

2025
~
2027

DIMENSIONAL METROLOGY

CATALOGUE NO. 108A

INSIZE

MEASUREMENT SOLUTION PROVIDER

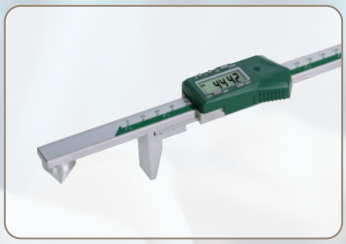


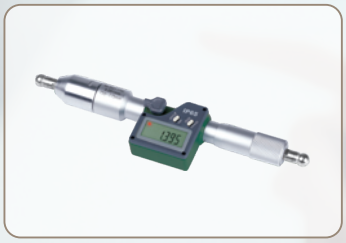


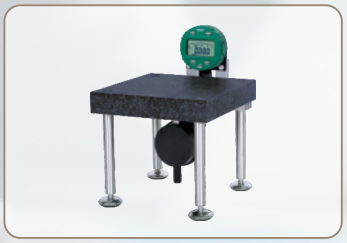
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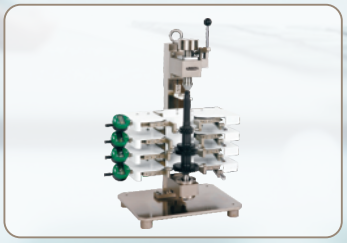
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INSIZE is our standard quality, made in China

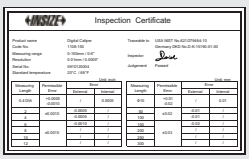
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INSPECTION CERTIFICATE

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Inspection Certificate



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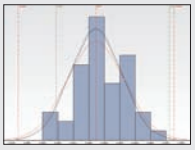
1. Search for products according to category in PRODUCT INDEX (next 5 pages)
2. Search for products in CODE NO. INDEX (page 933-939)
3. Search for products in APPLICATION INDEX OF MEASURING TOOLS (page 940-947)

We reserve the right to change or modify the design and specification of products in this catalogue without prior notice.

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PRODUCT INDEX

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DATA MANAGEMENT SOFTWARES



DATA OUTPUT CABLES



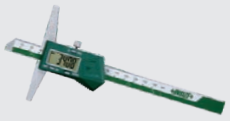
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CALIPERS

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DEPTH GAUGES



DEPTH GAUGES

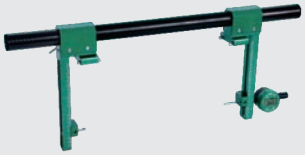


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INSIDE MICROMETERS



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BORE GAUGES



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DIGITAL RADIUS CALIPERS

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SNAP GAUGES


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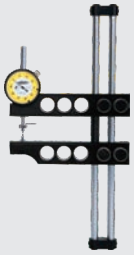

MINI DIGITAL HEIGHT GAUGES


HEIGHT GAUGES


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THREAD TAPER MEASURING INSTRUMENTS


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SQUARES


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STRAIGHT EDGES

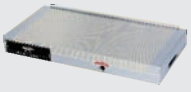

OPTICAL FLATS


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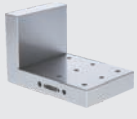

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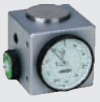

EDGE FINDERS


3D TESTERS


TRIGGER-TYPE 3D PROBES

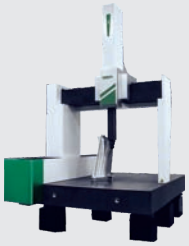

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ZERO SETTERS


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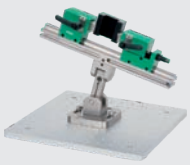

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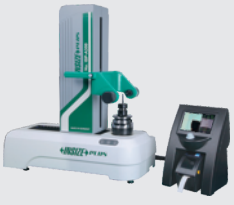

PROFILE PROJECTORS

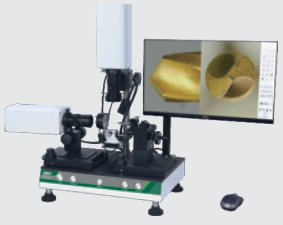

QUICK MEASUREMENT SYSTEMS

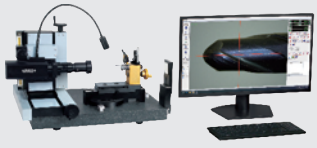

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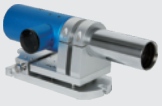

ELECTROMAGNETIC ULTRASONIC THICKNESS GAUGES


ULTRASONIC THICKNESS GAUGES

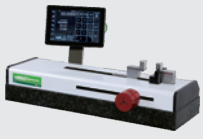

LASER DISTANCE METERS


HANDHELD 3D SCANNERS

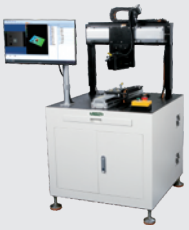

LASER SCAN MICROMETERS


DUAL AXIS PHOTOELECTRIC AUTOCOLLIMATORS


AIR GAUGES AND DISPLAYS


LENGTH PRESETTERS


DIGITAL GAP GAUGES


3D LINE LASER PROFILE MEASURING MACHINES


AUTOMATIC VISION INSPECTION MACHINES

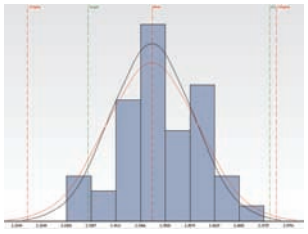

SEMI-AUTO MEASUREMENT STATIONS


THREE-DIMENSION FULL-FIELD STRAIN MEASUREMENT SYSTEMS


LARGE FIELD OF VIEW DYNAMIC MEASUREMENT SYSTEMS


TOTAL STATIONS

DATA OUTPUT AND SOFTWARE 01



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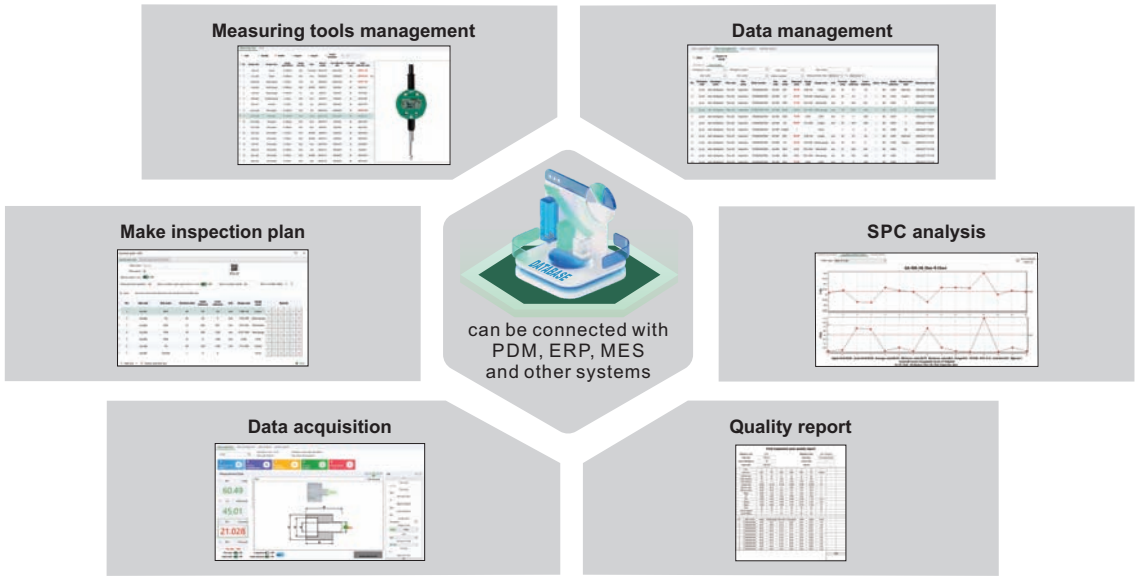
Data Output Cables
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Mobile Workbenches
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MEASUREMENT DATA MANAGEMENT AND ANALYSIS SOFTWARE (BASIC TYPE) CODE 7349

VIDEO



Measuring tools management

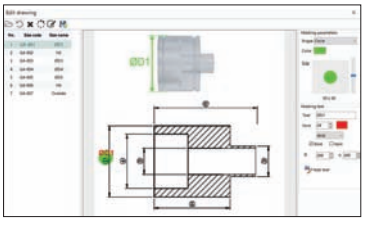
- Information, pictures and calibration date of measuring tools, can import and export Excel



Make inspection plan

- Define the dimensions, tolerances, measuring tools, drawing guides and formulas of workpieces, can import and export Excel
- Define parameters, QR code and batches of control plans

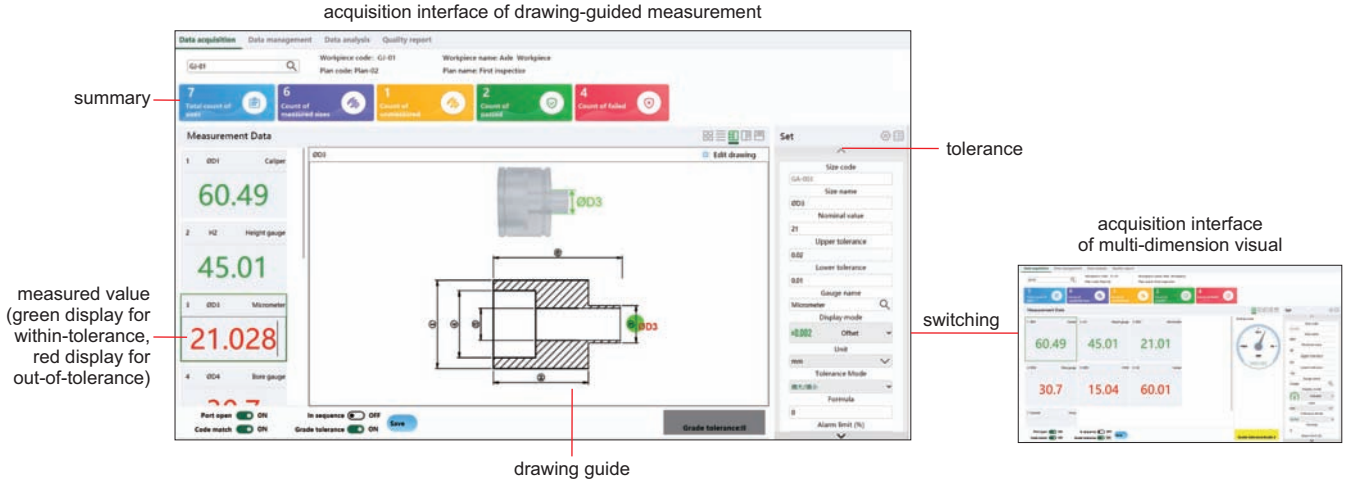




Data acquisition

- Drawing-guided measurement and acquisition data of measuring tools
- Support multiple data acquisition methods
  manual input: data input with keyboard
  data transfer: data collection with data output cable
- Support a variety of visual displays such as meters, trend graphs, levels, temperatures and deviations

acquisition interface of drawing-guided measurement

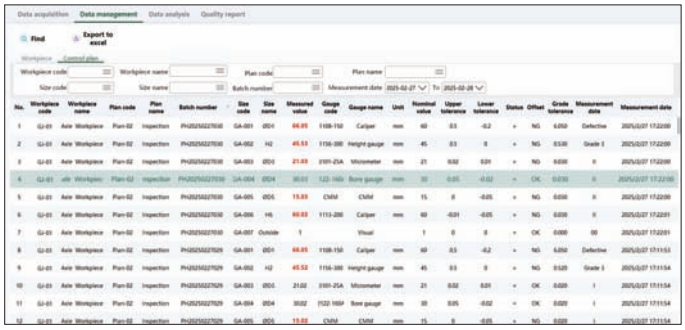


To be continued

Continued from previous page

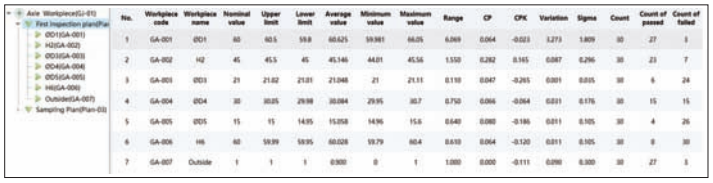
Data management

- Query measurement data (red display for out-of-tolerance) and result status (OK/NG, Rework, UpMax/LowMin), can export Excel

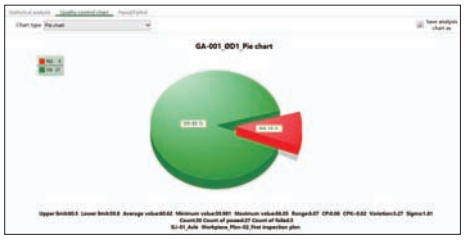


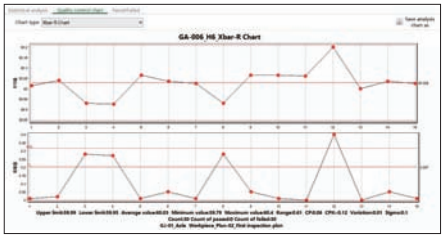
SPC analysis

- Parameters of SPC analysis: average, min value, max value, range, Cp, Cpk, variation, sigma, counts of OK/NG, can export Excel



- Provide variety of quality analysis control charts: Pie Chart, X Chart, Xbar-R Chart, Xbar-S Chart, I-MR Chart and Run Chart, can export JPEG image





Quality report

- Generate quality reports with control plan information, SPC parameters, and measurement data, can export Excel

First inspection plan quality report

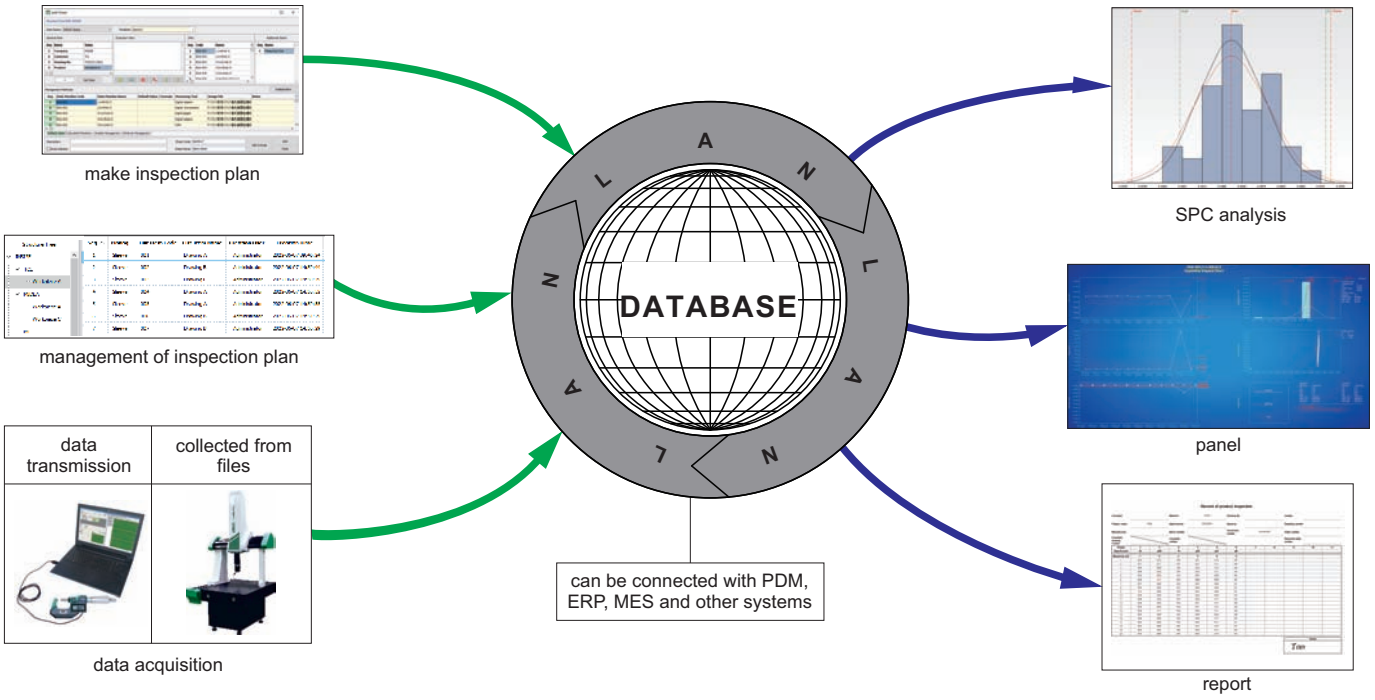
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Plan code	Plan-02	Plan name	First inspection plan
Count of Workpiece	30	Count of size	7
Export date	2025/2/28	Remark	

Item	1	2	3	4	5	6	7
Size name	ØD1	H2	ØD3	ØD4	ØD5	H6	Outside
Nominal value	60	45	21	30	15	60	1
Upper tolerance	0.5	0.5	0.02	0.05	0.2	0.01	0
Lower tolerance	-0.2	0	0.01	-0.02	-0.05	-0.05	0
Average value	60.625	45.146	21.048	30.084	15.058	60.028	0.9
Minimum value	59.981	44.01	21	29.95	14.96	59.79	0
Maximum value	66.05	45.56	21.11	30.7	15.6	60.4	1
Range	6.069	1.55	0.11	0.75	0.64	0.61	1
CP	0.064	0.282	0.047	0.066	0.08	0.064	0
CPK	-0.023	0.165	-0.265	-0.064	-0.186	-0.12	-0.111
Variation	3.273	0.087	0.001	0.031	0.011	0.011	0.09
Sigma	1.809	0.296	0.035	0.176	0.105	0.105	0.3
Count	30	30	30	30	30	30	30
Count of passed	27	23	6	15	4	0	27
Count of failed	3	7	24	15	26	30	3

No.	Batch number	Caliper	Height gauge	Micrometer	Bore gauge	CMM	Caliper	Visual
1	PH20250227001	59.98	45.01	21.01	30.00	15.04	60.01	1.00
2	PH20250227002	60.01	45.06	21.02	30.01	15.05	59.99	1.00
3	PH20250227003	60.01	45.07	21.01	30.01	15.06	60.01	1.00
4	PH20250227004	59.99	45.08	21.02	29.95	15.07	60.01	0.00
5	PH20250227005	60.01	45.09	21.02	30.04	15.08	59.99	1.00
6	PH20250227006	60.01	45.10	21.02	30.04	15.09	59.99	1.00
7	PH20250227007	60.00	45.02	21.02	29.98	14.96	59.98	1.00
8	PH20250227008	59.98	44.93	21.02	30.05	15.02	59.99	1.00
9	PH20250227009	59.99	45.04	21.02	30.04	15.03	59.98	1.00
10	PH20250227010	60.01	45.05	21.02	30.05	15.04	60.01	1.00

Sign

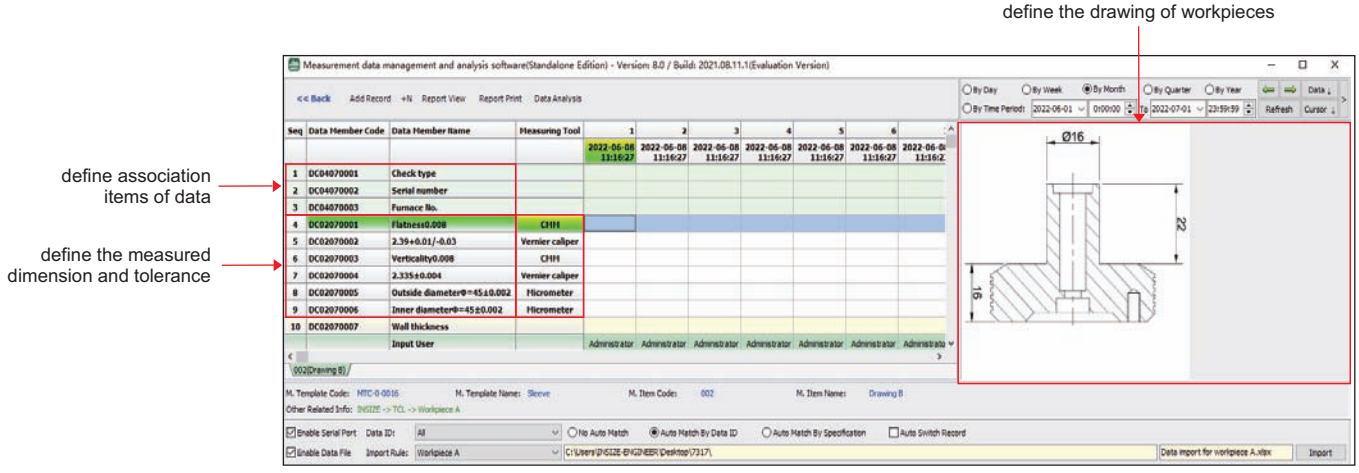
MEASUREMENT DATA MANAGEMENT AND ANALYSIS SOFTWARE



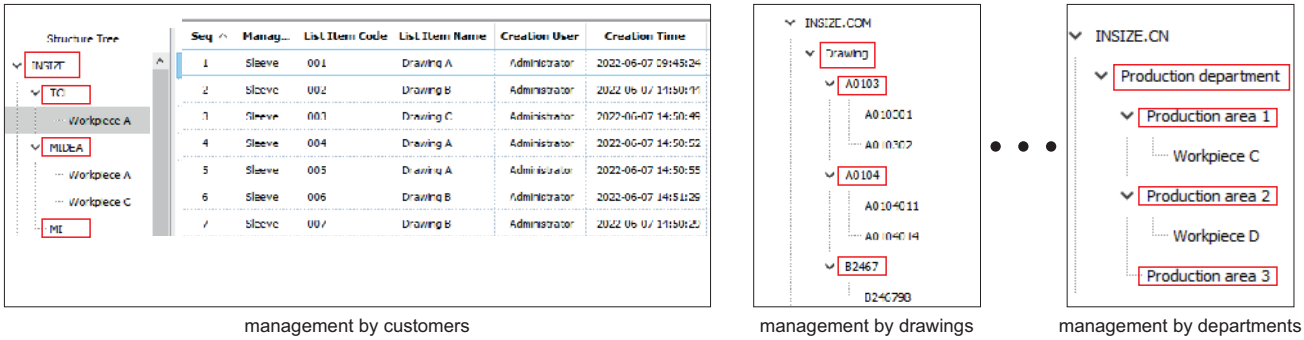
Make inspection plan

VIDEO

- Define the dimensions, tolerances, control range and other parameters of workpieces



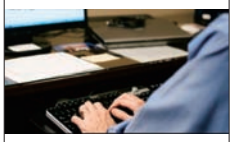
Management of inspection plan



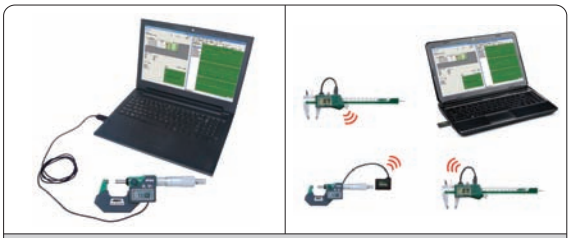
To be continued

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Data acquisition



manual input



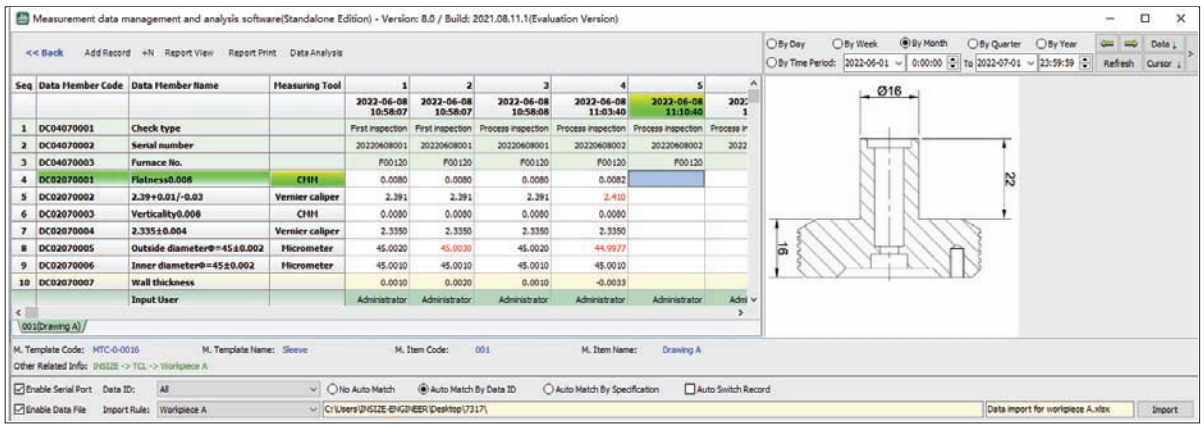
data transmission



file parsing



screen capture



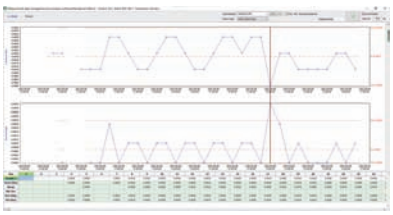
measurement interface

SPC

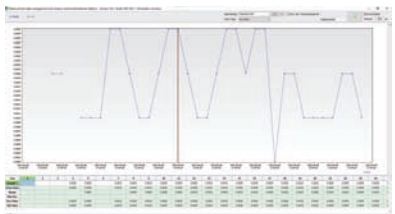
- Provide variety of quality analysis control charts



Xbar-R control chart



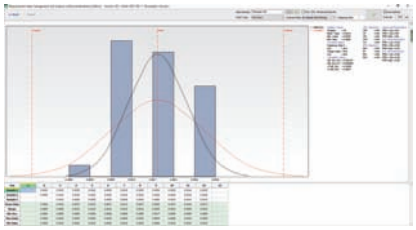
I-MR control chart



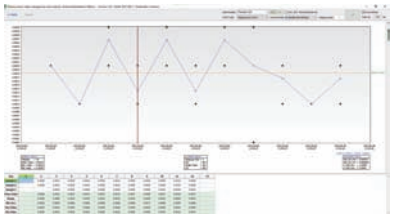
run control chart



Xbar-S control chart



CPK control chart



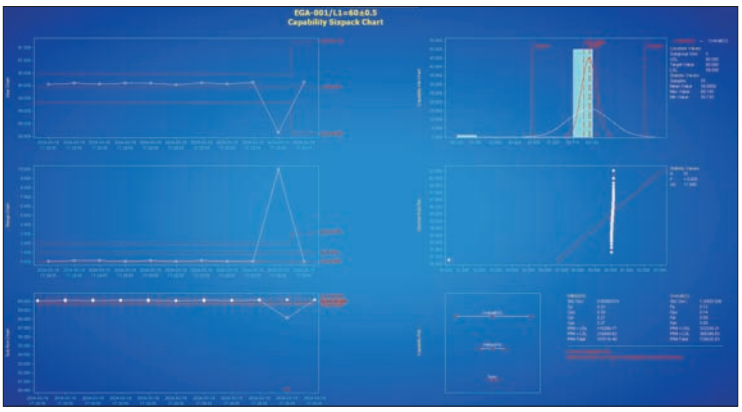
subgroup run chart

To be continued

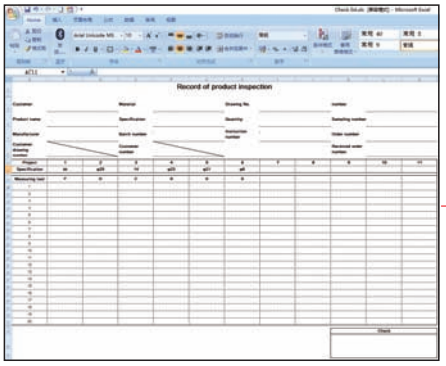
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Panel

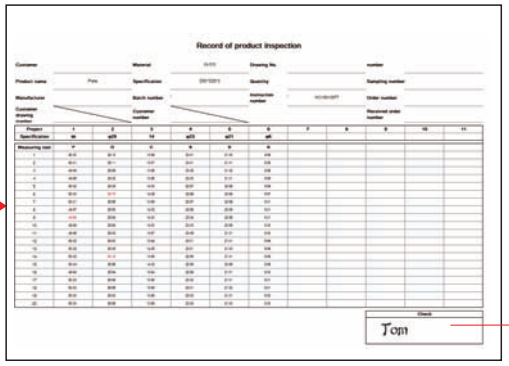
- Real-time display of SPC charts of multiple dimensions on the panel to monitor production quality



Report



report template



generate report

support exporting electronic signature

Complete version

Code	Data acquisition			SPC data analysis	Quality report	Real-time panel
	Manual input + Data transmission	File parsing	Screen capture			
7317	√	√	√	√	√	√

Acquisition+Analyze+Report

Code	Data acquisition		SPC data analysis	Quality report
	Manual input + Data transmission	File parsing		
7317-A1	√		√	√
7317-A2		√	√	√

Acquisition+Analyze

Code	Data acquisition		SPC data analysis
	Manual input + Data transmission	File parsing	
7317-B1	√		√
7317-B2		√	√

Acquisition+Report

Code	Data acquisition		Quality report
	Manual input + Data transmission	File parsing	
7317-C1	√		√
7317-C2		√	√

Acquisition

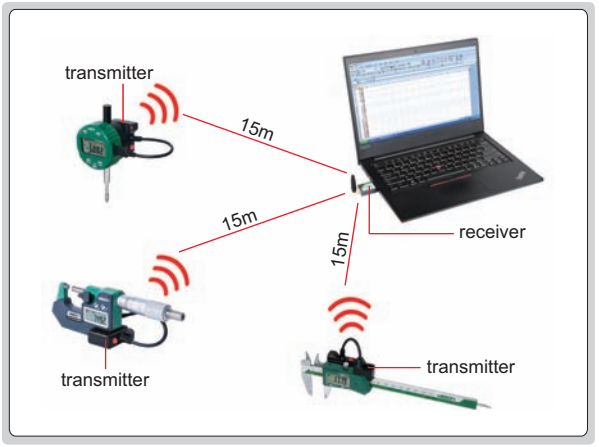
Code	Data acquisition	
	Manual input + Data transmission	File parsing
7317-D1	√	
7317-D2		√

Panel

Code	Real-time panel
7317-P	√

WIRELESS DATA TRANSMISSION SYSTEM (ZIGBEE)

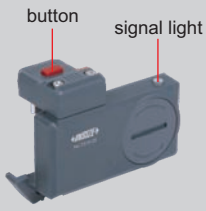
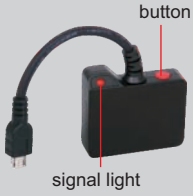
VIDEO



- Through wireless transmission, the readings of measuring tools can be transmitted to computers or mobile phones
- Wireless zigbee protocol, conforming to IEEE802, 2.4GHz band
- Transmission distance is 15 meter (under the condition of no obstruction and no electromagnetic interference)

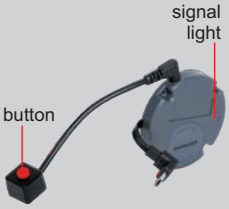
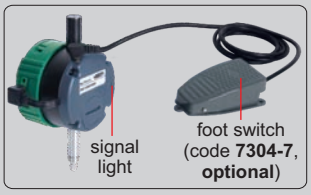
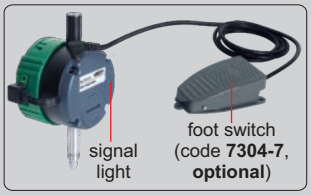
Transmitter

- Connecting to digital measuring tools such as calipers, micrometers and indicators
- CR2032 battery

Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-25	transmitter for digital calipers			▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-22	transmitter for large digital calipers			▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-30	transmitter for digital micrometers		 for **3102**, **3128**, **3565** series digital micrometers	▪ Press the "data" button of digital micrometer, can also press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once, at the same time, the signal light on the digital micrometer flashes once

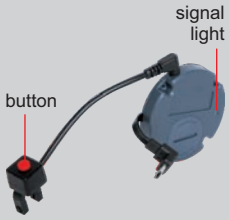
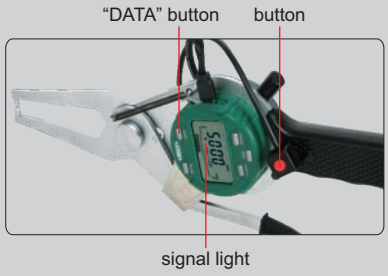
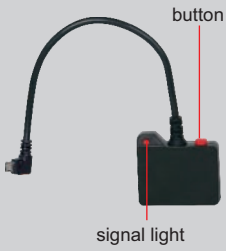
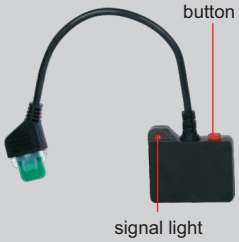
To be continued

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Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-31	transmitter for digital micrometers		 	▪ Press the "data" button of digital micrometer ▪ Data is transmitted once, the signal light on the digital micrometer flashes once
7315-50M	transmitter for digital indicators			▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-51	transmitter for digital indicators		 for **2108, 2138, 2139** series digital indicators   for other digital indicators 	▪ Press the "DATA" button of digital indicator, can also press the button of the transmitter ▪ Transmitter button can be fixed on request ▪ Data is transmitted once, the signal light on digital indicator flashes once ▪ Press the button of the transmitter ▪ Transmitter button can be fixed on request ▪ Data is transmitted once, the signal light on digital indicator flashes once

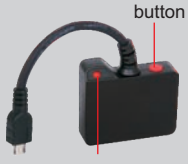
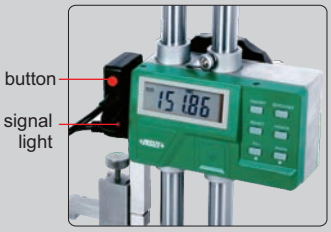
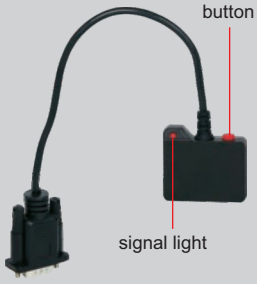
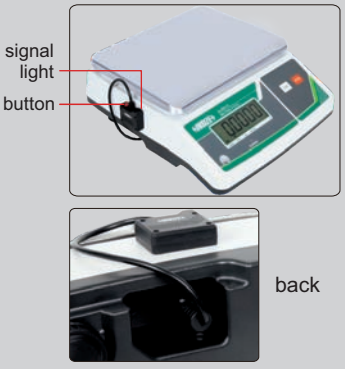
To be continued

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Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-51B	transmitter for bore gauges			▪ Press the "DATA" button of digital indicator, can also press the button of the transmitter ▪ Data is transmitted once, the signal light on digital indicator flashes once
7315-55	transmitter for digital gauges			▪ Press the "DATA" button of digital gauge, can also press the button of the transmitter ▪ Transmitter button can be fixed on request ▪ Data is transmitted once, the signal light on digital gauge flashes once
7315-60	transmitter for high precision digital indicators			▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-80	transmitter for digital calipers/ micrometers			▪ Press the "SET" button of the calipers/micrometers, can also press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-3350	transmitter for digital micrometers			▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once

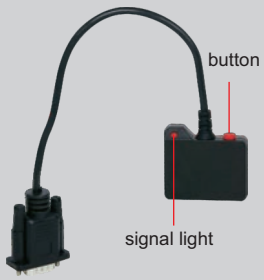
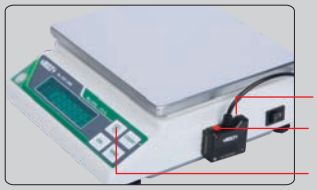
To be continued

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Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-1150	transmitter for digital height gauges			▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-1151	transmitter for digital height gauges			▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-2172	transmitter for digital protractors			▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-2771	transmitter for digital protractors			▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once
7315-8001	transmitter for electronic balances		 for **8001-6D**, **8001-15D**, **8001-30D** series weighing scales and **8501** series platform scales	▪ Press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once

To be continued

Continued from previous page

Code	Description	Transmitter	Connecting with measuring tool	Transmit data
7315-8301	transmitter for electronic balances		 	▪ Press the "⇳" button of the electronic balances, can also press the button of the transmitter ▪ Data is transmitted once, the signal light of the transmitter flashes once

Receiver (keyboard signal)

- For computers and mobile phones
- Recognized as HID keyboard device, the transmitted data is recognized by computers or mobile phones as keyboard input data and press enter key, such as 12.34↙. No need to install drivers and softwares
- Data can be transmitted to excel, word, txt etc.
- For any softwares which can receive keyboard signal

Code	Product	Description	Remark
7315-3		single channel receiver	connected with 1 transmitter only
7315-6		multichannel receiver	connected with 6 transmitters, each channel has status indicator
7315-7			
7315-8			
7315-9			

To be continued

Continued from previous page

Receiver (text format, virtual com port)

- For computers with windows system
- Text format virtual com port, converted to keyboard format with supplied software
- Supplied with Excel directional input software
- Measurement data can be transmitted to excel, word, txt etc. and any software which receives keyboard signal

Code	Product	Description	Remark
7315-2		multichannel receiver	connected with maximum 16 transmitters, each of them has unique identification code

Excel directional input software

- Supplied with **7315-2** receiver
- The readings of measuring tools can be transmitted to the designated area of excel, which facilitates data management and improves efficiency

Excel directional input software (included in **7315-2**), application example 1

Set the display area of caliper at B4-B9,
the readings of caliper are displayed at B4, B5...B9.
Set the display area of micrometer at C4-C9,
the readings of micrometer are displayed at C4, C5... C9.
Set the display area of height gauge at D4-D9,
the readings of height gauge are displayed at D4, D5... D9.

	A	B	C	D
1	Project	Length	Width	Height
2	Dimension and Tolerance	50±0.05	24±0.01	10+0.05/-0.06
3	Measuring tool	Caliper	Micrometer	Height gage
4	1	50.02	24.004	9.98
5	2	50.01	24.010	10.01
6	3	49.99	23.990	10.02
7	4	50.00	23.996	9.99
8	5	50.04	24.000	10.01
9	6	Channel 1	Channel 2	Channel 3

serial of workpieces

the next data display area is indicated in green

Excel directional input software (included in **7315-2**), application example 2

Set the display area of micrometer at B4-C9, data input is from the left to the right,
the readings of micrometer are displayed at B4, C4, B5, C5... B9, C9.
Set the display area of caliper at D4-D9,
the readings of caliper are displayed at D4, D5... D9.
Set the display area of depth gauge at E4-E9,
the readings of depth gauge are displayed at E4, E5... E9.

	A	B	C	D	E
1	Project	External diameter1	External diameter2	Length	Depth
2	Dimension and Tolerance	Φ23+0.01/-0.02	Φ21+0.01/-0.02	50±0.04	28±0.05
3	Measuring tool	Micrometer	Micrometer	Caliper	Depth gage
4	1	23.010	21.008	49.98	28.01
5	2	23.010	21.000	49.98	27.98
6	3	22.999	21.000	50	28
7	4	23.007	20.998	50	28
8	5	23.000	20.985	50.01	28.01
9	6	23.008	Channel 1	Channel 2	Channel 3

serial of workpieces

the next data display area is indicated in green

Receiver (485 communication)

- Modbus-RTU protocols , baud rate 9600
- Can be connected to a PC or PLC
- The communication address is configurable

Code	Product	Description	Remark
7315-485		multichannel receiver	connected with 6 transmitters, each channel has status indicator

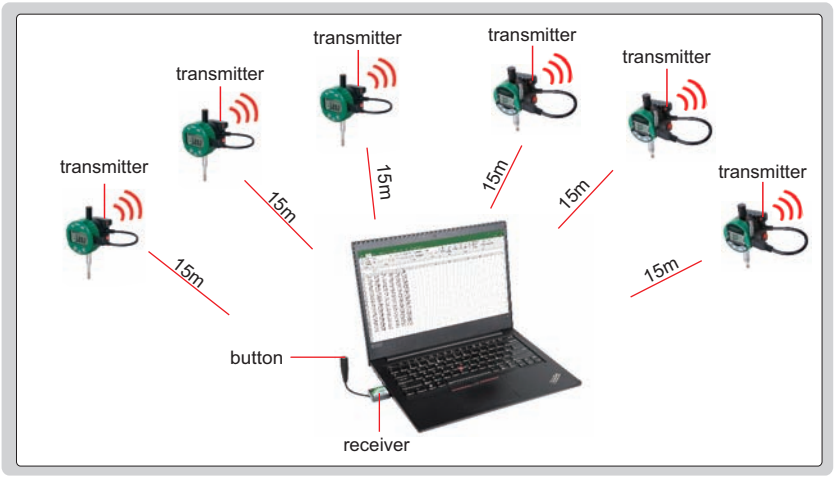
WIRELESS DATA TRANSMISSION SYSTEM OF DIGITAL INDICATORS (REMOTE CONTROL)

VIDEO

- The readings of digital indicators can be transmitted to computers or mobile phones
- Data acquisition can be remotely controlled through the receiver
- Wireless zigbee protocol, conforming to IEEE802, 2.4GHz band
- Transmission distance is 15 meter (under the condition of no obstruction and no electromagnetic interference)

transmission method: the button on receiver is pressed once, the readings of all digital indicators are transmitted

	channel 1	channel 2	channel 3	channel 4	channel 5	channel 6
	A	B	C	D	E	F
1	24.35	0.4045	57.72	1.949	0.4075	0.03568
2	24.45	0.5045	57.82	2.049	0.5075	0.13568
3	26.35	0.4045	57.72	1.949	0.4075	0.00078
4	27.35	0.4045	57.72	1.7575	0.4075	0.0762
5	28.35	0.4045	57.72	1.7575	0.4075	0.0762
6	29.35	0.4045	57.72	1.7575	0.4075	0.07618
7	30.35	0.4045	57.72	1.7575	0.4075	0.55334
8	31.35	0.4045	57.72	1.7575	0.4075	0.61198
9	24.35	0.4045	57.72	1.7575	0.4075	0.6172



Transmitter

- Suitable for digital indicators
- CR2032 battery
- 80 hours of operation on a single battery in measurement mode

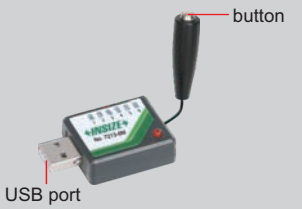
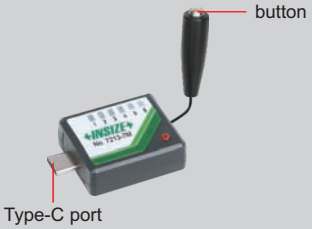
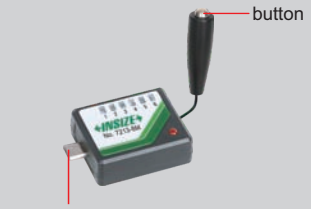
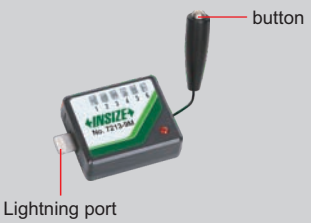
Code	Transmitter	Connecting with digital indicators	Transmit data
7213-56			■ Press and hold the button to enter the measurement mode ■ Press the receiver button in measurement mode to acquire data

To be continued

Continued from previous page

Receiver (keyboard signal)

- For computers and mobile phones
- Recognized as HID keyboard device, the transmitted data is recognized by computers or mobile phones as keyboard input data and press enter key, such as 12.34↙. No need to install drivers and softwares
- Data can be transmitted to excel, word, txt etc.
- Suitable for any softwares which can receive keyboard signal

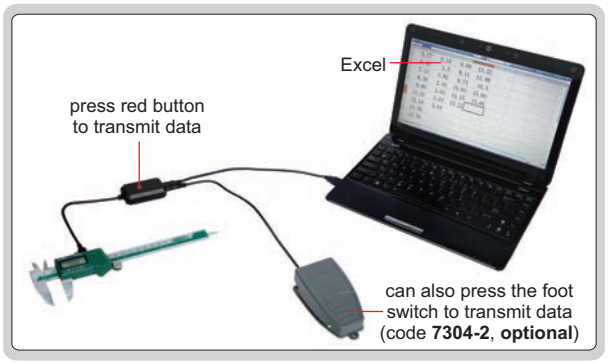
Code	Product	Description	Remark	Transmit data
7213-6M		multichannel receiver	connected with 6 transmitters, each channel has status indicator	▪ Press the button of the receiver ▪ Data is transmitted once, the signal light of the receiver flashes once
7213-7M				
7213-8M				
7213-9M				

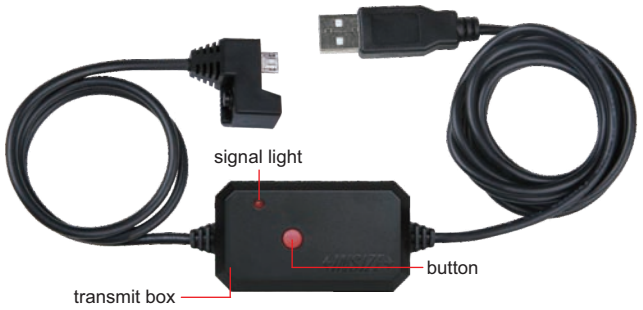
hand switch, code **7213-SW** (included), length 2m



DATA OUTPUT CABLES (KEYBOARD FORMAT)

application





7302-21

- Recognized as HID keyboard device by computer, no need to install drivers and softwares
- Data can be transmitted to Excel, Word, txt and other files (press transmit button, which is recognized by the computer as keyboard input data and press enter key, such as 12.34↙)
- For any softwares which can receive keyboard signal
- Optional accessory: foot switch (code: **7304-2**), hub (code: **7324-HUB4**, **7324-HUB7**), extension cables (code: **7325-ADD5**, **7325-ADD10**)

VIDEO

Code	Description	Plug	Connecting with measuring tool	Transmit data
7302-21	cable for digital calipers (length 3m)		 button	▪ Press the button on the plug of cable, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once
7302-22	cable for large digital calipers (length 2.5m)			▪ Press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once
7302-30	cable for digital micrometers (length 2.5m)		 signal light "data" button  back for **3102**, **3128**, **3565** series digital micrometers	▪ Press the "data" button of digital micrometer, can also press the button of the box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once
7302-31	cable for digital micrometers (length 2.5m)		 signal light "data" button  back	▪ Press the "data" button of digital micrometer, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once

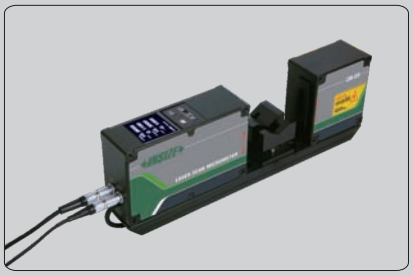
To be continued

Continued from previous page

Code	Description	Plug	Connecting with measuring tool	Transmit data
7302-50M	cable for digital gauges (length 2.5m)			▪ Press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once
7302-40M	cable for digital indicators (length 2.5m)		 for **2108**, **2138**, **2139** series digital indicators	▪ Press the "DATA" button of digital indicator, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once Note: long press button to zero the digital indicators
			 for other digital indicators	▪ Press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once Note: long press button to zero the digital indicators
7302-60	cable for high precision digital indicators (length 2.5m)			▪ Press the "DATA" button of high precision digital indicator, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once
7302-3350	cable for digital micrometers (length 2.5m)			▪ Press the "DATA" button of digital micrometer, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once
7302-1151	cable for digital height gauges (length 2.5m)			▪ Press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once

To be continued

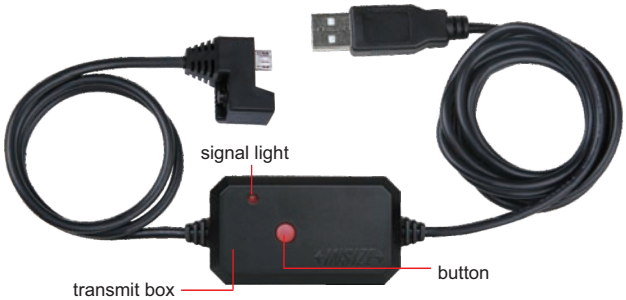
Continued from previous page

Code	Description	Plug	Connecting with measuring tool	Transmit data
7302-SPC7	cable for digital height gauges (length 2.5m)			■ Press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
7302-8001	cable for weighing scales (length 2.5m)		 back  for **8301** and **8305** series electronic balances	■ Press the “⇳” button of electronic balance, can also press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
			 back  for **8001-6D**, **8001-15D**, **8001-30D** series weighing scales and **8501** series platform scales	■ Press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
7302-8304	cable for electronic balances (length 3m)		 back 	■ Press the “🖶” button of electronic balance, can also press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
7302-LDM	cable for laser scan micrometers (length 3m)			■ Press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once

DATA OUTPUT CABLES (TEXT FORMAT, VIRTUAL COM PORT)

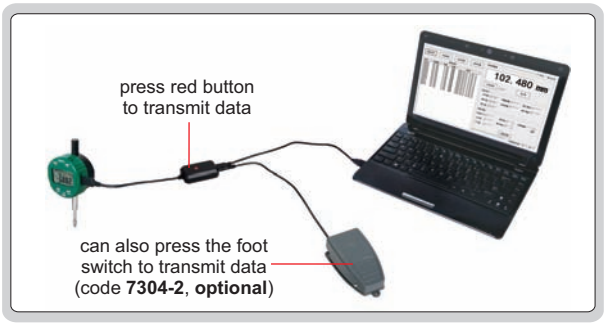
VIDEO

1) Data output cables with transmit box

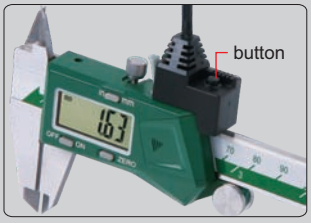
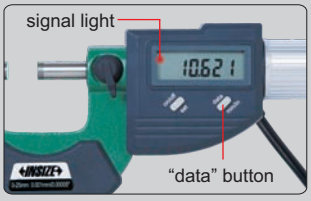


7305-21

application



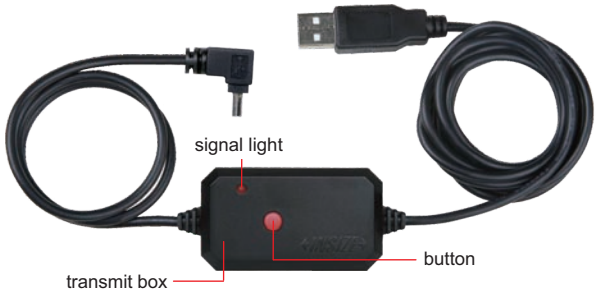
Single transmit (can be switched to continuous transmit)

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-21 **7305-R21**	cable for digital calipers (length 3m)				▪ Press the button on the plug of cable, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once
7305-22 **7305-R22**	cable for large digital calipers (length 2.5m)				▪ Press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once
7305-30 **7305-R30**	cable for digital micrometers (length 2.5m)			  for **3102**, **3128**, **3565** series digital micrometers	▪ Press the "data" button of digital micrometer, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once
7305-31 **7305-R31**	cable for digital micrometers (length 2.5m)			 	▪ Press the "data" button of digital micrometer, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on the digital micrometer flashes once

To be continued

Continued from previous page

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-50M	cable for digital gauges (length 2.5m)				■ Press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
7305-R50M					
7305-1150	cable for digital height gauges (length 2.5m)				■ Press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once
7305-R1150					



7305-40M

Continuous transmit (can be switched to single transmit)

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-40M	cable for digital indicators (length 2.5m)			 for **2108**, **2138**, **2139** series digital indicators	Continuous transmit is controlled in software Single transmit: ■ Press the “DATA” button of digital indicator, can also press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once Note: long press button to zero the digital indicators; software of data transmit is included
				 for other digital indicators	Continuous transmit is controlled in software Single transmit: ■ Press the button of the transmit box, or press the foot switch ■ Data is transmitted once, the signal light of the transmit box flashes once Note: long press button to zero the digital indicators; software of data transmit is included

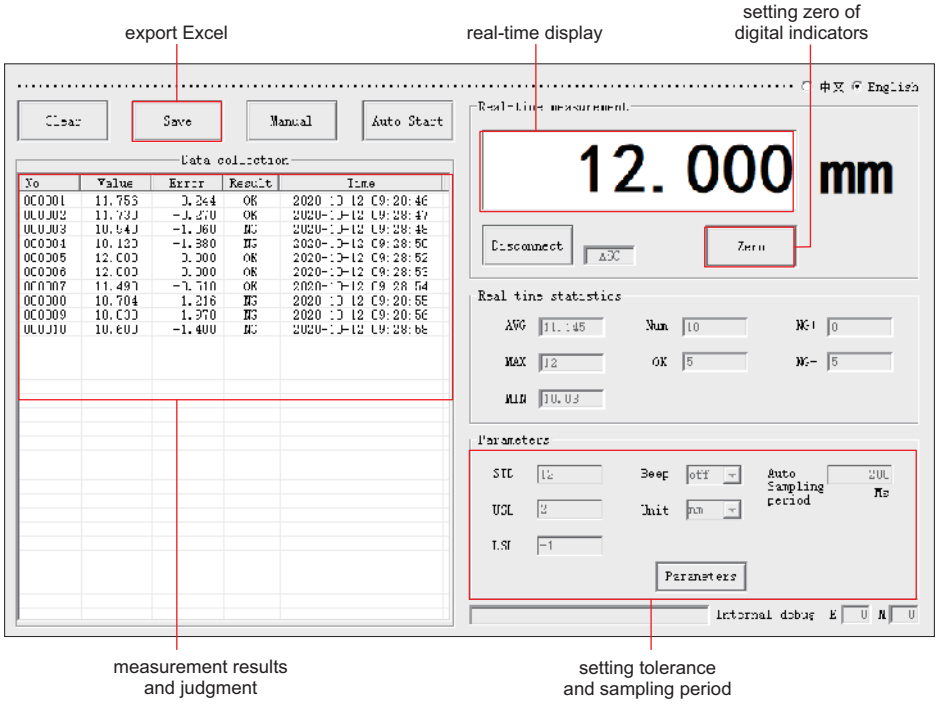
To be continued

Continued from previous page

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-R40M	cable for digital indicators (length 2.5m)			 for **2108**, **2138**, **2139** series digital indicators	Continuous transmit is controlled in software Single transmit: ▪ Press the "DATA" button of digital indicator, can also press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once, at the same time, the signal light on digital indicator flashes once Note: long press button to zero the digital indicators; software of data transmit is included
				 for other digital indicators	Continuous transmit is controlled in software Single transmit: ▪ Press the button of the transmit box, or press the foot switch ▪ Data is transmitted once, the signal light of the transmit box flashes once Note: long press button to zero the digital indicators; software of data transmit is included

Software (included in 7305-40M and 7305-R40M)

- Real-time display
- Tolerance setting, automatic judgment, out-of-tolerance alarm
- Real time statistics: max, min, average, Go/No-Go number
- Can save results as Excel



To be continued

Continued from previous page

communication protocol

- Baud: 9600bps
  Data bit: 8
  Stop bit 1
  Check bit: None
  No flow control

- Data output format

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10

+or- Data section (floating point) CR

Data format example

Display		Output
1.234	➡	+0001.234↙
-1.234	➡	-0001.234↙

- Data output format with ID number

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21

ID number Blank +or- Data section (floating point) CR

Data format example

Display		Output
1.234	➡	4109210605 +0001.234↙
-1.234	➡	4109210605 -0001.234↙

- The data transmission mode can be switched:
  single or continuous;
  The data output format can be switched:
  with ID number or without ID number;
  Data can be transmitted by command;
  The digital indicators can be zeroed by command

- Pin definition of RS232 plug:



⑤④③②①
⑨⑧⑦⑥

Pin No.	Symbol	Description
2	TXD	Data OUT
3	RXD	Data IN
4	VDD	+5V Power
5	GND	Ground

2) Data output cables without transmit box



7305-G3350

application



Single transmit

Code	Description	Plug to measuring tool	Plug to computer	Connecting with measuring tool	Transmit data
7305-G60	cable for high precision digital indicators (length 3m)				▪ Press the "DATA" button of high precision digital indicator
7305-G3350	cable for digital micrometers (length 3m)				▪ Press the "DATA" button of digital micrometer

communication protocol

- Baud: 9600bps
  Data bit: 8
  Stop bit 1
  Check bit: None
  No flow control

- Data output format

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10

+or- Data section (floating point) CR

Data format example

Display		Output
1.234	➡	+0001.234↙
-1.234	➡	-0001.234↙

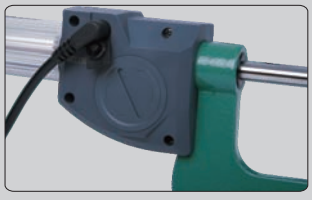
- Data can be transmitted by command
  The digital indicators or micrometers can be zeroed by command

485 DATA OUTPUT CABLES

- Modbus-RTU protocols
- Can be connected to a PC or PLC
- The baud rate is configurable (9600, 19200, 38400)
- The communication address is configurable



7215-50M

Code	Description	Plug	Connecting with measuring tool	Transmit data
7215-21	cable for digital calipers (length 3m)			▪ Acquiring data through host computers
7215-22	cable for digital calipers (length 2.5m)			▪ Acquiring data through host computers
7215-30	cable for digital micrometers (length 2.5m)		 for **3102**, **3128**, **3565** series digital micrometers  back	▪ Acquiring data through host computers
7215-31	cable for digital micrometers (length 2.5m)		 	▪ Acquiring data through host computers
7215-40M	cable for digital indicators (length 2.5m)			▪ Acquiring data through host computers
7215-50M	cable for digital gauges (length 2.5m)			▪ Acquiring data through host computers

connected with digital indicator

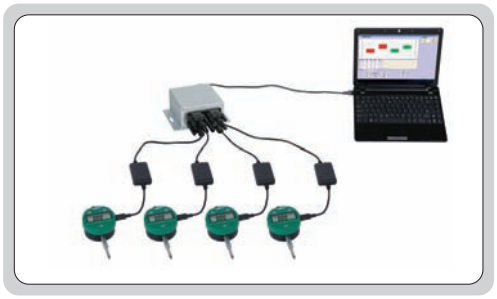




DISPLAY UNIT CODE 7106-1A

REFER TO PAGE 627 FOR DETAILS

connected with digital indicators



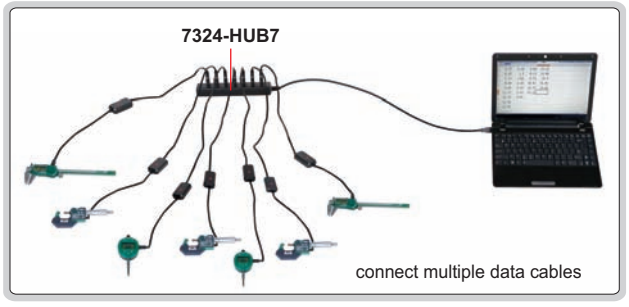
MULTICHANNEL INTERFACE BOXES

REFER TO PAGE 628 FOR DETAILS



7107-1

application



HUBS



7324-HUB4



7324-HUB7

adapter **(optional)**



7324-ADAPTER

- Suitable for USB plug data cable



7324-HUB16

Code	Description	Applicable products	Note
7324-HUB4	4-channel hub (length 0.2m, USB computer plug)	**7302** series data cables (USB plug) **7305** series data cables (USB plug)	no adapter required
7324-HUB7	7-channel hub (length 1m, USB computer plug)		optional: adapter (code: **7324-ADAPTER**) note: adapter required for connecting high power devices
7324-HUB16	16-channel hub (length 1m, USB computer plug)		adapter is included

EXTENSION CABLES

Code	Description	Applicable products
7325-ADD5	data extension cable (length 5m, USB plug)	**7302** series data cables
7325-ADD10	data extension cable (length 10m, USB plug)	**7305** series data cables (USB plug)



7325-ADD5

application



FOOT SWITCH

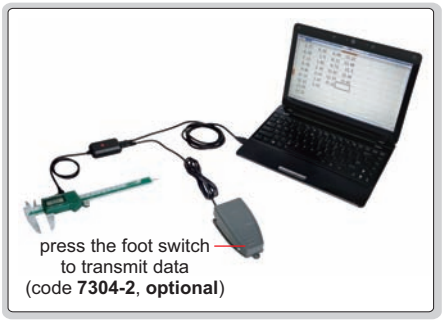


7304-2

- For data transmission

Code	Description	Applicable products
7304-2	data transmission foot switch with cable (length 2m)	**7302** series data cables **7305** series data cables

application



OK/NG INPUT SWITCHES



7327-FS



7327-SW

- Used with **7317** software, output OK or NG
- USB plug, length 1.5m

Code	Description
7327-FS	foot switch for OK/NG input
7327-SW	hand switch for OK/NG input

application

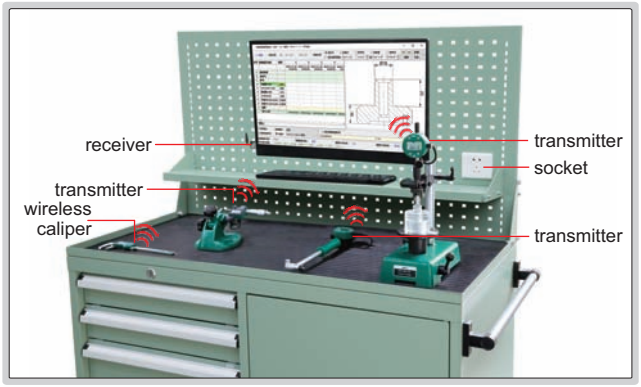


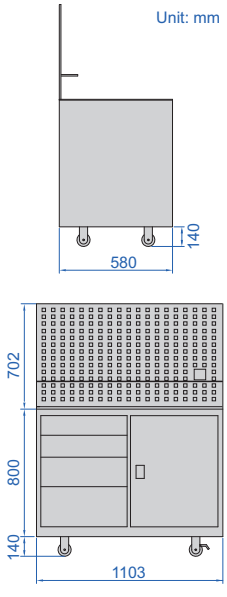
MOBILE WORKBENCH



7901-10A

application





- Tabletop can support 50kg

Code	L×W×H
7901-10A	1103×580×1642mm

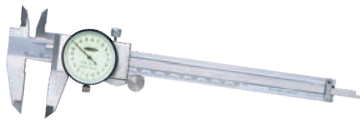
CALIPERS 02



Digital Calipers
Page 26-34/39-41



Vernier Calipers
Page 34-37/41-43



Dial Calipers
Page 38



Caliper/Height Gauge Checkers
Page 44



Caliper End Grinding Machines
Page 44



Depth Base Attachments
Page 45



Measruing Force Device Of Calipers
Page 45



Accessory Sets For Digital Calipers
Page 46-47



Special Purpose Calipers
Page 48-83

IP67 WATERPROOF DIGITAL CALIPERS

INSIZE PLUS

INSPECTION CERTIFICATE | DATA OUTPUT | IP67 WATERPROOF



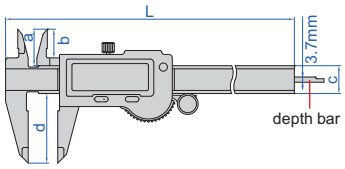
1195-150

- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, mm/inch, preset, data output
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory:
  wireless transmitter code **7315-80** (receiver is needed) page 9,
  accessory set for digital calipers (code **6144,** only for range 0-150mm and 0-200mm),
  depth base attachment (code **6140**)

(mm)

Code	Range	Accuracy	L	a	b	c	d	Remark
1195-150*	0-150mm/0-6"	±0.02mm	235	21	16.5	16	40	with depth bar
1195-200*	0-200mm/0-8"	±0.03mm	290	24.5	20	16	50	with depth bar
1195-300*	0-300mm/0-12"	±0.03mm	387	23	18.5	16	64	without depth bar

*Supplied with manufacturer inspection certificate



IP67 WATERPROOF DIGITAL CALIPERS

ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME

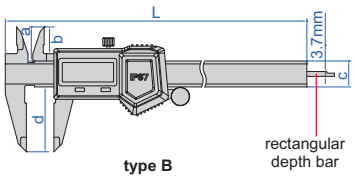
ATTENTION: NO DATA OUTPUT

IP67 WATERPROOF

INSPECTION CERTIFICATE



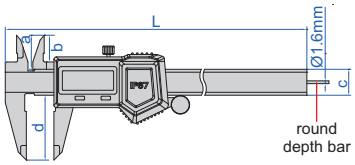
1118-150B



type B



1118-150R



type R

- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off,
  mm/inch, ABS/REL, hold
- Battery CR2032
- Meet DIN862
- Made of stainless steel
- Optional accessory:
  accessory set for digital calipers
  (code **6144,** only for range 0-150mm and 0-200mm),
  depth base attachment (code **6140**)

Code	Range	Accuracy	Type	L	a	b	c	d
1118-150B*	0-150mm/0-6"	±0.03mm	B	236mm	21mm	16mm	16mm	40mm
1118-200B*	0-200mm/0-8"	±0.03mm	B	286mm	24mm	19mm	16mm	50mm
1118-300B*	0-300mm/0-12"	±0.03mm	B	400mm	25mm	20.5mm	16mm	60mm
1118-150R*	0-150mm/0-6"	±0.03mm	R	236mm	21mm	16mm	16mm	40mm

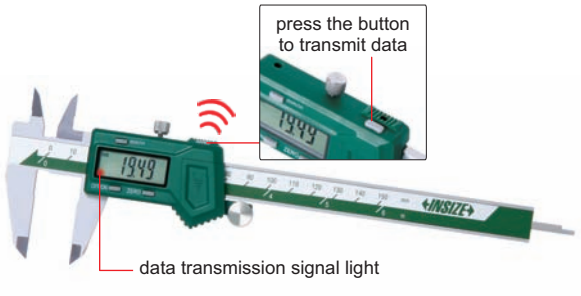
*Supplied with manufacturer inspection certificate

WIRELESS DIGITAL CALIPERS (ZIGBEE)

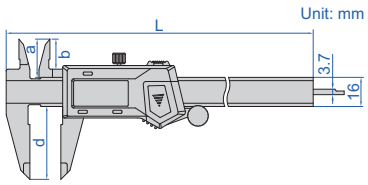
ATTENTION: THE WORKING LIFE OF A BATTERY IS ABOUT 3-5 MONTHS

INSPECTION CERTIFICATE

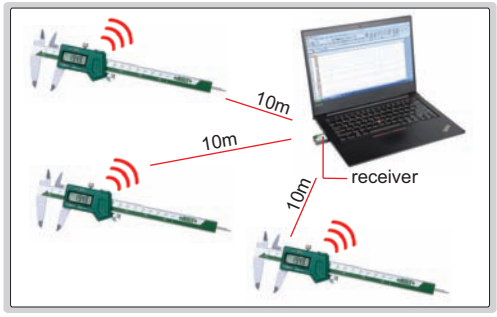
VIDEO



1113-150

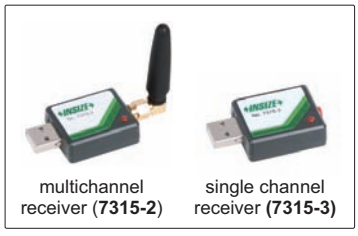


application



- Non waterproof
- Built-in wireless data transmission module, Zigbee signal
- Transmission distance is 10 meter (under the condition of no obstruction and no electromagnetic interference)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, data transmission
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: receiver (code **7315-2/3/6/7/8/9**), accessory set for digital calipers (code **6144,** only for range 0-150mm and 0-200mm), depth base attachment (code **6140**)

receiver (**optional**)



(mm)

Code	Range	Accuracy	L	a	b	d
1113-150*	0-150mm/0-6"	±0.03mm	236	21	16	40
1113-200*	0-200mm/0-8"	±0.03mm	286	24	19	50
1113-300*	0-300mm/0-12"	±0.03mm	400	25	20.5	60

*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS (STANDARD TYPE)

INSPECTION CERTIFICATE

DATA OUTPUT

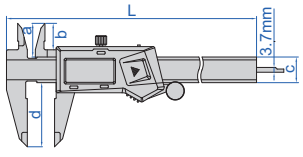
POPULAR MODEL



1108-150

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory: wireless transmitter code **7315-25** (receiver is needed) page 7, accessory set for digital calipers (code **6144,** only for range 0-150mm and 0-200mm), depth base attachment (code **6140**)

Code	Range	Accuracy	L	a	b	c	d
1108-150*	0-150mm/0-6"	±0.02mm	236mm	21mm	16mm	16mm	40mm
1108-200*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm
1108-250*	0-250mm/0-10"	±0.03mm	350mm	25mm	20.5mm	16mm	60mm
1108-300*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm



*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS (ABSOLUTE SYSTEM)

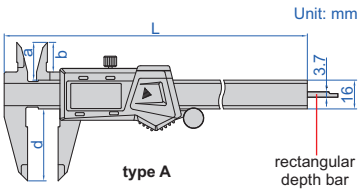
INSPECTION CERTIFICATE

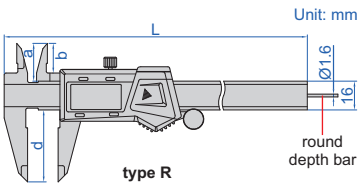
DATA OUTPUT



1103-150

- Non waterproof
- Absolute system, low power consumption, long battery life
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, mm/inch, ORIGIN, ZERO/ABS
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory:
  wireless transmitter code **7315-22** (receiver is needed) page 7,
  accessory set for digital calipers (code **6144,** only for range 0-150mm and 0-200mm),
  depth base attachment (code **6140**)





Code	Range	Accuracy	Type	L	a	b	d
1103-150*	0-150mm/0-6"	±0.03mm	A	236mm	21mm	16.5mm	40mm
1103-200*	0-200mm/0-8"	±0.03mm	A	286mm	24mm	19.5mm	50mm
1103-300*	0-300mm/0-12"	±0.03mm	A	400mm	26mm	21.5mm	60mm
1103-150R*	0-150mm/0-6"	±0.03mm	R	236mm	21mm	16.5mm	40mm

*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS

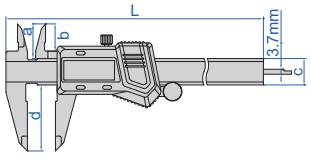
INSPECTION CERTIFICATE

ATTENTION: NO DATA OUTPUT

- Non waterproof
- Zinc alloy housing for digital unit
- Resolution: 0.01mm/0.0005"
- Buttons: zero, on/off, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Meet DIN862
- Made of stainless steel
- Optional accessory:
  accessory set for digital calipers
  (code **6144,** only for range 0-150mm and 0-200mm),
  depth base attachment (code **6140**)



1114-150A



Code	Range	Accuracy	L	a	b	c	d
1114-150A*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm
1114-200A*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm
1114-300A*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm

*Supplied with manufacturer inspection certificate

DATA OUTPUT INSPECTION CERTIFICATE

DIGITAL CALIPERS (FRACTION READING)



1102-150

- Non waterproof
- Resolution: 1/128", 0.01mm, 0.0005"
- Buttons: unit (inch fraction/mm/inch), on/off, zero
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output (for mm and inch)
- Meet DIN862
- Made of stainless steel
- Optional accessory:
  wireless transmitter code **7315-25** (receiver is needed) page 7,
  accessory set for digital calipers
  (code **6144,** only for range 0-150mm and 0-200mm),
  depth base attachment (code **6140**)



inch fraction reading



mm reading

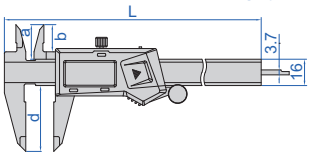


inch reading

Code	Range	Accuracy	L	a	b	d
1102-150*	0-150mm/0-6"	±0.02mm	236mm	21mm	16mm	40mm
1102-200*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	50mm
1102-300*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	60mm

*Supplied with manufacturer inspection certificate

Unit: mm



DATA OUTPUT INSPECTION CERTIFICATE

HEAVY DUTY 300mm DIGITAL CALIPER



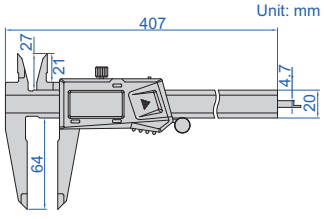
1196-300

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory:
  wireless transmitter code **7315-22** (receiver is needed) page 7

Code	Range	Accuracy
1196-300*	0-300mm/0-12"	±0.03mm

*Supplied with manufacturer inspection certificate

Unit: mm



METRIC DIGITAL CALIPERS

INSPECTION CERTIFICATE | LOCK READING WITH "HOLD" BUTTON | DATA OUTPUT

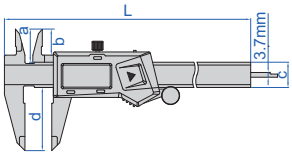
- Non waterproof
- Resolution: 0.01mm
- Buttons: on/off, zero, hold
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory:
  wireless transmitter code **7315-25** (receiver is needed) page 7,
  accessory set for digital calipers
  (code **6144,** only for range 0-150mm and 0-200mm),
  depth base attachment (code **6140**)



1109-150

Code	Range	Accuracy	L	a	b	c	d
1109-150*	0-150mm	±0.03mm	236mm	21mm	16mm	16mm	40mm
1109-200*	0-200mm	±0.03mm	286mm	24mm	19mm	16mm	50mm
1109-300*	0-300mm	±0.03mm	400mm	25mm	20.5mm	16mm	60mm

*Supplied with manufacturer inspection certificate



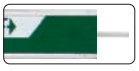
DIGITAL CALIPERS WITH ROUND DEPTH BAR

INSPECTION CERTIFICATE | DATA OUTPUT

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Meet DIN862
- Made of stainless steel
- Optional accessory:
  accessory set for digital calipers (code **6144**),
  depth base attachment (code **6140**)



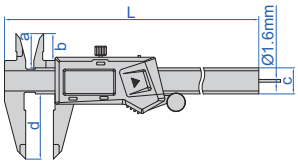
1119-150



round depth bar Ø1.6mm

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	L	a	b	c	d
1119-150*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	a	b	c	d
1119-150WL*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm

*Supplied with manufacturer inspection certificate

DATA OUTPUT

INSPECTION CERTIFICATE

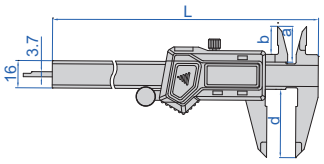
LEFT HAND DIGITAL CALIPERS

- Non waterproof
- Designed for left handed users
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Meet DIN862
- Made of stainless steel
- Optional accessory:
  wireless transmitter code **7315-22** (receiver is needed) page 7,
  accessory set for digital calipers (code **6144,** only for range 0-150mm and 0-200mm),
  depth base attachment (code **6140**)



1130-150

Unit: mm



Code	Range	Accuracy	L	a	b	d
1130-150*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	40mm
1130-200*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	50mm
1130-300*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	60mm

*Supplied with manufacturer inspection certificate

DATA OUTPUT

INSPECTION CERTIFICATE

DIGITAL CALIPERS WITH CERAMIC TIPPED JAWS

- Non waterproof
- Ceramic tipped jaws for outside measurement, extremely wear-resistant, non-magnetic and non electric conductive
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, made of stainless steel
- Meet DIN862
- Optional accessory:
  depth base attachment (code **6140**)



1193-150

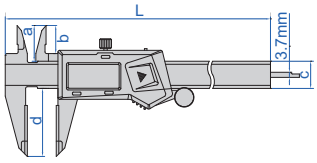
ceramic tipped jaws



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	L	a	b	c	d
1193-150*	0-150mm/0-6"	±0.03mm	235mm	21mm	16.5mm	16mm	40mm
1193-200*	0-200mm/0-8"	±0.03mm	287mm	24mm	20mm	16mm	50mm
1193-300*	0-300mm/0-12"	±0.03mm	390mm	26mm	21.5mm	16mm	60mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

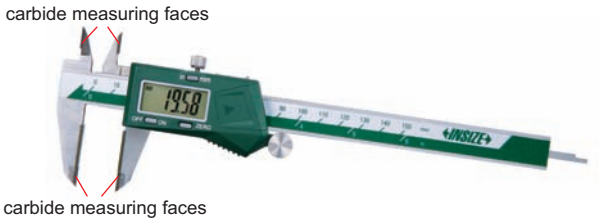


Code	Range	Accuracy	L	a	b	c	d
1193-150WL*	0-150mm/0-6"	±0.03mm	235mm	21mm	16.5mm	16mm	40mm
1193-200WL*	0-200mm/0-8"	±0.03mm	287mm	24mm	20mm	16mm	50mm
1193-300WL*	0-300mm/0-12"	±0.03mm	390mm	26mm	21.5mm	16mm	60mm

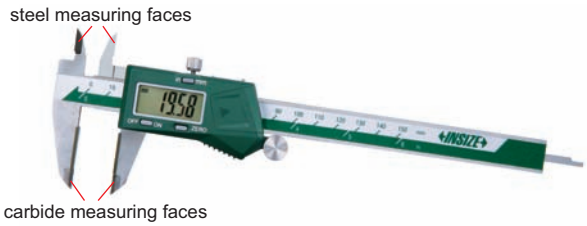
*Supplied with manufacturer inspection certificate

DIGITAL CALIPERS WITH CARBIDE TIPPED JAWS

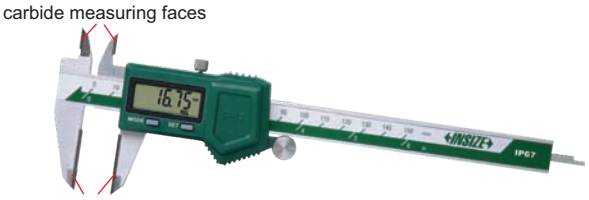
INSPECTION CERTIFICATE



1110-150A

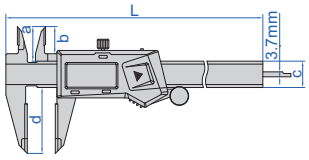


1110-150B



1110-150C

- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Meet DIN862
- Made of stainless steel
- Optional accessory: depth base attachment (code **6140**)



Non waterproof, with data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	L	a	b	c	d	Remark
1110-150A*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped upper and lower jaws
1110-200A*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm	carbide tipped upper and lower jaws
1110-300A*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm	carbide tipped upper and lower jaws
1110-150B*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped lower jaws
1110-200B*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm	carbide tipped lower jaws
1110-300B*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm	carbide tipped lower jaws

Non waterproof, built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	a	b	c	d	Remark
1110-150AWL*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped upper and lower jaws
1110-200AWL*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm	carbide tipped upper and lower jaws
1110-300AWL*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm	carbide tipped upper and lower jaws
1110-150BWL*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped lower jaws
1110-200BWL*	0-200mm/0-8"	±0.03mm	286mm	24mm	19mm	16mm	50mm	carbide tipped lower jaws
1110-300BWL*	0-300mm/0-12"	±0.03mm	400mm	25mm	20.5mm	16mm	60mm	carbide tipped lower jaws

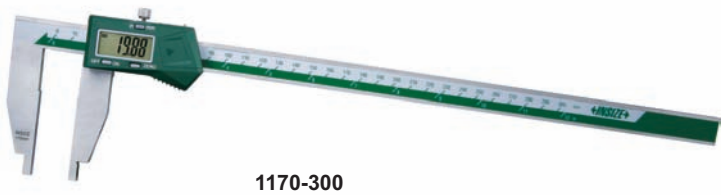
IP67 dust/waterproof, without data interface

Code	Range	Accuracy	L	a	b	c	d	Remark
1110-150C*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped upper and lower jaws
1110-150D*	0-150mm/0-6"	±0.03mm	236mm	21mm	16mm	16mm	40mm	carbide tipped lower jaws

*Supplied with manufacturer inspection certificate

DATA OUTPUT

DIGITAL CALIPERS



1170-300

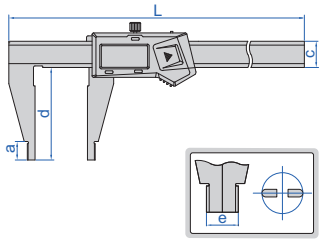
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	a	c	d	e	L
1170-200	0-200mm/0-8"	±0.03mm	12mm	17mm	60mm	10mm	314mm
1170-306	0-300mm/0-12"	±0.04mm	12mm	17mm	60mm	10mm	420mm
1170-300	0-300mm/0-12"	±0.06mm	12mm	17mm	90mm	10mm	420mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	a	c	d	e	L
1170-200WL	0-200mm/0-8"	±0.03mm	12mm	17mm	60mm	10mm	314mm
1170-306WL	0-300mm/0-12"	±0.04mm	12mm	17mm	60mm	10mm	420mm
1170-300WL	0-300mm/0-12"	±0.06mm	12mm	17mm	90mm	10mm	420mm



DATA OUTPUT

DIGITAL CALIPERS



1171-300

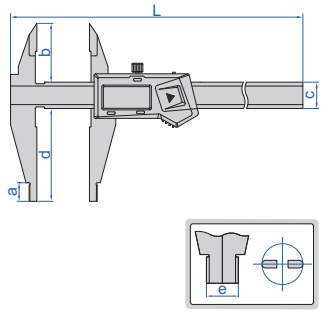
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	a	b	c	d	e	L
1171-200	0-200mm/0-8"	±0.03mm	12mm	38mm	17mm	60mm	10mm	320mm
1171-250	0-250mm/0-10"	±0.03mm	12mm	38mm	17mm	60mm	10mm	365mm
1171-306	0-300mm/0-12"	±0.04mm	12mm	38mm	17mm	60mm	10mm	420mm
1171-300	0-300mm/0-12"	±0.06mm	12mm	38mm	17mm	90mm	10mm	420mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	a	b	c	d	e	L
1171-200WL	0-200mm/0-8"	±0.03mm	12mm	38mm	17mm	60mm	10mm	320mm
1171-250WL	0-250mm/0-10"	±0.03mm	12mm	38mm	17mm	60mm	10mm	365mm
1171-306WL	0-300mm/0-12"	±0.04mm	12mm	38mm	17mm	60mm	10mm	420mm
1171-300WL	0-300mm/0-12"	±0.06mm	12mm	38mm	17mm	90mm	10mm	420mm



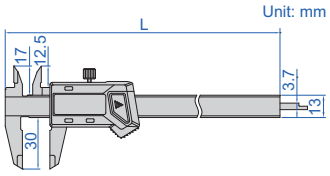
MINI DIGITAL CALIPERS

ATTENTION:
NO DATA OUTPUT

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: zero, mm/inch, on/off
- Automatic power off, move the digital unit to turn on power
- Battery LR44
- Meet DIN862
- Made of stainless steel



1111-100A



Code	Range	Accuracy	L
1111-75A	0-75mm/0-3"	±0.02mm	144mm
1111-100A	0-100mm/0-4"	±0.02mm	170mm

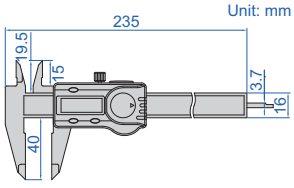
PLASTIC DIGITAL CALIPER

ATTENTION:
NO DATA OUTPUT

- Non waterproof
- Made of hard plastic, non-magnetic and non electric conductive
- Prevent workpieces from scratching by calipers
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Battery CR2032, automatic power off



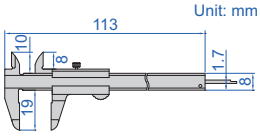
1139-150



Code	Range	Accuracy
1139-150	0-150mm/0-6"	±0.1mm

MINI VERNIER CALIPERS

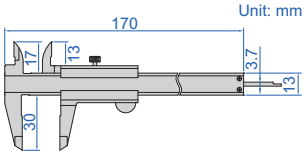
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

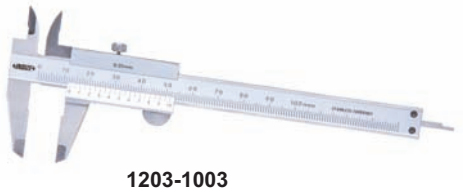




1204-70

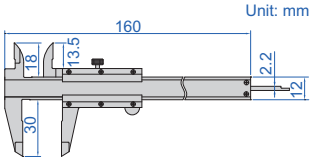
Code	Range	Graduation	Accuracy
1204-70	0-70mm	0.05mm	±0.05mm





1203-1003

Code	Range	Graduation	Accuracy
1203-1003	0-100mm	0.05mm	±0.05mm





1201-1003

Code	Range	Graduation	Accuracy
1201-1003	0-100mm	0.05mm	±0.05mm

VERNIER CALIPERS

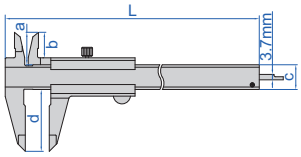
POPULAR MODEL



1205-150S

Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-150S	0-150mm/0-6"	±0.05mm	235	20.5	15.5	16	40
1205-200S	0-200mm/0-8"	±0.05mm	290	23.5	19	17	50
1205-250S	0-250mm/0-10"	±0.05mm	364	27.5	22	20	64
1205-300S	0-300mm/0-12"	±0.05mm	414	27.5	22	20	64



Graduation 0.05mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1503S	0-150mm	±0.05mm	235	20.5	15.5	16	40
1205-2003S	0-200mm	±0.05mm	290	23.5	19	17	50
1205-2503S	0-250mm	±0.05mm	350	26	21.5	20	64
1205-3003S	0-300mm	±0.05mm	414	27.5	22	20	64

- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1502S	0-150mm/0-6"	±0.03mm	235	20.5	15.5	16	40
1205-2002S	0-200mm/0-8"	±0.03mm	290	23.5	19	17	50
1205-2502S	0-250mm/0-10"	±0.03mm	364	27.5	22	20	64
1205-3002S	0-300mm/0-12"	±0.03mm	414	27.5	22	20	64

Graduation 0.02mm (mm)

Code	Range	Accuracy	L	a	b	c	d
1205-1501S	0-150mm	±0.03mm	235	20.5	15.5	16	40
1205-2001S	0-200mm	±0.03mm	290	23.5	19	17	50
1205-2501S	0-250mm	±0.03mm	350	26	21.5	20	64
1205-3001S	0-300mm	±0.03mm	414	27.5	22	20	64

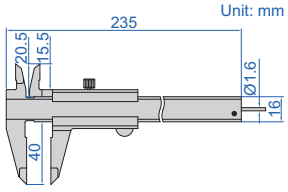
VERNIER CALIPER WITH ROUND DEPTH BAR



1202-150

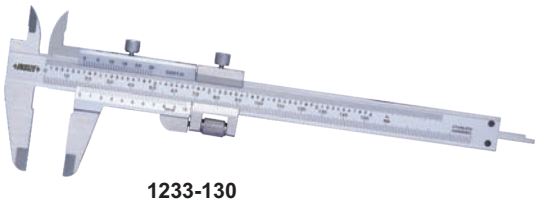
- Graduation 0.05mm/1/128"
- Round depth bar
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Accuracy
1202-150	0-150mm/0-6"	±0.05mm



VERNIER CALIPERS WITH FINE ADJUSTMENT

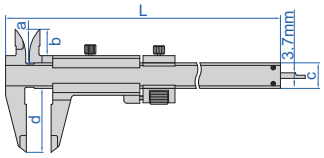
- Graduation 0.02mm/0.001"
- With fine adjustment
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface



1233-130

(mm)

Code	Range	Accuracy	L	a	b	c	d
1233-130	0-130mm/0-5"	±0.03mm	230	20.5	16.5	16	40
1233-180	0-180mm/0-7"	±0.03mm	295	23.5	19	16	50
1233-280	0-280mm/0-11"	±0.03mm	410	26	20	20	60



VERNIER CALIPERS WITH THUMB CLAMP

- Meet DIN862
- With thumb clamp
- Made of stainless steel
- Satin chrome plated reading surface



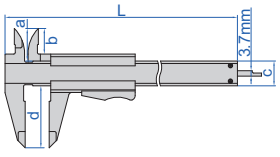
1223-150

Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	L	a	b	c	d
1223-150	0-150mm/0-6"	±0.05mm	230	20.5	16.5	16	40
1223-200	0-200mm/0-8"	±0.05mm	295	23.5	19	16	50

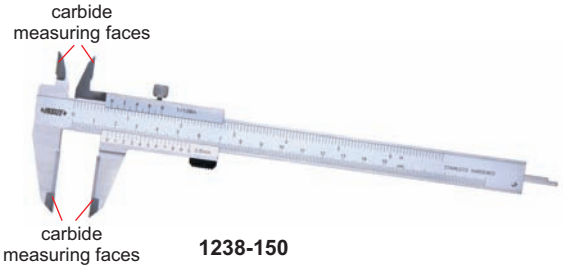
Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	L	a	b	c	d
1223-1502	0-150mm/0-6"	±0.03mm	230	20.5	16.5	16	40
1223-2002	0-200mm/0-8"	±0.03mm	295	23.5	19	16	50



VERNIER CALIPERS WITH CARBIDE TIPPED JAWS

- Carbide tipped jaws for inside and outside measurements
- Meet DIN862
- Made of stainless steel
- Satin chrome plated reading surface



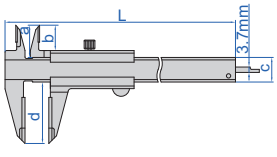
1238-150

Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	L	a	b	c	d
1238-150	0-150mm/0-6"	±0.05mm	230	21	16.5	16	40
1238-200	0-200mm/0-8"	±0.05mm	295	24	19	16	50
1238-300	0-300mm/0-12"	±0.05mm	410	25	20	16	60

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	L	a	b	c	d
1238-1502	0-150mm/0-6"	±0.03mm	230	21	16.5	16	40
1238-2002	0-200mm/0-8"	±0.03mm	295	24	19	16	50
1238-3002	0-300mm/0-12"	±0.03mm	410	25	20	16	60



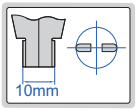
VERNIER CALIPERS



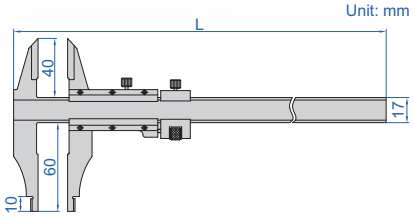
1217-3001

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Graduation	Accuracy	L
1217-2503	0-250mm	0.05mm	±0.05mm	360mm
1217-3001	0-300mm	0.02mm	±0.03mm	410mm



Unit: mm



VERNIER CALIPERS (ANTI MAGNETIC)

ATTENTION: NOT HARDENED

PURE COPPER

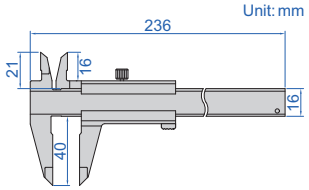


1224-150A

- Suitable for magnetic parts
- Made of pure copper

Code	Range	Graduation	Accuracy
1224-150A	0-150mm	0.02mm	±0.05mm
1224-1501A	0-150mm	0.05mm	±0.05mm

Unit: mm



LEFT HAND VERNIER CALIPERS

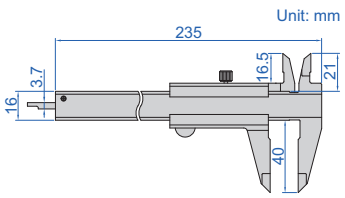


1239-1502

- Designed for left handed users
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Graduation	Accuracy
1239-150	0-150mm/0-6"	0.05mm/1/128"	±0.05mm
1239-1503	0-150mm	0.05mm	±0.05mm
1239-1502	0-150mm/0-6"	0.02mm/0.001"	±0.03mm
1239-1501	0-150mm	0.02mm	±0.03mm

Unit: mm



TEETH VERNIER CALIPER

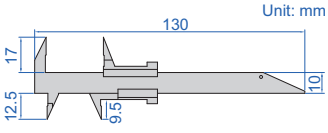


1226-70

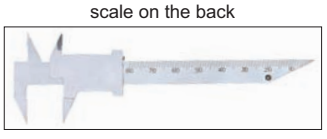
- Used for teeth
- Made of stainless steel

Code	Range	Graduation	Accuracy
1226-70	0-70mm	0.1mm	±0.1mm

Unit: mm

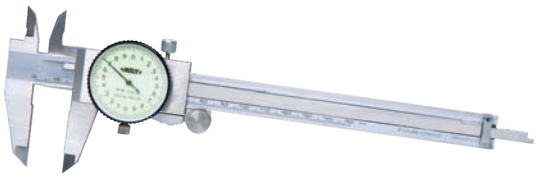


scale on the back



DIAL CALIPERS

INSPECTION CERTIFICATE
SHOCK PROOF

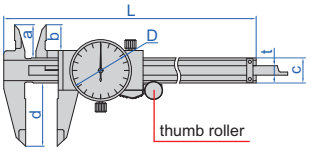


- Shockproof dial indicator
- Made of stainless steel

1312-150A

Dial indicator graduation: 0.02mm (mm)

Code	Range	Accuracy	Thumb roller	L	a	b	c	d	D	t
1312-150A*	0-150mm	±0.03mm	with	235	21	16.5	16	40	Ø39	6.5
1312-200A*	0-200mm	±0.03mm	with	288	24	19	16	48	Ø39	6.5
1312-300A*	0-300mm	±0.03mm	with	410	28	22	20	62	Ø44.5	7.5
1312-100AW*	0-100mm	±0.02mm	without	165	18	13	13	30	Ø32	6



Dial indicator graduation: 0.01mm (mm)

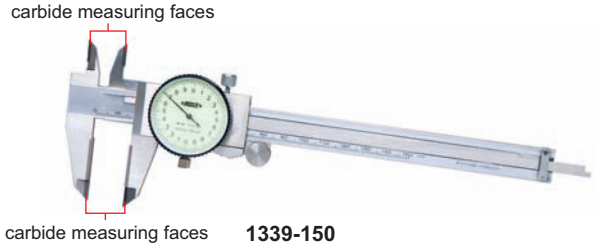
Code	Range	Accuracy	Thumb roller	L	a	b	c	d	D	t
1311-150A*	0-150mm	±0.03mm	with	235	21	16.5	16	40	Ø39	6.5
1311-200A*	0-200mm	±0.03mm	with	288	24	19	16	48	Ø39	6.5
1311-300A*	0-300mm	±0.03mm	with	410	28	22	20	62	Ø44.5	7.5

*Supplied with manufacturer inspection certificate

DIAL CALIPERS WITH CARBIDE TIPPED JAWS

INSPECTION CERTIFICATE
SHOCK PROOF

- Shockproof dial indicator
- Dial indicator graduation: 0.02mm
- Carbide tipped jaws for inside and outside measurements
- Made of stainless steel

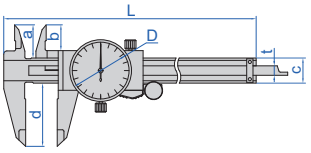


1339-150

(mm)

Code	Range	Accuracy	L	a	b	c	d	D	t
1339-150*	0-150mm	±0.03mm	235	21	16.5	16	40	Ø39	6.5
1339-200*	0-200mm	±0.03mm	288	24	19	16	48	Ø39	6.5
1339-300*	0-300mm	±0.03mm	410	28	22	20	62	Ø44.5	7.5

*Supplied with manufacturer inspection certificate



DIAL CALIPERS

SHOCK PROOF

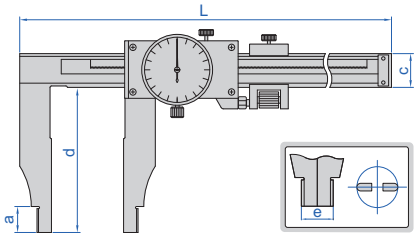


- Shockproof dial indicator
- Dial indicator graduation: 0.02mm
- Made of stainless steel

1316-500

(mm)

Code	Range	Accuracy	a	c	d	e	L
1316-500	0-500mm	±0.05mm	18	21	90	20	650
1316-600	0-600mm	±0.05mm	18	21	90	20	750
1316-1000	0-1000mm	±0.07mm	24	28	150	20	1190
1316-1500	0-1500mm	±0.11mm	24	28	150	20	1690



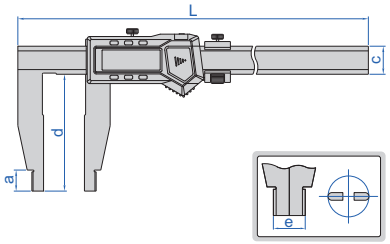
DATA OUTPUT

POPULAR MODEL

DIGITAL CALIPERS



1106-501



- Non waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Made of stainless steel
- Optional accessory: accessory set for large digital calipers (code **6145-500/6146-500B**, for calipers with c=24mm)

With data interface **(mm)**

Code	Range	Accuracy	a	c	d	e	L	Wireless transmitter (optional)
1106-301	0-300mm/0-12"	±0.05mm	18	24	100	20	420	**7315-22** (receiver is needed) page 7
1106-302	0-300mm/0-12"	±0.05mm	18	24	150	20	475	
1106-451	0-450mm/0-18"	±0.05mm	18	24	100	20	625	
1106-501	0-500mm/0-20"	±0.05mm	18	24	100	20	675	
1106-502	0-500mm/0-20"	±0.06mm	18	24	150	20	675	
1106-503	0-500mm/0-20"	±0.06mm	24	31	200	20	675	
1106-505	0-500mm/0-20"	±0.08mm	24	42	300	20	675	**7315-20B** (receiver is needed)
1106-601	0-600mm/0-24"	±0.05mm	18	24	100	20	770	**7315-22** (receiver is needed) page 7
1106-602	0-600mm/0-24"	±0.06mm	18	24	150	20	770	
1106-603	0-600mm/0-24"	±0.06mm	24	31	200	20	825	
1106-802	0-800mm/0-32"	±0.07mm	24	31	150	20	1025	
1106-1002	0-1000mm/0-40"	±0.08mm	24	31	150	20	1220	
1106-1003	0-1000mm/0-40"	±0.08mm	24	31	200	20	1220	
1106-1005	0-1000mm/0-40"	±0.10mm	24	42	300	20	1220	**7315-20B** (receiver is needed)
1106-1502	0-1500mm/0-60"	±0.11mm	24	42	150	20	1780	
1106-1503	0-1500mm/0-60"	±0.12mm	24	42	200	20	1780	
1106-2002	0-2000mm/0-80"	±0.14mm	24	42	150	20	2290	
1106-2003	0-2000mm/0-80"	±0.14mm	24	42	200	20	2290	
1106-2502	0-2500mm/0-100"	±0.22mm	24	42	150	20	2800	
1106-3002	0-3000mm/0-120"	±0.26mm	24	42	150	20	3300	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	a	c	d	e	L
1106-301WL	0-300mm/0-12"	±0.05mm	18mm	24mm	100mm	20mm	420mm
1106-302WL	0-300mm/0-12"	±0.05mm	18mm	24mm	150mm	20mm	420mm
1106-451WL	0-450mm/0-18"	±0.05mm	18mm	24mm	100mm	20mm	625mm
1106-501WL	0-500mm/0-20"	±0.05mm	18mm	24mm	100mm	20mm	675mm
1106-502WL	0-500mm/0-20"	±0.06mm	18mm	24mm	150mm	20mm	675mm
1106-601WL	0-600mm/0-24"	±0.05mm	18mm	24mm	100mm	20mm	770mm
1106-602WL	0-600mm/0-24"	±0.06mm	18mm	24mm	150mm	20mm	770mm

DIGITAL CALIPERS

DATA OUTPUT

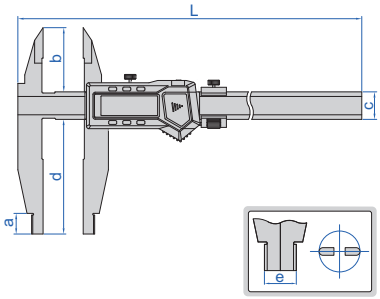


1117-501

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Made of stainless steel
- Optional accessory: accessory set for large digital calipers (code **6145-500/6146-500B**, for calipers with c=24mm)

With data interface (optional wireless transmitter code 7315-22, receiver is needed page 7)

Code	Range	Accuracy	a	b	c	d	e	L
1117-301	0-300mm/0-12"	±0.05mm	18mm	56mm	24mm	100mm	20mm	420mm
1117-501	0-500mm/0-20"	±0.05mm	18mm	56mm	24mm	100mm	20mm	675mm
1117-502	0-500mm/0-20"	±0.06mm	24mm	56mm	24mm	150mm	20mm	675mm
1117-601	0-600mm/0-24"	±0.05mm	18mm	56mm	24mm	100mm	20mm	770mm
1117-802	0-800mm/0-32"	±0.07mm	24mm	67mm	31mm	150mm	20mm	1025mm
1117-1002	0-1000mm/0-40"	±0.08mm	24mm	67mm	31mm	150mm	20mm	1220mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	a	b	c	d	e	L
1117-301WL	0-300mm/0-12"	±0.05mm	18mm	56mm	24mm	100mm	20mm	420mm
1117-501WL	0-500mm/0-20"	±0.05mm	18mm	56mm	24mm	100mm	20mm	675mm
1117-502WL	0-500mm/0-20"	±0.06mm	24mm	56mm	24mm	150mm	20mm	675mm
1117-601WL	0-600mm/0-24"	±0.05mm	18mm	56mm	24mm	100mm	20mm	770mm

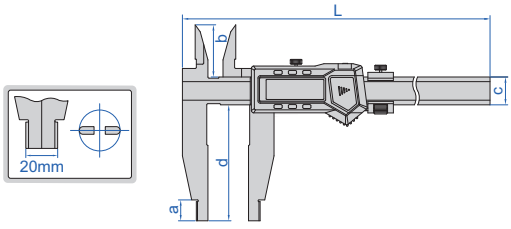
DIGITAL CALIPERS

DATA OUTPUT



1136-501

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Made of stainless steel
- Optional accessory: accessory set for large digital calipers (code **6145-500/6146-500B**, for calipers with c=24mm)



With data interface (optional wireless transmitter code 7315-22, receiver is needed page 7, for calipers with c=24mm or 31mm) **(mm)**

Code	Range	Accuracy	a	b	c	d	L
1136-301	0-300mm/0-12"	±0.05mm	18	45	24	100	420
1136-451	0-450mm/0-18"	±0.05mm	18	45	24	100	625
1136-501	0-500mm/0-20"	±0.05mm	18	45	24	100	675
1136-502	0-500mm/0-20"	±0.06mm	18	45	24	150	675
1136-503	0-500mm/0-20"	±0.06mm	24	60	31	200	675
1136-601	0-600mm/0-24"	±0.05mm	18	45	24	100	770
1136-1002	0-1000mm/0-40"	±0.08mm	24	60	31	150	1220
1136-1502	0-1500mm/0-60"	±0.11mm	24	60	42	150	1780
1136-2002	0-2000mm/0-80"	±0.14mm	24	60	42	150	2290

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed) **(mm)**

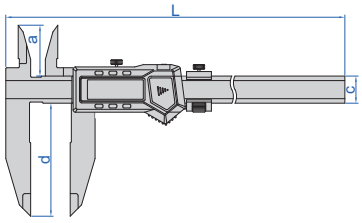
Code	Range	Accuracy	a	b	c	d	L
1136-301WL	0-300mm/0-12"	±0.05mm	18	45	24	100	420
1136-451WL	0-450mm/0-18"	±0.05mm	18	45	24	100	625
1136-501WL	0-500mm/0-20"	±0.05mm	18	45	24	100	675
1136-502WL	0-500mm/0-20"	±0.06mm	18	45	24	150	675
1136-601WL	0-600mm/0-24"	±0.05mm	18	45	24	100	770

DIGITAL CALIPERS

DATA OUTPUT



1135-601



- Non waterproof
- Resolution: 0.01mm/0.0005"
- Button function: on/off, zero, mm/inch, ABS, data preset
- Battery CR2032
- Made of stainless steel

With data interface (optional wireless transmitter code 7315-22, receiver is needed page 7) **(mm)**

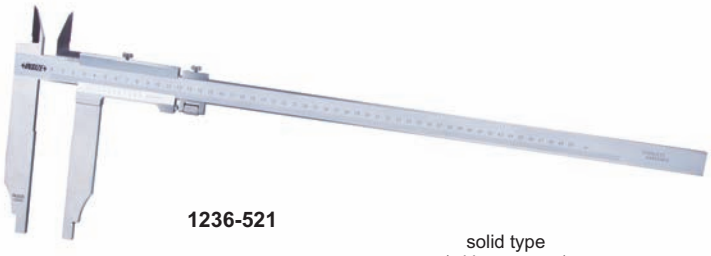
Code	Range	Accuracy	a	c	d	L
1135-451	0-450mm/0-18"	±0.05mm	45	24	100	625
1135-601	0-600mm/0-24"	±0.05mm	45	24	100	770
1135-1002	0-1000mm/0-40"	±0.08mm	60	31	150	1220

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed) **(mm)**

Code	Range	Accuracy	a	c	d	L
1135-451WL	0-450mm/0-18"	±0.05mm	45	24	100	625
1135-601WL	0-600mm/0-24"	±0.05mm	45	24	100	770

VERNIER CALIPERS (SOLID TYPE)

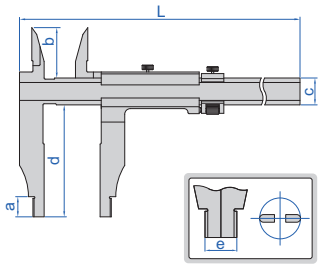
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



1236-521

solid type (without screw)





Graduation 0.05mm/1/128" **(mm)**

Code	Range	Accuracy	a	b	c	d	e	L
1236-394	0-300mm/0-12"	±0.07mm	12	38	20	90	10	450
1236-514	0-500mm/0-20"	±0.07mm	18	45	24	100	20	670
1236-524	0-500mm/0-20"	±0.08mm	18	45	24	150	20	670
1236-614	0-600mm/0-24"	±0.08mm	18	45	24	100	20	770
1236-824	0-800mm/0-32"	±0.09mm	24	60	31	150	20	1030
1236-1024	0-1000mm/0-40"	±0.12mm	24	60	31	150	20	1230

Graduation 0.02mm **(mm)**

Code	Range	Accuracy	a	b	c	d	e	L
1236-511	0-500mm	±0.05mm	18	45	24	100	20	670
1236-521	0-500mm	±0.06mm	18	45	24	150	20	670
1236-1021	0-1000mm	±0.08mm	24	60	31	150	20	1230

VERNIER CALIPERS (SOLID TYPE)

- Graduation 0.05mm/1/128"
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



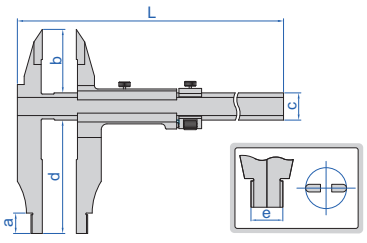
1207-514

(mm)

Code	Range	Accuracy	a	b	c	d	e	L
1207-394	0-300mm/0-12"	±0.07mm	12	40	20	90	10	440
1207-514	0-500mm/0-20"	±0.07mm	18	56	24	100	20	670
1207-524	0-500mm/0-20"	±0.08mm	18	56	24	150	20	670
1207-824	0-800mm/0-32"	±0.09mm	24	67	31	150	20	930
1207-1024	0-1000mm/0-40"	±0.12mm	24	67	31	150	20	1230

solid type (without screw)





VERNIER CALIPERS (SOLID TYPE)

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface

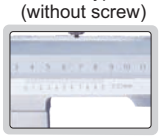


1208-511

Graduation 0.05mm/1/128" **(mm)**

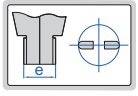
Code	Range	Accuracy	a	c	d	e	L
1208-214	0-200mm/0-8"	±0.06mm	10	20	100	10	330
1208-394	0-300mm/0-12"	±0.07mm	10	20	90	10	410
1208-324	0-300mm/0-12"	±0.07mm	18	24	150	20	410
1208-524	0-500mm/0-20"	±0.08mm	18	24	150	20	670
1208-614	0-600mm/0-24"	±0.08mm	18	24	100	20	770
1208-624	0-600mm/0-24"	±0.09mm	18	24	150	20	770
1208-824	0-800mm/0-32"	±0.09mm	24	31	150	20	1030
1208-1024	0-1000mm/0-40"	±0.12mm	24	31	150	20	1230
1208-1524	0-1500mm/0-60"	±0.16mm	24	42	150	20	1820
1208-2024	0-2000mm/0-80"	±0.20mm	24	42	150	20	2330

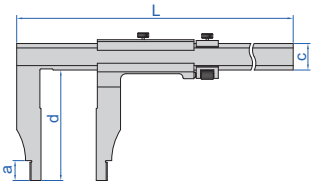
solid type
(without screw)



Graduation 0.02mm **(mm)**

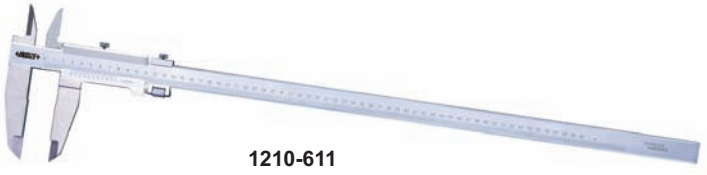
Code	Range	Accuracy	a	c	d	e	L
1208-511	0-500mm	±0.05mm	18	24	100	20	670
1208-521	0-500mm	±0.06mm	18	24	150	20	670
1208-1021	0-1000mm	±0.08mm	24	31	150	20	1230
1208-1521	0-1500mm	±0.11mm	24	42	150	20	1820





VERNIER CALIPERS (SOLID TYPE)

- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



1210-611

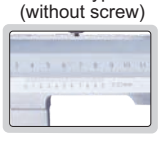
Graduation 0.05mm/1/128" **(mm)**

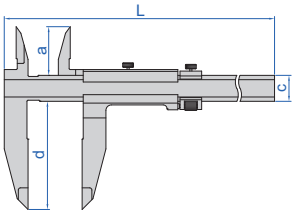
Code	Range	Accuracy	a	c	d	L
1210-614	0-600mm/0-24"	±0.08mm	45	24	100	770
1210-1024	0-1000mm/0-40"	±0.12mm	60	31	150	1230

Graduation 0.02mm **(mm)**

Code	Range	Accuracy	a	c	d	L
1210-611	0-600mm	±0.05mm	45	24	100	770
1210-1021	0-1000mm	±0.08mm	60	31	150	1230

solid type
(without screw)





VERNIER CALIPERS (SEPARATE TYPE)

POPULAR MODEL

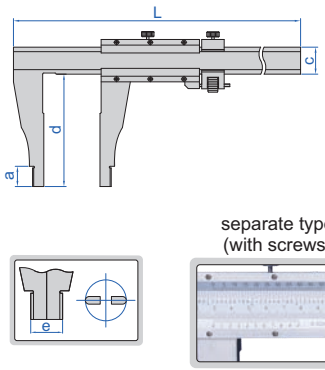
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



1214-500

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	a	c	d	e	L
1214-300	0-300mm/0-12"	±0.05mm	10	20	75	10	410
1214-450	0-450mm/0-18"	±0.05mm	18	24	100	20	620
1214-500	0-500mm/0-20"	±0.05mm	18	24	100	20	670
1214-600	0-600mm/0-24"	±0.05mm	18	24	100	20	770
1214-1000	0-1000mm/0-40"	±0.08mm	24	32	140	20	1216
1214-1500	0-1500mm/0-60"	±0.12mm	24	42	200	20	1830
1214-2000	0-2000mm/0-80"	±0.14mm	24	42	200	20	2320



Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	a	c	d	e	L
1214-6004	0-600mm/0-24"	±0.08mm	18	24	100	20	770
1214-1004	0-1000mm/0-40"	±0.12mm	24	32	140	20	1216

LONG JAW VERNIER CALIPERS (SEPARATE TYPE)

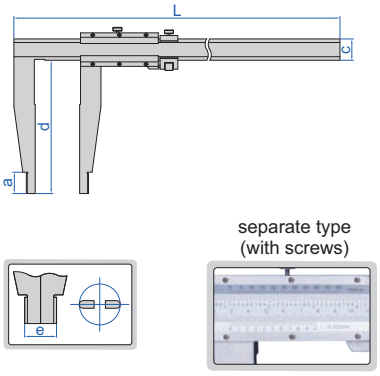
- With fine adjustment
- Made of stainless steel
- Satin chrome plated reading surface



1215-1032

Graduation 0.02mm/0.001" (mm)

Code	Range	Accuracy	a	c	d	e	L
1215-392	0-300mm/0-12"	±0.05mm	10	17	90	10	410
1215-322	0-300mm/0-12"	±0.05mm	18	24	150	20	470
1215-522	0-500mm/0-20"	±0.06mm	18	24	150	20	670
1215-532	0-500mm/0-20"	±0.06mm	18	24	200	20	670
1215-622	0-600mm/0-24"	±0.06mm	18	24	150	20	770
1215-642	0-600mm/0-24"	±0.08mm	24	32	250	20	870
1215-822	0-800mm/0-32"	±0.07mm	24	32	150	20	1020
1215-832	0-800mm/0-32"	±0.07mm	24	32	200	20	1020
1215-1032	0-1000mm/0-40"	±0.08mm	24	32	200	20	1220
1215-1052	0-1000mm/0-40"	±0.11mm	24	42	300	20	1330
1215-3052	0-3000mm/0-120"	±0.26mm	24	50	300	20	3360



Graduation 0.05mm/1/128" (mm)

Code	Range	Accuracy	a	c	d	e	L
1215-524	0-500mm/0-20"	±0.08mm	18	24	150	20	670
1215-1034	0-1000mm/0-40"	±0.12mm	24	32	200	20	1330

CALIPER INSPECTION GAUGE BLOCK AND RING GAUGE SETS

REFER TO PAGE 399 FOR DETAILS



4176-30

CALIPER/HEIGHT GAUGE CHECKERS

REFER TO PAGE 404 FOR DETAILS



horizontal use



vertical use

6884-300A

CALIPER END GRINDING MACHINE CODE 6309

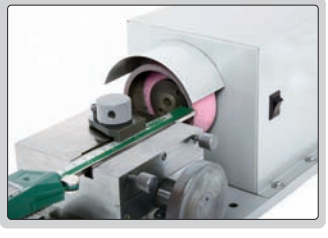
VIDEO



on/off

- Used for grinding the depth measuring surface of the end of calipers

application



SPECIFICATION

Power supply	220V, 50/60Hz
Dimension (L×W×H)	370×200×160mm
Weight	15kg

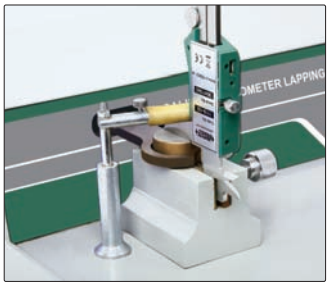
REFER TO PAGE 205
FOR DETAILS

CALIPER/MICROMETER LAPPING MACHINE CODE 6318

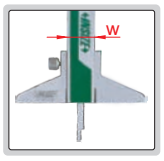


- For lapping measuring surfaces of caliper lower jaws

lapping measuring surfaces of caliper lower jaws



DEPTH BASE ATTACHMENTS

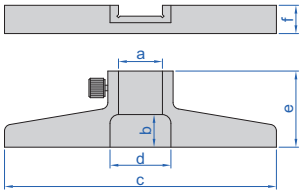




6140



6140-16B



- To increase the stability of depth measurement
- Made of stainless steel

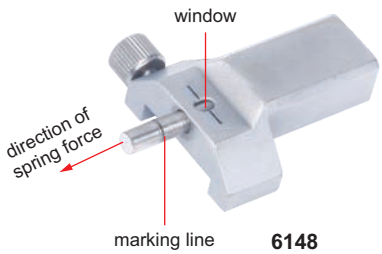
(mm)

Code	a	b	c	d	e	f
6140	16.5	9	75	18	30	6
6140-300A	20	15	125	22	34	9
6140-16B	16	12.5	75	24.5	30	11
6140-300B	20	15	125	28	35	13

Application

Code	Type	Application
6140	narrow base (f=6mm)	suitable for **1195/1118/1113/1108/1103/1114/1109/1130/1193/1110** series digital calipers with beam width (w) 16mm
6140-300A	narrow base (f=9mm)	suitable for **1196** series digital calipers with beam width (w) 20mm
6140-16B	wide base (f=11mm), high stability	suitable for **1195/1118/1113/1108/1103/1114/1109/1130/1193/1110** series digital calipers and **1312/1311/1339** series dial calipers with b am width (w) 16mm
6140-300B	wide base (f=13), high stability	suitable for **1196** series digital calipers and **1312/1311/1339** series dial calipers with beam width (w) 20mm

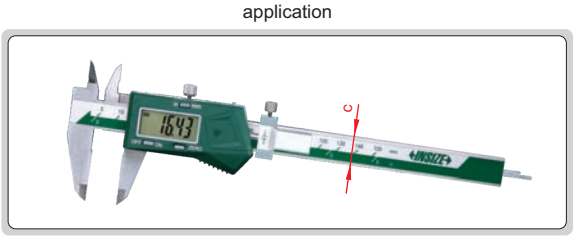
MEASRUING FORCE DEVICE OF CALIPERS



6148

- Constant force for external measurement
- Made of stainless steel

application



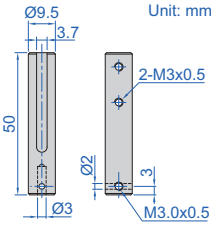
Code	Application
6148	suitable for calipers with beam width (c) 16mm

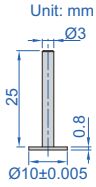
ACCESSORY SET FOR DIGITAL CALIPERS CODE 6144

VIDEO

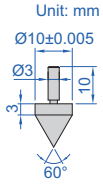


6144

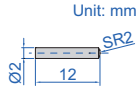




disk points (stainless steel)



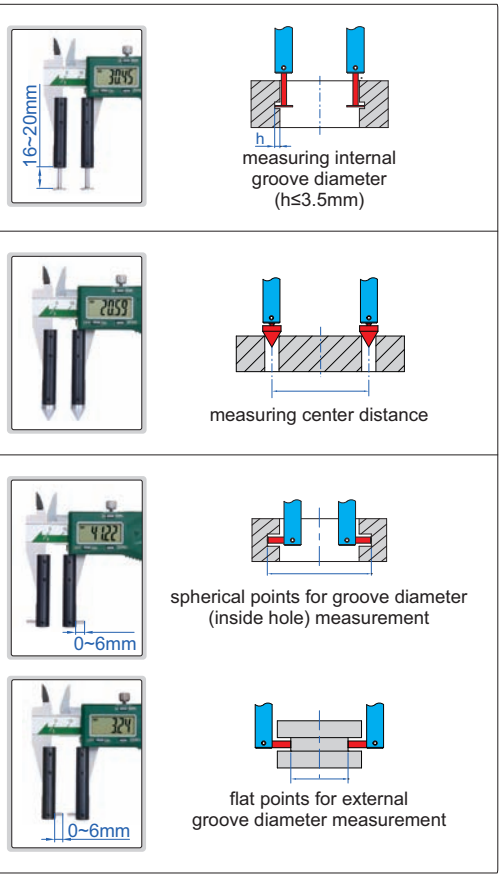
conical points (stainless steel)



spherical/flat points (stainless steel)

- Suitable for 0-150mm/0-6" and 0-200mm/0-8" digital calipers (thickness of lower jaws≤3.7mm)

Code
6144

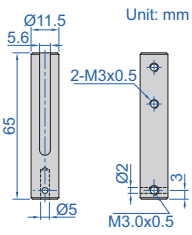


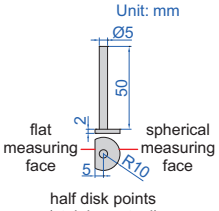
ACCESSORY SET FOR LARGE DIGITAL CALIPERS CODE 6145-500

VIDEO

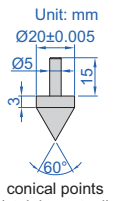


6145-500

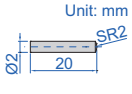




half disk points (stainless steel)



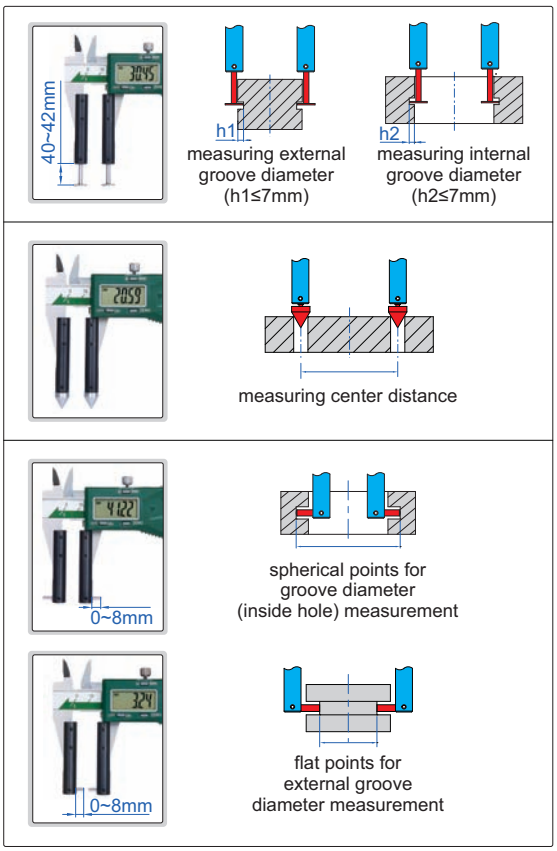
conical points (stainless steel)



spherical/flat points (stainless steel)

- Suitable for 0-500mm/0-20" and 0-600mm/0-24" digital calipers (thickness of lower jaws≤5.6mm)

Code
6145-500

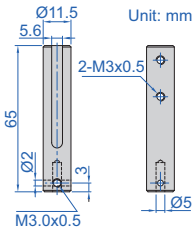


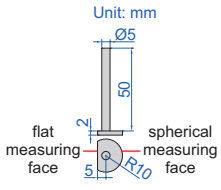
ACCESSORY SET FOR LARGE DIGITAL CALIPERS (WITH SIDE POINTS) CODE 6146-500B



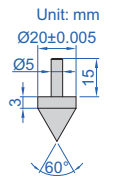


6146-500B

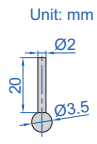




half disk points (stainless steel)

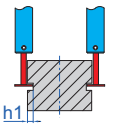


conical points (stainless steel)

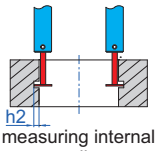


ball points (stainless steel)



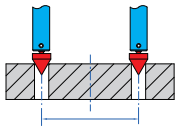


measuring external groove diameter (h1≤7mm)



measuring internal groove diameter (h2≤7mm)

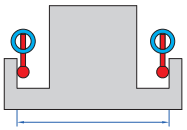




measuring center distance





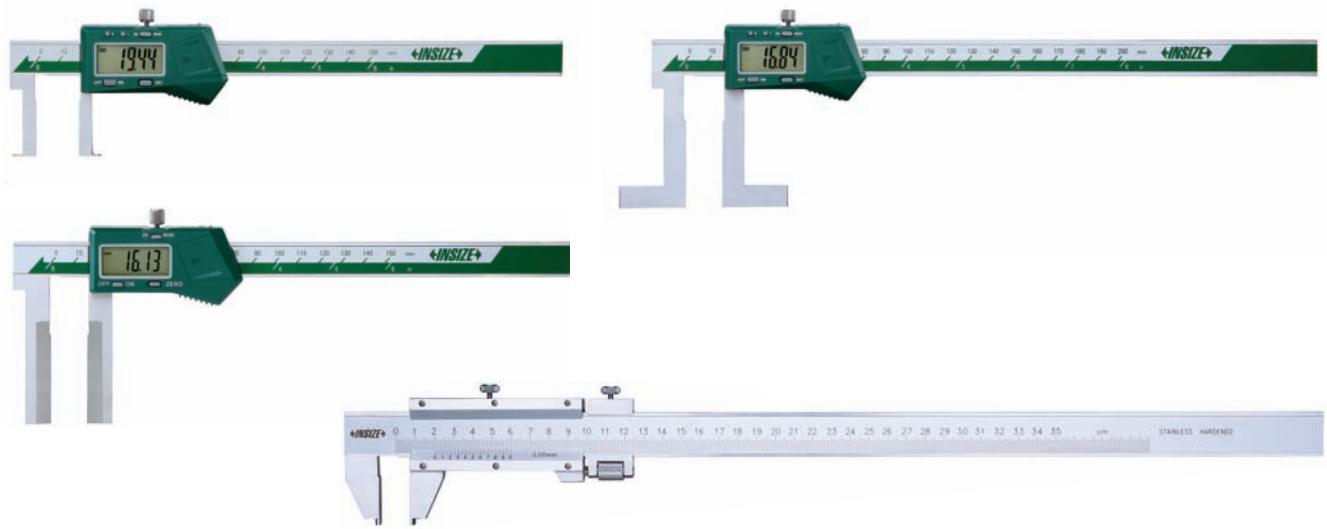


measuring slot width

- Suitable for 0-500mm/0-20" and 0-600mm/0-24" digital calipers (thickness of lower jaws≤5.6mm)

Code
6146-500B

CUSTOMIZED CALIPER



- Caliper can be customized according to customers' requirements

UNIVERSAL CALIPERS

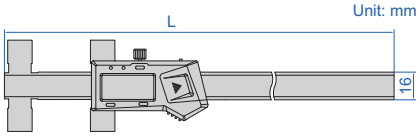
DATA OUTPUT





1511-200

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

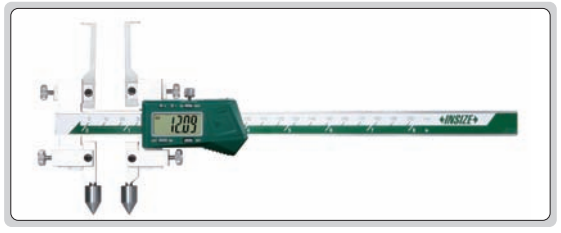
Code	Range*	Accuracy	L
1511-200	0-200mm/0-8"	±0.06mm	286mm
1511-300	0-300mm/0-12"	±0.06mm	400mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range*	Accuracy	L
1511-200WL	0-200mm/0-8"	±0.06mm	286mm
1511-300WL	0-300mm/0-12"	±0.06mm	400mm

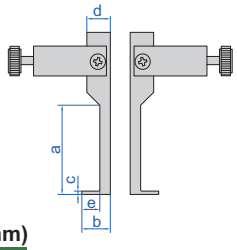
*The range changes according to different points

upper and lower jaws can be fitted with a variety of points



Flat head groove points (optional)



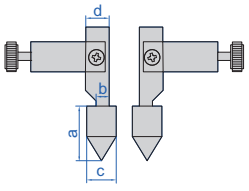


(mm)

Code	a	b	c	d	e
1511-A01	12	2.5	0.4	8	1
1511-A02	16	3.5	0.4	8	2
1511-A03	25	7.5	0.6	8	5
1511-A04	30	10	1	8	6.5
1511-A05	80	22	1.5	12	10

Centerline points (optional)

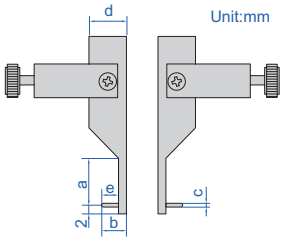




(mm)

Code	a	b	c	d
1511-E01	10	4	Ø5	8
1511-E02	20	4	Ø10	8
1511-E03	25	8	Ø15	12

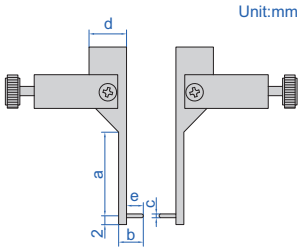
Cylindrical groove points (optional)



(mm)

Code	a	b	c	d	e
1511-B01	20	5	Ø1	8	2
1511-B02	40	10	Ø2	8	5
1511-B03	80	22	Ø2	12	10
1511-D01	63	12	Ø2	12	7
1511-D02	63	12	Ø4	12	7

Cylindrical groove points (optional)



(mm)

Code	a	b	c	d	e
1511-C01	63	12	Ø2	12	7
1511-C02	63	12	Ø4	12	7

VIDEO

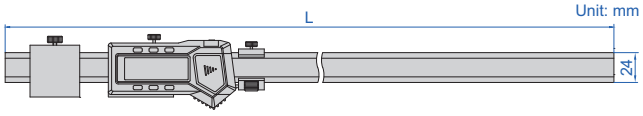
DATA OUTPUT

UNIVERSAL CALIPERS



- Non waterproof
- Buttons: on/off, set, mm/inch, ABS, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

1125-600



With data interface (optional wireless transmitter code 7315-22, receiver is needed page 7)

Code	Range*	Resolution	Accuracy	L
1125-600	0-600mm/0-24"	0.01mm/0.0005"	±0.05mm	778mm
1125-1000	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1205mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range*	Resolution	Accuracy	L
1125-600WL	0-600mm/0-24"	0.01mm/0.0005"	±0.05mm	778mm
1125-1000WL	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1205mm

*The range changes according to different points

working with stands

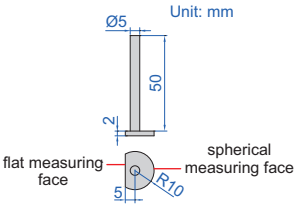


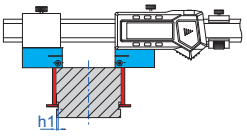
working with measuring jaws



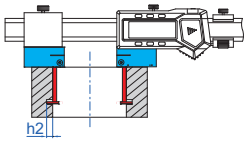
Half disk points (included)







measuring external groove diameter with flat measuring face (depth h1≤2.5mm)

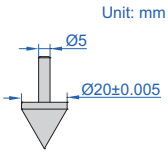


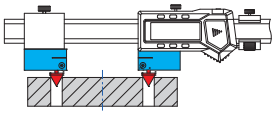
measuring internal groove diameter with spherical measuring face (depth h2≤7.5mm)

Conical points (optional)



Code
1125-T101



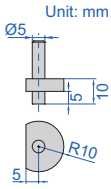


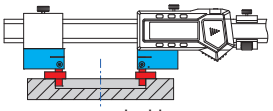
measuring center distance

Round shoulder points (optional)



Code
1125-T102



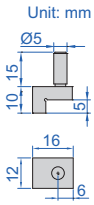


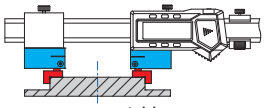
measure inside diameter of shallow hole

Flat shoulder points (optional)



Code
1125-T103

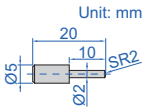


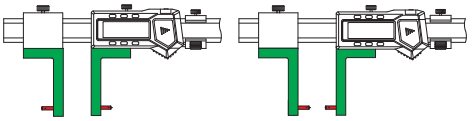


measure outside diameter of low boss

Spherical points (included)

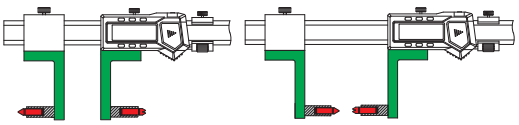






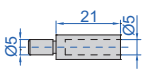
Point sleeve (optional)





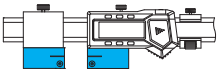
working with multifunctional points, ball points and screw thread points

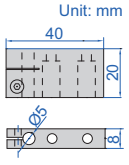
Code
1125-T104



Stands (included)





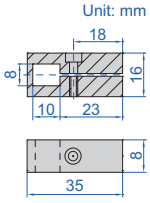


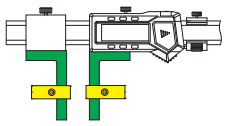
To be continued

Continued from previous page

Depth stop (included)

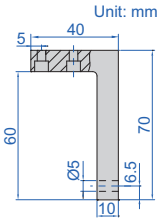


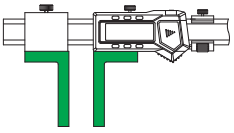




Measuring jaws (included)







Multifunctional points 7392* (optional, page 51)



*It is necessary to use point sleeve (code **1125-T104**) for these points

Ball points 7391* (optional, page 51)



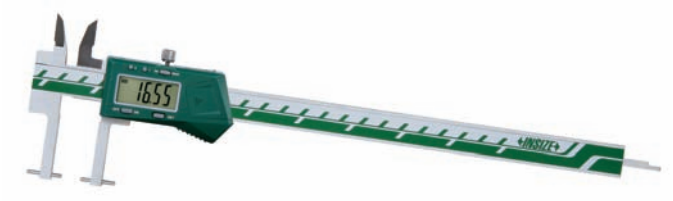
Screw thread points 7381*, 7321* (optional, page 51)



DIGITAL CALIPERS WITH INTERCHANGEABLE POINTS

DATA OUTPUT

VIDEO



1526-200

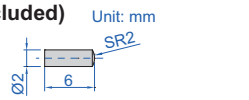
- Non waterproof
- Supplied with 3 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: points

preset buttons

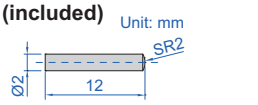


short spherical points (included)



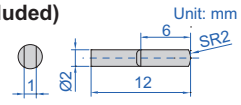


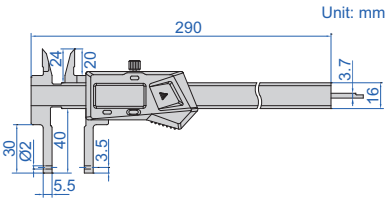
long spherical/flat points (included)



spherical blade points (included)







With data interface

Code	Wireless transmitter (optional)
1526-200	**7315-25** (receiver is needed) page 7

Built-in wireless

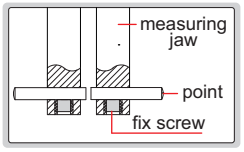
Code	Receiver (optional)
1526-200WL	code **7315-2/3/6/7/8/9**

Point	Range	Accuracy	Application
short spherical points	12-212mm/0.5-8.5" (internal)	±0.03mm	for grooves inside small hole
long spherical/flat points	24-224mm/1-8.8" (internal) 0-187mm/0-7.5" (external)	±0.03mm	spherical points for grooves inside hole flat points for external grooves
spherical blade points	24-224mm/1-8.8" (internal) 0-187mm/0-7.5" (external)	±0.03mm	for narrow grooves inside hole

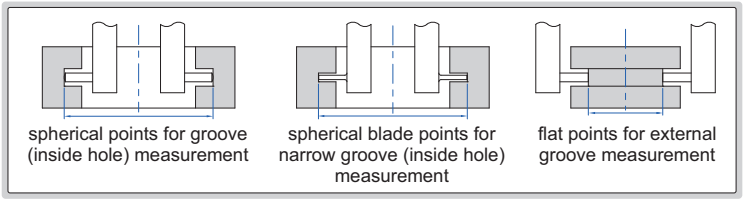
zero setting block for external measurement (included)



install points



measure internal and external grooves

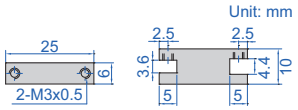


To be continued

Continued from previous page

Depth stop (optional)

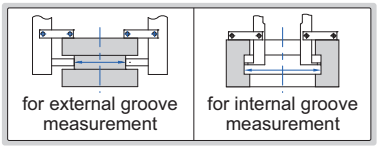
Code
6143





6143

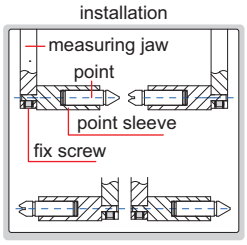




Point sleeve (optional)



1526-T101

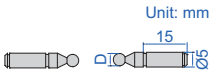


Code
1526-T101

Ball points (optional)



7391-T5

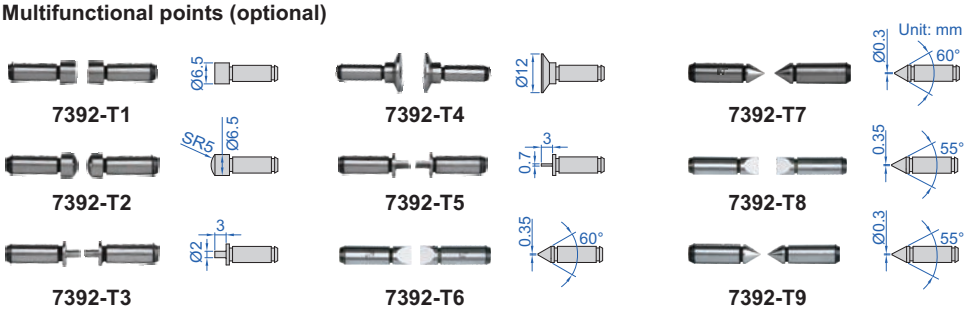


*It is necessary to use point sleeve (code **1526-T101**) for these points

Range of **1526-200 and **1526-200WL** after installing the points and point sleeve

Code	Ball dia. (D)	Range**
7391-T3*	SØ2.0mm	75-275mm/3.0-10.8" (internal) 0-146mm/0-5.7" (external)
7391-T4*	SØ2.5mm	76-276mm/3.0-10.8" (internal) 0-145mm/0-5.7" (external)
7391-T5*	SØ3.0mm	77-277mm/3.0-10.9" (internal) 0-144mm/0-5.6" (external)
7391-T6*	SØ3.5mm	78-278mm/3.1-10.9" (internal) 0-143mm/0-5.6" (external)
7391-T7*	SØ4.0mm	79-279mm/3.1-10.9" (internal) 0-142mm/0-5.6" (external)
7391-T8*	SØ4.5mm	80-280mm/3.2-11.0" (internal) 0-141mm/0-5.5" (external)
7391-T9*	SØ5.0mm	81-281mm/3.2-11.0" (internal) 0-140mm/0-5.5" (external)
7391-T10*	SØ6.0mm	83-283mm/3.3-11.1" (internal) 0-138mm/0-5.4" (external)

Multifunctional points (optional)



Range**
66-266mm/2.6-10.5" (internal), 0-155mm/0-6.1" (external)

Range of **1526-200 and **1526-200WL** after installing the points and point sleeve

Code	Type
7392-T1*	flat
7392-T2*	spherical
7392-T3*	spline
7392-T4*	disk
7392-T5*	blade
7392-T6*	knife-edge
7392-T7*	point
7392-T8*	knife-edge
7392-T9*	point

*It is necessary to use point sleeve (code **1526-T101**) for these points

Screw thread points (optional)



7321-T16



7381-T11

Internal thread (60° thread angle)

Code	Pitch
7321-T11*	0.4-0.5mm/64-48TPI
7321-T12*	0.6-0.9mm/44-28TPI
7321-T13*	1-1.75mm/24-14TPI
7321-T14*	2-3mm/13-9TPI
7321-T15*	3.5-5mm/8-5TPI
7321-T16*	5.5-7mm/4.5-3.5TPI
7321-T1S*	6 pairs/set, including all above points

External thread (60° thread angle)

Code	Pitch
7381-T11*	0.4-0.5mm/64-48TPI
7381-T12*	0.6-0.9mm/44-28TPI
7381-T13*	1-1.75mm/24-14TPI
7381-T14*	2-3mm/13-9TPI
7381-T15*	3.5-5mm/8-5TPI
7381-T16*	5.5-7mm/4.5-3.5TPI
7381-TS*	6 pairs/set, including all above points

Range**
66-266mm/2.6-10.5" (internal) 0-155mm/0-6.1" (external)

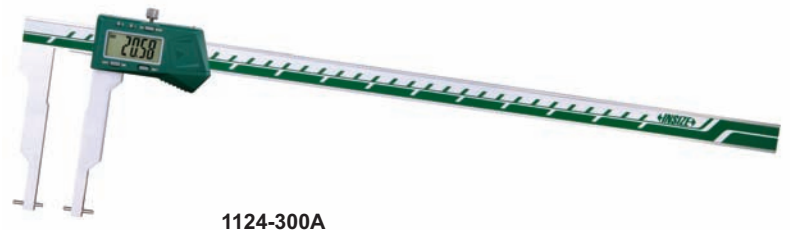
Range of **1526-200 and **1526-200WL** after installing the points and point sleeve

*It is necessary to use point sleeve (code **1526-T101**) for these points

DIGITAL CALIPERS WITH INTERCHANGEABLE POINTS

DATA OUTPUT

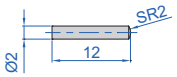
VIDEO



1124-300A

short spherical/flat points (included)

Unit: mm



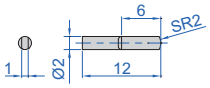
long spherical/flat points (included)

Unit: mm



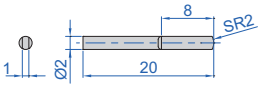
short spherical blade points (included)

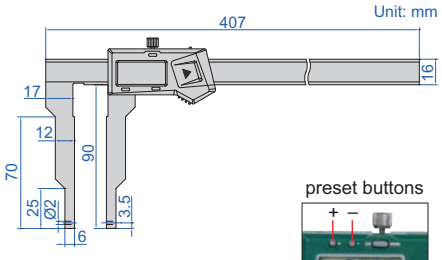
Unit: mm



long spherical blade points (included)

Unit: mm





preset buttons

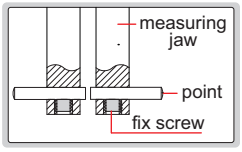


zero setting block for external measurement (included)



- Non waterproof
- Supplied with 4 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: points (code **1526-T101**, **7392**, **7391**, **7381**, **7321**), depth stop (code **6143**)

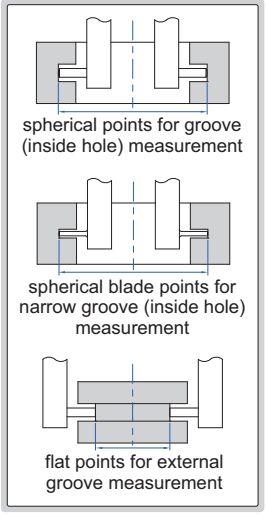
install points



depth stop **6143** (**optional**)



measure internal and external grooves



With data interface

Code	Wireless transmitter (optional)
1124-300A	**7315-25** (receiver is needed) page 7

Built-in wireless

Code	Receiver (optional)
1124-300AWL	code **7315-2/3/6/7/8/9**

Point	Range	Accuracy	Application
short spherical/flat points	24-324mm/1-12.7" (internal) 0-288mm/0-11.3" (external)	±0.04mm	spherical points for grooves inside hole (small hole) flat points for external grooves
long spherical/flat points	40-340mm/1.5-13.3" (internal) 0-272mm/0-10.7" (external)	±0.04mm	spherical points for grooves inside hole (large hole) flat points for external grooves
short spherical blade points	24-324mm/1-12.7" (internal) 0-288mm/0-11.3" (external)	±0.04mm	for narrow grooves inside hole (small hole)
long spherical blade points	40-340mm/1.5-13.3" (internal) 0-272mm/0-10.7" (external)	±0.04mm	for narrow grooves inside hole (large hole)

Multifunctional points 7392* **(optional**, page 51**)**



Ball points 7391*(optional, page 51**)**



Screw thread points 7381*, **7321*** **(optional**, page 51**)**



*It is necessary to use point sleeve (code **1526-T101**) for these points

DATA OUTPUT

VARIOUS POINTS ARE AVAILABLE (PAGE 310~314)

DIGITAL CALIPERS WITH INTERCHANGEABLE POINTS

VIDEO

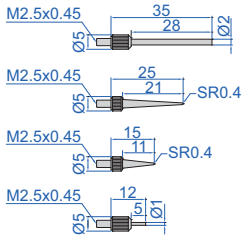
preset buttons

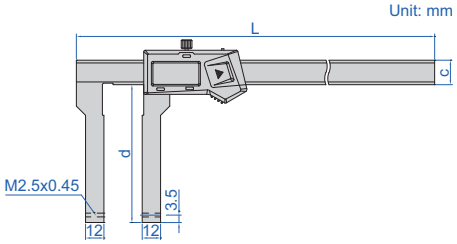




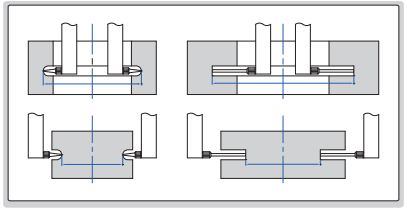
1530-300

- Non waterproof
- Supplied with 4 pairs of points and zero setting block for external measurement
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: points (page 310~314), depth stop (code **6143**)

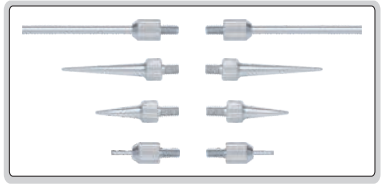




measure internal and external grooves



4 pairs of points (included)



zero setting block for external measurement (included)



Code	Range*	Accuracy	L	d	c	Wireless transmitter (optional)
1530-300	0-300mm/0-12"	±0.06mm	407mm	90mm	16mm	**7315-25** (receiver is needed) page 7
1530-500	0-500mm/0-20"	±0.08mm	740mm	100mm	24mm	**7315-22** (receiver is needed) page 7

Built-in wireless
(receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range*	Accuracy	L	d	c
1530-300WL	0-300mm/0-12"	±0.06mm	407mm	90mm	16mm
1530-500WL	0-500mm/0-20"	±0.08mm	740mm	100mm	24mm

*For different points, the measuring range changes accordingly

depth stop **6143** (**optional**)



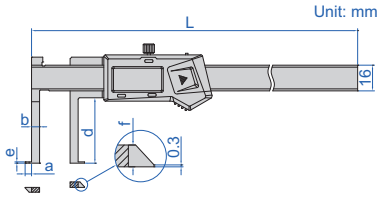
DIGITAL INSIDE GROOVE CALIPERS



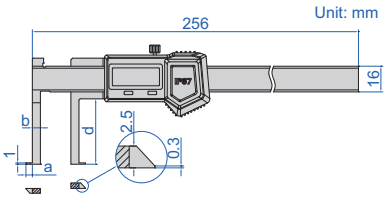
1520-150



1520-150P

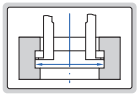


type A



type B

- Measure diameter of grooves inside small bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -),
  type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code **6143**)



depth stop **6143**
(**optional**)



Non waterproof, with data interface
(optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Type	Accuracy	L	a	b	d	e	f
1520-150	11-150mm/0.43-6"	A	±0.04mm	236mm	3.5mm	5mm	41mm	1mm	2.5mm
1520-200	16-200mm/0.63-8"	A	±0.04mm	285mm	5mm	7mm	41mm	1mm	3mm
1520-300	20-300mm/0.79-12"	A	±0.05mm	398mm	7.5mm	9mm	62mm	2mm	4mm

Non waterproof, built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Type	Accuracy	L	a	b	d	e	f
1520-150WL	11-150mm/0.43-6"	A	±0.04mm	236mm	3.5mm	5mm	41mm	1mm	2.5mm
1520-200WL	16-200mm/0.63-8"	A	±0.04mm	285mm	5mm	7mm	41mm	1mm	3mm
1520-300WL	20-300mm/0.79-12"	A	±0.05mm	398mm	7.5mm	9mm	62mm	2mm	4mm

IP67 dust/waterproof, no automatic power off, set zero after power on each time, without data interface

Code	Range	Type	Accuracy	a	b	d
1520-150P	14-150mm/0.56-6"	B	±0.04mm	5mm	7mm	30mm
1520-1501P	8-150mm/0.31-6"	B	±0.04mm	2mm	4mm	40mm

DATA OUTPUT

DIGITAL INSIDE POINT CALIPERS

depth stop **6143** (**optional**)



preset buttons

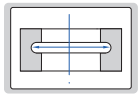


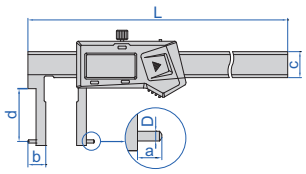
1121-150A
type A



1121-150B
type B

- Non waterproof
- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -)
  type B: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: depth stop
  (code **6143**, for calipers with c=16mm)





Preset (no need to add the width of the jaws on the reading), with data interface **(mm)**

Code	Range	Type	Accuracy	L	a	b	c	d	D	Wireless transmitter (optional)
1121-150A	24-150mm/0.94-6"	A	±0.04mm	250	5	12	16	28	Ø2	**7315-25** (receiver is needed) page 7
1121-1501	35-150mm/1.38-6"	A	±0.05mm	250	6	17.5	16	60	Ø2	
1121-200A	25-200mm/0.98-8"	A	±0.04mm	310	5	12.5	16	37	Ø2	
1121-2001	40-200mm/1.57-8"	A	±0.05mm	310	7	20	16	70	Ø3	
1121-300A	30-300mm/1.18-12"	A	±0.07mm	410	5	15	16	50	Ø2	
1121-3001A	50-300mm/1.97-12"	A	±0.07mm	410	8	25	16	77	Ø3	
1121-500A	40-500mm/1.57-20"	A	±0.07mm	680	5	20	24	90	Ø3	**7315-22** (receiver is needed) page 7
1121-5001	60-500mm/2.36-20"	A	±0.08mm	680	10	30	24	120	Ø3	
1121-5002	80-500mm/3.15-20"	A	±0.08mm	680	16	40	24	150	Ø3	

Preset (no need to add the width of the jaws on the reading), built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Type	Accuracy	L	a	b	c	d	D
1121-150AWL	24-150mm/0.94-6"	A	±0.04mm	250mm	5mm	12mm	16mm	28mm	Ø2mm
1121-1501WL	35-150mm/1.38-6"	A	±0.05mm	250mm	6mm	17.5mm	16mm	60mm	Ø2mm
1121-200AWL	25-200mm/0.98-8"	A	±0.04mm	310mm	5mm	12.5mm	16mm	37mm	Ø2mm
1121-2001WL	40-200mm/1.57-8"	A	±0.05mm	310mm	7mm	20mm	16mm	70mm	Ø3mm
1121-300AWL	30-300mm/1.18-12"	A	±0.07mm	410mm	5mm	15mm	16mm	50mm	Ø2mm
1121-3001AWL	50-300mm/1.97-12"	A	±0.07mm	410mm	8mm	25mm	16mm	77mm	Ø3mm
1121-500AWL	40-500mm/1.57-20"	A	±0.07mm	680mm	5mm	20mm	24mm	90mm	Ø3mm
1121-5001WL	60-500mm/2.36-20"	A	±0.08mm	680mm	10mm	30mm	24mm	120mm	Ø3mm
1121-5002WL	80-500mm/3.15-20"	A	±0.08mm	680mm	16mm	40mm	24mm	150mm	Ø3mm

No preset (need to add the width of the jaws on the reading)

Code	Range	Type	Accuracy	L	a	b	c	d	D
1121-150B	50-150mm/1.97-6"	B	±0.06mm	270mm	8mm	25mm	20mm	90mm	Ø3mm
1121-200B	60-200mm/2.36-8"	B	±0.06mm	320mm	10mm	30mm	20mm	100mm	Ø3mm
1121-300B	60-300mm/2.36-12"	B	±0.07mm	420mm	10mm	30mm	20mm	110mm	Ø3mm

DIGITAL INSIDE GROOVE CALIPERS

depth stop **6143**
(**optional**)



preset buttons

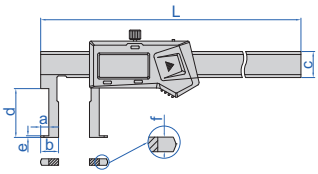


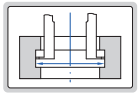
1120-150A
type A

- Measure groove diameter
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -)
  type B: on/off, zero, mm/inch
  type C: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop
  (code **6143**, for calipers with c=16mm)



1120-150B
type B







1120-150P
type C

Non waterproof, preset (no need to add the width of the jaws on the reading), with data interface **(mm)**

Code	Range	Type	Accuracy	L	a	b	c	d	e	f	Wireless transmitter (optional)
1120-150A	22-150mm/0.87-6"	A	±0.04mm	250	5	11	16	30	1	4	**7315-25** (receiver is needed) page 7
1120-1501	35-150mm/1.38-6"	A	±0.06mm	250	6	17.5	16	60	1.5	4	
1120-200A	25-200mm/0.98-8"	A	±0.04mm	310	5	12.5	16	40	1	4	
1120-2001	40-200mm/1.57-8"	A	±0.06mm	310	7	20	16	70	2.5	4	
1120-300A	30-300mm/1.18-12"	A	±0.05mm	410	5	15	16	50	1.5	4	
1120-3001	50-300mm/1.97-12"	A	±0.07mm	410	8	25	16	80	2.5	4	
1120-500	40-500mm/1.57-20"	A	±0.07mm	680	5	20	24	90	2.2	5.5	**7315-22** (receiver is needed) page 7
1120-5001	60-500mm/2.36-20"	A	±0.08mm	680	10	30	24	120	3.4	5.5	
1120-5002	80-500mm/3.15-20"	A	±0.08mm	680	16	40	24	150	5.2	5.5	

Non waterproof, preset (no need to add the width of the jaws on the reading),
built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Type	Accuracy	L	a	b	c	d	e	f
1120-150AWL	22-150mm/0.87-6"	A	±0.04mm	250mm	5mm	11mm	16mm	30mm	1mm	4mm
1120-1501WL	35-150mm/1.38-6"	A	±0.06mm	250mm	6mm	17.5mm	16mm	60mm	1.5mm	4mm
1120-200AWL	25-200mm/0.98-8"	A	±0.04mm	310mm	5mm	12.5mm	16mm	40mm	1mm	4mm
1120-2001WL	40-200mm/1.57-8"	A	±0.06mm	310mm	7mm	20mm	16mm	70mm	2.5mm	4mm
1120-300AWL	30-300mm/1.18-12"	A	±0.05mm	410mm	5mm	15mm	16mm	50mm	1.5mm	4mm
1120-3001WL	50-300mm/1.97-12"	A	±0.07mm	410mm	8mm	25mm	16mm	80mm	2.5mm	4mm
1120-500WL	40-500mm/1.57-20"	A	±0.07mm	680mm	5mm	20mm	24mm	90mm	2.2mm	5.5mm
1120-5001WL	60-500mm/2.36-20"	A	±0.08mm	680mm	10mm	30mm	24mm	120mm	3.4mm	5.5mm
1120-5002WL	80-500mm/3.15-20"	A	±0.08mm	680mm	16mm	40mm	24mm	150mm	5.2mm	5.5mm

Non waterproof, no preset (need to add the width of the jaws on the reading)

Code	Range	Type	Accuracy	L	a	b	c	d	e	f
1120-150B	50-150mm/1.97-6"	B	±0.06mm	270mm	8mm	25mm	20mm	90mm	3.4mm	4mm
1120-200B	60-200mm/2.36-8"	B	±0.06mm	320mm	10mm	30mm	20mm	100mm	3.4mm	4mm
1120-300B	60-300mm/2.36-12"	B	±0.07mm	420mm	10mm	30mm	20mm	110mm	3.4mm	4mm

IP67 dust/waterproof, no automatic power off, set zero after power on each time,
no preset (need to add the width of the jaws on the reading), without data interface

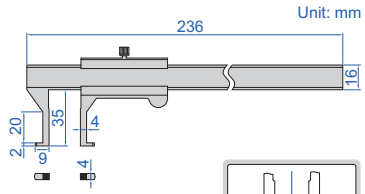
Code	Range	Type	Accuracy	L	a	b	c	d	e	f
1120-150P	22-150mm/0.87-6"	C	±0.04mm	250mm	5mm	11mm	16mm	30mm	1mm	4mm

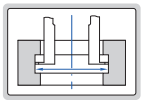
INSIDE GROOVE VERNIER CALIPER

- Measure diameter of grooves inside bores
- Made of stainless steel
- Satin chrome plated reading surface



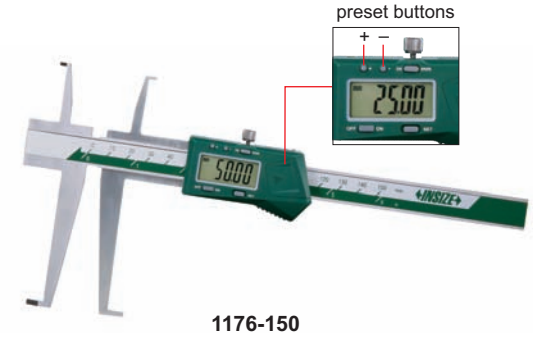
1262-150A





Code	Range	Graduation	Accuracy
1262-150A	18-150mm	0.02mm	±0.04mm

DIGITAL INSIDE GROOVE CALIPERS



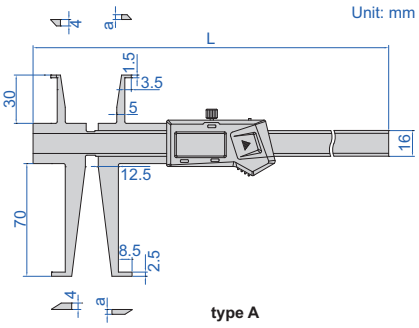
1176-150



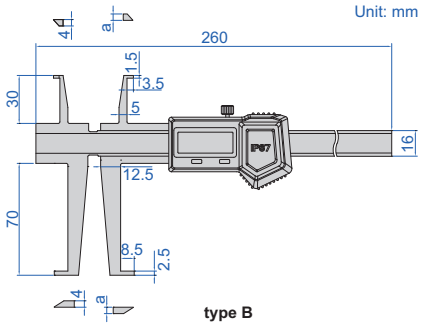
1176-150P

depth stop **6143** (**optional**)





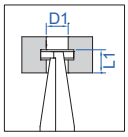
type A



type B

- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -)
  type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code **6143**)

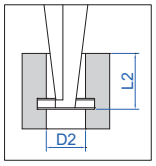
sizes to be measured (use upper jaws)



(mm)

D1	L1
Ø9	<8
Ø10	<15
Ø11~200	<30

sizes to be measured (use lower jaws)



(mm)

D2	L2
Ø17	<16
Ø18	<28
Ø19	<40
Ø20	<50
Ø21	<58
Ø22~200	<70

Non waterproof, with data interface
(optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-150	9-150mm/0.35-6"	17-150mm/0.70-6"	A	±0.04mm	260mm	3mm
1176-200	9-200mm/0.35-8"	17-200mm/0.70-8"	A	±0.05mm	320mm	3.5mm

Non waterproof, built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-150WL	9-150mm/0.35-6"	17-150mm/0.70-6"	A	±0.04mm	260mm	3mm
1176-200WL	9-200mm/0.35-8"	17-200mm/0.70-8"	A	±0.05mm	320mm	3.5mm

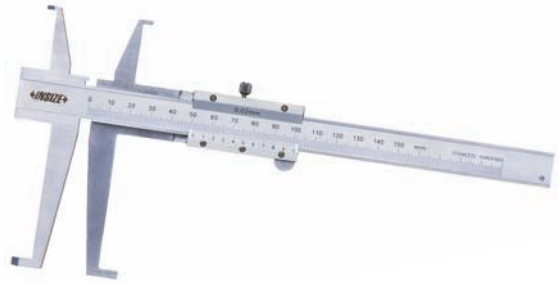
IP67 dust/waterproof, without data interface, no automatic power off, set zero after power on each time

Code	Range of upper jaw	Range of lower jaw	Type	Accuracy	a
1176-150P	9-150mm/0.35-6"	17-150mm/0.70-6"	B	±0.04mm	4mm

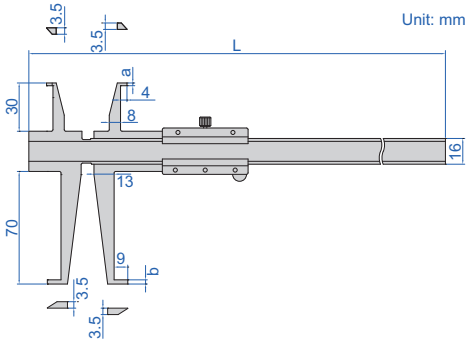
INSIDE GROOVE CALIPERS

depth stop **6143** (**optional**)



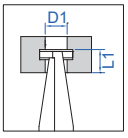


1199-150



- Measure diameter of grooves inside bores
- Graduation: 0.02mm
- Made of stainless steel
- Optional accessory: depth stop (code **6143**)

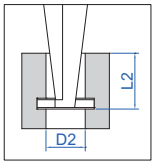
sizes to be measured (use upper jaws)



(mm)

D1	L1
Ø9	<8
Ø10	<12
Ø11	<15
Ø12	<20
Ø13~300	<30

sizes to be measured (use lower jaws)



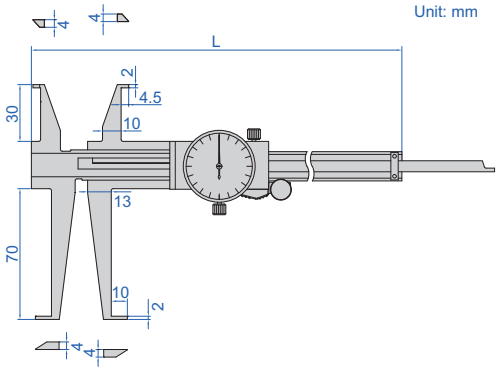
(mm)

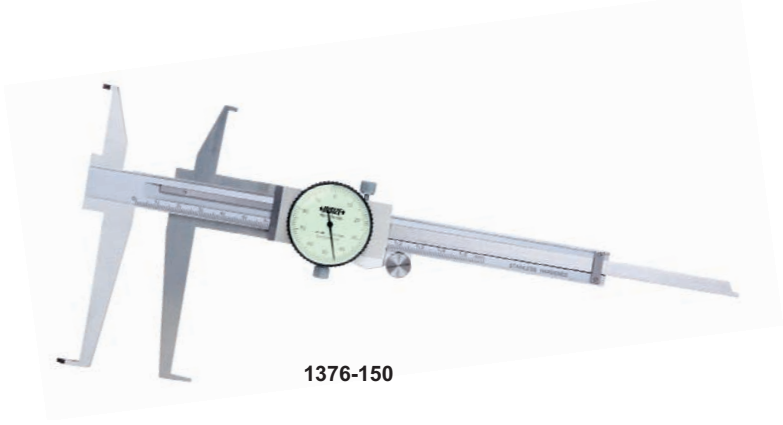
D2	L2
Ø18	<30
Ø19	<40
Ø20	<45
Ø21	<55
Ø22	<60
Ø23~300	<70

Code	Range of upper jaw	Range of lower jaw	Accuracy	L	a	b
1199-150	9-150mm	18-150mm	±0.04mm	248mm	1.6mm	2.5mm
1199-200	9-200mm	18-200mm	±0.05mm	298mm	1.8mm	2.8mm
1199-300	9-300mm	18-300mm	±0.06mm	398mm	2.0mm	3.0mm

INSIDE GROOVE DIAL CALIPERS

SHOCK PROOF

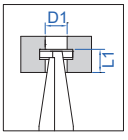




1376-150

- Measure diameter of grooves inside bores
- Shockproof dial indicator
- Dial indicator graduation: 0.02mm
- Made of stainless steel
- Optional accessory: depth stop (code **6143**)

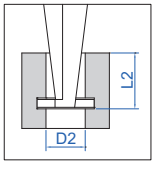
sizes to be measured (use upper jaws)



(mm)

D1	L1
Ø11	<8
Ø12	<10
Ø13	<15
Ø14	<20
Ø15~300	<30

sizes to be measured (use lower jaws)



(mm)

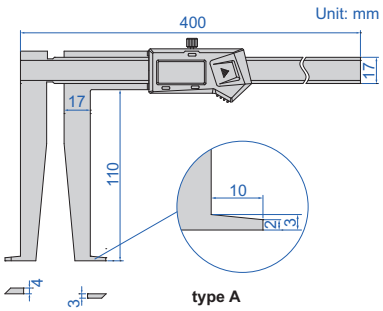
D2	L2
Ø18	<20
Ø19	<28
Ø20	<35
Ø21	<40
Ø22	<50
Ø23~300	<70

Code	Range of upper jaw	Range of lower jaw	Accuracy	L
1376-150	11-150mm	18-150mm	±0.03mm	240mm
1376-200	11-200mm	18-200mm	±0.03mm	290mm
1376-300	11-300mm	18-300mm	±0.04mm	390mm

DIGITAL INSIDE GROOVE CALIPERS

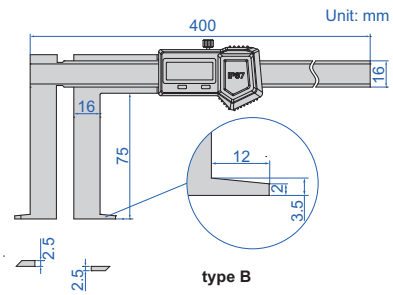


1178-300





1178-300P



- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -)
  type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code **6143**)

depth stop **6143**
(**optional**)



Non waterproof, with data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Type	Accuracy
1178-300	25-300mm/1.18-12"	A	±0.05mm

Non waterproof, built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Type	Accuracy
1178-300WL	25-300mm/1.18-12"	A	±0.05mm

IP67 dust/waterproof, no automatic power off, set zero after power on each time, without data interface

Code	Range	Type	Accuracy
1178-300P	33-300mm/1.30-12"	B	±0.05mm

DIGITAL DEEP HOLE INSIDE GROOVE CALIPERS

DATA OUTPUT

preset buttons





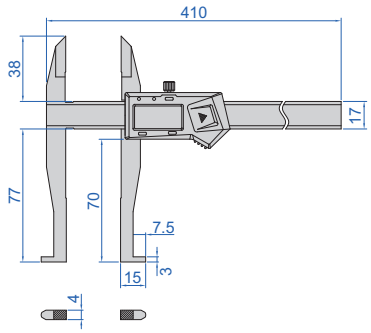
1129-300

- Non waterproof
- Measure diameter of grooves inside deep holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code **6143**)

depth stop **6143** (**optional**)



Unit: mm

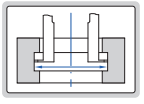


With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range of upper jaw	Range of lower jaw	Accuracy
1129-300	0-300mm/0-12"	30-300mm/1.2-12"	±0.06mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range of upper jaw	Range of lower jaw	Accuracy
1129-300WL	0-300mm/0-12"	30-300mm/1.2-12"	±0.06mm



DIGITAL INSIDE GROOVE CALIPERS

DATA OUTPUT



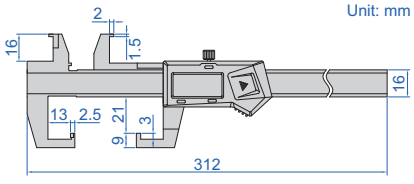
1128-200

- Non waterproof
- Measure diameter or distance of grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

preset buttons



Unit: mm

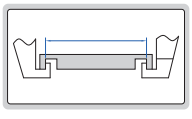


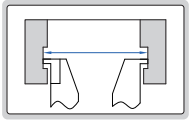
With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range of upper jaw	Range of lower jaw	Accuracy
1128-200	10-200mm/0.39-8"	3-200mm/0.12-8"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range of upper jaw	Range of lower jaw	Accuracy
1128-200WL	10-200mm/0.39-8"	3-200mm/0.12-8"	±0.03mm



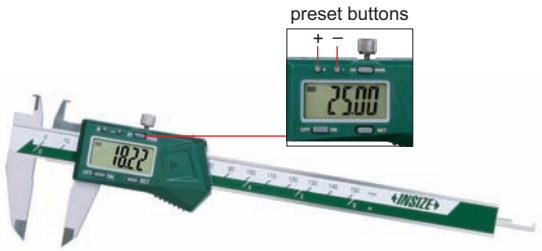


DATA OUTPUT

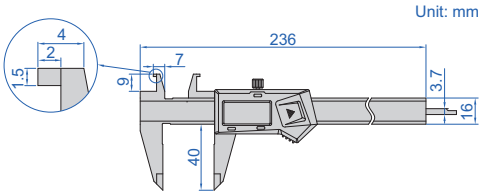
DIGITAL INSIDE GROOVE CALIPERS



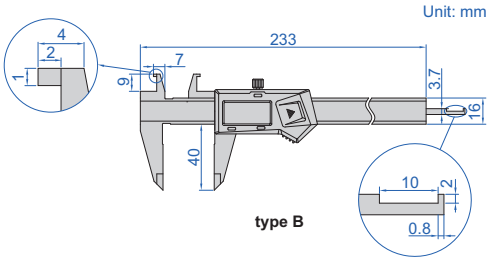
1191-150



1191-150B



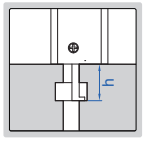
type A



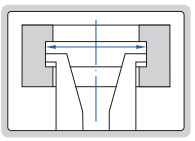
type B

- Non waterproof
- Upper jaws for measuring diameter of grooves
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, zero, mm/inch
  type B: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

measure depth of grooves (h<10mm, only for type B)



measure diameter of grooves 8-150mm



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

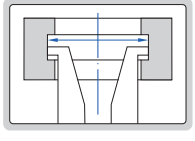
Code	Range of upper jaw	Range of lower jaw	Accuracy	Type
1191-150	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm	A
1191-150B	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm	B

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

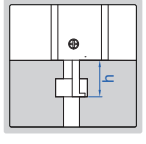
Code	Range of upper jaw	Range of lower jaw	Accuracy	Type
1191-150WL	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm	A
1191-150BWL	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm	B

INSIDE GROOVE VERNIER CALIPER

measure diameter of grooves 8-150mm

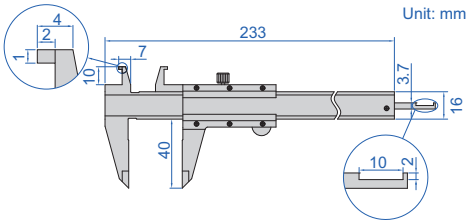


measure depth of grooves (h<10mm)





1291-150



- Graduation: 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range of upper jaw	Range of lower jaw	Accuracy
1291-150	8-150mm	0-150mm	±0.03mm

DIGITAL OUTSIDE NECK CALIPERS

DATA OUTPUT

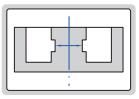


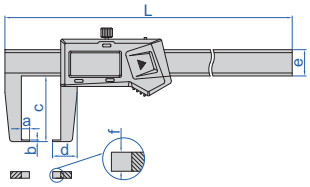
1187-150A

depth stop **6143** (**optional**)



- Non waterproof
- Measure grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code **6143**, for calipers with e=16mm)





With data interface **(mm)**

Code	Range	Accuracy	L	a	b	c	d	e	f	Wireless transmitter (optional)
1187-150A	0-150mm/0-6"	±0.04mm	250	5	1	40	15	16	4	**7315-25** (receiver is needed) page 7
1187-200A	0-200mm/0-8"	±0.05mm	310	9	1.5	80	23	16	4	
1187-300A	0-300mm/0-12"	±0.06mm	490	12	2	150	36	24	4	**7315-22** (receiver is needed) page 7
1187-500A	0-500mm/0-20"	±0.07mm	690	12	2	150	36	24	5.5	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	a	b	c	d	e	f
1187-150AWL	0-150mm/0-6"	±0.04mm	250mm	5mm	1mm	40mm	15mm	16mm	4mm
1187-200AWL	0-200mm/0-8"	±0.05mm	310mm	9mm	1.5mm	80mm	23mm	16mm	4mm
1187-300AWL	0-300mm/0-12"	±0.06mm	490mm	12mm	2mm	150mm	36mm	24mm	4mm
1187-500AWL	0-500mm/0-20"	±0.07mm	690mm	12mm	2mm	150mm	36mm	24mm	5.5mm

DIGITAL OUTSIDE POINT CALIPERS

DATA OUTPUT

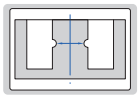


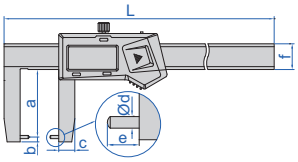
1185-150A

depth stop **6143** (**optional**)



- Non waterproof
- Measure wall thickness inside bores and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code **6143**)





With data interface **(mm)**

Code	Range	Accuracy	L	a	b	c	Ød	e	f	Wireless transmitter (optional)
1185-150A	0-150mm/0-6"	±0.04mm	250	40	3	10	2	5	16	**7315-25** (receiver is needed) page 7
1185-200A	0-200mm/0-8"	±0.05mm	310	80	3	14	3	9	16	
1185-300A	0-300mm/0-12"	±0.06mm	490	150	3	20	3	12	24	**7315-22** (receiver is needed) page 7

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	a	b	c	Ød	e	f
1185-150AWL	0-150mm/0-6"	±0.04mm	250mm	40mm	3mm	10mm	2mm	5mm	16mm
1185-200AWL	0-200mm/0-8"	±0.05mm	310mm	80mm	3mm	14mm	3mm	9mm	16mm
1185-300AWL	0-300mm/0-12"	±0.06mm	490mm	150mm	3mm	20mm	3mm	12mm	24mm

DIGITAL OUTSIDE GROOVE CALIPERS

DATA OUTPUT

- Non waterproof
- Measure grooves and recesses in small spaces
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1535-100

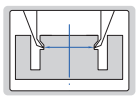


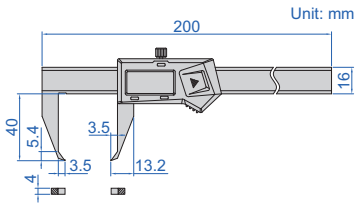
With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1535-100	0-100mm/0-4"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1535-100WL	0-100mm/0-4"	±0.03mm



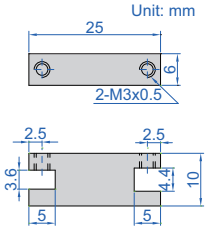


DEPTH STOP FOR CALIPERS

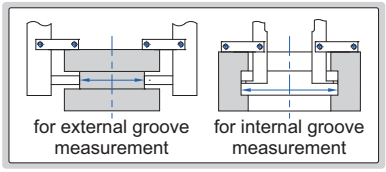




6143



application



- Supplied in pair
- Made of stainless steel
- Suitable for caliper series **1124, 1526, 1530, 1199, 1520, 1176, 1178, 1120, 1121, 1187, 1129, 1185** and **1376**

Code
6143

DIGITAL SMALL POINT CALIPERS

DATA OUTPUT

- Non waterproof
- Small pointed jaws fit into small grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



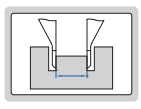
1169-150

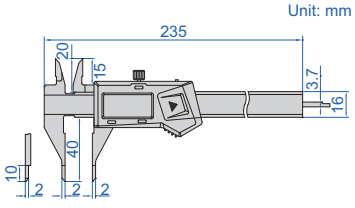
With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1169-150	0-150mm/0-6"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1169-150WL	0-150mm/0-6"	±0.03mm





DIGITAL POINT CALIPERS

DATA OUTPUT

- Non waterproof
- Pointed jaws fit into small grooves and recesses
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

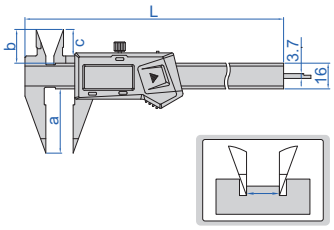


1183-150A

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	L	a	b	c
1183-150A	0-150mm/0-6"	±0.03mm	236mm	40mm	21mm	16.5mm
1183-200A	0-200mm/0-8"	±0.03mm	286mm	50mm	24mm	19.5mm
1183-300A	0-300mm/0-12"	±0.03mm	400mm	60mm	25mm	21.5mm

Unit: mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	a	b	c
1183-150AWL	0-150mm/0-6"	±0.03mm	236mm	40mm	21mm	16.5mm
1183-200AWL	0-200mm/0-8"	±0.03mm	286mm	50mm	24mm	19.5mm
1183-300AWL	0-300mm/0-12"	±0.03mm	400mm	60mm	25mm	21.5mm

DIGITAL CALIPERS WITH POSITIONING SURFACES

DATA OUTPUT

- Non waterproof
- Lower jaws with positioning surfaces, for measuring inside diameters quickly
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

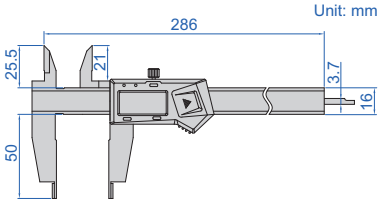


1534-200

preset buttons

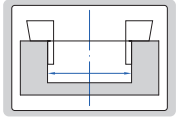


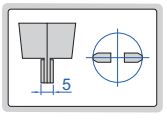
Unit: mm



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1534-200	0-200mm/0-8"	±0.03mm





Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1534-200WL	0-200mm/0-8"	±0.03mm

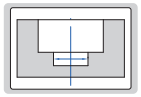
DATA OUTPUT

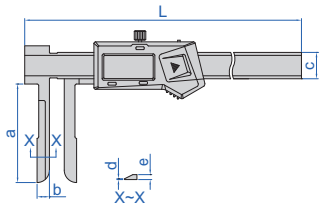
DIGITAL INSIDE KNIFE-EDGE CALIPERS



1123-150A

- Non waterproof
- Measure diameter of deep step holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel





With data interface **(mm)**

Code	Range	Accuracy	L	a	b	c	d	e	Wireless transmitter (optional)
1123-150A	15-150mm/0.6-6"	±0.05mm	250	60	12	16	0.3	3.5	**7315-25** (receiver is needed) page 7
1123-200A	20-200mm/0.8-8"	±0.06mm	305	100	17	16	0.3	3.5	
1123-300A	24-300mm/0.9-12"	±0.06mm	500	150	22	24	0.5	3.5	**7315-22** (receiver is needed) page 7

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	a	b	c	d	e
1123-150AWL	15-150mm/0.6-6"	±0.05mm	250mm	60mm	12mm	16mm	0.3mm	3.5mm
1123-200AWL	20-200mm/0.8-8"	±0.06mm	305mm	100mm	17mm	16mm	0.3mm	3.5mm

DATA OUTPUT

DIGITAL CALIPERS WITH KNIFE-EDGE LOWER JAWS

- Non waterproof
- Measure diameter of narrow grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



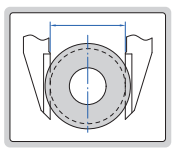
1532-200

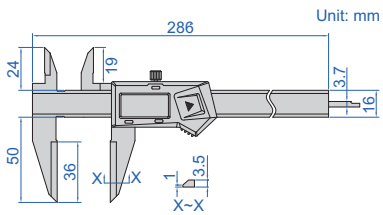
With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1532-200	0-200mm/0-8"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1532-200WL	0-200mm/0-8"	±0.03mm





DIGITAL CALIPERS WITH LONG UPPER JAWS

DATA OUTPUT

- Non waterproof
- Long upper jaws for measuring diameter of deep holes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



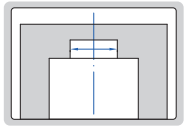
1138-200

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

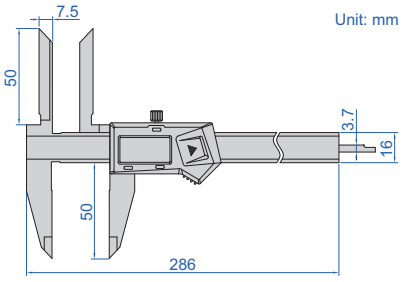
Code	Range	Accuracy
1138-200	0-200mm/0-8"	±0.04mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1138-200WL	0-200mm/0-8"	±0.04mm



Unit: mm

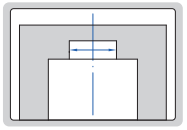


DIAL CALIPERS WITH LONG UPPER JAWS

SHOCK PROOF

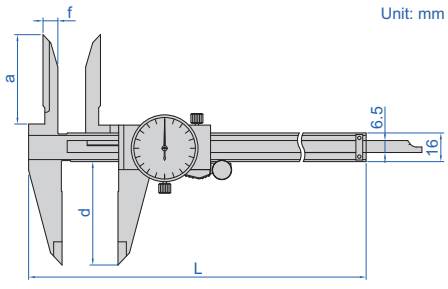


1338-300



- Long upper jaws for measuring diameter of deep holes
- Shockproof dial indicator
- Dial indicator graduation: 0.02mm
- Made of stainless steel

Unit: mm



(mm)

Code	Range	Accuracy	L	a	d	f
1338-150	0-150mm	±0.03mm	236	40	40	6.5
1338-200	0-200mm	±0.03mm	288	45	50	7.5
1338-300	0-300mm	±0.04mm	400	50	60	8

DATA OUTPUT

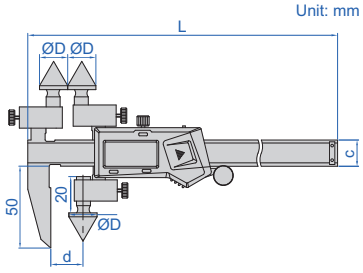
DIGITAL CENTERLINE AND EDGE TO CENTER CALIPERS



1521-2002

- Non waterproof
- Measure hole center distance in the same or offset planes and edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

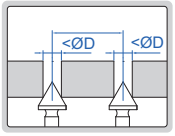
Unit: mm



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7) **(mm)**

Code	Range	Accuracy	ØD	d	L	c
1521-150	5-140mm/0.2-5.5"	±0.05mm	5	5	236	16
1521-1501	10-140mm/0.4-5.5"	±0.05mm	10	10	236	16
1521-1502	20-140mm/0.8-5.5"	±0.05mm	20	20	236	16
1521-200	5-190mm/0.2-7.5"	±0.05mm	5	5	285	16
1521-2001	10-190mm/0.4-7.5"	±0.05mm	10	10	285	16
1521-2002	20-190mm/0.8-7.5"	±0.05mm	20	20	285	16
1521-300	5-290mm/0.2-11.5"	±0.07mm	5	5	385	17
1521-3001	10-290mm/0.4-11.5"	±0.07mm	10	10	385	17
1521-3002	20-290mm/0.8-11.5"	±0.07mm	20	20	385	17

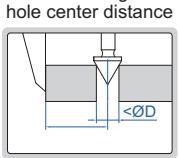
measure hole center distance



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed) **(mm)**

Code	Range	Accuracy	ØD	d	L	c
1521-150WL	5-140mm/0.2-5.5"	±0.05mm	5	5	236	16
1521-1501WL	10-140mm/0.4-5.5"	±0.05mm	10	10	236	16
1521-1502WL	20-140mm/0.8-5.5"	±0.05mm	20	20	236	16
1521-200WL	5-190mm/0.2-7.5"	±0.05mm	5	5	285	16
1521-2001WL	10-190mm/0.4-7.5"	±0.05mm	10	10	285	16
1521-2002WL	20-190mm/0.8-7.5"	±0.05mm	20	20	285	16
1521-300WL	5-290mm/0.2-11.5"	±0.07mm	5	5	385	17
1521-3001WL	10-290mm/0.4-11.5"	±0.07mm	10	10	385	17
1521-3002WL	20-290mm/0.8-11.5"	±0.07mm	20	20	385	17

measure edge to hole center distance



DIGITAL CENTERLINE AND EDGE TO CENTER CALIPERS

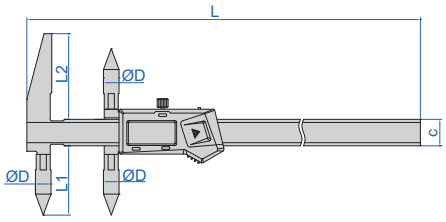
DATA OUTPUT

preset buttons



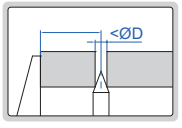


1525-300

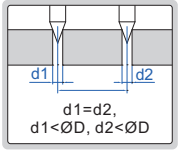


- Non waterproof
- Measure hole center distance or edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

measure edge to hole center distance



measure hole center distance



With data interface **(mm)**

Code	Range of upper jaw (edge to center)	Range of lower jaw (center to center)	Accuracy	ØD	L1	L2	c	L	Wireless transmitter (optional)
1525-300	5-300mm/0.2-12"	10-300mm/0.4-12"	±0.08mm	10	44.5	55	17	410	**7315-25** (receiver is needed) page 7
1525-3001	10-300mm/0.4-12"	20-300mm/0.8-12"	±0.08mm	20	48	60	17	410	
1525-500	10-500mm/0.4-20"	20-500mm/0.8-20"	±0.09mm	20	50	60	24	690	**7315-22** (receiver is needed) page 7
1525-1000	15-1000mm/0.6-40"	30-1000mm/1.2-40"	±0.12mm	30	70	81	31	1255	
1525-1500	15-1500mm/0.6-60"	30-1500mm/1.2-60"	±0.15mm	30	70	81	31	1760	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed) **(mm)**

Code	Range of upper jaw (edge to center)	Range of lower jaw (center to center)	Accuracy	ØD	L1	L2	c	L
1525-300WL	5-300mm/0.2-12"	10-300mm/0.4-12"	±0.08mm	10	44.5	55	17	410
1525-3001WL	10-300mm/0.4-12"	20-300mm/0.8-12"	±0.08mm	20	48	60	17	410
1525-500WL	10-500mm/0.4-20"	20-500mm/0.8-20"	±0.09mm	20	50	60	24	690

DATA OUTPUT

preset buttons

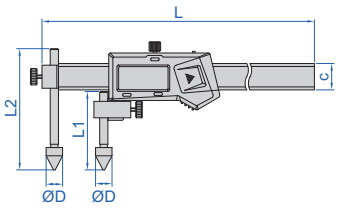


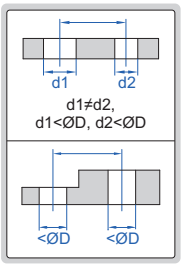
DIGITAL OFFSET CENTERLINE CALIPERS



1192-150A

- Non waterproof
- Measure hole center distance in the same or offset planes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel





With data interface

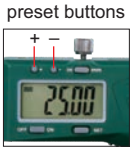
Code	Range	Accuracy	c	ØD	L1	L2	L	Wireless transmitter (optional)
1192-150A	10-150mm/0.4-6"	±0.05mm	16mm	10mm	46mm	79mm	236mm	**7315-25** (receiver is needed) page 7
1192-200A	10-200mm/0.4-8"	±0.07mm	16mm	10mm	46mm	79mm	286mm	
1192-300A	10-300mm /0.4-12"	±0.09mm	16mm	10mm	46mm	79mm	396mm	
1192-500A	20-500mm/0.8-20"	±0.09mm	24mm	20mm	70mm	110mm	683mm	**7315-22** (receiver is needed) page 7
1192-1000A	30-1000mm/1.2-40"	±0.12mm	31mm	30mm	75mm	120mm	1255mm	
1192-1500A	30-1500mm/1.2-60"	±0.15mm	31mm	30mm	75mm	120mm	1760mm	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	c	ØD	L1	L2	L
1192-150AWL	10-150mm/0.4-6"	±0.05mm	16mm	10mm	46mm	79mm	236mm
1192-200AWL	10-200mm/0.4-8"	±0.07mm	16mm	10mm	46mm	79mm	286mm
1192-300AWL	10-300mm /0.4-12"	±0.09mm	16mm	10mm	46mm	79mm	396mm
1192-500AWL	20-500mm/0.8-20"	±0.09mm	24mm	20mm	52mm	112mm	725mm

DATA OUTPUT

preset buttons

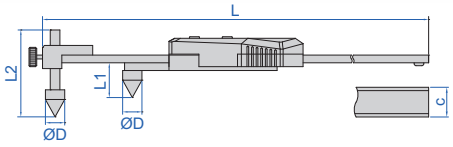


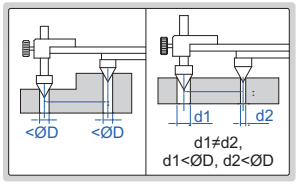
DIGITAL BACK-JAW CENTERLINE CALIPERS



1177-200

- Non waterproof
- Measure hole center distance in the same or offset planes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel





With data interface

Code	Range	Accuracy	ØD	c	L1	L2	L	Wireless transmitter (optional)
1177-200	10-200mm/0.4-8"	±0.10mm	10mm	16mm	18mm	45mm	310mm	**7315-25** (receiver is needed) page 7
1177-300	10-300mm/0.4-12"	±0.10mm	10mm	16mm	18mm	45mm	410mm	
1177-500	20-500mm/0.8-20"	±0.10mm	20mm	24mm	26mm	70mm	692mm	**7315-22** (receiver is needed) page 7
1177-1000	30-1000mm/1.2-40"	±0.12mm	30mm	31mm	39mm	70mm	1242mm	
1177-1500	30-1500mm/1.2-60"	±0.15mm	30mm	31mm	39mm	70mm	1745mm	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	ØD	c	L1	L2	L
1177-200WL	10-200mm/0.4-8"	±0.10mm	10mm	16mm	18mm	45mm	310mm
1177-300WL	10-300mm/0.4-12"	±0.10mm	10mm	16mm	18mm	45mm	410mm
1177-500WL	20-500mm/0.8-20"	±0.10mm	20mm	24mm	26mm	70mm	692mm

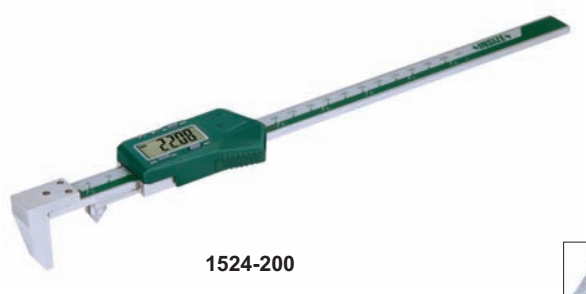
back-jaw



DIGITAL BACK-JAW EDGE TO CENTER CALIPERS

DATA OUTPUT

- Non waterproof
- Measure edge to hole center distance
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: calibration standard (code **1524-BLOCK**)



1524-200

back-jaw



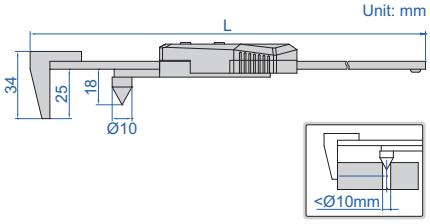
With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	L
1524-200	5-200mm/0.2-8"	±0.1mm	310mm
1524-300	5-300mm/0.2-12"	±0.1mm	410mm

preset buttons



Unit: mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L
1524-200WL	5-200mm/0.2-8"	±0.1mm	310mm
1524-300WL	5-300mm/0.2-12"	±0.1mm	410mm

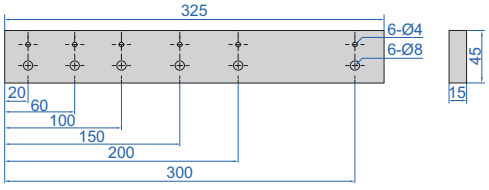
Calibration standard (optional)

Code
1524-BLOCK



1524-BLOCK

Unit: mm



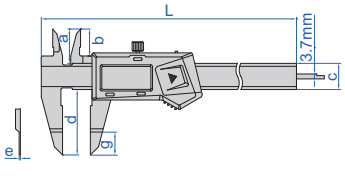
DIGITAL BLADE CALIPERS

DATA OUTPUT

- Non waterproof
- The blade jaws fit into small grooves
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

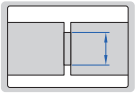


1188-150A



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	L	a	b	c	d	e	g
1188-150A	0-150mm/0-6"	±0.03mm	235mm	21mm	16.5mm	16mm	40mm	0.85mm	17mm
1188-200A	0-200mm/0-8"	±0.03mm	297mm	24mm	20mm	16mm	50mm	0.85mm	17mm
1188-300A	0-300mm/0-12"	±0.04mm	390mm	26mm	21.5mm	16mm	60mm	1.00mm	17mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

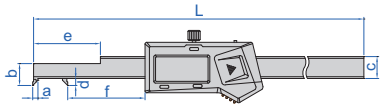
Code	Range	Accuracy	L	a	b	c	d	e	g
1188-150AWL	0-150mm/0-6"	±0.03mm	235mm	21mm	16.5mm	16mm	40mm	0.85mm	17mm
1188-200AWL	0-200mm/0-8"	±0.03mm	297mm	24mm	20mm	16mm	50mm	0.85mm	17mm
1188-300AWL	0-300mm/0-12"	±0.04mm	390mm	26mm	21.5mm	16mm	60mm	1.00mm	17mm

DATA OUTPUT

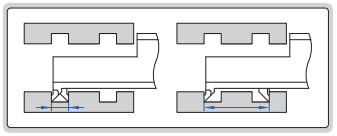
DIGITAL HOOK CALIPERS



1122-300



- Non waterproof
- Measure width and distance of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	L	a	b	c	d	e	f
1122-150	3-150mm/0.12-6"	±0.03mm	260mm	3mm	12mm	12.5mm	4mm	24mm	27mm
1122-200	3-200mm/0.12-8"	±0.03mm	310mm	3mm	12mm	12.5mm	4mm	24mm	27mm
1122-300	4-300mm/0.16-12"	±0.04mm	466mm	4mm	14mm	15mm	5mm	86mm	89mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	a	b	c	d	e	f
1122-150WL	3-150mm/0.12-6"	±0.03mm	260mm	3mm	12mm	12.5mm	4mm	24mm	27mm
1122-200WL	3-200mm/0.12-8"	±0.03mm	310mm	3mm	12mm	12.5mm	4mm	24mm	27mm
1122-300WL	4-300mm/0.16-12"	±0.04mm	466mm	4mm	14mm	15mm	5mm	86mm	89mm

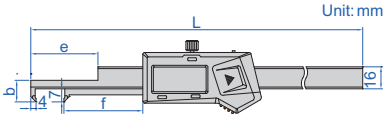
DATA OUTPUT

DIGITAL EXTERNAL HOOK CALIPERS



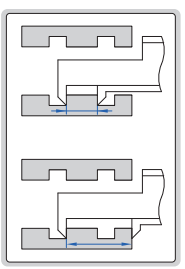
1164-200

- Non waterproof
- Measure width and distance of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	L	b	e	f
1164-150	0-150mm/0-6"	±0.03mm	275mm	14mm	52mm	50mm
1164-200	0-200mm/0-8"	±0.03mm	325mm	14mm	52mm	50mm
1164-300	0-300mm/0-12"	±0.04mm	460mm	15mm	82mm	80mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	b	e	f
1164-150WL	0-150mm/0-6"	±0.03mm	275mm	14mm	52mm	50mm
1164-200WL	0-200mm/0-8"	±0.03mm	325mm	14mm	52mm	50mm
1164-300WL	0-300mm/0-12"	±0.04mm	460mm	15mm	82mm	80mm

DIGITAL V SHAPE CALIPER

DIRECT READING, CALCULATION IS NOT REQUIRED

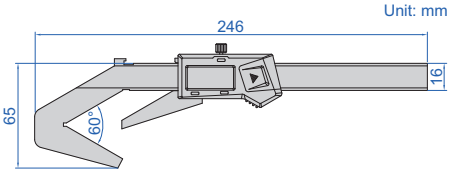
DATA OUTPUT



1539-3

- Non waterproof
- Measure outside diameter of three number of flutes (such as taps, reamers, end mills and gears)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory: wireless transmitter code **7315-25** (receiver is needed) page 7

Unit: mm



Code	Range	Accuracy
1539-3	Ø4-Ø40mm/0.16"-1.58" DIA	±0.03mm

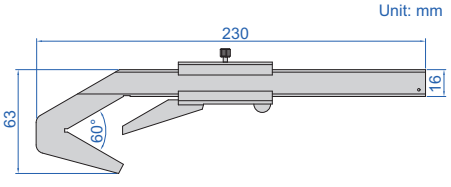
V SHAPE VERNIER CALIPER



1273-403

- Measure outside diameter of three number of flutes (such as taps, reamers, end mills and gears)
- Made of stainless steel
- Satin chrome plated reading surface

Unit: mm



Code	Range	Graduation	Accuracy
1273-403	Ø4-40mm	0.05mm	±0.05mm

DIRECT READING, CALCULATION IS NOT REQUIRED

DATA OUTPUT

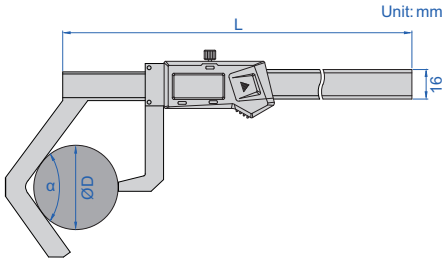
DIGITAL V TYPE CALIPERS

VIDEO



1529-5

- Non waterproof
- Measure the outside diameter of odd number of flutes (such as taps, reamers, end mills and gears)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory: Ø50mm calibration cylinder (code **6316-50**), wireless transmitter code **7315-25** (receiver is needed) page 7



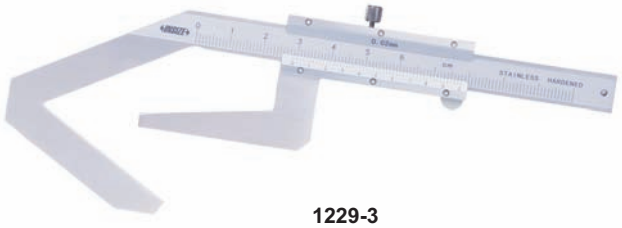
Code	Range (ØD)	Flutes	Accuracy	Angle α	L
1529-3	Ø50-Ø200mm/2-8" DIA	3	±0.06mm	60°	390mm
1529-5	Ø50-Ø200mm/2-8" DIA	5	±0.06mm	108°	318mm
1529-19	Ø50-Ø200mm/2-8" DIA	19	±0.06mm	85°15'47"	336mm
1529-23	Ø50-Ø200mm/2-8" DIA	23	±0.06mm	70°26'5"	362mm
1529-31	Ø50-Ø200mm/2-8" DIA	31	±0.06mm	75°29'2"	355mm

Ø50mm calibration cylinder (code **6316-50**, **optional**)



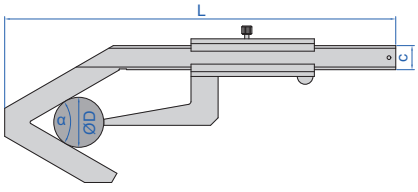
V SHAPE VERNIER CALIPERS

- Measure outside diameter of odd number of flutes (such as taps, reamers, end mills and gears)
- Made of stainless steel
- Satin chrome plated reading surface
- Optional accessory: 4mm pin gauge (code **4110-4D00**), Ø50mm calibration cylinder (code **6316-50**)



1229-3

Code	Range (ØD)	Graduation	Accuracy	Flutes	Angle α	L	c
1229-3	Ø4-60mm	0.02mm	±0.04mm	3	60°	260mm	16mm
1229-35	Ø50-200mm	0.02mm	±0.06mm	3	60°	516mm	20mm
1229-5	Ø4-60mm	0.02mm	±0.04mm	5	108°	210mm	16mm
1229-55	Ø50-200mm	0.02mm	±0.06mm	5	108°	360mm	20mm



DIGITAL CALIPERS WITH ONE DIRECTION UPPER JAWS

DATA OUTPUT

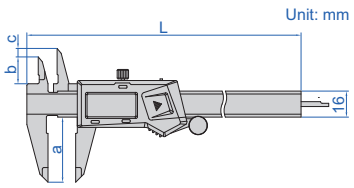


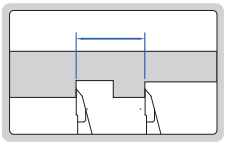
1184-200



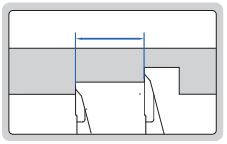
1184-150A

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: zero, power on/off, inch/mm
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory:
  wireless transmitter code **7315-25** (receiver is needed) page 7





jaws with same height used for measuring the distance in same level



jaws with different height used for measuring the distance in different level

Jaws with same height **(mm)**

Code	Range	Accuracy	L	a	b	c
1184-150	0-150mm/0-6"	±0.03mm	236	40	17	0
1184-200	0-200mm/0-8"	±0.03mm	286	50	20	0
1184-300	0-300mm/0-12"	±0.03mm	400	60	22	0

Jaws with different height **(mm)**

Code	Range	Accuracy	L	a	b	c
1184-150A	0-150mm/0-6"	±0.03mm	236	40	17	5
1184-200A	0-200mm/0-8"	±0.03mm	286	50	20	8
1184-300A	0-300mm/0-12"	±0.03mm	400	60	22	10

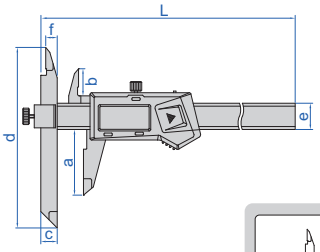
DIGITAL OFFSET CALIPERS

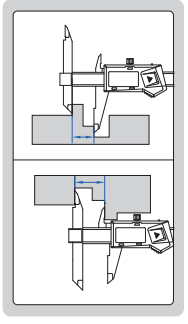
DATA OUTPUT



1186-150A

- Non waterproof
- The left jaw can slide up and down to facilitate measurement of stepped sections
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel





With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7) **(mm)**

Code	Range	Accuracy	L	a	b	c	d	e	f
1186-150A	0-150mm/0-6"	±0.04mm	249	40	16.5	10	110	17	7
1186-200A	0-200mm/0-8"	±0.04mm	299	50	19.5	10	120	17	7
1186-300A	0-300mm/0-12"	±0.05mm	399	60	20.5	10	130	17	7

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed) **(mm)**

Code	Range	Accuracy	L	a	b	c	d	e	f
1186-150AWL	0-150mm/0-6"	±0.04mm	249	40	16.5	10	110	17	7
1186-200AWL	0-200mm/0-8"	±0.04mm	299	50	19.5	10	120	17	7
1186-300AWL	0-300mm/0-12"	±0.05mm	399	60	20.5	10	130	17	7

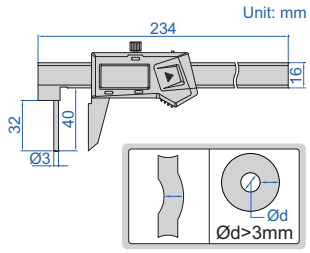
DATA OUTPUT

DIGITAL TUBE THICKNESS CALIPERS

- Non waterproof
- Measure wall thickness of tubes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1161-150A



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1161-150A	0-150mm/0-6"	±0.05mm

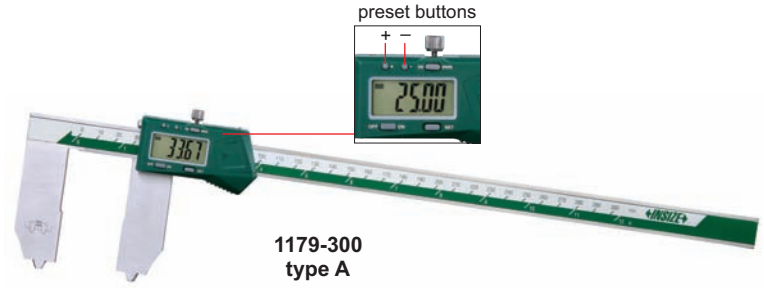
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1161-150AWL	0-150mm/0-6"	±0.05mm

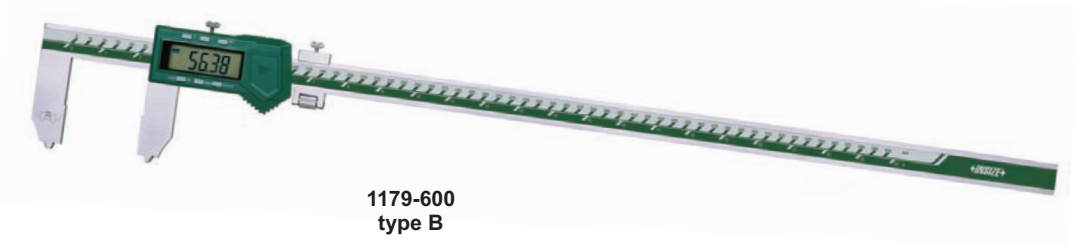
DATA OUTPUT

DIGITAL RTJ RING GROOVE CALIPERS

- Non waterproof
- Angle of RTJ ring groove: 23°
- Measure ring grooves of flange
- Resolution: 0.01mm/0.0005"
- Button function: on/off, set, zero, mm/inch, data preset
- Battery CR2032
- Made of stainless steel

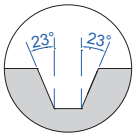


1179-300
type A

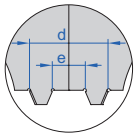


1179-600
type B

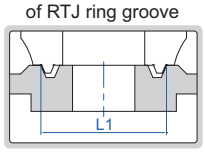
applicable for RTJ ring grooves with angle 23°



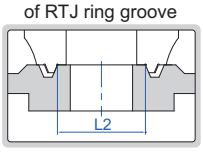
d and e need to be added on the reading

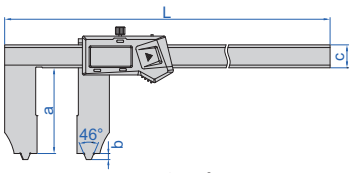


measure outside diameter of RTJ ring groove

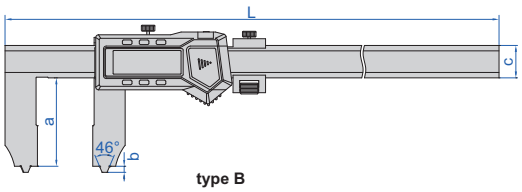


measure inside diameter of RTJ ring groove





type A



type B

With data interface **(mm)**

Code	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Accuracy	Type	L	a	b	c	d	e	Wireless transmitter (optional)
1179-300	10-300mm/0.4-12"	25-300mm/1-12"	±0.06mm	A	410	63.5	4.5	17	25	10	**7315-25** (receiver is needed) page 7
1179-600	10-600mm/0.4-24"	25-600mm/1-24"	±0.07mm	B	770	65.5	4.5	24	25	10	**7315-22** (receiver is needed) page 7
1179-1000	15-1000mm/0.6-40"	30-1000mm/1.2-40"	±0.09mm	B	1220	90	5	31	30	15	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed) **(mm)**

Code	Range (inside diameter of RTJ ring groove)	Range (outside diameter of RTJ ring groove)	Accuracy	Type	L	a	b	c	d	e
1179-300WL	10-300mm/0.4-12"	25-300mm/1-12"	±0.06mm	A	410	63.5	4.5	17	25	10
1179-600WL	10-600mm/0.4-24"	25-600mm/1-24"	±0.07mm	B	770	65.5	4.5	24	25	10

DIGITAL CALIPERS WITH INTERCHANGEABLE BALL TIPS

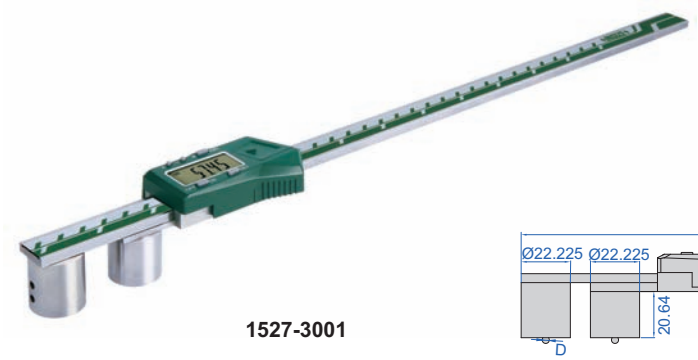
DATA OUTPUT

back-jaw

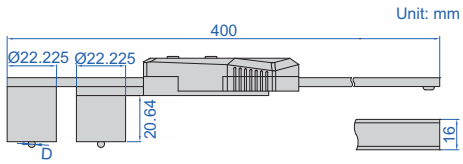


preset buttons





1527-3001



- Non waterproof
- Resolution 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: ball tips

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1527-3001	(22.22+D)~300mm*	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

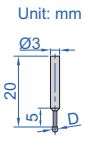
Code	Range	Accuracy
1527-3001WL	(22.22+D)~300mm*	±0.03mm

*"D" is the diameter of ball tips.

Ball tips (optional, supplied in pair)



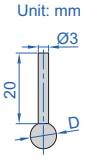
1527-T101



type A



1527-T104

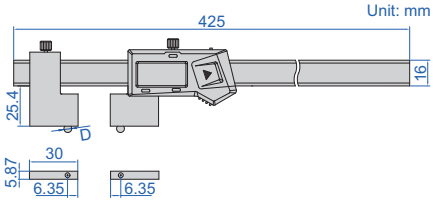


type B

Code	Diameter (D)	Accuracy of diameter	Type	Material
1527-T101	1/16" (Ø1.5875mm)	±0.005mm	A	ruby
1527-T102	1/8" (Ø3.175mm)	±0.005mm	B	stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	B	stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	B	stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	B	stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	B	stainless steel

DIGITAL CALIPERS WITH INTERCHANGEABLE BALL TIPS

DATA OUTPUT





ball tips are optional

1528-3001

preset buttons



- Non waterproof
- Resolution 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: ball tips

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1528-3001	(12.7+D)~300mm*	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

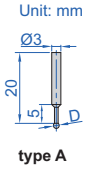
Code	Range	Accuracy
1528-3001WL	(12.7+D)~300mm*	±0.03mm

*"D" is the diameter of ball tips.

Ball tips (optional, supplied in pair)



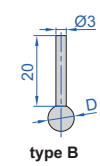
1527-T101



type A



1527-T104



type B

Code	Diameter (D)	Accuracy of diameter	Type	Material
1527-T101	1/16" (Ø1.5875mm)	±0.005mm	A	ruby
1527-T102	1/8" (Ø3.175mm)	±0.005mm	B	stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	B	stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	B	stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	B	stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	B	stainless steel

RELATIVE PRODUCT: CRIMP HEIGHT MICROMETER (CODE 3266-25BA, 3566-25BA)

DATA OUTPUT

DIGITAL CRIMP HEIGHT CALIPERS

- Non waterproof
- Measure crimp height
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, meet DIN862
- Made of stainless steel



1165-150A

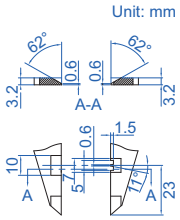


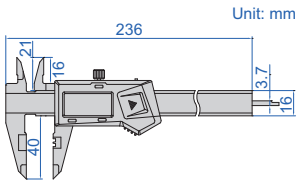
With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1165-150A	0-150mm/0-6"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1165-150AWL	0-150mm/0-6"	±0.03mm





DATA OUTPUT

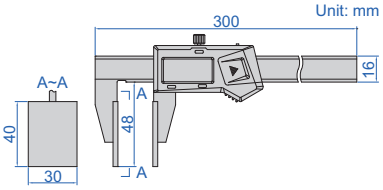
DIGITAL CALIPERS WITH LARGE MEASURING FACES





1172-200

- Non waterproof
- Measure diameter of wire ropes, and thickness of soft materials like rubber, sponge, etc.
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



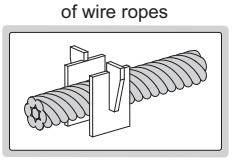
With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1172-200	0-200mm/0-8"	±0.07mm

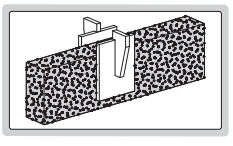
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1172-200WL	0-200mm/0-8"	±0.07mm

measure diameter of wire ropes



measure thickness of rubber, sponge, etc.



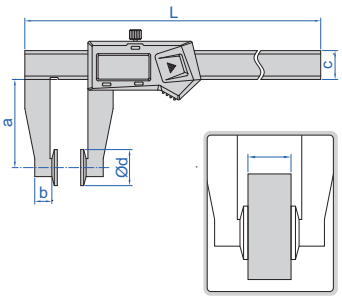
DIGITAL CALIPERS WITH DISK FACES

DATA OUTPUT

- Non waterproof
- Measure thickness of soft sheets
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1533-150



With data interface (mm)

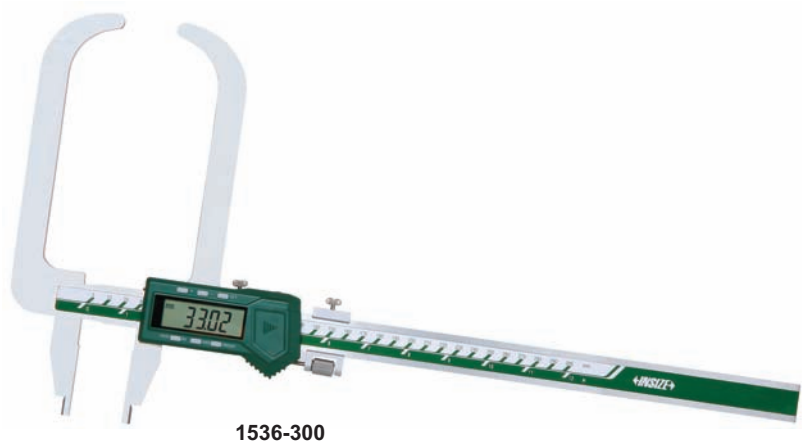
Code	Range	Accuracy	L	a	b	c	Ød	Wireless transmitter (optional)
1533-150	0-150mm/0-6"	±0.04mm	245	50	11	16	20	**7315-25** (receiver is needed) page 7
1533-200	0-200mm/0-8"	±0.05mm	310	80	11	16	30	
1533-500	0-500mm/0-20"	±0.07mm	680	150	12.5	24	50	**7315-22** (receiver is needed) page 7

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed) (mm)

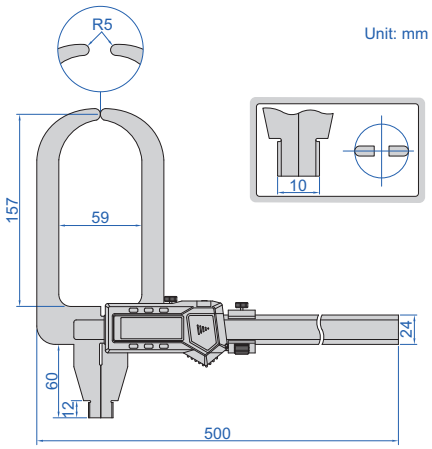
Code	Range	Accuracy	L	a	b	c	Ød
1533-150WL	0-150mm/0-6"	±0.04mm	245	50	11	16	20
1533-200WL	0-200mm/0-8"	±0.05mm	310	80	11	16	30
1533-500WL	0-500mm/0-20"	±0.07mm	680	150	12.5	24	50

DIGITAL WALL THICKNESS CALIPERS

DATA OUTPUT



1536-300



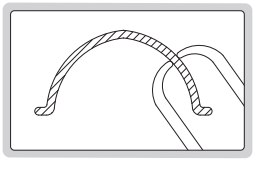
- Non waterproof
- Measure wall thickness of helmets, domes and curved pots
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS, data preset
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (optional wireless transmitter code 7315-22, receiver is needed page 7)

Code	Range	Accuracy
1536-300	0-300mm/0-12"	±0.05mm

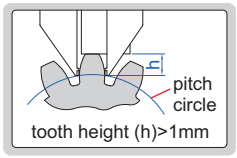
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1536-300WL	0-300mm/0-12"	±0.05mm



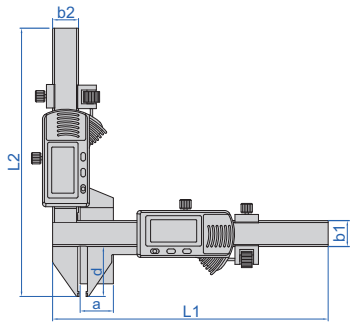
DIGITAL GEAR TOOTH CALIPERS

ATTENTION:
NO DATA OUTPUT





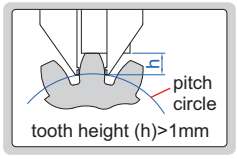
1181-M25A

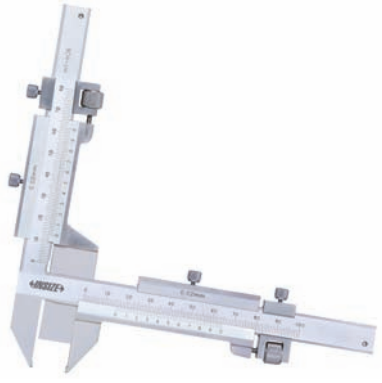


- Non waterproof
- Resolution: 0.01mm/0.0005"
- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height>1mm)
- Buttons: zero, on/off, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

Code	Range	Accuracy of height measurement	Accuracy of thickness measurement	Total accuracy	L1	L2	a	b1	b2	d
1181-M25A	M1-25mm	±0.03mm	±0.03mm	±0.04mm	170mm	165.5mm	21mm	16mm	16mm	30.5mm
1181-M50A	M5-50mm	±0.03mm	±0.03mm	±0.04mm	220mm	190mm	50.5mm	16mm	16mm	55mm

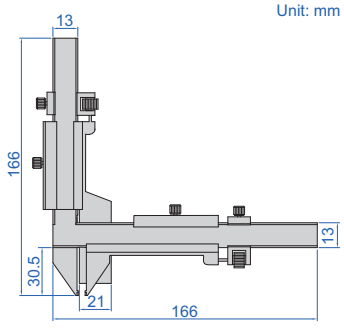
GEAR TOOTH VERNIER CALIPER





1281-M26A

Unit: mm



- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height>1mm)
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Graduation	Accuracy of height measurement	Accuracy of thickness measurement	Total accuracy
1281-M26A	M1-26mm	0.02mm	±0.03mm	±0.03mm	±0.04mm

DIGITAL DISK BRAKE CALIPERS

RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

DATA OUTPUT

- Non waterproof
- Measure thickness of disk brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



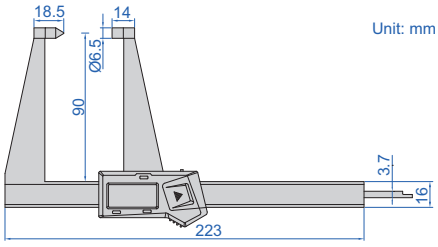
1162-125A

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1162-125A	0-125mm/0-5"	±0.05mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1162-125AWL	0-125mm/0-5"	±0.05mm





DIGITAL DISK BRAKE AND PAD CALIPERS

RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

DATA OUTPUT

- Non waterproof
- Measure thickness of disk brakes and pad wear
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



1167-150A



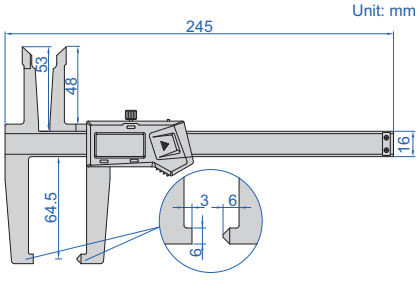


With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1167-150A	0-150mm/0-6"	±0.07mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1167-150AWL	0-150mm/0-6"	±0.07mm



DIGITAL DRUM BRAKE CALIPERS

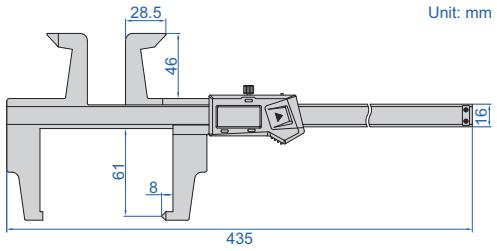
RELATIVE PRODUCT: DISK BRAKE MICROMETER (CODE 3288-, 3588-)

DATA OUTPUT



1168-300A

- Non waterproof
- Measure internal and external diameter of drum brakes
- Resolution 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

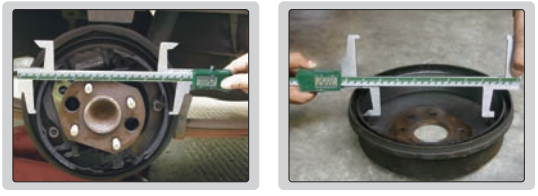


With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1168-300A	0-300mm/0-12"	±0.07mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1168-300AWL	0-300mm/0-12"	±0.07mm

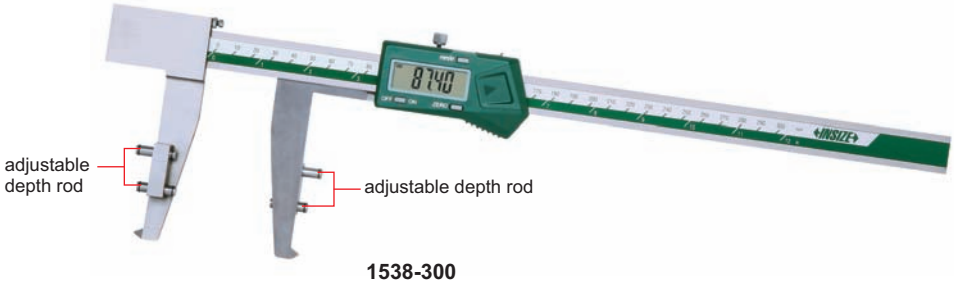


DIGITAL DRUM BRAKE CALIPER

DATA OUTPUT

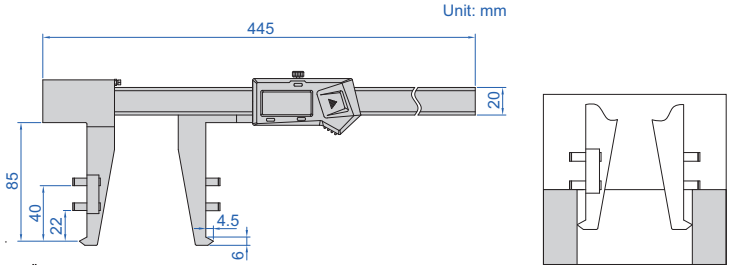
calibration block (included)





1538-300

- Non waterproof
- Measure internal diameter of drum brakes
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: wireless transmitter code **7315-22** (receiver is needed) page 7



Code	Range	Accuracy
1538-300	30-300mm/1.2-12"	±0.05mm

DIGITAL CALIPERS FOR BORING TOOLS

DATA OUTPUT

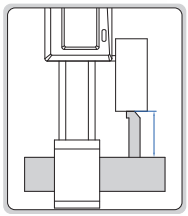
- Non waterproof
- Measure height of boring tools
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel





1512-150

application



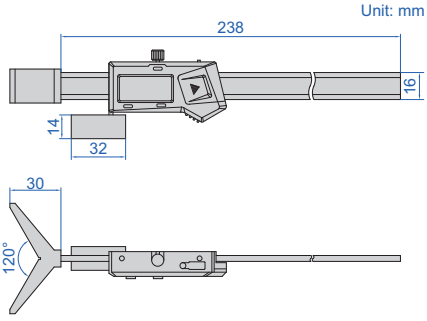
With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	Remark
1512-150	0-150mm/0-6"	±0.03mm	for shank with diameter Ø10-80mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Remark
1512-150WL	0-150mm/0-6"	±0.03mm	for shank with diameter Ø10-80mm

Unit: mm

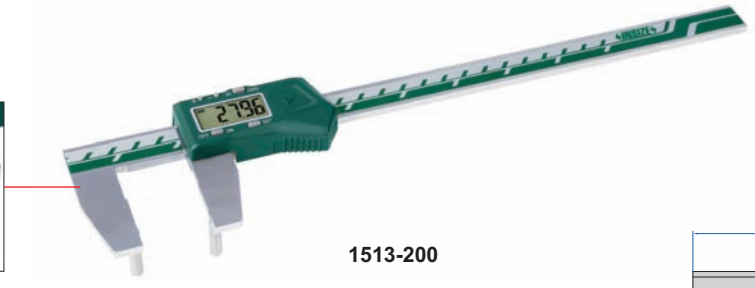


DIGITAL CALIPERS FOR BORES WITH BARRIER INSIDE

DATA OUTPUT

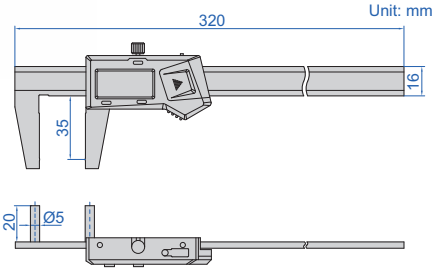
RELATIVE PRODUCT: BORE GAUGE FOR BARRIER INSIDE BORE (CODE 2348)





1513-200

Unit: mm



- Non waterproof
- Measure diameter of bores with barrier inside
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel

application



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range (ØD)*	Diameter of barrier (Ød)	Accuracy
1513-200	10-200mm/0.4-8"	<D-10mm (less than 70mm)	±0.03mm

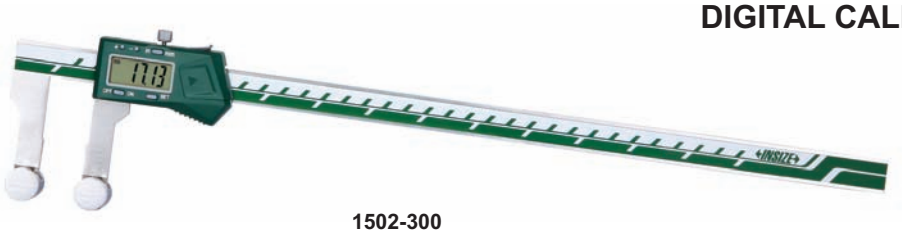
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range (ØD)*	Diameter of barrier (Ød)	Accuracy
1513-200WL	10-200mm/0.4-8"	<D-10mm (less than 70mm)	±0.03mm

*For example:
When measuring size (ØD) is 40mm, D-10=30mm, so the diameter of barrier (Ød) should be less than 30mm.
When measuring size (ØD) is 100mm, D-10=90mm, however it should be less than 70mm,
so the diameter of barrier (Ød) should be less than 70mm.

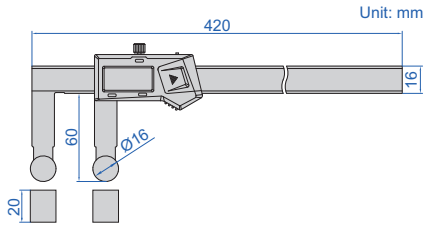
DIGITAL CALIPERS

DATA OUTPUT



1502-300

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1502-300	0-300mm/0-12"	±0.05mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1502-300WL	0-300mm/0-12"	±0.05mm

DIGITAL ARC RADIUS CALIPERS

REFER TO PAGE 266 FOR DETAILS



1189-200B

DIGITAL SCRIBING CALIPERS

REFER TO PAGE 536 FOR DETAILS



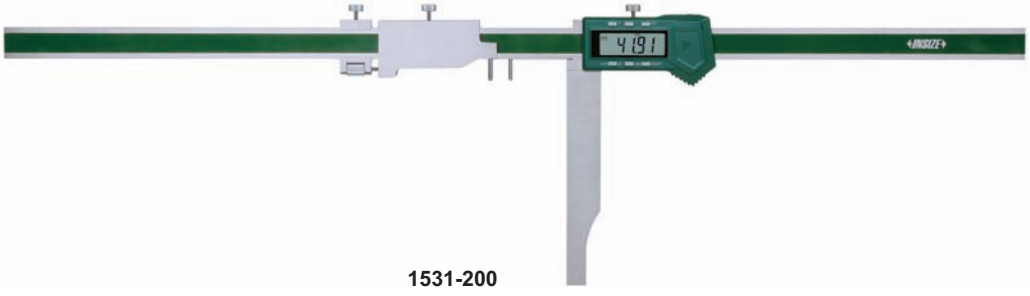
1166-150A

KEYWAY SYMMETRY DIGITAL CALIPERS

REFER TO PAGE 269 FOR DETAILS



1531-60



1531-200

03 DEPTH MEASURING TOOLS



Digital Depth Gauges
Page 85-89



Dial Depth Gauges
Page 89



Vernier Depth Gauges
Page 90-92



Extension Bases
Page 92



Mini Depth Gauges
Page 92-93



Depth Gauges
Page 94-97



Depth Micrometers
Page 98-99



Measuring Tools Dynamometers
Page 99



Depth Micrometer Checkers
Page 100

ATTENTION: NO DATA OUTPUT

ATTENTION: IT IS NECESSARY TO SET ZERO AFTER POWER ON EACH TIME

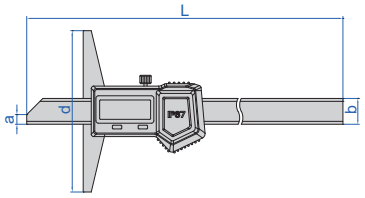
IP67 WATERPROOF DIGITAL DEPTH GAUGES

IP67 WATERPROOF

- IP67 dust/waterproof
- Resolution: 0.01mm/0.0005"
- Button function: zero, on/off, mm/inch, ABS/REL, hold
- Meet DIN862
- Battery CR2032
- Made of stainless steel



1149-150



Code	Range	Accuracy	L	a	b	d
1149-150	0-150mm/0-6"	±0.03mm	240mm	6mm	16mm	100mm
1149-200	0-200mm/0-8"	±0.03mm	290mm	6mm	16mm	100mm
1149-300	0-300mm/0-12"	±0.03mm	390mm	6mm	16mm	150mm

3

POPULAR MODEL

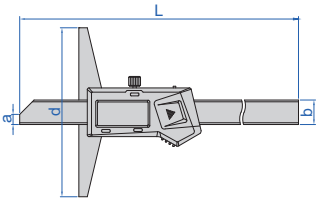
DATA OUTPUT

DIGITAL DEPTH GAUGES (STANDARD TYPE)

- Non waterproof
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862 (except 0-500mm/0-20", 0-1000mm/0-40", 0-1500mm/0-60")
- Battery CR2032
- Made of stainless steel



1141-150A



With data interface (mm)

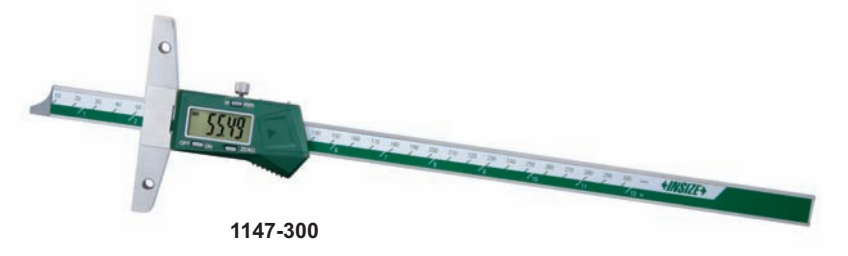
Code	Range	Resolution	Accuracy	L	a	b	d	Wireless transmitter (optional)
1141-150A	0-150mm/0-6"	0.01mm/0.0005"	±0.03mm	230	6	14.5	100	7315-25 (receiver is needed) page 7
1141-200A	0-200mm/0-8"	0.01mm/0.0005"	±0.03mm	280	6	14.5	100	
1141-300A	0-300mm/0-12"	0.01mm/0.0005"	±0.03mm	380	6	14.5	150	
1141-500A	0-500mm/0-20"	0.01mm/0.0005"	±0.05mm	585	7	15	150	
1141-5001A	0-500mm/0-20"	0.01mm/0.0005"	±0.05mm	585	7	15	200	
1141-1000A	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188	7	18	150	7315-22 (receiver is needed) page 7
1141-10001A	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188	7	18	200	
1141-10002A	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188	7	18	250	
1141-10003A	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188	7	18	300	
1141-1500A	0-1500mm/0-60"	0.01mm/0.0005"	±0.11mm	1695	7	18	200	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Resolution	Accuracy	L	a	b	d
1141-150AWL	0-150mm/0-6"	0.01mm/0.0005"	±0.03mm	230mm	6mm	14.5mm	100mm
1141-200AWL	0-200mm/0-8"	0.01mm/0.0005"	±0.03mm	280mm	6mm	14.5mm	100mm
1141-300AWL	0-300mm/0-12"	0.01mm/0.0005"	±0.03mm	380mm	6mm	14.5mm	150mm
1141-500AWL	0-500mm/0-20"	0.01mm/0.0005"	±0.05mm	585mm	7mm	15mm	150mm
1141-5001AWL	0-500mm/0-20"	0.01mm/0.0005"	±0.05mm	585mm	7mm	15mm	200mm
1141-1000AWL	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188mm	7mm	18mm	150mm
1141-10001AWL	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188mm	7mm	18mm	200mm
1141-10002AWL	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188mm	7mm	18mm	250mm
1141-10003AWL	0-1000mm/0-40"	0.01mm/0.0005"	±0.07mm	1188mm	7mm	18mm	300mm
1141-1500AWL	0-1500mm/0-60"	0.01mm/0.0005"	±0.11mm	1695mm	7mm	18mm	200mm

DIGITAL DEPTH GAUGES WITH MOUNTING HOLES FOR EXTENSION BASE

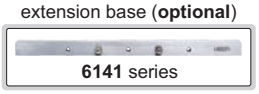
DATA OUTPUT



1147-300

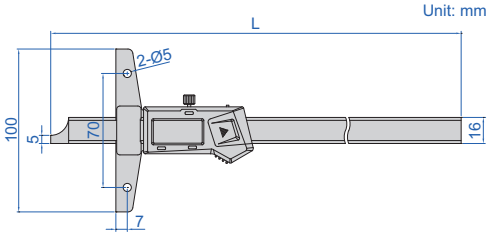
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Made of stainless steel
- Optional accessory: extension base (code **6141**)

extension base (**optional**)



6141 series

Unit: mm



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

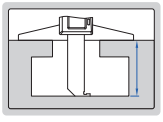
Code	Range	Accuracy	L
1147-150	0-150mm/0-6"	±0.03mm	237mm
1147-200	0-200mm/0-8"	±0.03mm	287mm
1147-300	0-300mm/0-12"	±0.03mm	403mm
1147-500	0-500mm/0-20"	±0.05mm	605mm
1147-700	0-700mm/0-28"	±0.06mm	805mm

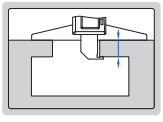
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

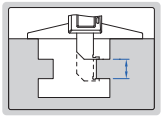
Code	Range	Accuracy	L
1147-150WL	0-150mm/0-6"	±0.03mm	237mm
1147-200WL	0-200mm/0-8"	±0.03mm	287mm
1147-300WL	0-300mm/0-12"	±0.03mm	403mm
1147-500WL	0-500mm/0-20"	±0.05mm	605mm
1147-700WL	0-700mm/0-28"	±0.06mm	805mm

DIGITAL HOOK DEPTH GAUGES

DATA OUTPUT







- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



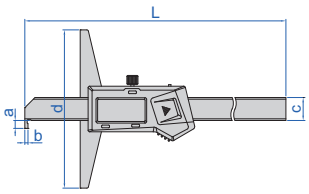
1142-150A

With data interface

Code	Range	Accuracy	L	d	a	b	c	Wireless transmitter (optional)
1142-150A	0-150mm/0-6"	±0.03mm	230mm	100mm	5mm	2mm	14.5mm	**7315-25** (receiver is needed) page 7
1142-200A	0-200mm/0-8"	±0.03mm	280mm	100mm	5mm	2mm	14.5mm	
1142-300A	0-300mm/0-12"	±0.04mm	380mm	150mm	5mm	2mm	14.5mm	
1142-500A	0-500mm/0-20"	±0.05mm	585mm	150mm	8mm	3mm	15mm	
1142-5001A	0-500mm/0-20"	±0.05mm	585mm	200mm	8mm	3mm	15mm	
1142-1000A	0-1000mm/0-40"	±0.07mm	1188mm	150mm	10mm	4mm	18mm	**7315-22** (receiver is needed) page 7
1142-10001A	0-1000mm/0-40"	±0.07mm	1188mm	200mm	10mm	4mm	18mm	
1142-10002A	0-1000mm/0-40"	±0.07mm	1188mm	250mm	10mm	4mm	18mm	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	d	a	b	c
1142-150AWL	0-150mm/0-6"	±0.03mm	230mm	100mm	5mm	2mm	14.5mm
1142-200AWL	0-200mm/0-8"	±0.03mm	280mm	100mm	5mm	2mm	14.5mm
1142-300AWL	0-300mm/0-12"	±0.04mm	380mm	150mm	5mm	2mm	14.5mm
1142-500AWL	0-500mm/0-20"	±0.05mm	585mm	150mm	8mm	3mm	15mm
1142-5001AWL	0-500mm/0-20"	±0.05mm	585mm	200mm	8mm	3mm	15mm
1142-1000AWL	0-1000mm/0-40"	±0.07mm	1188mm	150mm	10mm	4mm	18mm
1142-10001AWL	0-1000mm/0-40"	±0.07mm	1188mm	200mm	10mm	4mm	18mm
1142-10002AWL	0-1000mm/0-40"	±0.07mm	1188mm	250mm	10mm	4mm	18mm



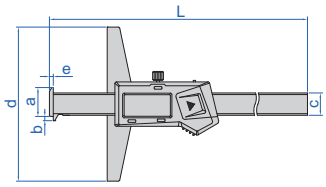
DIGITAL DOUBLE HOOK DEPTH GAUGES

DATA OUTPUT

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Made of stainless steel



1144-150A

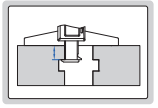


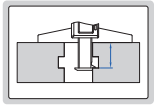
With data interface (mm)

Code	Range	Accuracy	L	d	a	b	c	e	Wireless transmitter (optional)
1144-150A	0-150mm/0-6"	±0.03mm	233	100	21.5	3.5	14.5	2.5	**7315-25** (receiver is needed) page 7
1144-200A	0-200mm/0-8"	±0.03mm	283	100	21.5	3.5	14.5	2.5	
1144-300A	0-300mm/0-12"	±0.03mm	383	150	21.5	3.5	14.5	2.5	
1144-500A	0-500mm/0-20"	±0.05mm	585	150	25	5	15	3	
1144-5001A	0-500mm/0-20"	±0.05mm	585	200	25	5	15	3	
1144-1000A	0-1000mm/0-40"	±0.07mm	1188	150	32	7	18	4	**7315-22** (receiver is needed) page 7
1144-10001A	0-1000mm/0-40"	±0.07mm	1188	200	32	7	18	4	
1144-10002A	0-1000mm/0-40"	±0.07mm	1188	250	32	7	18	4	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	d	a	b	c	e
1144-150AWL	0-150mm/0-6"	±0.03mm	233mm	100mm	21.5mm	3.5mm	14.5mm	2.5mm
1144-200AWL	0-200mm/0-8"	±0.03mm	283mm	100mm	21.5mm	3.5mm	14.5mm	2.5mm
1144-300AWL	0-300mm/0-12"	±0.03mm	383mm	150mm	21.5mm	3.5mm	14.5mm	2.5mm
1144-500AWL	0-500mm/0-20"	±0.05mm	585mm	150mm	25mm	5mm	15mm	3mm
1144-5001AWL	0-500mm/0-20"	±0.05mm	585mm	200mm	25mm	5mm	15mm	3mm
1144-1000AWL	0-1000mm/0-40"	±0.07mm	1188mm	150mm	32mm	7mm	18mm	4mm
1144-10001AWL	0-1000mm/0-40"	±0.07mm	1188mm	200mm	32mm	7mm	18mm	4mm
1144-10002AWL	0-1000mm/0-40"	±0.07mm	1188mm	250mm	32mm	7mm	18mm	4mm





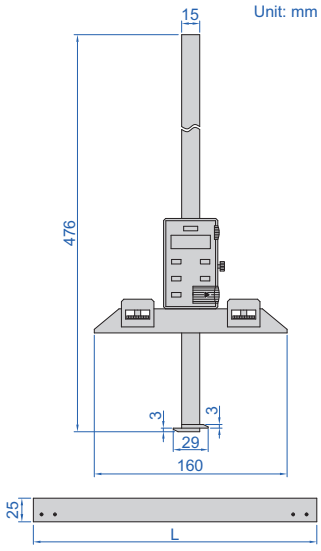
DIGITAL DOUBLE HOOK DEPTH GAUGE

DATA OUTPUT

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Made of stainless steel
- LR44 battery, data output
- Supplied with gauge block for zero setting
- Optional accessory: extension base, wireless transmitter code **7315-1150** (receiver is needed) page 10



1540-300



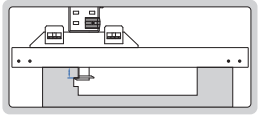
Code	Range	Accuracy
1540-300	0-300mm/0-12"	±0.04mm

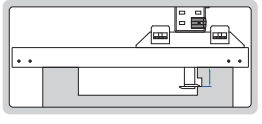
Extension base (optional)

Code	L
1540-L300	300mm
1540-L400	400mm
1540-L500	500mm
1540-L600	600mm
1540-L800	800mm

gauge block for zero setting (included)







DIGITAL DEPTH GAUGES WITH ROUND DEPTH BAR

VIDEO

MEASURE DEPTH OF SMALL HOLES (>Ø4mm)

DATA OUTPUT

MEASURE WIDTH AND DEPTH OF GROOVES INSIDE BORE

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Supplied with three interchangeable points (flat, spherical, disk)
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Optional accessory: extension base (code **6141**, for **1148-120**, **1148-120WL**, **1148-200**, **1148-200WL**, **1148-300** and **1148-300WL**)



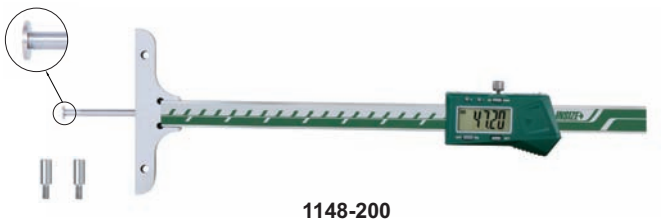
1148-100S

preset buttons



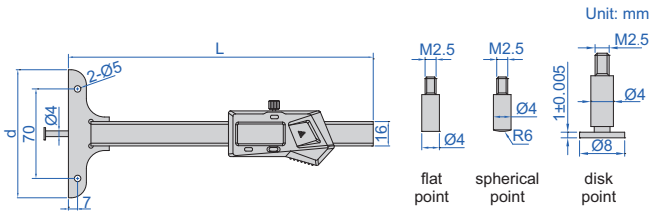


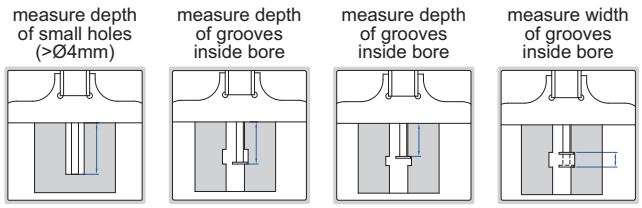
1148-120



1148-200

Unit: mm





With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range*	Accuracy	L	d	Remark
1148-100S	0-100mm/0-4"	±0.02mm	200mm	45mm	
1148-100	0-100mm/0-4"	±0.02mm	200mm	85mm	
1148-120	0-120mm/0-4.7"	±0.03mm	300mm	101mm	one-hand use, with mounting holes for extension base
1148-200	0-200mm/0-8"	±0.03mm	300mm	101mm	with mounting holes for extension base
1148-300	0-300mm/0-12"	±0.04mm	400mm	101mm	with mounting holes for extension base

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range*	Accuracy	L	d	Remark
1148-100SWL	0-100mm/0-4"	±0.02mm	200mm	45mm	
1148-100WL	0-100mm/0-4"	±0.02mm	200mm	85mm	
1148-120WL	0-120mm/0-4.7"	±0.03mm	300mm	101mm	one-hand use, with mounting holes for extension base
1148-200WL	0-200mm/0-8"	±0.03mm	300mm	101mm	with mounting holes for extension base
1148-300WL	0-300mm/0-12"	±0.04mm	400mm	101mm	with mounting holes for extension base

*When disk points are used, the range is reduced by 10mm

one-hand use of **1148-120** and **1148-120WL**

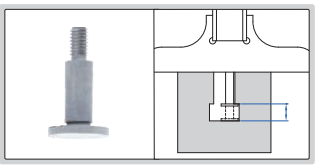


extension base for **1148-120**, **1148-120WL**, **1148-200**, **1148-200WL**, **1148-300** and **1148-300WL** (**optional**)



6141 series

1148-P103 (**optional**), measure width of bottom grooves inside blind hole



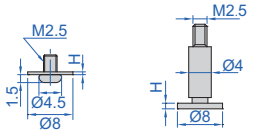
OPTIONAL DISK POINTS

Code	Description	H	Remark
1148-P101	0.5mm disk point	0.5±0.005mm	for narrow grooves
1148-P102	0.7mm disk point	0.7±0.005mm	for narrow grooves
1148-P103	1mm disk point	1±0.005mm	for grooves inside blind hole
1148-P104	0.5mm disk point	0.5±0.005mm	for grooves inside blind hole

1148-P101 (**optional**)



Unit: mm



1148-P101 and **1148-P102**

1148-P103 and **1148-P104**

DIGITAL POINT DEPTH GAUGES

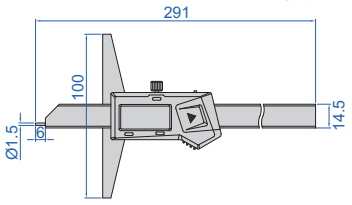
DATA OUTPUT



1143-200A

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Meet DIN862
- Battery CR2032
- Made of stainless steel

Unit: mm

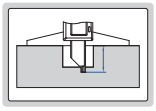


With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1143-200A	0-200mm/0-8"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1143-200AWL	0-200mm/0-8"	±0.03mm



DIAL DEPTH GAUGES

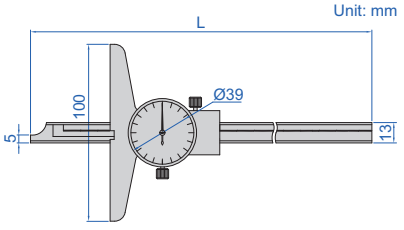
SHOCK PROOF



1340-150

- Shockproof dial indicator
- Made of stainless steel

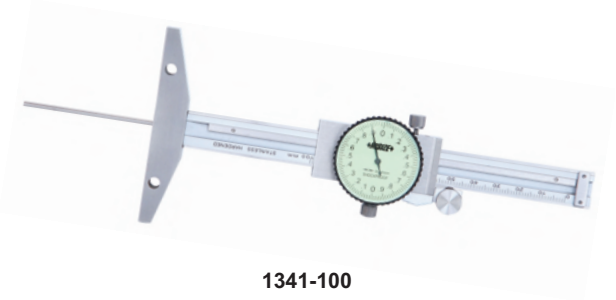
Unit: mm



Code	Range	Graduation	Accuracy	L
1340-150	0-150mm	0.02mm	±0.03mm	232mm
1340-200	0-200mm	0.02mm	±0.03mm	282mm
1340-300	0-300mm	0.02mm	±0.04mm	382mm

DIAL DEPTH GAUGES WITH ROUND BAR

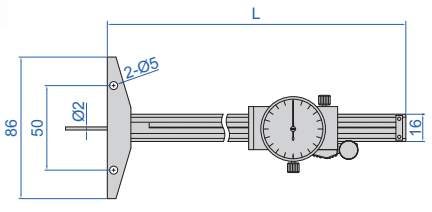
SHOCK PROOF



1341-100

- Shockproof dial indicator
- Dial indicator graduation: 0.02mm
- Made of stainless steel

Unit: mm

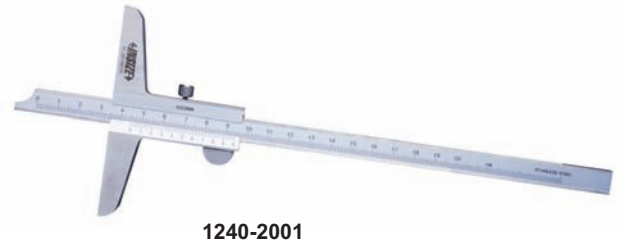


Code	Range	Accuracy	L
1341-100	0-100mm	±0.02mm	181mm
1341-150	0-150mm	±0.03mm	234mm
1341-200	0-200mm	±0.03mm	284mm

VERNIER DEPTH GAUGES (STANDARD TYPE)

POPULAR MODEL

- Made of stainless steel
- Satin chrome plated reading surface



1240-2001

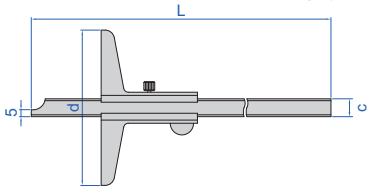
Graduation 0.05mm

Code	Range	Accuracy	L	d	c
1240-150	0-150mm	±0.05mm	250mm	100mm	10mm
1240-200	0-200mm	±0.05mm	300mm	100mm	10mm
1240-300	0-300mm	±0.08mm	400mm	100mm	10mm
1240-500	0-500mm	±0.09mm	605mm	150mm	11mm

Graduation 0.02mm

Code	Range	Accuracy	L	d	c
1240-1501	0-150mm	±0.03mm	250mm	100mm	10mm
1240-2001	0-200mm	±0.03mm	300mm	100mm	10mm
1240-3001	0-300mm	±0.04mm	400mm	100mm	10mm
1240-5001	0-500mm	±0.05mm	605mm	150mm	11mm

Unit: mm



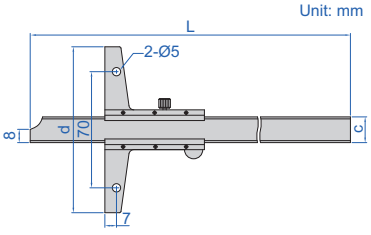
VERNIER DEPTH GAUGES

WITH MOUNTING HOLES FOR EXTENSION BASE



1247-2001

Unit: mm



- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code **6141**)

extension base (**optional**)



6141 series

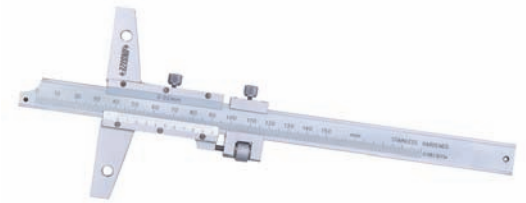
Range	L	c	d
0-150mm	240mm	16mm	100mm
0-200mm	290mm	16mm	100mm
0-300mm	390mm	16mm	100mm
0-600mm	704mm	16mm	150mm
0-1000mm	1140mm	16mm	200mm

Code	Range	Accuracy	Graduation
1247-150	0-150mm	±0.05mm	0.05mm
1247-200	0-200mm	±0.05mm	0.05mm
1247-300	0-300mm	±0.08mm	0.05mm
1247-600	0-600mm	±0.10mm	0.05mm
1247-1000	0-1000mm	±0.15mm	0.05mm

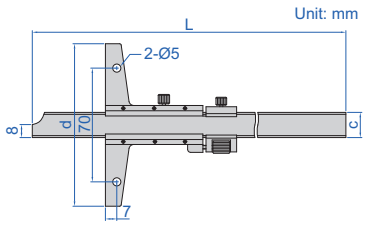
Code	Range	Accuracy	Graduation
1247-1501	0-150mm	±0.03mm	0.02mm
1247-2001	0-200mm	±0.03mm	0.02mm
1247-3001	0-300mm	±0.04mm	0.02mm
1247-6001	0-600mm	±0.05mm	0.02mm
1247-1001	0-1000mm	±0.07mm	0.02mm

WITH MOUNTING HOLES FOR EXTENSION BASE

VERNIER DEPTH GAUGES WITH FINE ADJUSTMENT



1249-1501



- With fine adjustment
- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code **6141**)

extension base (**optional**)



6141 series

Graduation 0.02mm

Code	Range	Accuracy
1249-1501	0-150mm	±0.03mm
1249-2001	0-200mm	±0.03mm
1249-3001	0-300mm	±0.04mm

Graduation 0.05mm

Code	Range	Accuracy
1249-150	0-150mm	±0.05mm
1249-200	0-200mm	±0.05mm
1249-300	0-300mm	±0.08mm

Range	L	c	d
0-150mm	256mm	16mm	100mm
0-200mm	306mm	16mm	100mm
0-300mm	406mm	16mm	100mm

WITH MOUNTING HOLES FOR EXTENSION BASE

VERNIER HOOK DEPTH GAUGES

extension base (**optional**)

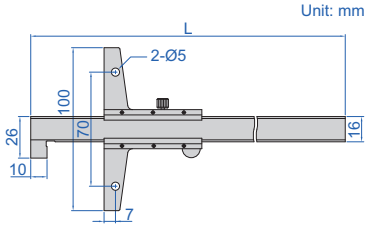


6141 series



1248-1501

- Made of stainless steel
- Satin chrome plating finish on reading surface
- Optional accessory: extension base (code **6141**)

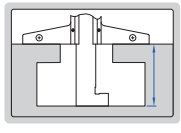


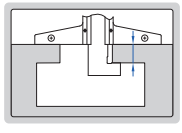
Graduation 0.05mm

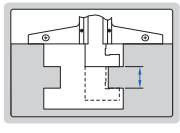
Code	Range	Accuracy	L
1248-150	0-150mm	±0.05mm	266mm
1248-200	0-200mm	±0.05mm	316mm
1248-300	0-300mm	±0.08mm	416mm

Graduation 0.02mm

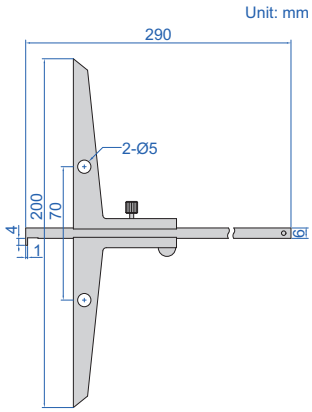
Code	Range	Accuracy	L
1248-1501	0-150mm	±0.03mm	266mm
1248-2001	0-200mm	±0.03mm	316mm
1248-3001	0-300mm	±0.04mm	416mm

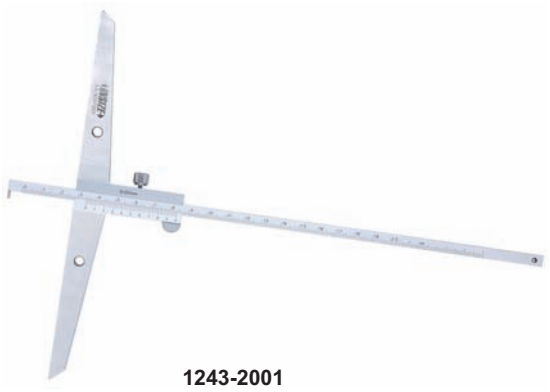






VERNIER HOOK DEPTH GAUGE

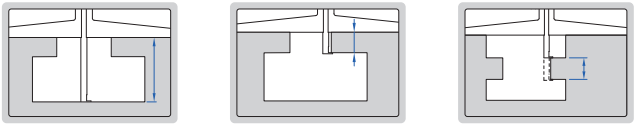




1243-2001

- Graduation 0.02mm
- Made of stainless steel
- Satin chrome plating finish on reading surface

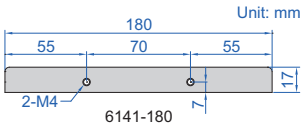
Code	Range	Accuracy
1243-2001	0-200mm	±0.04mm



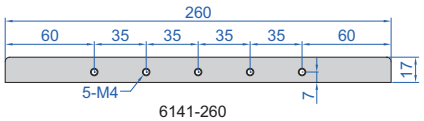
EXTENSION BASES



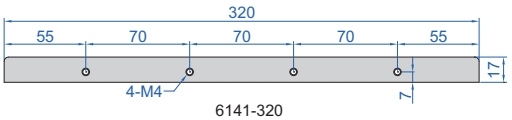
6141-260



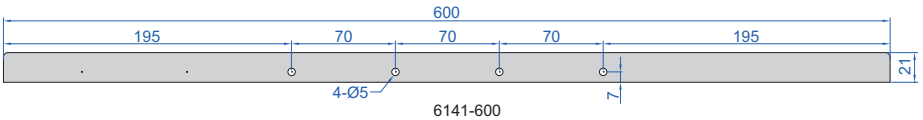
6141-180



6141-260

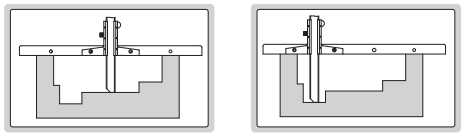


6141-320



6141-600

- Supplied with two screws
- Made of stainless steel
- Suitable for depth gauges series **1147**, **1148**, **1247**, **1248** and **1249**

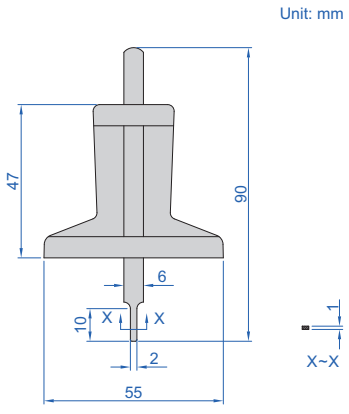


Code	Length
6141-180	180mm
6141-260	260mm
6141-320	320mm
6141-600	600mm

MINI VERNIER DEPTH GAUGE



1244-30



- Graduation: 0.1mm
- Made of stainless steel

Code	Range	Accuracy
1244-30	0-30mm	±0.10mm

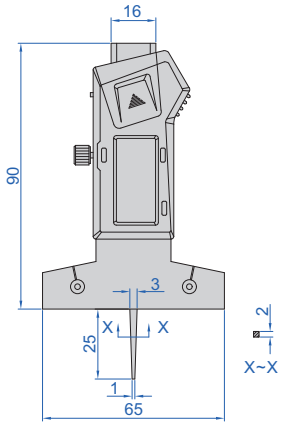
DATA OUTPUT

MINI DIGITAL DEPTH GAUGES





Unit: mm





- Non waterproof
- Measure depth of small groove and hole, also measure depth of tire tread
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Supplied with zero set surface
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

1145-25A



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1145-25A	0-25mm/0-1"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1145-25AWL	0-25mm/0-1"	±0.03mm

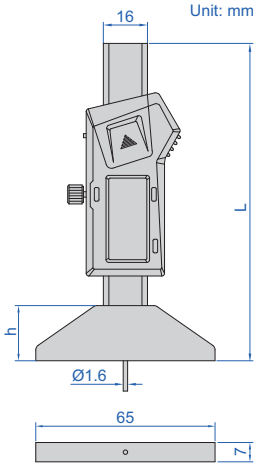
DATA OUTPUT

MINI DIGITAL DEPTH GAUGES WITH ROUND BAR





Unit: mm



- Non waterproof
- Measure depth of small groove and hole
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+,-)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

1140-25

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy	L	h
1140-25	0-25mm/0-1"	±0.02mm	114mm	20mm
1140-50	0-50mm/0-2"	±0.02mm	140mm	20mm
1140-100	0-100mm/0-4"	±0.02mm	190mm	20mm
1140-150	0-150mm/0-6"	±0.03mm	236mm	16mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	h
1140-25WL	0-25mm/0-1"	±0.02mm	114mm	20mm
1140-50WL	0-50mm/0-2"	±0.02mm	140mm	20mm
1140-100WL	0-100mm/0-4"	±0.02mm	190mm	20mm
1140-150WL	0-150mm/0-6"	±0.03mm	236mm	16mm

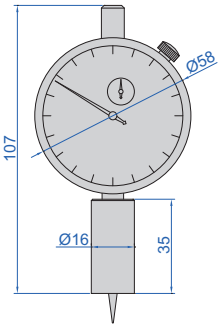
DIAL DEPTH GAUGES

- Accuracy: ±0.017mm
- Stainless steel base
- Pointed tip

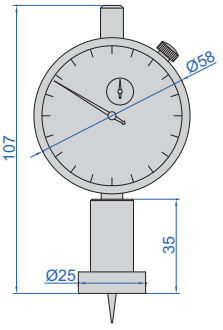


2343-102

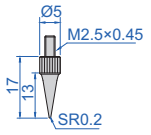
Unit: mm



2343-101



2343-102



pointed tip

Code	Range	Dial indicator stroke	Dial indicator graduation	Base
2343-101	0-10mm	10mm	0.01mm	Ø16mm
2343-102	0-10mm	10mm	0.01mm	Ø25mm

DIGITAL DEPTH GAUGES

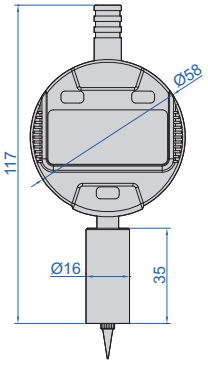
DATA OUTPUT

- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Pointed tip
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

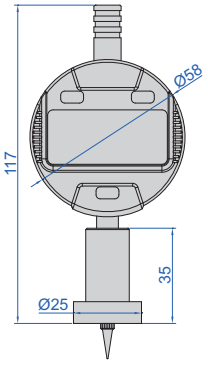


2142-102

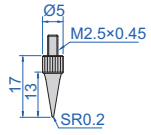
Unit: mm



2142-101/2142-301



2142-102/2142-302



pointed tip

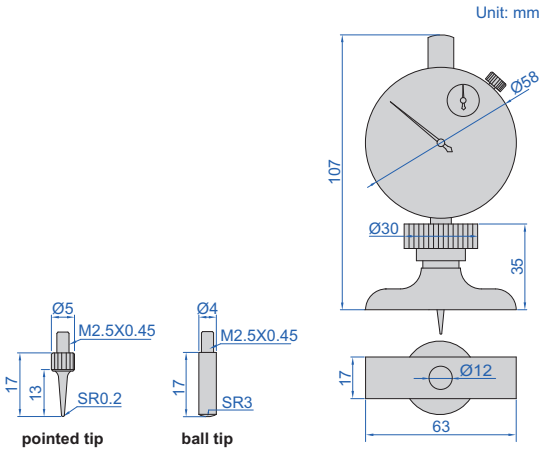
Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy	Base
2142-101	0-12.7mm/0-0.5"	12.7mm/0.5"	0.01mm/0.0005"	±20μm	Ø16mm
2142-102	0-12.7mm/0-0.5"	12.7mm/0.5"	0.01mm/0.0005"	±20μm	Ø25mm
2142-301	0-12.7mm/0-0.5"	12.7mm/0.5"	0.001mm/0.00005"	±5μm	Ø16mm
2142-302	0-12.7mm/0-0.5"	12.7mm/0.5"	0.001mm/0.00005"	±5μm	Ø25mm

DIAL DEPTH GAUGE

- Accuracy: ±0.017mm
- Stainless steel base
- Supplied with pointed tip and ball tip



2341-101A



Code	Range	Dial indicator stroke	Dial indicator graduation
2341-101A	0-10mm	10mm	0.01mm

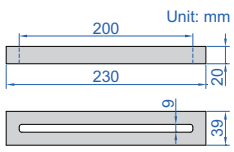
DIAL DEPTH GAUGES

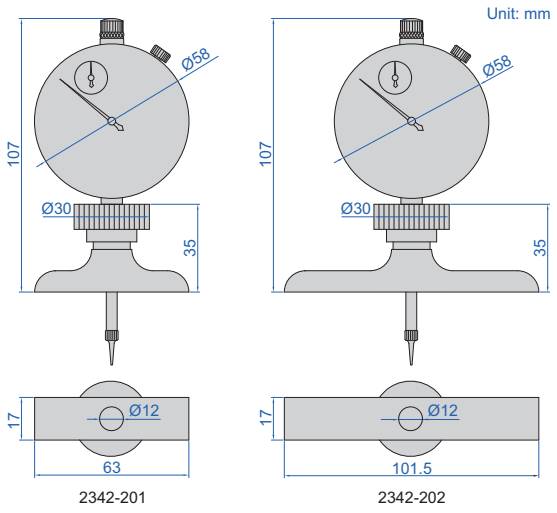


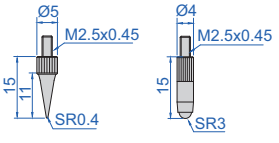
2342-202



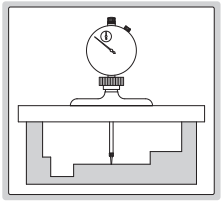
2141-10 (**optional**), can be customized according to workpieces

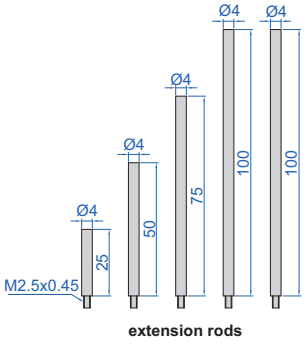






application





- Dial indicator graduation: 0.01mm
- Accuracy: ±0.03mm
- Stainless steel base
- Extension rods: 25mm (1pc), 50mm (1pc), 75mm (1pc), 100mm (2pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: granite extension holder (code **2141-10**)

Code	Range	Dial indicator stroke	Base
2342-201	0-300mm	30mm	63×17mm
2342-202	0-300mm	30mm	101.5×17mm

DIGITAL DEPTH GAUGES

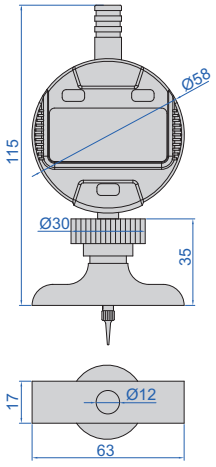
DATA OUTPUT



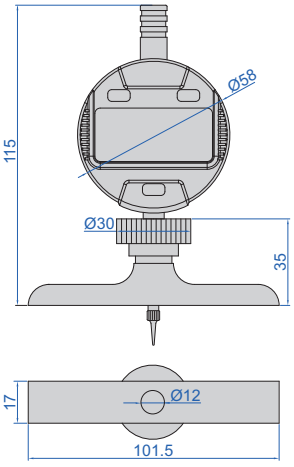
2141-202A



Unit: mm

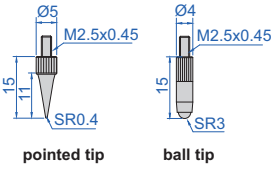


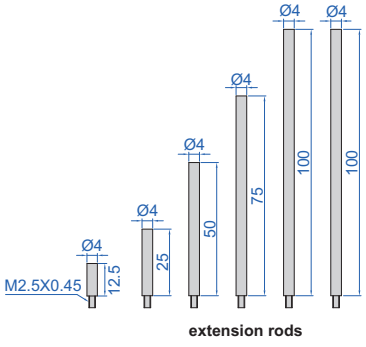
2141-201A/2141-301



2141-202A/2141-302

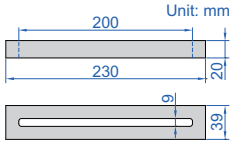
- Button function: on/off, zero, mm/inch, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Extension rods: 12.5mm (1pc), 25mm (1pc), 50mm (1pc), 75mm (1pc), 100mm (2pcs)
- Supplied with pointed tip and ball tip
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, granite extension holder (code **2141-10**)



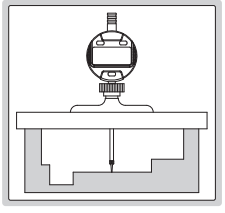




2141-10 (**optional**), can be customized according to workpieces



application



Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy	Base
2141-201A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	±20μm	63×17mm
2141-202A	0-300mm/0-12"	12.7mm/0.5"	0.01mm/0.0005"	±20μm	101.5×17mm
2141-301	0-300mm/0-12"	12.7mm/0.5"	0.001mm/0.00005"	±5μm	63×17mm
2141-302	0-300mm/0-12"	12.7mm/0.5"	0.001mm/0.00005"	±5μm	101.5×17mm

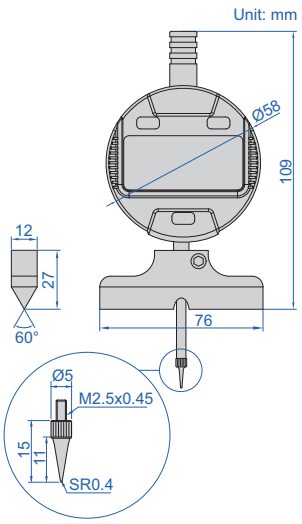
DATA OUTPUT

DIGITAL DEPTH GAUGE (60° KNIFE EDGE BASE)

- Button function: on/off, zero, inch/mm, ABS, data preset, change measuring direction
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base with 60° knife edge
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8



2143-101



Code	Range	Digital indicator stroke	Digital indicator resolution	Accuracy
2143-101	0-12.7mm/0-0.5"	12.7mm/0.5"	0.01mm/0.0005"	±20μm

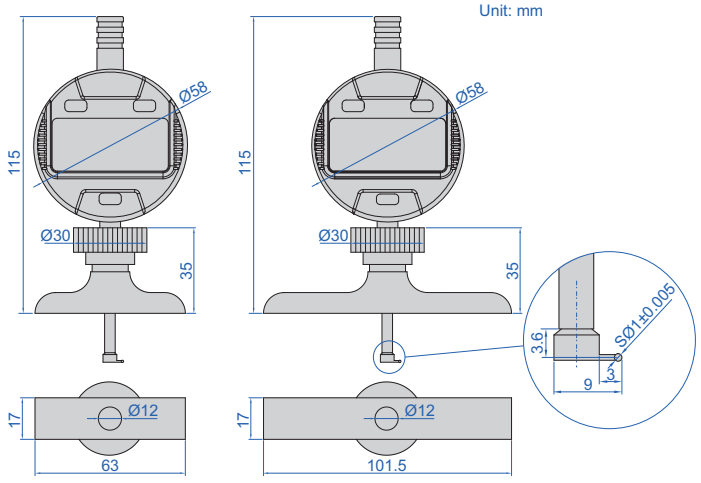
DATA OUTPUT

DIGITAL GROOVE GAUGES

VIDEO

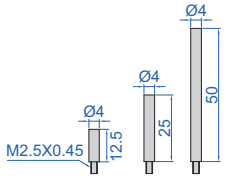


2145-202



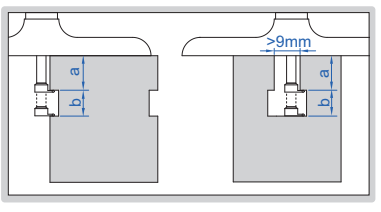
2145-201/2145-301 2145-202/2145-302

- Button function: on/off, zero, mm/inch, absolute/incremental measurement, data preset, change measuring direction
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Supplied with extension rods: 12.5mm (1pc), 25mm (1pc), 50mm (1pc)
- Supplied with groove point
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8



extension rods

measure width (b) and depth (a) of groove



Code	Range (a)	Digital indicator stroke (b)	Digital indicator resolution	Accuracy	Base
2145-201	0-85mm/0-3.35"	12.7mm/0.5"	0.01mm/0.0005"	±20μm	63×17mm
2145-202	0-85mm/0-3.35"	12.7mm/0.5"	0.01mm/0.0005"	±20μm	101.5×17mm
2145-301	0-85mm/0-3.35"	12.7mm/0.5"	0.001mm/0.00005"	±5μm	63×17mm
2145-302	0-85mm/0-3.35"	12.7mm/0.5"	0.001mm/0.00005"	±5μm	101.5×17mm

DIGITAL DEPTH MICROMETERS

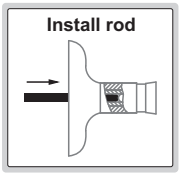
IP65 WATERPROOF

DATA OUTPUT

- Resolution: 0.001mm/0.00005"
- Micrometer head accuracy: +/-3μm
- Rod accuracy: +/-(2+L/75)μm, L is the measuring range in mm
- Button function: on/off, set, mm/inch, data transmit
- IP65 dust/waterproof
- Data output
- Automatic power off
- Rods with flat end
- Ratchet stop
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery

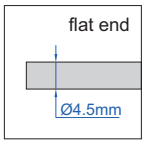


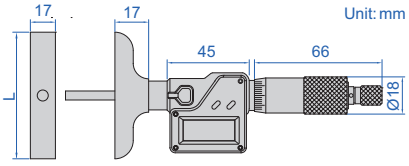
3540-50



With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Rods	L
3540-25	0-25mm/0-1"	1 pc	101.5mm
3540-50	0-50mm/0-2"	2 pcs	101.5mm
3540-100	0-100mm/0-4"	4 pcs	101.5mm
3540-150	0-150mm/0-6"	6 pcs	101.5mm
3540-300	0-300mm/0-12"	12 pcs	101.5mm
3540-B25	0-25mm/0-1"	1 pc	63mm
3540-B50	0-50mm/0-2"	2 pcs	63mm
3540-B100	0-100mm/0-4"	4 pcs	63mm
3540-B150	0-150mm/0-6"	6 pcs	63mm
3540-B300	0-300mm/0-12"	12 pcs	63mm





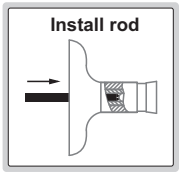
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3540-□□□□WL

Code examples:

Original code	Wireless code
3540-25	3540-25WL
3540-B25	3540-B25WL

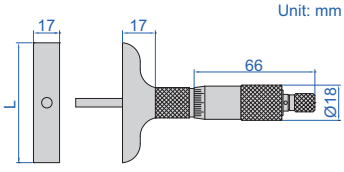
DEPTH MICROMETERS

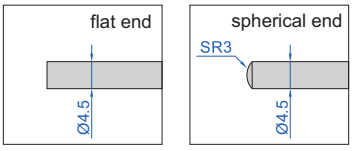


- Meet DIN863-2
- Graduation: 0.01mm
- Micrometer head accuracy: +/-3μm
- Rod accuracy: +/-(2+L/75)μm,
  L is the measuring range in mm
- Rods with flat or spherical end
- Ratchet stop



3240-100





Flat end

Code	Range	Rods	L
3240-25	0-25mm	1 pc	101.5mm
3240-50	0-50mm	2 pcs	101.5mm
3240-75	0-75mm	3 pcs	101.5mm
3240-100	0-100mm	4 pcs	101.5mm
3240-150	0-150mm	6 pcs	101.5mm
3240-200	0-200mm	8 pcs	101.5mm
3240-300	0-300mm	12 pcs	101.5mm
3240-B25	0-25mm	1 pc	63mm
3240-B50	0-50mm	2 pcs	63mm
3240-B100	0-100mm	4 pcs	63mm
3240-B150	0-150mm	6 pcs	63mm
3240-B300	0-300mm	12 pcs	63mm

Spherical end

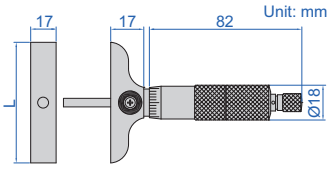
Code	Range	Rods	L
3240-25S	0-25mm	1 pc	101.5mm
3240-50S	0-50mm	2 pcs	101.5mm
3240-100S	0-100mm	4 pcs	101.5mm
3240-150S	0-150mm	6 pcs	101.5mm
3240-300S	0-300mm	12 pcs	101.5mm
3240-B25S	0-25mm	1 pc	63mm
3240-B50S	0-50mm	2 pcs	63mm
3240-B100S	0-100mm	4 pcs	63mm
3240-B150S	0-150mm	6 pcs	63mm
3240-B300S	0-300mm	12 pcs	63mm

DEPTH MICROMETERS

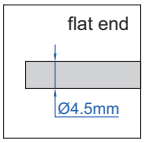


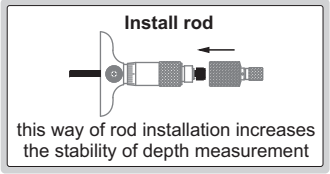
3241-100

- Meet DIN863-2
- Graduation: 0.01mm
- Micrometer head accuracy: +/-3μm
- Rod accuracy: +/-(2+L/75)μm,
  L is the measuring range in mm
- Rods with flat end
- Ratchet stop



Code	Range	Rods	L
3241-25	0-25mm	1 pc	101.5mm
3241-50	0-50mm	2 pcs	101.5mm
3241-75	0-75mm	3 pcs	101.5mm
3241-100	0-100mm	4 pcs	101.5mm
3241-150	0-150mm	6 pcs	101.5mm
3241-200	0-200mm	8 pcs	101.5mm
3241-300	0-300mm	12 pcs	101.5mm
3241-B25	0-25mm	1 pc	63mm
3241-B50	0-50mm	2 pcs	63mm
3241-B100	0-100mm	4 pcs	63mm
3241-B150	0-150mm	6 pcs	63mm
3241-B300	0-300mm	12 pcs	63mm





this way of rod installation increases the stability of depth measurement

REFER TO PAGE 200 FOR DETAILS

MEASURING TOOLS DYNAMOMETERS



ISF-DGD15



check the measuring force of depth gauges

CYLINDER GAUGE BLOCKS FOR DEPTH MICROMETERS

INSPECTION CERTIFICATE

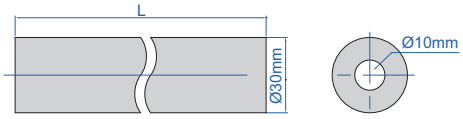
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Meet ISO3650 grade 1



4179-25

Code	Length (L)
4179-25*	25mm
4179-50*	50mm
4179-75*	75mm
4179-100*	100mm
4179-125*	125mm
4179-150*	150mm
4179-175*	175mm
4179-200*	200mm
4179-225*	225mm
4179-250*	250mm
4179-275*	275mm

*Supplied with manufacturer inspection certificate



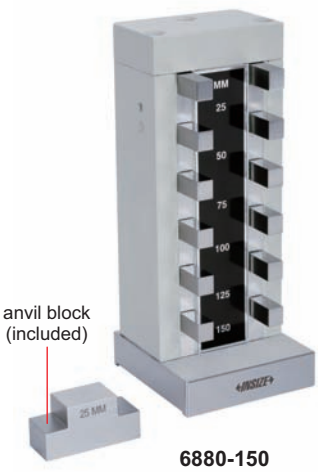
application



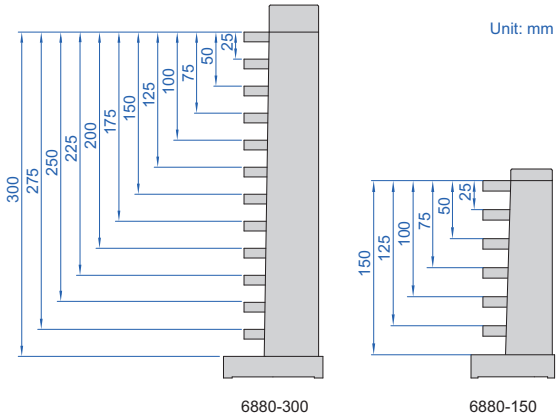
DEPTH MICROMETER CHECKERS

INSPECTION CERTIFICATE

VIDEO



6880-150



6880-300 6880-150

application



- To check depth micrometers and set zero
- Constructed with steel gauge blocks
- Supplied with anvil block

Code	Size	Range (mm)	Accuracy
6880-150*	0-150mm	25, 50, 75, 100, 125, 150	±2μm
6880-300*	0-300mm	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300	±3μm

*Supplied with manufacturer inspection certificate

HEIGHT MEASURING TOOLS 04



Digital Height Gauges
Page 102-105



Dial Indicator Stands
Page 105



Height Gauges
Page 106-111

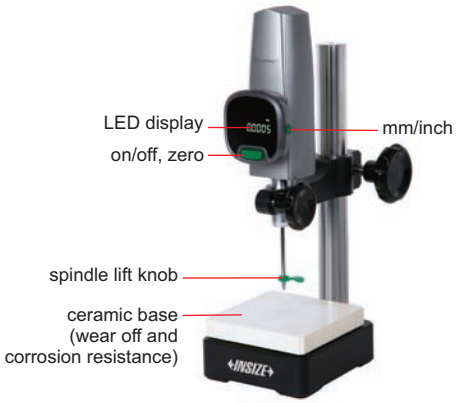


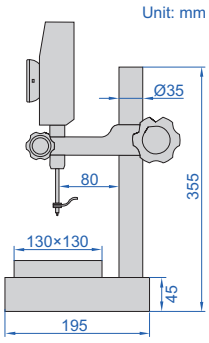
Height Gauge Checkers
Page 111

HIGH PRECISION DIGITAL HEIGHT GAUGES

VIDEO

DATA OUTPUT

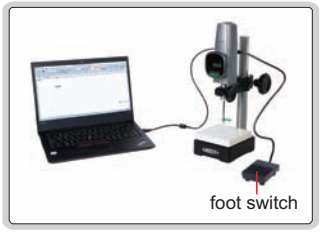




1155-505

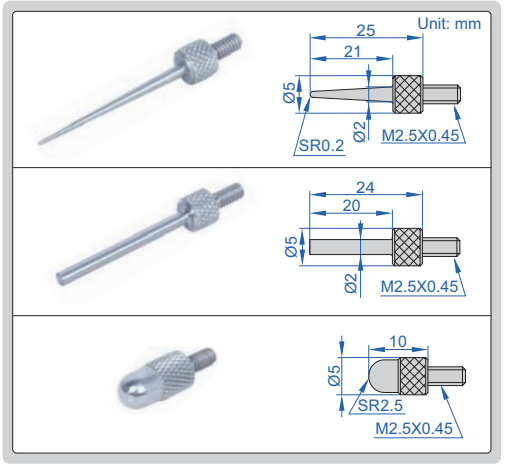


power supplied by charge pal



data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero

measuring tips (included)



- High stability, high precision, high response speed (5000mm/s)
- High brightness LED display
- Ceramic base flatness: 1μm

Code	Range	Resolution	Accuracy (at 20°C)	Measuring force	Output	Power supply
1155-505	0~50mm	0.5μm/0.00002" (can switch to: 1μm/0.00005")	1.5μm	0.8~1.2N	USB	5V/1A (adapter or charge pal)
1155-510	0~50mm	0.1μm/0.000005" (can switch to: 1μm/0.00005")	1μm	0.8~1.2N	USB	5V/1A (adapter or charge pal)

STANDARD DELIVERY

Main unit	1 pc

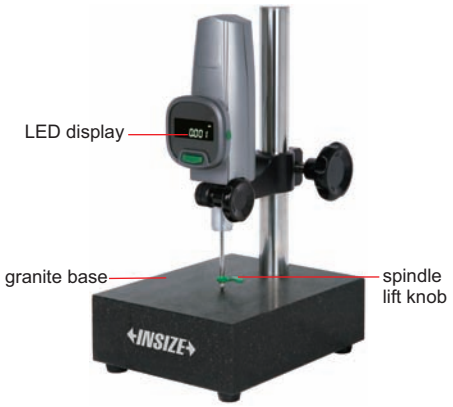
OPTIONAL ACCESSORY

Contact point	code **6282**
Charge pal	**1155-5-POB**
Data output cable (including foot switch)	**1155-5-FOS**

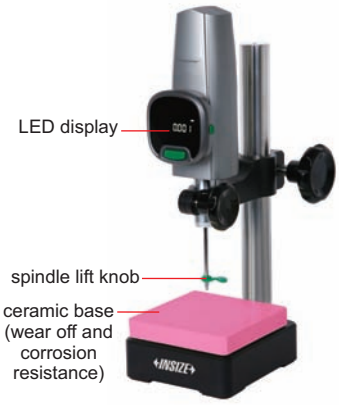
DATA OUTPUT

VIDEO

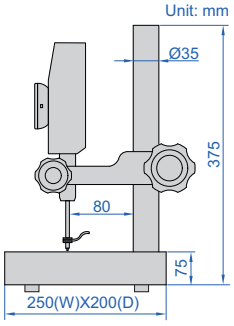
DIGITAL HEIGHT GAUGES



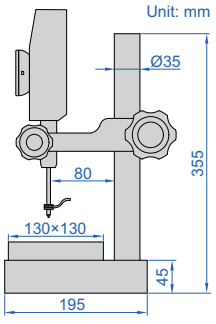
1157-501



1157-502



1157-501



1157-502

- Buttons: on/off, zero, mm/inch, max./min./max.-min.
- High response speed (5000mm/s)
- High brightness LED display

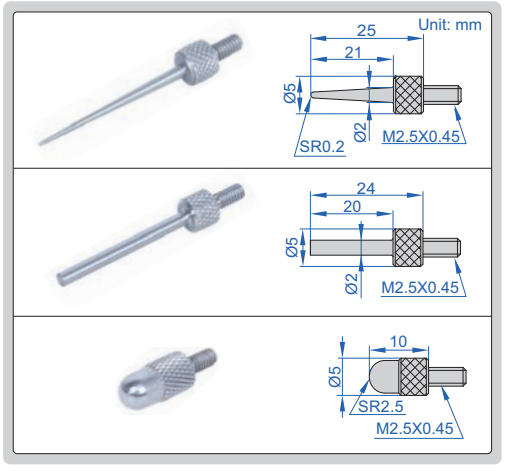


power supplied by charge pal



data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero

measuring tips (included)



Code	Range	Resolution	Accuracy (at 20°C)	Measuring force	Output	Power supply	Base
1157-501	0~50mm	1μm/0.00005"	3μm	0.8~1.2N	USB	5V/1A (adapter or charge pal)	granite (flatness: 2μm)
1157-502	0~50mm	1μm/0.00005"	3μm	0.8~1.2N	USB	5V/1A (adapter or charge pal)	ceramic (flatness: 1μm)

STANDARD DELIVERY

Main unit	1 pc

OPTIONAL ACCESSORY

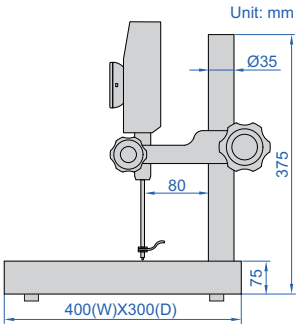
Contact point	code **6282**
Charge pal	**1155-5-POB**
Data output cable (including foot switch)	**1155-5-FOS**

LARGE RANGE DIGITAL HEIGHT GAUGE

VIDEO

DATA OUTPUT

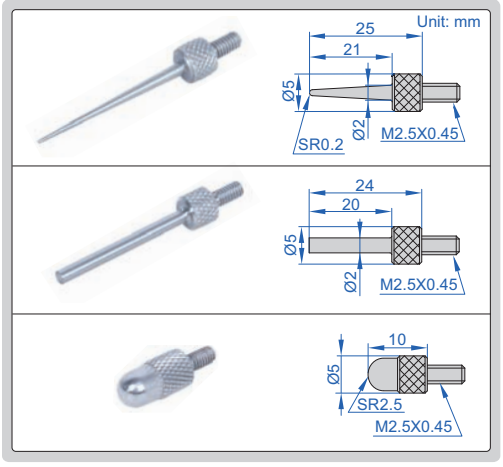


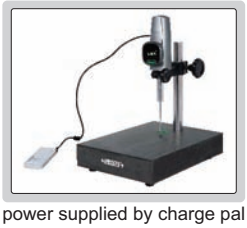


1158-100

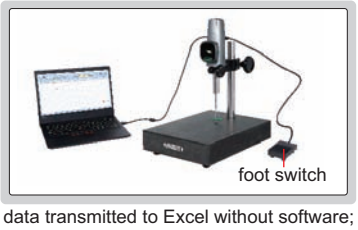
- High stability, high precision, high response speed (5000mm/s)
- High brightness LED display
- Granite base flatness: 3μm

measuring tips (included)





power supplied by charge pal



data transmitted to Excel without software; short press the foot switch to transmit data, long press to zero

Code	Range	Resolution	Accuracy (at 20°C)	Measuring force	Output	Power supply
1158-100	0~100mm	0.1μm/0.000005" (can switch to: 1μm/0.00005")	3μm	0.8~1.2N	USB	5V/1A (adapter or charge pal)

STANDARD DELIVERY

Main unit	1 pc

OPTIONAL ACCESSORY

Contact point	code **6282**
Charge pal	**1155-5-POB**
Data output cable (including foot switch)	**1155-5-FOS**

VIDEO

DATA OUTPUT

DIGITAL HEIGHT GAUGES



1159-101

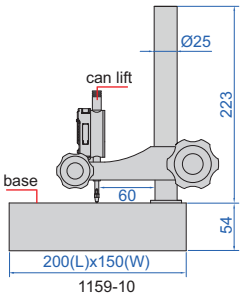


1159-25

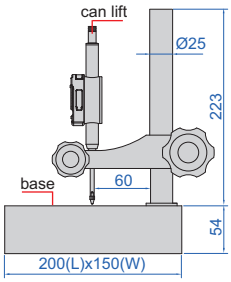


1159-501

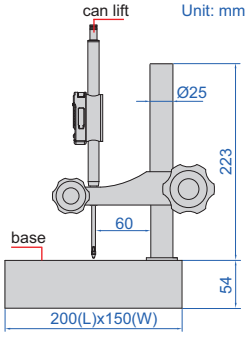
Unit: mm



1159-10
1159-101



1159-25
1159-251



1159-50
1159-501

- Granite base flatness: 2.5μm
- Vertical travel of holder: 170mm
- Battery CR2032, data output
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Supplied with dust cover
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Digital indicator stroke	Resolution	Accuracy	Maximum measuring force
1159-10	12.7mm/0.5"	0.01mm/0.0005"	20μm	1.5N
1159-25	25.4mm/1"	0.01mm/0.0005"	20μm	2.2N
1159-50	50.8mm/2"	0.01mm/0.0005"	30μm	2.5N
1159-101	12.7mm/0.5"	0.001mm/0.00005"	5μm	1.5N
1159-251	25.4mm/1"	0.001mm/0.00005"	5μm	2.2N
1159-501	50.8mm/2"	0.001mm/0.00005"	6μm	2.5N

DIAL INDICATOR STANDS

REFER TO PAGE 331~339 FOR DETAILS



6862-1001



6864-250T



6867-250

DIGITAL HEIGHT GAUGES

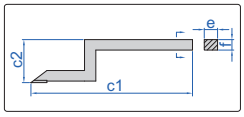
DATA OUTPUT

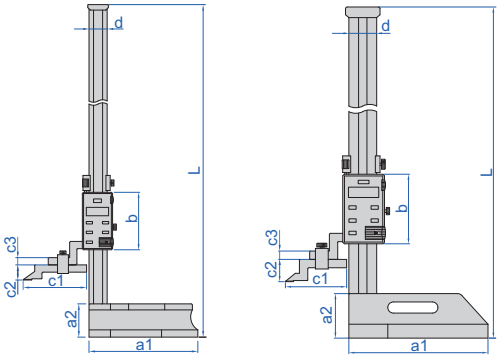
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- ABS/INC is for absolute and incremental measurement
- TOL is for tolerance measurement
- Carbide tipped scriber
- Made of stainless steel (except the base)
- LR44 battery, data output
- Supplied with dial test indicator holder
- Supplied with dust cover (except **1150-1500/2000**)
- Optional accessory:
  wireless transmitter code **7315-1150** (receiver is needed) page 10,
  clamp for protractors (code **2372-CLAMP**, for **1150-300**)



1150-1000 **1150-500** **1150-300**

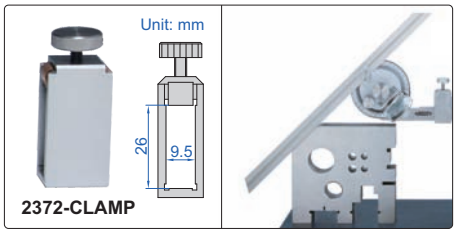
scriber (included)





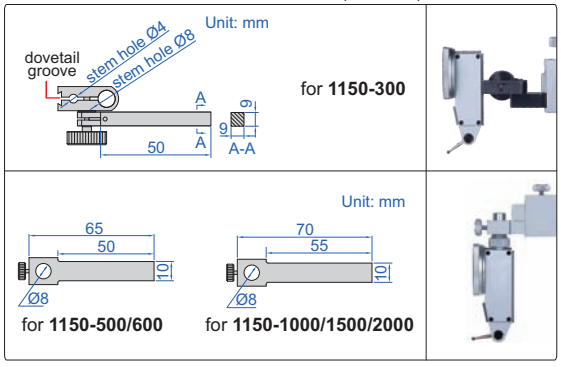
type A, type B **type C**

clamp for protractors (**optional**)
for **1150-300**



2372-CLAMP

dial test indicator holder (included)



Code	Range	Type	Accuracy	L	a1	a2	b	c1	c2	c3	d	e	f
1150-300	0-300mm/0-12"	A	±0.04mm	485mm	138mm	45mm	95mm	80mm	30mm	10mm	28mm	9mm	9mm
1150-500	0-500mm/0-20"	B	±0.06mm	720mm	180mm	55mm	95mm	103mm	25mm	12mm	30mm	10mm	12mm
1150-600	0-600mm/0-24"	B	±0.06mm	820mm	180mm	55mm	95mm	103mm	25mm	12mm	30mm	10mm	12mm
1150-1000	0-1000mm/0-40"	C	±0.08mm	1275mm	250mm	80mm	125mm	110mm	39mm	15mm	50mm	10mm	15mm
1150-1500	0-1500mm/0-60"	C	±0.12mm	1790mm	280mm	80mm	125mm	110mm	39mm	15mm	50mm	10mm	15mm
1150-2000	0-2000mm/0-80"	C	±0.16mm	2290mm	280mm	80mm	125mm	110mm	39mm	15mm	50mm	10mm	15mm

INSPECTION CERTIFICATE

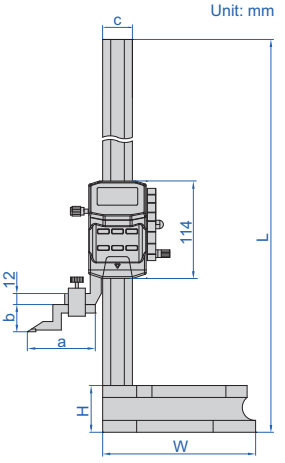
POPULAR MODEL

VIDEO

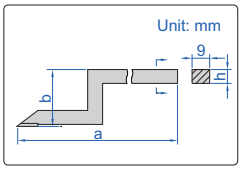
DATA OUTPUT

DIGITAL HEIGHT GAUGES WITH DRIVING WHEEL

- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, preset +, preset -, ABS/INC
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Battery CR2032
- Data output
- Supplied with dust cover
- With dial test indicator holder
- Optional accessory: wireless transmitter code **7315-22** (receiver is needed) page 7, clamp for protractors (code **2372-CLAMP**)



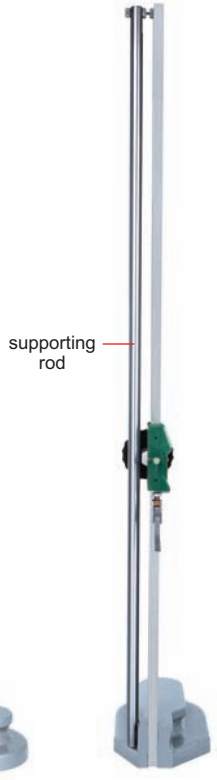
scriber (included)





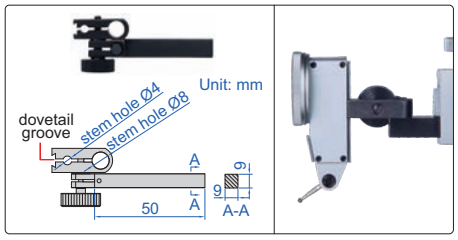
1156-300



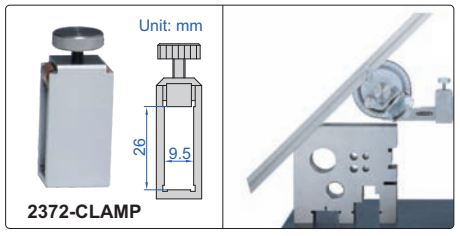


1156-1000

dial test indicator holder (included)



clamp for protractors (**optional**)



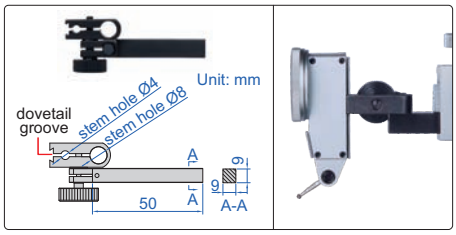
Code	Range	Accuracy	L	W	H	a	b	c	h
1156-300*	0-300mm/0-12"	±0.03mm	515mm	180mm	55mm	80mm	30mm	35mm	9mm
1156-600*	0-600mm/0-24"	±0.05mm	815mm	180mm	55mm	80mm	30mm	35mm	9mm
1156-1000*	0-1000mm/0-40"	±0.07mm	1220mm	265mm	70mm	92mm	48mm	40mm	12mm

*Supplied with manufacturer inspection certificate

DIGITAL HEIGHT GAUGES

DATA OUTPUT

dial test indicator holder (included)

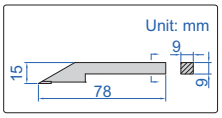


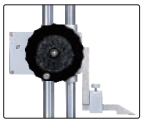
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, data hold, ABS/INC, preset
- ABS/INC is for absolute and incremental measurement
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Battery CR2032, data output
- With driving wheel
- With dial test indicator holder
- Supplied with dust cover
- Optional accessory: wireless transmitter code **7315-1151** (receiver is needed) page 10, clamp for protractors (code **2372-CLAMP**)



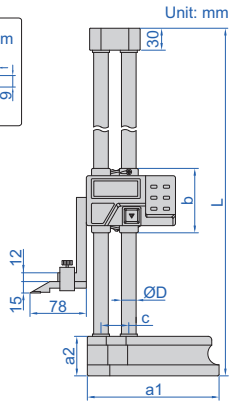
1151-300A

scriber (included)

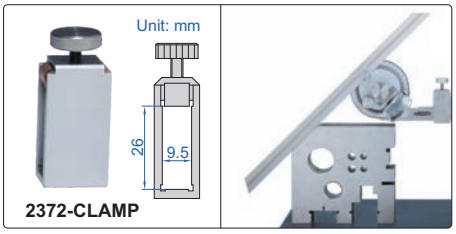




driving wheel on the back



clamp for protractors (**optional**)

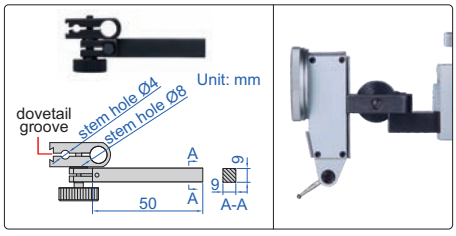


(mm)

Code	Range	Accuracy	L	a1	a2	b	c	ØD
1151-300A	0-300mm/0-12"	±0.04mm	475	135	43	84	33	15
1151-450A	0-450mm/0-18"	±0.05mm	660	180	54	88	38	20
1151-600A	0-600mm/0-24"	±0.05mm	810	180	54	88	38	20

DIAL HEIGHT GAUGES

dial test indicator holder (included)

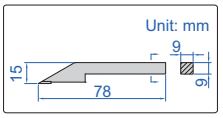


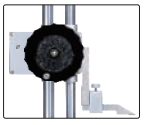
- Dial indicator graduation: 0.01mm
- One counter reads in the plus direction and another in the minus direction, so incremental measurement can be made in either direction
- Carbide tipped scriber
- Made of stainless steel (except the base)
- With driving wheel
- With dial test indicator holder
- Supplied with dust cover
- Optional accessory: clamp for protractors (code **2372-CLAMP**)



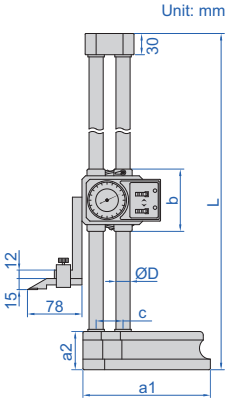
1351-300

scriber (included)

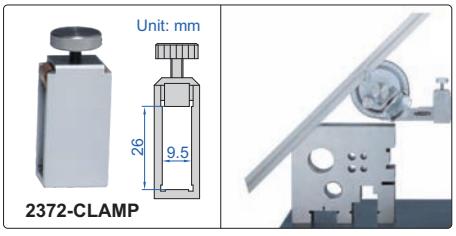




driving wheel on the back



clamp for protractors (**optional**)



(mm)

Code	Range	Accuracy	L	a1	a2	b	c	ØD
1351-300	0-300mm	±0.04mm	475	135	43	84	33	15
1351-450	0-450mm	±0.05mm	660	180	54	88	38	20
1351-600	0-600mm	±0.05mm	810	180	54	88	38	20

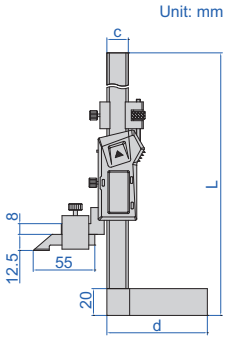
DATA OUTPUT

MINI DIGITAL HEIGHT GAUGES

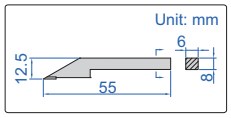
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Carbide tipped scriber
- With fine adjustment
- Made of stainless steel
- Battery CR2032
- Optional accessory: dial test indicator holder (code **7151-CL1**)



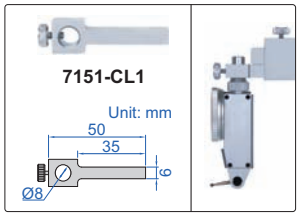
1154-150



scriber (included)



dial test indicator holder (**optional**)



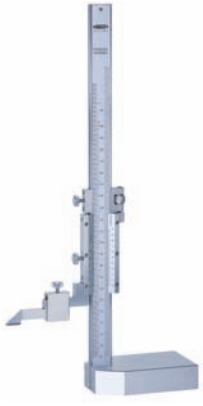
Code	Range	Accuracy	L	c	d	Wireless transmitter (optional)
1154-150	0-150mm/0-6"	±0.03mm	280mm	16mm	75mm	**7315-22** (receiver is needed) page 7
1154-200	0-200mm/0-8"	±0.03mm	340mm	20mm	90mm	

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

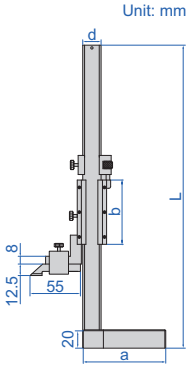
Code	Range	Accuracy	L	c	d
1154-150WL	0-150mm/0-6"	±0.03mm	280mm	16mm	75mm

MINI VERNIER HEIGHT GAUGES

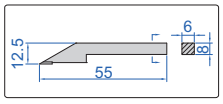
- Graduation: 0.02mm/0.001"
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Optional accessory: dial test indicator holder (code **7151-CL1**)



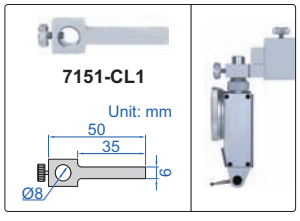
1253-200



scriber (included)



dial test indicator holder (**optional**)



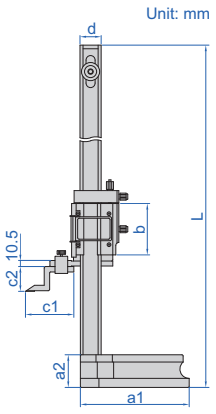
(mm)

Code	Range	Accuracy	L	a	b	d
1253-150	0-150mm/0-6"	±0.03mm	265	75	57	16
1253-200	0-200mm/0-8"	±0.03mm	325	90	70	20

VERNIER HEIGHT GAUGES

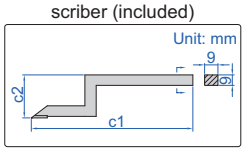
- Graduation: 0.02mm/0.001"
- Adjustable main scale to set zero
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- Supplied with magnifier
- With fine adjustment
- Supplied with dust cover
- Optional accessory: dial test indicator holder (code **6293-6**), clamp for protractors (code **2372-CLAMP**)



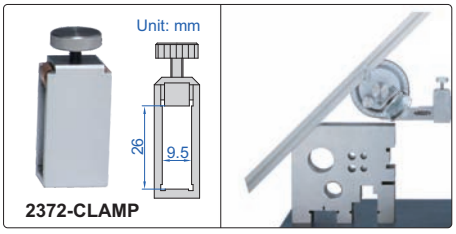


1250-300

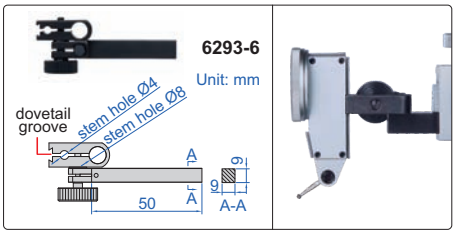
scriber (included)



clamp for protractors (**optional**)



dial test indicator holder (**optional**)



(mm)

Code	Range	Accuracy	L	a1	a2	b	c1	c2	d
1250-300	0-300mm/0-12"	±0.04mm	545	135	43	75	80	30	28
1250-450	0-450mm/0-18"	±0.05mm	720	180	54	85	80	41	35
1250-600	0-600mm/0-24"	±0.05mm	870	180	54	85	80	41	35

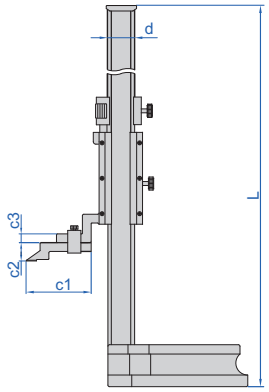
VERNIER HEIGHT GAUGES (BASIC TYPE)

POPULAR MODEL

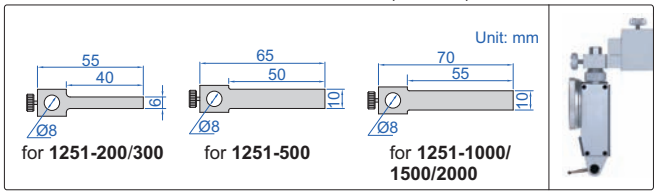
- Graduation: 0.02mm/0.001"
- Carbide tipped scriber
- Made of stainless steel (except the base)
- Satin chrome plated scale
- With dial test indicator holder
- Supplied with dust cover



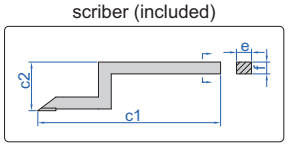
1251-200



dial test indicator holder (included)



scriber (included)



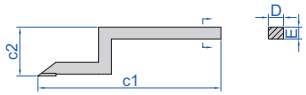
(mm)

Code	Range	Accuracy	L	c1	c2	c3	d	e	f
1251-200	0-200mm/0-8"	±0.03mm	370	76	25	10	23	6	8
1251-300	0-300mm/0-12"	±0.04mm	470	76	25	10	23	6	8
1251-500	0-500mm/0-20"	±0.05mm	720	105	25	12	30	10	12
1251-1000	0-1000mm/0-40"	±0.07mm	1275	110	39	15	50	10	15
1251-1500	0-1500mm/0-60"	±0.11mm	1790	110	39	15	50	10	15
1251-2000	0-2000mm/0-80"	±0.14mm	2290	110	39	15	50	10	15

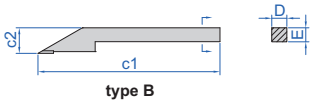
SCRIBERS FOR HEIGHT GAUGES



7150-SC3



type A



type B

- Carbide tipped

Code	For height gauges	Type	c1	c2	D	E
7150-SC2	1150-500, 1150-600	A	103mm	25mm	10mm	12mm
7150-SC3	1150-1000, 1150-1500, 1150-2000	A	110mm	39mm	10mm	15mm
7150-SC4	1351-300, 1351-450, 1351-600, 1151-300A, 1151-450A, 1151-600A	B	78mm	15mm	9mm	9mm
7150-SC6	1250-300, 1156-300, 1156-600, 1150-300	A	80mm	30mm	9mm	9mm
7150-SC7	1250-450, 1250-600	A	80mm	41mm	9mm	9mm
7150-SC9	1253-150, 1253-200, 1154-150	B	55mm	12.5mm	6mm	8mm
7150-SC10	1156-1000	A	92mm	48mm	9mm	12mm

REFER TO PAGE 404 FOR DETAILS

CALIPER/HEIGHT GAUGE CHECKERS

vertical use





horizontal use

6884-300A

05 COMPARISON MEASURING TOOLS



Universal Comparison Gauges
Page 113-115



Carbon Fiber Comparison Gauges
Page 116-117



Horizontal Measuring Benches
Page 118



Universal Comparison
Measuring Benches
Page 119-120



Comparison Gauges
Page 121-123



Internal/External Measuring Gauges
Page 124-131

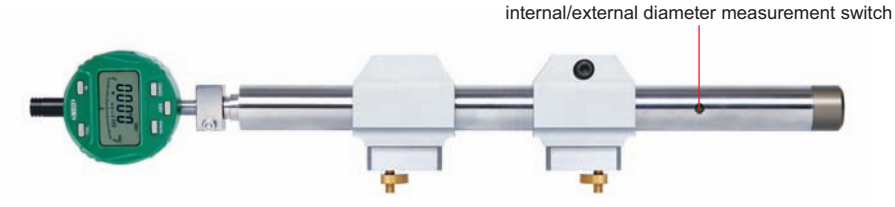


Internal And External Diameter
Comparison Instruments
Page 132-133



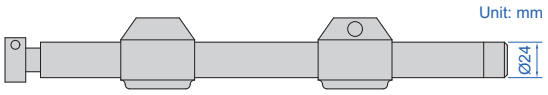
Outside Diameter Measuring Stands
Page 134

UNIVERSAL COMPARISON GAUGE



- Measure outer diameter, inside diameter and hole center distance
- Total range of movable point: 10mm, effective range of movable point: ±2mm
- Optional accessory: gauge block accessory (code **6881**), gauge block holder (code **6886**)





Code	Range of external diameter**	Range of internal diameter **	Accuracy	Repeatability *
2927-M200	0-200mm/0-8"	30-250mm/1.2"-10"	±5μm	2μm

*After set zero, accuracy is ±5μm within range of ±2mm from zero position

** The measuring range will change according to different measuring points

Extension rods (optional)



Code	Length (L)	Material
2927-A200	200mm	steel
2927-A500	500mm	steel

Digital indicator (optional)

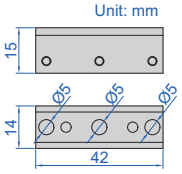


Code	Range	Resolution
2103-10F	12.7mm/0.5"	0.001mm/0.00005"

Stands (optional, supplied in pair)

Code
2927-H



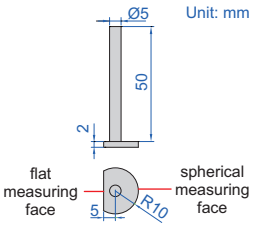


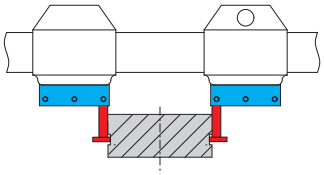


Half disk points (optional, supplied in pair)

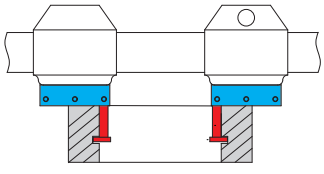
Code
2927-S101







measuring external groove diameter with flat measuring face (depth≤2.5mm)



measuring internal groove diameter with spherical measuring face (depth≤7.5mm)

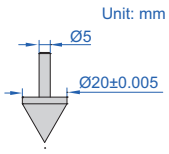
To be continued

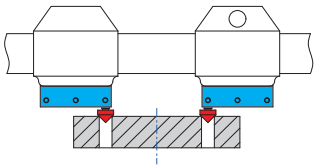
Continued from previous page

Conical points
(optional, supplied in pair)

Code
2927-S102



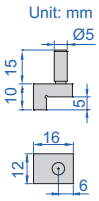


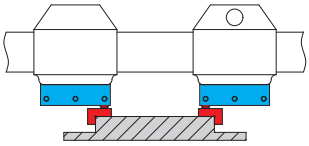

measuring center distance

Flat shoulder points (optional, supplied in pair)



Code
2927-S103

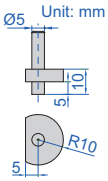


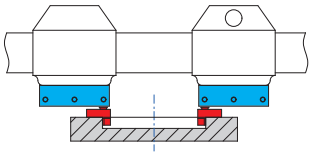

measure outside
diameter of low boss

Round shoulder points (optional, supplied in pair)



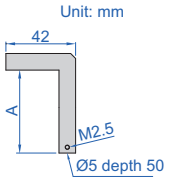
Code
2927-S104

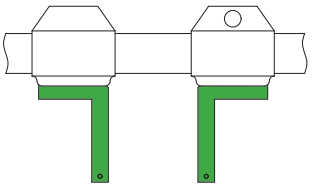



measure inside
diameter of shallow hole

Measuring jaws (optional, supplied in pair)

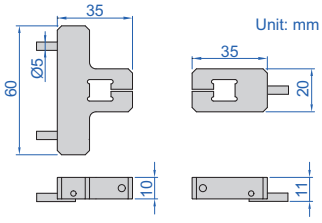
Code	Length (A)
2927-J50	50mm
2927-J75	75mm
2927-J100	100mm

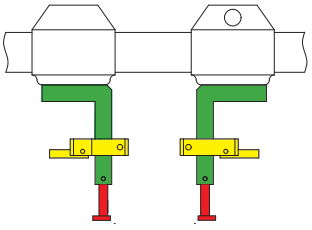




Depth stop (optional, supplied in pair)

Code
2927-D

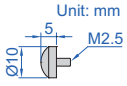


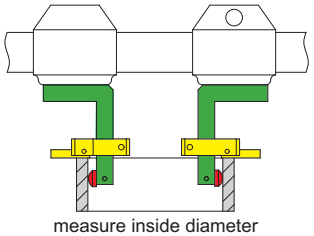


Spherical point
(optional, supplied in single)

Code
2927-S201



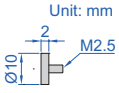


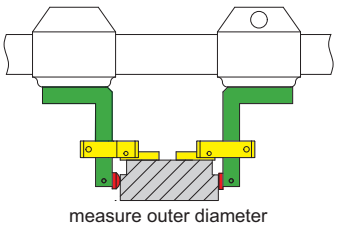

measure inside diameter
(2 spherical points)

Flat point
(optional, supplied in single)

Code
2927-S202



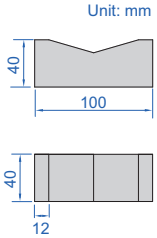



measure outer diameter
(1 spherical point, 1 flat point)

V-shaped placement brackets
(optional, supplied in pair)

Code
2927-V

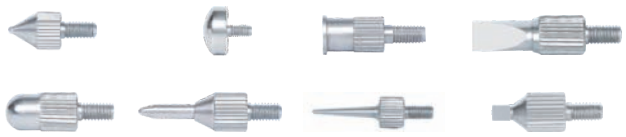


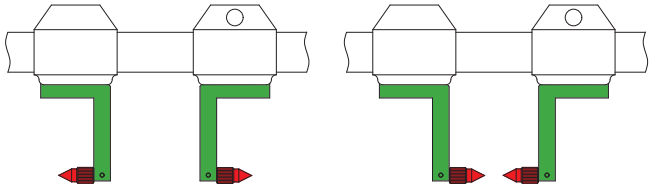


To be continued

Continued from previous page

Points (optional, supplied in single)

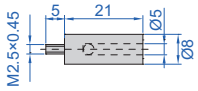


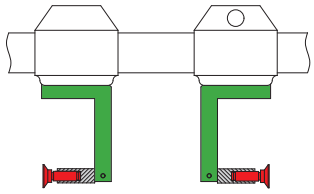


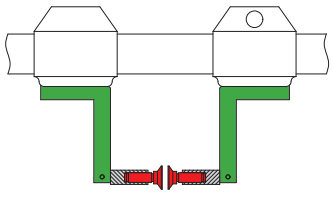
Multifunctional points (optional, supplied in pair)
Code 7392



Unit: mm







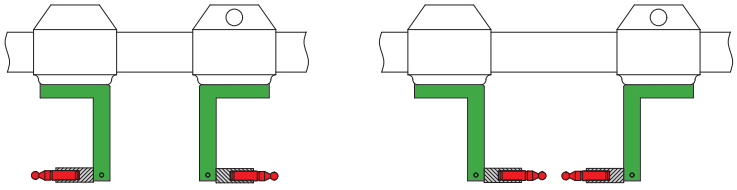
Point sleeve (optional, supplied in pair)

Code
2927-T101

*It is necessary to use point sleeve (code **2927-T101**) for these points

Ball points (optional, supplied in pair)
Code 7391

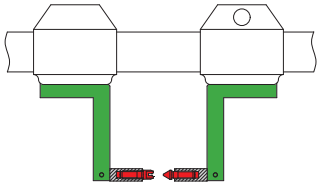




*It is necessary to use point sleeve (code **2927-T101**) for these points

External thread points (optional, supplied in pair)
Code 7381

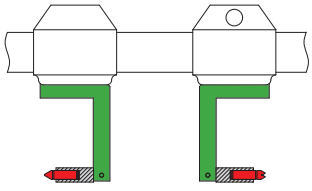




*It is necessary to use point sleeve (code **2927-T101**) for these points

Internal thread points (optional, supplied in pair)
Code 7321

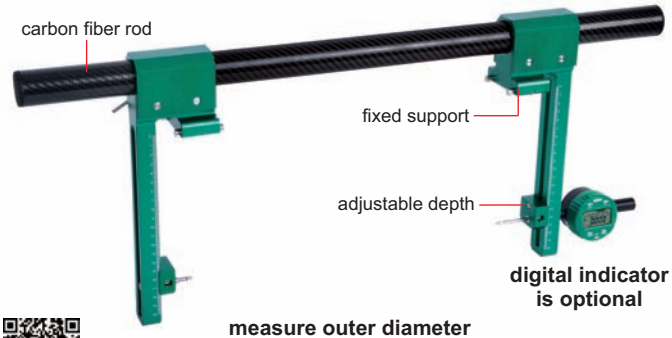




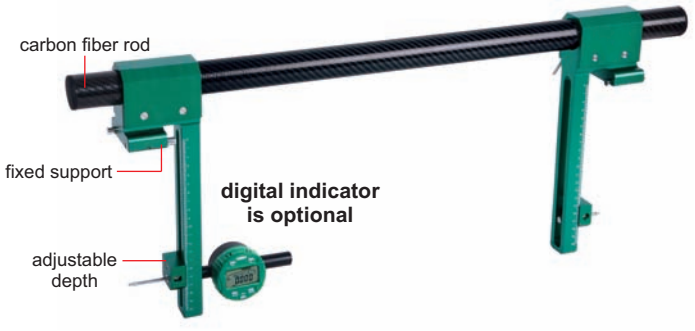
*It is necessary to use point sleeve (code **2927-T101**) for these points

CARBON FIBER COMPARISON GAUGES

CARBON FIBER RODS, LIGHT WEIGHT, NOT EASY TO DEFORM, NO TEMPERATURE EXPAND, SUITABLE FOR THIN-WALL WORKPIECES AND LARGE-SIZE WORKPIECES



measure outer diameter



measure inside diameter, minimum diameter is 220mm

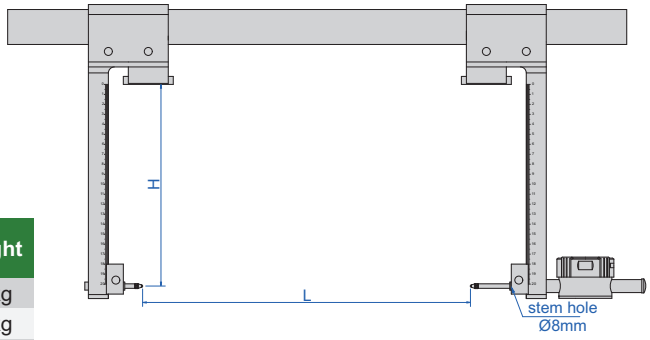
VIDEO

2931-D1000B

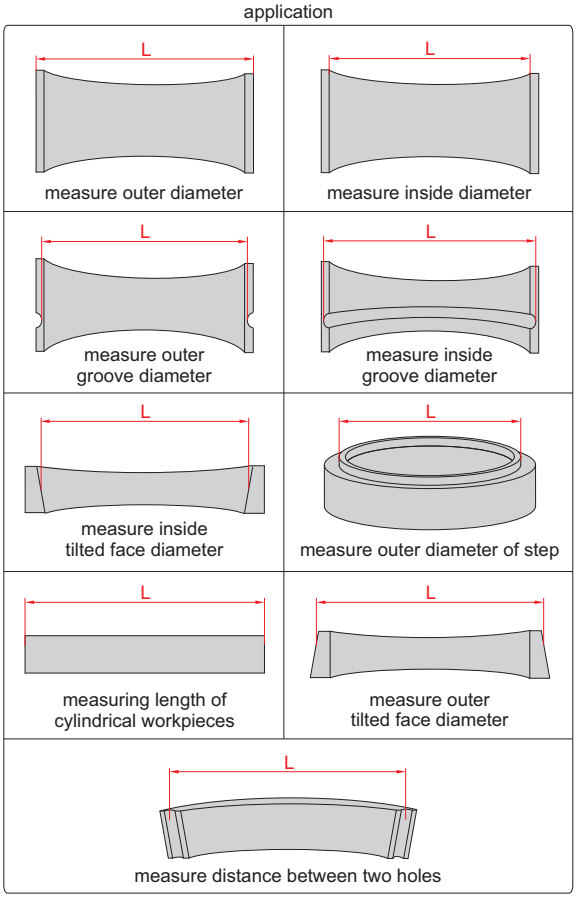
5

- Measure outer diameter, inside diameter, holes distance and cylindrical workpiece length
- Carbon fiber rods, light weight, not easy to deform, no temperature expand
- Optional accessory: cylinder gauge block (code **4001**), digtial indicators (code **2138-25SP/2139-25SP/2103-25SP/2104-25SP**)

Code	Maximum measuring range (L)	Measuring depth (H)	Repeatability	Weight
2931-D1000A	1000mm	0-100mm	5μm	2.0kg
2931-D1000B	1000mm	0-200mm	10μm	2.3kg
2931-D1000C	1000mm	0-300mm	25μm	2.6kg
2931-D1500A	1500mm	0-100mm	8μm	2.3kg
2931-D1500B	1500mm	0-200mm	15μm	2.6kg
2931-D1500C	1500mm	0-300mm	30μm	2.9kg
2931-D2000A	2000mm	0-100mm	10μm	2.6kg
2931-D2000B	2000mm	0-200mm	20μm	2.9kg
2931-D2000C	2000mm	0-300mm	35μm	3.2kg
2931-D2500A	2500mm	0-100mm	12μm	2.9kg
2931-D2500B	2500mm	0-200mm	25μm	3.2kg
2931-D2500C	2500mm	0-300mm	50μm	3.5kg
2931-D3000A	3000mm	0-100mm	14μm	3.2kg
2931-D3000B	3000mm	0-200mm	30μm	3.5kg
2931-D3000C	3000mm	0-300mm	60μm	3.8kg
2931-D4000A	4000mm	0-100mm	16μm	3.8kg
2931-D4000B	4000mm	0-200mm	35μm	4.1kg
2931-D4000C	4000mm	0-300mm	65μm	4.4kg
2931-D5000A	5000mm	0-100mm	25μm	4.4kg
2931-D5000B	5000mm	0-200mm	40μm	4.7kg
2931-D5000C	5000mm	0-300mm	70μm	5.0kg
2931-D6000A	6000mm	0-100mm	28μm	8.4kg
2931-D6000B	6000mm	0-200mm	50μm	8.8kg
2931-D6000C	6000mm	0-300mm	80μm	9.2kg
2931-D7000A	7000mm	0-100mm	30μm	9.2kg
2931-D7000B	7000mm	0-200mm	55μm	9.6kg
2931-D7000C	7000mm	0-300mm	100μm	10kg
2931-D8000A	8000mm	0-100mm	32μm	10kg
2931-D8000B	8000mm	0-200mm	60μm	10.4kg
2931-D8000C	8000mm	0-300mm	110μm	10.8kg
2931-D9000A	9000mm	0-100mm	35μm	10.7kg
2931-D9000B	9000mm	0-200mm	70μm	11.1kg
2931-D9000C	9000mm	0-300mm	120μm	11.5kg



application



To be continued

Continued from previous page



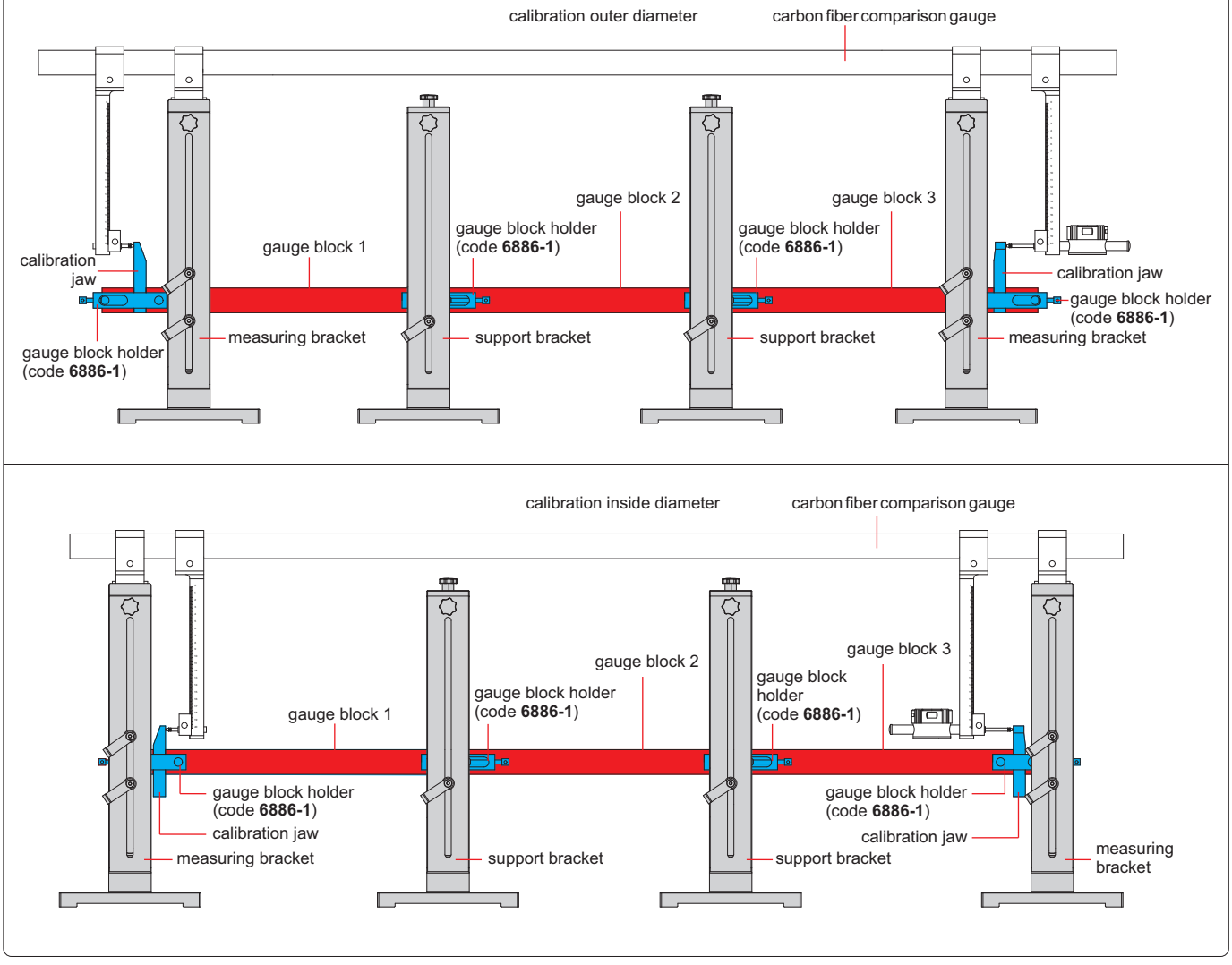
Calibration bracket (optional)

Code	Remark
2931-J□□□□□	can be customized according to carbon fiber comparison gauges, including 2 measuring brackets and multiple support brackets to support gauge blocks

Calibration jaw (optional, supplied in pair)

Code	Remark
2931-F	made of carbide

application



HORIZONTAL MEASURING BENCH

ATTENTION: DIGITAL INDICATOR USES RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

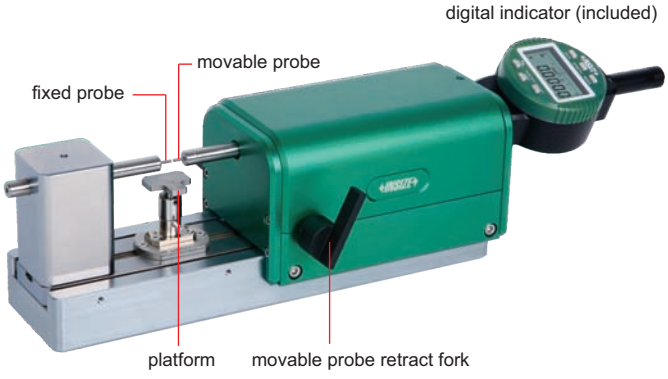
PROBE AND PLATFORM CAN BE CUSTOMIZED

DATA OUTPUT

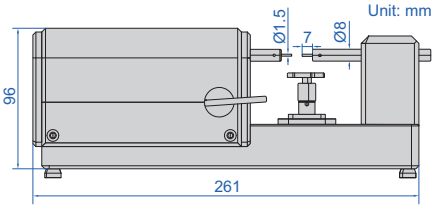
MEASURING FORCE CAN BE CUSTOMIZED, MINIMUM MEASURING FORCE IS 2N

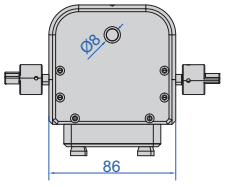
DIGITAL INDICATOR USES ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

VIDEO



6849-60





- Quickly measure outside diameters
- The platform can move horizontally and the height is adjustable
- For left and right hand operation
- Carbide probes
- Digital indicator uses linear ball bearings and can be used ten million times
- Digital indicator uses absolute encoder, the original data remains after power off
- Digital indicator reading in digital and analog
- Data output
- Digital indicator button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, resolution adjustment
- Digital indicator uses rechargeable battery, for 24 hours continuous working
- Optional accessory: wireless transmitter code **7315-60** (receiver is needed) page 9

Code	Range	Movable probe travel	Resolution	Accuracy	Any ±1mm accuracy *	Repeatability	Measuring force	Weight
6849-60	0-60mm	20mm	0.0002mm/0.00001"	3μm	0.6μm	0.4μm	2N	6.4kg

*After set zero at any position, accuracy is 0.6μm within ±1mm from zero position

UNIVERSAL COMPARISON MEASURING BENCH

ATTENTION: DIGITAL INDICATOR USES RECHARGEABLE BATTERY, FOR 30 HOURS CONTINUOUS WORKING

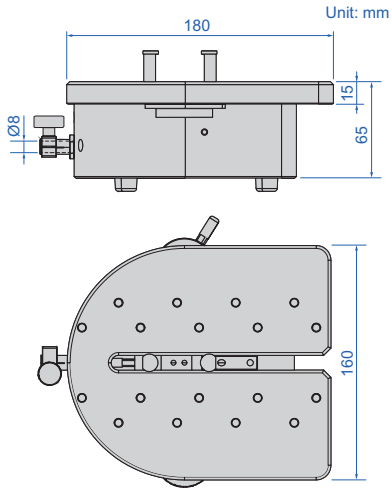
DIGITAL INDICATOR USES ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

DIGITAL INDICATOR WITH IP54 DUST/WATERPROOF

VIDEO



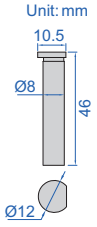
6848-145



- Switchable measurement direction for measuring internal and external diameter
- Adjustable measuring force: 2-5N
- Movable probe travel: 20mm
- Digital indicator with IP54 dust/waterproof (when cap is lifted, no dust/waterproof)
- Digital indicator uses absolute encoder, the original data remains after power off
- Digital indicator uses rechargeable battery, for 30 hours continuous working
- Digital indicator with automatic power off
- Digital indicator reading in digital and analog
- Digital indicator display can be rotated by 270°
- Digital indicator button function: on/off, zero setting, data preset, tolerance Go and No-Go display, data hold, mm/inch, measuring direction change max./min./TIR, absolute/incremental measurement, data output
- Data output cable (keyboard format) is included in digital indicator

Probes (included, supplied in pair)





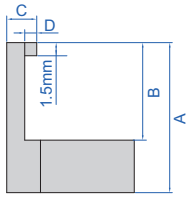
Code	Range of external ** diameter	Range of internal ** diameter	Resolution	Accuracy	Any ±1mm accuracy *	Repeatability
6848-145	0-130mm	24-145mm	0.0005mm/0.00002"	5μm	1μm	1μm

*After set zero at any position, accuracy is 1μm within ±1mm from zero position

** The measuring range will change according to different measuring probes

Internal groove probes (optional, supplied in pair)





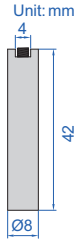
(mm)

Code	Minimum measuring Internal diameter	A	B	C	D
6848-S201*	4mm	20	13	3.8	1.4
6848-S202*	7mm	24	18	6	2.2
6848-S203*	12mm	28	22	6	2

*It is necessary to use internal groove probe holder (code **6848-T201**)

Internal groove probe holders (optional, supplied in pair)





application



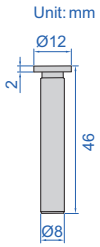
Code
6848-T201

To be continued

Continued from previous page

Disk probes
(optional, supplied in pair)

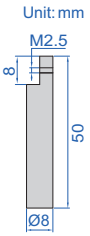




Code
6848-S101

Probe holders
(optional, supplied in pair)



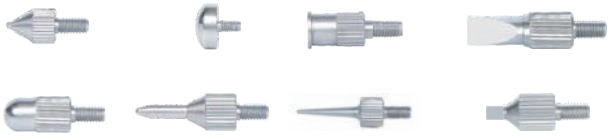


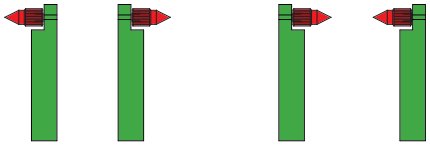
application



Code
6848-T401

Probes (optional, supplied in pair)
Code 6282*



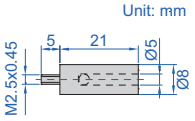


*It is necessary to use probe holders (code **6848-T401**) for these probes

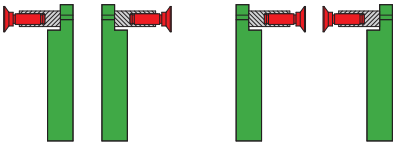
Multifunctional probes (optional, supplied in pair)
Code 7392*



Probe sleeve (optional, supplied in pair)



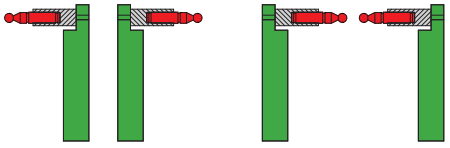
Code
2927-T101



*It is necessary to use probe holders (code **6848-T401**) and probe sleeve (code **2927-T101**) for these probes

Ball probes (optional, supplied in pair)
Code 7391*

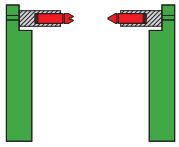




*It is necessary to use probe holders (code **6848-T401**) and probe sleeve (code **2927-T101**) for these probes

External thread probes (optional, supplied in pair)
Code 7381*

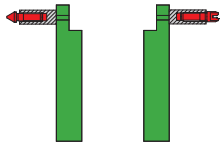




*It is necessary to use probe holders (code **6848-T401**) and probe sleeve (code **2927-T101**) for these probes

Internal thread probes (optional, supplied in pair)
Code 7321*



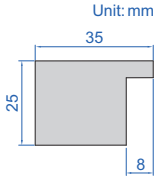


*It is necessary to use probe holders (**code 6848-T401**) and probe sleeve (**code 2927-T101**) for these probes

Spacer blocks (optional, supplied in pair)



Code
6848-B10



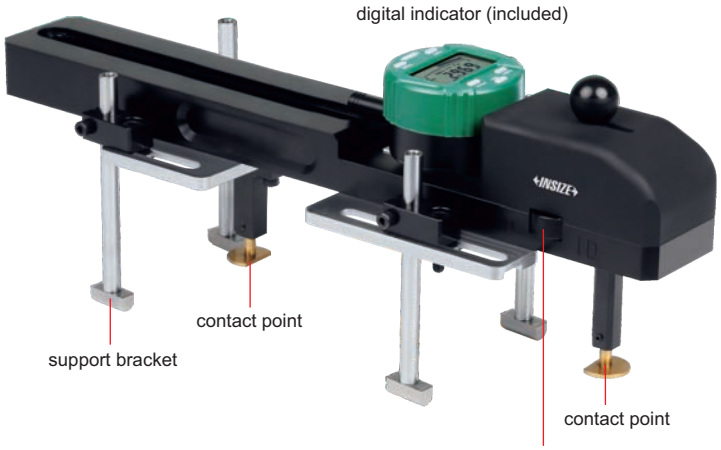
application



CAN BE CUSTOMIZED

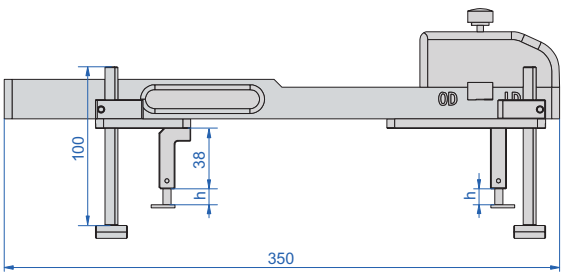
DATA OUTPUT

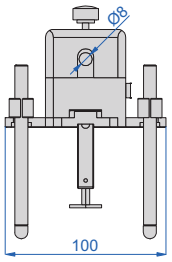
DIGITAL COMPARISON GAUGES



2514-300

Unit: mm



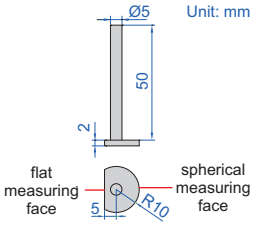


- Measure internal diameter and external diameter
- Measuring force: 3-4N, point height is adjustable (h): 10-40mm
- Digital indicator display can be rotated by 320°
- Digital indicator button function: on/off, zero setting, tolerance Go and No-Go display, measuring direction change, max./min./TIR measurement, data preset, inch/metric conversion, data output, absolute/incremental measurement
- Digital indicator can keep preset data and tolerance data in memory after restart
- Digital indicator power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery
- Optional accessory: gauge blocks (code **4101**)
  gauge block accessory (code **6881**)

Contact points (included, supplied in pair)



Unit: mm



With data interface (optional wireless transmitter code 7315-50M, receiver is needed page 8)

Code	Range of internal/ external diameter	Contact point stroke	Accuracy	Repeatability	Indicator
2514-300	100-300mm	10mm	5μm	2μm	digital indicator, code **2138-10F**, range 12.7mm/0.5", resolution 0.001mm0.00005"

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range of internal/ external diameter	Contact point stroke	Accuracy	Repeatability	Indicator
2514-300WL	100-300mm	10mm	5μm	2μm	digital indicator, code **2508-10FWL**, range 12.7mm/0.5", resolution 0.001mm0.00005"

COMPARISON GAUGES

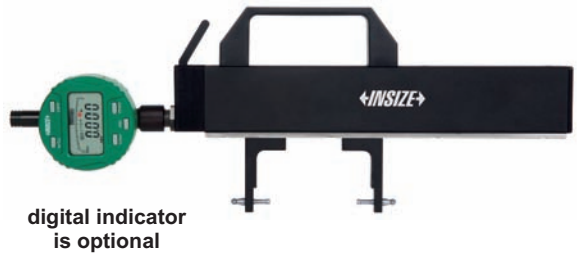
CUSTOMIZABLE MEASURING JAWS AND POINTS

VIDEO



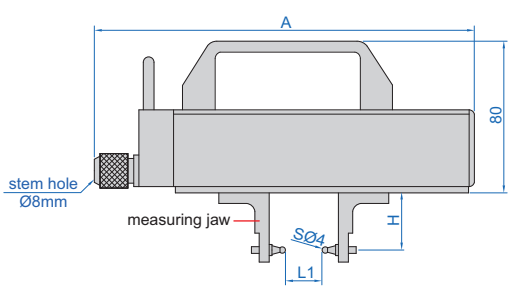
digital indicator is optional

measure external diameter
2252-110

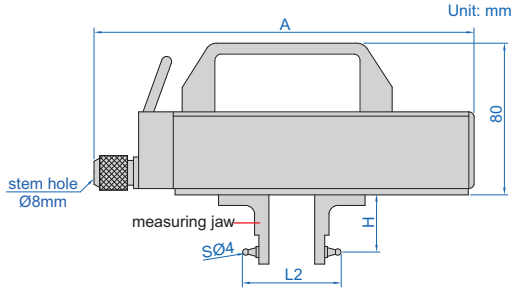


digital indicator is optional

measure internal diameter
2252-220



2252-101, 2252-102, 2252-110 and 2252-120



2252-201, 2252-202, 2252-210 and 2252-220

- Measure external diameter, internal diameter and over-pin diameter of gears
- Total range of movable point: 8mm, effective range of movable point: ±2mm
- Optional accessory: digital indicator (code **2138-10F**), gauge block grade 1 (**4101-B** series)

Measure external diameter

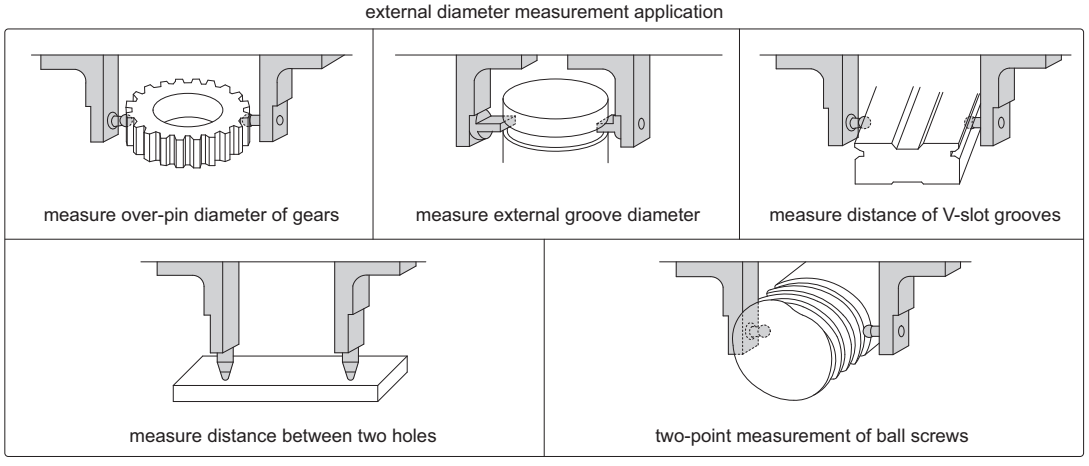
Code	Range of external diameter (L1)	Accuracy*	Repeatability	A	H
2252-101	25-90mm/1-3.54"	±5μm	1μm	195mm	40mm
2252-102	25-140mm/1-5.51"	±5μm	1μm	245mm	40mm
2252-110	25-90mm/1-3.54"	±5μm	2μm	195mm	70mm
2252-120	25-140mm/1-5.51"	±5μm	2μm	245mm	70mm

Measure internal diameter

Code	Range of internal diameter (L2)	Accuracy*	Repeatability	A	H
2252-201	42-105mm/1.65-4.13"	±5μm	1μm	195mm	40mm
2252-202	42-160mm/1.65-6.30"	±5μm	1μm	245mm	40mm
2252-210	42-105mm/1.65-4.13"	±5μm	2μm	195mm	70mm
2252-220	42-160mm/1.65-6.30"	±5μm	2μm	245mm	70mm

*Within ±2mm effective range

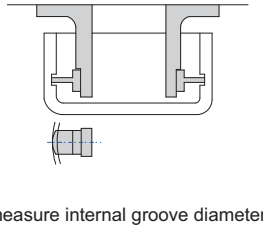
external diameter measurement application

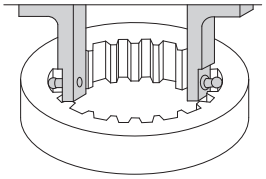


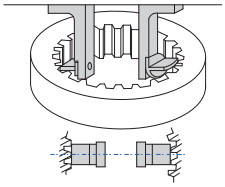
To be continued

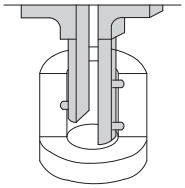
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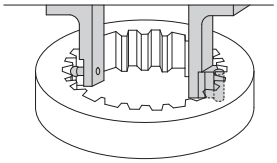
internal diameter measurement application


measure internal groove diameter

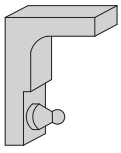

measure major diameter at the missing teeth of internal spline

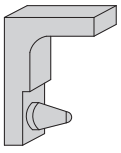

measure minor diameter of internal odd teeth

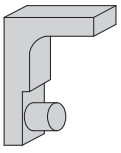

three-point measurement of ball splines and ball nuts

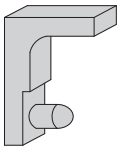

ball/cylinder points measurement of internal spline over-pin diameter

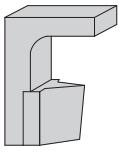
customizable points

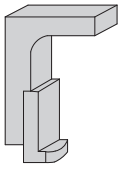

ball point

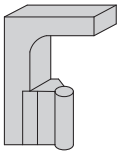

ball point

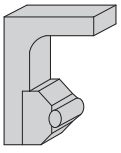

flat point

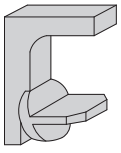

shell type point

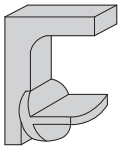

external thread minor diameter point


shallow hole point

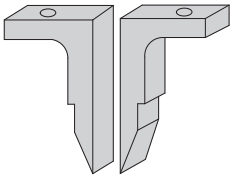

cylindrical point for gear

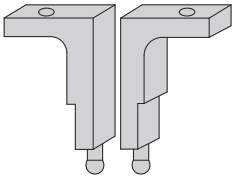

cylindrical point for gear

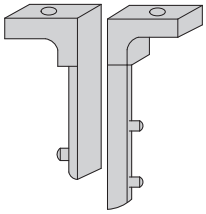

external groove point

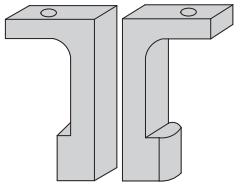

internal groove point

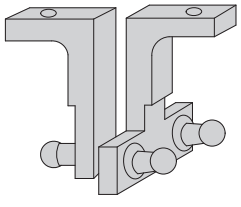
customizable measuring jaws

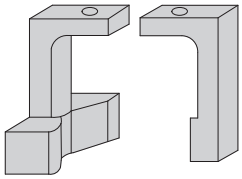

width measuring jaws

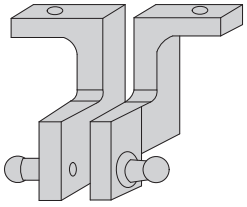

shallow hole distance measuring jaws

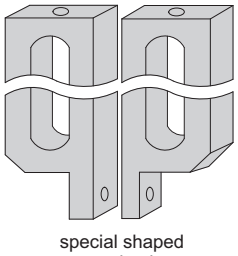

ball splines/nuts measuring jaws


one-piece measuring jaws


three-point measuring jaws


major diameter measuring jaws of odd teeth


eccentric measuring jaws


special shaped measuring jaws

DIGITAL INTERNAL MEASURING GAUGES

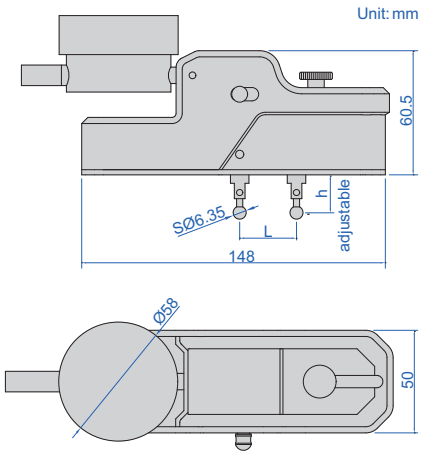
VIDEO

DATA OUTPUT

- Measure internal dimensions
- Resolution: 0.001mm/0.00005"
- Accuracy: 5μm
- Repeatability: 1μm
- Movable point stroke: 5mm/0.2"
- Point height is adjustable, h=2-25mm
- CR2032 battery, automatic power off (time is adjustable)
- Data output



2932-451



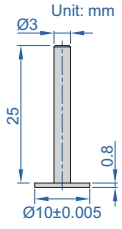
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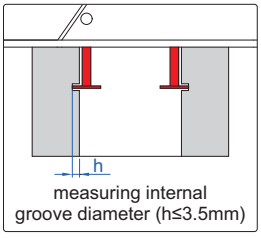
Code	Measuring range (L)*	Indicator	Wireless transmitter (optional)
2932-45	24-50mm/0.95-2"	Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement	**7315-50M** (receiver is needed) page 8
2932-451	24-50mm/0.95-2"	With transmission button and signal light Reading in digital and analog Display can be rotated by 320° Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display	**7315-51** (receiver is needed) page 8

*The measuring range will change according to different measuring points

Disk points (optional, supplied in pair)



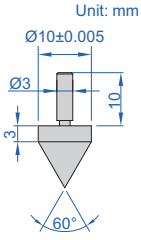


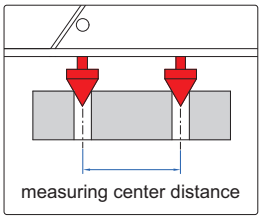


Code	Measuring range	Material
2932-S101	30-55mm/1.2-2.2"	stainless steel

Conical points (optional, supplied in pair)



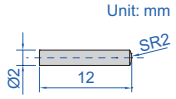


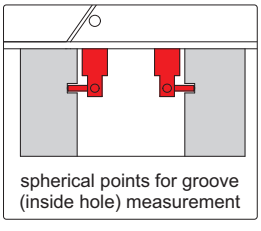


Code	Measuring range	Material
2932-S102	20-45mm/0.8-1.8"	stainless steel

Spherical points (optional, supplied in pair)



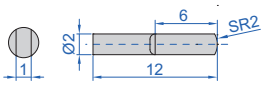


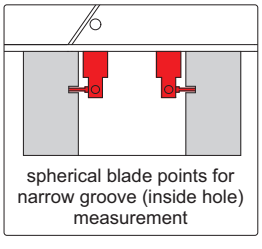


Code	Measuring range	Material
2932-S103	30-60mm/1.2-2.4"	stainless steel

Spherical blade points (optional, supplied in pair)







Code	Measuring range	Material
2932-S104	30-60mm/1.2-2.4"	stainless steel

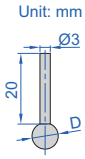
To be continued

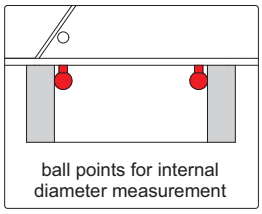
Continued from previous page

Ball points (optional, supplied in pair)



1527-T104

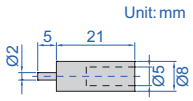




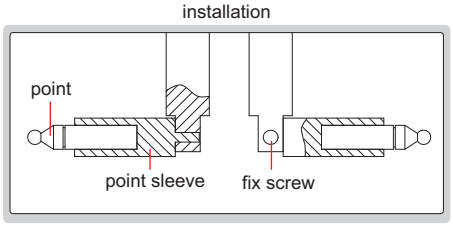
Code	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" (Ø3.175mm)	±0.005mm	stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	stainless steel

Point sleeve (optional, supplied in pair)





Code
1526-T101



5

Multifunctional points (optional, supplied in pair)



7392-T1



7392-T2



7392-T3



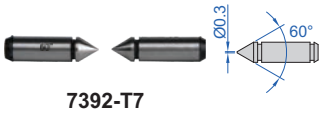
7392-T4



7392-T5



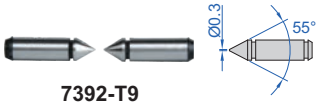
7392-T6



7392-T7



7392-T8



7392-T9

Measuring range **
80-105mm/3.2-4.2"

**After installing points and point sleeve

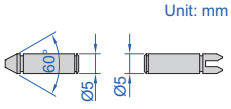
Code	Type
7392-T1*	flat
7392-T2*	spherical
7392-T3*	spline
7392-T4*	disk
7392-T5*	blade
7392-T6*	knife-edge
7392-T7*	point
7392-T8*	knife-edge
7392-T9*	point

*It is necessary to use point sleeve (code **1526-T101**) for these points

Screw thread points (optional, supplied in pair)



7321-T16



Measuring range **
80-105mm/3.2-4.2"

**After installing points and point sleeve

Internal thread (60° thread angle)

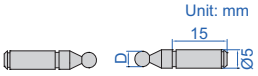
Code	Pitch
7321-T11*	0.4-0.5mm/64-48TPI
7321-T12*	0.6-0.9mm/44-28TPI
7321-T13*	1-1.75mm/24-14TPI
7321-T14*	2-3mm/13-9TPI
7321-T15*	3.5-5mm/8-5TPI
7321-T16*	5.5-7mm/4.5-3.5TPI
7321-T1S*	6 pairs/set, including all above points

*It is necessary to use point sleeve (code **1526-T101**) for these points

Ball points (optional, supplied in pair)



7391-T5



Measuring range **
80-105mm/3.2-4.2"

**After installing points and point sleeve

Code	Ball dia. (D)
7391-T2*	SØ1.5mm
7391-T3*	SØ2.0mm
7391-T4*	SØ2.5mm
7391-T5*	SØ3.0mm
7391-T6*	SØ3.5mm
7391-T7*	SØ4.0mm
7391-T8*	SØ4.5mm
7391-T9*	SØ5.0mm
7391-T10*	SØ6.0mm

*It is necessary to use point sleeve (code **1526-T101**) for these points

DIGITAL EXTERNAL MEASURING GAUGES

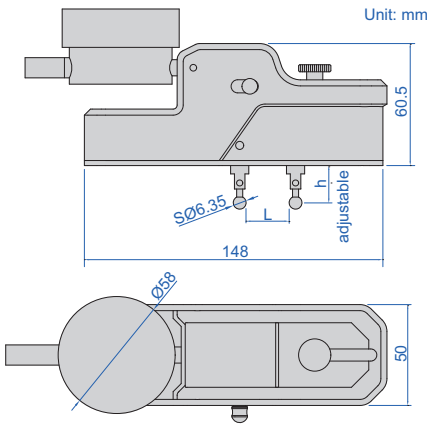
VIDEO

DATA OUTPUT

- Measure external dimensions
- Resolution: 0.001mm/0.00005"
- Accuracy: 5μm
- Repeatability: 1μm
- Movable point stroke: 5mm/0.2"
- Point height is adjustable, h=2-25mm
- CR2032 battery, automatic power off (time is adjustable)
- Data output



2934-401



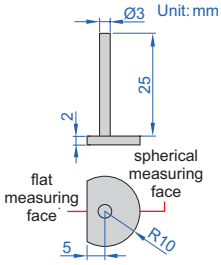
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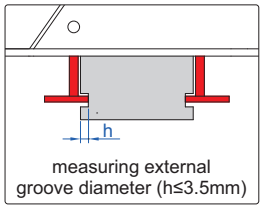
Code	Measuring range (L) *	Indicator	Wireless transmitter (optional)
2934-40	13-38mm/0.51-1.5"	Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement	**7315-50M** (receiver is needed) page 8
2934-401	13-38mm/0.51-1.5"	With transmission button and signal light Reading in digital and analog Display can be rotated by 320° Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display	**7315-51** (receiver is needed) page 8

*The measuring range will change according to different measuring points

Disk points (optional, supplied in pair)



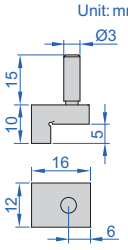


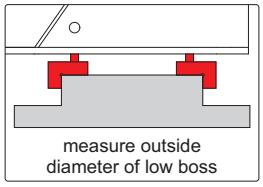


Code	Measuring range	Material
2934-S101	10-35mm/0.4-1.4"	stainless steel

Flat shoulder points (optional, supplied in pair)



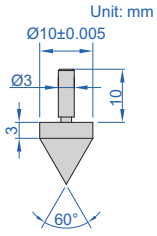


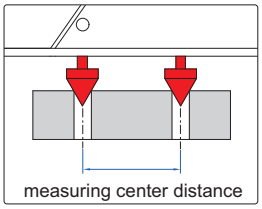


Code	Measuring range	Material
2934-S102	30-55mm/1.2-2.2"	stainless steel

Conical points (optional, supplied in pair)





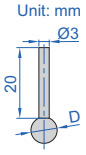


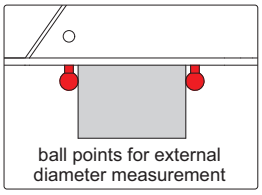
Code	Measuring range	Material
2932-S102	20-45mm/0.8-1.8"	stainless steel

Ball points (optional, supplied in pair)



1527-T104



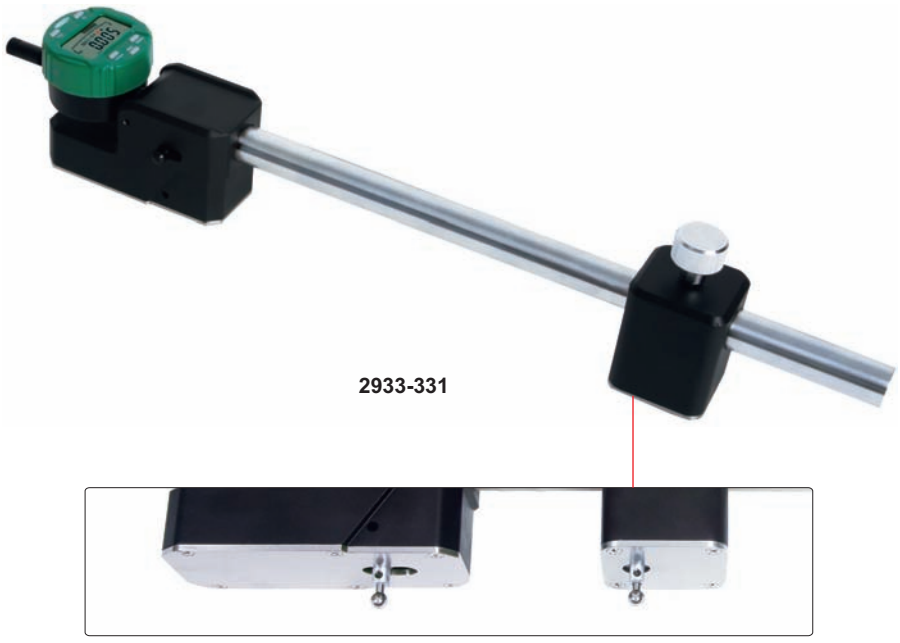


Code	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" (Ø3.175mm)	±0.005mm	stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	stainless steel

LARGE RANGE DIGITAL INTERNAL MEASURING GAUGES

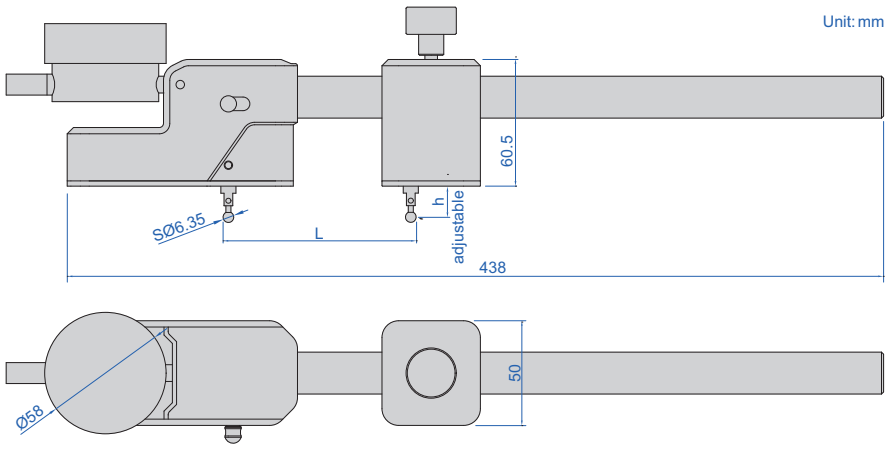
DATA OUTPUT

VIDEO



2933-331

- Measure internal dimensions
- Resolution: 0.001mm/0.00005"
- Accuracy: 5μm
- Repeatability: 1μm
- Movable point stroke: 5mm/0.2"
- Point height is adjustable, h=2-25mm
- CR2032 battery, automatic power off (time is adjustable)
- Data output



Code	Measuring range (L)*	Indicator	Wireless transmitter (optional)
2933-330	48-330mm/1.89-13"	Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement	**7315-50M** (receiver is needed) page 8
2933-331	48-330mm/1.89-13"	With transmission button and signal light Reading in digital and analog Display can be rotated by 320° Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display	**7315-51** (receiver is needed) page 8

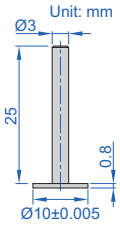
*The measuring range will change according to different measuring points

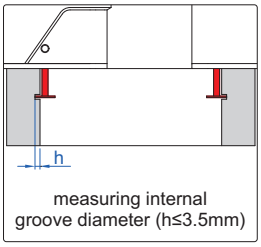
To be continued

Continued from previous page

Disk points (optional, supplied in pair)



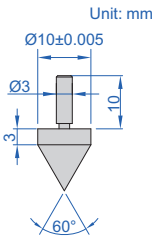


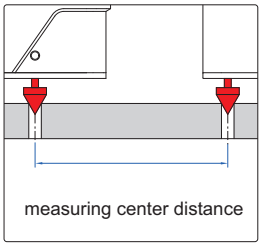


Code	Measuring range	Material
2932-S101	52-330mm/2.05-13"	stainless steel

Conical points (optional, supplied in pair)



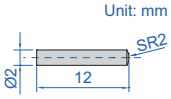


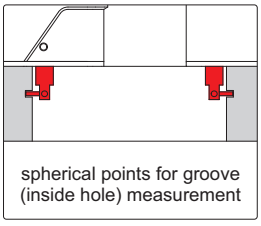


Code	Measuring range	Material
2932-S102	42-320mm/1.65-12.6"	stainless steel

Spherical points (optional, supplied in pair)



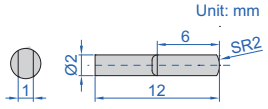


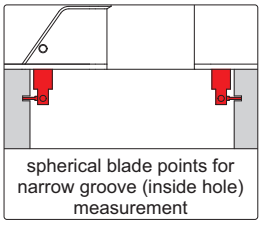


Code	Measuring range	Material
2932-S103	55-330mm/2.16-13"	stainless steel

Spherical blade points (optional, supplied in pair)





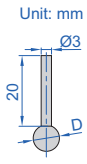


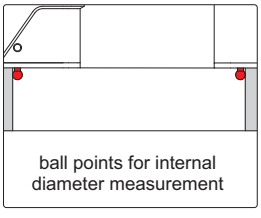
Code	Measuring range	Material
2932-S104	55-330mm/2.16-13"	stainless steel

Ball points (optional, supplied in pair)



1527-T104

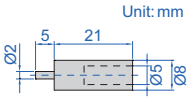




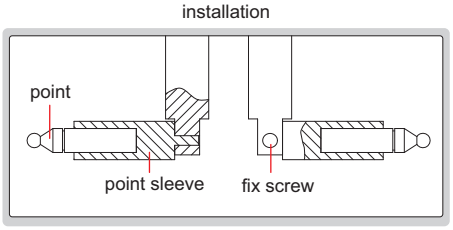
Code	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" (Ø3.175mm)	±0.005mm	stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	stainless steel

Point sleeve (optional, supplied in pair)





Code
1526-T101



To be continued

Continued from previous page

Multifunctional points (optional, supplied in pair)



7392-T1



7392-T2



7392-T3



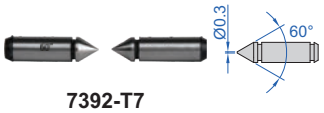
7392-T4



7392-T5



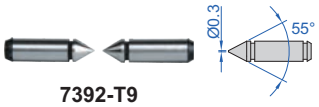
7392-T6



7392-T7



7392-T8



7392-T9

Measuring range **
100-370mm/3.94-14.5"

**After installing points and point sleeve

Code	Type
7392-T1*	flat
7392-T2*	spherical
7392-T3*	spline
7392-T4*	disk
7392-T5*	blade
7392-T6*	knife-edge
7392-T7*	point
7392-T8*	knife-edge
7392-T9*	point

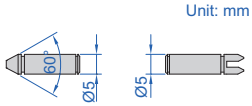
*It is necessary to use point sleeve (code **1526-T101**) for these points

5

Screw thread points (optional, supplied in pair)



7321-T16



Measuring range **
100-370mm/3.94-14.5"

**After installing points and point sleeve

Internal thread (60° thread angle)

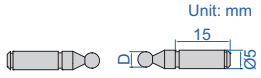
Code	Pitch
7321-T11*	0.4-0.5mm/64-48TPI
7321-T12*	0.6-0.9mm/44-28TPI
7321-T13*	1-1.75mm/24-14TPI
7321-T14*	2-3mm/13-9TPI
7321-T15*	3.5-5mm/8-5TPI
7321-T16*	5.5-7mm/4.5-3.5TPI
7321-T1S*	6 pairs/set, including all above points

*It is necessary to use point sleeve (code **1526-T101**) for these points

Ball points (optional, supplied in pair)



7391-T5



Measuring range **
100-370mm/3.94-14.5"

**After installing points and point sleeve

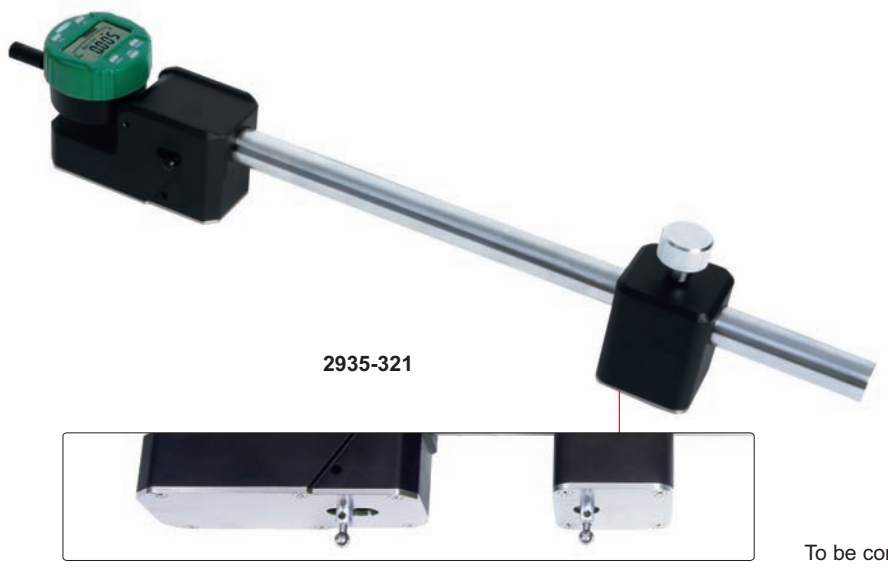
Code	Ball dia. (D)
7391-T2*	SØ1.5mm
7391-T3*	SØ2.0mm
7391-T4*	SØ2.5mm
7391-T5*	SØ3.0mm
7391-T6*	SØ3.5mm
7391-T7*	SØ4.0mm
7391-T8*	SØ4.5mm
7391-T9*	SØ5.0mm
7391-T10*	SØ6.0mm

*It is necessary to use point sleeve (code **1526-T101**) for these points

DATA OUTPUT

VIDEO

LARGE RANGE DIGITAL EXTERNAL MEASURING GAUGES

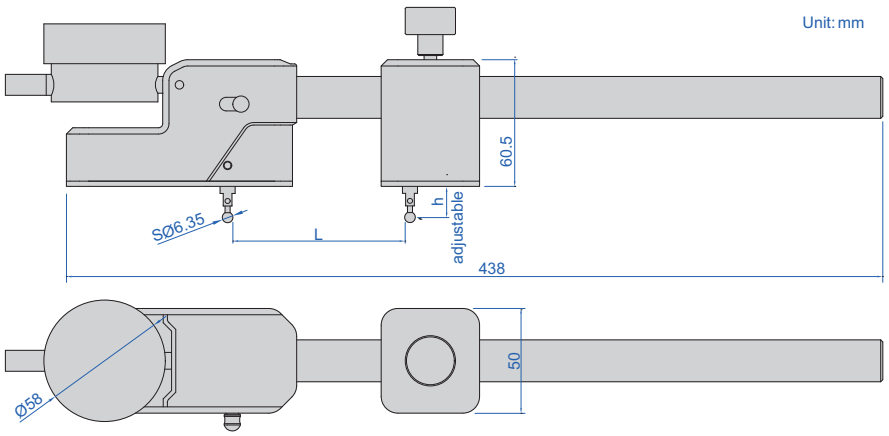


2935-321

- Measure external dimensions
- Resolution: 0.001mm/0.00005"
- Accuracy: 5μm
- Repeatability: 1μm
- Movable point stroke: 5mm/0.2"
- Point height is adjustable, h=2-25mm
- CR2032 battery, automatic power off (time is adjustable)
- Data output

To be continued

Continued from previous page

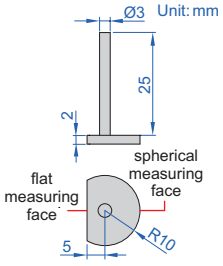


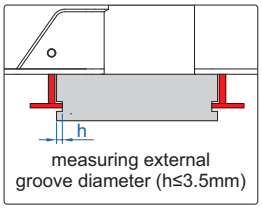
Code	Measuring range (L)*	Indicator	Wireless transmitter (optional)
2935-320	35-320mm/1.4-12.6"	Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement	**7315-50M** (receiver is needed) page 8
2935-321	35-320mm/1.4-12.6"	With transmission button and signal light Reading in digital and analog Display can be rotated by 320° Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display	**7315-51** (receiver is needed) page 8

*The measuring range will change according to different measuring points

Disk points (optional, supplied in pair)



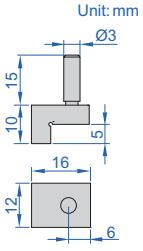


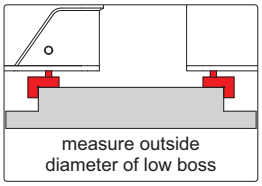


Code	Measuring range	Material
2934-S101	32-320mm/1.26-12.6"	stainless steel

Flat shoulder points (optional, supplied in pair)



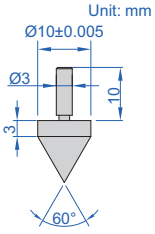


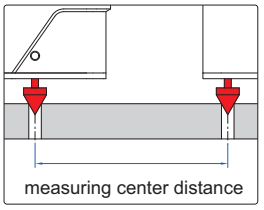


Code	Measuring range	Material
2934-S102	52-320mm/2.05-12.6"	stainless steel

Conical points (optional, supplied in pair)





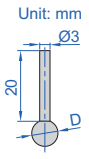


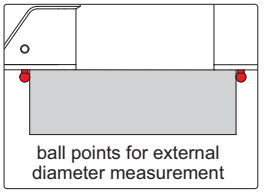
Code	Measuring range	Material
2932-S102	42-320mm/1.65-12.6"	stainless steel

Ball points (optional, supplied in pair)



1527-T104





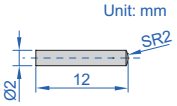
Code	Diameter (D)	Accuracy of diameter	Material
1527-T102	1/8" (Ø3.175mm)	±0.005mm	stainless steel
1527-T103	3/16" (Ø4.7625mm)	±0.005mm	stainless steel
1527-T104	1/4" (Ø6.35mm)	±0.005mm	stainless steel
1527-T105	3/8" (Ø9.525mm)	±0.005mm	stainless steel
1527-T106	1/2" (Ø12.7mm)	±0.005mm	stainless steel

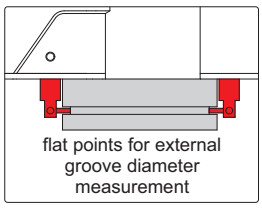
To be continued

Continued from previous page

Spherical/flat points (optional, supplied in pair)



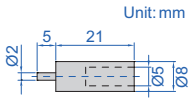


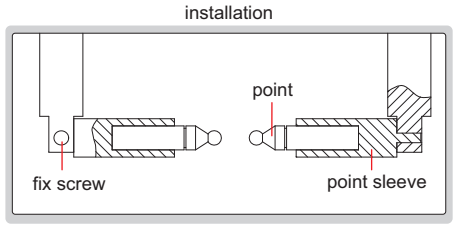


Code	Measuring range	Material
2932-S103	30-320mm/1.2-12.6"	stainless steel

Point sleeve (optional, supplied in pair)



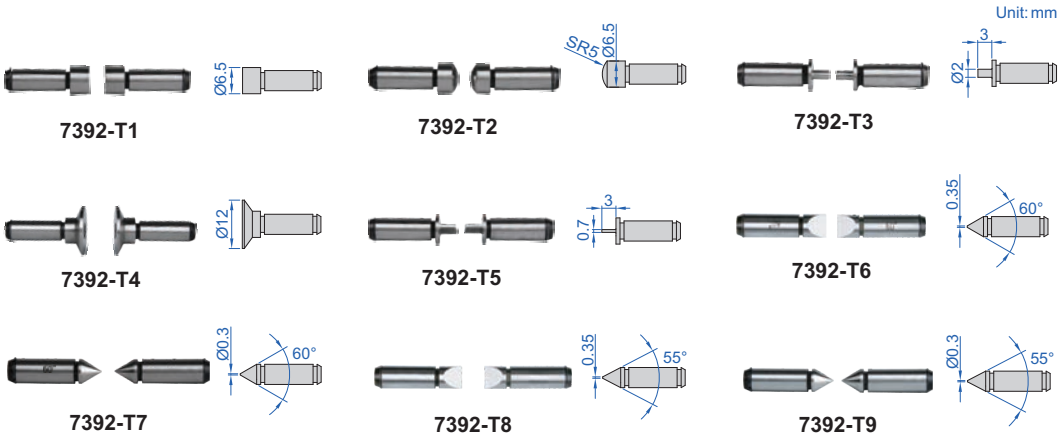




Code
1526-T101

5

Multifunctional points (optional, supplied in pair)



Measuring range **
0-300mm/0-11.8"

**After installing points and point sleeve

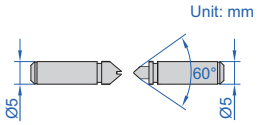
Code	Type
7392-T1*	flat
7392-T2*	spherical
7392-T3*	spline
7392-T4*	disk
7392-T5*	blade
7392-T6*	knife-edge
7392-T7*	point
7392-T8*	knife-edge
7392-T9*	point

*It is necessary to use point sleeve (code **1526-T101**) for these points

Screw thread points (optional, supplied in pair)



7381-T16



Measuring range **
0-300mm/0-11.8"

**After installing points and point sleeve

External thread (60° thread angle)

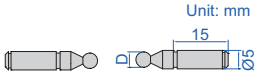
Code	Pitch
7381-T11*	0.4-0.5mm/64-48TPI
7381-T12*	0.6-0.9mm/44-28TPI
7381-T13*	1-1.75mm/24-14TPI
7381-T14*	2-3mm/13-9TPI
7381-T15*	3.5-5mm/8-5TPI
7381-T16*	5.5-7mm/4.5-3.5TPI
7381-TS*	6 pairs/set, including all above points

*It is necessary to use point sleeve (code **1526-T101**) for these points

Ball points (optional, supplied in pair)



7391-T5



Measuring range **
0-300mm/0-11.8"

**After installing points and point sleeve

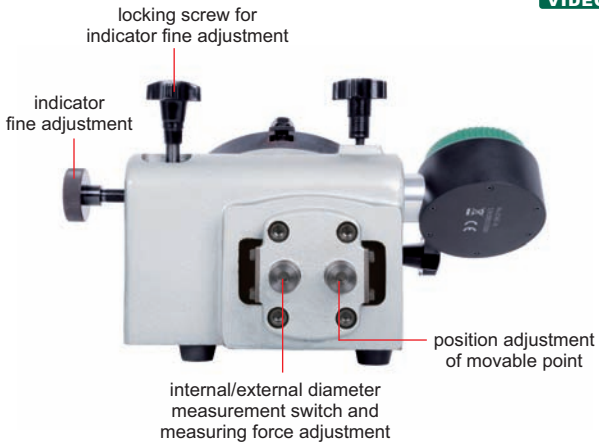
Code	Ball dia. (D)
7391-T2*	SØ1.5mm
7391-T3*	SØ2.0mm
7391-T4*	SØ2.5mm
7391-T5*	SØ3.0mm
7391-T6*	SØ3.5mm
7391-T7*	SØ4.0mm
7391-T8*	SØ4.5mm
7391-T9*	SØ5.0mm
7391-T10*	SØ6.0mm

*It is necessary to use point sleeve (code **1526-T101**) for these points

INTERNAL AND EXTERNAL DIAMETER COMPARISON INSTRUMENT

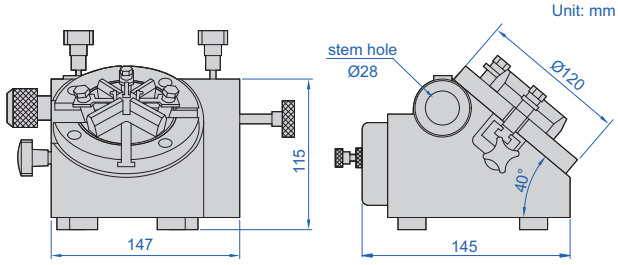
VIDEO





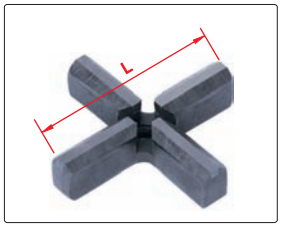
- Measure internal/external diameter, variation and taper
- Total range of movable point: 2mm,
  effective range of movable point: ±0.1mm
- Groove probes and disc probes are included
- Optional accessory: Ø28mm/Ø8mm bush (code **6843-B8**),
  cross table, 0.001mm digital/dial indicators,
  high precision digital indicators (code **2140-6**, **2140-6WL**)

Unit: mm



Code	Applicable holding stem	Range of internal diameter	Range of external diameter	Accuracy	Repeatability
6844-100	Ø28mm	20-100mm/0.8-3.9"	15-80mm/0.6-3.1"	±0.001mm	0.001mm

cross table (working with groove probes)



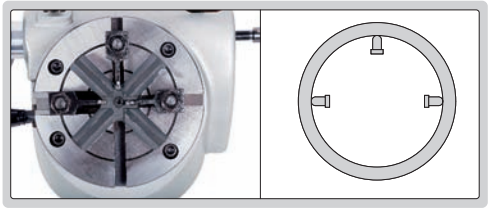
disc probes (included)



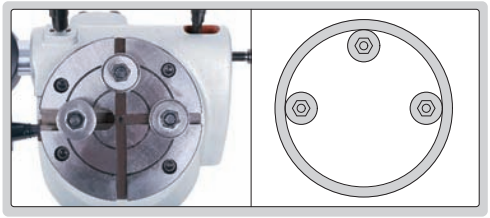
groove probe (included)



groove probes to measure
small internal diameter and internal groove diameter



disc probes to measure large internal diameter



Cross table

Code	L	Remark
6844-T40	40mm	included
6844-T80	80mm	**optional**
6844-T100	100mm	**optional**

Ø28mm/Ø8mm bush (optional)

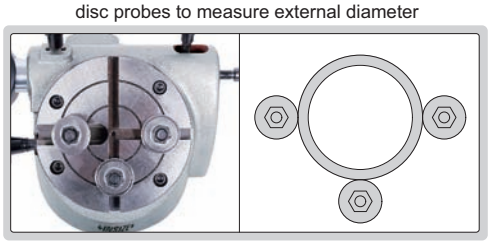


Code
6843-B8

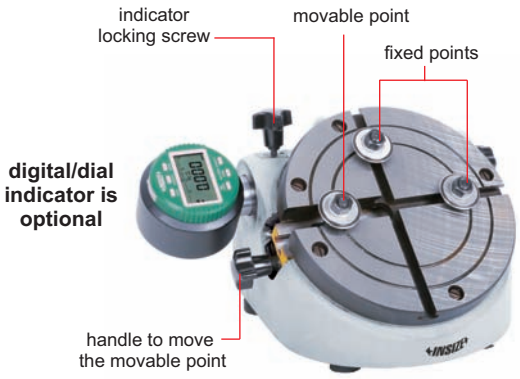
application

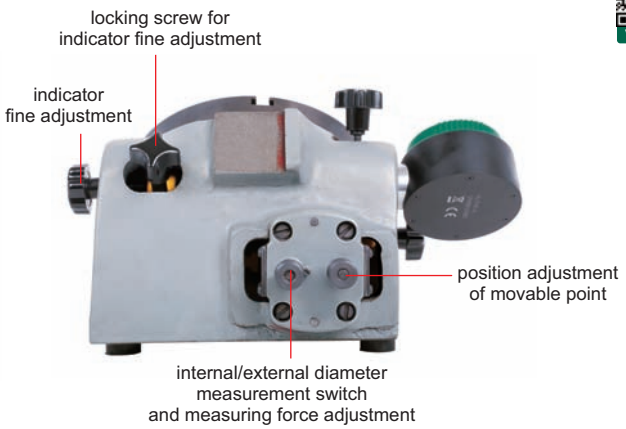


disc probes to measure external diameter



INTERNAL AND EXTERNAL DIAMETER COMPARISON INSTRUMENT



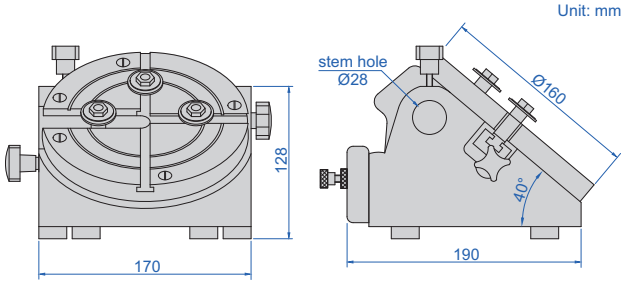


VIDEO

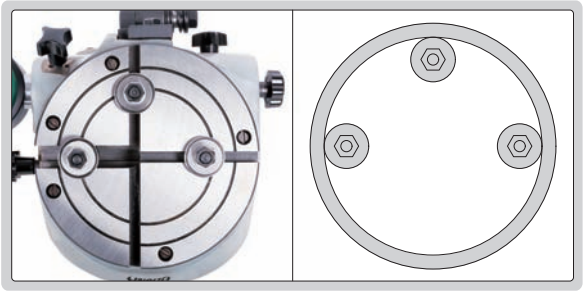
5

- Measure internal/external diameter, variation and taper
- Total range of movable point: 2mm,
  effective range of movable point: ±0.1mm
- Optional accessory: Ø28mm/Ø8mm bush (code **6843-B8**),
  0.001mm digital/dial indicators,
  high precision digital indicators (code **2140-6**, **2140-6WL**)

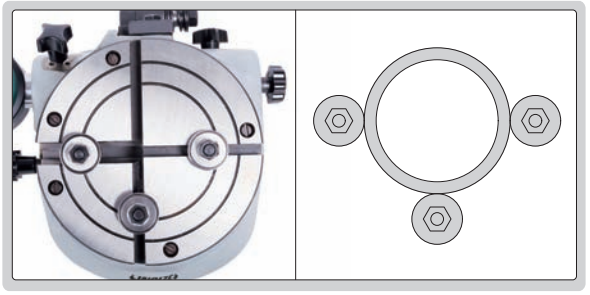
Unit: mm



internal diameter measurement



external diameter measurement



Code	Applicable holding stem	Range of internal diameter	Range of external diameter	Accuracy	Repeatability
6843-140	Ø28mm	50-140mm/2-5.5"	30-120mm/1.2-4.7"	±0.001mm	0.001mm

Ø28mm/Ø8mm bush (optional)



application



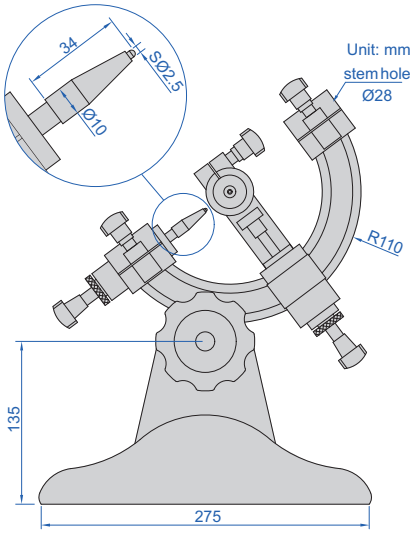
Code
6843-B8

OUTSIDE DIAMETER MEASURING STAND

VIDEO



6847-50



5

- To measure diameter and roundness of cylinders and steel balls
- Supplied with measuring base (code **6847-A100**)
- Optional accessory: Ø28mm/Ø8mm bush (code **6843-B8**), 0.001mm digital/dial indicators, high precision digital indicators (code **2140-6**, **2140-6WL**), gauge blocks (**4101** series, for zero setting of cylinders), custom plug gauges (for zero setting of cylinders), ceramic standard balls (**4190** series, for zero setting of steel balls)

Code	Range of outside diameter	Accuracy	Repeatability
6847-50	1.5-50mm/0.06-2"	±0.001mm	0.0005mm

Measuring base

Code	Diameter	Remark
6847-A10	10mm	**optional**
6847-A20	20mm	**optional**
6847-A30	30mm	**optional**
6847-A40	40mm	**optional**
6847-A50	50mm	**optional**
6847-A60	60mm	**optional**
6847-A70	70mm	**optional**
6847-A75	75mm	**optional**
6847-A80	80mm	**optional**
6847-A90	90mm	**optional**
6847-A100	100mm	included

Ø28mm/Ø8mm bush (optional)



Code
6843-B8

application





Digital Micrometers/Snap Gauges
Page 136-139



Digital Micrometers
Page 140-146



Outside Micrometers
Page 147-153



Large Outside Micrometers
Page 153-157



Limit Micrometers
Page 158



Indicating Micrometers
Page 158-160



Micrometers With Dial Indicator
Page 161-163



Groove Micrometers
Page 163



3-Wires
Page 164



Special Purpose Micrometers
Page 165-199



Optical Parallels
Page 199



Parallelism Inspect Devices For Outside Micrometers
Page 199



Measuring Tools Dynamometers
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Micrometer Measuring Force Detectors
Page 201



Micrometer Inspection Gauge Block Sets
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Micrometer Stands
Page 201-203



Micrometer Setting Standards
Page 204



Micrometer Lapping Machines
Page 205-206



Micrometer Heads
Page 206-210

HIGH PRECISION DIGITAL MICROMETERS/SNAP GAUGES

ONE TURN OF SLEEVE MAKES 10MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

IP65 WATERPROOF

DATA OUTPUT

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

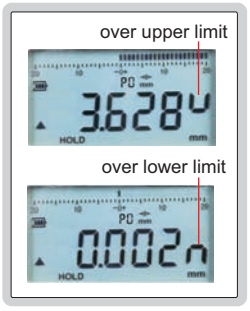
ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

NON-ROTATING SPINDLE

INSPECTION CERTIFICATE

VIDEO

alarm when over tolerance

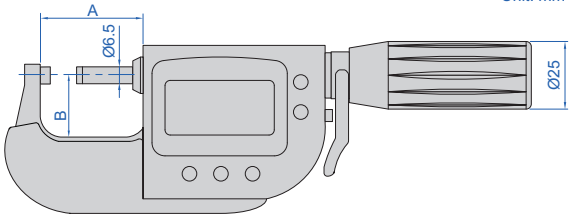




3359-25

- Absolute encoder, the original data remains after power off
- Resolution: 0.0001mm/0.00001"
- One turn of sleeve makes 10mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Carbide measuring faces
- Measuring force 5-10N
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch
- Power: rechargeable battery, for 24 hours continuous working

Unit: mm



With data interface (optional wireless transmitter code 7315-3350, receiver is needed page 9)

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3359-25*	0-25mm/0-1"	±0.5μm	0.3μm	0.3μm	0.6μm	38mm	24mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3359-25AWL*	0-25mm/0-1"	±0.5μm	0.3μm	0.3μm	0.6μm	38mm	24mm

*Supplied with manufacturer inspection certificate

DIGITAL MICROMETERS/SNAP GAUGES (BASIC TYPE)

ONE TURN OF SLEEVE MAKES 10MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

IP65 WATERPROOF

DATA OUTPUT

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

NON-ROTATING SPINDLE

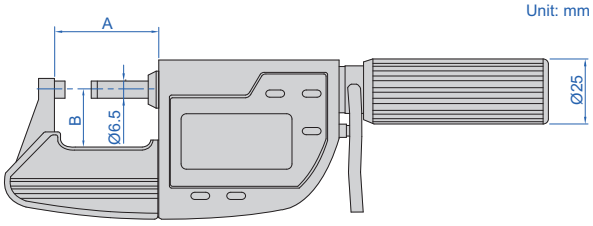
INSPECTION CERTIFICATE

POPULAR MODEL

VIDEO

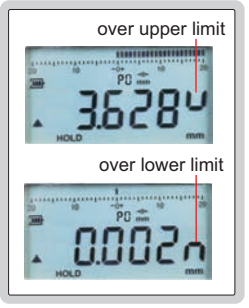


Unit: mm



3358-25

alarm when over tolerance



- Absolute encoder, the original data remains after power off
- Resolution: 0.001mm/0.00005"
- One turn of sleeve makes 10mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Carbide measuring faces
- Measuring force 5-10N
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch
- Supplied with gauge blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working

With data interface (optional wireless transmitter code 7315-3350, receiver is needed page 9)

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3358-25 *	0-25mm/0-1"	2μm	1μm	0.5μm	1.2μm	38mm	24mm
3358-50 *	25-50mm/1-2"	2μm	1μm	0.5μm	1.2μm	64mm	32.5mm
3358-75 *	50-75mm/2-3"	3μm	1μm	0.5μm	1.8μm	89mm	46mm
3358-100 *	75-100mm/3-4"	3μm	1μm	0.5μm	1.8μm	114mm	60mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3358-25AWL *	0-25mm/0-1"	2μm	1μm	0.5μm	1.2μm	38mm	24mm
3358-50AWL *	25-50mm/1-2"	2μm	1μm	0.5μm	1.2μm	64mm	32.5mm
3358-75AWL *	50-75mm/2-3"	3μm	1μm	0.5μm	1.8μm	89mm	46mm
3358-100AWL *	75-100mm/3-4"	3μm	1μm	0.5μm	1.8μm	114mm	60mm

*Supplied with manufacturer inspection certificate

DIGITAL MICROMETERS/SNAP GAUGES

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

IP65 WATERPROOF

DATA OUTPUT

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

NON-ROTATING SPINDLE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

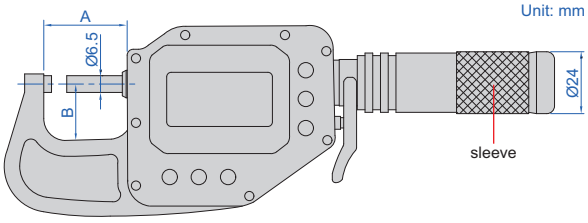
INSPECTION CERTIFICATE

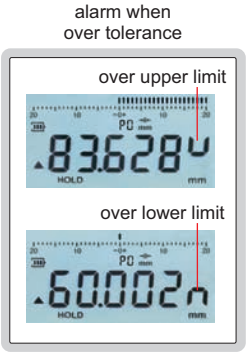
VIDEO



3350-25

- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
  0.001mm/0.00005"
  0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide measuring faces
- Measuring force 5-10N
  Customizable measuring force range 2-12N
  Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gauge blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working





With data interface (optional wireless transmitter code 7315-3350, receiver is needed page 9)

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3350-25*	0-25mm/0-1"	1.4μm	0.6μm	0.5μm	1μm	38mm	24mm
3350-50*	25-50mm/1-2"	1.6μm	1μm	0.5μm	1μm	63mm	28mm
3350-75*	50-75mm/2-3"	1.8μm	1μm	0.5μm	1μm	88mm	45mm
3350-100*	75-100mm/3-3.95"	2μm	1μm	0.5μm	1μm	113mm	57mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3350-25AWL*	0-25mm/0-1"	1.4μm	0.6μm	0.5μm	1μm	38mm	24mm
3350-50AWL*	25-50mm/1-2"	1.6μm	1μm	0.5μm	1μm	63mm	28mm
3350-75AWL*	50-75mm/2-3"	1.8μm	1μm	0.5μm	1μm	88mm	45mm
3350-100AWL*	75-100mm/3-3.95"	2μm	1μm	0.5μm	1μm	113mm	57mm

*Supplied with manufacturer inspection certificate

DIGITAL MICROMETERS/SNAP GAUGES

IP65 WATERPROOF

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

VIDEO

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

NON-ROTATING SPINDLE

DATA OUTPUT

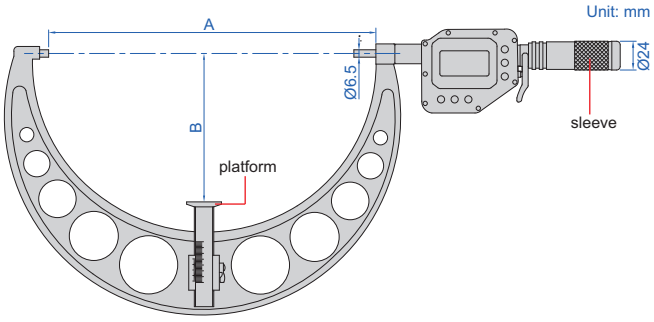
MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

INSPECTION CERTIFICATE



3351-275

- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
  (when the reading exceeds 100mm, the resolution is automatically switched to 0.001mm)
  0.001mm/0.00005"
  0.01mm/0.0005
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide measuring faces
- Measuring force 5-10N
  Customizable measuring force range 2-12N
  Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gauge blocks for zero setting
- Power: rechargeable battery, for 24 hours continuous working



With data interface (optional wireless transmitter code 7315-3350, receiver is needed page 9)

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3351-125*	100-125mm/4-5"	3μm	1μm	0.5μm	2μm	128mm	62.5mm
3351-150*	125-150mm/5-6"	3μm	1μm	0.5μm	2μm	153mm	75mm
3351-175*	150-175mm/6-7"	4μm	1μm	0.5μm	2.5μm	178mm	87.5mm
3351-200*	175-200mm/7-8"	4μm	1μm	0.5μm	2.5μm	203mm	100mm
3351-225*	200-225mm/8-9"	5μm	1μm	0.5μm	3μm	228mm	112.5mm
3351-250*	225-250mm/9-10"	5μm	1μm	0.5μm	3μm	253mm	125mm
3351-275*	250-275mm/10-11"	6μm	1μm	0.5μm	3.5μm	278mm	137.5mm
3351-300*	275-300mm/11-12"	6μm	1μm	0.5μm	3.5μm	303mm	150mm

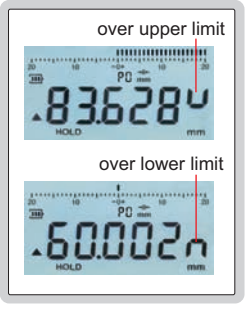
gauge blocks for zero setting (included)



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Repeatability	Measuring faces		A	B
				flatness	parallelism		
3351-125AWL*	100-125mm/4-5"	3μm	1μm	0.5μm	2μm	128mm	62.5mm
3351-150AWL*	125-150mm/5-6"	3μm	1μm	0.5μm	2μm	153mm	75mm
3351-175AWL*	150-175mm/6-7"	4μm	1μm	0.5μm	2.5μm	178mm	87.5mm
3351-200AWL*	175-200mm/7-8"	4μm	1μm	0.5μm	2.5μm	203mm	100mm
3351-225AWL*	200-225mm/8-9"	5μm	1μm	0.5μm	3μm	228mm	112.5mm
3351-250AWL*	225-250mm/9-10"	5μm	1μm	0.5μm	3μm	253mm	125mm
3351-275AWL*	250-275mm/10-11"	6μm	1μm	0.5μm	3.5μm	278mm	137.5mm
3351-300AWL*	275-300mm/11-12"	6μm	1μm	0.5μm	3.5μm	303mm	150mm

alarm when over tolerance



*Supplied with manufacturer inspection certificate

NON-ROTATING SPINDLE DIGITAL MICROMETERS

INSIZE PLUS

INSPECTION CERTIFICATE

QUICK MEASUREMENT
ONE TURN OF SLEEVE OR RATCHET STOP MAKES 2mm SPINDLE FEED

LEVER FORCE MEASURING DEVICE SUITABLE FOR MASS MEASUREMENT

IP65 WATERPROOF

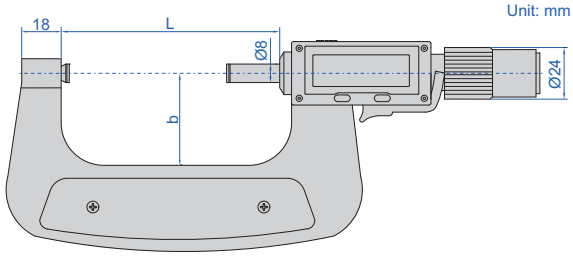
NON-ROTATING SPINDLE

DATA OUTPUT

VIDEO



3632-80A



- Adjustable resolution: 0.01mm/0.0005", 0.001mm/0.00005", 0.0005mm/0.00002"
- Repeatability: 1μm
- Measuring force: 5-10N
- Lever force measuring device, suitable for mass measurement
- No-rotating spindle, suitable for measuring cylindrical workpiece
- Quick measurement: one turn of sleeve or ratchet stop makes 2mm spindle feed
- Carbide measuring faces
- Data output
- Button function: mm/inch, max./min. value tracking, preset value, hold, on/off, zero
- Ratchet sets force measurement
- CR2032 battery, automatic power off
- Supplied with setting standards (except 0-30mm/0-1.18")
- Optional accessory:
  wireless transmitter code **7315-80** (receiver is needed) page 9

lever force measuring device

press the lever force measuring device, the spindle retracted 1.5mm (MAX). release the force measuring device, the spindle extends, contacts the measured workpiece, and the measured force is constant



(mm)

Code	Range	Accuracy		L	b
		stroke≤25mm	stroke>25mm		
3632-30A*	0-30mm/0-1.18"	±2μm	±3μm	38	24
3632-55A*	25-55mm/0.98-2.17"	±2μm	±3μm	63	30.5
3632-80A*	50-80mm/1.97-3.15"	±3μm	±4μm	88	44
3632-105A*	75-105mm/2.95-4.13"	±3μm	±4μm	113	57
3632-130A*	100-130mm/3.94-5.12"	±3μm	±5μm	138	70
3632-155A*	125-155mm/4.92-6.1"	±3μm	±5μm	163	83
3632-180A*	150-180mm/5.91-7.09"	±4μm	±6μm	188	96
3632-205A*	175-205mm/6.89-8.07"	±4μm	±6μm	213	109
3632-230A*	200-230mm/7.87-9.06"	±4μm	±6μm	238	122
3632-255A*	225-255mm/8.86-10.04"	±4μm	±6μm	268	135
3632-280A*	250-280mm/9.84-11.02"	±5μm	±7μm	293	147.5
3632-305A*	275-305mm/10.83-12.01"	±5μm	±7μm	318	160

*Supplied with manufacturer inspection certificate

HIGH PRECISION NON-ROTATING SPINDLE DIGITAL MICROMETERS

INSIZE PLUS

QUICK MEASUREMENT
ONE TURN OF SLEEVE OR RATCHET STOP MAKES 2MM SPINDLE FEED

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

IP65 WATERPROOF

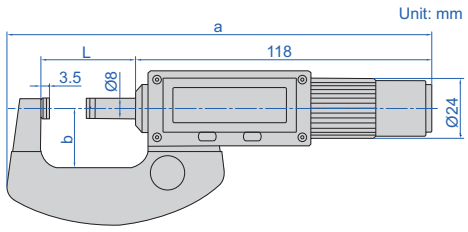
NON-ROTATING SPINDLE

DATA OUTPUT

STROKE 30mm



3661-30



- Adjustable resolution: 0.01mm/0.0005", 0.001mm/0.00005", 0.0005mm/0.00002"
- Repeatability: 0.5μm
- Measuring force: 5-10N
- Flatness of measuring faces: 0.3μm
- Parallelism of measuring faces: 0.5μm
- Ratchet stop
- Non-rotating spindle, suitable for cylinders
- Quick measurement: one turn of sleeve or ratchet stop makes 2mm spindle feed
- Carbide measuring faces
- Data output
- Button function: mm/inch, max./min. value tracking, preset value, hold, on/off, zero
- CR2032 battery
- Automatic power off, turn the sleeve to turn on
- Optional accessory: setting standards (code **7386**), wireless transmitter code **7315-80** (receiver is needed) page 9

(mm)

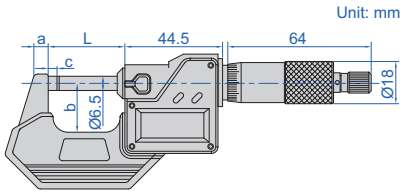
Code	Range	Accuracy		L	a	b
		stroke ≤25mm	stroke >25mm			
3661-30	0-30mm/0-1.18"	±2μm	±3μm	38	169	24
3661-55	25-55mm/0.98-2.17"	±2μm	±3μm	63	195	30.5
3661-80	50-80mm/1.97-3.15"	±3μm	±4μm	88	228	44
3661-105	75-105mm/2.95-4.13"	±3μm	±4μm	113	257	57
3661-130	100-130mm/3.94-5.12"	±3μm	±5μm	138	289	70
3661-155	125-155mm/4.92-6.1"	±3μm	±5μm	163	315	83
3661-180	150-180mm/5.91-7.09"	±4μm	±6μm	188	340	96
3661-205	175-205mm/6.89-8.07"	±4μm	±6μm	213	363	109
3661-230	200-230mm/7.87-9.06"	±4μm	±6μm	238	388	122
3661-255	225-255mm/8.86-10.04"	±4μm	±6μm	268	429	135
3661-280	250-280mm/9.84-11.02"	±5μm	±7μm	293	454	147.5
3661-305	275-305mm/10.83-12.01"	±5μm	±7μm	318	479	160

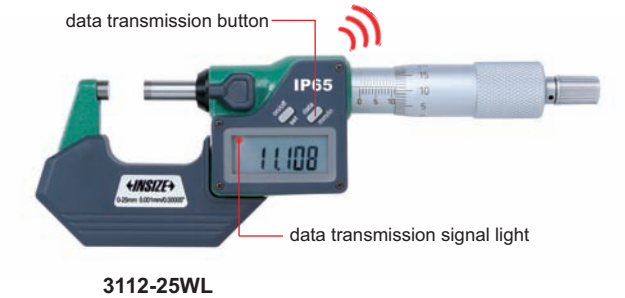
WIRELESS WATERPROOF DIGITAL OUTSIDE MICROMETERS (ZIGBEE)

DATA OUTPUT | IP65 WATERPROOF

INSPECTION CERTIFICATE

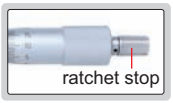
VIDEO



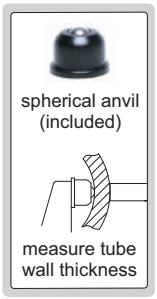


3112-25WL

- IP65 dust/waterproof
- Built-in wireless data transmission module, Zigbee signal
- Transmission distance is 10 meter (under the condition of no obstruction and no electromagnetic interference)
- Button function: on/off, set, mm/inch, data transmit
- Automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")
- Built-in rechargeable lithium battery
- Optional accessory: receiver (code **7315-2/3/6/7/8/9**)







receiver (**optional**)



Metric/Inch type (ratchet stop) (mm)

Code	Range	Resolution	Accuracy	L	a	b	c
3112-25WL*	0-25mm/0-1"	0.001mm/0.00005"	±2μm	34.5	6	25	3
3112-50WL*	25-50mm/1-2"	0.001mm/0.00005"	±2μm	59.5	8	32	3
3112-75WL*	50-75mm/2-3"	0.001mm/0.00005"	±3μm	84.5	8	44.5	3
3112-100WL*	75-100mm/3-4"	0.001mm/0.00005"	±3μm	109.5	8	57	3
3112-125WL	100-125mm/4-5"	0.001mm/0.00005"	±3μm	135	10	70	3
3112-150WL	125-150mm/5-6"	0.001mm/0.00005"	±3μm	160.5	10	82	3
3112-175WL	150-175mm/6-7"	0.001mm/0.00005"	±4μm	186	12	94.5	5.5
3112-200WL	175-200mm/7-8"	0.001mm/0.00005"	±4μm	211.5	12	107	5.5
3112-225WL	200-225mm/8-9"	0.001mm/0.00005"	±4μm	236	23	129.5	5.5
3112-250WL	225-250mm/9-10"	0.001mm/0.00005"	±4μm	261.5	23	142.5	5.5
3112-275WL	250-275mm/10-11"	0.001mm/0.0001"	±5μm	287	23	155	5.5
3112-300WL	275-300mm/11-12"	0.001mm/0.0001"	±5μm	312.5	23	167.5	5.5

Metric/Inch type (friction thimble) (mm)

Code	Range	Resolution	Accuracy	L	a	b	c
3112-25FWL*	0-25mm/0-1"	0.001mm/0.00005"	±2μm	34.5	6	25	3

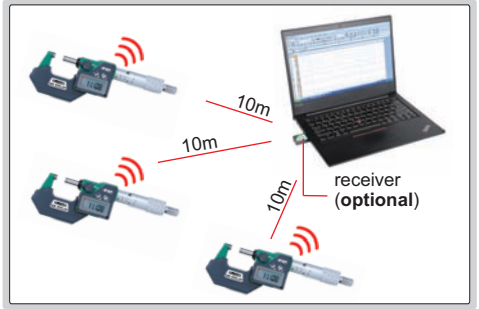
Metric type (ratchet stop) (mm)

Code	Range	Resolution	Accuracy	L	a	b	c
3112-25JWL*	0-25mm	0.001mm	±2μm	34.5	6	25	3
3112-50JWL*	25-50mm	0.001mm	±2μm	59.5	8	32	3
3112-75JWL*	50-75mm	0.001mm	±3μm	84.5	8	44.5	3
3112-100JWL*	75-100mm	0.001mm	±3μm	109.5	8	57	3

Set (ratchet stop type)

Code	Range	Micrometers included	Packaging
3112-753WL*	0-75mm/0-3"	3112-25WL, 3112-50WL, 3112-75WL	blow mould case
3112-1004WL*	0-100mm/0-4"	3112-25WL, 3112-50WL, 3112-75WL, 3112-100WL	blow mould case
3112-1506WL	0-150mm/0-6"	3112-25WL, 3112-50WL, 3112-75WL, 3112-100WL, 3112-125WL, 3112-150WL	aluminum box
3112-3006WL	150-300mm/6-12"	3112-175WL, 3112-200WL, 3112-225WL, 3112-250WL, 3112-275WL, 3112-300WL	aluminum box

application

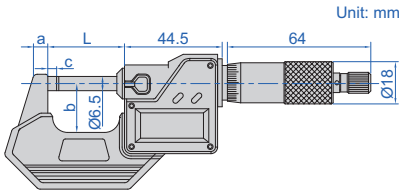


*Supplied with manufacturer inspection certificate

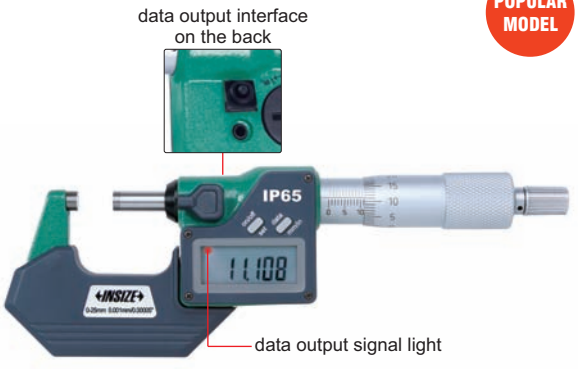
DATA OUTPUT | IP65 WATERPROOF

WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITH DATA OUTPUT)

INSPECTION CERTIFICATE



POPULAR MODEL

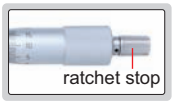


3101-25A

- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory:
  wireless transmitter code **7315-31** (receiver is needed) page 8

Metric/Inch type (ratchet stop) (mm)

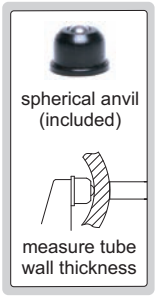
Code	Range	Resolution	Accuracy	L	a	b	c
3101-25A*	0-25mm/0-1"	0.001mm/0.00005"	±2μm	34.5	6	25	3
3101-50A*	25-50mm/1-2"	0.001mm/0.00005"	±2μm	59.5	8	32	3
3101-75A*	50-75mm/2-3"	0.001mm/0.00005"	±3μm	84.5	8	44.5	3
3101-100A*	75-100mm/3-4"	0.001mm/0.00005"	±3μm	109.5	8	57	3
3101-125A	100-125mm/4-5"	0.001mm/0.00005"	±3μm	135	10	70	3
3101-150A	125-150mm/5-6"	0.001mm/0.00005"	±3μm	160.5	10	82	3
3101-175A	150-175mm/6-7"	0.001mm/0.00005"	±4μm	186	12	94.5	5.5
3101-200A	175-200mm/7-8"	0.001mm/0.00005"	±4μm	211.5	12	107	5.5
3101-225A	200-225mm/8-9"	0.001mm/0.00005"	±4μm	236	23	129.5	5.5
3101-250A	225-250mm/9-10"	0.001mm/0.00005"	±4μm	261.5	23	142.5	5.5
3101-275A	250-275mm/10-11"	0.001mm/0.0001"	±5μm	287	23	155	5.5
3101-300A	275-300mm/11-12"	0.001mm/0.0001"	±5μm	312.5	23	167.5	5.5





Metric/Inch type (friction thimble) (mm)

Code	Range	Resolution	Accuracy	L	a	b	c
3101-25FA*	0-25mm/0-1"	0.001mm/0.00005"	±2μm	34.5	6	25	3



Metric type (ratchet stop) (mm)

Code	Range	Resolution	Accuracy	L	a	b	c
3101-25AJ*	0-25mm	0.001mm	±2μm	34.5	6	25	3
3101-50AJ*	25-50mm	0.001mm	±2μm	59.5	8	32	3
3101-75AJ*	50-75mm	0.001mm	±3μm	84.5	8	44.5	3
3101-100AJ*	75-100mm	0.001mm	±3μm	109.5	8	57	3

Set (ratchet stop type)

Code	Range	Micrometers included	Packaging
3101-753A*	0-75mm/0-3"	3101-25A, 3101-50A, 3101-75A	blow mould case
3101-1004A*	0-100mm/0-4"	3101-25A, 3101-50A, 3101-75A, 3101-100A	blow mould case
3101-1506A	0-150mm/0-6"	3101-25A, 3101-50A, 3101-75A, 3101-100A, 3101-125A, 3101-150A	aluminum box
3101-3006A	150-300mm/6-12"	3101-175A, 3101-200A, 3101-225A, 3101-250A, 3101-275A, 3101-300A	aluminum box

*Supplied with manufacturer inspection certificate



3101-753A



3101-1506A

WATERPROOF DIGITAL OUTSIDE MICROMETERS (WITHOUT DATA OUTPUT)

IP65
WATERPROOF

ATTENTION: NO DATA OUTPUT

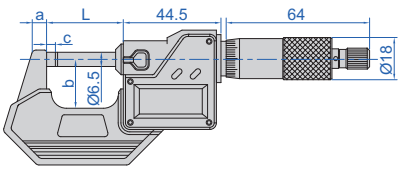
INSPECTION CERTIFICATE



3108-25A

- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- No data output
- Automatic power off
- Carbide measuring faces
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")

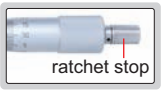
Unit: mm

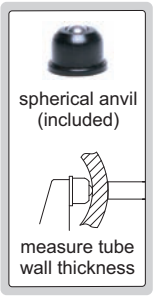


6

Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b	c
3108-25A*	0-25mm/0-1"	±2μm	34.5	6	25	3
3108-50A*	25-50mm/1-2"	±2μm	59.5	8	32	3
3108-75A*	50-75mm/2-3"	±3μm	84.5	8	44.5	3
3108-100A*	75-100mm/3-4"	±3μm	109.5	8	57	3
3108-125A	100-125mm/4-5"	±3μm	135	10	70	3
3108-150A	125-150mm/5-6"	±3μm	160.5	10	82	3
3108-175A	150-175mm/6-7"	±4μm	186	12	94.5	5.5
3108-200A	175-200mm/7-8"	±4μm	211.5	12	107	5.5





Friction thimble type (mm)

Code	Range	Accuracy	L	a	b	c
3108-25FA*	0-25mm/0-1"	±2μm	34.5	6	25	3





3108-753A



3108-1506A

Set

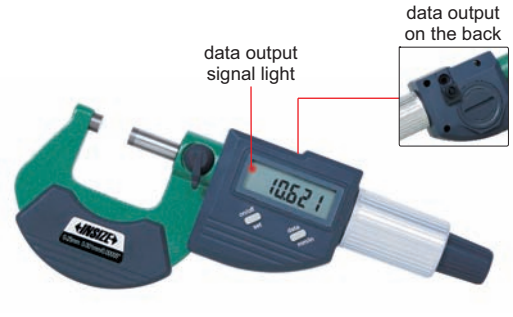
Code	Range	Micrometers included	Packaging
3108-753A*	0-75mm/0-3"	3108-25A, 3108-50A, 3108-75A	blow mould case
3108-1004A*	0-100mm/0-4"	3108-25A, 3108-50A, 3108-75A, 3108-100A	blow mould case
3108-1506A	0-150mm/0-6"	3108-25A, 3108-50A, 3108-75A, 3108-100A, 3108-125A, 3108-150A	aluminum box

*Supplied with manufacturer inspection certificate

DIGITAL OUTSIDE MICROMETERS (BASIC TYPE, WITH DATA OUTPUT)

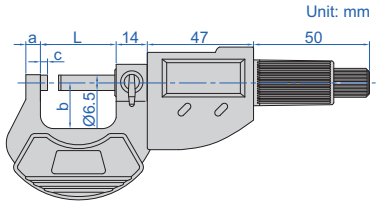
INSPECTION CERTIFICATE

DATA OUTPUT



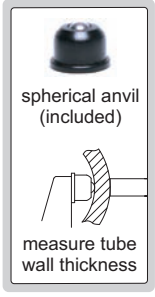
3102-25

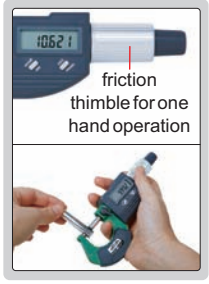
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, data transmit
- Automatic power off
- Carbide measuring faces
- Friction thimble
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")
- Optional accessory:
  wireless transmitter code **7315-30** (receiver is needed) page 7



Individual **(mm)**

Code	Range	Accuracy	L	a	b	c
3102-25 *	0-25mm/0-1"	±2μm	32	6	24	3
3102-50 *	25-50mm/1-2"	±2μm	57	8	32	3
3102-75 *	50-75mm/2-3"	±3μm	82	8	45	3
3102-100 *	75-100mm/3-4"	±3μm	107	10	57	3
3102-125	100-125mm/4-5"	±3μm	133	10	70	3
3102-150	125-150mm/5-6"	±3μm	158	10	82	3
3102-175	150-175mm/6-7"	±4μm	183	12	95	5.5
3102-200	175-200mm/7-8"	±4μm	209	12	107	5.5







3102-753A



3102-1506A

Set

Code	Range	Micrometers included	Packaging
3102-753A *	0-75mm/0-3"	3102-25, 3102-50, 3102-75	blow mould case
3102-1004A *	0-100mm/0-4"	3102-25, 3102-50, 3102-75, 3102-100	blow mould case
3102-1506A	0-150mm/0-6"	3102-25, 3102-50, 3102-75, 3102-100, 3102-125, 3102-150	aluminum box

*Supplied with manufacturer inspection certificate

DIGITAL OUTSIDE MICROMETERS (BASIC TYPE, WITHOUT DATA OUTPUT)

ATTENTION: NO DATA OUTPUT

- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, ABS/INC
- No data output
- Automatic power off
- Carbide measuring faces
- Friction thimble
- Supplied with spherical anvil
- Setting standards are included (except 0-25mm/0-1")



3109-25A

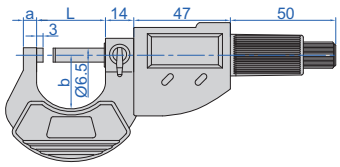
INSPECTION CERTIFICATE

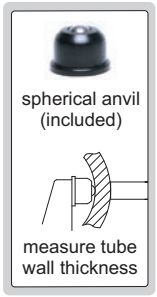
Individual

Code	Range	Accuracy	L	a	b
3109-25A*	0-25mm/0-1"	±2μm	32mm	6mm	28mm
3109-50A*	25-50mm/1-2"	±2μm	57mm	8mm	37mm
3109-75A*	50-75mm/2-3"	±3μm	82mm	8mm	50mm
3109-100A*	75-100mm/3-4"	±3μm	107mm	10mm	61mm
3109-125A	100-125mm/4-5"	±3μm	132mm	10mm	73mm
3109-150A	125-150mm/5-6"	±3μm	157mm	10mm	85mm
3109-175A	150-175mm/6-7"	±4μm	182mm	20mm	104mm
3109-200A	175-200mm/7-8"	±4μm	207mm	20mm	117mm
3109-225A	200-225mm/8-9"	±4μm	234mm	20mm	130mm
3109-250A	225-250mm/9-10"	±4μm	260mm	20mm	143mm
3109-275A	250-275mm/10-11"	±5μm	285mm	20mm	155mm
3109-300A	275-300mm/11-12"	±5μm	310mm	20mm	168mm

POPULAR MODEL

Unit: mm







Set

Code	Range	Micrometers included	Packaging
3109-753A*	0-75mm/0-3"	3109-25A, 3109-50A, 3109-75A	blow mould case
3109-1004A*	0-100mm/0-4"	3109-25A, 3109-50A, 3109-75A, 3109-100A	blow mould case
3109-1506A	0-150mm/0-6"	3109-25A, 3109-50A, 3109-75A, 3109-100A, 3109-125A, 3109-150A	aluminum box
3109-3006A	150-300mm/6-12"	3109-175A, 3109-200A, 3109-225A, 3109-250A, 3109-275A, 3109-300A	aluminum box

*Supplied with manufacturer inspection certificate



3109-753A



3109-1506A

DIGITAL VERTICAL MICROMETERS

DATA OUTPUT

IP65 WATERPROOF

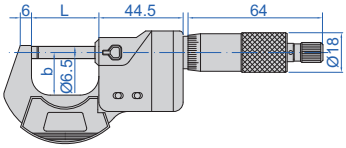
- Measure the thickness of plates for easy reading
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, ABS/INC
- Data output
- Automatic power off
- Carbide spindle tip
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Optional accessory:
  wireless transmitter code **7315-30** (receiver is needed) page 7



3565-25A

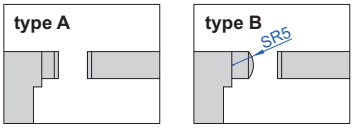
INSPECTION CERTIFICATE

Unit: mm



Code	Range	Type	Accuracy	L	b
3565-25A*	0-25mm/0-1"	A	±2μm	34.5mm	25mm
3565-50A*	25-50mm/1-2"	A	±2μm	59.5mm	32mm
3565-25BA*	0-25mm/0-1"	B	±2μm	34.5mm	25mm
3565-50BA*	25-50mm/1-2"	B	±2μm	59.5mm	32mm

*Supplied with manufacturer inspection certificate



ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

INSPECTION CERTIFICATE

OUTSIDE MICROMETERS

INSIZE PLUS

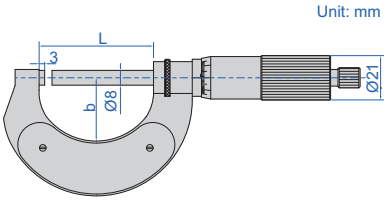
- Carbide measuring faces
- Graduation: 0.01mm
- Meet DIN863-1
- Friction thimble
- Optional accessory: setting standards (code **7386**)

Code	Range	Accuracy	L	b
3701-25A*	0-25mm	4μm	37mm	24mm
3701-50A*	25-50mm	4μm	62mm	34mm
3701-75A*	50-75mm	5μm	87mm	46mm
3701-100A*	75-100mm	5μm	112mm	60mm
3701-125A*	100-125mm	6μm	139mm	72mm
3701-150A*	125-150mm	6μm	164mm	85mm
3701-175A*	150-175mm	7μm	190mm	97mm
3701-200A*	175-200mm	7μm	215mm	110mm
3701-225A*	200-225mm	8μm	240mm	122mm
3701-250A*	225-250mm	8μm	264mm	135mm
3701-275A*	250-275mm	9μm	290mm	148mm
3701-300A*	275-300mm	9μm	315mm	160mm

*Supplied with manufacturer inspection certificate



3701-25A



6

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

LIGHT WEIGHT

OUTSIDE MICROMETERS WITH 50mm RANGE

INSIZE PLUS

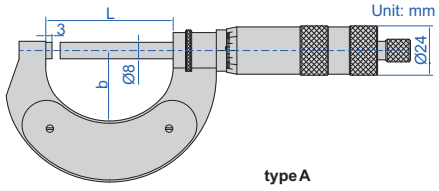
- Graduation 0.01mm
- Ratchet stop
- One turn of sleeve makes 1mm spindle feed
- Carbide measuring faces
- Optional accessory: setting standards (code **7386**)

(mm)

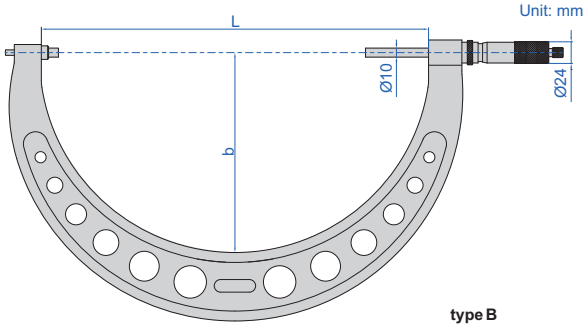
Code	Range	Type	Accuracy	L	b	Weight
3682-50	0-50mm	A	4μm	62	34	0.46kg
3682-100	50-100mm	A	5μm	112	60	0.62kg
3682-150	100-150mm	A	6μm	164	85	0.78kg
3682-200	150-200mm	A	7μm	215	110	1.03kg
3682-250	200-250mm	A	8μm	264	135	1.25kg
3682-300	250-300mm	A	9μm	315	160	1.45kg
3682-350	300-350mm	B	10μm	370	190	1.50kg
3682-400	350-400mm	B	11μm	430	220	1.80kg
3682-450	400-450mm	B	12μm	475	250	2.15kg
3682-500	450-500mm	B	13μm	530	273	2.30kg
3682-550	500-550mm	B	14μm	570	291	2.40kg
3682-600	550-600mm	B	14μm	630	323	3.00kg
3682-650	600-650mm	B	16μm	675	351	3.30kg
3682-700	650-700mm	B	16μm	730	378	3.70kg
3682-750	700-750mm	B	18μm	785	401	3.90kg
3682-800	750-800mm	B	18μm	830	423	4.10kg
3682-850	800-850mm	B	20μm	885	440	4.30kg
3682-900	850-900mm	B	20μm	930	473	4.90kg
3682-950	900-950mm	B	22μm	980	503	5.80kg
3682-1000	950-1000mm	B	22μm	1030	520	6.10kg



3682-50



type A



type B

OUTSIDE MICROMETERS (GRADUATION 0.005mm)

INSIZE PLUS

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

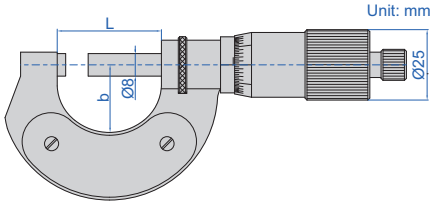
- Graduation 0.005mm
- Friction thimble
- One turn of sleeve makes 0.5mm spindle feed
- Carbide measuring faces
- Optional accessory: setting standards (code **7386**)



3681-25

(mm)

Code	Range	Accuracy	L	b
3681-25	0-25mm	4μm	37	24
3681-50	25-50mm	4μm	62	34
3681-75	50-75mm	5μm	87	46
3681-100	75-100mm	5μm	112	60
3681-125	100-125mm	6μm	139	72
3681-150	125-150mm	6μm	164	85
3681-175	150-175mm	7μm	190	97
3681-200	175-200mm	7μm	215	110
3681-225	200-225mm	8μm	240	122
3681-250	225-250mm	8μm	264	135
3681-275	250-275mm	9μm	290	148
3681-300	275-300mm	9μm	315	160



OUTSIDE MICROMETERS

INSPECTION CERTIFICATE

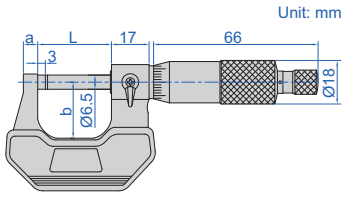
- Graduation 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)



3202-25A

Individual

Code	Range	Accuracy	L	a	b
3202-25A*	0-25mm	4μm	32mm	6mm	24mm
3202-50A*	25-50mm	4μm	57mm	8mm	32mm
3202-75A*	50-75mm	5μm	82mm	8mm	45mm
3202-100A*	75-100mm	5μm	107mm	8mm	57mm
3202-125A	100-125mm	6μm	133mm	8mm	70mm
3202-150A	125-150mm	6μm	125mm	8mm	82mm
3202-175A	150-175mm	7μm	183mm	8mm	95mm
3202-200A	175-200mm	7μm	209mm	8mm	107mm



Set

Code	Range	Micrometers included
3202-753A*	0-75mm	3202-25A, 3202-50A, 3202-75A
3202-1004A*	0-100mm	3202-25A, 3202-50A, 3202-75A, 3202-100A
3202-1506A	0-150mm	3202-25A, 3202-50A, 3202-75A, 3202-100A 3202-125A, 3202-150A

*Supplied with manufacturer inspection certificate

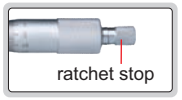
POPULAR MODEL

INSPECTION CERTIFICATE

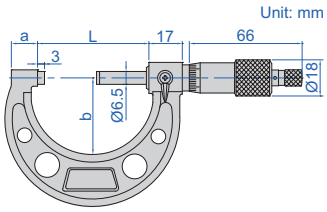
OUTSIDE MICROMETERS


3203-25A


3203-50A







- Graduation: metric 0.01mm
  inch 0.0001"
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm and 0-1")

Metric (ratchet stop type)

Code	Range	Accuracy	L	a	b
3203-25A*	0-25mm	±2μm	32mm	9mm	28mm
3203-50A*	25-50mm	±2μm	57mm	14mm	38mm
3203-75A*	50-75mm	±2μm	82mm	15mm	49mm
3203-100A*	75-100mm	±3μm	107mm	15mm	60mm
3203-125A	100-125mm	±3μm	133mm	16.5mm	73mm
3203-150A	125-150mm	±3μm	158mm	16.5mm	85mm
3203-175A	150-175mm	±4μm	183mm	19.4mm	104mm
3203-200A	175-200mm	±4μm	209mm	19.4mm	117mm
3203-225A	200-225mm	±4μm	234mm	19.4mm	130mm
3203-250A	225-250mm	±5μm	260mm	19.4mm	142mm
3203-275A	250-275mm	±5μm	285mm	19.4mm	155mm
3203-300A	275-300mm	±5μm	310mm	19.4mm	168mm

Inch (ratchet stop type)

Code	Range	Accuracy	L	a	b
3203-1A*	0-1"	±0.0001"	1.260"	0.354"	1.102"
3203-2A*	1-2"	±0.0001"	2.244"	0.551"	1.496"
3203-3A*	2-3"	±0.0001"	3.228"	0.591"	1.929"
3203-4A*	3-4"	±0.00015"	4.213"	0.591"	2.362"
3203-5A*	4-5"	±0.00015"	5.236"	0.650"	2.874"
3203-6A*	5-6"	±0.00015"	6.220"	0.650"	3.346"
3203-7A	6-7"	±0.0002"	7.205"	0.764"	4.094"
3203-8A	7-8"	±0.0002"	8.228"	0.764"	4.606"
3203-9A	8-9"	±0.0002"	9.213"	0.764"	5.118"
3203-10A	9-10"	±0.00025"	10.236"	0.764"	5.591"
3203-11A	10-11"	±0.00025"	11.220"	0.764"	6.102"
3203-12A	11-12"	±0.00025"	12.205"	0.764"	6.614"


3203-1004A


3203-3006A

Metric micrometer set (ratchet stop type)

Code	Range	Micrometers included	Packaging
3203-753A*	0-75mm	3203-25A, 3203-50A, 3203-75A	blow mould case
3203-1004A*	0-100mm	3203-25A, 3203-50A, 3203-75A, 3203-100A	blow mould case
3203-1506A	0-150mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A	blow mould case
3203-3006A	150-300mm	3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A	aluminum box
3203-3012A	0-300mm	3203-25A, 3203-50A, 3203-75A, 3203-100A, 3203-125A, 3203-150A 3203-175A, 3203-200A, 3203-225A, 3203-250A, 3203-275A, 3203-300A	aluminum box

To be continued

Continued from previous page

Inch micrometer set (ratchet stop type)

Code	Range	Micrometers included	Packaging
3203-33A*	0-3"	3203-1A, 3203-2A, 3203-3A	blow mould case
3203-44A*	0-4"	3203-1A, 3203-2A, 3203-3A, 3203-4A	blow mould case
3203-66A*	0-6"	3203-1A, 3203-2A, 3203-3A, 3203-4A, 3203-5A, 3203-6A	blow mould case
3203-126A	6-12"	3203-7A, 3203-8A, 3203-9A, 3203-10A, 3203-11A, 3203-12A	aluminum box
3203-1212A	0-12"	3203-1A, 3203-2A, 3203-3A, 3203-4A, 3203-5A, 3203-6A, 3203-7A, 3203-8A, 3203-9A, 3203-10A, 3203-11A, 3203-12A	aluminum box

Inch (friction thimble type)

Code	Range	Accuracy	L	a	b
3203-1FA*	0-1"	±0.0001"	1.260"	0.354"	1.102"
3203-2FA*	1-2"	±0.0001"	2.244"	0.551"	1.496"
3203-3FA*	2-3"	±0.0001"	3.228"	0.591"	1.929"
3203-4FA*	3-4"	±0.00015"	4.213"	0.591"	2.362"
3203-5FA*	4-5"	±0.00015"	5.236"	0.650"	2.874"
3203-6FA*	5-6"	±0.00015"	6.220"	0.650"	3.346"
3203-7FA	6-7"	±0.0002"	7.205"	0.764"	4.094"
3203-8FA	7-8"	±0.0002"	8.228"	0.764"	4.606"
3203-9FA	8-9"	±0.0002"	9.213"	0.764"	5.118"
3203-10FA	9-10"	±0.00025"	10.236"	0.764"	5.591"
3203-11FA	10-11"	±0.00025"	11.220"	0.764"	6.102"
3203-12FA	11-12"	±0.00025"	12.205"	0.764"	6.614"

*Supplied with manufacturer inspection certificate

1μm GRADUATION OUTSIDE MICROMETERS

INSPECTION CERTIFICATE

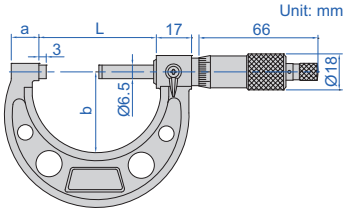
- Graduation 0.001mm
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)



3210-25A

Ratchet stop type (mm)

Code	Range	Accuracy	L	a	b
3210-25A*	0-25mm	4μm	32	9	28
3210-50A*	25-50mm	4μm	57	14	38
3210-75A*	50-75mm	5μm	82	15	49
3210-100A*	75-100mm	5μm	107	15	60
3210-125A	100-125mm	6μm	133	16.5	73
3210-150A	125-150mm	6μm	158	16.5	85
3210-175A	150-175mm	7μm	183	19.4	104
3210-200A	175-200mm	7μm	209	19.4	117



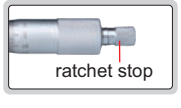
Friction thimble type (mm)

Code	Range	Accuracy	L	a	b
3210-25FA*	0-25mm	4μm	32	9	28
3210-50FA*	25-50mm	4μm	57	14	38

Micrometer set (ratchet stop type)

Code	Range	Micrometers included
3210-753A*	0-75mm	3210-25A, 3210-50A, 3210-75A
3210-1004A*	0-100mm	3210-25A, 3210-50A, 3210-75A, 3210-100A
3210-1506A	0-150mm	3210-25A, 3210-50A, 3210-75A, 3210-100A, 3210-125A, 3210-150A

*Supplied with manufacturer inspection certificate





INSPECTION CERTIFICATE

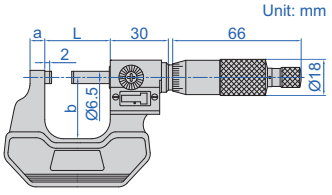
OUTSIDE MICROMETERS WITH COUNTER



3400-25

- Counter resolution: 0.01mm
- Thimble graduation: 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

Code	Range	Accuracy	L	a	b
3400-25 *	0-25mm	4μm	32mm	6mm	26mm
3400-50 *	25-50mm	4μm	57mm	8mm	32mm
3400-75 *	50-75mm	5μm	82mm	8mm	44.5mm
3400-100 *	75-100mm	5μm	107mm	8mm	57mm
3400-125	100-125mm	6μm	132.4mm	17mm	71.8mm
3400-150	125-150mm	6μm	157.8mm	17mm	84mm
3400-175	150-175mm	7μm	185mm	20mm	98.5mm
3400-200	175-200mm	7μm	210.4mm	20mm	111mm
3400-225	200-225mm	8μm	236mm	20mm	124mm
3400-250	225-250mm	8μm	261mm	20mm	136.5mm
3400-275	250-275mm	9μm	287mm	20mm	149mm
3400-300	275-300mm	9μm	312mm	20mm	162mm



*Supplied with manufacturer inspection certificate

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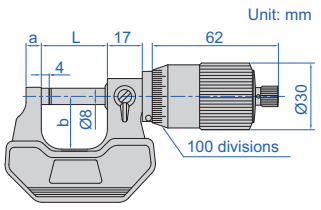
QUICK FEEDING OUTSIDE MICROMETERS



3208-25B

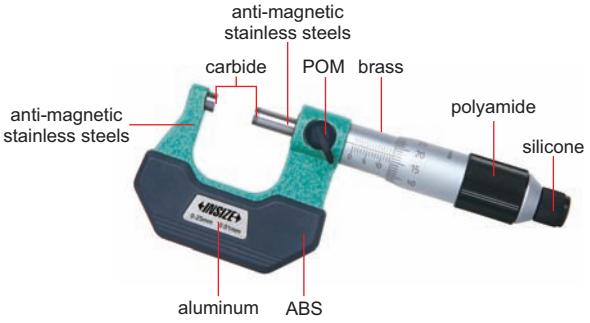
- Graduation 0.01mm
- 1mm feeding of each turn
- Friction thimble
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)

Code	Range	Accuracy	L	a	b
3208-25B	0-25mm	4μm	32mm	6mm	24mm
3208-50B	25-50mm	4μm	57mm	8mm	32mm
3208-75B	50-75mm	5μm	82mm	8mm	45mm
3208-100B	75-100mm	5μm	107mm	8mm	57mm
3208-125B	100-125mm	6μm	133mm	8mm	70mm
3208-150B	125-150mm	6μm	158mm	8mm	82mm
3208-175B	150-175mm	7μm	183mm	8mm	95mm
3208-200B	175-200mm	7μm	209mm	8mm	107mm



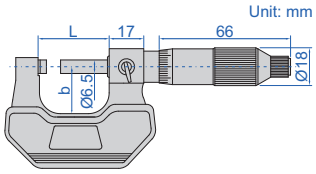
NON MAGNETIC MICROMETERS

- Suitable for magnetic materials
- Graduation: 0.01mm
- Non magnetic carbide measuring faces
- Ratchet stop



3231-25A

Code	Range	Accuracy	L	b
3231-25A	0-25mm	4μm	32mm	24mm
3231-50A	25-50mm	4μm	57mm	32mm
3231-75A	50-75mm	5μm	82mm	45mm
3231-100A	75-100mm	5μm	105mm	57mm



OUTSIDE MICROMETERS FOR LEFT OR RIGHT HANDERS



front

- Graduation 0.01mm
- Graduations on two sides
- Ratchet stop
- Carbide measuring faces
- Meet DIN863-1
- Supplied with setting standards (except 0-25mm)

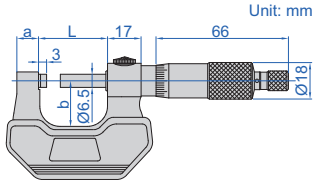


back

3236-25B

(mm)

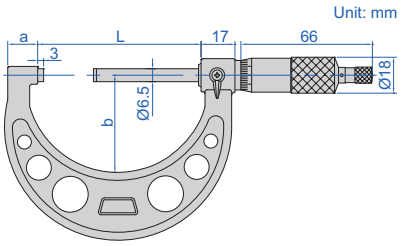
Code	Range	Accuracy	L	a	b
3236-25B	0-25mm	4μm	32	6	24
3236-50B	25-50mm	4μm	57	8	32
3236-75B	50-75mm	5μm	82	8	45
3236-100B	75-100mm	5μm	107	8	57
3236-125B	100-125mm	6μm	133	8	70
3236-150B	125-150mm	6μm	158	8	82
3236-175B	150-175mm	7μm	183	8	95
3236-200B	175-200mm	7μm	209	8	107



LONG SPINDLE OUTSIDE MICROMETERS

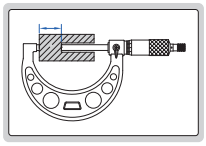


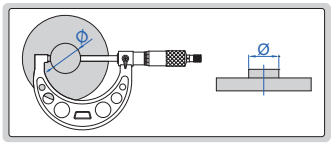
3209-25



- Graduation 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

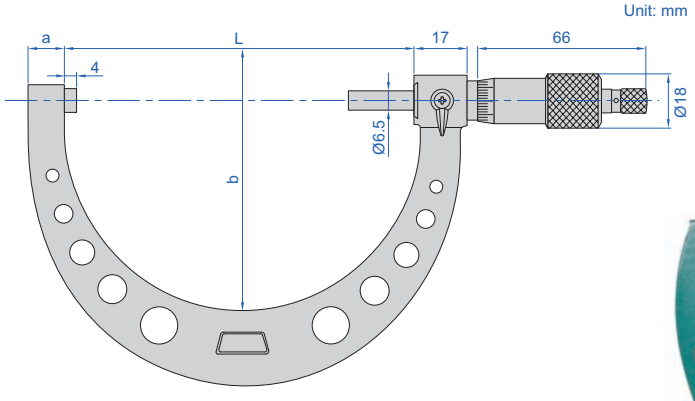
Code	Range	Accuracy	L	a	b
3209-25	0-25mm	4μm	57mm	14mm	38mm
3209-50	25-50mm	4μm	82mm	15mm	49mm
3209-75	50-75mm	5μm	107mm	15mm	60mm
3209-100	75-100mm	5μm	133mm	16.5mm	73mm

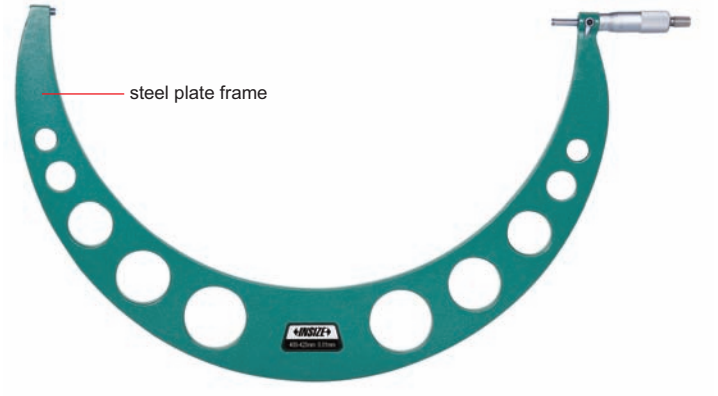




6

OUTSIDE MICROMETERS (STEEL PLATE FRAME)



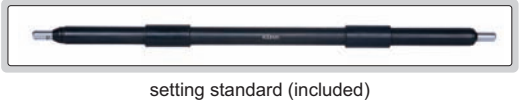


3216-425

- Graduation: 0.01mm
- Carbide measuring faces
- Meet DIN863-1
- Ratchet stop
- Supplied with setting standards

(mm)

Code	Range	Accuracy	L	a	b
3216-325	300-325mm	10μm	338	20	176
3216-350	325-350mm	10μm	364	20	192
3216-375	350-375mm	11μm	389	20	202
3216-400	375-400mm	11μm	414	20	217
3216-425	400-425mm	12μm	440	20	226
3216-450	425-450mm	12μm	465	20	241
3216-475	450-475mm	13μm	491	20	255
3216-500	475-500mm	13μm	516	20	268

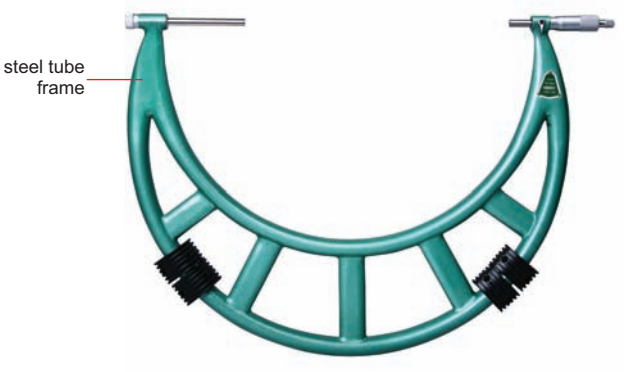


setting standard (included)

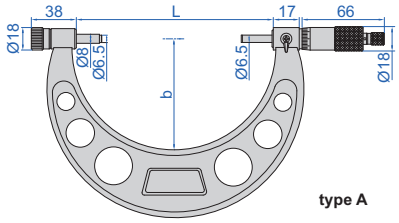
OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS



3206-150A

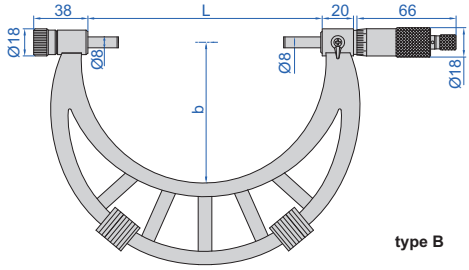


3206-400



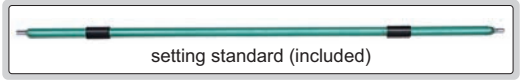
type A

Unit: mm

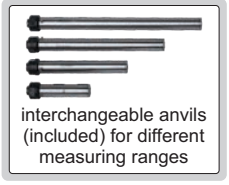


type B

- Graduation 0.01mm
- Ratchet stop
- Meet DIN863-3
- Carbide measuring faces
- Supplied with setting standards



setting standard (included)



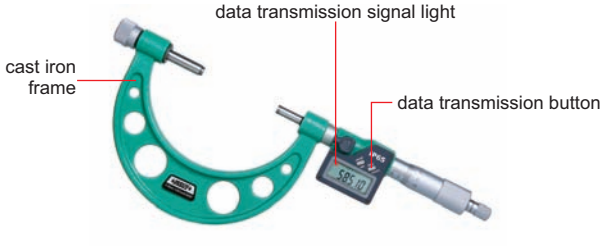
interchangeable anvils (included) for different measuring ranges

(mm)

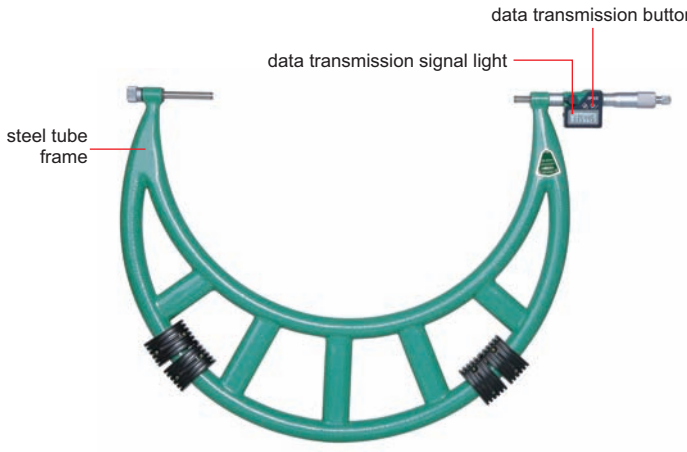
Code	Range	Type	Accuracy	L	b	Setting standard (included)
3206-50A	0-50mm	A	4μm	58	35	25
3206-100A	0-100mm	A	5μm	108	57	25, 50, 75
3206-150A	0-150mm	A	6μm	158	82	25, 50, 75, 100, 125
3206-151A	50-150mm	A	6μm	158	82	50, 75, 100, 125
3206-200A	100-200mm	A	7μm	208	114	100, 125, 150, 175
3206-300A	150-300mm	A	9μm	308	165	150, 175, 200, 225, 250, 275
3206-301A	200-300mm	A	9μm	308	165	200, 225, 250, 275
3206-400	300-400mm	B	11μm	409	224	325, 375
3206-500	400-500mm	B	13μm	509	275	425, 475
3206-600	500-600mm	B	14μm	609	321	525, 575
3206-700	600-700mm	B	16μm	709	371	625, 675
3206-800	700-800mm	B	18μm	809	426	725, 775
3206-900	800-900mm	B	20μm	909	476	825, 875
3206-1000	900-1000mm	B	22μm	1009	576	925, 975

IP65 WATERPROOF | DATA OUTPUT

DIGITAL OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

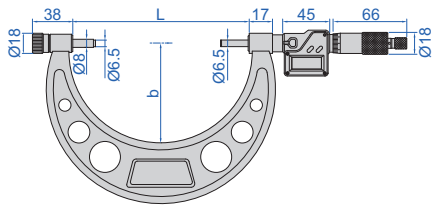


3506-100A



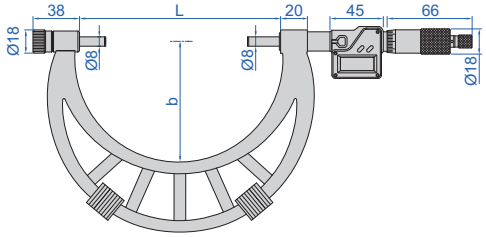
3506-400A

Unit: mm



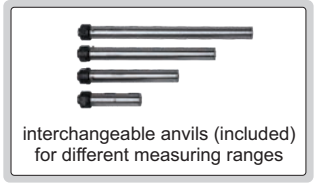
type A

Unit: mm



type B

- Resolution 0.001mm/0.0001" (resolution of **3506-100A/100AWL** and **3506-150A/150AWL** is 0.001mm/0.00005")
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Power: with data interface: CR2032 built-in wireless: rechargeable lithium battery



interchangeable anvils (included) for different measuring ranges



setting standard (included)

With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8) **(mm)**

Code	Range	Type	Accuracy	L	b	Setting standard (included)
3506-100A	0-100mm/0-4"	A	±5μm	105	57	25, 50, 75
3506-150A	0-150mm/0-6"	A	±6μm	155	82	25, 50, 75, 100, 125
3506-300A	150-300mm/6-12"	A	±8μm	305	165	150, 175, 200, 225, 250, 275
3506-301A	200-300mm/8-12"	A	±8μm	305	165	200, 225, 250, 275
3506-400A	300-400mm/12-16"	B	±9μm	405	224	325, 375
3506-500A	400-500mm/16-20"	B	±11μm	505	275	425, 475
3506-600A	500-600mm/20-24"	B	±12μm	605	321	525, 575
3506-700A	600-700mm/24-28"	B	±13μm	705	371	625, 675
3506-800A	700-800mm/28-32"	B	±15μm	805	426	725, 775
3506-900A	800-900mm/32-36"	B	±16μm	905	476	825, 875
3506-1000A	900-1000mm/36-40"	B	±17μm	1005	576	925, 975

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3506-□□□□WL

Code examples:

Original code	Wireless code
3506-100A	**3506-100AWL**
3506-150A	**3506-150AWL**

OUTSIDE MICROMETERS WITH INTERCHANGEABLE ANVILS

INSIZE PLUS

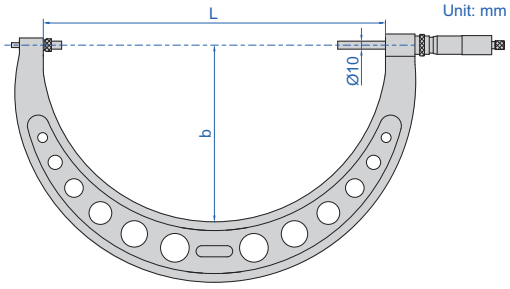
ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

LIGHT WEIGHT

QUICK MEASUREMENT
ONE TURN OF SLEEVE OR RATCHET STOP MAKES 1MM SPINDLE FEED



3675-300



interchangeable anvil (included)
for different measuring ranges

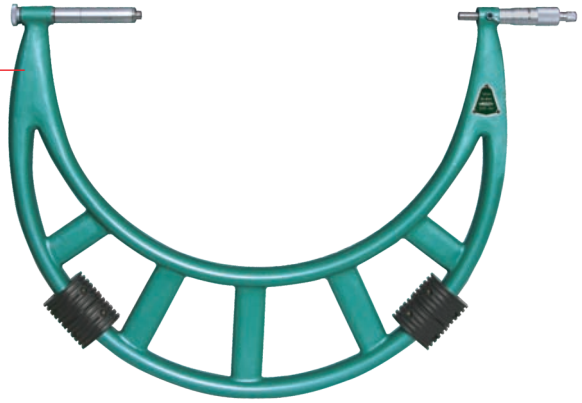


- Graduation 0.01mm
- Ratchet stop
- Meet DIN863-3
- Carbide measuring faces
- Light weight
- Optional accessory: setting standards (code **7386**)

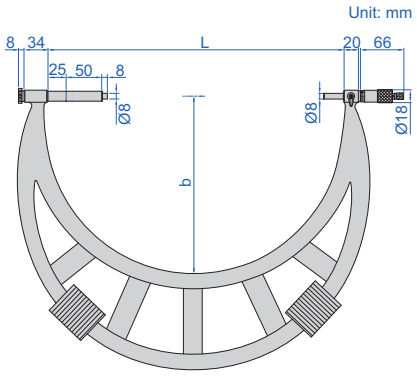
(mm)

Code	Range	Accuracy	L	b	Weight
3675-200	100-200mm	6μm	240	122	1.2kg
3675-300	200-300mm	6μm	325	165	1.5kg
3675-400	300-400mm	7μm	430	220	1.9kg
3675-500	400-500mm	8μm	530	273	2.4kg
3675-600	500-600mm	9μm	630	323	3.1kg
3675-700	600-700mm	9μm	730	378	3.8kg
3675-800	700-800mm	9μm	830	423	4.2kg
3675-900	800-900mm	10μm	930	473	5kg
3675-1000	900-1000mm	10μm	1030	520	6.2kg
3675-1100	1000-1100mm	11μm	1135	585	7.6kg
3675-1200	1100-1200mm	11μm	1230	635	8.6kg
3675-1300	1200-1300mm	12μm	1335	685	9.7kg
3675-1400	1300-1400mm	12μm	1430	735	11.3kg
3675-1500	1400-1500mm	13μm	1530	780	12.5kg
3675-1600	1500-1600mm	18μm	1660	840	13.6kg
3675-1700	1600-1700mm	19μm	1765	890	14.9kg
3675-1800	1700-1800mm	20μm	1870	940	16.2kg
3675-1900	1800-1900mm	21μm	1970	1000	17.5kg
3675-2000	1900-2000mm	22μm	2075	1055	18.8kg

OUTSIDE MICROMETERS WITH EXTENSION ANVIL COLLAR



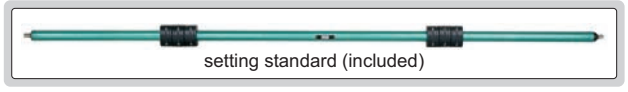
3205-400

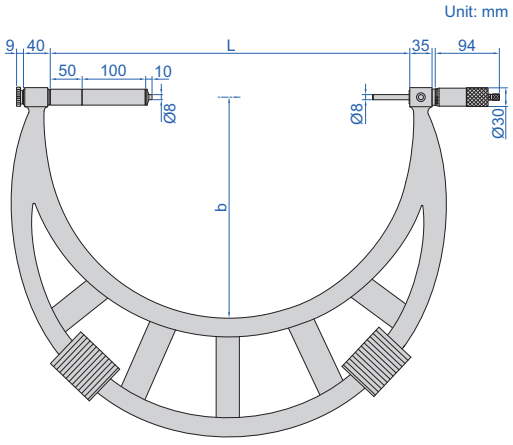


type A



adjust collars for different measuring ranges





type B

- Graduation 0.01mm
- Adjust collars for different measuring ranges
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards

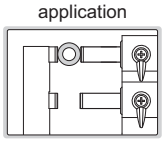
(mm)

Code	Range	Type	Accuracy	L	b	Setting standard (included)
3205-400	300-400mm	A	11μm	410	250	325, 375
3205-500	400-500mm	A	13μm	510	295	425, 475
3205-600	500-600mm	A	14μm	610	345	525, 575
3205-700	600-700mm	A	16μm	710	395	625, 675
3205-800	700-800mm	A	18μm	810	445	725, 775,
3205-900	800-900mm	A	20μm	910	495	825, 875
3205-1000	900-1000mm	A	22μm	1010	545	925, 975
3205-1200	1000-1200mm	B	22μm	1210	645	1050, 1150
3205-1400	1200-1400mm	B	24μm	1410	745	1250, 1350
3205-1600	1400-1600mm	B	28μm	1610	845	1450, 1550
3205-1800	1600-1800mm	B	31μm	1810	945	1650, 1750
3205-2000	1800-2000mm	B	34μm	2010	1045	1850, 1950

LIMIT MICROMETERS

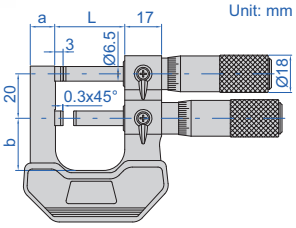
- Used as Go/No-Go gauge by setting upper and lower limits
- Graduation 0.002mm
- Carbide measuring faces
- Supplied with setting standard (except 0-25mm)

application





3235-25A



Code	Range	Accuracy	L	a	b
3235-25A	0-25mm	4μm	32mm	12mm	24mm
3235-50A	25-50mm	4μm	57mm	15mm	32mm

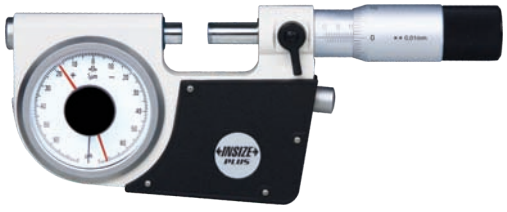
INDICATING MICROMETERS

INSIZE PLUS

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

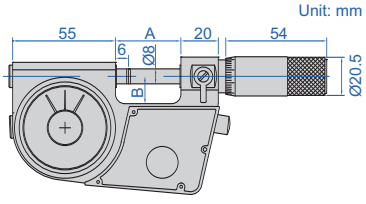
INSPECTION CERTIFICATE

6



3333-25

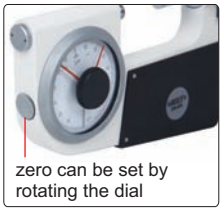
- Meet DIN863-3
- Carbide measuring faces
- Measuring force 5-10N
- Dial can be adjusted
- Optional accessory: gauge blocks grade 0 (**4101-A** series), for zero setting



(mm)

Code	Micrometer head			Dial indicator			A	B
	range	graduation	accuracy	range	graduation	accuracy		
3333-25*	0-25mm	0.01mm	4μm	±0.07mm	1μm	±1μm	35.5	15
3333-252*	0-25mm	0.01mm	4μm	±0.14mm	2μm	±2μm	35.5	15
3333-50*	25-50mm	0.01mm	4μm	±0.07mm	1μm	±1μm	60.5	25
3333-502*	25-50mm	0.01mm	4μm	±0.14mm	2μm	±2μm	60.5	25
3333-75*	50-75mm	0.01mm	4μm	±0.07mm	1μm	±1μm	88	37.5
3333-752*	50-75mm	0.01mm	4μm	±0.14mm	2μm	±2μm	88	37.5
3333-100*	75-100mm	0.01mm	4μm	±0.07mm	1μm	±1μm	111	50
3333-1002*	75-100mm	0.01mm	4μm	±0.14mm	2μm	±2μm	111	50
3333-125*	100-125mm	0.01mm	4μm	±0.07mm	1μm	±1μm	136	62.5
3333-1252*	100-125mm	0.01mm	4μm	±0.14mm	2μm	±2μm	136	62.5
3333-150*	125-150mm	0.01mm	4μm	±0.07mm	1μm	±1μm	161	75
3333-1502*	125-150mm	0.01mm	4μm	±0.14mm	2μm	±2μm	161	75
3333-175*	150-175mm	0.01mm	4μm	±0.14mm	2μm	±2μm	186	88
3333-200*	175-200mm	0.01mm	4μm	±0.14mm	2μm	±2μm	211	101
3333-225*	200-225mm	0.01mm	4μm	±0.14mm	2μm	±2μm	236	113
3333-250*	225-250mm	0.01mm	4μm	±0.14mm	2μm	±2μm	261	126
3333-275*	250-275mm	0.01mm	4μm	±0.14mm	2μm	±2μm	286	138
3333-300*	275-300mm	0.01mm	4μm	±0.14mm	2μm	±2μm	311	151

*Supplied with manufacturer inspection certificate



zero can be set by rotating the dial

BLUETOOTH DIGITAL INDICATING MICROMETERS

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

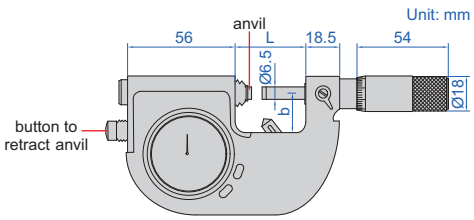
IP54 WATERPROOF

BUILT-IN BLUETOOTH

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED



3507-25



- Meet DIN863-3
- Absolute encoder, the original data remains after power off
- Measuring stroke of anvil: >1mm
- Reading in digital and analog
- Button function: on/off, zero setting, mm/inch, tolerance, display setting, bluetooth, signal mode setting, data output
- Android and iPhone APP, USB type-C cable are included
- Carbide measuring faces
- Power: rechargeable Li-battery, for 20 hours continuous working (bluetooth transmission reduces working hours)
- Optional accessory: gauge blocks grade 0 (**4101-A** series), for zero setting

warning in red or yellow when over tolerance



charge pal

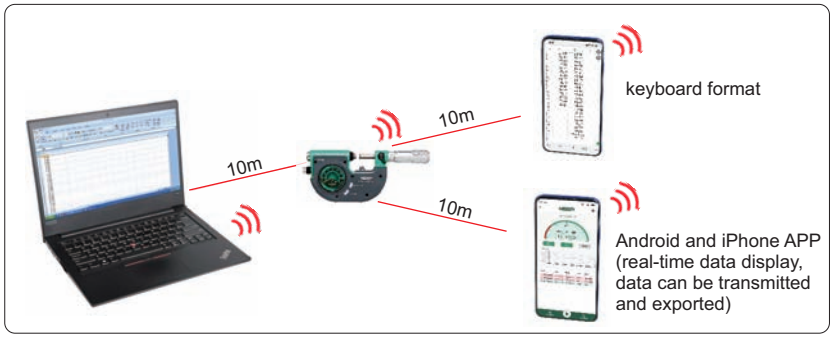


(mm)

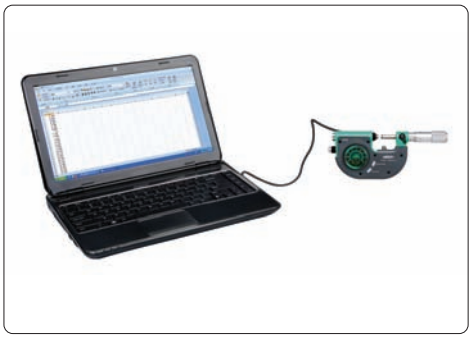
Code	Micrometer head			Digital indicator			Repeatability	L	b	Remarks
	range	graduation	accuracy	range	resolution	accuracy				
3507-25	0-25mm	0.002mm	3μm	±0.04mm	0.1μm	±1μm	0.3μm	35.5	15	includes charge pal
3507-50	25-50mm	0.002mm	3μm	±0.04mm	0.1μm	±1μm	0.3μm	60.5	25	includes charge pal
3507-75	50-75mm	0.002mm	3μm	±0.04mm	0.1μm	±1μm	0.3μm	86	37.5	includes charge pal
3507-100	75-100mm	0.002mm	3μm	±0.04mm	0.1μm	±1μm	0.3μm	111	50	includes charge pal
3507-25B	0-25mm	0.002mm	3μm	±0.04mm	0.2μm	±1μm	0.3μm	35.5	15	—
3507-50B	25-50mm	0.002mm	3μm	±0.04mm	0.2μm	±1μm	0.3μm	60.5	25	—
3507-75B	50-75mm	0.002mm	3μm	±0.04mm	0.2μm	±1μm	0.3μm	86	37.5	—
3507-100B	75-100mm	0.002mm	3μm	±0.04mm	0.2μm	±1μm	0.3μm	111	50	—

Data output

Data output with bluetooth (transmission distance is 10 meters)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single transmission
	virtual com port	data can be transmitted to Android and iPhone APP	real-time display, data can be transmitted and exported
Data output with USB cable (cable length 1.8 meters)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single transmission
	virtual com port	data can be transmitted to serial communication software	single transmission



data output with bluetooth (included)



data output with USB cable (included)

DIGITAL INDICATING MICROMETERS (WITHOUT DATA OUTPUT)

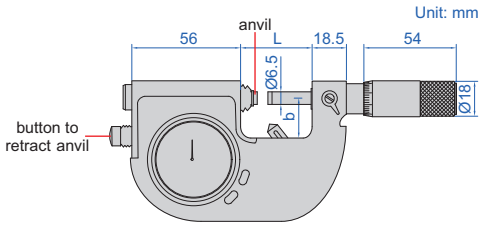
IP54 WATERPROOF

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED



3508-25



- Meet DIN863-3
- Absolute encoder, the original data remains after power off
- Measuring stroke of anvil: >1mm
- Reading in digital and analog
- Button function: on/off, zero setting, mm/inch, tolerance, display setting
- Carbide measuring faces
- Power: rechargeable Li-battery, for 20 hours continuous working
- Optional accessory: gauge blocks grade 0 (**4101-A** series), for zero setting

warning in red or yellow when over tolerance



6

(mm)

Code	Micrometer head			Digital indicator			Repeatability	L	b
	range	graduation	accuracy	range	resolution	accuracy			
3508-25	0-25mm	0.002mm	3μm	±0.04mm	0.2μm	±1μm	0.3μm	35.5	15
3508-50	25-50mm	0.002mm	3μm	±0.04mm	0.2μm	±1μm	0.3μm	60.5	25
3508-75	50-75mm	0.002mm	3μm	±0.04mm	0.2μm	±1μm	0.3μm	86	37.5
3508-100	75-100mm	0.002mm	3μm	±0.04mm	0.2μm	±1μm	0.3μm	111	50
3508-25B	0-25mm	0.002mm	3μm	±0.04mm	0.5μm	±1μm	0.3μm	35.5	15
3508-50B	25-50mm	0.002mm	3μm	±0.04mm	0.5μm	±1μm	0.3μm	60.5	25
3508-75B	50-75mm	0.002mm	3μm	±0.04mm	0.5μm	±1μm	0.3μm	86	37.5
3508-100B	75-100mm	0.002mm	3μm	±0.04mm	0.5μm	±1μm	0.3μm	111	50

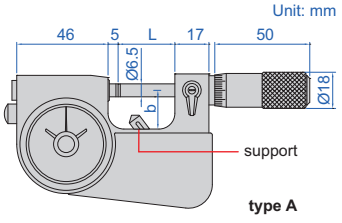
INDICATING MICROMETERS

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

- Meet DIN863-3
- Micrometer head graduation: 0.002mm
- Dial indicator: range ±0.04mm, graduation 0.001mm, accuracy 0.001mm
- Carbide measuring faces
- Optional accessory: gauge blocks grade 0 (**4101-A** series), for zero setting



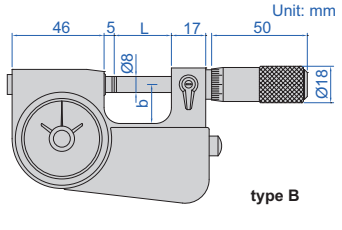
3332-25



type A



3332-25B



type B

(mm)

Code	Micrometer head range	Micrometer head accuracy	Type	L	b	Remark
3332-25	0-25mm	4μm	A	28.5	19	with support
3332-50	25-50mm	4μm	A	53.5	30	with support
3332-75	50-75mm	5μm	A	78.5	45	without support
3332-100	75-100mm	5μm	A	103.5	57	without support
3332-25B	0-25mm	4μm	B	28.5	19	without support

DIAL SNAP GAUGES

REFER TO PAGE 363
FOR DETAILS



3334-25

BLUETOOTH DIGITAL INDICATING SNAP GAUGES

REFER TO PAGE 364-365
FOR DETAILS



3509-25

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

INSPECTION CERTIFICATE

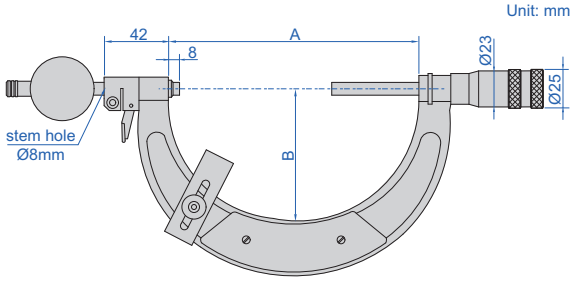
MICROMETERS WITH DIAL INDICATOR

INSIZE PLUS

digital indicator is optional



3346-25



(mm)

Code	Micrometer head range	Micrometer head graduation	Micrometer head accuracy	A	B
3346-25*	0-25mm	5μm	4μm	37	24
3346-50*	25-50mm	5μm	4μm	62	34
3346-75*	50-75mm	5μm	5μm	87	46
3346-100*	75-100mm	5μm	5μm	112	60
3346-150*	100-150mm	5μm	6μm	164	85
3346-200*	150-200mm	5μm	7μm	215	110
3346-250*	200-250mm	5μm	8μm	264	135
3346-300*	250-300mm	5μm	9μm	315	160

*Supplied with manufacturer inspection certificate

- Anvil retracting range: 2.5mm
- Carbide measuring faces
- Parallelism of measuring faces: 1μm
- Optional accessory: dial indicator (code **2890-1F**), digital indicator, gauge blocks grade 1 (**4101-B** series), for zero setting

MICROMETERS WITH DIAL INDICATOR

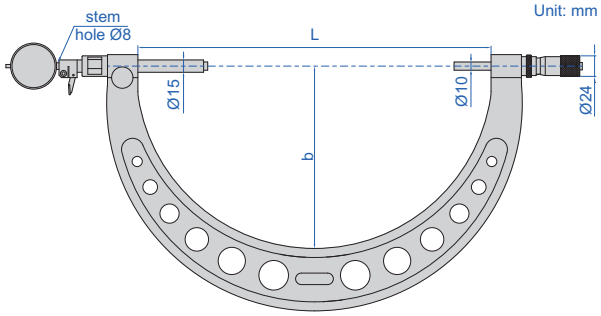
INSIZE PLUS

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

LIGHT WEIGHT

digital indicator is optional

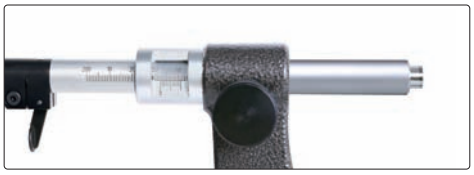




3685-300

- Graduation 0.01mm
- Anvil with vernier graduation, convenient adjustment for different measuring ranges
- Meet DIN863-3
- Carbide measuring faces
- Anvil retracting range: 2.5mm
- Optional accessory: dial/digital indicators, setting standards (code **7386**)

anvil with vernier graduation,
can be adjusted for different measuring ranges



Range 100mm **(mm)**

Code	Range	Micrometer head accuracy	L	b	Weight
3685-300	200-300mm	6μm	320	165	1.7kg
3685-400	300-400mm	7μm	430	220	2.1kg
3685-500	400-500mm	8μm	530	273	2.6kg
3685-600	500-600mm	9μm	630	323	3.3kg
3685-700	600-700mm	9μm	730	378	4.0kg
3685-800	700-800mm	9μm	830	423	4.4kg
3685-900	800-900mm	10μm	930	473	5.2kg
3685-1000	900-1000mm	10μm	1030	520	6.4kg

Range 200mm **(mm)**

Code	Range	Micrometer head accuracy	L	b	Weight
3685-402	200-400mm	7μm	430	220	2.2kg
3685-602	400-600mm	9μm	630	323	3.4kg
3685-802	600-800mm	9μm	830	423	4.5kg
3685-1002	800-1000mm	10μm	1030	520	6.5kg
3685-1202	1000-1200mm	11μm	1230	635	8.9kg
3685-1402	1200-1400mm	12μm	1430	735	11.6kg
3685-1602	1400-1600mm	18μm	1660	840	13.9kg
3685-1802	1600-1800mm	20μm	1870	940	16.5kg
3685-2002	1800-2000mm	22μm	2075	1055	19.1kg

MICROMETERS WITH DIAL INDICATOR

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

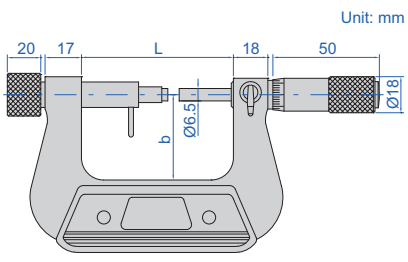
- Meet DIN863-3
- Micrometer head graduation 0.01mm
- Anvil retracting range: 8mm
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)
- Optional accessory: dial indicators (graduation 0.01mm), digital indicators (resolution 0.01mm/0.0005")



digital indicator is optional

3331-25A

Code	Micrometer head range	Micrometer head accuracy	L	b
3331-25A	0-25mm	4μm	67mm	38mm
3331-50A	25-50mm	4μm	92.4mm	50mm
3331-75A	50-75mm	5μm	117.6mm	62mm
3331-100A	75-100mm	5μm	143mm	70mm
3331-125A	100-125mm	6μm	168.2mm	82mm
3331-150A	125-150mm	6μm	192mm	94.5mm
3331-175A	150-175mm	7μm	217mm	107mm

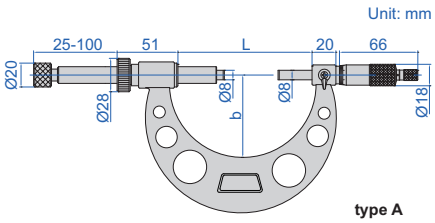


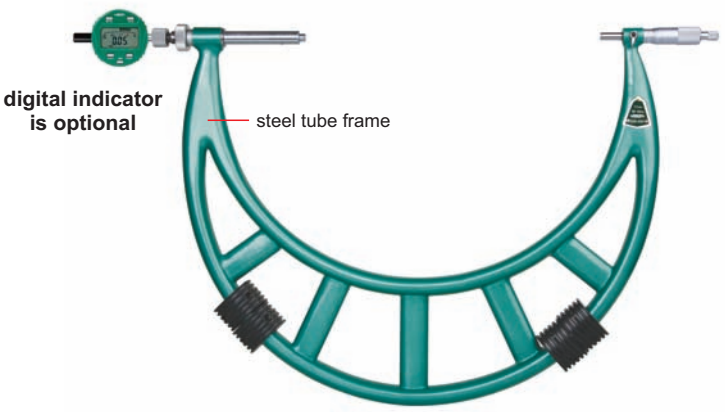
MICROMETERS WITH DIAL INDICATOR

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

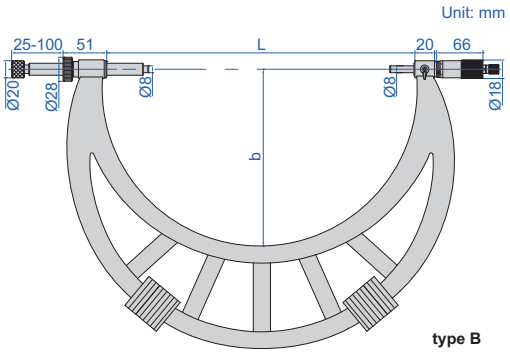


3296-100A





3296-400A



(mm)

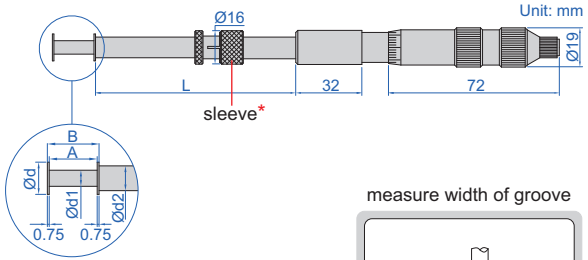
Code	Range	Type	Accuracy	L	b
3296-100A	0-100mm	A	6μm	115	68
3296-200A	100-200mm	A	7μm	215	120
3296-300A	200-300mm	A	8μm	315	170
3296-400A	300-400mm	B	9μm	415	225
3296-500A	400-500mm	B	10μm	515	275
3296-600A	500-600mm	B	11μm	615	325
3296-700A	600-700mm	B	12μm	715	375
3296-800A	700-800mm	B	13μm	815	430
3296-900A	800-900mm	B	14μm	915	480
3296-1000A	900-1000mm	B	15μm	1015	530

- Meet DIN863-3
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Optional accessory: dial indicators (graduation 0.01mm) digital indicators (resolution 0.01mm/0.0005")

GROOVE MICROMETERS



3287-50B



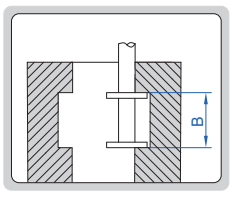
- Measure width of grooves inside bores
- Graduation 0.01mm
- Two graduations for inside and outside measurements
- Non-rotating spindle
- Two-directional ratchet stop

(mm)

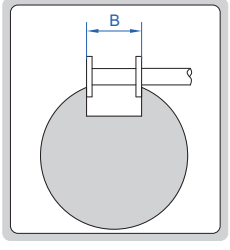
Code	Range (outside A)	Range (inside B)	Accuracy	L	Ød	Ød1	Ød2
3287-25B	0-25mm	1.6-26.5mm	10μm	102	13	6.5	10
3287-50B	25-50mm	26.5-51.5mm	10μm	102	13	6.5	10
3287-75B	50-75mm	51.5-76.5mm	10μm	102	13	6.5	10
3287-100B	75-100mm	76.5-101.5mm	10μm	102	13	6.5	10
3287-125B	100-125mm	101.5-126.5mm	15μm	102	13	6.5	10
3287-150B	125-150mm	126.5-151.5mm	15μm	102	13	6.5	10
3287-251B*	0-25mm	1.6-26.5mm	10μm	90	6.5	3	5

***3287-251B** does not have sleeve

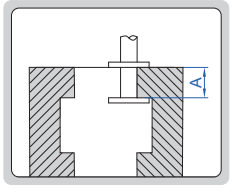
measure width of groove



measure width of keyway



measure position of groove



3-WIRES

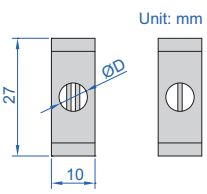
VIDEO

INSPECTION CERTIFICATE

- Used with standard outside micrometers to measure pitch diameter of screw threads
- Diameter accuracy: ±0.5μm
- Cylindricity: 1μm
- Hardness: HRC60
- Supplied with manufacturer inspection certificate
- Scope of application: outside diameter of thread ≤50mm



7382-19



application



For outside micrometers with spindle Ø6.35mm (ØD)

Code	Pin gauge diameter	Applicable pitch
7382-11	Ø0.170mm	0.2mm, 0.25mm, 0.3mm
7382-12	Ø0.195mm	0.35mm
7382-13	Ø0.220mm	0.4mm
7382-14	Ø0.250mm	0.45mm
7382-15	Ø0.290mm	0.5mm
7382-16	Ø0.335mm	0.6mm
7382-17	Ø0.390mm	0.7mm
7382-18	Ø0.455mm	0.75mm, 0.8mm
7382-19	Ø0.530mm	0.9mm
7382-110	Ø0.620mm	1.0mm
7382-111	Ø0.725mm	1.25mm
7382-112	Ø0.895mm	1.5mm
7382-113	Ø1.100mm	1.75mm, 2.0mm
7382-114	Ø1.350mm	2.5mm
7382-115	Ø1.650mm	3.0mm
7382-116	Ø2.050mm	3.5mm
7382-117	Ø2.550mm	4mm, 4.5mm
7382-118	Ø3.200mm	5mm, 5.5mm, 6mm
7382-1S	18 pairs/set, including all above 3-wires	

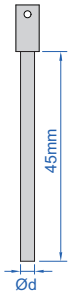
For outside micrometers with spindle Ø6.50mm (ØD)

Code	Pin gauge diameter	Applicable pitch
7382-21	Ø0.170mm	0.2mm, 0.25mm, 0.3mm
7382-22	Ø0.195mm	0.35mm
7382-23	Ø0.220mm	0.4mm
7382-24	Ø0.250mm	0.45mm
7382-25	Ø0.290mm	0.5mm
7382-26	Ø0.335mm	0.6mm
7382-27	Ø0.390mm	0.7mm
7382-28	Ø0.455mm	0.75mm, 0.8mm
7382-29	Ø0.530mm	0.9mm
7382-210	Ø0.620mm	1.0mm
7382-211	Ø0.725mm	1.25mm
7382-212	Ø0.895mm	1.5mm
7382-213	Ø1.100mm	1.75mm, 2.0mm
7382-214	Ø1.350mm	2.5mm
7382-215	Ø1.650mm	3.0mm
7382-216	Ø2.050mm	3.5mm
7382-217	Ø2.550mm	4mm, 4.5mm
7382-218	Ø3.200mm	5mm, 5.5mm, 6mm
7382-2S	18 pairs/set, including all above 3-wires	

3-WIRES

INSPECTION CERTIFICATE

CUSTOMIZABLE DIAMETER Ød





7394-75A

- Ød≤0.3mm, made of alloy steel, hardness HRC60; Ød>0.3mm, made of carbide, hardness HRA90
- Diameter accuracy: ±0.5μm
- Cylindricity: 0.5μm
- Supplied with manufacturer inspection certificate

Code	Diameter (Ød)	Applicable pitch
7394-60A*	0.170mm	0.2mm, 0.25mm, 0.3mm
7394-61A*	0.195mm	0.35mm
7394-62A*	0.220mm	0.4mm
7394-63A*	0.250mm	0.45mm
7394-64A*	0.290mm	0.5mm
7394-65A	0.335mm	0.6mm
7394-66A	0.390mm	0.7mm
7394-67A	0.455mm	0.75mm, 0.8mm
7394-68A	0.530mm	0.9mm
7394-69A	0.620mm	1.0mm
7394-70A	0.725mm	1.25mm
7394-71A	0.895mm	1.5mm
7394-72A	1.100mm	1.75mm, 2.0mm
7394-73A	1.350mm	2.5mm
7394-74A	1.650mm	3.0mm
7394-75A	2.050mm	3.5mm
7394-76A	2.550mm	4mm, 4.5mm
7394-77A	3.200mm	5mm, 5.5mm, 6mm

*Made of alloy steel

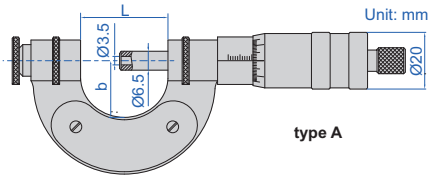
INSPECTION CERTIFICATE

EXTERNAL SCREW THREAD MICROMETERS

INSIZE PLUS

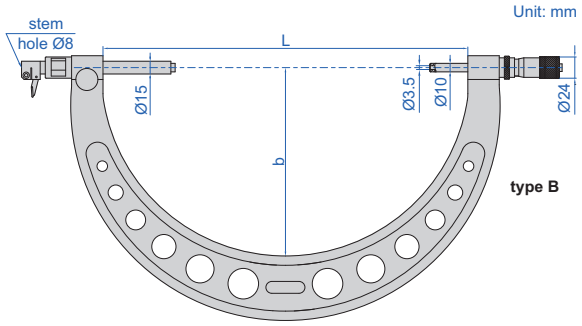


3680-50

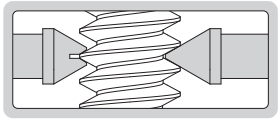




3680-4001



- Measure pitch diameter of screw threads
- Graduation 0.01mm
- Optional accessory: setting standards (code **7384**), external tread tips (code **7390**), dial/digital indicators (only for type B)



Type A (ratchet stop) (mm)

Code	Range	Accuracy	L	b
3680-25*	0-25mm	4μm	37	24
3680-50*	25-50mm	4μm	62	34
3680-75*	50-75mm	4μm	87	46
3680-100*	75-100mm	4μm	112	60
3680-125*	100-125mm	5μm	139	72
3680-150*	125-150mm	5μm	164	85
3680-200*	150-200mm	7μm	215	110
3680-250*	200-250mm	7μm	264	135
3680-300*	250-300mm	7μm	315	160

Type B (without ratchet stop) (mm)

Code	Range	Left anvil retracting sroke	Micrometer head accuracy	L	b
3680-3001*	200-300mm	2.5mm	6μm	320	165
3680-4001*	300-400mm	2.5mm	7μm	430	220
3680-5001*	400-500mm	2.5mm	8μm	530	273
3680-6001*	500-600mm	2.5mm	9μm	630	323
3680-7001*	600-700mm	2.5mm	9μm	730	378
3680-8001*	700-800mm	2.5mm	9μm	830	423
3680-9001*	800-900mm	2.5mm	10μm	930	473
3680-10001*	900-1000mm	2.5mm	10μm	1030	520
3680-4002*	200-400mm	2.5mm	7μm	430	220
3680-6002*	400-600mm	2.5mm	9μm	630	323
3680-8002*	600-800mm	2.5mm	9μm	830	423
3680-10002*	800-1000mm	2.5mm	10μm	1030	520
3680-12002*	1000-1200mm	2.5mm	11μm	1230	635
3680-14002*	1200-1400mm	2.5mm	12μm	1430	735
3680-16002*	1400-1600mm	2.5mm	18μm	1660	840
3680-18002*	1600-1800mm	2.5mm	20μm	1870	940
3680-20002*	1800-2000mm	2.5mm	22μm	2075	1055

*Supplied with manufacturer inspection certificate

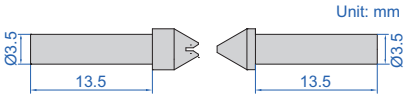
MEASURING TIPS FOR EXTERNAL SCREW THREAD MICROMETERS

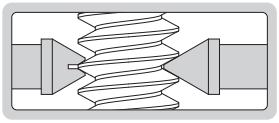
INSIZE PLUS

- Supplied in pair
- Made of hardened steel
- Suitable for **3680** series micrometers



7390-T104





60° thread angle

Code	Pitch
7390-T101	0.35-0.5mm/72-48TPI
7390-T102	0.6-0.8mm/44-32TPI
7390-T103	0.9-1.25mm/28-18TPI
7390-T104	1.5-2mm/16-11TPI
7390-T105	2.5-3.5mm/10-7TPI
7390-T106	4-6mm/6-4TPI

55° thread angle

Code	Pitch
7390-T201	60-48TPI
7390-T202	40-32TPI
7390-T203	28-22TPI
7390-T204	20-16TPI
7390-T205	14-11TPI
7390-T206	10-7TPI
7390-T207	6-4TPI

30° thread angle

Code	Pitch
7390-T301	1.5mm
7390-T302	2mm
7390-T303	3mm
7390-T304	4mm
7390-T305	5-6mm
7390-T306	7-8mm
7390-T307	9-10mm
7390-T308	12-14mm

6

SETTING STANDARDS FOR EXTERNAL SCREW THREAD MICROMETERS

INSIZE PLUS

ATTENTION: WHEN PITCH <0.4MM OR >63.5TPI, SETTING STANDARDS CANNOT BE USED TO SET ZERO, A CALIBRATED WORK PIECE CAN BE USED INSTEAD

TIPS FOR TRAPEZOIDAL, ACME THREAD ARE ALSO AVAILABLE





7384-A100

- Made of hardened steel
- Deviation (difference between the ordered size and the size marked on the setting standard when supplied): ±20μm
  For example, the ordered size is 25mm, the size marked on the setting standard when supplied may be 25.015mm

60° thread angle (mm)

Code	L	Ød	Accuracy
7384-A25	25	7.8	±2.5μm
7384-A50	50	7.8	±3μm
7384-A75	75	7.8	±3.5μm
7384-A100	100	7.8	±4μm
7384-A125	125	7.8	±4.5μm
7384-A150	150	7.8	±5μm
7384-A175	175	7.8	±5.5μm
7384-A200	200	7.8	±6μm
7384-A225	225	10	±6.5μm
7384-A250	250	10	±7μm
7384-A275	275	10	±7.5μm
7384-A300	300	10	±8μm

55° thread angle (mm)

Code	L	Ød	Accuracy
7384-B25	25	7.8	±2.5μm
7384-B50	50	7.8	±3μm
7384-B75	75	7.8	±3.5μm
7384-B100	100	7.8	±4μm
7384-B125	125	7.8	±4.5μm
7384-B150	150	7.8	±5μm
7384-B175	175	7.8	±5.5μm
7384-B200	200	7.8	±6μm
7384-B225	225	10	±6.5μm
7384-B250	250	10	±7μm
7384-B275	275	10	±7.5μm
7384-B300	300	10	±8μm

NON-ROTATING SPINDLE

SCREW THREAD MICROMETERS

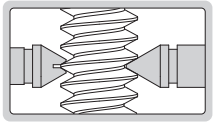


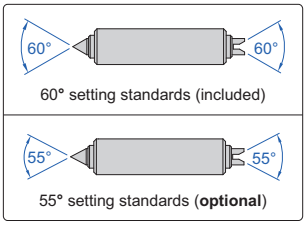
3281-25A
(measuring tips are optional)



3281-S25
(measuring tips are included)

- Measure pitch diameter of screw threads
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-25mm)
- Optional accessory: 55° setting standards





Measuring tips are optional (mm)

Code	Range	L	b	55° setting standard (optional)
3281-25A	0-25mm	42	26	–
3281-50A	25-50mm	67	38	**3281-SP1**
3281-75A	50-75mm	92	50	**3281-SP2**
3281-100A	75-100mm	117.6	62	**3281-SP3**
3281-125A	100-125mm	143	70	**3281-SP4**
3281-150A	125-150mm	168.2	82	**3281-SP5**
3281-175A	150-175mm	192	94.5	**3281-SP6**
3281-200A	175-200mm	217	107	**3281-SP7**
3281-225A	200-225mm	242	130	**3281-SP8**
3281-250A	225-250mm	267	142	**3281-SP9**
3281-275A	250-275mm	291	155	**3281-SP10**
3281-300A	275-300mm	317	167	**3281-SP11**

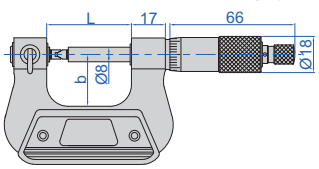
Measuring tips are included (mm)

Code	Range	L	b	Measuring tips (included)	55° setting standard (optional)
3281-S25	0-25mm	42	26	6 pairs of measuring tips: metric and unified thread (60° thread angle) 0.4-0.5mm/64-48TPI, 0.6-0.9mm/44-28TPI, 1-1.75mm/24-14TPI, 2-3mm/13-9TPI, 3.5-5mm/8-5TPI, 5.5-7mm/4.5-3.5TPI	–
3281-S50	25-50mm	67	38		**3281-SP1**
3281-S75	50-75mm	92	50		**3281-SP2**
3281-S100	75-100mm	117.6	62		**3281-SP3**
3281-S125	100-125mm	143	70		**3281-SP4**
3281-S150	125-150mm	168.2	82		**3281-SP5**
3281-S175	150-175mm	192	94.5		**3281-SP6**
3281-S200	175-200mm	217	107		**3281-SP7**
3281-S225	200-225mm	242	130		**3281-SP8**
3281-S250	225-250mm	267	142		**3281-SP9**
3281-S275	250-275mm	291	155		**3281-SP10**
3281-S300	275-300mm	317	167		**3281-SP11**

accuracy of micrometers with tips (mm)

Pitch	Range							
	0-25	25-50	50-75	75-100	100-125	125-200	200-225	225-300
0.4~0.5	±0.01	-	-	-	-	-	-	-
0.6~0.8	±0.01	±0.013	-	-	-	-	-	-
1~1.25	±0.012	±0.015	±0.017	±0.017	-	-	-	-
1.5~2.0	±0.014	±0.017	±0.019	±0.019	±0.020	±0.023	±0.025	±0.028
2.5~3.5	±0.016	±0.019	±0.021	±0.021	±0.023	±0.025	±0.028	±0.031
4.0~7.0	-	±0.021	±0.023	±0.023	±0.025	±0.028	±0.031	±0.033

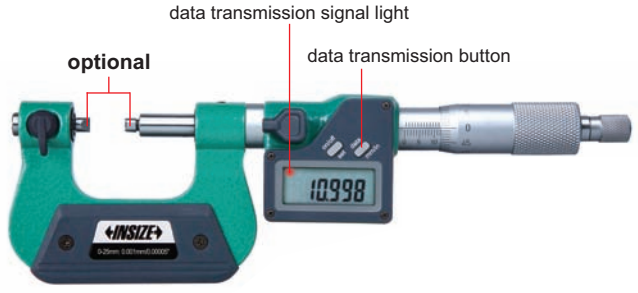
Unit: mm



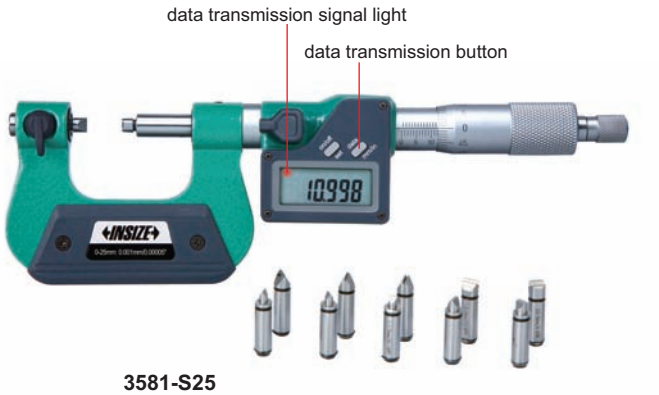
DIGITAL SCREW THREAD MICROMETERS

DATA OUTPUT

NON-ROTATING SPINDLE



3581-25A
(measuring tips are optional)



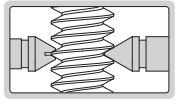
3581-S25
(measuring tips are included)

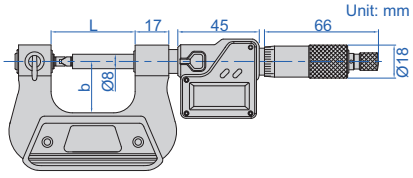
Measuring tips are optional, with data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

(mm)

Code	Range	L	b	55° setting standard (optional)
3581-25A	0-25mm/0-1"	42	26	–
3581-50A	25-50mm/1-2"	67	38	**3281-SP1**
3581-75A	50-75mm/2-3"	92	50	**3281-SP2**
3581-100A	75-100mm/3-4"	117.6	62	**3281-SP3**
3581-125A	100-125mm/4-5"	143	70	**3281-SP4**
3581-150A	125-150mm/5-6"	168.2	82	**3281-SP5**
3581-175A	150-175mm/6-7"	192	94.5	**3281-SP6**
3581-200A	175-200mm/7-8"	217	107	**3281-SP7**
3581-225A	200-225mm/8-9"	242	130	**3281-SP8**
3581-250A	225-250mm/9-10"	267	142	**3281-SP9**
3581-275A	250-275mm/10-11"	291	155	**3281-SP10**
3581-300A	275-300mm/11-12"	317	167	**3281-SP11**

- Measure pitch diameter of screw threads
- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Non-rotating spindle
- Ratchet stop
- Supplied with 60° setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery
- Optional accessory: 55° setting standards

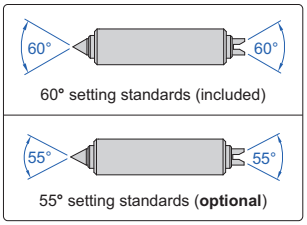




Measuring tips are included, with data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

(mm)

Code	Range	L	b	Measuring tips (included)	55° setting standard (optional)
3581-S25	0-25mm/0-1"	42	26	6 pairs of measuring tips: metric and unified thread (60° thread angle) 0.4-0.5mm/64-48TPI, 0.6-0.9mm/44-28TPI, 1-1.75mm/24-14TPI, 2-3mm/13-9TPI, 3.5-5mm/8-5TPI, 5.5-7mm/4.5-3.5TPI	–
3581-S50	25-50mm/1-2"	67	38		**3281-SP1**
3581-S75	50-75mm/2-3"	92	50		**3281-SP2**
3581-S100	75-100mm/3-4"	117.6	62		**3281-SP3**
3581-S125	100-125mm/4-5"	143	70		**3281-SP4**
3581-S150	125-150mm/5-6"	168.2	82		**3281-SP5**
3581-S175	150-175mm/6-7"	192	94.5		**3281-SP6**
3581-S200	175-200mm/7-8"	217	107		**3281-SP7**
3581-S225	200-225mm/8-9"	242	130		**3281-SP8**
3581-S250	225-250mm/9-10"	267	142		**3281-SP9**
3581-S275	250-275mm/10-11"	291	155		**3281-SP10**
3581-S300	275-300mm/11-12"	317	167		**3281-SP11**



accuracy of micrometers with tips (mm)

Pitch	Range							
	0-25	25-50	50-75	75-100	100-125	125-200	200-225	225-300
0.4~0.5	±0.01	-	-	-	-	-	-	-
0.6~0.8	±0.01	±0.013	-	-	-	-	-	-
1~1.25	±0.012	±0.015	±0.017	±0.017	-	-	-	-
1.5~2.0	±0.014	±0.017	±0.019	±0.019	±0.020	±0.023	±0.025	±0.028
2.5~3.5	±0.016	±0.019	±0.021	±0.021	±0.023	±0.025	±0.028	±0.031
4.0~7.0	-	±0.021	±0.023	±0.023	±0.025	±0.028	±0.031	±0.033

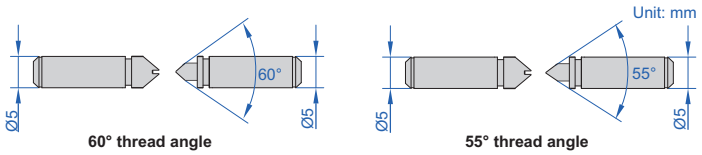
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3581-□□□□WL

Code examples:

Original code	Wireless code
3581-25A	**3581-25AWL**
3581-S25	**3581-S25WL**

MEASURING TIPS FOR SCREW THREAD MICROMETERS



60° thread angle

55° thread angle



7381-T13

- Supplied in pair
- Suitable for **3281, 3581** series micrometers

Metric and unified thread (60° thread angle)

Code	Pitch
7381-T11	0.4-0.5mm/64-48TPI
7381-T12	0.6-0.9mm/44-28TPI
7381-T13	1-1.75mm/24-14TPI
7381-T14	2-3mm/13-9TPI
7381-T15	3.5-5mm/8-5TPI
7381-T16	5.5-7mm/4.5-3.5TPI
7381-TS	6 pairs/set, including all above tips

Whitworth thread (55° thread angle)

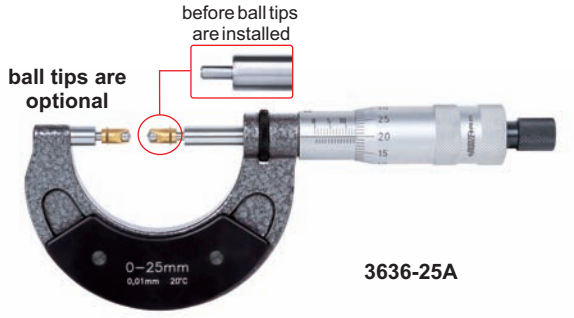
Code	Pitch
7381-T21	60-48TPI
7381-T22	48-40TPI
7381-T23	40-32TPI
7381-T24	32-24TPI
7381-T25	24-18TPI
7381-T26	18-14TPI
7381-T27	14-10TPI
7381-T28	10-7TPI
7381-T29	7-4.5TPI
7381-T210	4.5-3.5TPI
7381-T2S	10 pairs/set, including all above tips

INSPECTION CERTIFICATE

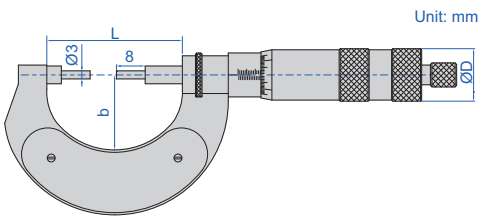
ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

EXTERNAL GEAR TOOTH MICROMETERS

INSIZE PLUS

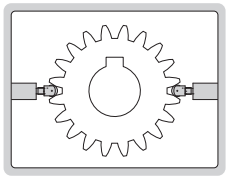


3636-25A



cylindrical tips (**optional**)





- Meet DIN863-3
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Optional accessory: ball tips (code **7383**), cylindrical tips (code **7393**), setting standards (code **7386**)

(mm)

Code	Range	Accuracy	L	b	ØD
3636-25A*	0-25mm	3μm	62	34	20
3636-50A*	25-50mm	3μm	87	46	20
3636-75A*	50-75mm	4μm	112	60	20
3636-100A*	75-100mm	4μm	139	72	20
3636-125A*	100-125mm	5μm	164	85	20
3636-150A*	125-150mm	5μm	190	97	20
3636-175A*	150-175mm	5μm	215	110	20
3636-200A*	175-200mm	5μm	240	122	20

(mm)

Code	Range	Accuracy	L	b	ØD
3636-225A*	200-225mm	6μm	264	135	20
3636-250A*	225-250mm	6μm	290	148	20
3636-300A*	250-300mm	6μm	325	165	24
3636-350A*	300-350mm	7μm	370	190	24
3636-400A*	350-400mm	7μm	430	220	24
3636-450A*	400-450mm	8μm	475	250	24
3636-500A*	450-500mm	8μm	530	273	24
3636-550A*	500-550mm	9μm	570	291	24
3636-600A*	550-600mm	9μm	630	323	24

*Supplied with manufacturer inspection certificate

CYLINDRICAL TIPS FOR GEAR TOOTH MICROMETERS

INSIZE PLUS

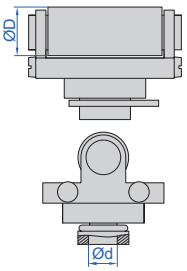
CYLINDRICAL DIAMETER ØD CAN BE CUSTOMIZED

Code	Diameter of shaft (ØD)	Ød	Accuracy
7393-T1	1mm	3mm	±1μm
7393-T2	2mm	3mm	±1μm
7393-T4	4mm	3mm	±1μm
7393-T5	5mm	3mm	±1μm
7393-T6	6mm	3mm	±1μm
7393-T7	7mm	3mm	±1μm
7393-T8	8mm	3mm	±1μm

- Supplied in pair
- Made of hardened steel
- Self-positioning
- Suitable for **3636, 3638, 3678,** series micrometers



7393-T5



BALL TIPS FOR GEAR TOOTH MICROMETERS

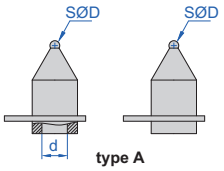
INSIZE PLUS

BALL TIPS DIAMETER SØD CAN BE CUSTOMIZED

- Supplied in pair
- Made of hardened steel
- Suitable for **3636, 3638, 3678** series micrometeres



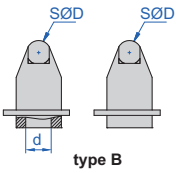
7383-1



type A



7383-2



type B

Code	Ball dia. (SØD)	d	Accuracy	Type
7383-1	SØ1mm	Ø3mm	±1μm	A
7383-1D5	SØ1.5mm	Ø3mm	±1μm	B
7383-1D75	SØ1.75mm	Ø3mm	±1μm	B
7383-2	SØ2mm	Ø3mm	±1μm	B
7383-2D25	SØ2.25mm	Ø3mm	±1μm	B
7383-2D5	SØ2.5mm	Ø3mm	±1μm	B
7383-3	SØ3mm	Ø3mm	±1μm	B
7383-3D5	SØ3.5mm	Ø3mm	±1μm	B
7383-4	SØ4mm	Ø3mm	±1μm	B
7383-4D5	SØ4.5mm	Ø3mm	±1μm	B
7383-5	SØ5mm	Ø3mm	±1μm	B
7383-5D5	SØ5.5mm	Ø3mm	±1μm	B
7383-6	SØ6mm	Ø3mm	±1μm	B

Code	Ball dia. (SØD)	d	Accuracy	Type
7383-6D5	SØ6.5mm	Ø3mm	±1μm	B
7383-7	SØ7mm	Ø3mm	±1μm	B
7383-7D5	SØ7.5mm	Ø3mm	±1μm	B
7383-8	SØ8mm	Ø3mm	±1μm	B
7383-9	SØ9mm	Ø3mm	±1μm	B
7383-10	SØ10mm	Ø3mm	±1μm	B
7383-10D5	SØ10.5mm	Ø3mm	±1.5μm	B
7383-11	SØ11mm	Ø3mm	±1.5μm	B
7383-12	SØ12mm	Ø3mm	±1.5μm	B
7383-13	SØ13mm	Ø3mm	±1.5μm	B
7383-14	SØ14mm	Ø3mm	±1.5μm	B
7383-15	SØ15mm	Ø3mm	±1.5μm	B
7383-16	SØ16mm	Ø3mm	±1.5μm	B

GEAR TOOTH MICROMETERS

- Meet DIN863-3
- Measure over-pin diameter of gears
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards (except 0-25mm)
- Optional accessory: ball tips (code **7391**)

(mm)

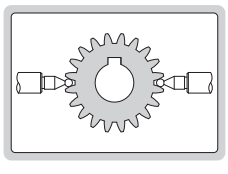
Code	Range	Accuracy	L	b
3291-25	0-25mm	4μm	67	38
3291-50	25-50mm	4μm	92.4	50
3291-75	50-75mm	5μm	117.6	62
3291-100	75-100mm	5μm	143	70
3291-125	100-125mm	6μm	168.2	82
3291-150	125-150mm	6μm	192	94.5
3291-175	150-175mm	7μm	217	107
3291-200	175-200mm	7μm	242	130
3291-225	200-225mm	8μm	267	142.5
3291-250	225-250mm	8μm	292	155
3291-275	250-275mm	9μm	317	167.5

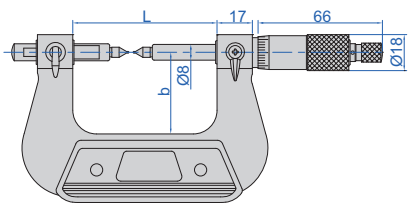
ball tips are optional



3291-25

Unit: mm



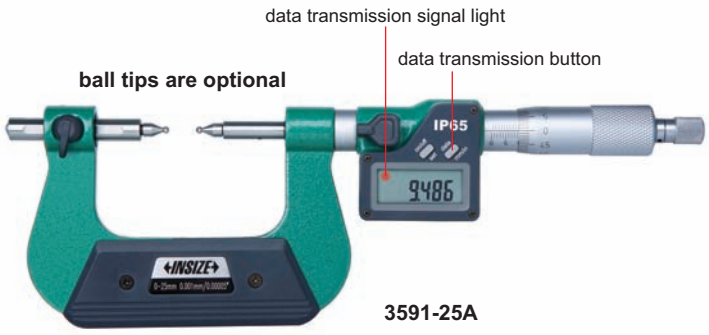


IP65 WATERPROOF

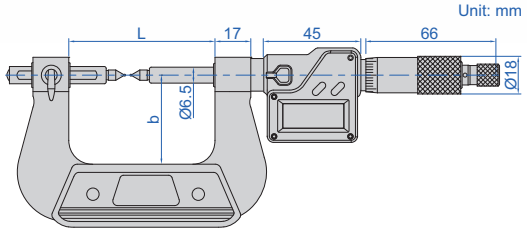
DATA OUTPUT

DIGITAL GEAR TOOTH MICROMETERS

- Measure over-pin diameter of gears
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery
- Optional accessory: ball tips (code **7391**)



3591-25A



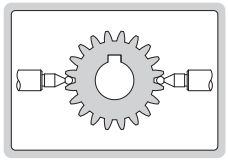
With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

(mm)

Code	Range	Accuracy	L	b
3591-25A	0-25mm/0-1"	±4μm	67	38
3591-50A	25-50mm/1-2"	±4μm	92.4	50
3591-75A	50-75mm/2-3"	±5μm	117.6	62
3591-100A	75-100mm/3-4"	±5μm	143	70
3591-125A	100-125mm/4-5"	±6μm	168.2	82
3591-150A	125-150mm/5-6"	±6μm	192	94.5
3591-175A	150-175mm/6-7"	±7μm	217	107
3591-200A	175-200mm/7-8"	±7μm	242	130
3591-225A	200-225mm/8-9"	±8μm	267	142.5
3591-250A	225-250mm/9-10"	±8μm	292	155
3591-275A	250-275mm/10-11"	±9μm	317	167.5

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3591-□□□□WL



Code examples:

Original code	Wireless code
3591-25A	**3591-25AWL**
3591-50A	**3591-50AWL**

6

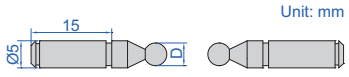
BALL TIPS FOR GEAR TOOTH MICROMETERS

BALL TIPS DIAMETER SØD CAN BE CUSTOMIZED WITH SIZES BETWEEN 1.50-6.00MM

- Supplied in pair
- Suitable for **3291, 3591** series micrometers



7391-T5



Code	Ball dia. (D)
7391-T2	SØ1.5mm
7391-T3	SØ2.0mm
7391-T4	SØ2.5mm
7391-T5	SØ3.0mm

Code	Ball dia. (D)
7391-T6	SØ3.5mm
7391-T7	SØ4.0mm
7391-T8	SØ4.5mm
7391-T9	SØ5.0mm
7391-T10	SØ6.0mm

INSPECTION CERTIFICATE

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

POINT MICROMETERS

INSIZE PLUS

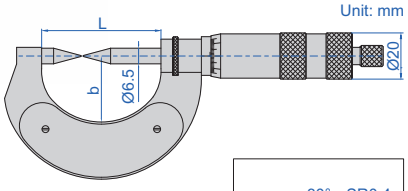
(mm)

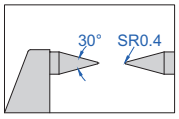
Code	Range	Accuracy	L	b
3659-25A*	0-25mm	4μm	62	34
3659-50A*	25-50mm	4μm	87	46
3659-75A*	50-75mm	5μm	112	60
3659-100A*	75-100mm	5μm	139	72
3659-125A*	100-125mm	6μm	164	85
3659-150A*	125-150mm	6μm	190	97
3659-175A*	150-175mm	7μm	215	110
3659-200A*	175-200mm	7μm	240	122
3659-225A*	200-225mm	8μm	264	135
3659-250A*	225-250mm	8μm	290	148

*Supplied with manufacturer inspection certificate



3659-25A





- Measure the web thickness of drills, small grooves and keyways
- Graduation: 0.01mm
- Ratchet stop
- Carbide tips
- Optional accessory: setting standards (code **7386**)

POINT MICROMETERS

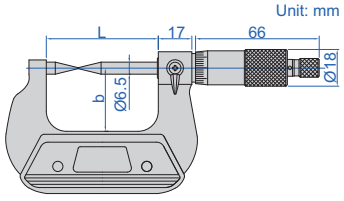
- Measure the web thickness of drills, small grooves and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm)

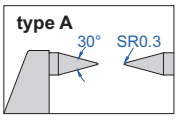


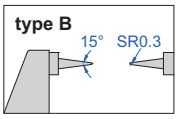
3230-25A

(mm)

Code	Range	Type	Accuracy	L	b
3230-25A	0-25mm	A	4μm	57	32
3230-50A	25-50mm	A	4μm	82	44.5
3230-75A	50-75mm	A	5μm	107	57
3230-100A	75-100mm	A	5μm	132.6	69.5
3230-25BA	0-25mm	B	4μm	57	32
3230-50BA	25-50mm	B	4μm	82	44.5
3230-75BA	50-75mm	B	5μm	107	57
3230-100BA	75-100mm	B	5μm	132.6	69.5







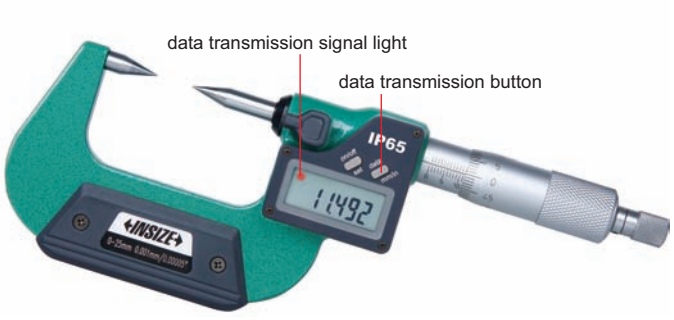
6

DIGITAL POINT MICROMETERS

IP65 WATERPROOF

DATA OUTPUT

- Measure the web thickness of drills, small grooves and keyways
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide tips
- Supplied with setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery

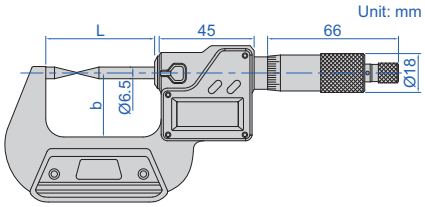


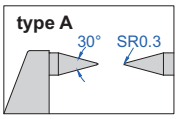
3530-25A

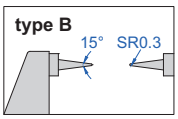
With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

(mm)

Code	Range	Type	Accuracy	L	b
3530-25A	0-25mm/0-1"	A	±4μm	57	32
3530-50A	25-50mm/1-2"	A	±4μm	82	44.5
3530-75A	50-75mm/2-3"	A	±5μm	107	57
3530-100A	75-100mm/3-4"	A	±5μm	132.6	69.5
3530-25BA	0-25mm/0-1"	B	±4μm	57	32
3530-50BA	25-50mm/1-2"	B	±4μm	82	44.5
3530-75BA	50-75mm/2-3"	B	±5μm	107	57
3530-100BA	75-100mm/3-4"	B	±5μm	132.6	69.5







Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3530-□□□□WL

Code examples:

Original code	Wireless code
3530-25A	3530-25AWL
3530-25BA	3530-25BAWL

DIGITAL POINT MICROMETERS/SNAP GAUGES

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

NON-ROTATING SPINDLE

DATA OUTPUT

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

IP65 WATERPROOF

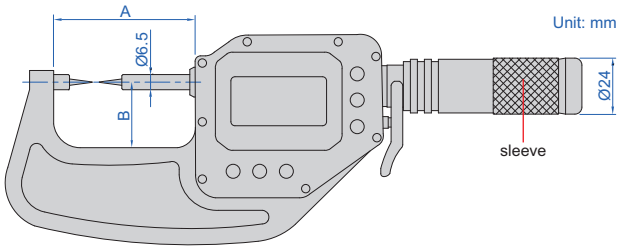
INSPECTION CERTIFICATE

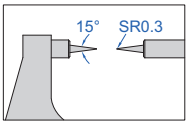
VIDEO



3354-25

- Measure the web thickness of drills, small grooves and keyways
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
  0.001mm/0.00005"
  0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
  Customizable measuring force range 2-12N
  Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gauge blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working

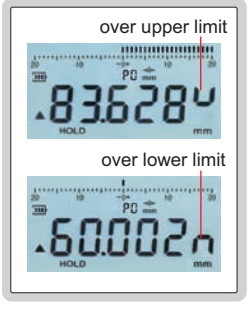




With data interface (optional wireless transmitter code 7315-3350, receiver is needed page 9)

Code	Range	Accuracy	Repeatability	A	B
3354-25 *	0-25mm/0-1"	2μm	1μm	63mm	25mm
3354-50 *	25-50mm/1-2"	2μm	1μm	88mm	42mm
3354-75 *	50-75mm/2-3"	2μm	1μm	113mm	56mm

alarm when over tolerance

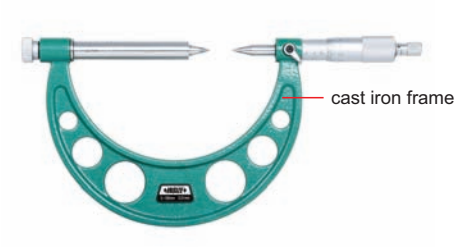


Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

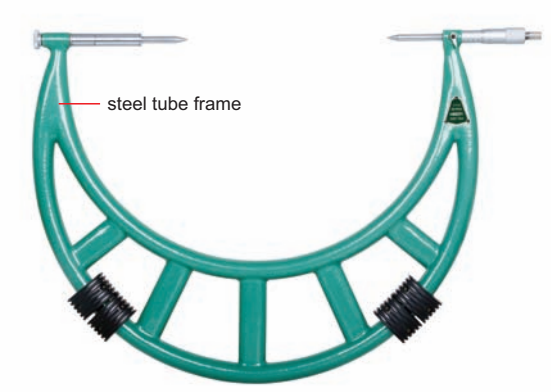
Code	Range	Accuracy	Repeatability	A	B
3354-25AWL*	0-25mm/0-1"	2μm	1μm	63mm	25mm
3354-50AWL*	25-50mm/1-2"	2μm	1μm	88mm	42mm
3354-75AWL*	50-75mm/2-3"	2μm	1μm	113mm	56mm

*Supplied with manufacturer inspection certificate

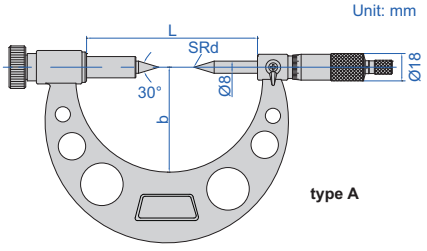
GEAR ROOT DIAMETER MICROMETERS

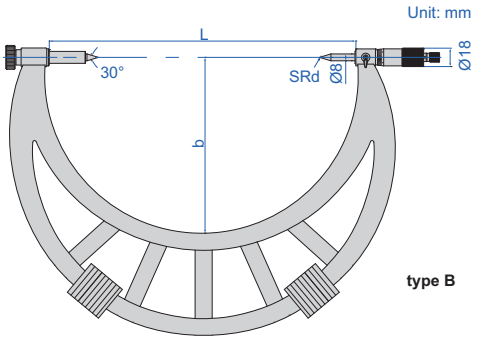


3297-100



3297-300





- Measure diameter of gear root circle
- Graduation 0.01mm
- Ratchet stop
- Meet DIN863-3
- Carbide measuring faces
- Supplied with setting standards

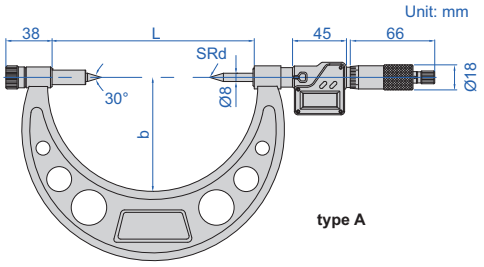
(mm)

Code	Range	Type	Accuracy	L	b	SRd
3297-100	5-100mm	A	5μm	137	72	0.4
3297-200	100-200mm	A	7μm	237	129	0.5
3297-300	200-300mm	B	9μm	414	225	0.7
3297-400	300-400mm	B	11μm	514	275	0.7
3297-500	400-500mm	B	13μm	614	325	0.7
3297-600	500-600mm	B	15μm	714	375	0.7
3297-700	600-700mm	B	16μm	814	425	0.7
3297-800	700-800mm	B	18μm	914	475	0.7
3297-900	800-900mm	B	20μm	1014	525	0.7

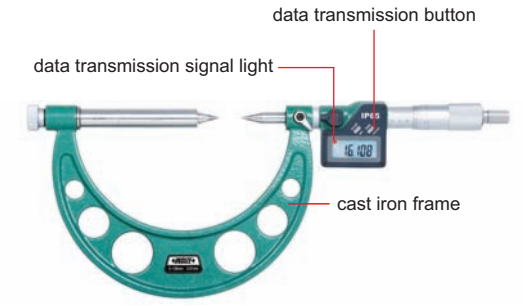
DIGITAL GEAR ROOT DIAMETER MICROMETERS

IP65 WATERPROOF

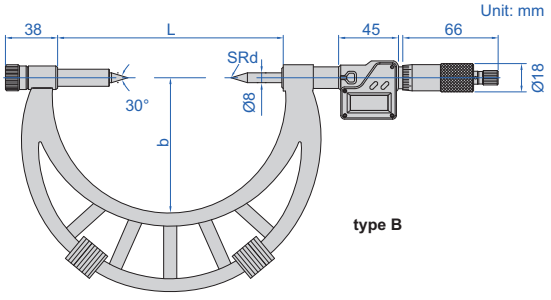
DATA OUTPUT



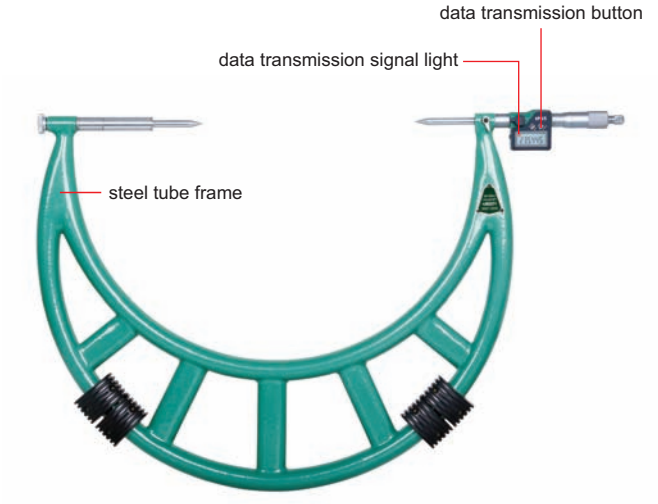
type A



3597-100



type B



3597-300

- Measure diameter of gear root circle
- Resolution 0.001mm/0.0001" (resolution of **3597-100/100WL** and **3597-200/200WL** is 0.001mm/0.00005")
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery

With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8) **(mm)**

Code	Range	Type	Accuracy	L	b	SRd
3597-100	5-100mm	A	3μm	137	72	0.4
3597-200	100-200mm	A	4μm	237	129	0.5
3597-300	200-300mm	B	5μm	414	225	0.7
3597-400	300-400mm	B	6μm	514	275	0.7
3597-500	400-500mm	B	7μm	614	325	0.7
3597-600	500-600mm	B	8μm	714	375	0.7
3597-700	600-700mm	B	8μm	814	425	0.7
3597-800	700-800mm	B	9μm	914	475	0.7
3597-900	800-900mm	B	10μm	1014	525	0.7

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3597-□□□□WL

Code examples:

Original code	Wireless code
3597-100	**3597-100WL**
3597-200	**3597-200WL**

BLADE MICROMETERS

INSIZE PLUS

INSPECTION CERTIFICATE

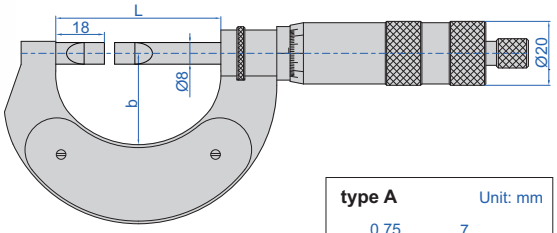
ATTENTION: SETTING STANDARDS ARE NOT INCLUDED



3650-25A

- Meet DIN863-3
- Graduation 0.01mm
- Force: 5-10N
- Optional accessory: setting standards (code **7386**)

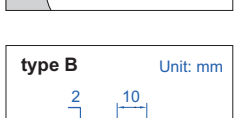
Unit: mm

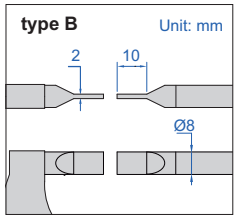


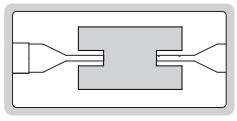
(mm)

Code	Range	Type	Accuracy	L	b
3650-25A*	0-25mm	A	4μm	62	34
3650-50A*	25-50mm	A	4μm	87	46
3650-75A*	50-75mm	B	5μm	112	60
3650-100A*	75-100mm	B	5μm	139	72
3650-125A*	100-125mm	B	6μm	164	85
3650-150A*	125-150mm	B	6μm	190	97
3650-175A*	150-175mm	B	7μm	215	110
3650-200A*	175-200mm	B	7μm	240	122
3650-225A*	200-225mm	B	8μm	264	135
3650-250A*	225-250mm	B	8μm	290	148
3650-275A*	250-275mm	B	9μm	315	160
3650-300A*	275-300mm	B	9μm	340	174

*Supplied with manufacturer inspection certificate







6

BLADE MICROMETERS

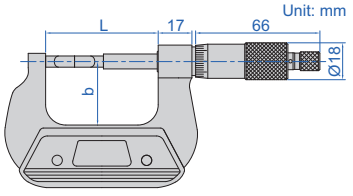
NON-ROTATING SPINDLE

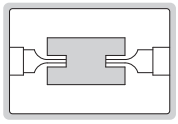


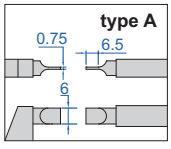
3232-25A

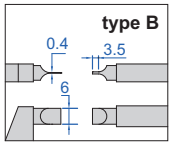
- Meet DIN863-3
- Measure the groove diameter of shafts and keyways
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

Unit: mm









Type A (mm)

Code	Range	Accuracy	L	b
3232-25A	0-25mm	4μm	57	32
3232-50A	25-50mm	4μm	82	44.5
3232-75A	50-75mm	5μm	107	57
3232-100A	75-100mm	5μm	132.6	69.5
3232-125A	100-125mm	6μm	158	82
3232-150A	125-150mm	6μm	183.4	94.5
3232-175A	150-175mm	7μm	208.8	107
3232-200A	175-200mm	7μm	234.2	129.6
3232-225A	200-225mm	8μm	259.6	142.3
3232-250A	225-250mm	8μm	285	155
3232-275A	250-275mm	9μm	310.4	167.7
3232-300A	275-300mm	9μm	336.5	177.8

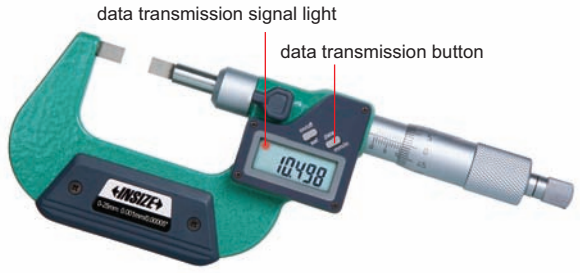
Type B (mm)

Code	Range	Accuracy	L	b
3232-25BA	0-25mm	4μm	57	32
3232-50BA	25-50mm	4μm	82	44.5
3232-75BA	50-75mm	5μm	107	57
3232-100BA	75-100mm	5μm	132.6	69.5
3232-125BA	100-125mm	6μm	158	82
3232-150BA	125-150mm	6μm	183.4	94.5
3232-175BA	150-175mm	7μm	208.8	107
3232-200BA	175-200mm	7μm	234.2	129.6
3232-225BA	200-225mm	8μm	259.6	142.3
3232-250BA	225-250mm	8μm	285	155
3232-275BA	250-275mm	9μm	310.4	167.7
3232-300BA	275-300mm	9μm	336.5	177.8

DIGITAL BLADE MICROMETERS

NON-ROTATING SPINDLE

DATA OUTPUT

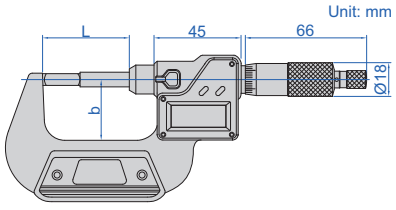


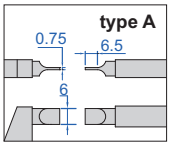
3532-25A

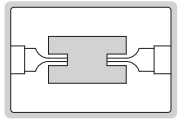
- Measure the groove diameter of shafts and keyways
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery

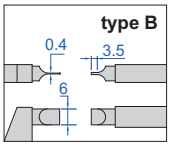
With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8) **(mm)**

Code	Range	Type	Accuracy	L	b
3532-25A	0-25mm/0-1"	A	±4μm	57	32
3532-50A	25-50mm/1-2"	A	±4μm	82	44.5
3532-75A	50-75mm/2-3"	A	±5μm	107	57
3532-100A	75-100mm/3-4"	A	±5μm	132.6	69.5
3532-125A	100-125mm/4-5"	A	±6μm	158	82
3532-150A	125-150mm/5-6"	A	±6μm	183.4	94.5
3532-175A	150-175mm/6-7"	A	±7μm	208.8	107
3532-200A	175-200mm/7-8"	A	±7μm	234.2	129.6
3532-225A	200-225mm/8-9"	A	±8μm	259.6	142.3
3532-250A	225-250mm/9-10"	A	±8μm	285	155
3532-275A	250-275mm/10-11"	A	±9μm	310.4	167.7
3532-300A	275-300mm/10-12"	A	±9μm	336.5	177.8
3532-25BA	0-25mm/0-1"	B	±4μm	57	32
3532-50BA	25-50mm/1-2"	B	±4μm	82	44.5
3532-75BA	50-75mm/2-3"	B	±5μm	107	57
3532-100BA	75-100mm/3-4"	B	±5μm	132.6	69.5
3532-125BA	100-125mm/4-5"	B	±6μm	158	82
3532-150BA	125-150mm/5-6"	B	±6μm	183.4	94.5
3532-175BA	150-175mm/6-7"	B	±7μm	208.8	107
3532-200BA	175-200mm/7-8"	B	±7μm	234.2	129.6
3532-225BA	200-225mm/8-9"	B	±8μm	259.6	142.3
3532-250BA	225-250mm/9-10"	B	±8μm	285	155
3532-275BA	250-275mm/10-11"	B	±9μm	310.4	167.7
3532-300BA	275-300mm/10-12"	B	±9μm	336.5	177.8









Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3532-□□□□WL

Code examples:

Original code	Wireless code
3532-25A	**3532-25AWL**
3532-25BA	**3532-25BAWL**

DIGITAL BLADE MICROMETERS/SNAP GAUGES

INSPECTION CERTIFICATE

VIDEO

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

IP65 WATERPROOF

DATA OUTPUT

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

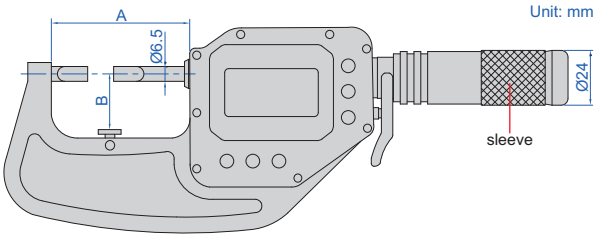
NON-ROTATING SPINDLE

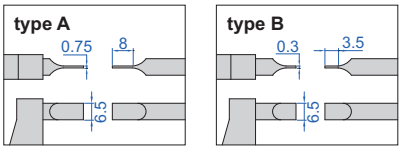
ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM



3352-25A

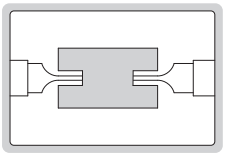
- Measure the groove diameter of shafts and keyways
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
  0.001mm/0.00005"
  0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
  Customizable measuring force range 2-12N
  Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gauge blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working





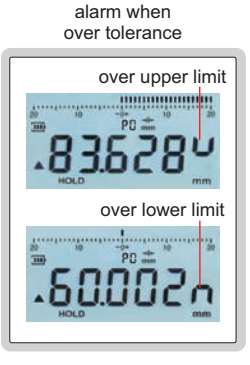
With data interface (optional wireless transmitter code 7315-3350, receiver is needed page 9)

Code	Range	Type	Accuracy	Repeatability	A	B
3352-25A*	0-25mm/0-1"	A	2μm	1μm	63mm	25mm
3352-50A*	25-50mm/1-2"	A	2μm	1μm	88mm	42mm
3352-75A*	50-75mm/2-3"	A	2μm	1μm	113mm	56mm
3352-25B*	0-25mm/0-1"	B	2μm	1μm	63mm	25mm
3352-50B*	25-50mm/1-2"	B	2μm	1μm	88mm	42mm
3352-75B*	50-75mm/2-3"	B	2μm	1μm	113mm	56mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Type	Accuracy	Repeatability	A	B
3352-25AWL*	0-25mm/0-1"	A	2μm	1μm	63mm	25mm
3352-50AWL*	25-50mm/1-2"	A	2μm	1μm	88mm	42mm
3352-75AWL*	50-75mm/2-3"	A	2μm	1μm	113mm	56mm
3352-25BWL*	0-25mm/0-1"	B	2μm	1μm	63mm	25mm
3352-50BWL*	25-50mm/1-2"	B	2μm	1μm	88mm	42mm
3352-75BWL*	50-75mm/2-3"	B	2μm	1μm	113mm	56mm



*Supplied with manufacturer inspection certificate

RELATIVE PRODUCT: DIGITAL CRIMP HEIGHT CALIPER (CODE 1165-)

CRIMP HEIGHT MICROMETERS

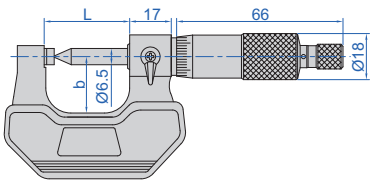


3266-25BA



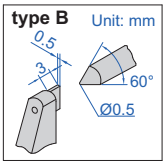
- Measure the height of crimp contact
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

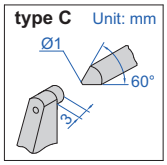
Unit: mm

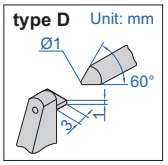


(mm)

Code	Range	Type	Accuracy	L	b
3266-25BA	0-25mm	B	4μm	34	24
3266-25CA	0-25mm	C	4μm	34	24
3266-50CA	25-50mm	C	4μm	59	32
3266-75CA	50-75mm	C	5μm	85	45
3266-100CA	75-100mm	C	5μm	110	57
3266-25DA	0-25mm	D	4μm	34	24







6

DATA OUTPUT

IP65 WATERPROOF

RELATIVE PRODUCT: DIGITAL CRIMP HEIGHT CALIPER (CODE 1165-)

DIGITAL CRIMP HEIGHT MICROMETERS

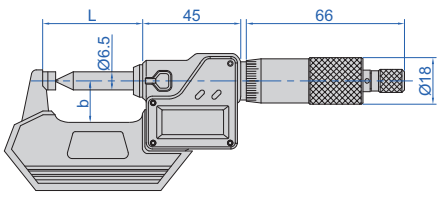


3566-25BA



- Measure the height of crimp contact
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery

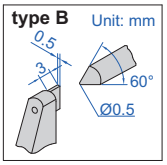
Unit: mm

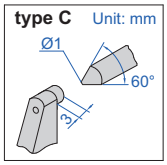


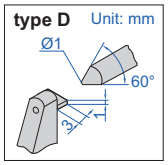
With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

(mm)

Code	Range	Type	Accuracy	L	b
3566-25BA	0-25mm/0-1"	B	±4μm	34.5	25
3566-25CA	0-25mm/0-1"	C	±4μm	34.5	25
3566-50CA	25-50mm/1-2"	C	±4μm	59.5	32
3566-75CA	50-75mm/2-3"	C	±5μm	84.5	44.5
3566-100CA	75-100mm/3-4"	C	±5μm	109.5	57
3566-25DA	0-25mm/0-1"	D	±4μm	34.5	25







Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3566-□□□□WL

Code examples:

Original code	Wireless code
3566-25BA	3566-25BAWL
3566-25CA	3566-25CAWL

SPLINE MICROMETERS

INSIZE PLUS

INSPECTION CERTIFICATE

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

- Meet DIN863-3
- Measure splined shafts, slots and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting standards (code **7386**)



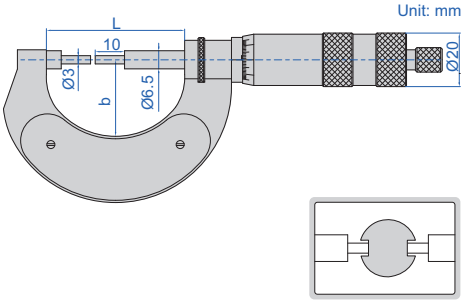
3658-25

(mm)

Code	Range	Accuracy	L	b
3658-25*	0-25mm	4μm	62	34
3658-50*	25-50mm	4μm	87	46
3658-75*	50-75mm	5μm	112	60
3658-100*	75-100mm	5μm	139	72
3658-125*	100-125mm	6μm	164	85
3658-150*	125-150mm	6μm	190	97
3658-175*	150-175mm	7μm	215	110
3658-200*	175-200mm	7μm	240	122
3658-225*	200-225mm	8μm	264	135
3658-250*	225-250mm	8μm	290	148

*Supplied with manufacturer inspection certificate

Unit: mm



6

SPLINE MICROMETERS

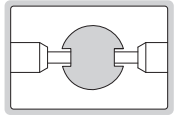
- Meet DIN863-3
- Measure splined shafts, slots and keyways
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



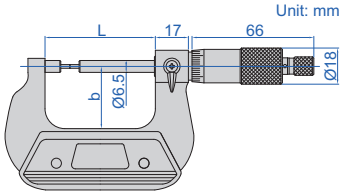
3233-25BA

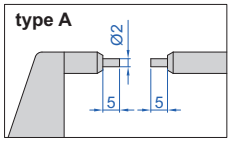
(mm)

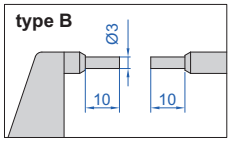
Code	Range	Type	Accuracy	L	b
3233-25A	0-25mm	A	4μm	57	32
3233-50A	25-50mm	A	4μm	82	44.5
3233-75A	50-75mm	A	5μm	107	57
3233-100A	75-100mm	A	5μm	132.6	69.5
3233-125A	100-125mm	A	6μm	158	82
3233-150A	125-150mm	A	6μm	183.4	94.5
3233-175A	150-175mm	A	7μm	208.8	107
3233-25BA	0-25mm	B	4μm	57	32
3233-50BA	25-50mm	B	4μm	82	44.5
3233-75BA	50-75mm	B	5μm	107	57
3233-100BA	75-100mm	B	5μm	132.6	69.5
3233-125BA	100-125mm	B	6μm	158	82
3233-150BA	125-150mm	B	6μm	183.4	94.5
3233-175BA	150-175mm	B	7μm	208.8	107



Unit: mm



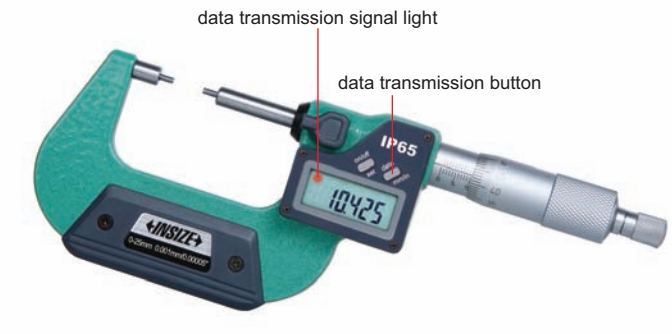


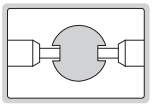


IP65 WATERPROOF

DATA OUTPUT

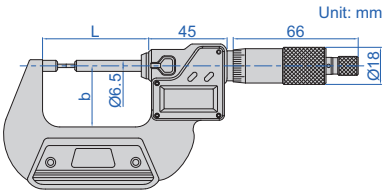
DIGITAL SPLINE MICROMETERS





3533-25BA

- Measure splined shafts, slots and keyways
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery

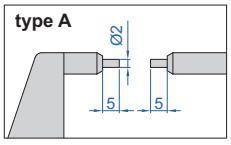


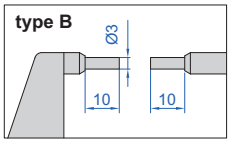
6

With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

(mm)

Code	Range	Type	Accuracy	L	b
3533-25A	0-25mm/0-1"	A	±4μm	57	32
3533-50A	25-50mm/1-2"	A	±4μm	82	44.5
3533-75A	50-75mm/2-3"	A	±5μm	107	57
3533-100A	75-100mm/3-4"	A	±5μm	132.6	69.5
3533-125A	100-125mm/4-5"	A	±6μm	158	82
3533-150A	125-150mm/5-6"	A	±6μm	183.4	94.5
3533-175A	150-175mm/6-7"	A	±7μm	208.8	107
3533-25BA	0-25mm/0-1"	B	±4μm	57	32
3533-50BA	25-50mm/1-2"	B	±4μm	82	44.5
3533-75BA	50-75mm/2-3"	B	±5μm	107	57
3533-100BA	75-100mm/3-4"	B	±5μm	132.6	69.5
3533-125BA	100-125mm/4-5"	B	±6μm	158	82
3533-150BA	125-150mm/5-6"	B	±6μm	183.4	94.5
3533-175BA	150-175mm/6-7"	B	±7μm	208.8	107





Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3533-□□□□WL

Code examples:

Original code	Wireless code
3533-25A	**3533-25AWL**
3533-25BA	**3533-25BAWL**

DIGITAL SPLINE MICROMETERS/SNAP GAUGES

ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM

MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

NON-ROTATING SPINDLE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

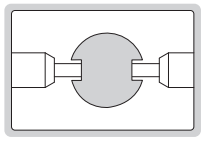
IP65 WATERPROOF

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

DATA OUTPUT

INSPECTION CERTIFICATE

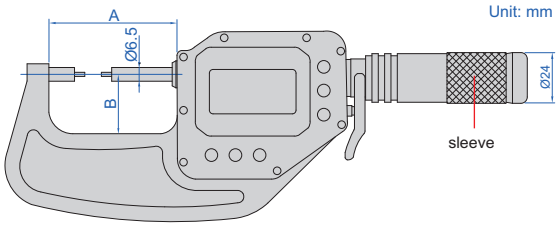
VIDEO

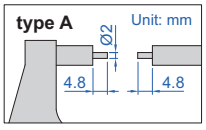


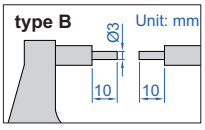


3356-25

- Measure splined shafts, slots and keyways
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
  0.001mm/0.00005"
  0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
  Customizable measuring force range 2-12N
  Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gauge blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working







With data interface (optional wireless transmitter code 7315-3350, receiver is needed page 9)

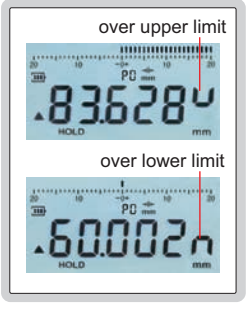
Code	Range	Accuracy	Type	Repeatability	A	B
3356-25 *	0-25mm/0-1"	2μm	A	1μm	63mm	25mm
3356-50 *	25-50mm/1-2"	2μm	A	1μm	88mm	42mm
3356-75 *	50-75mm/2-3"	2μm	A	1μm	113mm	56mm
3356-25B *	0-25mm/0-1"	2μm	B	1μm	63mm	25mm
3356-50B *	25-50mm/1-2"	2μm	B	1μm	88mm	42mm
3356-75B *	50-75mm/2-3"	2μm	B	1μm	113mm	56mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Type	Repeatability	A	B
3356-25WL *	0-25mm/0-1"	2μm	A	1μm	63mm	25mm
3356-50WL *	25-50mm/1-2"	2μm	A	1μm	88mm	42mm
3356-75WL *	50-75mm/2-3"	2μm	A	1μm	113mm	56mm
3356-25BWL *	0-25mm/0-1"	2μm	B	1μm	63mm	25mm
3356-50BWL *	25-50mm/1-2"	2μm	B	1μm	88mm	42mm
3356-75BWL *	50-75mm/2-3"	2μm	B	1μm	113mm	56mm

*Supplied with manufacturer inspection certificate

alarm when over tolerance

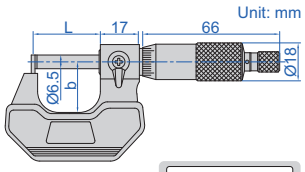


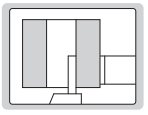
CYLINDRICAL ANVIL TUBE MICROMETERS

- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards (except 0-25mm)



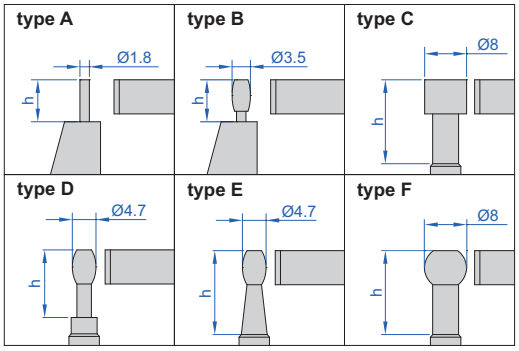
3261-25A





(mm)

Code	Range	Type	Accuracy	L	b	h
3261-25A	0-25mm	A	6μm	36	25	8
3261-50A	25-50mm	A	6μm	61	32	8
3261-25BA	0-25mm	B	6μm	36	25	8
3261-50BA	25-50mm	B	6μm	61	32	15
3261-25CA	0-25mm	C	6μm	36	25	27.5
3261-50CA	25-50mm	C	6μm	61	32	36.5
3261-25DA	0-25mm	D	6μm	36	25	16
3261-50DA	25-50mm	D	6μm	61	32	26
3261-25EA	0-25mm	E	6μm	36	25	27.5
3261-50EA	25-50mm	E	6μm	61	32	35
3261-25FA	0-25mm	F	6μm	36	25	27.5
3261-50FA	25-50mm	F	6μm	61	32	35.5



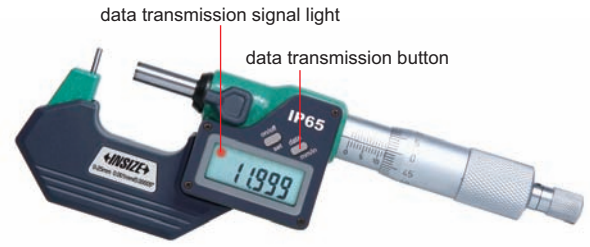
6

IP65 WATERPROOF

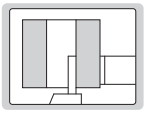
DATA OUTPUT

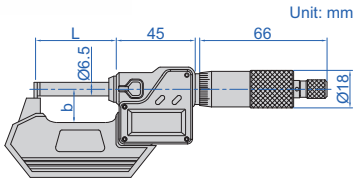
DIGITAL CYLINDRICAL ANVIL TUBE MICROMETERS

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide spindle tip
- Supplied with setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery



3561-25A

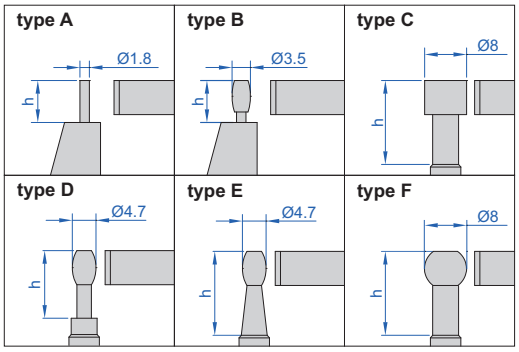




With data interface
(optional wireless transmitter code 7315-31, receiver is needed page 8)

(mm)

Code	Range	Type	Accuracy	L	b	h
3561-25A	0-25mm/0-1"	A	±6μm	36	25	8
3561-50A	25-50mm/1-2"	A	±6μm	61	32	8
3561-25BA	0-25mm/0-1"	B	±6μm	36	25	8
3561-50BA	25-50mm/1-2"	B	±6μm	61	32	15
3561-25CA	0-25mm/0-1"	C	±6μm	36	25	27.5
3561-50CA	25-50mm/1-2"	C	±6μm	61	32	36.5
3561-25DA	0-25mm/0-1"	D	±6μm	36	25	16
3561-50DA	25-50mm/1-2"	D	±6μm	61	32	26
3561-25EA	0-25mm/0-1"	E	±6μm	36	25	27.5
3561-50EA	25-50mm/1-2"	E	±6μm	61	32	35
3561-25FA	0-25mm/0-1"	F	±6μm	36	25	27.5
3561-50FA	25-50mm/1-2"	F	±6μm	61	32	35.5



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

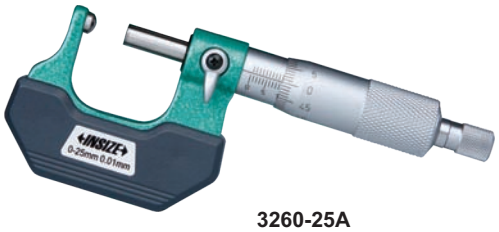
Code
3561-□□□□WL

Code examples:

Original code	Wireless code
3561-25A	3561-25AWL
3561-25BA	3561-25BAWL

SPHERICAL ANVIL TUBE MICROMETERS

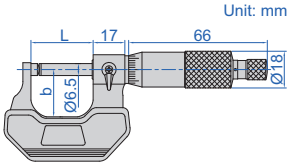
- Meet DIN863-3
- Measure wall thickness of tubes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

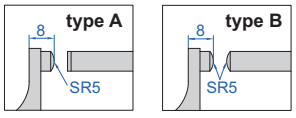


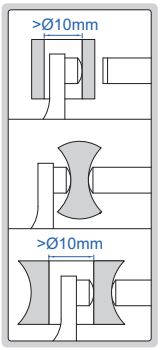
3260-25A

(mm)

Code	Range	Type	Accuracy	L	b
3260-25A	0-25mm	A	4μm	32	24
3260-50A	25-50mm	A	4μm	57	32
3260-75A	50-75mm	A	5μm	82	44.5
3260-100A	75-100mm	A	5μm	107	57
3260-25SA	0-25mm	B	4μm	32	24
3260-50SA	25-50mm	B	4μm	57	32
3260-75SA	50-75mm	B	5μm	82	44.5
3260-100SA	75-100mm	B	5μm	107	57



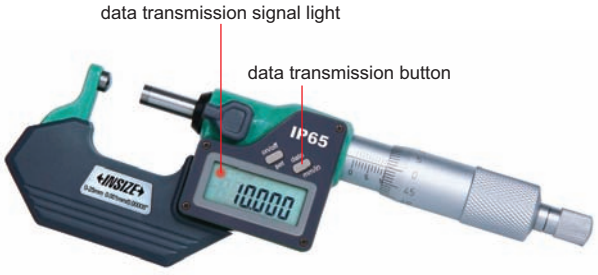




DIGITAL SPHERICAL ANVIL TUBE MICROMETERS

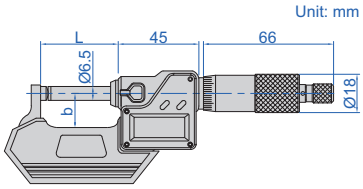
IP65 WATERPROOF

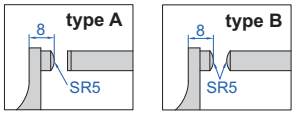
DATA OUTPUT

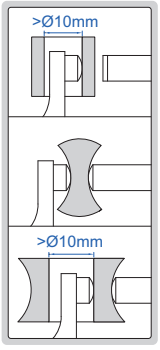


3560-25A

- Measure wall thickness of tubes
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery







With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

(mm)

Code	Range	Type	Accuracy	L	b
3560-25A	0-25mm/0-1"	A	±4μm	32	24
3560-50A	25-50mm/1-2"	A	±4μm	57	32
3560-75A	50-75mm/2-3"	A	±5μm	82	44.5
3560-100A	75-100mm/3-4"	A	±5μm	107	57
3560-25SA	0-25mm/0-1"	B	±4μm	32	24
3560-50SA	25-50mm/1-2"	B	±4μm	57	32
3560-75SA	50-75mm/2-3"	B	±5μm	82	44.5
3560-100SA	75-100mm/3-4"	B	±5μm	107	57

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3560-□□□□WL

Code examples:

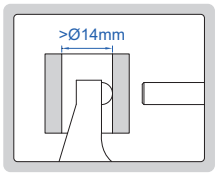
Original code	Wireless code
3560-25A	3560-25AWL
3560-25SA	3560-25SAWL

DIGITAL SPHERICAL ANVIL TUBE MICROMETERS/SNAP GAUGES

IP65 WATERPROOF | NON-ROTATING SPINDLE | ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF | ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM | MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

INSPECTION CERTIFICATE | ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING | DATA OUTPUT

VIDEO

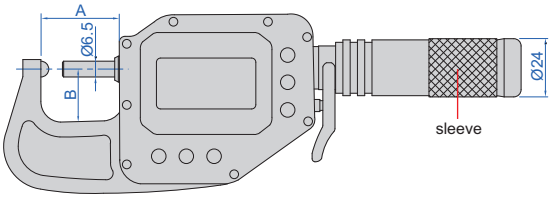


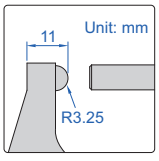


3355-25

- Measure wall thickness of tubes
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
  0.001mm/0.00005"
  0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
  Customizable measuring force range 2-12N
  Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gauge blocks for zero setting (except 0-25mm/0-1")
- Power: rechargeable battery, for 24 hours continuous working

Unit: mm





With data interface (optional wireless transmitter code 7315-3350, receiver is needed page 9)

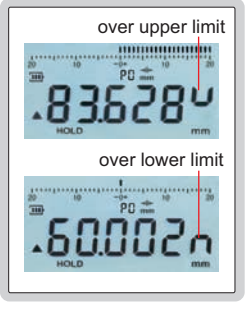
Code	Range	Accuracy	Repeatability	A	B
3355-25 *	0-25mm/0-1"	2μm	1μm	38mm	24mm
3355-50 *	25-50mm/1-2"	2μm	1μm	63mm	25mm
3355-75 *	50-75mm/2-3"	2μm	1μm	88mm	42mm
3355-100 *	75-100mm/3-3.95"	2μm	1μm	113mm	56mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Repeatability	A	B
3355-25AWL*	0-25mm/0-1"	2μm	1μm	38mm	24mm
3355-50AWL*	25-50mm/1-2"	2μm	1μm	63mm	25mm
3355-75AWL*	50-75mm/2-3"	2μm	1μm	88mm	42mm
3355-100AWL*	75-100mm/3-3.95"	2μm	1μm	113mm	56mm

*Supplied with manufacturer inspection certificate

alarm when over tolerance

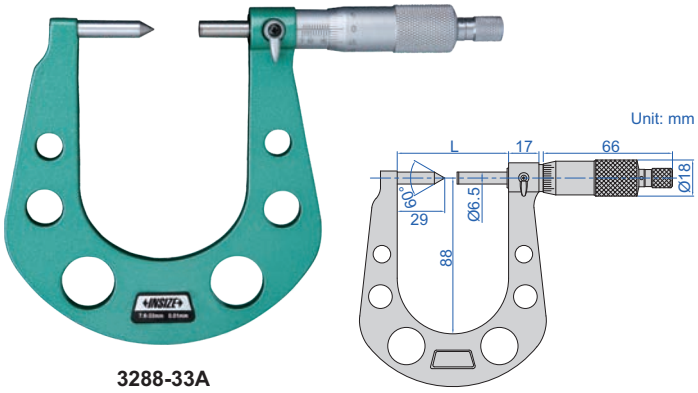


DISK BRAKE MICROMETERS

RELATIVE PRODUCT: DIGITAL DISK BRAKE AND PAD CALIPER
DIGITAL DRUM BRAKE CALIPER (CODE 1162-, 1167-, 1168-)

- Measure thickness of disk brakes
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards





3288-33A

Code	Range	Accuracy	L
3288-33A	7.6-33mm	5μm	64.5mm
3288-50A	25-50mm	5μm	82mm

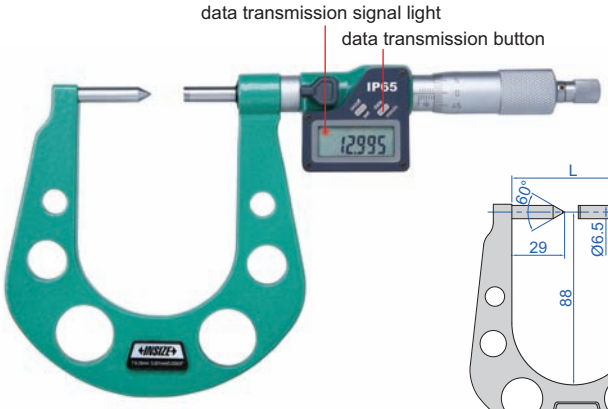
DIGITAL DISK BRAKE MICROMETERS

RELATIVE PRODUCT: DIGITAL DISK BRAKE AND PAD CALIPER
DIGITAL DRUM BRAKE CALIPER (CODE 1162-, 1167-, 1168-)

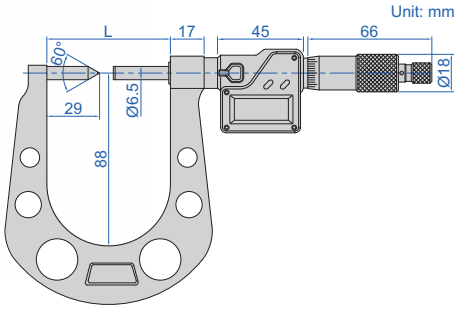
DATA OUTPUT

IP65 WATERPROOF

- Measure thickness of disk brakes
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery



3588-33A



With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Accuracy	L
3588-33A	7.6-33mm/0.3-1.3"	±5μm	64.5mm
3588-50A	25-50mm/1-2"	±5μm	82mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L
3588-33AWL	7.6-33mm/0.3-1.3"	±5μm	64.5mm
3588-50AWL	25-50mm/1-2"	±5μm	82mm

SHEET METAL MICROMETERS

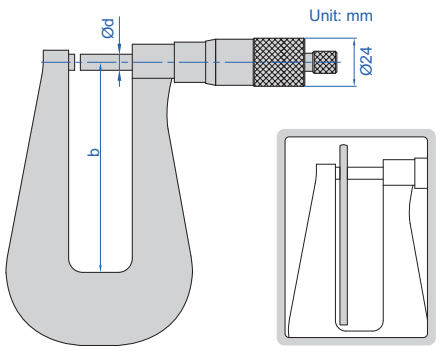
INSIZE PLUS

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

- Deep frame suitable for sheet metal, paper and plastic
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting standards (code **7386**)



3653-252A



(mm)

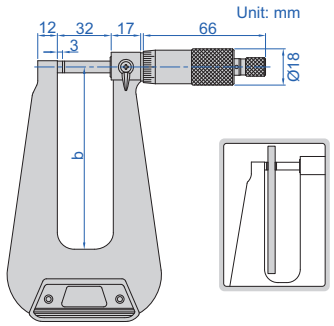
Code	Range	Accuracy	b	Ød
3653-251A	0-25mm	4μm	50	6.5
3653-252A	0-25mm	5μm	100	8
3653-253A	0-25mm	6μm	150	6.5
3653-254A	0-25mm	8μm	250	6.5
3653-501A	25-50mm	4μm	50	8
3653-502A	0-50mm	4μm	50	8
3653-503A	0-50mm	5μm	100	8
3653-100A	50-100mm	5μm	100	8

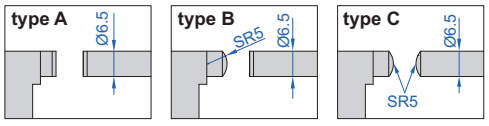
SHEET METAL MICROMETERS

- Deep frame suitable for sheet metal, paper and plastic
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



3239-253





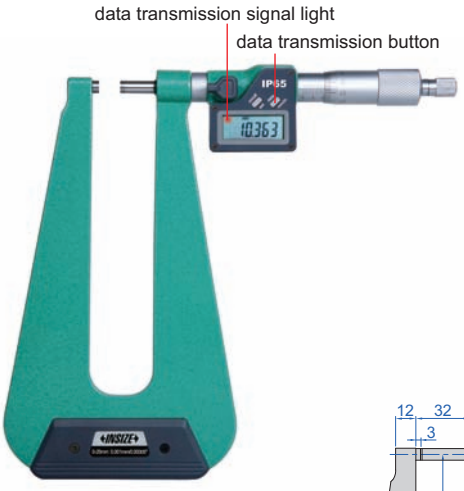
Code	Range	Type	Accuracy	b
3239-253	0-25mm	A	7μm	155mm
3239-253F	0-25mm	B	7μm	155mm
3239-254F	0-25mm	B	10μm	310mm
3239-253S	0-25mm	C	7μm	155mm

6

DIGITAL SHEET METAL MICROMETERS

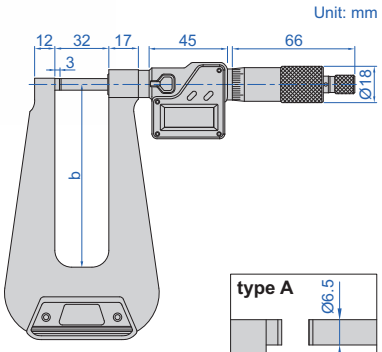
IP65 WATERPROOF

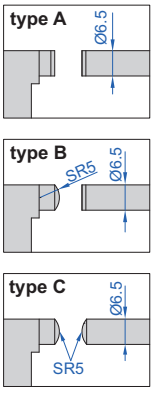
DATA OUTPUT



3539-253A

- Deep frame suitable for sheet metal, paper and plastic
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery





With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Type	Accuracy	b
3539-253A	0-25mm/0-1"	A	±7μm	155mm
3539-253FA	0-25mm/0-1"	B	±7μm	155mm
3539-254FA	0-25mm/0-1"	B	±10μm	310mm
3539-253SA	0-25mm/0-1"	C	±7μm	155mm

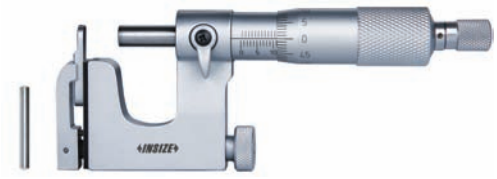
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3539-□□□□WL

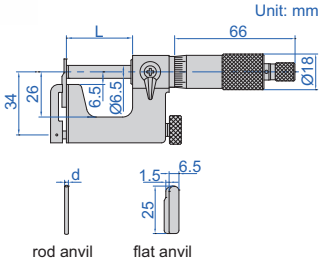
Code examples:

Original code	Wireless code
3539-253A	3539-253AWL
3539-253FA	3539-253FAWL

INTERCHANGEABLE ANVIL MICROMETERS

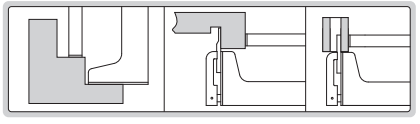


3262-25A



- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Graduation 0.01mm
- Ratchet stop
- Carbide spindle tip
- Setting standards are included (except 0-25mm)

Code	Range	Accuracy	L	d
3262-25A	0-25mm	4μm	28.5mm	Ø3mm
3262-50A	25-50mm	4μm	53.5mm	Ø5mm

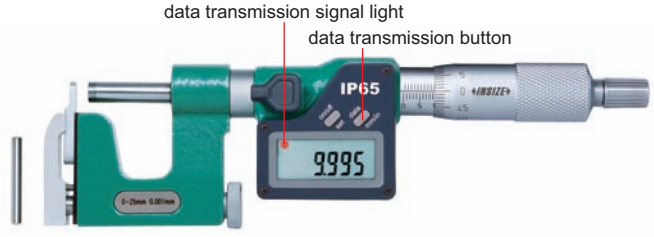


6

DIGITAL INTERCHANGEABLE ANVIL MICROMETERS

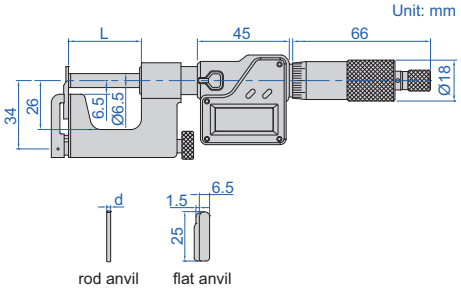
IP65 WATERPROOF

DATA OUTPUT



3562-25A

- Measure tube thickness, shoulder edge distance, rivet head height, etc.
- Supplied with flat anvil and rod anvil
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide spindle tip
- Setting standards are included (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery

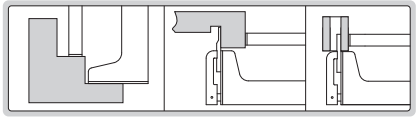


With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

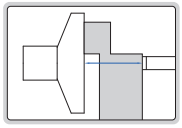
Code	Range	Accuracy	L	d
3562-25A	0-25mm/0-1"	±4μm	28.5mm	Ø3mm
3562-50A	25-50mm/1-2"	±4μm	53.5mm	Ø5mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	d
3562-25AWL	0-25mm/0-1"	±4μm	28.5mm	Ø3mm
3562-50AWL	25-50mm/1-2"	±4μm	53.5mm	Ø5mm

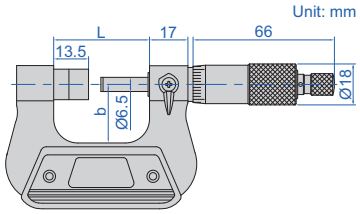


LARGE ANVIL MICROMETERS



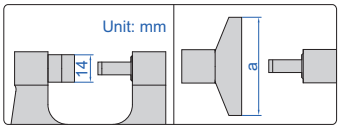


3234-25A



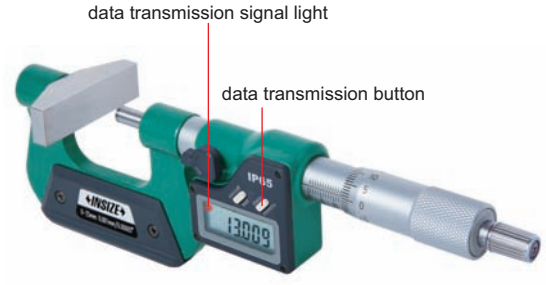
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

Code	Range	Accuracy	L	a	b
3234-25A	0-25mm	4μm	42mm	50mm	26mm
3234-50A	25-50mm	4μm	67mm	60mm	38mm



6

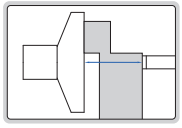
DIGITAL LARGE ANVIL MICROMETERS



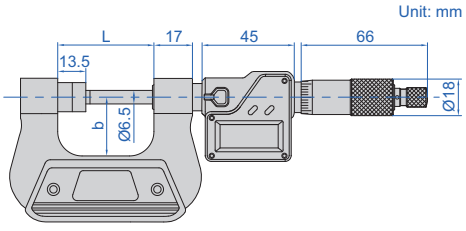
DATA OUTPUT

IP65 WATERPROOF

3534-25A



- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery

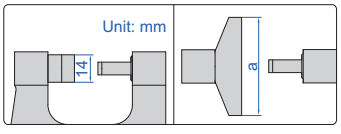


With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Accuracy	L	a	b
3534-25A	0-25mm/0-1"	±4μm	42mm	50mm	26mm
3534-50A	25-50mm/1-2"	±4μm	67mm	60mm	38mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	L	a	b
3534-25AWL	0-25mm/0-1"	±4μm	42mm	50mm	26mm
3534-50AWL	25-50mm/1-2"	±4μm	67mm	60mm	38mm

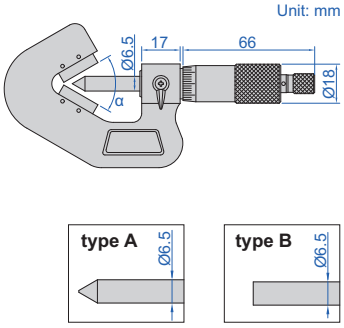


V-ANVIL MICROMETERS

- Measure the diameter of parts or cutting tools with odd grooves, such as taps, reamers and end mills
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards



3290-153A



Code	Range	Flutes	Accuracy	α	Type
3290-153A	1-15mm	3	4μm	60°	A
3290-203A	5-20mm	3	4μm	60°	B
3290-353A	20-35mm	3	5μm	60°	B
3290-503A	35-50mm	3	5μm	60°	B
3290-653A	50-65mm	3	6μm	60°	B
3290-803A	65-80mm	3	6μm	60°	B
3290-953A	80-95mm	3	7μm	60°	B
3290-255A	5-25mm	5	4μm	108°	B

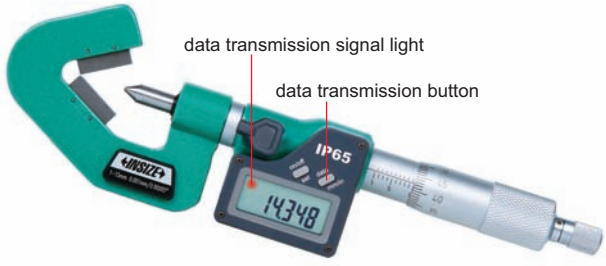
Code	Range	Flutes	Accuracy	α	Type
3290-455A	25-45mm	5	5μm	108°	B
3290-655A	45-65mm	5	6μm	108°	B
3290-855A	65-85mm	5	7μm	108°	B
3290-1055A	85-105mm	5	8μm	108°	B
3290-257A	5-25mm	7	4μm	128°34'17"	B
3290-457A	25-45mm	7	5μm	128°34'17"	B
3290-657A	45-65mm	7	6μm	128°34'17"	B
3290-857A	65-85mm	7	7μm	128°34'17"	B

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DIGITAL V-ANVIL MICROMETERS

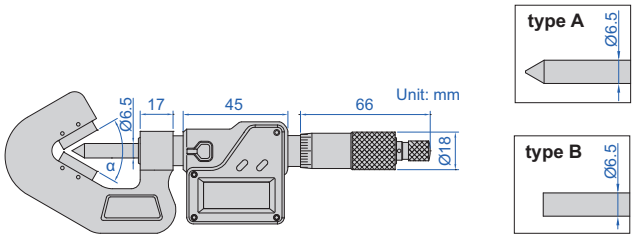
IP65 WATERPROOF

DATA OUTPUT



3590-153A

- Measure the diameter of parts or cutting tools with odd grooves, such as taps, reamers and end mills
- Resolution 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery



With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Flutes	Accuracy	α	Type
3590-153A	1-15mm/0.04-0.6"	3	±4μm	60°	A
3590-203A	5-20mm/0.2-0.8"	3	±4μm	60°	B
3590-353A	20-35mm/0.8-1.4"	3	±5μm	60°	B
3590-503A	35-50mm/1.4-2.0"	3	±5μm	60°	B
3590-653A	50-65mm/2.0-2.6"	3	±6μm	60°	B
3590-803A	65-80mm/2.6-3.2"	3	±6μm	60°	B
3590-953A	80-95mm/3.2-3.6"	3	±6μm	60°	B
3590-255A	5-25mm/0.2-1.0"	5	±4μm	108°	B

With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Flutes	Accuracy	α	Type
3590-455A	25-45mm/1.0-1.8"	5	±5μm	108°	B
3590-655A	45-65mm/1.8-2.6"	5	±6μm	108°	B
3590-855A	65-85mm/2.6-3.4"	5	±6μm	108°	B
3590-1055A	85-105mm/3.4-4.2"	5	±6μm	108°	B
3590-257A	5-25mm/0.2-1.0"	7	±4μm	128°34'17"	B
3590-457A	25-45mm/1.0-1.8"	7	±4μm	128°34'17"	B
3590-657A	45-65mm/1.8-2.6"	7	±5μm	128°34'17"	B
3590-857A	65-85mm/2.6-3.4"	7	±5μm	128°34'17"	B

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3590-□□□□WL

Code examples:

Original code	Wireless code
3590-153A	3590-153AWL
3590-203A	3590-203AWL

NON-ROTATING SPINDLE UNIVERSAL MICROMETERS

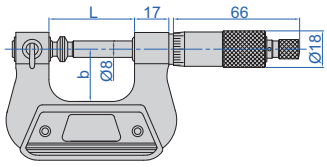
NON-ROTATING SPINDLE



3280-25A

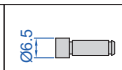
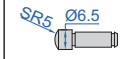
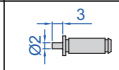
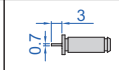
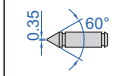
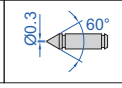
- Meet DIN863-3
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Setting standards are included (except 0-25mm)
- Optional accessory: 55° anvil/spindle tip (code **3280-SP1** and **3280-SP2**)

Unit: mm

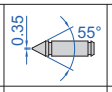
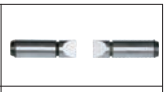
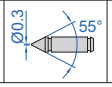
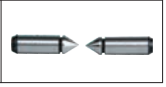


Code	Range	Accuracy	L	b
3280-25A	0-25mm	4μm	42mm	26mm
3280-50A	25-50mm	4μm	67mm	38mm
3280-75A	50-75mm	5μm	92mm	50mm
3280-100A	75-100mm	5μm	118mm	62mm
3280-125A	100-125mm	6μm	143mm	70mm
3280-150A	125-150mm	6μm	168mm	82mm
3280-175A	150-175mm	7μm	192mm	95mm
3280-200A	175-200mm	7μm	217mm	107mm

Anvil/spindle tip (included) Unit: mm

Flat		
Spherical		
Spline		
Disk		
Blade		
Knife-edge		
Point		

55° anvil/spindle tip (**optional**) Unit: mm

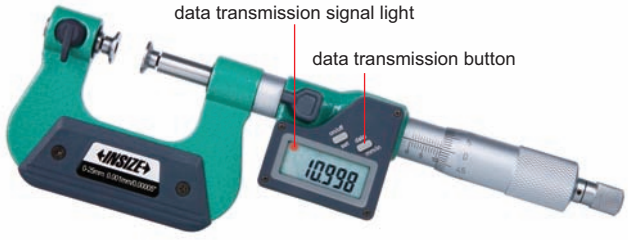
Code **3280-SP1** Knife-edge		
Code **3280-SP2** Point		

6

DIGITAL UNIVERSAL MICROMETERS

NON-ROTATING SPINDLE

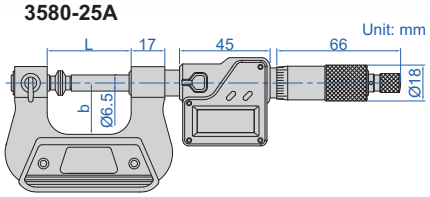
DATA OUTPUT



3580-25A

- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with 7 pairs of anvil/spindle tip
- Setting standards are included (except 0-25mm/0-1")
- Power: with data interface: CR2032 built-in wireless: rechargeable lithium battery
- Optional accessory: 55° anvil/spindle tip code **3280-SP1** and **3280-SP2**

Unit: mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3580-□□□□WL

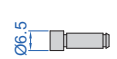
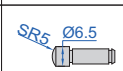
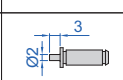
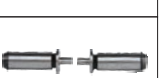
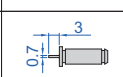
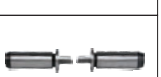
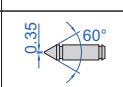
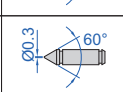
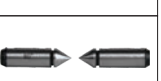
Code examples:

Original code	Wireless code
3580-25A	**3580-25AWL**
3580-50A	**3580-50AWL**

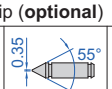
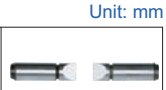
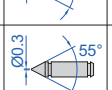
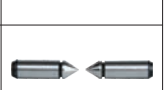
With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8) (mm)

Code	Range	Accuracy	L	b
3580-25A	0-25mm/0-1"	±4μm	42	26
3580-50A	25-50mm/1-2"	±4μm	67	38
3580-75A	50-75mm/2-3"	±5μm	92	50
3580-100A	75-100mm/3-4"	±5μm	118	62
3580-125A	100-125mm/4-5"	±6μm	143	70
3580-150A	125-150mm/5-6"	±6μm	168	82
3580-175A	150-175mm/6-7"	±7μm	192	95
3580-200A	175-200mm/7-8"	±7μm	217	107

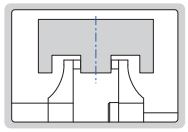
Anvil/spindle tip (included) Unit: mm

Flat		
Spherical		
Spline		
Disk		
Blade		
Knife-edge		
Point		

55° anvil/spindle tip (**optional**) Unit: mm

Code **3280-SP1** Knife-edge		
Code **3280-SP2** Point		

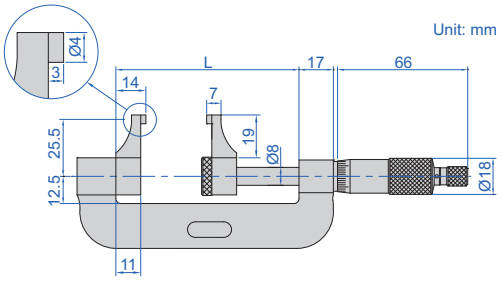
CALIPER TYPE MICROMETERS





3238-25

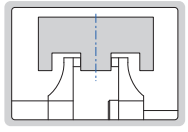
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)



Code	Range	Accuracy	L
3238-25	0-25mm	10μm	56mm
3238-50	25-50mm	10μm	81mm
3238-75	50-75mm	11μm	106mm
3238-100	75-100mm	11μm	131mm

6

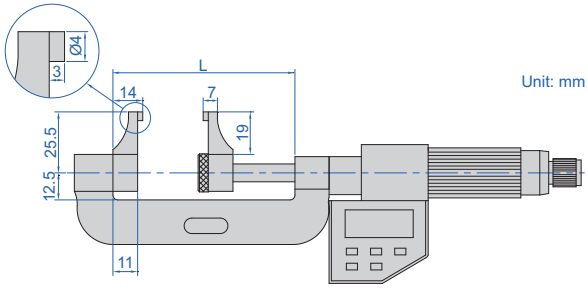
DIGITAL CALIPER TYPE MICROMETERS





3538-25

- Resolution: 0.001mm/0.00005"
- Non-rotating spindle
- Buttons: on/off, data set, mm/in, ABS/INC
- Data output
- Automatic power off
- Ratchet friction thimble
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm/0-1")



Code	Range	Accuracy	L
3538-25	0-25mm/0-1"	±10μm	56mm
3538-50	25-50mm/1-2"	±10μm	81mm
3538-75	50-75mm/2-3"	±11μm	106mm
3538-100	75-100mm/3-4"	±11μm	131mm

JAW TYPE MICROMETERS

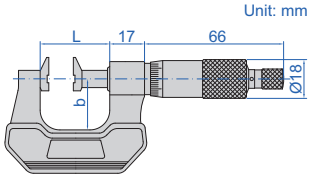
NON-ROTATING SPINDLE

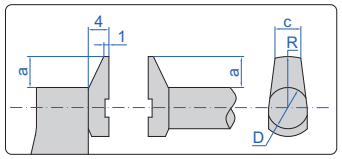
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards (except 0-25mm)

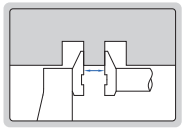


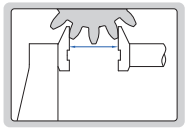
3283-25A

Unit: mm









(mm)

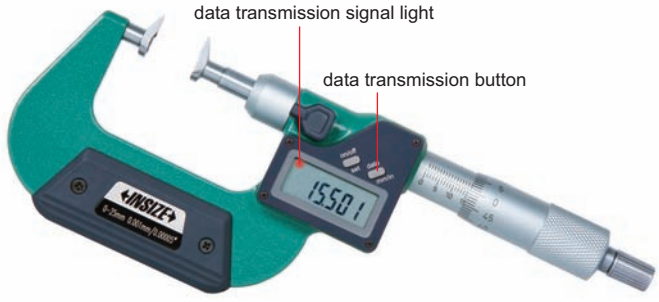
Code	Range	Accuracy	L	a	b	c	R	D
3283-25A	0-25mm	4μm	34	6	24	5	10	8
3283-50A	25-50mm	4μm	59	6	32	5	10	8
3283-75A	50-75mm	5μm	85	6	45	5	10	8
3283-100A	75-100mm	5μm	110	6	57	5	10	8
3283-125A	100-125mm	6μm	138	9	70	8	15	12
3283-150A	125-150mm	6μm	163	9	82	8	15	12
3283-175A	150-175mm	7μm	188	9	95	8	15	12
3283-200A	175-200mm	7μm	214	9	107	8	15	12

6

DIGITAL JAW TYPE MICROMETERS

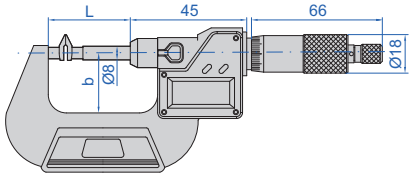
NON-ROTATING SPINDLE

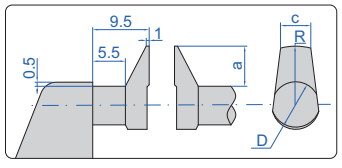
DATA OUTPUT

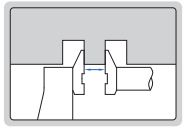


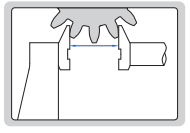
3583-25A

Unit: mm









- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards (except 0-25mm/0-1")
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery

With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

(mm)

Code	Range	Accuracy	L	a	b	c	R	D
3583-25A	0-25mm/0-1"	±4μm	43	6.5	32	5	10	8
3583-50A	25-50mm/1-2"	±4μm	85	6.5	44.5	5	10	8
3583-75A	50-75mm/2-3"	±5μm	110	6.5	57	5	10	8
3583-100A	75-100mm/3-4"	±5μm	135	6.5	70	5	10	8
3583-125A	100-125mm/4-5"	±6μm	160	11.5	86	8	15	12
3583-150A	125-150mm/5-6"	±6μm	186	11.5	94.5	8	15	12
3583-175A	150-175mm/6-7"	±7μm	211	11.5	107	8	15	12
3583-200A	175-200mm/7-8"	±7μm	236	11.5	120	8	15	12

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3583-□□□□WL

Code examples:

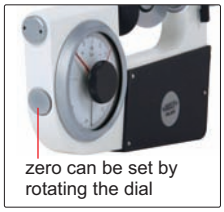
Original code	Wireless code
3583-25A	3583-25AWL
3583-50A	3583-50AWL

DISK INDICATING MICROMETERS

INSIZE PLUS

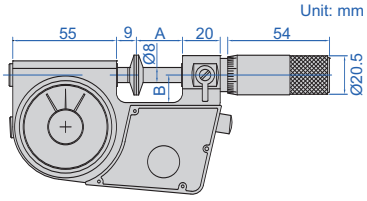
INSPECTION CERTIFICATE

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED





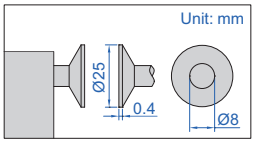
3338-20

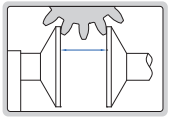


- Meet DIN863-3
- Suitable for measuring the common normal length of spur and helical gears
- Carbide measuring faces
- Measuring force 5-10N
- Optional accessory: gauge blocks grade 0 (**4101-A** series), for zero setting

(mm)

Code	Micrometer head			Dial indicator			A	B
	range	graduation	accuracy	range	graduation	accuracy		
3338-201*	0-20mm	0.01mm	4μm	±0.07mm	1μm	2μm	26	15
3338-20*	0-20mm	0.01mm	4μm	±0.14mm	2μm	4μm	26	15
3338-451*	20-45mm	0.01mm	4μm	±0.07mm	1μm	2μm	51.5	25
3338-45*	20-45mm	0.01mm	4μm	±0.14mm	2μm	4μm	51.5	25
3338-701*	45-70mm	0.01mm	4μm	±0.07mm	1μm	2μm	76.5	37
3338-70*	45-70mm	0.01mm	4μm	±0.14mm	2μm	4μm	76.5	37
3338-951*	70-95mm	0.01mm	4μm	±0.07mm	1μm	2μm	101.5	52.5
3338-95*	70-95mm	0.01mm	4μm	±0.14mm	2μm	4μm	101.5	52.5
3338-120*	95-120mm	0.01mm	4μm	±0.14mm	2μm	2μm	126.5	65
3338-145*	120-145mm	0.01mm	4μm	±0.14mm	2μm	4μm	126.5	77.5





*Supplied with manufacturer inspection certificate

DISK MICROMETERS

INSIZE PLUS

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

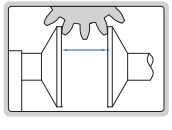
- Graduation: 0.01mm
- Ratchet stop
- One turn of sleeve makes 0.5mm spindle feed
- Optional accessory: setting standards (code **7386**)

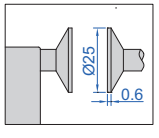


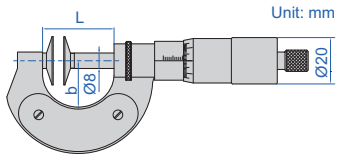
3676-25

(mm)

Code	Range	Accuracy	L	b
3676-25	0-25mm	4μm	37	24
3676-50	25-50mm	4μm	62	34
3676-75	50-75mm	5μm	87	46
3676-100	75-100mm	5μm	112	60
3676-125	100-125mm	6μm	139	72
3676-150	125-150mm	6μm	164	85
3676-175	150-175mm	7μm	190	97
3676-200	175-200mm	7μm	215	110
3676-225	200-225mm	8μm	240	122
3676-250	225-250mm	8μm	264	135
3676-275	250-275mm	9μm	290	148
3676-300	275-300mm	9μm	315	160





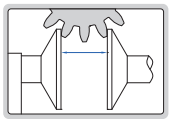


ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

LIGHT WEIGHT

LARGE RANGE DISK MICROMETERS

INSIZE PLUS





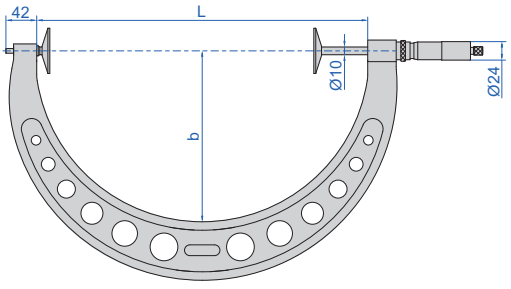
3677-350

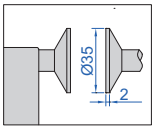
- Graduation: 0.01mm
- Ratchet stop
- Quick measurement, one turn of sleeve makes 1mm spindle feed
- Light weight
- Optional accessory: setting standards (code **7386**)

(mm)

Code	Range	Accuracy	L	b	Weight
3677-350	300-350mm	8μm	370	190	1.65kg
3677-400	350-400mm	8μm	430	220	1.95kg
3677-450	400-450mm	9μm	475	250	2.30kg
3677-500	450-500mm	9μm	530	273	2.45kg
3677-550	500-550mm	10μm	570	291	2.55kg
3677-600	550-600mm	10μm	630	323	3.15kg
3677-650	600-650mm	10μm	675	351	3.45kg
3677-700	650-700mm	10μm	730	378	3.85kg
3677-750	700-750mm	10μm	785	401	4.05kg
3677-800	750-800mm	10μm	830	423	4.25kg
3677-850	800-850mm	11μm	885	440	4.45kg
3677-900	850-900mm	11μm	930	473	5.05kg
3677-950	900-950mm	11μm	980	503	5.95kg
3677-1000	950-1000mm	11μm	1030	520	6.25kg

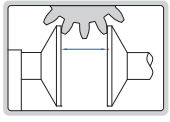
Unit: mm





6

DISK MICROMETERS

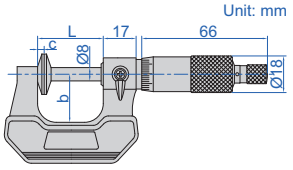




3282-25

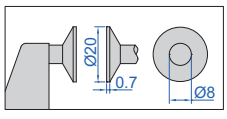
- Measure root tangent length of gear
- Graduation 0.01mm
- Ratchet stop
- Supplied with setting standards

Unit: mm



(mm)

Code	Range	Accuracy	Parallelism	L	b	c
3282-25	0-25mm	4μm	5μm	34	24	3.3
3282-50	25-50mm	4μm	5μm	59	32	3.3
3282-75	50-75mm	5μm	5μm	85	45	3.3
3282-100	75-100mm	5μm	5μm	110	57	3.3

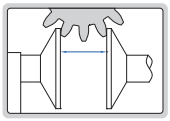


NON-ROTATING SPINDLE DISK MICROMETERS

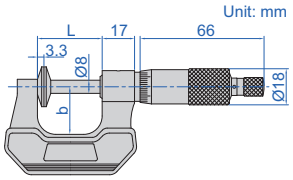
NON-ROTATING SPINDLE



3294-25

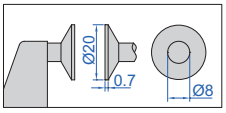


- Measure root tangent length of gear
- Graduation 0.01mm
- Non-rotating spindle
- Ratchet stop
- Supplied with setting standards



(mm)

Code	Range	Accuracy	Parallelism	L	b
3294-25	0-25mm	4μm	5μm	34	24
3294-50	25-50mm	4μm	5μm	59	32
3294-75	50-75mm	5μm	5μm	85	45
3294-100	75-100mm	5μm	5μm	110	57

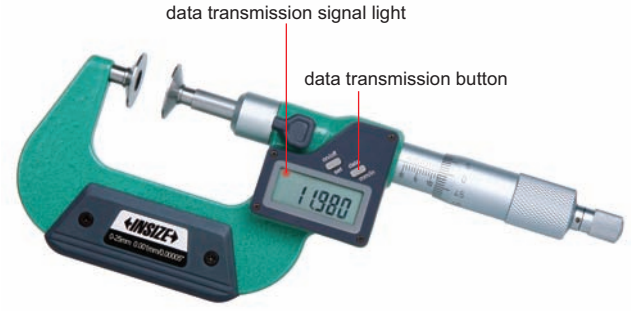


6

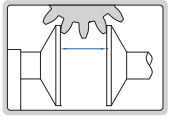
DIGITAL NON-ROTATING SPINDLE DISK MICROMETERS

DATA OUTPUT

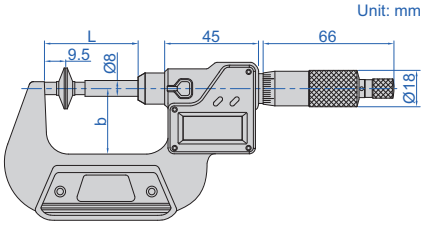
NON-ROTATING SPINDLE

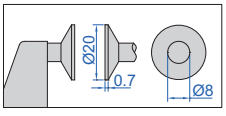


3594-25A



- Measure root tangent length of gear
- Resolution 0.001mm/0.00005"
- Non-rotating spindle
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Supplied with setting standards
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery





With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Accuracy	Parallelism	L	b
3594-25A	0-25mm/0-1"	±4μm	5μm	43mm	32mm
3594-50A	25-50mm/1-2"	±4μm	5μm	68mm	44.5mm
3594-75A	50-75mm/2-3"	±5μm	5μm	93mm	57mm
3594-100A	75-100mm/3-4"	±5μm	5μm	118.5mm	70mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3594-□□□□WL

Code examples:

Original code	Wireless code
3594-25A	3594-25AWL
3594-50A	3594-50AWL

DIGITAL DISK MICROMETERS/SNAP GAUGES

DATA OUTPUT | NON-ROTATING SPINDLE | ONE TURN OF SLEEVE MAKES 5MM SPINDLE FEED, PRESS THE FORK, THE SPINDLE RETRACTS 3MM | ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF | MEASUREMENT ACCURACY IS NOT AFFECTED BY THE USE OF SLEEVE

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

IP65 WATERPROOF

VIDEO

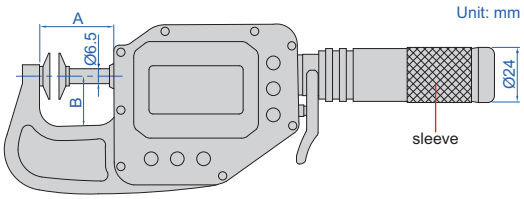
INSPECTION CERTIFICATE

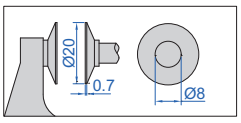


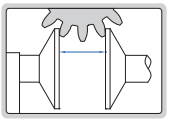
3353-25

- Measure root tangent length of gear
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
  0.001mm/0.00005"
  0.01mm/0.0005"
- One turn of sleeve makes 5mm spindle feed
- Measurement accuracy is not affected by the use of sleeve
- Press the fork, the spindle retracts 3mm
- Linear ball bearings for ten million times use
- Carbide spindle and anvil
- Measuring force 7-10N
  Customizable measuring force range 2-12N
  Attention: small measuring force will reduce the dustproof and waterproof level
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, zero, mm/inch, adjust resolution
- Supplied with gauge blocks for zero setting
- Power: rechargeable battery, for 24 hours continuous working

Unit: mm



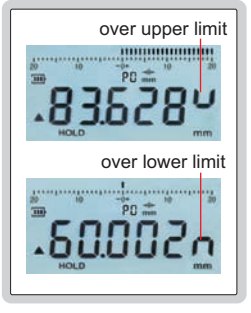




With data interface (optional wireless transmitter code 7315-3350, receiver is needed page 9)

Code	Range	Accuracy	Repeatability	Parallelism	A	B
3353-25 *	0-25mm/0-1"	4μm	1μm	4μm	38mm	24mm
3353-50 *	25-50mm/1-2"	4μm	1μm	4μm	63mm	25mm
3353-75 *	50-75mm/2-3"	5μm	1μm	5μm	88mm	42mm
3353-100 *	75-100mm/3-3.95"	5μm	1μm	5μm	113mm	56mm

alarm when over tolerance



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Repeatability	Parallelism	A	B
3353-25AWL*	0-25mm/0-1"	4μm	1μm	4μm	38mm	24mm
3353-50AWL*	25-50mm/1-2"	4μm	1μm	4μm	63mm	25mm
3353-75AWL*	50-75mm/2-3"	5μm	1μm	5μm	88mm	42mm
3353-100AWL*	75-100mm/3-3.95"	5μm	1μm	5μm	113mm	56mm

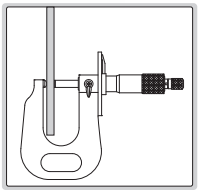
*Supplied with manufacturer inspection certificate

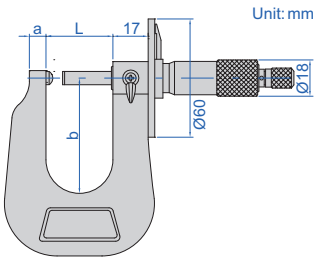
SHEET METAL MICROMETERS

- Meet DIN863-3
- Measure thickness of sheet metal, paper, plastic and rubber parts
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



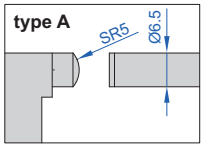
3263-25A

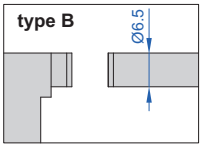




(mm)

Code	Range	Type	Accuracy	L	a	b
3263-15A	0-15mm	A	4μm	22	8	50
3263-25A	0-25mm	A	4μm	32	8	50
3263-50A	0-50mm	A	5μm	57	12	100
3263-15B	0-15mm	B	4μm	22	8	50
3263-25B	0-25mm	B	4μm	32	8	50
3263-50B	0-50mm	B	5μm	57	12	100





6

MICROMETERS FOR HOT PLATE

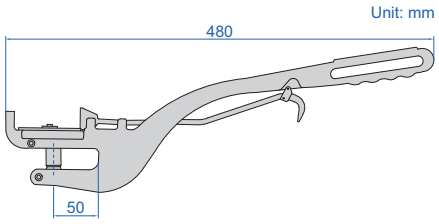
VIDEO

- Measure thickness of hot rolling sheet metal
- Carbide measuring faces
- Supplied with setting standard (except 0-15mm)



3264-15

Code	Range	Graduation	Accuracy
3264-15	0-15mm	0.05mm	0.05mm
3264-30	15-30mm	0.05mm	0.05mm
3264-45	30-45mm	0.05mm	0.05mm
3264-60	45-60mm	0.05mm	0.05mm
3264-75	60-75mm	0.05mm	0.05mm
3264-90	75-90mm	0.05mm	0.05mm
3264-105	90-105mm	0.05mm	0.05mm



HUB MICROMETERS

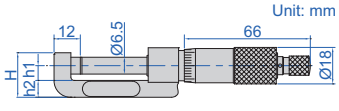
- Meet DIN863-3
- Measure hub thickness and shoulder inside a bore
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Supplied with setting standards (except 0-25mm)

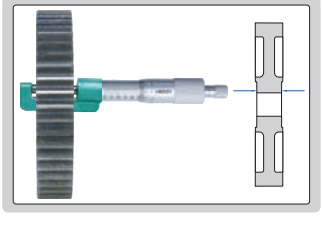


3292-25

(mm)

Code	Range	Accuracy	h1	h2	H
3292-25	0-25mm	4μm	6	9	18.7
3292-50	25-50mm	4μm	6.5	11	21.2
3292-75	50-75mm	5μm	6.5	11	21.2
3292-100	75-100mm	5μm	6.5	11	21.2





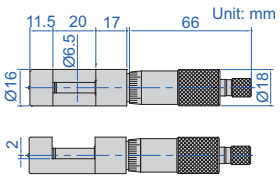
WIRE MICROMETER

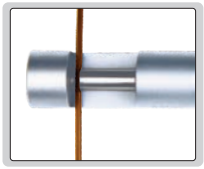
- Meet DIN863-3
- Measure diameter of wires and small balls
- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces



3285-10

Code	Range	Accuracy
3285-10	0-10mm	4μm





CAN SEAM MICROMETERS



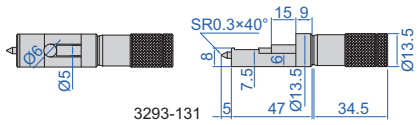
3293-131

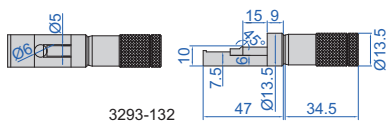


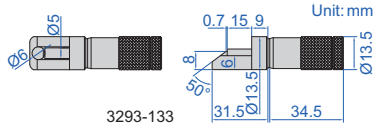
3293-132



3293-133

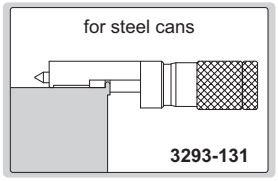


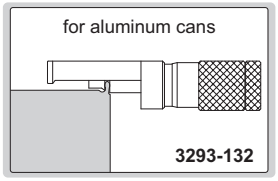


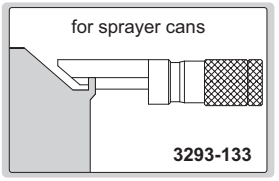


- Measure the width, height and depth of can seams
- Graduation 0.01mm

Code	Range	Accuracy
3293-131	0-13mm	4μm
3293-132	0-13mm	4μm
3293-133	0-13mm	4μm







6

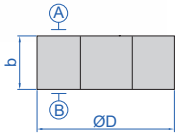
OPTICAL PARALLELS

- Check the flatness and parallelism of measuring faces of micrometer
- Flatness of A and B: 0.1μm
- Parallelism between A and B: 0.6μm

Code	Parallels included (b)	ØD	Applicable micrometer
4184-41A	15.62mm, 15.75mm, 15.87mm, 16.00mm	30mm	0-25mm
4184-42A	40.62mm, 40.75mm, 40.87mm, 41.00mm	30mm	25-50mm
4184-43B	65.62mm, 65.75mm, 65.87mm, 66.00mm	40mm	50-75mm
4184-44B	90.62mm, 90.75mm, 90.87mm, 91.00mm	50mm	75-100mm



4184-41A



VIDEO

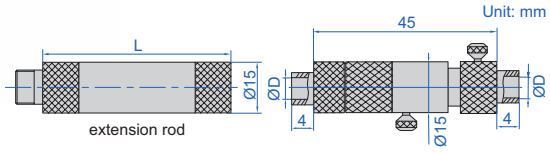
PARALLELISM INSPECT DEVICES FOR OUTSIDE MICROMETERS

MEASURING TIPS DIAMETER ØD CAN BE CUSTOMIZED

- Check parallelism of outside micrometers
- Simple structure, wide measuring range, high reliability
- Stainless steel measuring tips and extension rod
- Supplied with two kinds of measuring tips



4199-1000



Code	Range	Measuring tips dia. (ØD)	Extension rod (L)
4199-1000	50-1000mm	6.5mm, 8mm	15mm, 25mm, 50mm, 100mm (3 pcs), 150mm, 200mm (2 pcs)
4199-2000	50-2000mm	6.5mm, 8mm	15mm, 25mm, 50mm, 100mm (3 pcs), 150mm, 200mm (7 pcs)

MEASURING TOOLS DYNAMOMETERS

VIDEO

- It can be used for measuring force of micrometers, depth micrometers, dial test indicators, inside micrometers, indicators, micrometer heads and optical instruments (optical meters, contact interferometers) and other force measure ment verification
- High precision, wide application, reliable structure, easy to operate



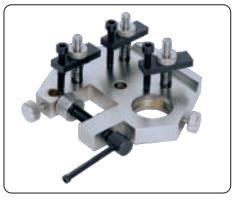
ISF-DGD15

SPECIFICATION

Code	ISF-DGD15	ISF-DGD50
Measuring range	0~15N	0~50N
Resolution	0.01N	
Accuracy	<4N: ±0.01N; ≥4N: ±0.5%	
Dimension	230×220×310mm	
Weight	10kg	

STANDARD DELIVERY

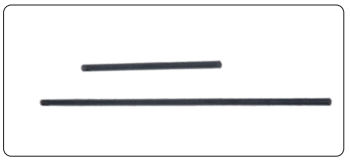
Main unit	1 pc
Disk	1 pc
Rod	2 pcs
Clamping disk	1 pc



clamping disk (included)



disk (included)



rod (included)



check the measuring force of micrometers



check the measuring force of dial indicators



check the measuring force of dial test indicators



check the measuring force of indicating micrometers



check the measuring force of bore gauges



check the measuring force of calipers

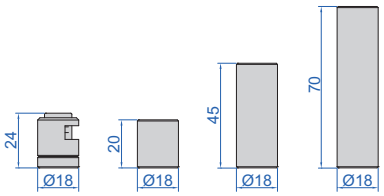
MICROMETER MEASURING FORCE DETECTOR

- For outside micrometers 0-25mm/0-1", 25-50mm/1-2", 50-75mm/2-3" and 75-100mm/3-4"



6315

Unit: mm



Code	Measuring force
6315	5-12N

REFER TO PAGE 400 FOR DETAILS

MICROMETER INSPECTION GAUGE BLOCK SETS



4107-10



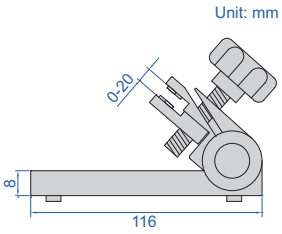
4160-10

MICROMETER STAND



6300

Unit: mm





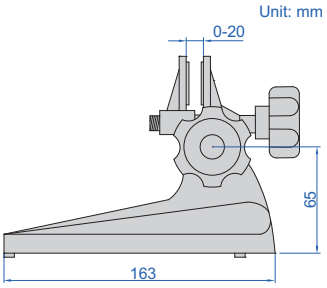
Code
6300

- Suitable for outside micrometers up to 100mm

MICROMETER STAND



6301



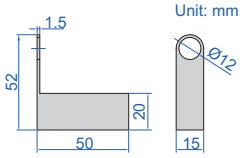
- Suitable for outside micrometers up to 100mm



Code
6301



6301-1



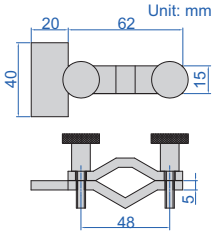
- Suitable for inside micrometers



Code	Description	Applicable products
6301-1	clamp for inside micrometers	all sizes of **3220** series



6301-2



- Suitable for three points internal micrometers



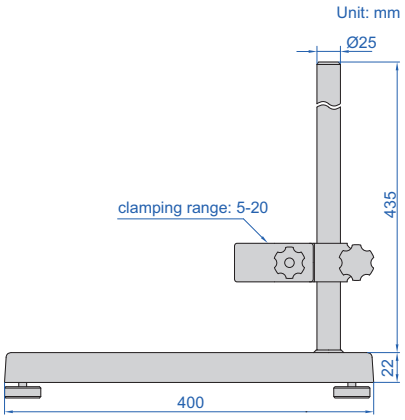
Code	Description	Applicable products
6301-2	clamp for three points internal micrometers	up to 100mm of **3127**, **3227** and **3113** series

MICROMETER STAND





6302



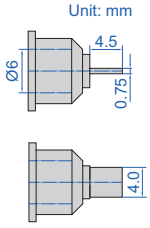
Code
6302

- Suitable for 100-300mm outside micrometers (except **3675** series)

MEASURING TIPS FOR MICROMETERS

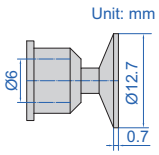


7397-3





7397-5



- To be installed on micrometer anvils (the measuring range of micrometer is reduced by 10mm)
- Supplied in single
- Made of stainless steel

application



Code	Description	Application
7397-3	blade tip	suitable for micrometers with anvil diameter 6.5mm (e.g. **3101**/**3102**/**3108**/**3109** series, etc.)
7397-5	disk tip	

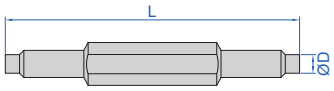
MICROMETER SETTING STANDARDS

INSIZE PLUS

- Suitable for outside micrometers



7386-100



Code	Length (L)	Accuracy	ØD
7386-25	25mm	±1.25μm	6.5mm
7386-50	50mm	±1.25μm	6.5mm
7386-75	75mm	±1.5μm	6.5mm
7386-100	100mm	±2μm	6.5mm
7386-125	125mm	±2.5μm	6.5mm
7386-150	150mm	±2.5μm	6.5mm
7386-175	175mm	±2.5μm	6.5mm
7386-200	200mm	±3μm	6.5mm
7386-225	225mm	±3μm	6.5mm
7386-250	250mm	±3μm	6.5mm
7386-275	275mm	±3μm	6.5mm
7386-300	300mm	±3μm	10mm
7386-325	325mm	±3.5μm	10mm
7386-350	350mm	±3.5μm	10mm
7386-375	375mm	±3.5μm	10mm
7386-400	400mm	±3.5μm	10mm

Code	Length (L)	Accuracy	ØD
7386-425	425mm	±3.5μm	10mm
7386-450	450mm	±3.5μm	10mm
7386-475	475mm	±3.5μm	10mm
7386-500	500mm	±3.5μm	10mm
7386-525	525mm	±3.5μm	10mm
7386-550	550mm	±3.5μm	10mm
7386-575	575mm	±3.5μm	10mm
7386-600	600mm	±3.5μm	10mm
7386-625	625mm	±4μm	10mm
7386-650	650mm	±4μm	10mm
7386-675	675mm	±4μm	10mm
7386-700	700mm	±4μm	10mm
7386-725	725mm	±4μm	10mm
7386-750	750mm	±4μm	10mm
7386-775	775mm	±4μm	10mm
7386-800	800mm	±4μm	10mm
7386-825	825mm	±4μm	10mm

Code	Length (L)	Accuracy	ØD
7386-850	850mm	±4μm	10mm
7386-875	875mm	±4μm	10mm
7386-900	900mm	±5μm	10mm
7386-925	925mm	±5μm	10mm
7386-950	950mm	±5μm	10mm
7386-975	975mm	±5μm	10mm
7386-1000	1000mm	±5μm	10mm
7386-1050	1050mm	±5μm	10mm
7386-1150	1150mm	±6μm	10mm
7386-1250	1250mm	±7μm	10mm
7386-1350	1350mm	±7μm	10mm
7386-1450	1450mm	±7μm	10mm
7386-1550	1550mm	±9μm	10mm
7386-1650	1650mm	±10μm	10mm
7386-1750	1750mm	±10μm	10mm
7386-1850	1850mm	±11μm	10mm
7386-1950	1950mm	±12μm	10mm

MICROMETER SETTING STANDARDS



6310-100

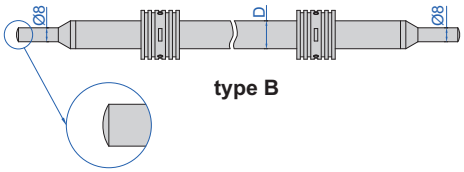


type A



6310-300

Unit: mm



type B

(mm)

Code	Length	Type	Accuracy	D
6310-25	25	A	±1.5μm	Ø7
6310-50	50	A	±2μm	Ø7
6310-75	75	A	±2.5μm	Ø7
6310-100	100	A	±3μm	Ø8
6310-125	125	A	±3.5μm	Ø8
6310-150	150	A	±4μm	Ø8
6310-175	175	A	±4.5μm	Ø8
6310-200	200	A	±5μm	Ø8
6310-225	225	A	±5.5μm	Ø8
6310-250	250	A	±6μm	Ø8
6310-275	275	A	±6.5μm	Ø8
6310-300	300	B	±7μm	Ø16
6310-325	325	B	±7.5μm	Ø16
6310-350	350	B	±8μm	Ø16
6310-375	375	B	±8.5μm	Ø16

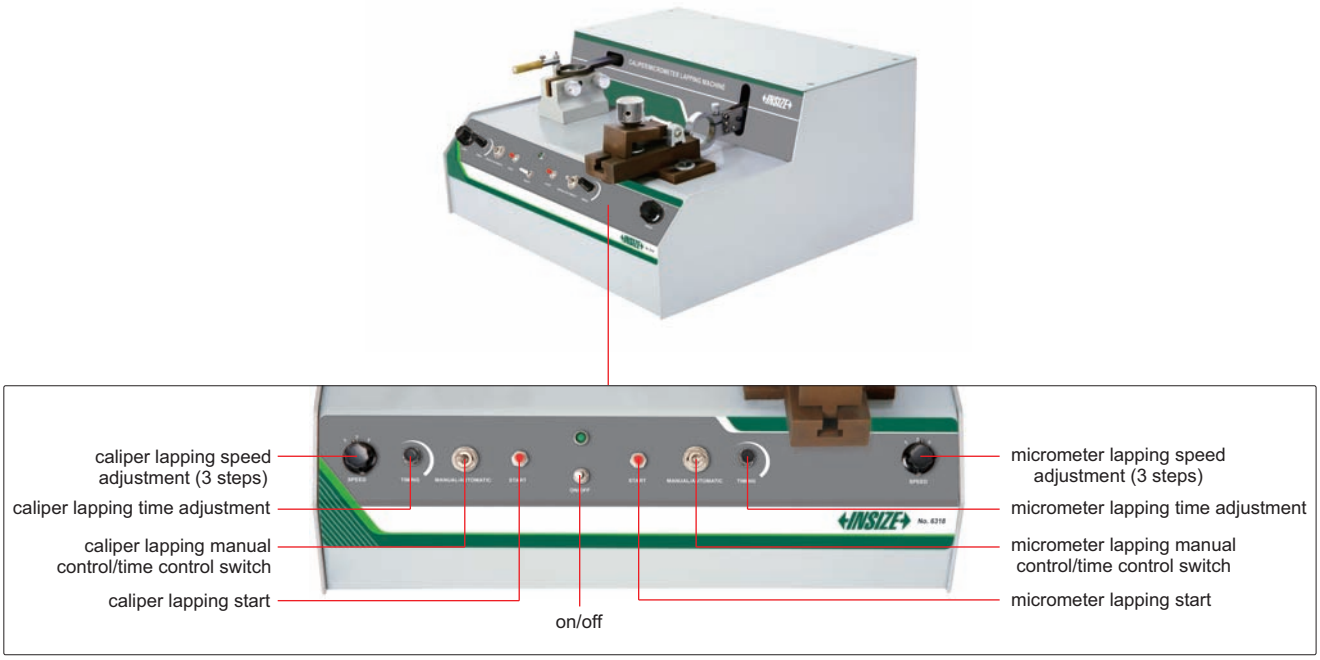
(mm)

Code	Length	Type	Accuracy	D
6310-400	400	B	±9μm	Ø16
6310-425	425	B	±9.5μm	Ø16
6310-450	450	B	±10μm	Ø16
6310-475	475	B	±10.5μm	Ø16
6310-500	500	B	±11μm	Ø16
6310-525	525	B	±11.5μm	Ø16
6310-575	575	B	±12.5μm	Ø16
6310-625	625	B	±13.5μm	Ø16
6310-675	675	B	±14.5μm	Ø16
6310-725	725	B	±15.5μm	Ø16
6310-775	775	B	±16.5μm	Ø16
6310-825	825	B	±17.5μm	Ø16
6310-875	875	B	±18.5μm	Ø16
6310-925	925	B	±19.5μm	Ø16
6310-975	975	B	±20.5μm	Ø16

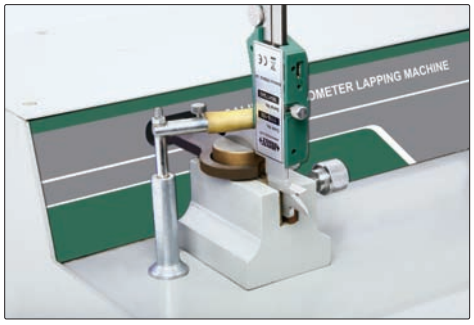
(mm)

Code	Length	Type	Accuracy	D
6310-1050	1050	B	±22μm	Ø23
6310-1150	1150	B	±24μm	Ø23
6310-1250	1250	B	±26μm	Ø23
6310-1350	1350	B	±28μm	Ø23
6310-1450	1450	B	±30μm	Ø23
6310-1550	1550	B	±32μm	Ø23
6310-1650	1650	B	±34μm	Ø23
6310-1750	1750	B	±36μm	Ø23
6310-1850	1850	B	±38μm	Ø23
6310-1950	1950	B	±40μm	Ø23

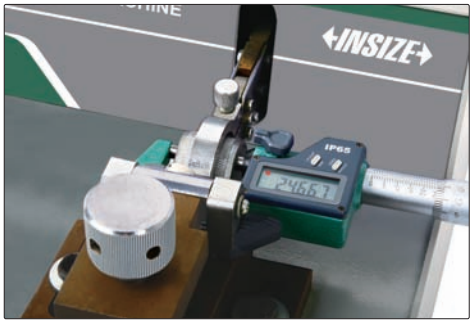
CALIPER/MICROMETER LAPPING MACHINE
CODE 6318



lapping measuring surfaces of caliper lower jaws



lapping measuring surfaces of outside micrometer



- For lapping measuring surfaces of caliper lower jaws and outside micrometers
- Suitable for 0-300mm range calipers and 0-100mm range outside micrometers
- Supplied with lapping block and diamond paste for calipers
- Lapping blocks for micrometers are optional, diamond paste is included
- Optional accessory: micrometer lapping blocks

caliper lapping block (included)



micrometer lapping blocks (code: **6307-1**, **optional**)



SPECIFICATION

Power supply	220V, 50/60Hz
Dimension (L×W×H)	430×400×210mm
Weight	28kg

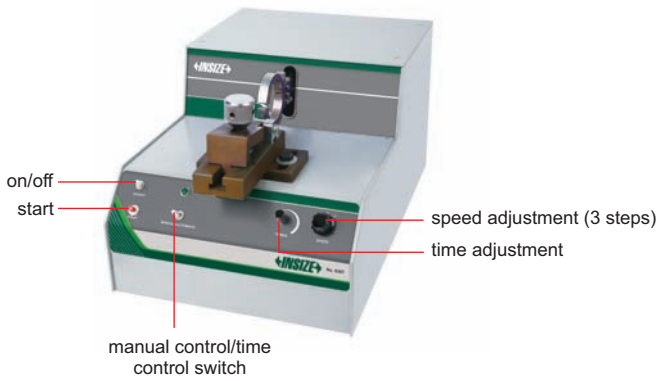
MICROMETER LAPPING BLOCKS (optional)

Code	For micrometer	Remark
6307-1	0~25mm	includes 4 lapping blocks
6307-2	25~50mm	includes 4 lapping blocks
6307-3	50~75mm	includes 4 lapping blocks
6307-4	75~100mm	includes 4 lapping blocks

MICROMETER LAPPING MACHINE
CODE 6307

VIDEO

- Used for lapping micrometer measuring surfaces
- Suitable for 0~100mm outside micrometers
- Supplied with diamond paste
- Optional accessory: micrometer lapping blocks



SPECIFICATION

Power supply	220V, 50/60Hz
Dimension (L×W×H)	360×230×210mm
Weight	15kg

MICROMETER LAPPING BLOCKS (optional)

Code	For micrometer	Remark
6307-1	0~25mm	includes 4 lapping blocks
6307-2	25~50mm	includes 4 lapping blocks
6307-3	50~75mm	includes 4 lapping blocks
6307-4	75~100mm	includes 4 lapping blocks

micrometer lapping blocks (code: **6307-1**, **optional**)



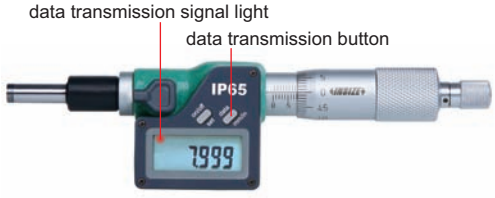
6

DIGITAL MICROMETER HEADS

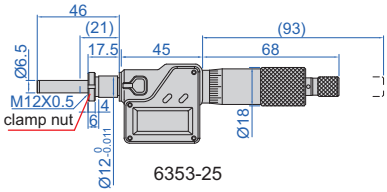
IP65 WATERPROOF

DATA OUTPUT

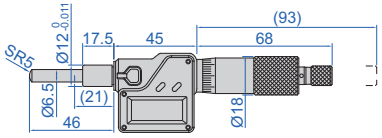
- Resolution: 0.001mm/0.00005"
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output, automatic power off
- Ratchet stop
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery



6353-25W

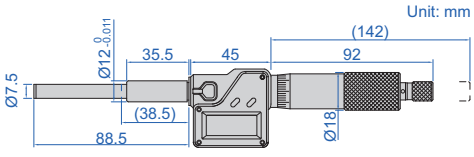


6353-25

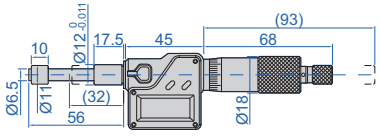


6353-25WS

Unit: mm



6353-50W



6354-25W

Rotating spindle, with data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Stem	Spindle tip	Accuracy
6353-25	0-25mm/0-1"	with clamp nut	flat (carbide)	±2μm
6353-25W	0-25mm/0-1"	plain	flat (carbide)	±2μm
6353-25S	0-25mm/0-1"	with clamp nut	spherical (SR5)	±2μm
6353-25WS	0-25mm/0-1"	plain	spherical (SR5)	±2μm
6353-50W	0-50mm/0-2"	plain	flat (carbide)	±4μm

Non-rotating spindle, with data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Stem	Spindle tip	Accuracy
6354-25W	0-25mm/0-1"	plain	flat	±2μm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
6353-□□□□WL

Code examples:

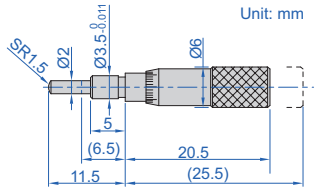
Original code	Wireless code
6353-25	**6353-25WL**
6354-25W	**6354-25WWL**

SMALL MICROMETER HEAD

- Graduation: 0.02mm



6372-5WS



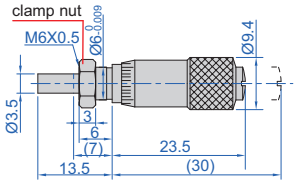
Code	Range	Stem	Spindle tip	Accuracy
6372-5WS	0-5mm	plain	spherical (SR1.5)	5μm

SMALL MICROMETER HEADS

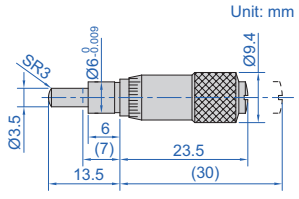
- Range: 0-6.5mm
- Graduation: 0.01mm
- Accuracy: 5μm



6385-65W



6385-65



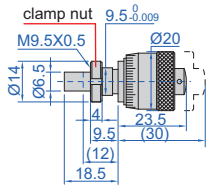
6385-65WS

Code	Stem	Spindle tip
6385-65	with clamp nut	flat
6385-65W	plain	flat
6385-65S	with clamp nut	spherical (SR3)
6385-65WS	plain	spherical (SR3)

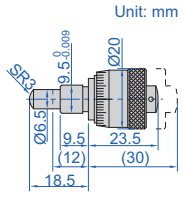
LARGE THIMBLE MICROMETER HEADS



6373-65



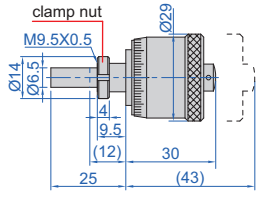
6373-65



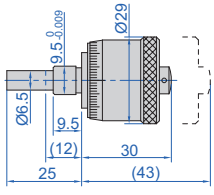
6373-65WS



6373-13



6373-13



6373-13W

Code	Range	Stem	Spindle tip
6373-65	0-6.5mm	with clamp nut	flat
6373-65W	0-6.5mm	plain	flat
6373-65S	0-6.5mm	with clamp nut	spherical (SR3)
6373-65WS	0-6.5mm	plain	spherical (SR3)
6373-13	0-13mm	with clamp nut	flat
6373-13W	0-13mm	plain	flat

- Meet DIN863-2
- Large thimble diameter for easy reading
- Graduation: 0.01mm
- Accuracy: 3μm

MICROMETER HEADS WITH ZERO ADJUSTABLE THIMBLE

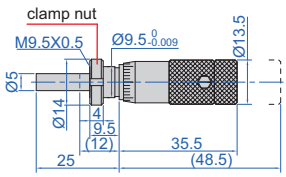
- Meet DIN863-2
- Range: 0-13mm
- Graduation: 0.01mm
- Accuracy: 3μm
- The thimble can be set to zero at any position



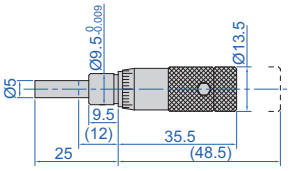
6384-13W

Code	Stem	Spindle tip
6384-13	with clamp nut	flat
6384-13W	plain	flat

Unit: mm

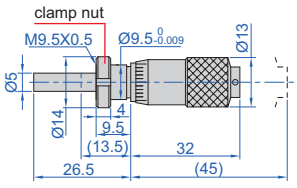


6384-13



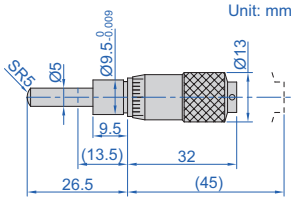
6384-13W

MICROMETER HEADS



6386-13

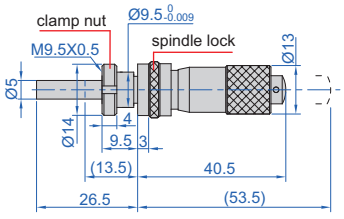
Unit: mm



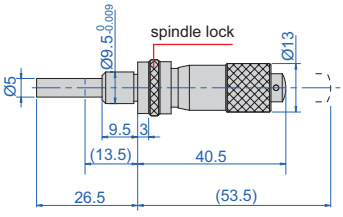
6386-13WS



6386-13W



6386-13P



6386-13WP



6386-13P

Code	Range	Stem	Spindle tip	Remark	Accuracy
6386-13	0-13mm	with clamp nut	flat		3μm
6386-13W	0-13mm	plain	flat		3μm
6386-13S	0-13mm	with clamp nut	spherical (SR5)		3μm
6386-13WS	0-13mm	plain	spherical (SR5)		3μm
6386-13P	0-13mm	with clamp nut	flat	with spindle lock	3μm
6386-13WP	0-13mm	plain	flat	with spindle lock	3μm

- Meet DIN863-2
- Graduation: 0.01mm

MICROMETER HEADS

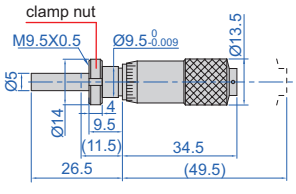
- Meet DIN863-2
- Graduation: 0.01mm
- Accuracy: 3μm



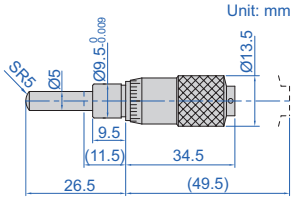
6387-15WS

Code	Range	Stem	Spindle tip
6387-15	0-15mm	with clamp nut	flat
6387-15W	0-15mm	plain	flat
6387-15S	0-15mm	with clamp nut	spherical (SR5)
6387-15WS	0-15mm	plain	spherical (SR5)

Unit: mm



6387-15

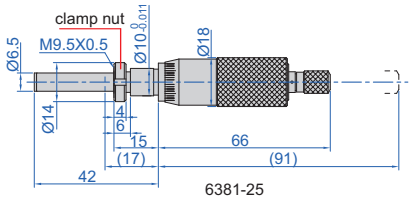


6387-15WS

MICROMETER HEADS

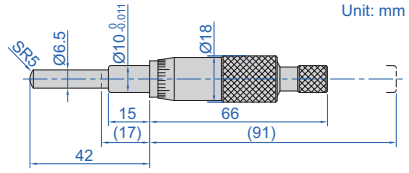


6381-25



6381-25

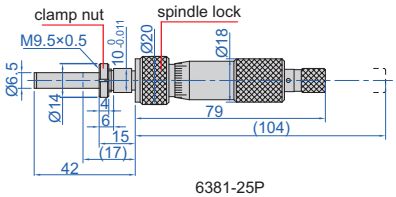
Unit: mm



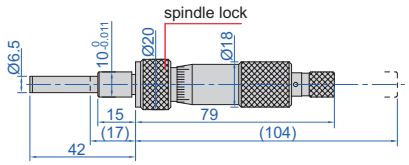
6381-25WS



6381-25P



6381-25P



6381-25WP

- Meet DIN863-2
- Graduation: 0.01mm
- Ratchet stop

Code	Range	Stem	Spindle tip	Remark	Accuracy
6381-25	0-25mm	with clamp nut	flat (carbide)		3μm
6381-25W	0-25mm	plain	flat (carbide)		3μm
6381-25S	0-25mm	with clamp nut	spherical (SR5)		3μm
6381-25WS	0-25mm	plain	spherical (SR5)		3μm
6381-25P	0-25mm	with clamp nut	flat (carbide)	with spindle lock	3μm
6381-25WP	0-25mm	plain	flat (carbide)	with spindle lock	3μm

6

MICROMETER HEADS

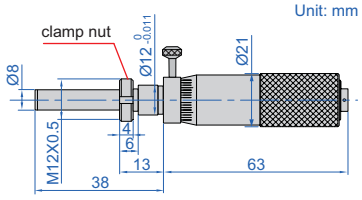
NON-ROTATING SPINDLE

- Non-rotating spindle
- One turn of sleeve makes 0.05mm spindle feed
- Carbide measuring faces



6389-1A

Unit: mm



Code	Range	Graduation	Accuracy	
			full range	within 0.05mm
6389-1A	0-2.5mm	0.001mm	5μm	1.5μm
6389-2A	0-2.5mm	0.001mm	7μm	3μm

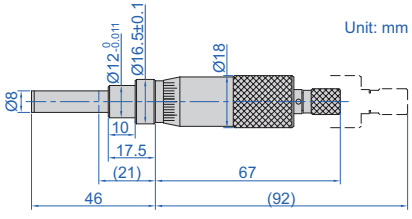
NON-ROTATING SPINDLE MICROMETER HEAD

- Meet DIN863-2
- Graduation: 0.01mm
- Ratchet stop
- Non-rotating spindle



6377-25W

Unit: mm

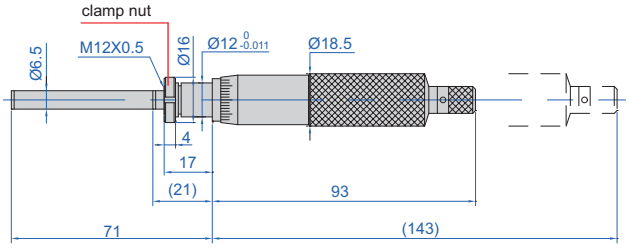


Code	Range	Stem	Spindle tip	Accuracy
6377-25W	0-25mm	plain	flat (carbide)	3μm

LARGE MICROMETER HEADS

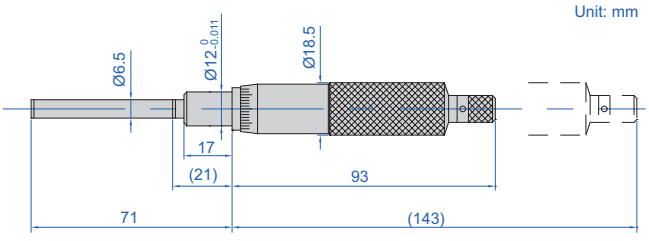


6388-50AW



6388-50A

Unit: mm



6388-50AW

- Graduation: 0.01mm
- Ratchet stop

Code	Range	Stem	Spindle tip	Accuracy
6388-50A	0-50mm	with clamp nut	flat (carbide)	5μm
6388-50AW	0-50mm	plain	flat (carbide)	5μm

QUICK SPINDLE FEEDING MICROMETER HEADS



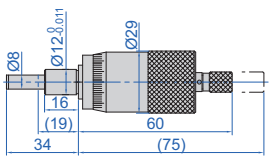
6375-15W



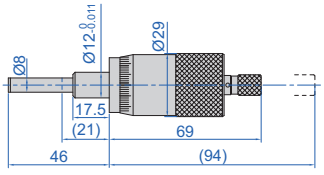
6375-25W



6375-50W

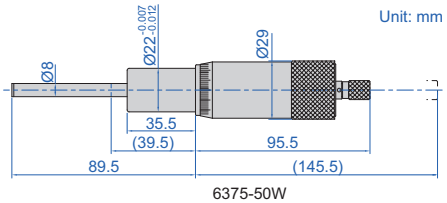


6375-15W



6375-25W

Unit: mm



6375-50W

- Micrometers up to 25mm meet DIN863-2
- Graduation: 0.01mm
- Quick spindle feed of 1mm/rev.
- Ratchet stop

Code	Range	Stem	Spindle tip	Accuracy
6375-15W	0-15mm	plain	flat (carbide)	3μm
6375-25W	0-25mm	plain	flat (carbide)	3μm
6375-50W	0-50mm	plain	flat (carbide)	5μm

BORE DIAMETER AND CIRCUMFERENCE MEASURING TOOLS

07



Inside Micrometers
Page 212-213



Inside Micrometers
Page 213-220



Three Points Internal Micrometers
Page 221-226



Pistol Grip Three Points Bore Gauges
Page 227



Bore Plug Gauges
Page 228-229



Gear Bore Gauges
Page 230



Split Type Dial Bore Gauges
Page 231-233



Bore Gauges
Page 234-248



Carbon Fiber Bore Gauges
Page 246



Large Range Bore Gauges
Page 247



Bore Gauge Setters
Page 250



Internal Chamfer Gauges
Page 251-252



Telescoping Gauge Sets
Page 253-254



Tape Bore Meters
Page 254-256



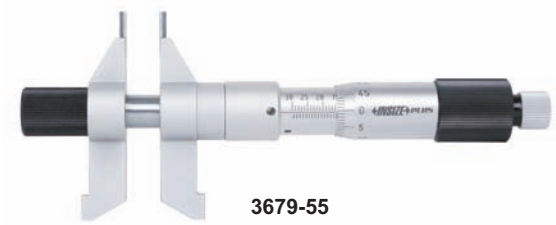
Circumference Meters
Page 257-258

INSIDE MICROMETERS

INSIZE PLUS

INSPECTION CERTIFICATE

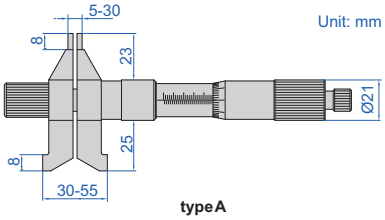
VIDEO



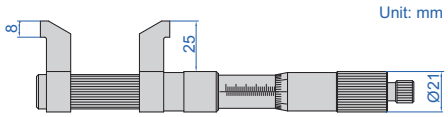
3679-55



3679-75

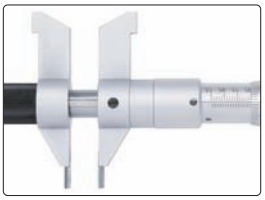


type A



type B

for type A, the upper jaws and lower jaws can be set zero separately



- Graduation: 0.01mm
- Carbide measuring faces
- Ratchet stop
- Optional accessory: setting ring (code **6312**), caliper/height gauge checker (code **6884**)

Code	Range	Type	Accuracy
3679-55 *	5-55mm	A	4μm
3679-75 *	50-75mm	B	5μm
3679-100 *	75-100mm	B	6μm
3679-125 *	100-125mm	B	7μm
3679-150 *	125-150mm	B	8μm
3679-175 *	150-175mm	B	9μm
3679-200 *	175-200mm	B	9μm
3679-225 *	200-225mm	B	10μm
3679-250 *	225-250mm	B	10μm
3679-275 *	250-275mm	B	12μm
3679-300 *	275-300mm	B	12μm

*Supplied with manufacturer inspection certificate

Code	Range	Type	Accuracy
3679-325 *	300-325mm	B	15μm
3679-350 *	325-350mm	B	15μm
3679-375 *	350-375mm	B	16μm
3679-400 *	375-400mm	B	16μm
3679-425 *	400-425mm	B	17μm
3679-450 *	425-450mm	B	17μm
3679-475 *	450-475mm	B	18μm
3679-500 *	475-500mm	B	18μm
3679-525 *	500-525mm	B	19μm
3679-550 *	525-550mm	B	19μm
3679-575 *	550-575mm	B	20μm
3679-600 *	575-600mm	B	20μm

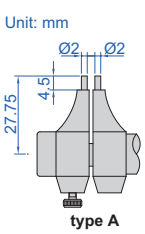
INSIDE MICROMETERS (ECONOMIC TYPE)

ATTENTION: LOW PARALLELISM OF TWO MEASURING FACES

- Graduation 0.01mm
- Ratchet stop
- Carbide measuring faces
- Optional accessory: setting ring (code **6312**), micrometer stand and clamp (code **6301** and **6301-1**)

micrometer stand with clamp **(optional)**

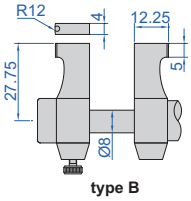




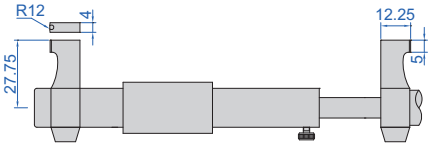
type A



3220-50



type B



type C

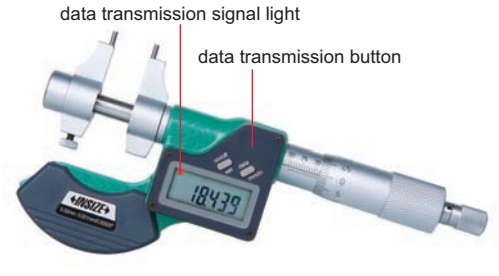
Code	Range	Type	Setting ring	Accuracy
3220-30	5-30mm	A	5mm (included)	7μm
3220-50	25-50mm	B	25mm (included)	8μm
3220-75	50-75mm	B	50mm **(optional)**	9μm
3220-100	75-100mm	C	75mm **(optional)**	10μm

DATA OUTPUT

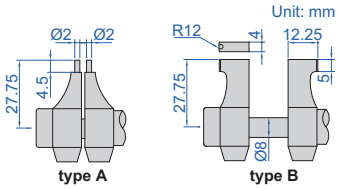
ATTENTION: LOW PARALLELISM OF TWO MEASURING FACES

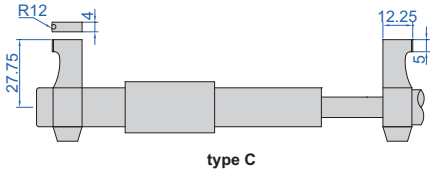
DIGITAL INSIDE MICROMETERS (ECONOMIC TYPE)

- Resolution 0.001mm/0.00005"
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Carbide measuring faces
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery
- Optional accessory: setting ring (code **6312**)



3520-30





With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Type	Setting ring	Accuracy
3520-30	5-30mm/0.2-1.2"	A	5mm (included)	±5μm
3520-50	25-50mm/1-2"	B	25mm (included)	±6μm
3520-75	50-75mm/2-3"	B	50mm **(optional)**	±7μm
3520-100	75-100mm/3-4"	C	75mm **(optional)**	±8μm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3520-□□□□WL

Code examples:

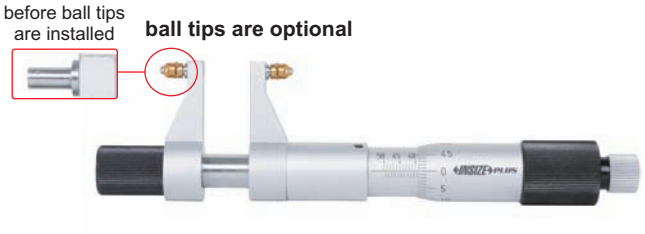
Original code	Wireless code
3520-30	**3520-30WL**
3520-50	**3520-50WL**

INSPECTION CERTIFICATE

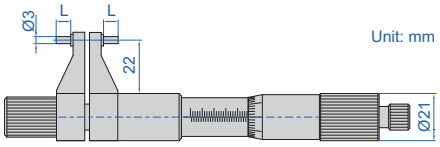
INTERNAL GEAR TOOTH MICROMETERS

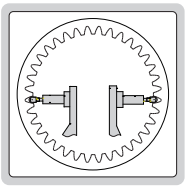
INSIZE PLUS

- Measure over-pin diameter of gears
- Graduation: 0.01mm
- Ratchet stop
- Optional accessory: ball tips (code **7383**) cylindrical tips (code **7393**, only for micrometers with L=8mm)



3678-50





cylindrical tips (**optional**) (only for micrometers with L=8mm)



Code	Range	Accuracy	L
3678-50*	25-50mm	4μm	6mm
3678-75*	50-75mm	5μm	8mm

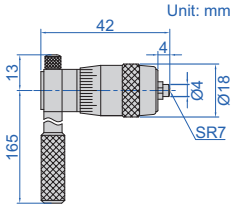
*Supplied with manufacturer inspection certificate

TUBULAR INSIDE MICROMETERS

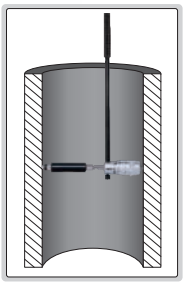
- Graduation 0.01mm
- Accuracy: (6+L/50)μm
  L=maximum measuring length (mm)
- Optional accessory: setting ring (code **6312**), gauge block accessory (code **6881**), cylinder gauge block (code **4001**), caliper/height gauge checker (code **6884**)



3221-200



application



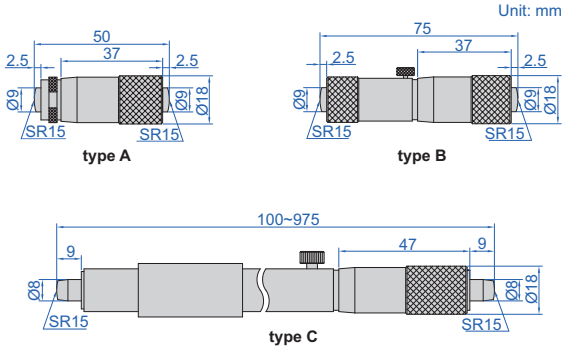
Code	Range	Travel of micrometer head	Extension rods
3221-32	25-32mm	7mm	—
3221-50	25-50mm	7mm	2 pcs
3221-63	50-63mm	13mm	—
3221-200	50-200mm	13mm	6 pcs
3221-300	50-300mm	13mm	10 pcs
3221-225	200-225mm	25mm	—
3221-500	200-500mm	25mm	3 pcs
3221-1000	200-1000mm	25mm	8 pcs

TUBULAR INSIDE MICROMETERS

- Micrometers up to 500mm meet DIN863-4
- Graduation 0.01mm
- Carbide measuring faces
- Optional accessory: gauge block accessory (code **6881**), cylinder gauge block (code **4001**), caliper/height gauge checker (code **6884**)



3229-225



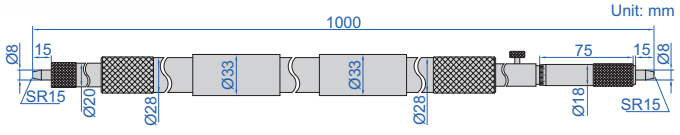
Code	Range	Type	Accuracy
3229-75	50-75mm	A	5μm
3229-100	75-100mm	B	5μm
3229-125	100-125mm	C	6μm
3229-150	125-150mm	C	6μm
3229-175	150-175mm	C	7μm
3229-200	175-200mm	C	7μm
3229-225	200-225mm	C	8μm
3229-250	225-250mm	C	8μm
3229-275	250-275mm	C	9μm
3229-300	275-300mm	C	9μm
3229-325	300-325mm	C	9μm
3229-350	325-350mm	C	9μm
3229-375	350-375mm	C	10μm
3229-400	375-400mm	C	10μm
3229-425	400-425mm	C	10μm
3229-450	425-450mm	C	10μm
3229-475	450-475mm	C	11μm
3229-500	475-500mm	C	11μm
3229-525	500-525mm	C	11μm
3229-550	525-550mm	C	11μm
3229-575	550-575mm	C	11μm
3229-600	575-600mm	C	12μm
3229-625	600-625mm	C	12μm
3229-650	625-650mm	C	12μm
3229-675	650-675mm	C	13μm
3229-700	675-700mm	C	13μm

Code	Range	Type	Accuracy
3229-725	700-725mm	C	13μm
3229-750	725-750mm	C	14μm
3229-775	750-775mm	C	14μm
3229-800	775-800mm	C	14μm
3229-825	800-825mm	C	15μm
3229-850	825-850mm	C	15μm
3229-875	850-875mm	C	15μm
3229-900	875-900mm	C	16μm
3229-925	900-925mm	C	16μm
3229-950	925-950mm	C	16μm
3229-975	950-975mm	C	17μm
3229-1000	975-1000mm	C	17μm

TUBULAR INSIDE MICROMETERS



3224-2000



Code	Range	Extension rods
3224-2000	1000-2000mm	50mm, 100mm (2 pcs), 200mm, 500mm
3224-3000	1000-3000mm	50mm, 100mm (2 pcs), 200mm, 500mm, 1000mm
3224-4000	1000-4000mm	50mm, 100mm (2 pcs), 200mm, 500mm, 1000mm (2 pcs)
3224-5000	1000-5000mm	50mm, 100mm (2 pcs), 200mm, 500mm, 1000mm (3 pcs)

- Micrometer head: 1000-1050mm
- Graduation 0.01mm
- Accuracy: (7+n+L/50)μm
  n=number of rods
  L=maximum measuring length (mm)
- Travel of micrometer head 50mm
- Carbide measuring faces

TUBULAR INSIDE MICROMETERS

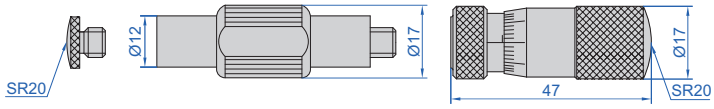
INSIZE PLUS



3684-100

- Micrometer head: 50-75mm
- Graduation: 0.01mm
- Carbide measuring faces

Unit: mm



Code	Range	Accuracy	Travel of micrometer head	Extension rods
3684-75	50-75mm	5μm	25mm	—
3684-100	50-100mm	5μm	25mm	25mm
3684-150	50-150mm	6μm	25mm	25mm, 50mm
3684-250	50-250mm	8μm	25mm	25mm, 50mm, 100mm
3684-300	50-300mm	9μm	25mm	25mm, 50mm (2 pcs), 100mm
3684-350	50-350mm	10μm	25mm	25mm, 50mm, 100mm (2 pcs)
3684-450	50-450mm	10μm	25mm	25mm, 50mm, 100mm, 200mm
3684-650	50-650mm	12μm	25mm	25mm, 50mm, 100mm, 200mm (2 pcs)
3684-850	50-850mm	15μm	25mm	25mm, 50mm, 100mm, 200mm, 400mm
3684-1250	50-1250mm	20μm	25mm	25mm, 50mm, 100mm, 200mm, 400mm (2 pcs)
3684-1450	50-1450mm	22μm	25mm	25mm, 50mm, 100mm, 200mm, 400mm, 600mm

7

TUBULAR INSIDE MICROMETERS

INSIZE PLUS

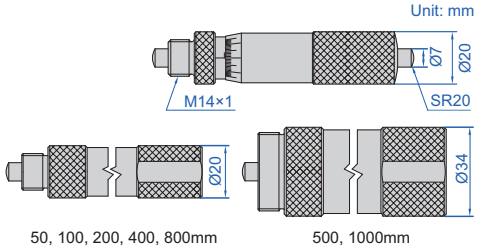
heat insulation extension rods



3683-200

- Micrometer head: 100-150mm
- Graduation: 0.01mm
- Carbide measuring faces
- Heat insulation extension rods

Unit: mm



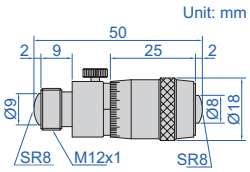
Code	Range	Accuracy	Travel of micrometer head	Heat insulation extension rods
3683-150	100-150mm	6μm	50mm	—
3683-200	100-200mm	7μm	50mm	50mm
3683-300	100-300mm	9μm	50mm	50mm, 100mm
3683-500	100-500mm	13μm	50mm	50mm, 100mm, 200mm
3683-900	100-900mm	16μm	50mm	50mm, 100mm, 200mm, 400mm
3683-1300	100-1300mm	22μm	50mm	50mm, 100mm, 200mm, 400mm (2 pcs)
3683-1700	100-1700mm	27μm	50mm	50mm, 100mm, 200mm, 400mm, 800mm
3683-2000	100-2000mm	32μm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm
3683-2100	100-2100mm	32μm	50mm	50mm, 100mm, 200mm, 400mm (2 pcs), 800mm
3683-2500	100-2500mm	40μm	50mm	50mm, 100mm, 200mm, 400mm, 800mm (2 pcs)
3683-3000	100-3000mm	50μm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm (2 pcs)
3683-4000	100-4000mm	60μm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm (3 pcs)
3683-5000	100-5000mm	72μm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm (4 pcs)
3683-6000	100-6000mm	90μm	50mm	50mm, 100mm, 200mm (2 pcs), 500mm, 1000mm (5 pcs)

TUBULAR INSIDE MICROMETERS

- Micrometer head: 50-63mm
- Graduation 0.01mm
- Accuracy: (3+n+L/50)μm
  n=number of rods
  L=maximum measuring length (mm)
- Supplied with setting standards
- Carbide measuring faces



3222-150



Code	Range	Travel of micrometer head	Extension rods
3222-63	50-63mm	13mm	—
3222-150	50-150mm	13mm	13mm, 25mm, 50mm
3222-300	50-300mm	13mm	13mm, 25mm, 50mm (2 pcs), 100mm
3222-500	50-500mm	13mm	13mm, 25mm, 50mm (2 pcs), 100mm, 200mm
3222-600	50-600mm	13mm	13mm, 25mm, 50mm, 100mm, 150mm, 200mm
3222-1000	50-1000mm	13mm	13mm, 25mm, 50mm (2 pcs), 100mm, 200mm (2 pcs), 300mm
3222-1500	50-1500mm	13mm	13mm, 25mm, 50mm (2 pcs), 100mm, 200mm (3 pcs), 300mm (2 pcs)

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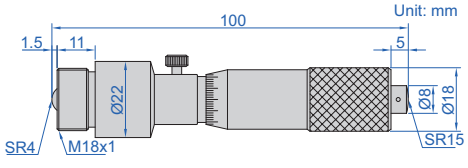
TUBULAR INSIDE MICROMETERS

- Micrometer head: 100-125mm
- Graduation 0.01mm
- Accuracy: (3+n+L/50)μm
  n=number of rods
  L=maximum measuring length (mm)
- Travel of micrometer head 25mm
- Supplied with setting standards
- Carbide measuring faces



3225-500

Code	Range	Extension rods
3225-125	100-125mm	—
3225-500	100-500mm	25mm, 50mm, 100mm, 200mm
3225-900	100-900mm	25mm, 50mm, 100mm, 200mm, 400mm
3225-1300	100-1300mm	25mm, 50mm, 100mm, 200mm, 400mm (2 pcs)
3225-1700	100-1700mm	25mm, 50mm, 100mm, 200mm, 400mm (3 pcs)
3225-2100	100-2100mm	25mm, 50mm, 100mm, 200mm, 400mm (4 pcs)



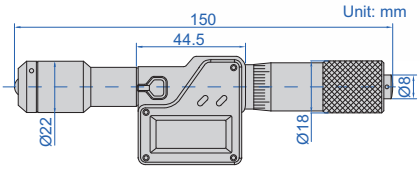
IP65 WATERPROOF

DATA OUTPUT

DIGITAL TUBULAR INSIDE MICROMETERS

- Micrometer head: 150-175mm
- Resolution: 0.001mm/0.00005"
- Accuracy: (3+n+L/50)μm
  n=number of rods
  L=maximum measuring length (mm)
- Carbide measuring faces
- Diameter of extension rods is 22mm
- IP65 dust/waterproof
- Button function: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Supplied with setting standards
- Power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery





With data interface (optional wireless transmitter code 7315-31, receiver is needed page 8)

Code	Range	Travel of micrometer head	Extension rods
3521-175	150-175mm	25mm	—
3521-1000	150-1000mm	25mm	25mm, 50mm (2 pcs), 100mm, 200mm, 400mm
3521-1500	150-1500mm	25mm	25mm, 50mm (2 pcs), 100mm (2 pcs), 200mm, 400mm (2 pcs)
3521-2000	150-2000mm	25mm	25mm, 50mm (2 pcs), 100mm, 200mm (2 pcs), 400mm (3 pcs)

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code
3521-□□□□WL

Code examples:

Original code	Wireless code
3521-175	**3521-175WL**
3521-1000	**3521-1000WL**

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INSPECTION CERTIFICATE

TUBULAR INSIDE MICROMETERS

INSIZE PLUS

- Carbide measuring faces for micrometer head and extension rods
- Points of extension rods are spring loaded
- Optional accessory:
  gauge block accessory (code **6881**),
  cylinder gauge block (code **4001**),
  caliper/height gauge checker (code **6884**)

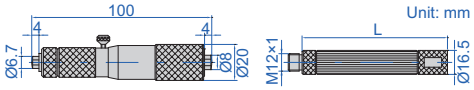


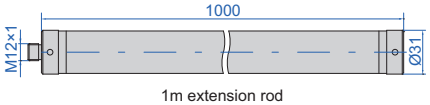
Extension rods

Length (L)	Accuracy	Weight	Material
25mm	±1.25μm	37g	steel
50mm	±1.25μm	65g	steel
100mm	±2μm	113g	steel
200mm	±3.5μm	208g	steel
400mm	±4.5μm	402g	steel
1000mm	±7.5μm	909g	carbon fiber

Micrometer head

Range	Graduation	Accuracy	Weight
100-125mm	0.01mm	±4μm	154g

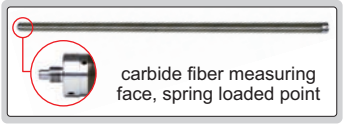




Code	Range	Extension rods
3634-350*	100-350mm	25mm, 200mm
3634-500*	100-500mm	25mm, 50mm, 100mm, 200mm
3634-1300*	100-1300mm	25mm, 50mm, 100mm, 200mm, 400mm (2 pcs)
3634-1500*	100-1500mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm (2 pcs)
3634-2100*	100-2100mm	25mm, 50mm, 100mm, 200mm, 400mm (4 pcs)
3634-3100*	100-3100mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (2 pcs)
3634-4100*	100-4100mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (3 pcs)
3634-5100*	100-5100mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (4 pcs)
3634-6100*	100-6100mm	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (5 pcs)

*Supplied with manufacturer inspection certificate

1m carbon fiber extension rod, light weight, no deform



DIGITAL NON-ROTATING SPINDLE INSIDE MICROMETERS

INSIZE PLUS

DATA OUTPUT

SPRING LOADED MEASURING POINT

VIDEO

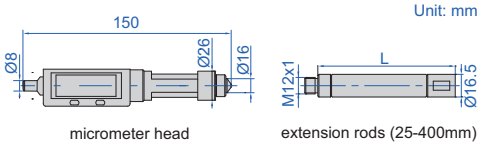
NON-ROTATING SPINDLE

INSPECTION CERTIFICATE



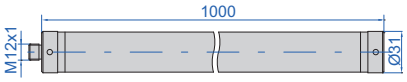
3635-950

Unit: mm



micrometer head

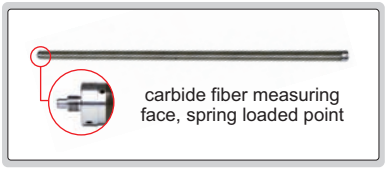
extension rods (25-400mm)



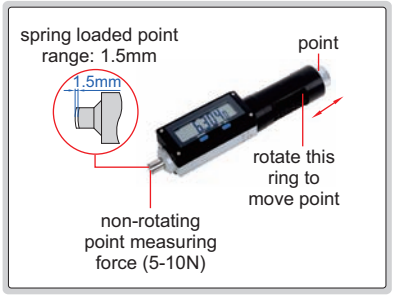
1m extension rod

- Carbide measuring faces for micrometer head and extension rods
- Points of extension rods are spring loaded
- Data output
- Button function: mm/inch, max./min. value tracking, preset value, hold, on/off, zero
- CR2032 battery, automatic power off, turn the sleeve to turn on
- Optional accessory: wireless transmitter code **7315-80** (receiver is needed) page 9, gauge block accessory (code **6881**), cylinder gauge block (code **4001**), caliper/height gauge checker (code **6884**)

1m carbon fiber extension rod, light weight, no deform



non-rotating spindle, spring loaded point and max./min. value tracking make it easy to find the right measuring position



Extension rods

Length (L)	Accuracy	Weight	Material
25mm	±1.25μm	37g	steel
50mm	±1.25μm	65g	steel
100mm	±2μm	113g	steel
200mm	±3.5μm	208g	steel
400mm	±4.5μm	402g	steel
1000mm	±7.5μm	909g	carbon fiber

Micrometer head

Range	Resolution	Accuracy	Repeatability	Measuring force	Weight
150-180mm/6-7"	0.001mm/0.00005" 0.01mm/0.0005" 0.0005mm/0.00002" (switchable)	±4μm	1μm	5-10N	275g

Code	Range	Extension rods
3635-350*	150-350mm/6-14"	25mm, 50mm, 100mm
3635-550*	150-550mm/6-22"	25mm, 50mm, 100mm, 200mm
3635-950*	150-950mm/6-38"	25mm, 50mm, 100mm, 200mm, 400mm
3635-1550*	150-1550mm/6-62"	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm (2 pcs)
3635-2150*	150-2150mm/6-86"	25mm, 50mm, 100mm, 200mm, 400mm (4 pcs)
3635-3150*	150-3150mm/6-126"	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (2 pcs)
3635-4150*	150-4150mm/6-166"	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (3 pcs)
3635-5150*	150-5150mm/6-206"	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (4 pcs)
3635-6150*	150-6150mm/6-246"	25mm, 50mm, 100mm, 200mm (2 pcs), 400mm, 1000mm (5 pcs)

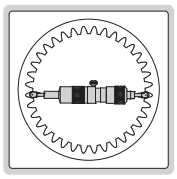
*Supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE

RELATIVE PRODUCT:
GEAR BORE GAGE (CODE 2428)

INTERNAL GEAR TOOTH MICROMETERS

INSIZE PLUS

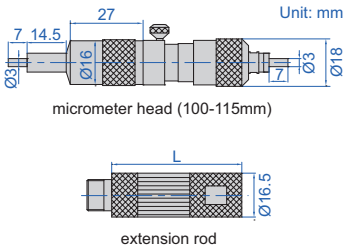


cylindrical tips (**optional**)





3638-200



- Measure over-pin diameter of gears
- Points of extension rods are spring loaded
- Optional accessory: ball tips (code **7383**), cylindrical tips (code **7393**)

Micrometer head

Range	Graduation	Accuracy
100-115mm	0.01mm	±4μm
150-175mm	0.01mm	±4μm

Code	Range	Micrometer head	Extension rod (L)
3638-200*	100-205mm	100-115mm	15mm, 25mm, 50mm
3638-500*	100-505mm	100-115mm	15mm, 25mm, 50mm, 100mm, 200mm
3638-900*	100-905mm	100-115mm	15mm, 25mm, 50mm, 100mm, 200mm, 400mm
3638-1100*	150-1150mm	150-175mm	25mm, 50mm, 100mm, 200mm, 200mm, 400mm

*Supplied with manufacturer inspection certificate

Extension rod

Length (L)	Accuracy
15mm	±1μm
25mm	±1.25μm
30mm	±1.25μm
50mm	±1.25μm
100mm	±2μm
200mm	±3.5μm
400mm	±4.5μm

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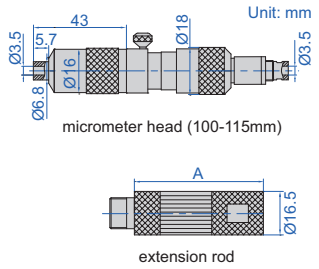
INSPECTION CERTIFICATE

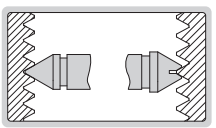
INTERNAL SCREW THREAD MICROMETERS

INSIZE PLUS



3641-200





- Measure pitch diameter of screw thread
- Points of extension rods are spring loaded
- Optional accessory: measuring tips for internal screw thread micrometer (code **7385**, L=13.5mm)

Micrometer head

Range	Graduation	Accuracy
100-115mm	0.01mm	±4μm
150-175mm	0.01mm	±4μm

Extension rod

Length (A)	Accuracy
15mm	±1μm
25mm	±1.25μm
50mm	±1.25μm
100mm	±2μm
200mm	±3.5μm
400mm	±4.5μm

Code	Range	Micrometer head	Extension rod (A)	Applicable tips
3641-200*	100-205mm	100-115mm	15mm, 25mm, 50mm	stem length L=13.5mm
3641-500*	100-505mm	100-115mm	15mm, 25mm, 50mm, 100mm, 200mm	stem length L=13.5mm
3641-900*	100-905mm	100-115mm	15mm, 25mm, 50mm, 100mm, 200mm, 400mm	stem length L=13.5mm
3641-1100*	150-1150mm	150-175mm	25mm, 50mm, 100mm, 200mm, 200mm, 400mm	stem length L=13.5mm

*Supplied with manufacturer inspection certificate

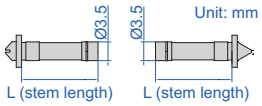
MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETERS

INSIZE PLUS

TIPS FOR TRAPEZOIDAL, ACME THREAD ARE ALSO AVAILABLE

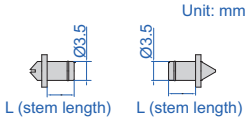
- Supplied in pair
- Made of hardened steel
- Suitable for **3641** series micrometers





7385-T106A





7385-T106B

60° thread angle

Code		Applicable pitch (mm)
L=13.5mm	L=5mm	
7385-T101A	7385-T101B	0.35
7385-T102A	7385-T102B	0.4/0.45
7385-T103A	7385-T103B	0.5/0.6
7385-T104A	7385-T104B	0.7/0.75/0.8
7385-T105A	7385-T105B	1/1.25
7385-T106A	7385-T106B	1.5/1.75
7385-T107A	7385-T107B	2.0/2.5
7385-T108A	7385-T108B	3.0/3.5
7385-T109A	7385-T109B	4.0/4.5/5.0
7385-T110A	7385-T110B	5.5/6.0

55° thread angle

Code		Applicable pitch (TPI)
L=13.5mm	L=5mm	
7385-T201A	7385-T201B	60/48
7385-T202A	7385-T202B	40/32
7385-T203A	7385-T203B	28/26/24/22
7385-T204A	7385-T204B	20/19/18/16
7385-T205A	7385-T205B	14/12/11
7385-T206A	7385-T206B	10/9/8
7385-T207A	7385-T207B	7/6
7385-T208A	7385-T208B	5/4.5/4
7385-T209A	7385-T209B	3.5/3.25/3/2.875/2.75
7385-T210A	7385-T210B	2.625/2.5/2

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INTERNAL SCREW THREAD MICROMETERS

- Graduation: 0.01mm
- Optional accessory: measuring tips for internal screw thread micrometer (code **7321**)

Code	Range
3226-1001	75-100mm
3226-1251	100-125mm
3226-1501	125-150mm
3226-1751	150-175mm
3226-2001	175-200mm

Code	Range
3226-2251	200-225mm
3226-2501	225-250mm
3226-2751	250-275mm
3226-3001	275-300mm

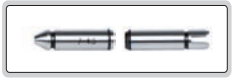


measuring tips for screw thread (optional)

measuring tips for screw thread (optional)

3226-1001

measuring tips for internal screw thread micrometer (**optional**)



MEASURING TIPS FOR INTERNAL SCREW THREAD MICROMETERS

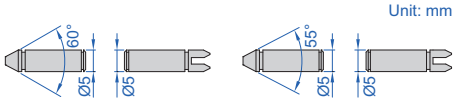
- Supplied in pair
- Suitable for **3226** series micrometers

Metric and unified screw (60° thread angle)

Code	Pitch
7321-T11	0.4-0.5mm/64-48TPI
7321-T12	0.6-0.9mm/44-28TPI
7321-T13	1-1.75mm/24-14TPI
7321-T14	2-3mm/13-9TPI
7321-T15	3.5-5mm/8-5TPI
7321-T16	5.5-7mm /4.5-3.5TPI
7321-T1S	6 pairs/set, including all above tips



7321-T1S



60° thread angle **55° thread angle**

Whitworth screw (55° thread angle)

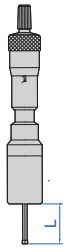
Code	Pitch
7321-T21	60-48TPI
7321-T22	48-40TPI
7321-T23	40-32TPI
7321-T24	32-24TPI
7321-T25	24-18TPI
7321-T26	18-14TPI
7321-T27	14-10TPI
7321-T28	10-7TPI
7321-T29	7-4.5TPI
7321-T210	4.5-3.5TPI
7321-T2S	10 pairs/set, including all above tips

INSPECTION CERTIFICATE

TWO POINTS/THREE POINTS INTERNAL MICROMETERS



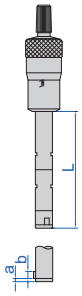
3227-6



type A
2-6mm, carbide measuring points two points



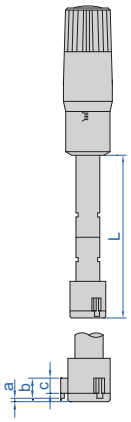
3227-8



type B
6-12mm, steel measuring points three points



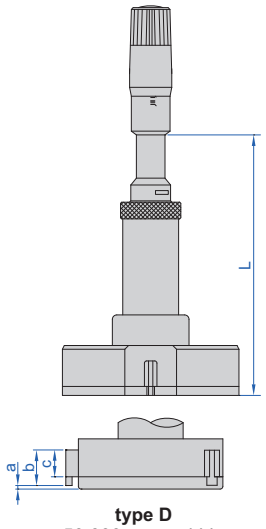
3227-16



type C
12-50mm, carbide measuring points three points



3227-125



type D
50-300mm, carbide measuring points three points

- Meet DIN863-4
- 2-12mm: graduation 0.001mm
  12-300mm: graduation 0.005mm
- Ratchet stop
- Optional accessory: setting rings (code **6312**), micrometer stand and clamp (code **6301** and **6301-2**)

7

Individual **(mm)**

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3227-2 *	2-2.5mm	A (two points)	6μm	Ø2.5 (included)	—	12	—	—	—
3227-3 *	2.5-3mm	A (two points)	6μm	Ø2.5 (included)	—	12	—	—	—
3227-4 *	3-4mm	A (two points)	6μm	Ø4 (included)	—	22	—	—	—
3227-5 *	4-5mm	A (two points)	6μm	Ø5 (included)	—	22	—	—	—
3227-6 *	5-6mm	A (two points)	6μm	Ø6 (included)	—	22	—	—	—
3227-8 *	6-8mm	B (three points)	4μm	Ø6 (included)	100	54.5	1.5	2.5	—
3227-10 *	8-10mm	B (three points)	4μm	Ø8 (included)	100	54.5	1.5	2.5	—
3227-12 *	10-12mm	B (three points)	4μm	Ø10 (included)	100	54.5	1.5	2.5	—
3227-16 *	12-16mm	C (three points)	4μm	Ø16 (included)	150	80	0.5	6	4.5
3227-20 *	16-20mm	C (three points)	4μm	Ø16 (included)	150	80	0.5	6	4.5
3227-25 *	20-25mm	C (three points)	4μm	Ø25 (included)	150	90	0.5	8	6
3227-30 *	25-30mm	C (three points)	4μm	Ø25 (included)	150	90	0.5	8	6
3227-40 *	30-40mm	C (three points)	4μm	Ø40 (included)	150	97	0.5	14	12
3227-50 *	40-50mm	C (three points)	5μm	Ø40 (included)	150	97	0.5	14	12
3227-63 *	50-63mm	D (three points)	5μm	Ø62 (included)	150	114	0.5	17.5	14.5
3227-75 *	62-75mm	D (three points)	5μm	Ø62 (included)	150	114	0.5	17.5	14.5
3227-88 *	75-88mm	D (three points)	5μm	Ø87 (included)	150	114	0.5	17.5	14.5
3227-100 *	87-100mm	D (three points)	5μm	Ø87 (included)	150	114	0.5	17.5	14.5
3227-125 *	100-125mm	D (three points)	6μm	**optional**	150	140	0.9	29	25
3227-150 *	125-150mm	D (three points)	6μm	**optional**	150	140	0.9	29	25
3227-175 *	150-175mm	D (three points)	7μm	**optional**	150	140	0.9	29	25
3227-200 *	175-200mm	D (three points)	7μm	**optional**	150	140	0.9	29	25
3227-225	200-225mm	D (three points)	8μm	**optional**	150	140	0.9	29	25
3227-250	225-250mm	D (three points)	8μm	**optional**	150	140	0.9	29	25
3227-275	250-275mm	D (three points)	9μm	**optional**	150	140	0.9	29	25
3227-300	275-300mm	D (three points)	9μm	**optional**	150	140	0.9	29	25

To be continued

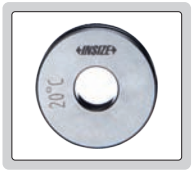
Continued from previous page

extension rod



included

setting ring



2-100mm: included
100-300mm: **optional**

micrometer stand with clamp **(optional)**





3227-504

Set

Code	Range	Micrometers included	Setting ring (included)	Extension rod (included)
3227-232*	2-3mm	2-2.5mm, 2.5-3mm	Ø2.5mm	—
3227-363*	3-6mm	3-4mm, 4-5mm, 5-6mm	Ø4mm, Ø5mm, Ø6mm	—
3227-123*	6-12mm	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
3227-202*	12-20mm	12-16mm, 16-20mm	Ø16mm	150mm
3227-504*	20-50mm	20-25mm, 25-30mm, 30-40mm, 40-50m	Ø25mm, Ø40mm	150mm
3227-1004*	50-100mm	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm

*Supplied with manufacturer inspection certificate

DIGITAL TWO POINTS/THREE POINTS INTERNAL MICROMETERS

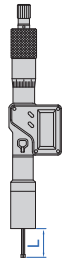
IP65 WATERPROOF

DATA OUTPUT

INSPECTION CERTIFICATE



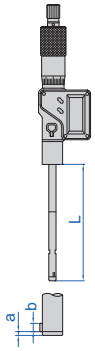
3127-5



type A
2-6mm, carbide measuring points two points



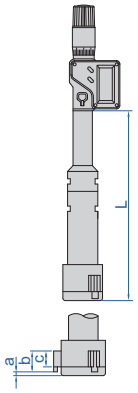
3127-12



type B
6-12mm, steel measuring points three points



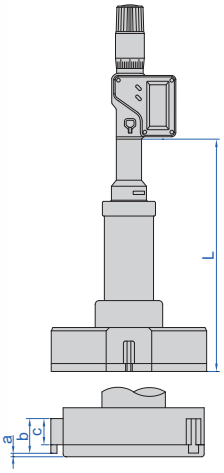
3127-40



type C
12-50mm, carbide measuring points three points



3127-125



type D
50-300mm, carbide measuring points three points

extension rod



included

setting ring



2-100mm: included
100-300mm: **optional**

micrometer stand with clamp (**optional**)





3127-202

- Resolution 0.001mm/0.00005" (resolution of **3127-275** and **3127-300** is 0.001mm/0.0001")
- IP65 dust/waterproof
- Buttons: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Optional accessory: wireless transmitter code **7315-31** (receiver is needed) page 8, setting ring (code **6312**), micrometer stand and clamp (code **6301** and **6301-2**)

To be continued

Continued from previous page

Individual (mm)

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3127-2*	2-2.5mm/0.08-0.10"	A (two points)	6µm	Ø2.5 (included)	—	12	—	—	—
3127-3*	2.5-3mm/0.10-0.12"	A (two points)	6µm	Ø2.5 (included)	—	12	—	—	—
3127-4*	3-4mm/0.12-0.16"	A (two points)	6µm	Ø4 (included)	—	22	—	—	—
3127-5*	4-5mm/0.16-0.20"	A (two points)	6µm	Ø5 (included)	—	22	—	—	—
3127-6*	5-6mm/0.20-0.24"	A (two points)	6µm	Ø6 (included)	—	22	—	—	—
3127-8*	6-8mm/0.24-0.31"	B (three points)	4µm	Ø6 (included)	100	57	1.5	2.5	—
3127-10*	8-10mm/0.31-0.39"	B (three points)	4µm	Ø8 (included)	100	57	1.5	2.5	—
3127-12*	10-12mm/0.39-0.47"	B (three points)	4µm	Ø10 (included)	100	57	1.5	2.5	—
3127-16*	12-16mm/0.47-0.63"	C (three points)	4µm	Ø16 (included)	150	99	0.5	6	4.5
3127-20*	16-20mm/0.63-0.79"	C (three points)	4µm	Ø16 (included)	150	99	0.5	6	4.5
3127-25*	20-25mm/0.79-0.98"	C (three points)	4µm	Ø25 (included)	150	105	0.5	8	6
3127-30*	25-30mm/0.98-1.18"	C (three points)	4µm	Ø25 (included)	150	105	0.5	8	6
3127-40*	30-40mm/1.18-1.57"	C (three points)	4µm	Ø40 (included)	150	110	0.5	14	12
3127-50*	40-50mm/1.57-1.97"	C (three points)	5µm	Ø40 (included)	150	110	0.5	14	12
3127-63*	50-63mm/1.97-2.48"	D (three points)	5µm	Ø62 (included)	150	127	0.5	17.5	14.5
3127-75*	62-75mm/2.44-2.95"	D (three points)	5µm	Ø62 (included)	150	127	0.5	17.5	14.5
3127-88*	75-88mm/2.95-3.46"	D (three points)	5µm	Ø87 (included)	150	127	0.5	17.5	14.5
3127-100*	87-100mm/3.43-3.94"	D (three points)	5µm	Ø87 (included)	150	127	0.5	17.5	14.5
3127-125*	100-125mm/3.94-4.92"	D (three points)	6µm	**optional**	150	175	0.9	29	25
3127-150*	125-150mm/4.92-5.91"	D (three points)	6µm	**optional**	150	175	0.9	29	25
3127-175*	150-175mm/5.91-6.89"	D (three points)	7µm	**optional**	150	175	0.9	29	25
3127-200*	175-200mm/6.89-7.87"	D (three points)	7µm	**optional**	150	175	0.9	29	25
3127-225	200-225mm/7.87-8.86"	D (three points)	8µm	**optional**	150	175	0.9	29	25
3127-250	225-250mm/8.86-9.84"	D (three points)	8µm	**optional**	150	175	0.9	29	25
3127-275	250-275mm/9.84-10.83"	D (three points)	9µm	**optional**	150	175	0.9	29	25
3127-300	275-300mm/10.83-11.81"	D (three points)	9µm	**optional**	150	175	0.9	29	25

Set

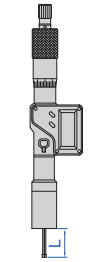
Code	Range	Micrometers included	Setting ring (included)	Extension rod (included)
3127-232*	2-3mm/0.08-0.12"	2-2.5mm, 2.5-3mm	Ø2.5mm	—
3127-363*	3-6mm/0.12-0.24"	3-4mm, 4-5mm, 5-6mm	Ø4mm, Ø5mm, Ø6mm	—
3127-123*	6-12mm/0.24-0.47"	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
3127-202*	12-20mm/0.47-0.79"	12-16mm, 16-20mm	Ø16mm	150mm
3127-504*	20-50mm/0.79-1.97"	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
3127-1004*	50-100mm/1.97-3.94"	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm

*Supplied with manufacturer inspection certificate

WIRELESS DIGITAL TWO POINTS/THREE POINTS INTERNAL MICROMETERS (ZIGBEE)



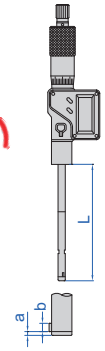
3113-5WL



type A
2-6mm, carbide measuring points two points



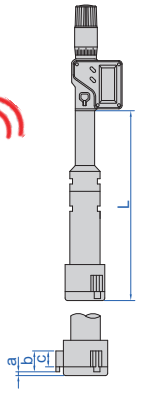
3113-12WL



type B
6-12mm, steel measuring points three points



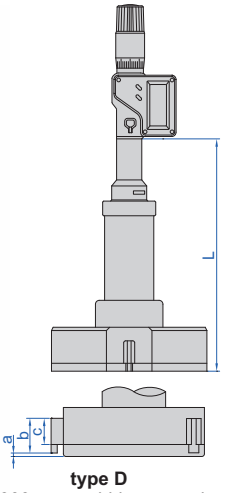
3113-40WL



type C
12-50mm, carbide measuring points three points



3113-125WL



type D
50-300mm, carbide measuring points three points

To be continued

Continued from previous page

IP65 WATERPROOF | DATA OUTPUT | INSPECTION CERTIFICATE

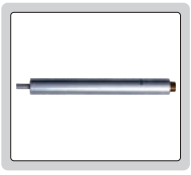
- Resolution 0.001mm/0.00005" (resolution of **3113-275WL** and **3113-300WL** is 0.001mm/0.0001")
- IP65 dust/waterproof
- Built-in wireless data transmission module, Zigbee signal
- Transmission distance is 10 meter (under the condition of no obstruction and no electromagnetic interference)
- Buttons: on/off, set, mm/inch, data transmit
- Data output
- Automatic power off
- Ratchet stop
- Built-in rechargeable lithium battery
- Optional accessory: receiver (code **7315-2/3/6/7/8/9**), setting ring (code **6312**), micrometer stand and clamp (code **6301** and **6301-2**)

setting ring



2-100mm: included
100-300mm: **optional**

extension rod



included

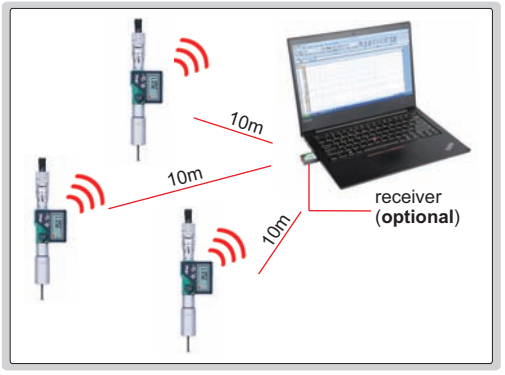
receiver (**optional**)



micrometer stand with clamp (**optional**)



application



Individual (mm)

Code	Range	Type	Accuracy	Setting ring	Extension rod (included)	L	a	b	c
3113-2WL*	2-2.5mm/0.08-0.10"	A (two points)	6μm	Ø2.5 (included)	—	12	—	—	—
3113-3WL*	2.5-3mm/0.10-0.12"	A (two points)	6μm	Ø2.5 (included)	—	12	—	—	—
3113-4WL*	3-4mm/0.12-0.16"	A (two points)	6μm	Ø4 (included)	—	22	—	—	—
3113-5WL*	4-5mm/0.16-0.20"	A (two points)	6μm	Ø5 (included)	—	22	—	—	—
3113-6WL*	5-6mm/0.20-0.24"	A (two points)	6μm	Ø6 (included)	—	22	—	—	—
3113-8WL*	6-8mm/0.24-0.31"	B (three points)	4μm	Ø6 (included)	100	57	1.5	2.5	—
3113-10WL*	8-10mm/0.31-0.39"	B (three points)	4μm	Ø8 (included)	100	57	1.5	2.5	—
3113-12WL*	10-12mm/0.39-0.47"	B (three points)	4μm	Ø10 (included)	100	57	1.5	2.5	—
3113-16WL*	12-16mm/0.47-0.63"	C (three points)	4μm	Ø16 (included)	150	99	0.5	6	4.5
3113-20WL*	16-20mm/0.63-0.79"	C (three points)	4μm	Ø16 (included)	150	99	0.5	6	4.5
3113-25WL*	20-25mm/0.79-0.98"	C (three points)	4μm	Ø25 (included)	150	105	0.5	8	6
3113-30WL*	25-30mm/0.98-1.18"	C (three points)	4μm	Ø25 (included)	150	105	0.5	8	6
3113-40WL*	30-40mm/1.18-1.57"	C (three points)	4μm	Ø40 (included)	150	110	0.5	14	12
3113-50WL*	40-50mm/1.57-1.97"	C (three points)	5μm	Ø40 (included)	150	110	0.5	14	12
3113-63WL*	50-63mm/1.97-2.48"	D (three points)	5μm	Ø62 (included)	150	127	0.5	17.5	14.5
3113-75WL*	62-75mm/2.44-2.95"	D (three points)	5μm	Ø62 (included)	150	127	0.5	17.5	14.5
3113-88WL*	75-88mm/2.95-3.46"	D (three points)	5μm	Ø87 (included)	150	127	0.5	17.5	14.5
3113-100WL*	87-100mm/3.43-3.94"	D (three points)	5μm	Ø87 (included)	150	127	0.5	17.5	14.5
3113-125WL*	100-125mm/3.94-4.92"	D (three points)	6μm	**optional**	150	175	0.9	29	25
3113-150WL*	125-150mm/4.92-5.91"	D (three points)	6μm	**optional**	150	175	0.9	29	25
3113-175WL*	150-175mm/5.91-6.89"	D (three points)	7μm	**optional**	150	175	0.9	29	25
3113-200WL*	175-200mm/6.89-7.87"	D (three points)	7μm	**optional**	150	175	0.9	29	25
3113-225WL	200-225mm/7.87-8.86"	D (three points)	8μm	**optional**	150	175	0.9	29	25
3113-250WL	225-250mm/8.86-9.84"	D (three points)	8μm	**optional**	150	175	0.9	29	25
3113-275WL	250-275mm/9.84-10.83"	D (three points)	9μm	**optional**	150	175	0.9	29	25
3113-300WL	275-300mm/10.83-11.81"	D (three points)	9μm	**optional**	150	175	0.9	29	25

Set

Code	Range	Micrometers included	Setting ring (included)	Extension rod (included)
3113-232WL*	2-3mm/0.08-0.12"	2-2.5mm, 2.5-3mm	Ø2.5mm	—
3113-363WL*	3-6mm/0.12-0.24"	3-4mm, 4-5mm, 5-6mm	Ø4mm, Ø5mm, Ø6mm	—
3113-123WL*	6-12mm/0.24-0.47"	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm
3113-202WL*	12-20mm/0.47-0.79"	12-16mm, 16-20mm	Ø16mm	150mm
3113-504WL*	20-50mm/0.79-1.97"	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm
3113-1004WL*	50-100mm/1.97-3.94"	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm

*Supplied with manufacturer inspection certificate

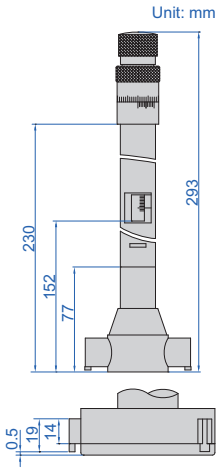
INSPECTION CERTIFICATE

WIDE RANGE THREE POINTS INTERNAL MICROMETERS

- Meet DIN863-4
- Graduation 0.001mm
- Carbide measuring faces
- Ratchet stop
- Setting rings are included (except 200-300mm)

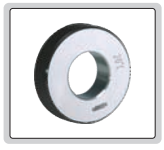


3228-70



Code	Range	Accuracy	Setting ring
3228-70*	50-70mm	5μm	Ø50mm (included)
3228-100*	70-100mm	5μm	Ø70mm (included)
3228-150*	100-150mm	6μm	Ø100mm (included)
3228-250*	150-250mm	8μm	Ø150mm (included)
3228-300*	200-300mm	9μm	Ø200mm (**optional**)

*Supplied with manufacturer inspection certificate



setting ring

IP54 WATERPROOF

DATA OUTPUT

DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETERS

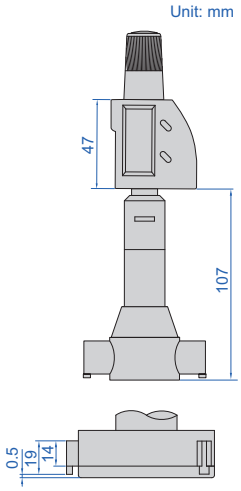
7

INSPECTION CERTIFICATE

- Meet DIN863-4
- Resolution 0.001mm/0.00005"
  (resolution of **3128-300** is 0.001mm/0.0001")
- IP54 dust/waterproof
- Buttons: on/off, set, mm/inch
- Data output
- Automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Setting rings are included (except 200-300mm)
- Optional accessory:
  wireless transmitter code **7315-30** (receiver is needed) page 7

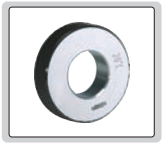


3128-150



Code	Range	Accuracy	Setting ring	Extension rod (included)
3128-70*	50-70mm/1.97-2.76"	5μm	Ø50mm (included)	150mm
3128-100*	70-100mm/2.76-3.94"	5μm	Ø70mm (included)	150mm
3128-150*	100-150mm/3.94-5.91"	6μm	Ø100mm (included)	150mm
3128-250*	150-250mm/5.91-9.84"	8μm	Ø150mm (included)	150mm
3128-300*	200-300mm/7.87-11.81"	9μm	Ø200mm (**optional**)	150mm

*Supplied with manufacturer inspection certificate



setting ring



extension rod (included)

DIGITAL WIDE RANGE THREE POINTS INTERNAL MICROMETER

IP54 WATERPROOF

DATA OUTPUT

extension rod (included)

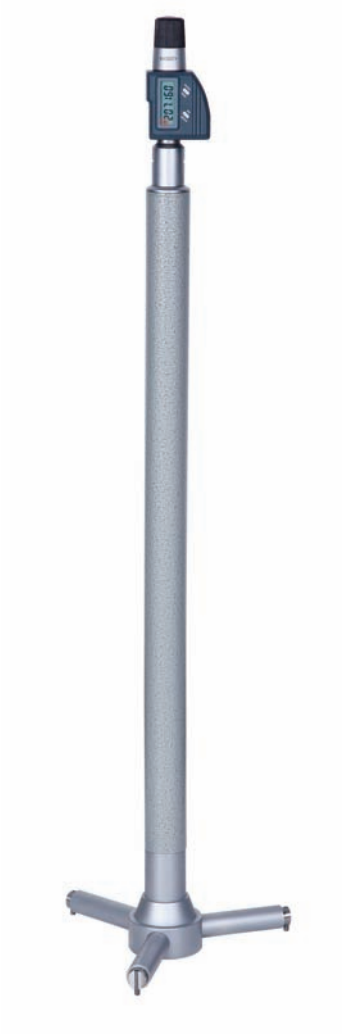


50mm replaceable measuring jaws (included)



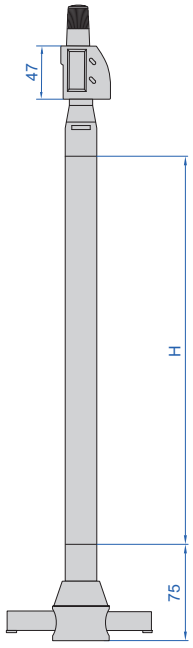
100mm replaceable measuring jaws (included)

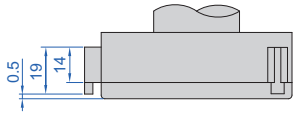




3621-500

Unit: mm





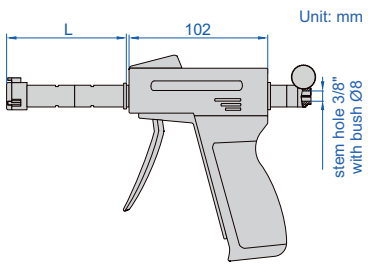
- Resolution 0.001mm/0.0001" (resolution is 0.00005" when <10")
- Replaceable measuring jaws, wide measuring range
- Buttons: on/off, set, mm/inch
- Data output
- Automatic power off
- Carbide measuring faces
- Ratchet stop
- Supplied with extension rods
- Optional accessary:
  setting rings (code **6312-200**, **6312-300**, **6312-400**),
  wireless transmitter code **7315-30** (receiver is needed) page 7

Code	Range	Accuracy	Measuring jaws (included)	Extension rods H (included)
3621-500	200-500mm/7.87-19.69"	(1+L/50)μm*	50mm(3pcs), 100mm(3pcs)	150mm, 500mm

*L=maximum measuring diameter (mm)

INSPECTION CERTIFICATE

PISTOL GRIP THREE POINTS BORE GAUGES



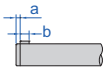
- Optional accessory: digital indicators (code **2103-101F**, resolution 0.001mm/0.00005"), setting rings (code **6312**)


setting ring

6-100mm: included
100-300mm: **optional**


extension rod

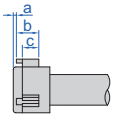
included



type A
6-12mm, steel measuring points


digital indicator is optional

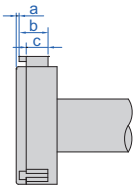
2124-8



type B
12-50mm, carbide measuring points


digital indicator is optional

2124-25



type C
50-300mm, carbide measuring points


digital indicator is optional

2124-125

Individual (mm)

Code	Range	Type	Accuracy (without digital indicator)	Setting ring	Extension rod (included)	L	a	b	c
2124-8 *	6-8mm	A	4μm	Ø6mm (included)	100mm	50	1.5	2.5	—
2124-10 *	8-10mm	A	4μm	Ø8mm (included)	100mm	50	1.5	2.5	—
2124-12 *	10-12mm	A	4μm	Ø10mm (included)	100mm	50	1.5	2.5	—
2124-16 *	12-16mm	B	4μm	Ø16mm (included)	150mm	65	0.5	6	4.5
2124-20 *	16-20mm	B	4μm	Ø16mm (included)	150mm	65	0.5	6	4.5
2124-25 *	20-25mm	B	4μm	Ø25mm (included)	150mm	91	0.5	8	6
2124-30 *	25-30mm	B	4μm	Ø25mm (included)	150mm	91	0.5	8	6
2124-40 *	30-40mm	B	4μm	Ø40mm (included)	150mm	97	0.5	14	12
2124-50 *	40-50mm	B	5μm	Ø40mm (included)	150mm	97	0.5	14	12
2124-63 *	50-63mm	C	5μm	Ø62mm (included)	150mm	112	0.5	17.5	14.5
2124-75 *	62-75mm	C	5μm	Ø62mm (included)	150mm	112	0.5	17.5	14.5
2124-88 *	75-88mm	C	5μm	Ø87mm (included)	150mm	112	0.5	17.5	14.5
2124-100*	87-100mm	C	5μm	Ø87mm (included)	150mm	112	0.5	17.5	14.5
2124-125*	100-125mm	C	6μm	**optional**	150mm	140	0.9	29	25
2124-150*	125-150mm	C	6μm	**optional**	150mm	140	0.9	29	25
2124-175*	150-175mm	C	7μm	**optional**	150mm	140	0.9	29	25
2124-200*	175-200mm	C	7μm	**optional**	150mm	140	0.9	29	25
2124-225	200-225mm	C	8μm	**optional**	150mm	140	0.9	29	25
2124-250	225-250mm	C	8μm	**optional**	150mm	140	0.9	29	25
2124-275	250-275mm	C	9μm	**optional**	150mm	140	0.9	29	25
2124-300	275-300mm	C	9μm	**optional**	150mm	140	0.9	29	25

Set

Code	Range	Probes included	Setting ring (included)	Extension rod (included)	Remark
2124-S123*	6-12mm	6-8mm, 8-10mm, 10-12mm	Ø6mm, Ø8mm, Ø10mm	100mm	includes 1 handle
2124-S202*	12-20mm	12-16mm, 16-20mm	Ø16mm	150mm	includes 1 handle
2124-S504*	20-50mm	20-25mm, 25-30mm, 30-40mm, 40-50mm	Ø25mm, Ø40mm	150mm	includes 2 handles
2124-S1004*	50-100mm	50-63mm, 62-75mm, 75-88mm, 87-100mm	Ø62mm, Ø87mm	150mm	includes 1 handle



2124- S504

*Supplied with manufacturer inspection certificate

BORE PLUG GAUGES

INSIZE PLUS

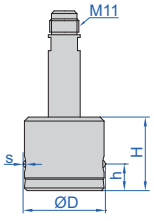
VIDEO



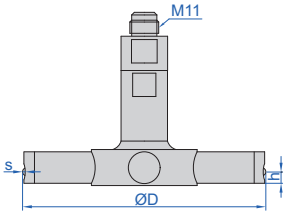
type A



type B

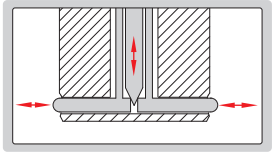


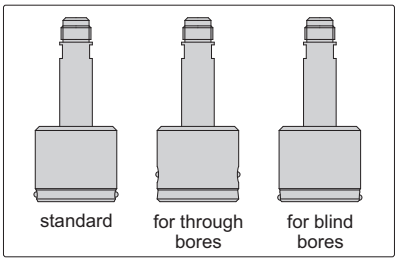
type A (2-130mm)



type B (130.1-300mm)

principle of measurement





SPECIFICATION OF PROBE **(mm)**

Range (ØD)		2-3	3.1-4	4.1-6	6.1-9	9.1-12	12.1-20	20.1-40	40.1-60	60.1-130	130.1-300
Type		A	A	A	A	A	A	A	A	A	B
Travel of point (s)		0.15	0.15	0.15	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Height of point (h)	standard	1	1.5	1.5	2.5	2.5	2.5	3.5	3.5	4	6
	for through bores	—	6	6	6	10	10	10	10	10	—
	for blind bores	0.7	1	1	1	1	1	1.2	1.2	1.2	3
Height of probe (H)		17.5	26	10	15	15	15	20	28	33	—
Repeatability		0.001	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.002

To be continued

Continued from previous page





PROBE

Code	Type
4653-A□□□□□	standard
4653-B□□□□□	for through bores
4653-C□□□□□	for blind bores

Ordering examples:

Code	Type	Range
4653-A30D6H7	standard	30.6H7

Attention: "D" stands for "."

SETTING RING

Code
6312-□□□□□





HANDLE

Code	Length (L)	Diameter (ØD)	Retraction
4653-150	45mm	12mm	without
4653-1105	105mm	12mm	without
4653-1235	235mm	12mm	without
4653-2145	145mm	18mm *	without
4653-2235	235mm	18mm *	without
4653-H70	70mm	12mm	with

* When measuring range is larger than 60mm, we suggest to use the 18mm handle



4653-G



4653-J



DEPTH STOP

Code	Applicable for probe
4653-G□□□□□	3.0~60mm
4653-J□□□□□	20~150mm

Ordering examples:

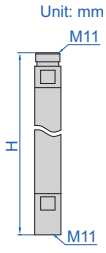
Code	Applicable for probe
4653-G22H7	22H7



EXTENSION ROD FOR HANDLE

Code	Length (H)
4653-R50	50mm
4653-R100	100mm
4653-R250	250mm
4653-R500	500mm

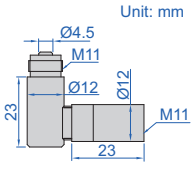






90° ADAPTER

Code
4653-K1



application





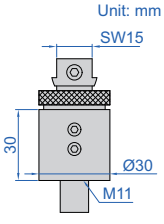
HANDLE FOR INDUCTIVE PROBE

Code
4653-F110

application







application



BASE

Code	Applicable holding stem
4663-STAND	Ø12mm
4663-STAND1	Ø18mm



FLOATING CLAMP HANDLE

Code	Length (L)	Diameter (ØD)	Floating range	Applicable range
4653-M20	26mm	Ø20mm	±0.4mm	6-20mm
4653-M30	29.5mm	Ø30mm	±0.7mm	20-60mm
4653-M50	58mm	Ø50mm	±0.75mm	60-130mm

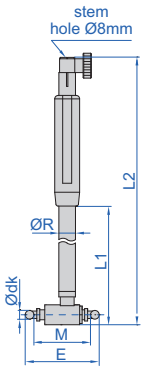
Suitable for automatic measurement

GEAR BORE GAUGES

INSIZE PLUS

RELATIVE PRODUCT: INTERNAL GEAR TOOTH MICROMETER (CODE 3638)

VIDEO



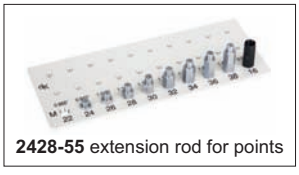


- Tungsten carbide ball points, diameter accuracy 2μm
- Optional accessory:
  – Dial indicator or dial comparator
  – Ball points
  – Thread adaptor
  – Long handle (code **7352**)

(mm)

Code	Range (E)	Accuracy (without dial comparator)	Repeatability (without dial comparator)	ØR	L1	L2	Thread for ball points
2428-12	8-12mm	2μm	0.5μm	5	100	165	M1.6
2428-22	12-22mm	2μm	0.5μm	5	102	168	M1.6
2428-55	22-55mm	2μm	0.5μm	8	110	204	M2.5
2428-250	55-250mm	2μm	0.5μm	12	177	290	M4
2428-510	100-510mm	2μm	0.5μm	18	235	363	M4

extension rod for points (included)

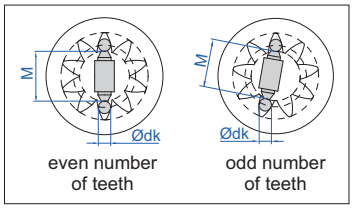


2428-55 extension rod for points

Ball points (optional)

Ball point diameter Ødk	2428-12	2428-22	2428-55	2428-250	2428-510
	point thread M1.6	point thread M1.6	point thread M2.5	point thread M4	point thread M4
	point code	point code	point code	point code	point code
1mm	**2428-A1**	**2428-E1**	**2428-B1**	**2428-C1**	**2428-C1**
1.5mm	**2428-A1D5**	**2428-E1D5**	**2428-B1D5**	**2428-C1D5**	**2428-C1D5**
2mm	**2428-A2**	**2428-E2**	**2428-B2**	**2428-C2**	**2428-C2**
2.5mm	—	**2428-E2D5**	**2428-B2D5**	**2428-C2D5**	**2428-C2D5**
3mm	—	**2428-E3**	**2428-B3**	**2428-C3**	**2428-C3**
3.5mm	—	**2428-E3D5**	**2428-B3D5**	**2428-C3D5**	**2428-C3D5**
4mm	—	**2428-E4**	**2428-B4**	**2428-C4**	**2428-C4**
4.5mm	—	—	**2428-B4D5**	**2428-C4D5**	**2428-C4D5**
5mm	—	—	**2428-B5**	**2428-C5**	**2428-C5**
5.5mm	—	—	**2428-B5D5**	**2428-C5D5**	**2428-C5D5**
6mm	—	—	**2428-B6**	**2428-C6**	**2428-C6**
6.5mm	—	—	**2428-B6D5**	**2428-C6D5**	**2428-C6D5**
7mm	—	—	**2428-B7**	**2428-C7**	**2428-C7**
7.5mm	—	—	**2428-B7D5**	**2428-C7D5**	**2428-C7D5**
8mm	—	—	**2428-B8**	**2428-C8**	**2428-C8**
8.5mm	—	—	**2428-B8D5**	**2428-C8D5**	**2428-C8D5**
9mm	—	—	**2428-B9**	**2428-C9**	**2428-C9**
9.5mm	—	—	**2428-B9D5**	**2428-C9D5**	**2428-C9D5**
10mm	—	—	**2428-B10**	**2428-C10**	**2428-C10**

method of measurement

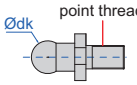


ball points (**optional**), in pair



Thread adaptor (optional)

Code	Thread	Remark
2428-D1	M1.6/M2.5	For example, use **2428-E1** with **2428-D1** to replace **2428-B1**
2428-D2	M2.5/M4	For example, use **2428-B1** with **2428-D2** to replace **2428-C1**

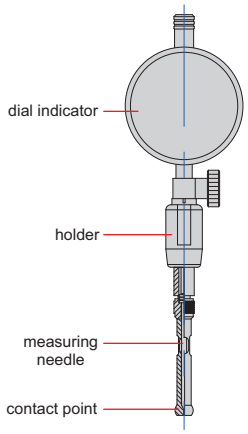


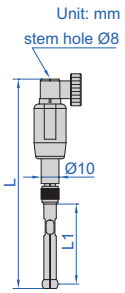
SPLIT TYPE DIAL BORE GAUGES

INSIZE PLUS

digital indicator is optional

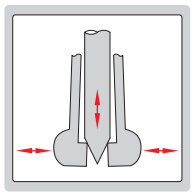






- Split type contact points
- Accuracy (without indicator): 3μm (measuring range 0.95~10mm), 4μm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1μm
- Optional accessory: digital/dial indicators or dial comparator

principle of measurement



VIDEO

(mm)

Contact point					Measuring needle	Setting ring	
code	measuring range	measuring depth (L1)	total length (L)	material of points	code	code	diameter
2426-1	0.95-1.15	13	89	carbide		**6312-1**	1
2426-1D1	1.07-1.25	13	89	carbide		**6312-1D1**	1.1
2426-1D2	1.17-1.35	13	89	carbide	**2426-N1D4**	**6312-1D2**	1.2
2426-1D3	1.27-1.45	13	89	carbide		**6312-1D3**	1.3
2426-1D4	1.37-1.55	13	89	carbide		**6312-1D4**	1.4
2426-1D75	1.5-1.9	17	93	carbide		**6312-1D75**	1.75
2426-2	1.8-2.2	17	93	carbide	**2426-N2D25**	**6312-2**	2
2426-2D25	2.05-2.45	17	93	carbide		**6312-2D25**	2.25
2426-2D5	2.3-2.7	25	101	carbide		**6312-2D5**	2.5
2426-2D75	2.55-2.95	25	101	carbide		**6312-2D75**	2.75
2426-3	2.8-3.2	25	101	carbide		**6312-3**	3
2426-3D25	3.05-3.45	25	101	carbide	**2426-N4**	**6312-3D25**	3.25
2426-3D5	3.3-3.7	25	101	carbide		**6312-3D5**	3.5
2426-3D75	3.55-3.95	25	101	carbide		**6312-3D75**	3.75
2426-4	3.8-4.2	25	101	carbide		**6312-4**	4
2426-4D5	4.15-4.8	41	118	DLC coating		**6312-4D5**	4.5
2426-5	4.7-5.3	41	118	DLC coating		**6312-5**	5
2426-5D5	5.2-5.8	41	118	DLC coating		**6312-5D5**	5.5
2426-6	5.7-6.3	41	118	DLC coating		**6312-6**	6
2426-6D5	6.2-6.8	41	118	DLC coating	**2426-N9**	**6312-6D5**	6.5
2426-7	6.7-7.3	41	118	DLC coating		**6312-7**	7
2426-7D5	7.2-7.8	45	118	DLC coating		**6312-7D5**	7.5
2426-8	7.7-8.3	45	118	DLC coating		**6312-8**	8
2426-8D5	8.2-8.8	45	118	DLC coating		**6312-8D5**	8.5
2426-9	8.7-9.3	45	118	DLC coating		**6312-9**	9
2426-10	9.2-10.5	45	118	DLC coating		**6312-10**	10
2426-11	10.2-11.5	45	118	DLC coating		**6312-11**	11
2426-12	11.2-12.5	45	118	DLC coating		**6312-12**	12
2426-13	12.2-13.5	45	118	DLC coating		**6312-13**	13
2426-14	13.4-14.6	45	118	DLC coating		**6312-14**	14
2426-15	14.4-15.6	45	118	DLC coating	**2426-N20**	**6312-15**	15
2426-16	15.4-16.6	45	118	DLC coating		**6312-16**	16
2426-17	16.4-17.6	45	118	DLC coating		**6312-17**	17
2426-18	17.4-18.6	45	118	DLC coating		**6312-18**	18
2426-19	18.4-19.6	45	118	DLC coating		**6312-19**	19
2426-20	19.4-20.6	45	118	DLC coating		**6312-20**	20



2426-HOLDER1



2426-HOLDER2

HOLDER

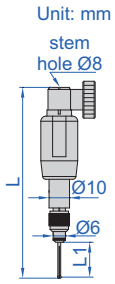
Code	Retraction	Applicable points
2426-HOLDER1	without	all
2426-HOLDER2	with	all

7

SPLIT TYPE DIAL BORE GAUGE SETS

INSIZE PLUS

digital indicator is optional

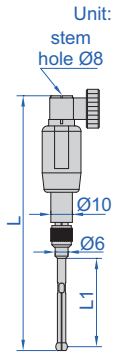


type A



type A

digital indicator is optional

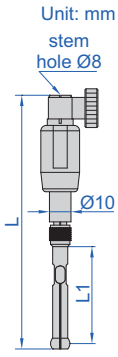


type B



type B

digital indicator is optional



type C

digital indicator is optional



type C

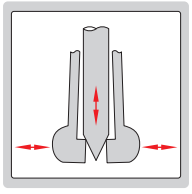
VIDEO

- Split type contact points
- Accuracy (without indicator): 3μm (measuring range 0.95~10mm), 4μm (measuring range 10~20.6mm)
- Repeatability (without indicator): 1μm
- Setting rings and dial indicators are optional



2421-121

principle of measurement



(mm)

Code	Range	Quantity of points	Measuring range of point	Measuring depth (L1)	Total length (L)	Material of points	Type of point	Setting ring (optional)	
								code	diameter
			0.95-1.15	13	89	carbide	A	**6312-1**	1
			1.07-1.25	13	89	carbide	A	**6312-1D1**	1.1
2421-1D4	0.95-1.55	5	1.17-1.35	13	89	carbide	A	**6312-1D2**	1.2
			1.27-1.45	13	89	carbide	A	**6312-1D3**	1.3
			1.37-1.55	13	89	carbide	A	**6312-1D4**	1.4
			1.5-1.9	17	93	carbide	A	**6312-1D75**	1.75
			1.8-2.2	17	93	carbide	A	**6312-2**	2
			2.05-2.45	17	93	carbide	A	**6312-2D25**	2.25
			2.3-2.7	25	101	carbide	A	**6312-2D5**	2.5
2421-4	1.5-4.2	10	2.55-2.95	25	101	carbide	A	**6312-2D75**	2.75
			2.8-3.2	25	101	carbide	A	**6312-3**	3
			3.05-3.45	25	101	carbide	A	**6312-3D25**	3.25
			3.3-3.7	25	101	carbide	A	**6312-3D5**	3.5
			3.55-3.95	25	101	carbide	A	**6312-3D75**	3.75
			3.8-4.2	25	101	carbide	A	**6312-4**	4
			4.15-4.8	41	118	DLC coating	B	**6312-4D5**	4.5
			4.7-5.3	41	118	DLC coating	B	**6312-5**	5
			5.2-5.8	41	118	DLC coating	B	**6312-5D5**	5.5
2421-7D5	4.15-7.8	7	5.7-6.3	41	118	DLC coating	B	**6312-6**	6
			6.2-6.8	41	118	DLC coating	B	**6312-6D5**	6.5
			6.7-7.3	41	118	DLC coating	B	**6312-7**	7
			7.2-7.8	45	118	DLC coating	C	**6312-7D5**	7.5
			7.7-8.3	45	118	DLC coating	C	**6312-8**	8
			8.2-8.8	45	118	DLC coating	C	**6312-8D5**	8.5
			8.7-9.3	45	118	DLC coating	C	**6312-9**	9
2421-12	7.7-12.5	6	9.2-10.5	45	118	DLC coating	C	**6312-10**	10
			10.2-11.5	45	118	DLC coating	C	**6312-11**	11
			11.2-12.5	45	118	DLC coating	C	**6312-12**	12

To be continued

Continued from previous page

(mm)

Code	Range	Quantity of points	Measuring range of point	Measuring depth (L1)	Total length (L)	Material of points	Type of point	Setting ring (optional)	
								code	diameter
2421-20	12.2-20.6	8	12.2-13.5	45	118	DLC coating	C	**6312-13**	13
			13.4-14.6	45	118	DLC coating	C	**6312-14**	14
			14.4-15.6	45	118	DLC coating	C	**6312-15**	15
			15.4-16.6	45	118	DLC coating	C	**6312-16**	16
			16.4-17.6	45	118	DLC coating	C	**6312-17**	17
			17.4-18.6	45	118	DLC coating	C	**6312-18**	18
			18.4-19.6	45	118	DLC coating	C	**6312-19**	19
			19.4-20.6	45	118	DLC coating	C	**6312-20**	20
2421-121	4.15-12.5	13	4.15-4.8	41	118	DLC coating	B	**6312-4D5**	4.5
			4.7-5.3	41	118	DLC coating	B	**6312-5**	5
			5.2-5.8	41	118	DLC coating	B	**6312-5D5**	5.5
			5.7-6.3	41	118	DLC coating	B	**6312-6**	6
			6.2-6.8	41	118	DLC coating	B	**6312-6D5**	6.5
			6.7-7.3	41	118	DLC coating	B	**6312-7**	7
			7.2-7.8	45	118	DLC coating	C	**6312-7D5**	7.5
			7.7-8.3	45	118	DLC coating	C	**6312-8**	8
			8.2-8.8	45	118	DLC coating	C	**6312-8D5**	8.5
			8.7-9.3	45	118	DLC coating	C	**6312-9**	9
			9.2-10.5	45	118	DLC coating	C	**6312-10**	10
			10.2-11.5	45	118	DLC coating	C	**6312-11**	11
			11.2-12.5	45	118	DLC coating	C	**6312-12**	12
2421-3D9	1.5-3.95	9	1.5-1.9	17	93	carbide	A	**6312-1D75**	1.75
			1.8-2.2	17	93	carbide	A	**6312-2**	2
			2.05-2.45	17	93	carbide	A	**6312-2D25**	2.25
			2.3-2.7	25	101	carbide	A	**6312-2D5**	2.5
			2.55-2.95	25	101	carbide	A	**6312-2D75**	2.75
			2.8-3.2	25	101	carbide	A	**6312-3**	3
			3.05-3.45	25	101	carbide	A	**6312-3D25**	3.25
			3.3-3.7	25	101	carbide	A	**6312-3D5**	3.5
			3.55-3.95	25	101	carbide	A	**6312-3D75**	3.75
2421-7D3	3.7-7.3	8	3.7-3.95	25	101	carbide	A	**6312-3D75**	3.75
			3.8-4.2	25	101	carbide	A	**6312-4**	4
			4.15-4.8	41	118	DLC coating	B	**6312-4D5**	4.5
			4.7-5.3	41	118	DLC coating	B	**6312-5**	5
			5.2-5.8	41	118	DLC coating	B	**6312-5D5**	5.5
			5.7-6.3	41	118	DLC coating	B	**6312-6**	6
			6.2-6.8	41	118	DLC coating	B	**6312-6D5**	6.5
			6.7-7.3	41	118	DLC coating	B	**6312-7**	7
2421-10	7-10	6	7-7.3	41	118	DLC coating	B	**6312-7**	7
			7.2-7.8	45	118	DLC coating	C	**6312-7D5**	7.5
			7.7-8.3	45	118	DLC coating	C	**6312-8**	8
			8.2-8.8	45	118	DLC coating	C	**6312-8D5**	8.5
			8.7-9.3	45	118	DLC coating	C	**6312-9**	9
			9.2-10	45	118	DLC coating	C	**6312-10**	10
2421-18	10-18	9	10-10.5	45	118	DLC coating	C	**6312-10**	10
			10.2-11.5	45	118	DLC coating	C	**6312-11**	11
			11.2-12.5	45	118	DLC coating	C	**6312-12**	12
			12.2-13.5	45	118	DLC coating	C	**6312-13**	13
			13.4-14.6	45	118	DLC coating	C	**6312-14**	14
			14.4-15.6	45	118	DLC coating	C	**6312-15**	15
			15.4-16.6	45	118	DLC coating	C	**6312-16**	16
			16.4-17.6	45	118	DLC coating	C	**6312-17**	17
			17.4-18	45	118	DLC coating	C	**6312-18**	18

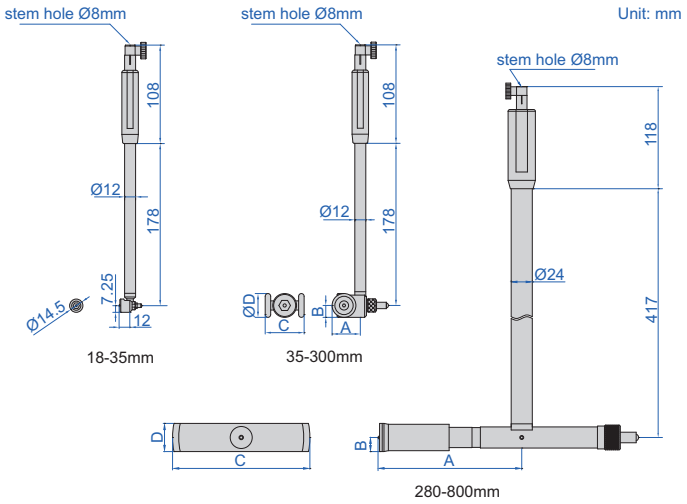
BORE GAUGES

INSIZE PLUS



digital indicator is optional

2422-150



contact points



- Applicable for 0.01mm or 0.001mm graduation dial indicators
- Optional accessory:
  – Dial indicator or dial comparator
  – Setting ring (code **6312**)
  – Long handle (code **7352**)
  – Bore gauge setter

Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)
2422-35	18-35mm	4μm	2μm
2422-60	35-60mm	4μm	2μm
2422-150	50-150mm	4μm	2μm
2422-300	150-300mm	4μm	2μm
2422-510	280-510mm	3μm	1.5μm
2422-800	400-800mm	3μm	1.5μm

Code	A	B	C	D
2422-60	19.5mm	10.5mm	28mm	21mm
2422-150	30.8mm	13mm	42.5mm	26mm
2422-300	30.8mm	13mm	76.5mm	26mm
2422-510	164mm	16mm	156mm	32mm
2422-800	305mm	18mm	300mm	36mm

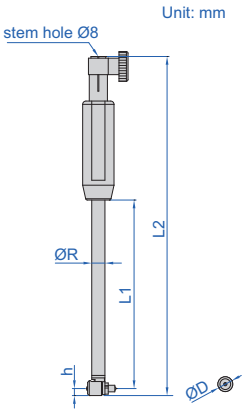
BORE GAUGES FOR SMALL HOLES

INSIZE PLUS

- Applicable for 0.01mm or 0.001mm, graduation dial indicators
- Carbide contact point and anvil
- Optional accessory: dial indicator or dial comparator, setting ring (code **6312**)



2425-6



(mm)

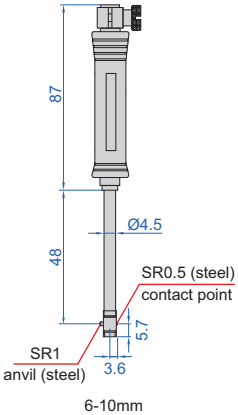
Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)	L1	L2	ØR	ØD	h
2425-6	4.5-6mm	2μm	0.5μm	80	147	4	4	2
2425-8	6-8mm	2μm	0.5μm	100	165	5	5.2	2.6
2425-12	8-12mm	2μm	0.5μm	100	166	5	6.5	3.25
2425-20	12-20mm	2μm	0.5μm	110	204	8	9	4.5

PRECISION BORE GAUGES FOR SMALL HOLES (WITHOUT DIAL INDICATOR)

7

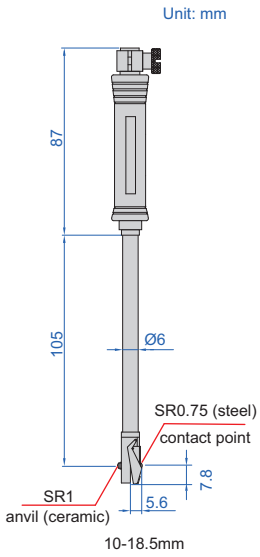


2284-10



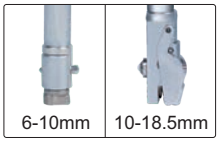


2284-18



- Optional accessory:
  dial indicator, bore gauge setter, setting ring (code **6312**)

Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)
2284-10	6-10mm	±0.004mm	0.0015mm
2284-18	10-18.5mm	±0.004mm	0.0015mm



PRECISION BORE GAUGES FOR SMALL HOLES (WITH DIAL INDICATOR)

BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL



2853-10

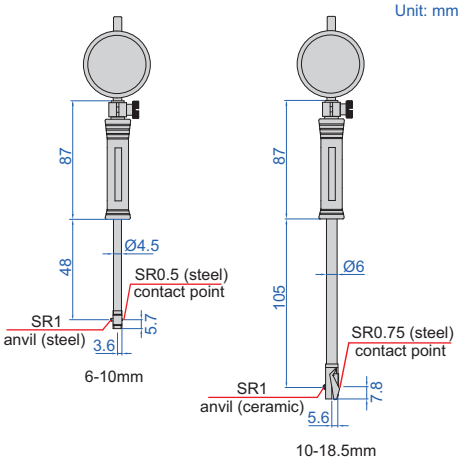


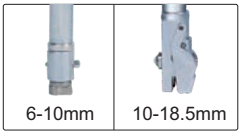
2153-18



2153-18WP

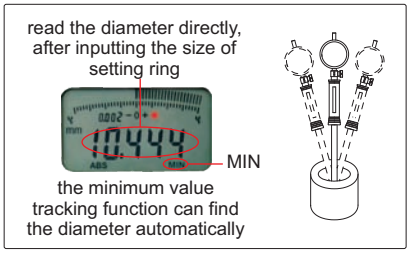
Unit: mm



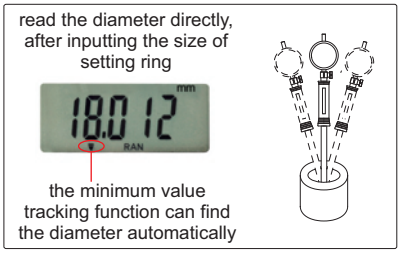


- Optional accessory: setting ring (code **6312**), bore gauge setter

with digital indicator



with waterproof digital indicator



With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2853-10	6-10mm	dial indicator, range 1mm, graduation 0.001mm (code **2313-1FA**)	±0.007mm	0.0015mm
2853-18	10-18.5mm		±0.007mm	0.0015mm

With digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2153-10	6-10mm	digital indicator, code **2108-101F**, range 12.7mm/0.5", resolution 0.001mm/0.00005"	±0.007mm	0.002mm
2153-18	10-18.5mm		±0.007mm	0.002mm

With waterproof digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2153-10WP	6-10mm	waterproof digital indicator, code **2137-101F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.001mm/0.00005"	±0.007mm	0.002mm
2153-18WP	10-18.5mm		±0.007mm	0.002mm

BORE GAUGES FOR SMALL HOLES (WITH DIAL INDICATOR)

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

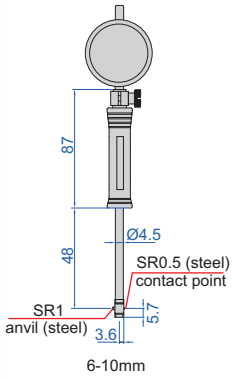


2852-10

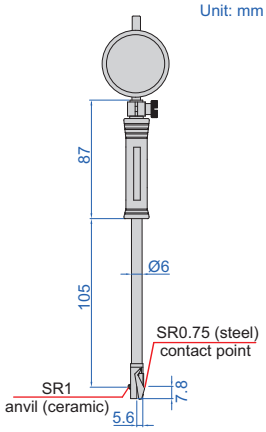


2152-18 **2152-18WP**

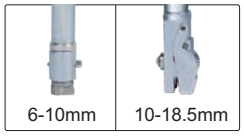
Unit: mm



6-10mm

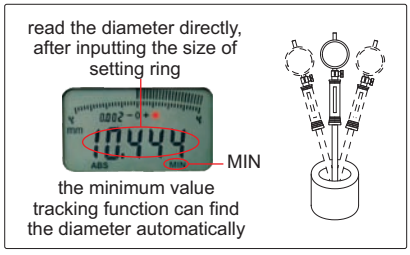


10-18.5mm

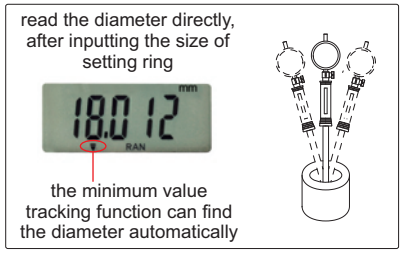


7

with digital indicator



with waterproof digital indicator



- Optional accessory: setting ring (code **6312**), bore gauge setter

With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2852-10	6-10mm	dial indicator, range 3mm, graduation 0.01mm (code **2311-3F**)	±0.012mm	0.003mm
2852-18	10-18.5mm		±0.012mm	0.003mm

With digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2152-10	6-10mm	digital indicator, code **2108-10F**, range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	±0.012mm	0.003mm
2152-18	10-18.5mm		±0.012mm	0.003mm

With waterproof digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2152-10WP	6-10mm	waterproof digital indicator, code **2137-10F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	±0.012mm	0.003mm
2152-18WP	10-18.5mm		±0.012mm	0.003mm

PRECISION BORE GAUGES (WITHOUT DIAL INDICATOR)



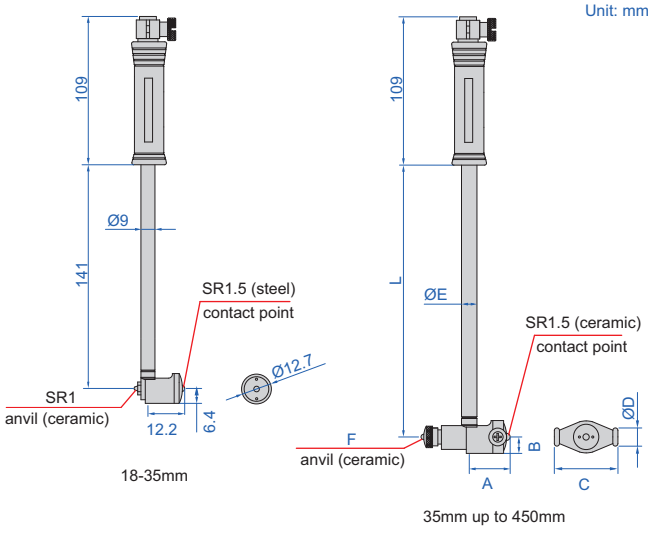
2283-35



2283-160

- Optional accessory: dial indicator, setting ring (code **6312**), bore gauge setter

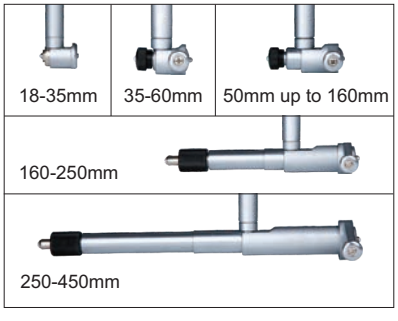
Unit: mm



(mm)

Range	A	B	C	ØD	ØE	F	L
35-60mm	22	9	27	13	12.8	SR2	141
50-100mm	26	9	35	13	12.8	SR2	141
50-160mm	26	9	35	13	12.8	SR2	141
100-160mm	26	9	35	13	12.8	SR2	141
160-250mm	56.5	13	74.5	15	14.5	SR2	241
250-450mm	86.5	15	101.5	15	14.5	SR2.5	241

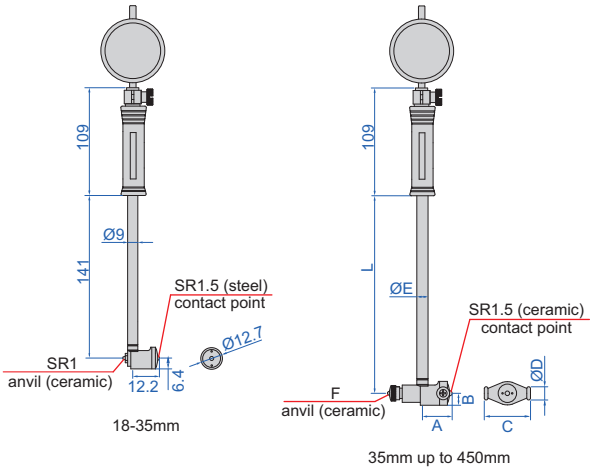
Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)
2283-35	18-35mm	±0.004mm	0.0015mm
2283-60	35-60mm	±0.004mm	0.0015mm
2283-100	50-100mm	±0.004mm	0.0015mm
2283-160	50-160mm	±0.004mm	0.0015mm
2283-161	100-160mm	±0.004mm	0.0015mm
2283-250	160-250mm	±0.004mm	0.0015mm
2283-450	250-450mm	±0.004mm	0.0015mm



BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

PRECISION BORE GAUGES (WITH DIAL INDICATOR)

Unit: mm

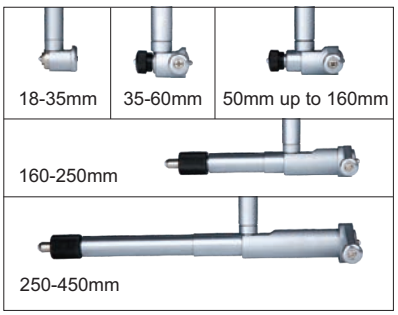




- Optional accessory: setting ring (code **6312**), bore gauge setter

(mm)

Range	A	B	C	ØD	ØE	F	L
35-60mm	22	9	27	13	12.8	SR2	141
50-100mm	26	9	35	13	12.8	SR2	141
50-160mm	26	9	35	13	12.8	SR2	141
100-160mm	26	9	35	13	12.8	SR2	141
160-250mm	56.5	13	74.5	15	14.5	SR2	241
250-450mm	86.5	15	101.5	15	14.5	SR2.5	241



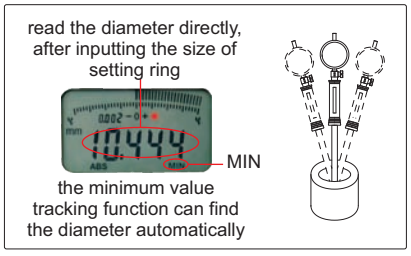
With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2825-35	18-35mm	dial indicator, range 1mm, graduation 0.001mm (code **2313-1FA**)	±0.007mm	0.0015mm
2825-60	35-60mm		±0.007mm	0.0015mm
2825-100	50-100mm		±0.007mm	0.0015mm
2825-160	50-160mm		±0.007mm	0.0015mm
2825-161	100-160mm		±0.007mm	0.0015mm
2825-250	160-250mm		±0.007mm	0.0015mm
2825-450	250-450mm		±0.007mm	0.0015mm

With digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2126-35	18-35mm	digital indicator, code **2108-101F**, range 12.7mm/0.5", resolution 0.001mm/0.00005"	±0.007mm	0.002mm
2126-60	35-60mm		±0.007mm	0.002mm
2126-100	50-100mm		±0.007mm	0.002mm
2126-160	50-160mm		±0.007mm	0.002mm
2126-161	100-160mm		±0.007mm	0.002mm
2126-250	160-250mm		±0.007mm	0.002mm
2126-450	250-450mm		±0.007mm	0.002mm

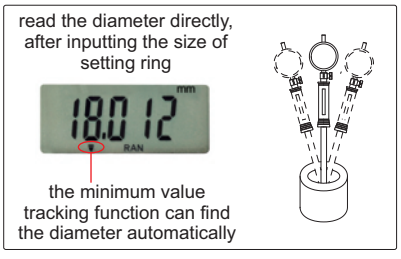
with digital indicator



With waterproof digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2126-35WP	18-35mm	waterproof digital indicator, code **2137-101F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.001mm/0.00005"	±0.007mm	0.002mm
2126-60WP	35-60mm		±0.007mm	0.002mm
2126-100WP	50-100mm		±0.007mm	0.002mm
2126-160WP	50-160mm		±0.007mm	0.002mm
2126-161WP	100-160mm		±0.007mm	0.002mm
2126-250WP	160-250mm		±0.007mm	0.002mm
2126-450WP	250-450mm		±0.007mm	0.002mm

with waterproof digital indicator



BORE GAUGES (WITH DIAL INDICATOR)

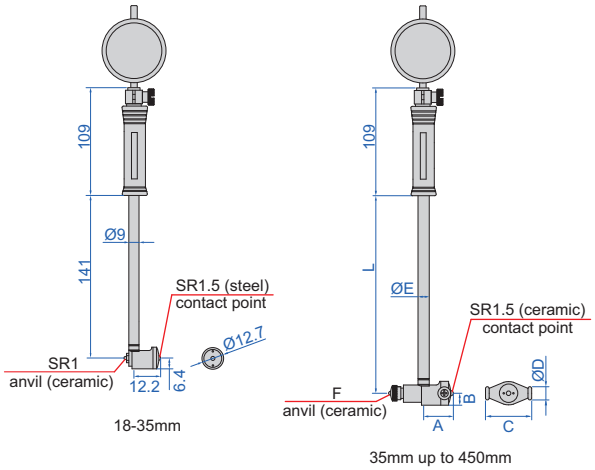
VIDEO

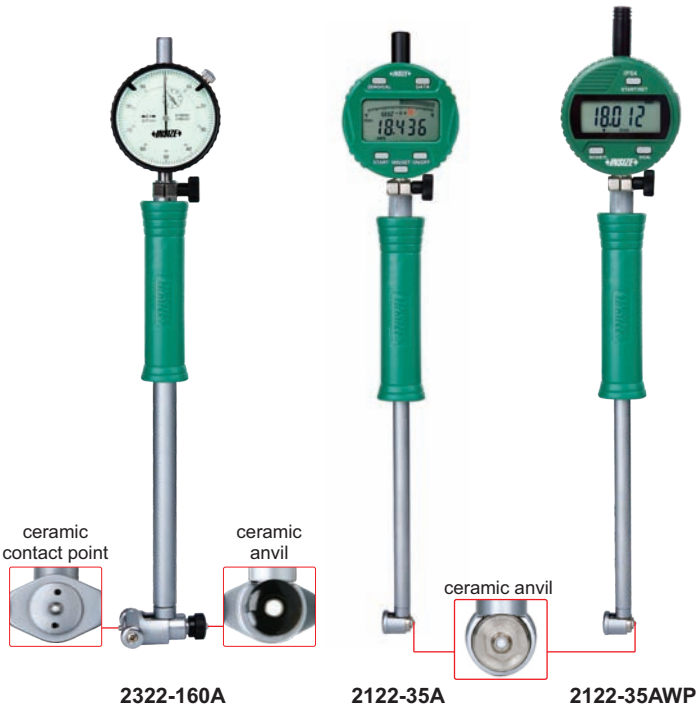
POPULAR MODEL

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

Unit: mm





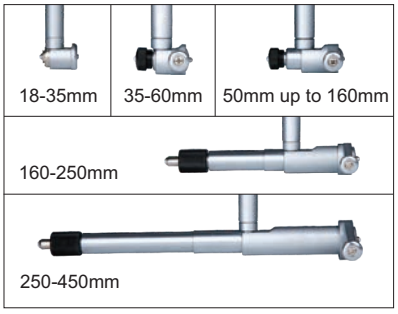
- Optional accessory: setting ring (code **6312**), long handle (code **7351**), bore gauge setter

(mm)

Range	A	B	C	ØD	ØE	F	L
35-60mm	22	9	27	13	12.8	SR2	141
50-100mm	26	9	35	13	12.8	SR2	141
50-160mm	26	9	35	13	12.8	SR2	141
100-160mm	26	9	35	13	12.8	SR2	141
160-250mm	56.5	13	74.5	15	14.5	SR2	241
250-450mm	86.5	15	101.5	15	14.5	SR2.5	241

With dial indicator

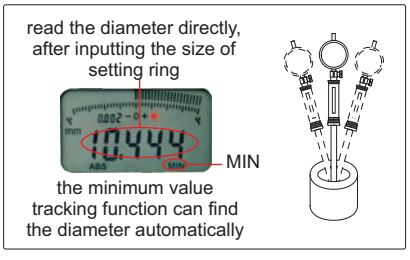
Code	Range	Indicator	Accuracy	Repeatability
2322-35A	18-35mm	dial indicator, range 10mm, graduation 0.01mm (code **2308-10FA**)	±0.015mm	0.003mm
2322-60A	35-60mm		±0.018mm	0.003mm
2322-100A	50-100mm		±0.018mm	0.003mm
2322-160A	50-160mm		±0.018mm	0.003mm
2322-161A	100-160mm		±0.018mm	0.003mm
2322-250A	160-250mm		±0.018mm	0.003mm
2322-450A	250-450mm		±0.018mm	0.003mm



With digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2122-35A	18-35mm	digital indicator, code **2108-10F**, range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	±0.015mm	0.003mm
2122-60A	35-60mm		±0.018mm	0.003mm
2122-100A	50-100mm		±0.018mm	0.003mm
2122-160A	50-160mm		±0.018mm	0.003mm
2122-161A	100-160mm		±0.018mm	0.003mm
2122-250A	160-250mm		±0.018mm	0.003mm
2122-450A	250-450mm		±0.018mm	0.003mm

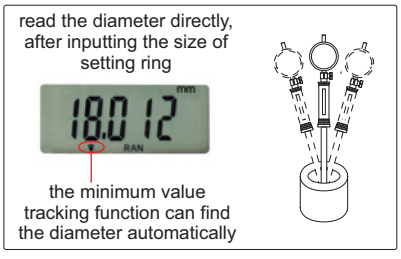
with digital indicator



With waterproof digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2122-35AWP	18-35mm	waterproof digital indicator, code **2137-10F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	±0.015mm	0.003mm
2122-60AWP	35-60mm		±0.018mm	0.003mm
2122-100AWP	50-100mm		±0.018mm	0.003mm
2122-160AWP	50-160mm		±0.018mm	0.003mm
2122-161AWP	100-160mm		±0.018mm	0.003mm
2122-250AWP	160-250mm		±0.018mm	0.003mm
2122-450AWP	250-450mm		±0.018mm	0.003mm

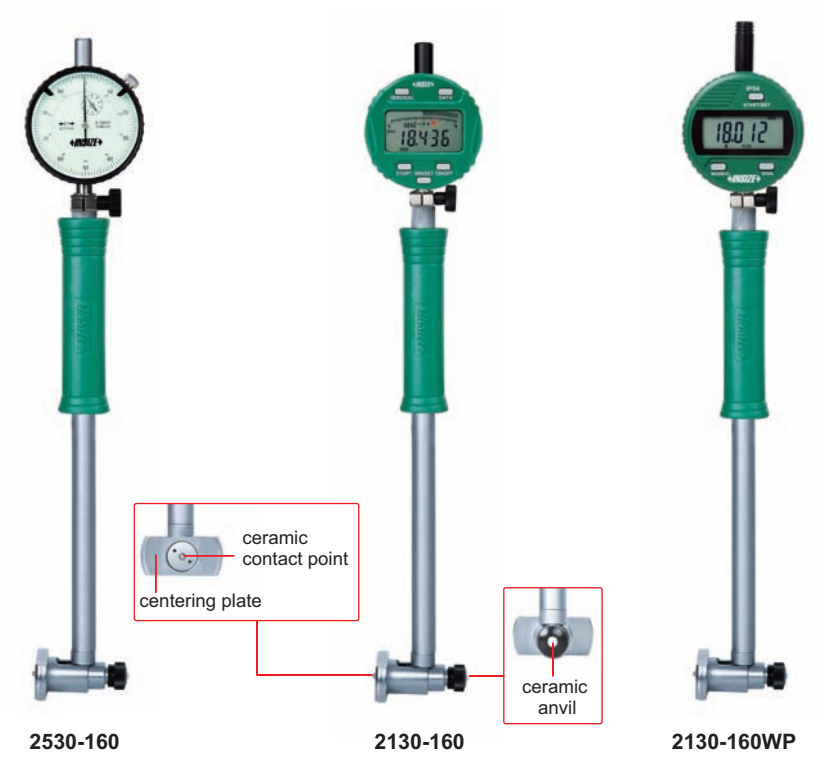
with waterproof digital indicator



ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

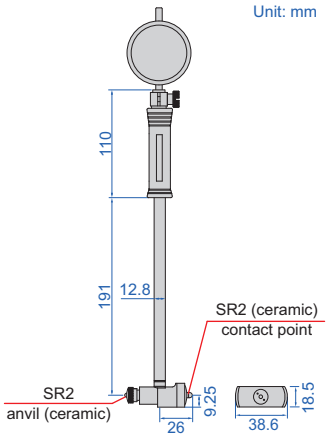
BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

BORE GAUGES (WITH CENTERING PLATE)



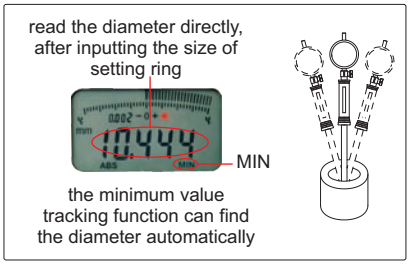
2530-160 | 2130-160 | 2130-160WP

Unit: mm

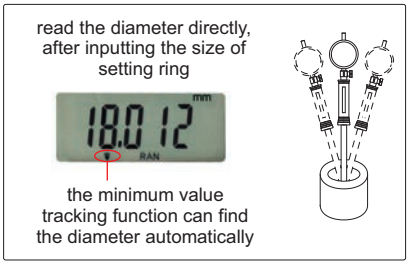


- Optional accessory: setting ring (code **6312**), long handle (code **7351**), bore gauge setter

with digital indicator



with waterproof digital indicator



With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2530-100	50-100mm	dial indicator, range 10mm, graduation 0.01mm (code **2308-10FA**)	±0.018mm	0.003mm
2530-160	50-160mm		±0.018mm	0.003mm
2530-161	100-160mm		±0.018mm	0.003mm

With digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2130-100	50-100mm	digital indicator, code **2108-10F**, range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	±0.018mm	0.003mm
2130-160	50-160mm		±0.018mm	0.003mm
2130-161	100-160mm		±0.018mm	0.003mm

With waterproof digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2130-100WP	50-100mm	waterproof digital indicator, code **2137-10F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	±0.018mm	0.003mm
2130-160WP	50-160mm		±0.018mm	0.003mm
2130-161WP	100-160mm		±0.018mm	0.003mm

BORE GAUGE SET

INSIZE PLUS



2423-S2

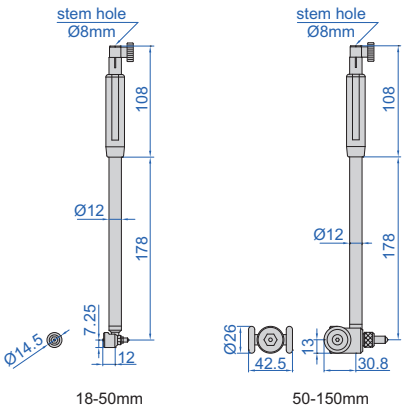
- Includes bore gauges 18-50mm and 50-150mm
- Optional accessory:
  - 0.01mm or 0.001mm graduation dial indicator or dial comparator
  - Setting ring (code **6312**)
  - Long handle (code **7352**)
  - Bore gauge setter

digital indicator is optional



18-50mm 50-150mm

Unit: mm



18-50mm 50-150mm

Code	Range	Accuracy (without dial comparator)	Repeatability (without dial comparator)
2423-S2	18-150mm	4μm	2μm

BORE GAUGES (WITH DIAL INDICATOR)

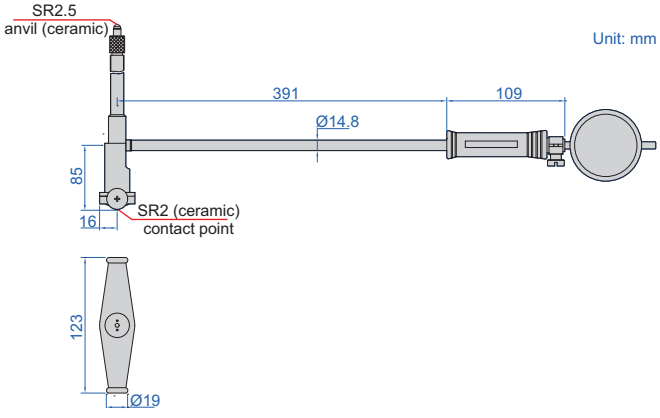
BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

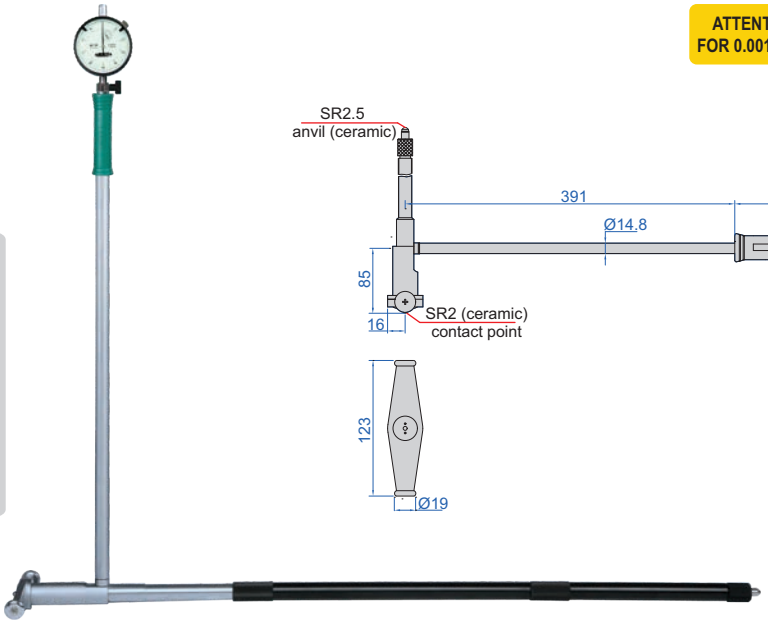


2308-10FA 2108-10F 2137-10F

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

Unit: mm





2828-800A

With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2828-800A	400-800mm	dial indicator, code **2308-10FA**, range 10mm, graduation 0.01mm	±0.025mm	0.003mm

With digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2128-800A	400-800mm	digital indicator, code **2108-10F**, range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	±0.025mm	0.003mm

With waterproof digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

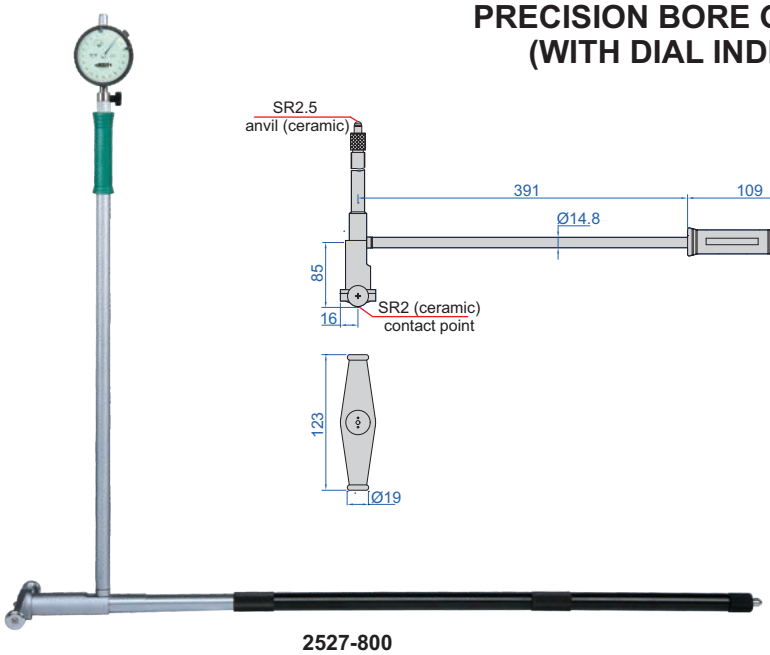
Code	Range	Indicator	Accuracy	Repeatability
2128-800AWP	400-800mm	waterproof digital indicator, code **2137-10F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	±0.025mm	0.003mm

BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

PRECISION BORE GAUGES (WITH DIAL INDICATOR)



2313-1FA | 2108-101F | 2137-101F



2527-800

With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2527-800	400-800mm	dial indicator, code **2313-1FA**, range 1mm, resolution 0.001mm	±0.007mm	0.0015mm

With digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2527-800G	400-800mm	digital indicator, code **2108-101F**, range 12.7mm/0.5", resolution 0.001mm/0.00005"	±0.007mm	0.002mm

With waterproof digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2527-800WP	400-800mm	waterproof digital indicator, code **2137-101F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.001mm/0.00005"	±0.007mm	0.002mm

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

BORE GAUGE SETS (WITH DIAL INDICATOR)

VIDEO



2824-S160



2724-S3



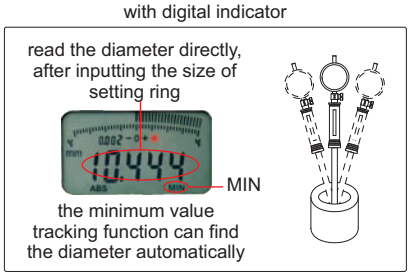
2724-S3WP

To be continued

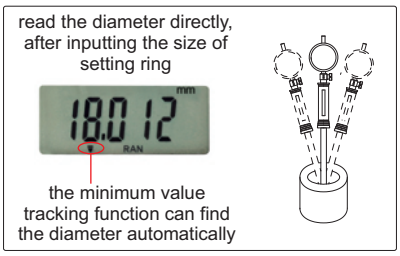
Continued from previous page

- Optional accessory: setting ring (code **6312**), long handle (code **7351**), bore gauge setter

with digital indicator



with waterproof digital indicator



packaging (code **2824-S3**)



With dial indicator

Code	Range	Indicator	Bore gauges included	Accuracy	Repeatability
2824-S160	35-160mm	dial indicator, code **2308-10FA**, range 10mm, graduation 0.01mm	①35-50mm (dial indicator and handle are not included) ②50-160mm	35-50mm ±0.018mm 50-160mm ±0.018mm	0.003mm
2824-S3	18-160mm	dial indicator, code **2308-10FA**, range 10mm, graduation 0.01mm	①18-35mm ②35-60mm (dial indicator is not included) ③50-160mm (dial indicator is not included)	18-35mm ±0.015mm 35-60mm ±0.018mm 50-160mm ±0.018mm	0.003mm

With digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Bore gauges included	Accuracy	Repeatability
2724-S160	35-160mm	digital indicator, code **2108-10F** range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	①35-50mm (digital indicator and handle are not included) ②50-160mm	35-50mm ±0.018mm 50-160mm ±0.018mm	0.003mm
2724-S3	18-160mm	digital indicator, code **2108-10F** range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	①18-35mm ②35-60mm (digital indicator is not included) ③50-160mm (digital indicator is not included)	18-35mm ±0.015mm 35-60mm ±0.018mm 50-160mm ±0.018mm	0.003mm

With waterproof digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Bore gauges included	Accuracy	Repeatability
2724-S160WP	35-160mm	waterproof digital indicator, code **2137-10F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	①35-50mm (digital indicator and handle are not included) ②50-160mm	35-50mm ±0.018mm 50-160mm ±0.018mm	0.003mm
2724-S3WP	18-160mm	waterproof digital indicator, code **2137-10F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	①18-35mm ②35-60mm (digital indicator is not included) ③50-160mm (digital indicator is not included)	18-35mm ±0.015mm 35-60mm ±0.018mm 50-160mm ±0.018mm	0.003mm

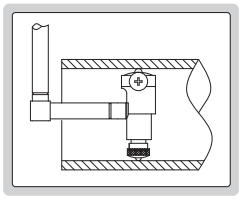
VIDEO

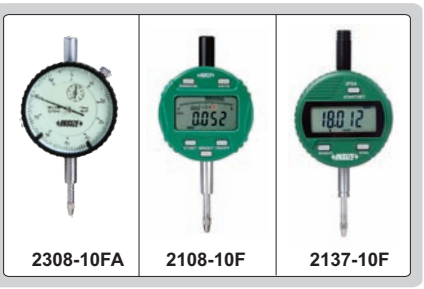
ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

BUILT-IN WIRELESS DIGITAL INDICATOR IS OPTIONAL

BORE GAUGES (WITH DIAL INDICATOR)

- Optional accessory: setting ring (code **6312**), long handle (code **7351**), bore gauge setter



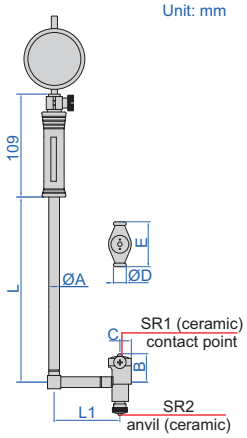


2308-10FA | 2108-10F | 2137-10F



2827-160A

Unit: mm



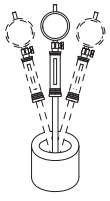
(mm)

Range	ØA	B	C	ØD	E	L	L1
35-60mm	12.8	22	9	13	27	141	75
50-160mm	12.8	28.5	9.2	13	35	141	76.2
160-250mm	14.5	62.0	12.7	15	74.5	391	100
250-450mm	14.5	91.5	15.0	15	101.5	391	100

with digital indicator

read the diameter directly, after inputting the size of setting ring



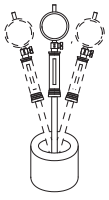


the minimum value tracking function can find the diameter automatically

with waterproof digital indicator

read the diameter directly, after inputting the size of setting ring





the minimum value tracking function can find the diameter automatically

With dial indicator

Code	Range	Indicator	Accuracy	Repeatability
2827-60A	35-60mm	dial indicator, code **2308-10FA**, range 10mm, graduation 0.01mm	±0.018mm	0.003mm
2827-160A	50-160mm		±0.018mm	0.003mm
2827-250A	160-250mm		±0.018mm	0.003mm
2827-450A	250-450mm		±0.018mm	0.003mm

With digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2127-60	35-60mm	digial indicator, code **2108-10F,** range 12.7mm/0.5", resolution 0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	±0.018mm	0.003mm
2127-160	50-160mm		±0.018mm	0.003mm
2127-250	160-250mm		±0.018mm	0.003mm
2127-450	250-450mm		±0.018mm	0.003mm

With waterproof digital indicator (optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Indicator	Accuracy	Repeatability
2127-60WP	35-60mm	waterproof digital indicator, code **2137-10F**, range 12.7mm/0.5", dust/waterproof IP54, resolution 0.002mm/0.0001" (can switch to 0.01mm/0.0005")	±0.018mm	0.003mm
2127-160WP	50-160mm		±0.018mm	0.003mm
2127-250WP	160-250mm		±0.018mm	0.003mm
2127-450WP	250-450mm		±0.018mm	0.003mm

CARBON FIBER BORE GAUGES

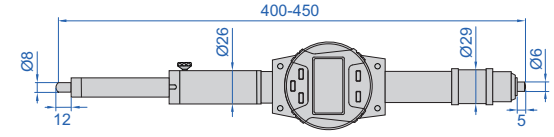
VIDEO

SPRING LOADED MEASURING POINT

CARBON FIBER EXTENSION RODS, LIGHT WEIGHT, NOT EASY TO DEFORM, LOW THERMAL EXPANSION

DATA OUTPUT

Unit: mm



measuring head



extension rods (100-1000mm)

50mm extension rod



3522-1500

- Carbon fiber extension rods, light weight, not easy to deform, low thermal expansion
- Carbide measuring faces
- Data output
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Supplied with 400mm setting standard
- Optional accessory:
  wireless transmitter code **7315-51** (receiver is needed) page 8

setting standard (included), used to set the measuring head



Measuring head

Range	Resolution	Accuracy	Repeatability	Weight
400-450mm	0.001mm/0.00005"	±6μm	±3μm	1kg

Extension rods

Length (L)	Accuracy	Weight	Material
50mm	±2μm	230g	steel
100mm	±3μm	300g	carbon fiber
200mm	±4.5μm	390g	carbon fiber
300mm	±6μm	470g	carbon fiber
600mm	±9μm	730g	carbon fiber
1000mm	±11μm	1000g	carbon fiber

spring loaded point, and max./min. value tracking make it easy to find the right measuring position



Code	Range	Weight	Extension rods
3522-1000	400-1000mm	3.8kg	50mm, 100mm, 200mm, 300mm
3522-1500	400-1500mm	4.5kg	50mm, 100mm, 200mm, 300mm, 600mm
3522-2000	400-2000mm	5.3kg	50mm, 100mm, 200mm, 300mm, 600mm (2 pcs)
3522-2400	400-2400mm	6.0kg	50mm, 100mm, 200mm, 300mm, 600mm (3 pcs)
3522-3400	400-3400mm	6.7kg	50mm, 100mm, 200mm, 300mm, 600mm (4 pcs)
3522-6400	400-6400mm	9.5kg	50mm, 100mm, 200mm, 300mm, 600mm, 1000mm (5 pcs)

LARGE RANGE BORE GAUGES

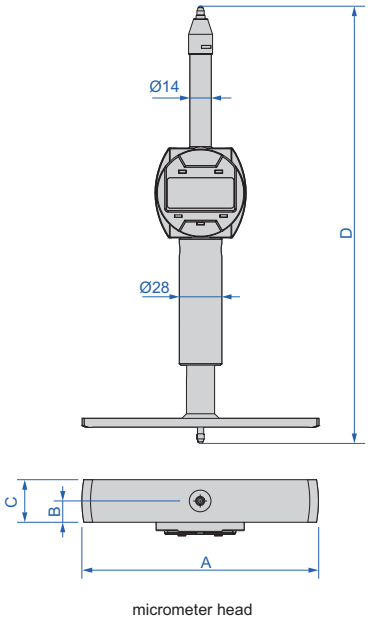
VIDEO

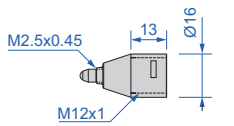
DATA OUTPUT



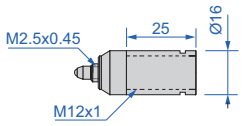
2330-510

Unit: mm

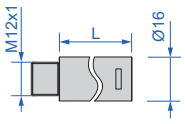




13mm fixed probe

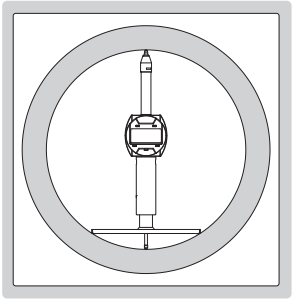


25mm fixed probe



extension rods (25-100mm)

application



- Digital indicator reading in digital and analog
- Digital indicator display can be rotated by 320°
- Digital indicator can keep preset data and tolerance data in memory after restart
- Digital indicator button function:
  tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- Digital indicator power:
  with data interface: CR2032
  built-in wireless: rechargeable lithium battery
- Carbide probes
- Data output
- Optional accessory:
  steel gauge block sets (code **4100**),
  gauge block accessory (code **6981**)

Extension rods

Length (L)	Accuracy	Material
25mm	1μm	chrome plated steel
50mm	2μm	chrome plated steel
100mm	4μm	chrome plated steel

Micrometer head

Range	Resolution	Movable probe travel	Accuracy	Repeatability	Remark
180-205mm	0.001mm/0.00005"	13mm	7μm	2μm	13mm, 25mm fixed probe (included)
280-305mm	0.001mm/0.00005"	13mm	7μm	2μm	13mm, 25mm fixed probe (included)

Digital indicator code 2138-10F is included
(with data interface, optional wireless transmitter code 7315-50M, receiver is needed page 8)

Code	Range (D)	Micrometer head range	A	B	C	Extension rods
2330-300	180-300mm	180-205mm	76.5mm	12.5mm	25mm	25mm, 50mm (2pcs)
2330-510	280-510mm	280-305mm	156mm	14mm	28mm	25mm, 50mm (2pcs), 100mm

Built-in wireless digital indicator code 2508-10FWL is included
(receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range (D)	Micrometer head range	A	B	C	Extension rods
2330-300WL	180-300mm	180-205mm	76.5mm	12.5mm	25mm	25mm, 50mm (2pcs)
2330-510WL	280-510mm	280-305mm	156mm	14mm	28mm	25mm, 50mm (2pcs), 100mm

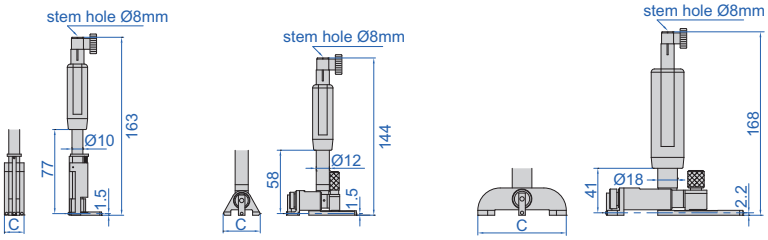
BORE GAUGES FOR BLIND HOLES

INSIZE PLUS

VIDEO

POINT HEIGHT H>0.5mm CAN BE CUSTOMIZED

Unit: mm



2424-50 2424-110 2424-300/450/600

- To measure diameter of shallow and blind holes
- Optional accessory:
  – 0.01mm or 0.001mm graduation dial indicators
  – Setting ring (code **6312**)
  – Long handle (code **7352**)
  – Bore gauge setter



digital indicator is optional

2424-300

Code	Range	Accuracy (without dial indicator)	Repeatability (without dial indicator)	C
2424-50	20-50mm	4μm	1μm	18mm
2424-110	50-110mm	4μm	1μm	34mm
2424-300	110-300mm	4μm	1μm	81mm
2424-450	200-450mm	4μm	1μm	81mm
2424-600	300-600mm	4μm	1μm	140mm



7

BORE GAUGE FOR BARRIER INSIDE BORE

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

MEASURE DIAMETER OF BORES WITH BARRIER INSIDE

RELATIVE PRODUCT: DIGITAL CALIPERS FOR BORES WITH BARRIER INSIDE (CODE 1513-)

application



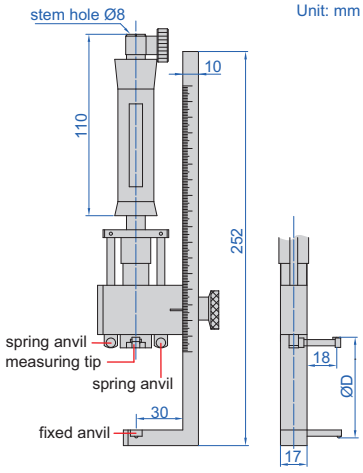
VIDEO



digital indicator is optional

2348-210

Unit: mm



- Measure diameter of bores with barrier inside
- Optional accessory:
  – 0.01mm graduation dial indicators
  – Setting ring (code **6312**)

(mm)

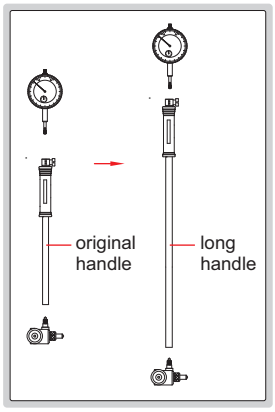
Code	Range ØD	Diameter of barrier Ød	Travel of measuring tip	Accuracy (without dial indicator)	Measuring force
2348-210	40-210mm	<D-14 (less than 50mm)*	1.6	0.018	2N

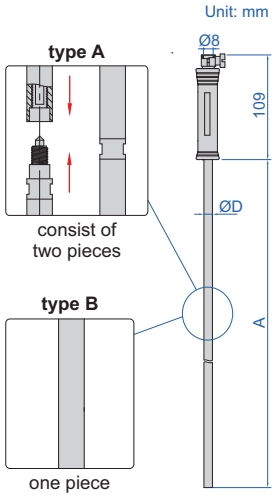
*For example:
When measuring size ØD is 40mm, D-14=26mm, so the diameter of barrier should be less than 26mm.
When measuring size ØD is 70mm, D-14=56mm, however it should be less than 50mm,
so the diameter of barrier should be less than 50mm.

LONG HANDLES

- To assist deep-hole measurement
- Can be used for bore gauges **2322**, **2122**, **2130**, **2530**, **2828**, **2128**, **2824**, **2724**, **2827** and **2127**

method of use (replace the original handle with long handle)







7351-EX11

Code	Applicable bore gauges	A	ØD	Type
7351-EX10	18-35mm	475mm	9mm	B
7351-EX11	35-60mm, 50-100mm, 50-160mm, 100-160mm	475mm	13mm	
7351-EX12		980mm	13mm	
7351-EX13		1480mm	14.5mm	A
7351-EX14		1980mm	14.5mm	
7351-EX21	160-250mm, 250-450mm	480mm	14.5mm	B
7351-EX22		980mm	14.5mm	
7351-EX23		1480mm	14.5mm	A
7351-EX24		1980mm	14.5mm	

ANVILS FOR BORE GAUGES



7350-160

- For bore gauges **2284**, **2853**, **2153**, **2852**, **2152**, **2283**, **2825**, **2126**, **2322**, **2122**, **2530**, **2130**, **2824**, **2724**, **2827** and **2127**

Code	Applicable bore gauges	Material of measuring face	Quantity per set	Measuring range of anvil (mm)
7350-10	6-10mm	steel	9 pcs	6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10
7350-18	10-18.5mm	ceramic	9 pcs	10, 11, 12, 13, 14, 15, 16, 17, 18
7350-35	18-35mm	ceramic	9 pcs	18, 20, 22, 24, 26, 28, 30, 32, 34
7350-60	35-60mm	ceramic	6 pcs	35, 40, 45, 50, 55, 60
7350-100	50-100mm	ceramic	11 pcs	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100
7350-160	50-160mm	ceramic	12 pcs	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105
7350-161	100-160mm	ceramic	12 pcs	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105
7350-250	160-250mm	ceramic	5 pcs	160, 170, 180, 190, 200
7350-450	250-450mm	ceramic	5 pcs	250, 260, 270, 280, 290

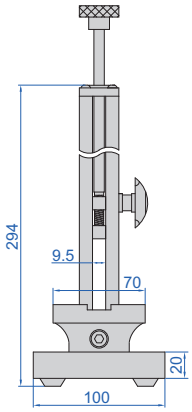
BORE GAUGE SETTERS

VIDEO



7353-160

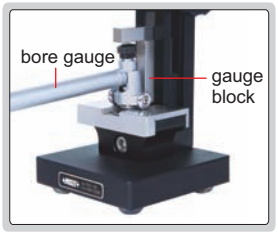
Unit: mm



horizontal use



application



gauge blocks for **7353-160**



- Vertical and horizontal use
- To be used with gauge blocks

Code	Range	Repeatability	Remark
7353-160	0-160mm	1.2μm	with gauge block set
7353-160W	0-160mm	1.2μm	without gauge block set

Gauge block set for 7353-160

Blocks per set	Size (mm)	Step (mm)	Quantity	Remark
33	1.005		1 pc	grade 2 (ISO3650)
	1.01-1.09	0.01	9 pcs	
	1.1-1.9	0.1	9 pcs	
	1-9	1	9 pcs	
	10-30	10	3 pcs	
	50		1 pc	
	100		1 pc	

BORE GAUGE SETTER

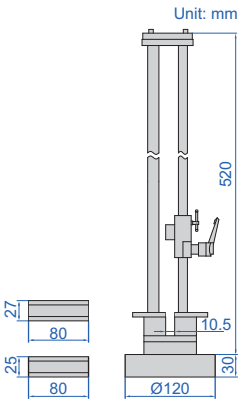
VIDEO

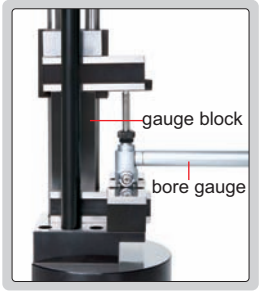
- Used together with gauge blocks to set bore gauges



2395-400

Unit: mm





Code	Setting range
2395-400	18-400mm

MEASURING TOOLS DYNAMOMETERS

REFER TO PAGE 200 FOR DETAILS



check the measuring force of bore gauges



ISF-DGD15

INSPECTION CERTIFICATE

DATA OUTPUT

VIDEO

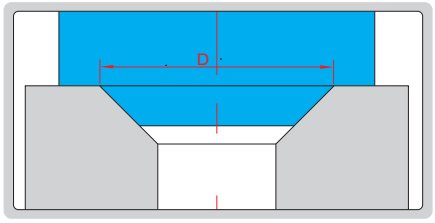
DIGITAL INTERNAL CHAMFER GAUGES

INSIZE PLUS



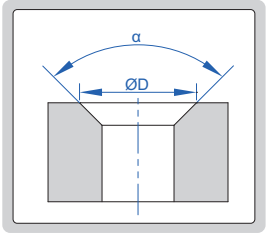
2962-609

measurement principle



- Measure end diameter of chamfer holes
- Resolution: 0.01mm/0.0005"
- Direct read (end diameter), no calculations
- TiN coated, hardness 2200HV, wear/rust-resistant
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8

measure end diameter of chamfer holes



Chamfer hole angle α=90°

Code	Range ØD	α	Accuracy
2962-209*	1-20mm	90°	±0.02mm
2962-409*	20-40mm	90°	±0.02mm
2962-609*	40-60mm	90°	±0.02mm
2962-809*	60-80mm	90°	±0.02mm
2962-1009*	80-100mm	90°	±0.02mm
2962-1209*	100-120mm	90°	±0.02mm

Chamfer hole angle α=127°

Code	Range ØD	α	Accuracy
2962-207*	1-20mm	127°	±0.02mm
2962-407*	20-40mm	127°	±0.02mm
2962-607*	40-60mm	127°	±0.02mm
2962-807*	60-80mm	127°	±0.02mm
2962-1007*	80-100mm	127°	±0.02mm
2962-1207*	100-120mm	127°	±0.02mm

Chamfer hole angle α=60°

Code	Range ØD	α	Accuracy
2962-126*	1-10mm	60°	±0.02mm
2962-216*	10-20mm	60°	±0.02mm
2962-316*	20-30mm	60°	±0.02mm
2962-416*	30-40mm	60°	±0.02mm
2962-516*	40-50mm	60°	±0.02mm
2962-616*	50-60mm	60°	±0.02mm
2962-716*	60-70mm	60°	±0.02mm
2962-816*	70-80mm	60°	±0.02mm
2962-916*	80-90mm	60°	±0.02mm
2962-1016*	90-100mm	60°	±0.02mm
2962-1116*	100-110mm	60°	±0.02mm
2962-1216*	110-120mm	60°	±0.02mm

*Supplied with manufacturer inspection certificate

INTERNAL CHAMFER GAUGES

INSIZE PLUS

INSPECTION CERTIFICATE

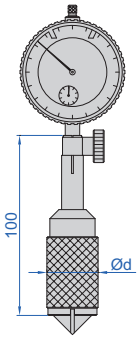
VIDEO

- Measure end diameter of chamfer or taper holes
- With limit pointers
- **2941-20** and **2941-203** are supplied with 5mm setting ring



2941-20

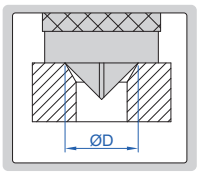
Unit: mm



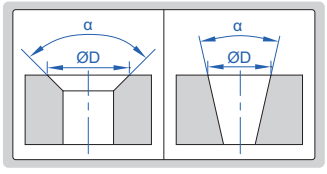
5mm setting ring for **2941-20** and **2941-203**



measurement principle



measure end diameter of chamfer or taper holes



Code	Range ØD	Applicable angle α	Graduation	Accuracy	Ød
2941-20*	0.5-20.1mm	0-90°	0.01mm	±0.02mm	28.3mm
2941-40*	20-40mm	0-90°	0.01mm	±0.02mm	50mm
2941-203*	0.5-20.1mm	90-127°	0.02mm	±0.04mm	28.3mm
2941-403*	20-40mm	90-127°	0.02mm	±0.04mm	50mm

*Supplied with manufacturer inspection certificate

7

DIGITAL INTERNAL CHAMFER GAUGES

INSIZE PLUS

INSPECTION CERTIFICATE

VIDEO

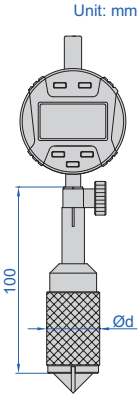
DATA OUTPUT

- Measure end diameter of chamfer or taper holes
- **2942-20** and **2942-203** are supplied with 5mm setting ring
- Resolution: 0.01mm/0.0005"
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8



2942-20

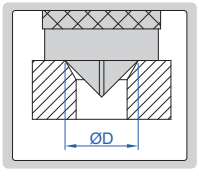
Unit: mm



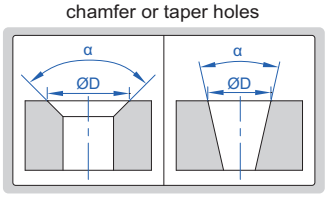
5mm setting ring for **2942-20** and **2942-203**



measurement principle



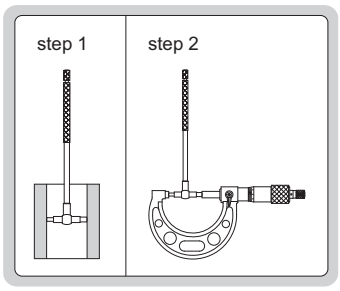
measure end diameter of chamfer or taper holes



Code	Range ØD	Applicable angle α	Accuracy	Ød
2942-20*	0.5-20.1mm	0-90°	±0.02mm	28.3mm
2942-40*	20-40mm	0-90°	±0.02mm	50mm
2942-203*	0.5-20.1mm	90-127°	±0.04mm	28.3mm
2942-403*	20-40mm	90-127°	±0.04mm	50mm

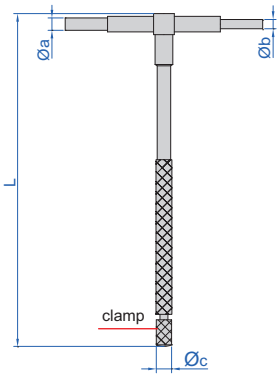
*Supplied with manufacturer inspection certificate

TELESCOPING GAUGE SET





4206-1



- 6 gauges per set
- For quick measurement of inside diameter of holes and width of slots
- Satin chrome finish

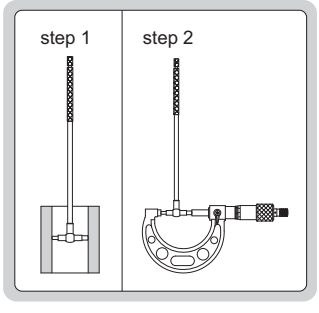
Code	Total range	Gauges included
4206-1	8-150mm	8-12.7mm, 12.7-19mm, 19-32mm, 32-54mm, 54-90mm, 90-150mm

(mm)

Range	L	Øa	Øb	Øc
8-12.7mm	115	3.9	2.9	4.7
12.7-19mm	115	5.3	3.8	4.7
19-32mm	115	5.3	3.8	4.7
32-54mm	137	7.6	6.1	6.2
54-90mm	137	7.6	6.1	6.2
90-150mm	137	7.6	6.1	6.2

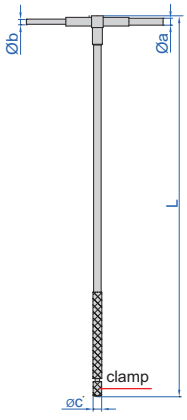
7

LONG HANDLE TELESCOPING GAUGES





4209-6

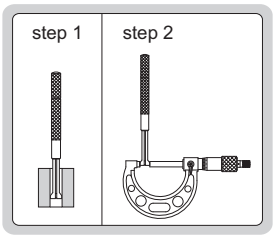


- For quick measurement of inside diameter of deep holes and width of slots
- Satin chrome finish

(mm)

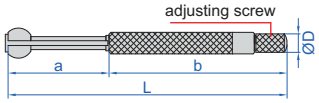
Code	Range	L	Øa	Øb	Øc
4209-1	8-12.7mm	300	3.9	2.9	6.2
4209-2	12.7-19mm	300	5.3	3.8	6.2
4209-3	19-32mm	300	5.3	3.8	6.2
4209-4	32-54mm	300	7.6	6.1	7.2
4209-5	54-90mm	300	7.6	6.1	7.2
4209-6	90-150mm	300	7.6	6.1	7.2

SMALL HOLE GAUGE SET





4208-1



- 4 gauges per set
- For small holes, slots and grooves, etc.
- Satin chrome finish

Code	Total range	Gauges included
4208-1	3-13mm	3-5mm, 5-7.5mm, 7.5-10mm, 10-13mm

(mm)

Range	L	a	b	ØD
3-5mm	76	24	52	5
5-7.5mm	79	27	52	5
7.5-10mm	88	30	58	6
10-13mm	91	34	58	6

7

FLEXIBLE INNER DIAMETER METERS



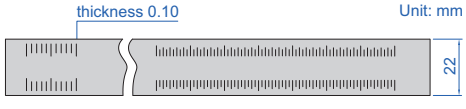
7137-60

application



- Measure average inner diameter of flexible materials
- Made of PET

Code	Diameter range	Graduation	Accuracy
7137-30	Ø10-30mm	0.05mm	±0.10mm
7137-60	Ø30-60mm	0.05mm	±0.10mm
7137-100	Ø50-100mm	0.05mm	±0.10mm
7137-200	Ø100-200mm	0.05mm	±0.10mm
7137-350	Ø200-350mm	0.05mm	±0.15mm



VIDEO

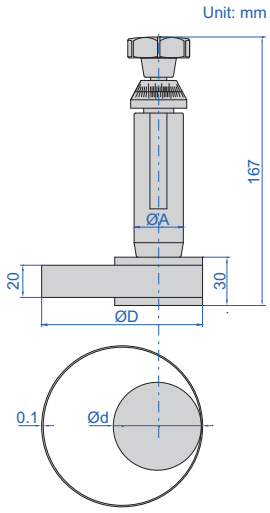
TAPE BORE METERS

INSIZE PLUS

- Measure internal diameter and circumference of soft materials like tubes, belts, etc.
- Graduation: 0.1mm
- Accuracy: ±0.2mm



2430-100



(mm)

Code	Range ØD	Ød	ØA	Measuring depth
2430-24	14-24mm	13.5	13	15-60
2430-40	22-40mm	21.5	21	15-60
2430-60	35-60mm	34.5	30.5	15-96
2430-100	55-100mm	54.5	30.5	15-106
2430-180	95-180mm	94.5	30.5	15-106
2430-255	170-255mm	94.5	30.5	15-106
2430-330	245-330mm	94.5	30.5	15-106

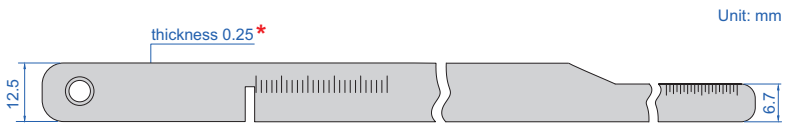
INNER DIAMETER METERS

CAN BE CUSTOM-MADE



7155-500

- Used to measure the inner diameter such as seals
- Made of stainless steel



Code	Diameter range	Graduation	Accuracy
7155-100*	Ø50-100mm	0.02mm	±0.05mm
7155-200*	Ø100-200mm	0.02mm	±0.05mm
7155-300	Ø200-300mm	0.02mm	±0.05mm
7155-500	Ø300-500mm	0.02mm	±0.05mm
7155-700	Ø500-700mm	0.02mm	±0.06mm
7155-900	Ø700-900mm	0.02mm	±0.06mm
7155-1100	Ø900-1100mm	0.02mm	±0.06mm
7155-1300	Ø1100-1300mm	0.02mm	±0.08mm

Code	Diameter range	Graduation	Accuracy
7155-1500	Ø1300-1500mm	0.02mm	±0.08mm
7155-1700	Ø1500-1700mm	0.02mm	±0.08mm
7155-1900	Ø1700-1900mm	0.02mm	±0.08mm
7155-2100	Ø1900-2100mm	0.02mm	±0.08mm
7155-2300	Ø2100-2300mm	0.02mm	±0.10mm
7155-2500	Ø2300-2500mm	0.02mm	±0.10mm
7155-2750	Ø2500-2750mm	0.02mm	±0.10mm
7155-3000	Ø2750-3000mm	0.02mm	±0.10mm

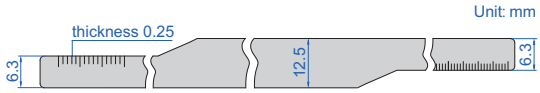
*The thickness of code **7155-100** and **7155-200** is 0.15mm, others is 0.25mm

DIAMETER METERS

CAN BE CUSTOM-MADE



7135-525



- Measure diameter of pipes, trees, tires, etc.
- Made of stainless steel

Standard type

Code	Diameter range	Graduation	Accuracy
7135-35*	Ø20-35mm	0.05mm	±0.05mm
7135-55*	Ø30-55mm	0.05mm	±0.05mm
7135-125	Ø50-125mm	0.01mm	±0.05mm
7135-225	Ø100-225mm	0.01mm	±0.05mm
7135-375	Ø200-375mm	0.01mm	±0.05mm
7135-525	Ø350-525mm	0.01mm	±0.05mm
7135-725	Ø500-725mm	0.01mm	±0.06mm
7135-925	Ø700-925mm	0.01mm	±0.06mm
7135-1125	Ø900-1125mm	0.02mm	±0.06mm
7135-1325	Ø1100-1325mm	0.02mm	±0.08mm
7135-1525	Ø1300-1525mm	0.02mm	±0.08mm
7135-1725	Ø1500-1725mm	0.02mm	±0.08mm
7135-1925	Ø1700-1925mm	0.02mm	±0.08mm
7135-2125	Ø1900-2125mm	0.02mm	±0.08mm
7135-2325	Ø2100-2325mm	0.02mm	±0.10mm
7135-2525	Ø2300-2525mm	0.02mm	±0.10mm
7135-2750	Ø2500-2750mm	0.02mm	±0.10mm
7135-3000	Ø2750-3000mm	0.02mm	±0.10mm
7135-3250	Ø3000-3250mm	0.02mm	±0.15mm
7135-3500	Ø3250-3500mm	0.02mm	±0.15mm

Code	Diameter range	Graduation	Accuracy
7135-3750	Ø3500-3750mm	0.02mm	±0.15mm
7135-4000	Ø3750-4000mm	0.02mm	±0.20mm
7135-4250	Ø4000-4250mm	0.02mm	±0.20mm
7135-4500	Ø4250-4500mm	0.02mm	±0.20mm
7135-4750	Ø4500-4750mm	0.02mm	±0.20mm
7135-5000	Ø4750-5000mm	0.02mm	±0.20mm
7135-5250	Ø5000-5250mm	0.02mm	±0.005%L**
7135-5500	Ø5250-5500mm	0.02mm	±0.005%L**
7135-5750	Ø5500-5750mm	0.02mm	±0.005%L**
7135-6000	Ø5750-6000mm	0.02mm	±0.005%L**
7135-6250	Ø6000-6250mm	0.02mm	±0.005%L**
7135-6500	Ø6250-6500mm	0.02mm	±0.005%L**
7135-6750	Ø6500-6750mm	0.02mm	±0.005%L**
7135-7000	Ø6750-7000mm	0.02mm	±0.005%L**
7135-7250	Ø7000-7250mm	0.02mm	±0.005%L**
7135-7500	Ø7250-7500mm	0.02mm	±0.005%L**
7135-7750	Ø7500-7750mm	0.02mm	±0.005%L**
7135-8000	Ø7750-8000mm	0.02mm	±0.005%L**
7135-8250	Ø8000-8250mm	0.02mm	±0.005%L**

Long type

Code	Diameter range	Graduation	Accuracy
7135-80*	Ø9-80mm	0.05mm	±0.05mm
7135-55B*	Ø15-55mm	0.02mm	±0.05mm
7135-300	Ø50-300mm	0.01mm	±0.05mm
7135-600	Ø300-600mm	0.01mm	±0.05mm
7135-900	Ø600-900mm	0.01mm	±0.06mm
7135-1200	Ø900-1200mm	0.02mm	±0.08mm
7135-1500	Ø1200-1500mm	0.02mm	±0.08mm
7135-1800	Ø1500-1800mm	0.02mm	±0.08mm
7135-2100	Ø1800-2100mm	0.02mm	±0.08mm
7135-2400	Ø2100-2400mm	0.02mm	±0.10mm
7135-2700	Ø2400-2700mm	0.02mm	±0.10mm
7135-3000B	Ø2700-3000mm	0.02mm	±0.10mm
7135-3300	Ø3000-3300mm	0.02mm	±0.15mm
7135-3600	Ø3300-3600mm	0.02mm	±0.15mm
7135-3900	Ø3600-3900mm	0.02mm	±0.20mm
7135-4200	Ø3900-4200mm	0.02mm	±0.20mm
7135-4500B	Ø4200-4500mm	0.02mm	±0.20mm

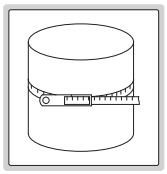
Code	Diameter range	Graduation	Accuracy
7135-4800	Ø4500-4800mm	0.02mm	±0.20mm
7135-5100	Ø4800-5100mm	0.02mm	±0.005%L**
7135-5400	Ø5100-5400mm	0.02mm	±0.005%L**
7135-5700	Ø5400-5700mm	0.02mm	±0.005%L**
7135-6000B	Ø5700-6000mm	0.02mm	±0.005%L**
7135-6300	Ø6000-6300mm	0.02mm	±0.005%L**
7135-6600	Ø6300-6600mm	0.02mm	±0.005%L**
7135-6900	Ø6600-6900mm	0.02mm	±0.005%L**
7135-7200	Ø6900-7200mm	0.02mm	±0.005%L**
7135-7500B	Ø7200-7500mm	0.02mm	±0.005%L**
7135-7800	Ø7500-7800mm	0.02mm	±0.005%L**
7135-8100	Ø7800-8100mm	0.02mm	±0.005%L**
7135-8400	Ø8100-8400mm	0.02mm	±0.005%L**
7135-8700	Ø8400-8700mm	0.02mm	±0.005%L**
7135-9000	Ø8700-9000mm	0.02mm	±0.005%L**
7135-9300	Ø9000-9300mm	0.02mm	±0.005%L**

* The thickness of code **7135-35**, **7135-55**, **7135-80** and **7135-55B** is 0.10mm, while the thickness of other codes is 0.25mm

** L is the actual measured value (unit: mm)

CAN BE CUSTOM-MADE

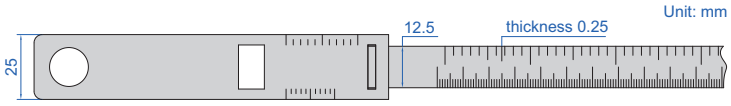
CIRCUMFERENCE METERS





7136-1880

- Measure diameter and circumference of pipes, trees, tires, etc.
- Made of stainless steel



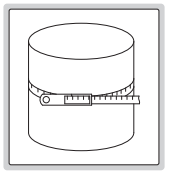
Code	Circumference range	Diameter range	Graduation	Accuracy	
				circumference	diameter
7136-940	160-940mm	Ø50-300mm	0.1mm	±0.30mm	±0.10mm
7136-1880	940-1880mm	Ø300-600mm	0.1mm	±0.30mm	±0.10mm
7136-2830	1880-2830mm	Ø600-900mm	0.1mm	±0.30mm	±0.10mm
7136-3770	2830-3770mm	Ø900-1200mm	0.1mm	±0.30mm	±0.10mm
7136-4710	3770-4710mm	Ø1200-1500mm	0.1mm	±0.30mm	±0.10mm
7136-5650	4710-5650mm	Ø1500-1800mm	0.1mm	±0.30mm	±0.10mm
7136-6600	5650-6600mm	Ø1800-2100mm	0.1mm	±0.30mm	±0.10mm
7136-7540	6600-7540mm	Ø2100-2400mm	0.1mm	±0.30mm	±0.10mm
7136-8480	7540-8480mm	Ø2400-2700mm	0.1mm	±0.30mm	±0.10mm
7136-9430	8480-9430mm	Ø2700-3000mm	0.1mm	±0.30mm	±0.10mm

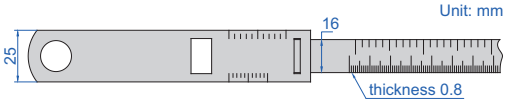
CIRCUMFERENCE METERS (ECONOMIC TYPE)

- Measure diameter and circumference of soft materials like pipes, trees, tires, etc.
- Graduation: 0.1mm
- Laser engraved scale
- Made of stainless steel



7114-950



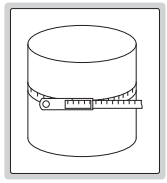


Code	Circumference range	Diameter range	Accuracy	
			circumference	diameter
7114-950	150-950mm	Ø50-300mm	±3mm	±1mm
7114-2200	940-2200mm	Ø300-700mm	±3mm	±1mm
7114-3460	2190-3460mm	Ø700-1100mm	±3mm	±1mm

CIRCUMFERENCE METERS

INSIZE PLUS

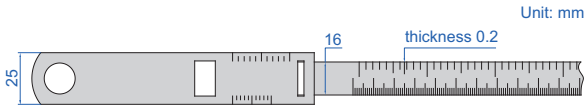
CAN SUPPLY TAPE WIDTH
6MM, 35MM, 60MM





7115-3460

- Measure diameter and circumference of pipes, trees, tires, etc.
- Graduation: 0.1mm
- Laser engraved scale
- Made of stainless steel

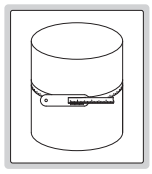


Code	Circumference range	Diameter range	Accuracy	
			circumference	diameter
7115-950*	150-950mm	Ø50-300mm	±0.60mm	±0.20mm
7115-2200	940-2200mm	Ø300-700mm	±0.60mm	±0.20mm
7115-3460	2190-3460mm	Ø700-1100mm	±0.60mm	±0.20mm
7115-4720	3450-4720mm	Ø1100-1500mm	±0.90mm	±0.30mm
7115-5980	4710-5980mm	Ø1500-1900mm	±0.90mm	±0.30mm
7115-7230	5970-7230mm	Ø1900-2300mm	±1.05mm	±0.35mm
7115-8500	7220-8500mm	Ø2300-2700mm	±1.20mm	±0.40mm
7115-9760	8490-9760mm	Ø2700-3100mm	±1.35mm	±0.45mm
7115-11010	9730-11010mm	Ø3100-3500mm	±1.50mm	±0.50mm

*When diameter range is Ø50-100mm, the accuracy of circumference is ±0.90mm, diameter is ±0.30mm

CIRCUMFERENCE METERS

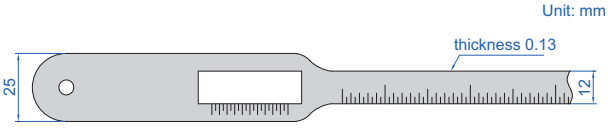
INSIZE PLUS





7116-115

- Measure diameter of cables, thin plastic pipes, etc., which may deform
- Laser engraved scale
- Made of stainless steel



Code	Diameter range	Graduation	Accuracy
7116-115	Ø20-115mm	0.05mm	±0.10mm
7116-230	Ø100-230mm	0.05mm	±0.10mm
7116-330	Ø200-330mm	0.05mm	±0.15mm
7116-620	Ø300-620mm	0.05mm	±0.20mm

TAPER GAUGES

REFER TO PAGE 509-510 FOR DETAILS



4833-2



TAPER GAUGE SET
4837-1

TAPER BORE GAUGES

REFER TO PAGE 511 FOR DETAILS



4852-15

SMALL TAPER BORE GAUGE

REFER TO PAGE 511 FOR DETAILS



4855-5

INSIDE SPRING CALIPERS

REFER TO PAGE 519 FOR DETAILS



7261-150

08 ARC RADIUS MEASURING TOOLS



Outside Diameter Variation Measuring Instruments
Page 261



Outside Diameter Measuring Instruments
Page 262



Digital Radius Gauges
Page 263



Digital Radius Gauges
Page 264



Large Range Digital Radius Gauges
Page 265-266



Digital Arc Radius Calipers
Page 266



Digital Radius Calipers
Page 267



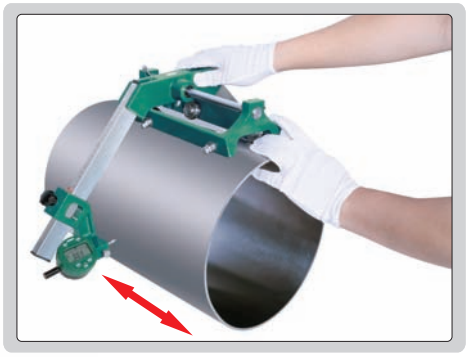
Radius Gauges
Page 267

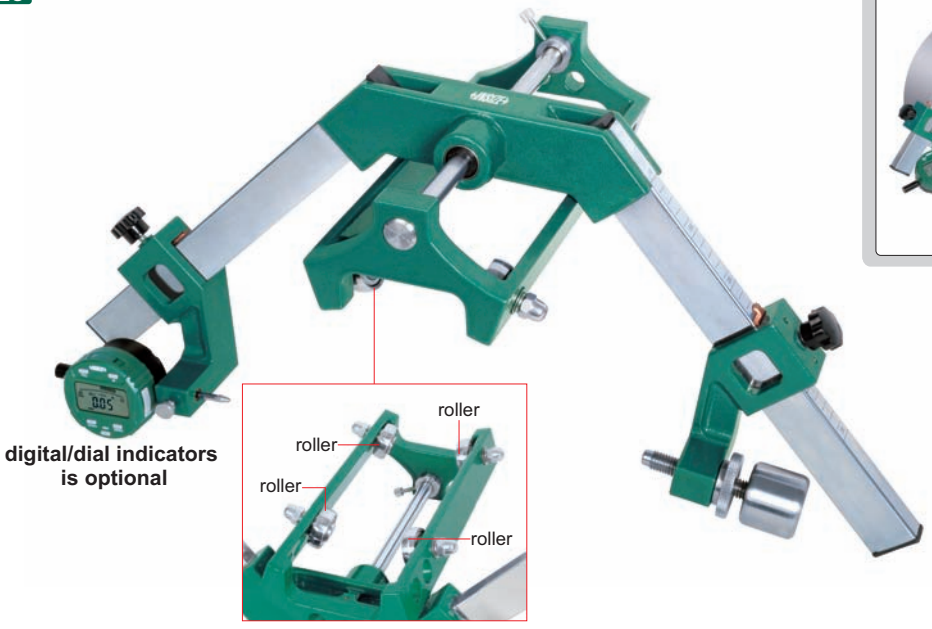
CAN BE CUSTOM-MADE

OUTSIDE DIAMETER VARIATION MEASURING INSTRUMENTS

VIDEO

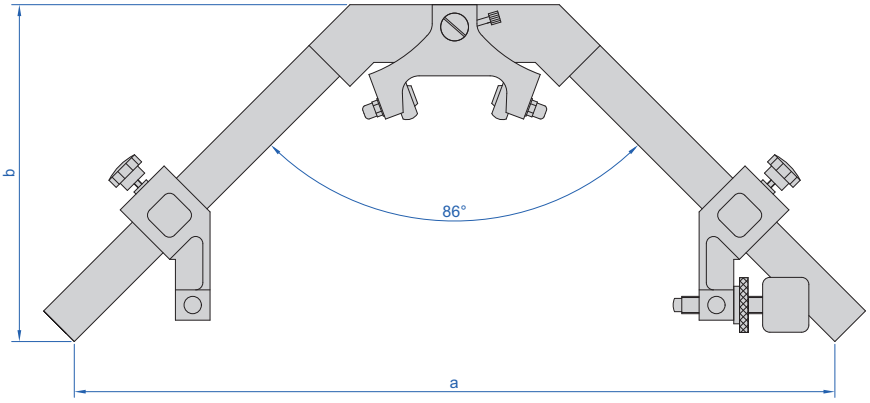
application



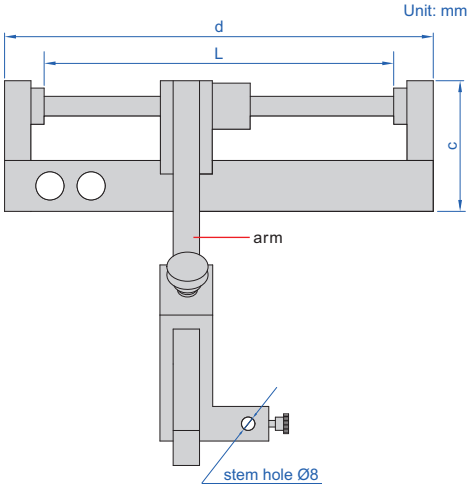


digital/dial indicators is optional

2715-350



Unit: mm



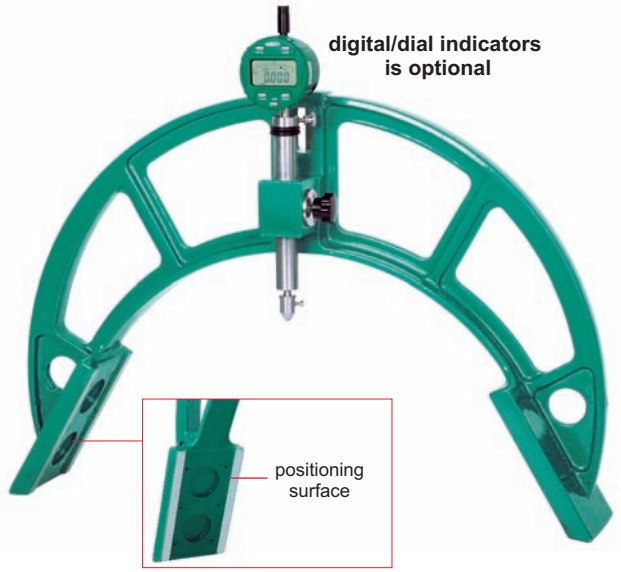
- Measurement of diameter variation, convexity, concavity, taper and other parameters
- Continuous measurement in the axis direction
- Four rollers are included
- Optional accessory: 0.01mm or 0.001mm graduation digital/dial indicators

(mm)

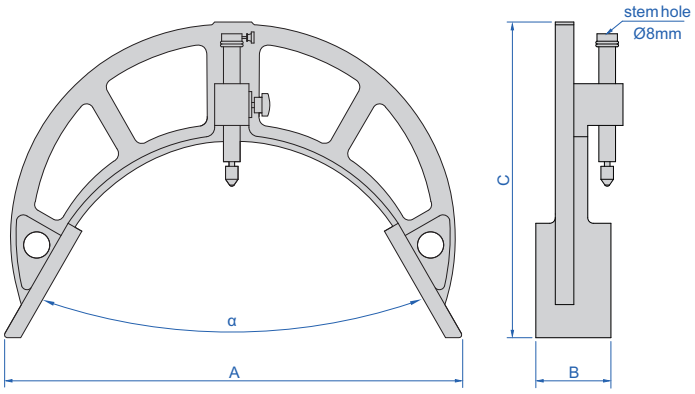
Code	Range (diameter)	Accuracy	Repeatability	Arm moving range (L)	a	b	c	d	Weight
2715-350	100-350mm/4-14"	0.01mm	3μm	200mm	500	230	80	260	4kg
2715-500	200-500mm/8-20"	0.01mm	3μm	151mm	630	260	95	260	5kg
2715-700	300-700mm/12-28"	0.01mm	3μm	197mm	910	372	112	320	6.5kg
2715-1000	500-1000mm/20-40"	0.01mm	3μm	190mm	1170	460	120	320	8kg
2715-1600	800-1600mm/32-64"	0.02mm	6μm	202mm	1860	690	180	320	12.5kg
2715-2000	1400-2000mm/56-80"	0.02mm	6μm	232mm	2156	860	210	350	18.5kg

OUTSIDE DIAMETER MEASURING INSTRUMENTS

VIDEO



2716-500



8

- The frame is made of aluminum magnesium alloy with light weight and high strength
- Optional accessory: 0.01mm or 0.001mm digital/dial indicators

(mm)

Code	Range (diameter)	Repeatability	α	A	B	C	Weight
2716-60	18-60	0.01mm	60°	140	60	160	1kg
2716-120	60-120	0.01mm	60°	166	65	162	1.5kg
2716-200	120-200	0.01mm	60°	225	70	228	2kg
2716-300	200-300	0.01mm	60°	330	80	262	2.5kg
2716-400	300-400	0.01mm	60°	405	80	303	4kg
2716-500	400-500	0.01mm	60°	494	80	340	5kg
2716-600	500-600	0.01mm	60°	594	80	398	6kg
2716-700	600-700	0.01mm	60°	685	80	446	7.5kg
2716-800	700-800	0.01mm	60°	772	80	479	9kg
2716-900	800-900	0.01mm	60°	860	80	520	10kg
2716-1000	900-1000	0.01mm	60°	950	80	560	11.5kg
2716-1100	1000-1100	0.01mm	60°	1035	90	575	13kg
2716-1200	1000-1200	0.01mm	83.62°	960	100	460	12kg
2716-1300	1100-1300	0.01mm	83.62°	1000	100	485	13.5kg
2716-1400	1200-1400	0.01mm	83.62°	1100	100	512	15kg
2716-1600	1400-1600	0.01mm	83.62°	1260	100	540	17kg
2716-1800	1600-1800	0.01mm	83.62°	1460	100	570	19kg
2716-2000	1800-2000	0.01mm	83.62°	1645	100	605	21kg

DIGITAL RADIUS GAUGES

DATA OUTPUT

VIDEO



2188-55



2188-233



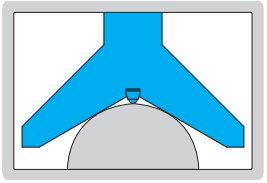
2188-143



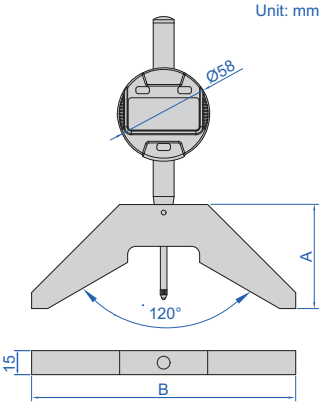
2188-323

- Measure radius of external arc, arc angle of measured surface should be larger than 60°
- Display radius value, no need to calculate
- Button function: on/off, zero, data preset, inch/mm
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Optional accessory: setting standards, wireless transmitter code **7315-50M** (receiver is needed) page 8

application



Unit: mm



Code	Range (radius)	Resolution	Accuracy	A	B
2188-55	4-53mm/0.16-2.09"	0.01mm/0.0005"	±0.02mm	40mm	65mm
2188-143	48-143mm/1.89-5.63"	0.01mm/0.0005"	±0.03mm	65mm	165mm
2188-233	138-233mm/5.43-9.17"	0.01mm/0.0005"	±0.03mm	85mm	255mm
2188-323	228-323mm/8.98-12.72"	0.01mm/0.0005"	±0.04mm	95mm	345mm

Setting standards

Code	Setting standards	Remark
4110-10D00	setting standard for **2188-55**	included
2188-P143	setting standard for **2188-143**	**optional**
2188-P233	setting standard for **2188-233**	**optional**
2188-P323	setting standard for **2188-323**	**optional**



2188-P143

setting standard application



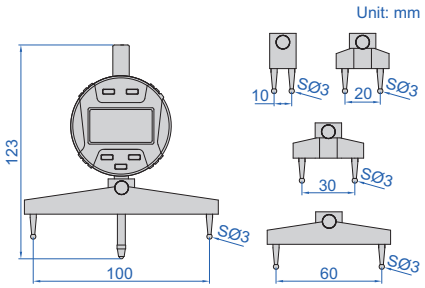
DIGITAL RADIUS GAUGE (LOW ACCURACY)

DATA OUTPUT

VIDEO



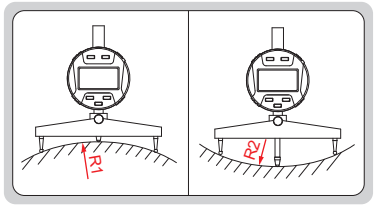
2183

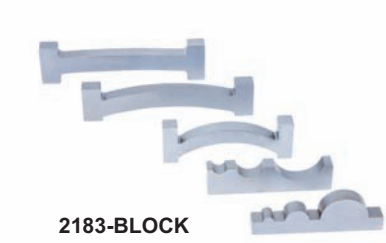


calibration standard application



- Resolution: 0.01mm/0.001"
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Measure radius of internal or external arcs
- Display can be rotated by 320°
- Supplied with 5 jaws for different sizes of arc
- Data output
- Battery CR2032
- Automatic power off (time is adjustable)
- Optional accessory:
  calibration standard (code **2183-BLOCK**),
  wireless transmitter code **7315-50M**
  (receiver is needed) page 8





2183-BLOCK

Code	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (mm)
2183	5-910mm/0.2-35.83"	7-910mm/0.3-35.83"	±0.01R*

*R is the radius to be measured. For example, radius is 100mm, the accuracy is ±0.01x100=±1mm

Calibration standard (optional)

Code	Remark
2183-BLOCK	includes 5 standard blocks

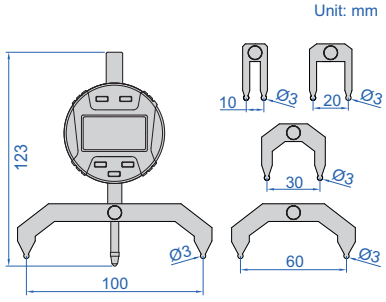
DIGITAL RADIUS GAUGE

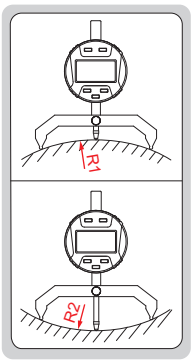
DATA OUTPUT

VIDEO



2511

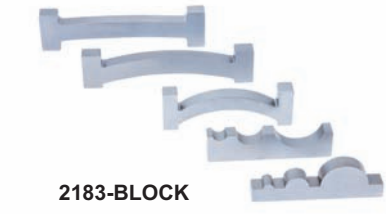




- Resolution: 0.01mm/0.001"
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Measure radius of internal or external arcs
- Cylindrical measuring jaws, self-positioning
- Display can be rotated by 320°
- Supplied with 5 jaws for different sizes of arc
- Data output
- Battery CR2032
- Automatic power off (time is adjustable)
- Optional accessory: calibration standard (code **2183-BLOCK**), wireless transmitter code **7315-50M** (receiver is needed) page 8

calibration standard application





2183-BLOCK

Code	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (mm)
2511	5-910mm/0.2-35.83"	7-910mm/0.3-35.83"	±0.005R*

*R is the radius to be measured. For example, radius is 100mm, the accuracy is ±0.005x100=±0.5mm

Calibration standard (optional)

Code	Remark
2183-BLOCK	includes 5 standard blocks

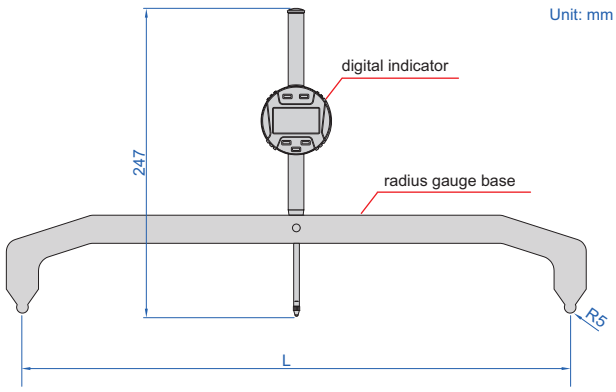
DATA OUTPUT

VIDEO

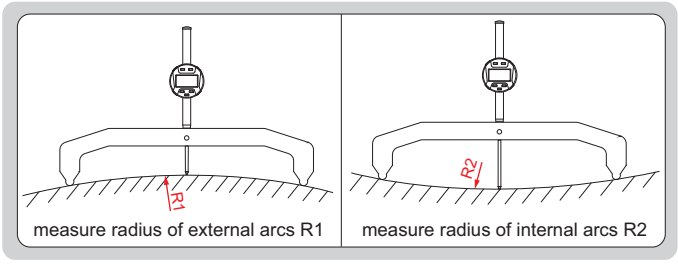
LARGE RANGE DIGITAL RADIUS GAUGES



2512-300



- Measure radius of internal or external arcs
- Resolution: 0.01mm/0.001"
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Display can be rotated by 320°
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8



Radius gauges (with digital indicator)

Code	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (mm)*	L
2512-100	100-625mm/4-24.606"	100-625mm/4-24.606"	±0.005R	100mm
2512-200	300-2500mm/11.811-98.425"	300-2500mm/11.811-98.425"	±0.005R	200mm
2512-300	500-11250mm/19.685-442.913"	500-11250mm/19.685-442.913"	±0.005R	300mm
2512-400	1100-15000mm/43.307-590"	1100-15000mm/43.307-590"	±0.005R	400mm

*R is the radius to be measured. For example, radius is 100mm, the accuracy is ±0.005×100=±0.5mm

Radius gauge bases (without digital indicator)

Code	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (mm)*	L	Material
2512-100-BASE	100-625mm/4-24.606"	100-625mm/4-24.606"	±0.005R	100mm	stainless steel
2512-200-BASE	300-2500mm/11.811-98.425"	300-2500mm/11.811-98.425"	±0.005R	200mm	stainless steel
2512-300-BASE	500-11250mm/19.685-442.913"	500-11250mm/19.685-442.913"	±0.005R	300mm	stainless steel
2512-400-BASE	1100-15000mm/43.307-590"	1100-15000mm/43.307-590"	±0.005R	400mm	stainless steel

*R is the radius to be measured. For example, radius is 100mm, the accuracy is ±0.005×100=±0.5mm

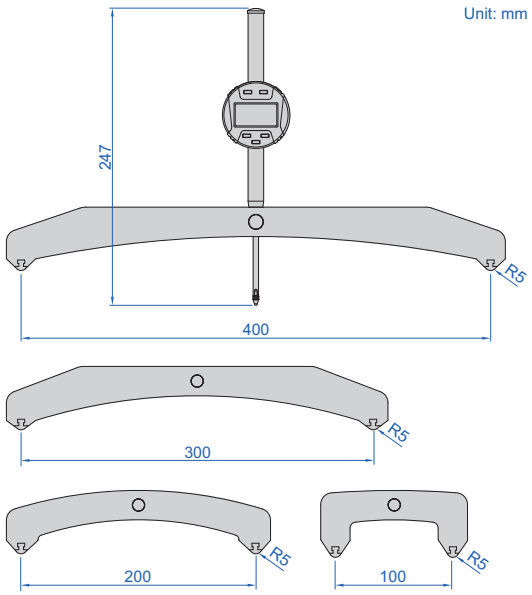
Digital indicator

Code	Range	Resolution	Accuracy	Repeatability
2512-50F	0-50.8mm/0-2"	0.01mm/0.001"	5μm	5μm

LARGE RANGE DIGITAL RADIUS GAUGE

DATA OUTPUT

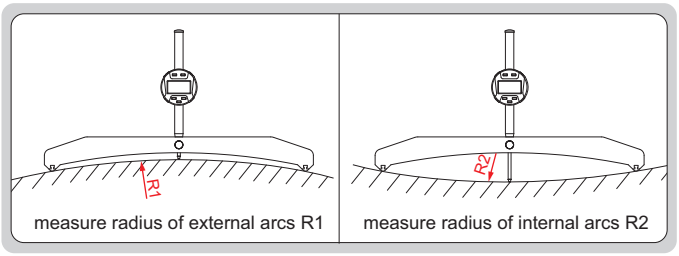
VIDEO





2197

- Measure radius of internal or external arcs
- Resolution: 0.01mm/0.001"
- Buttons: on/off, hold, mm/inch, s (select jaws), zero
- Display can be rotated by 320°
- Supplied with 4 jaws for different sizes of arc
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8



8

Code	Range of external radius (R1)	Range of internal radius (R2)	Accuracy (mm)
2197	100-15000mm/4-590"	100-15000mm/4-590"	±0.005R*

*R is the radius to be measured. For example, radius is 100mm, the accuracy is ±0.005×100=±0.5mm

DIGITAL ARC RADIUS CALIPERS

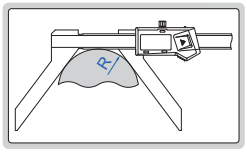
DATA OUTPUT

VIDEO

- Non waterproof
- Measure the radius of arc less than half round
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel

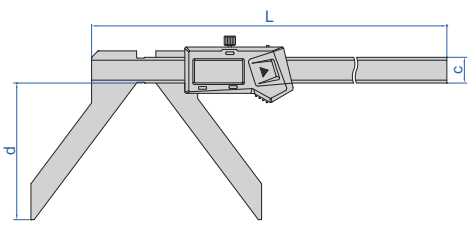


1189-200B



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range (R)	Accuracy	L	c	d
1189-150B	5-150mm/0.2-6"	±0.05mm	263mm	16mm	65mm
1189-200B	5-200mm/0.2-8"	±0.07mm	313mm	16mm	85mm



Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range (R)	Accuracy	L	c	d
1189-150BWL	5-150mm/0.2-6"	±0.05mm	263mm	16mm	65mm
1189-200BWL	5-200mm/0.2-8"	±0.07mm	313mm	16mm	85mm

DATA OUTPUT

DIRECT READING, CALCULATION IS NOT REQUIRED

DIGITAL RADIUS CALIPERS

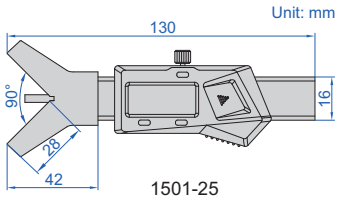
VIDEO



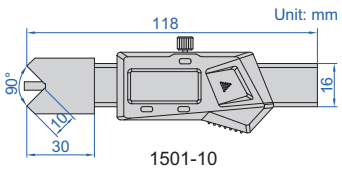
1501-25



1501-10



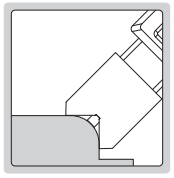
1501-25



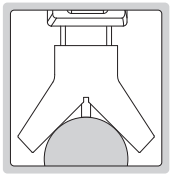
1501-10

- Non waterproof
- Measure radius of external arc, arc angle of measured surface should be larger than 90°
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with pin gauge for zero setting
- Optional accessory: wireless transmitter code **7315-25** (receiver is needed) page 7

1501-10 can measure small workpieces or workpieces with steps



application



pin gauge (included)



Code	Range (radius)	Accuracy
1501-25	2-25mm/0.079-1"	±0.05mm
1501-10	2-10mm/0.079-0.394"	±0.05mm

8

REFER TO PAGE 504-505 FOR DETAILS

RADIUS GAUGES



4801-17



4802-31



RADIUS GAUGE SET 4804-26

09 KEYWAY AND CHAMFER MEASURING TOOLS



Keyway Symmetry Gauges
Page 269



Keyway Symmetry Digital Calipers
Page 269



Digital Keyway Depth Gauges
Page 270



Groove Micrometers
Page 270



Digital Chamfer Gauges
Page 271



Chamfer Gauges
Page 272



Digital Chamfer Gauges
Page 272



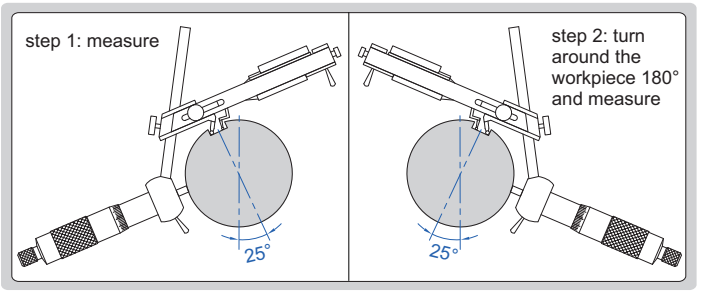
Chamfer Height Gauges
Page 273

KEYWAY SYMMETRY GAUGE



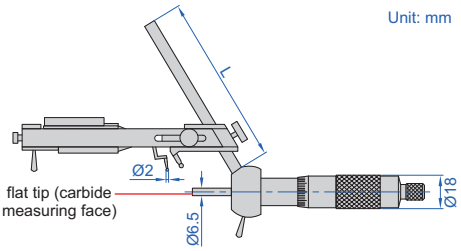
4865-14

application



- Used to measure the symmetry of shaft keyways

Unit: mm



Code	Range		Graduation	Accuracy	L
	diameter of shaft	width of keyway			
4865-14	14-110mm	5-28mm	0.01mm	0.02mm	100mm

KEYWAY SYMMETRY DIGITAL CALIPERS

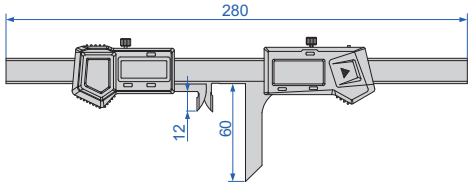


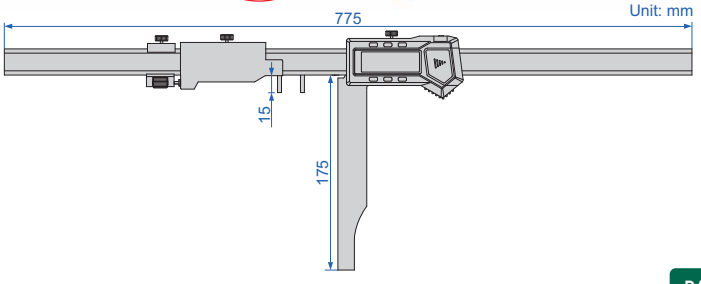
1531-60

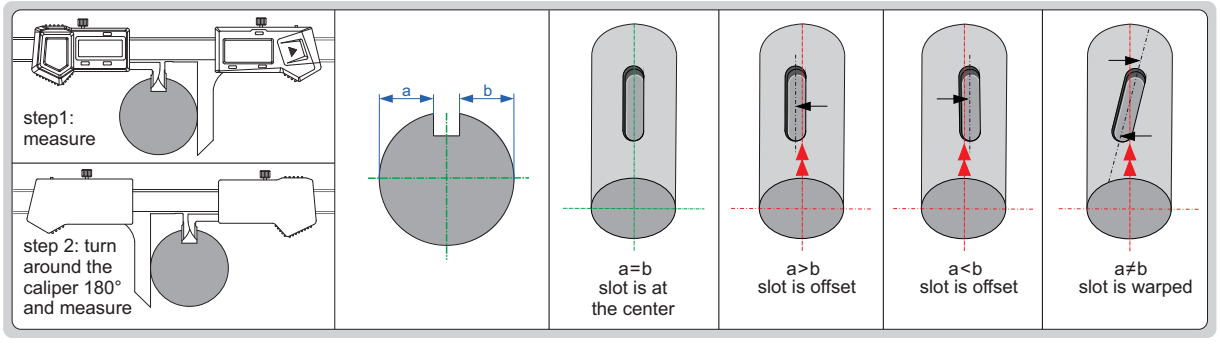


1531-200

Unit: mm







DATA OUTPUT

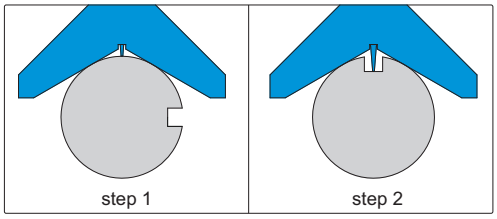
- Non waterproof
- Used to measure the symmetry of shaft keyways
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032, data output
- Made of stainless steel
- Optional accessory: wireless transmitter code **7315-22** (receiver is needed) page 7

Code	Width of keyway	Diameter of shaft	Accuracy	Remark
1531-60	6-45mm	Ø10-120mm	±0.05mm	can measure keyway width
1531-200	3-250mm	Ø6-350mm	±0.05mm	cannot measure keyway width

DIGITAL KEYWAY DEPTH GAUGE

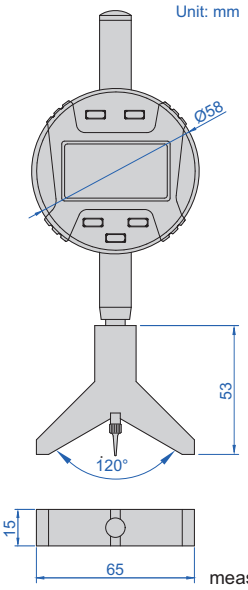
DATA OUTPUT

VIDEO



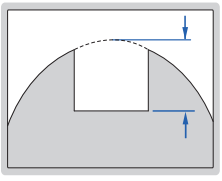


2182-25



- Measure keyway depth of cylindrical workpieces with diameter Ø10-100mm
- Button function: on/off, zero, inch/metric conversion, absolute/incremental measurement, data preset, measuring direction change
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Stainless steel base
- Pointed tip
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8

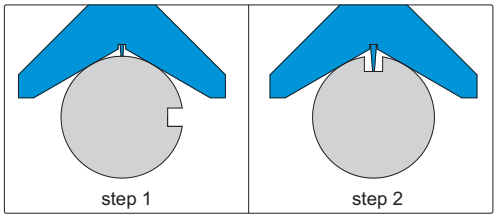
measure depth of keyway



Code	Range	Resolution	Accuracy
2182-25	0-25.4mm/0-1"	0.01mm/0.0005"	±0.02mm

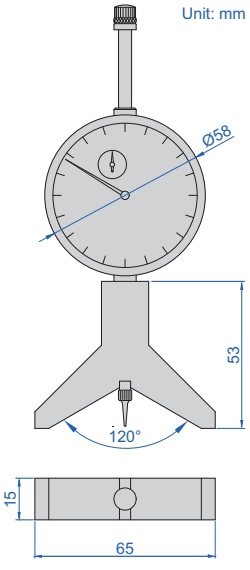
DIAL KEYWAY DEPTH GAUGE

VIDEO



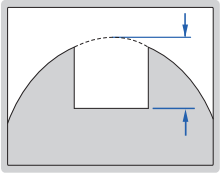


2189-30



- Measure keyway depth of cylindrical workpieces with diameter Ø10-100mm
- Stainless steel base
- Pointed tip

measure depth of keyway



Code	Range	Graduation	Accuracy
2189-30	0-30mm	0.01mm	±0.03mm

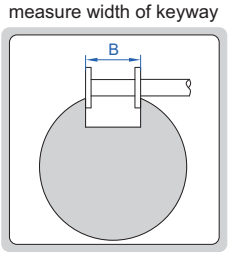
GROOVE MICROMETERS

REFER TO PAGE 163 FOR DETAILS



3287-50B

measure width of keyway

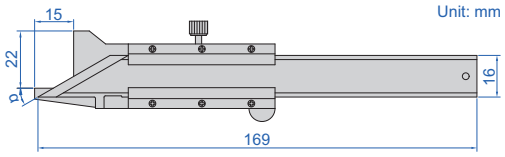


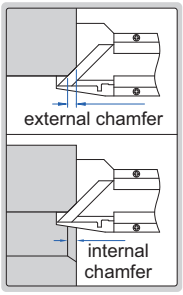
CHAMFER GAUGES

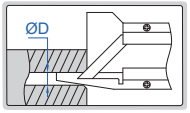


1267-6

- Measure 30º/45º/60º chamfer dimension
- Graduation: 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface







Code	Range	Accuracy	Chamfer (α)	ØD
1267-6	0-10mm	±0.06mm	45º	7mm
1267-63	0-10mm	±0.06mm	30º	8mm
1267-66	0-10mm	±0.06mm	60º	7mm

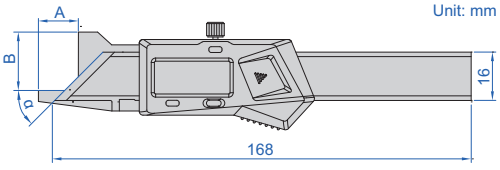
DATA OUTPUT

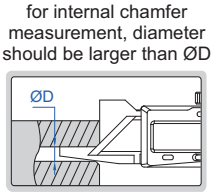
DIGITAL CHAMFER GAUGES

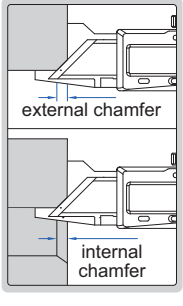


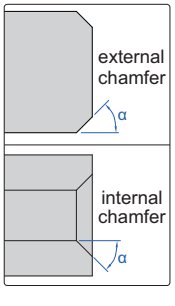
1180-6

- Non waterproof
- Measure 15º/20º/30º/45º/60º chamfer dimension
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel









With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

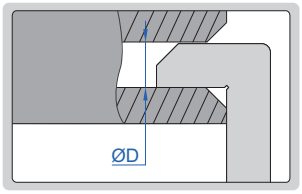
Code	Range	Accuracy	Chamfer (α)	A	B	ØD
1180-6	0-10mm/0-0.39"	±0.06mm	45º	15mm	22mm	7mm
1180-61	0-10mm/0-0.39"	±0.06mm	15º	33mm	20mm	11mm
1180-62	0-10mm/0-0.39"	±0.06mm	20º	33mm	20mm	11mm
1180-63	0-10mm/0-0.39"	±0.06mm	30º	15mm	22mm	8mm
1180-66	0-10mm/0-0.39"	±0.06mm	60º	14mm	21mm	7mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Chamfer (α)	A	B	ØD
1180-6WL	0-10mm/0-0.39"	±0.06mm	45º	15mm	22mm	7mm
1180-61WL	0-10mm/0-0.39"	±0.06mm	15º	33mm	20mm	11mm
1180-62WL	0-10mm/0-0.39"	±0.06mm	20º	33mm	20mm	11mm
1180-63WL	0-10mm/0-0.39"	±0.06mm	30º	15mm	22mm	8mm
1180-66WL	0-10mm/0-0.39"	±0.06mm	60º	14mm	21mm	7mm

CHAMFER GAUGE

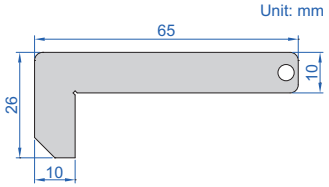
for internal chamfer measurement, diameter should be larger than ØD





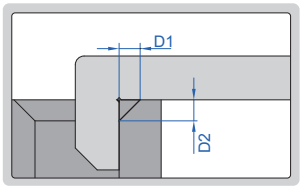
4844-1

Unit: mm

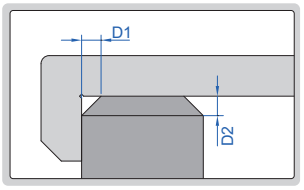


- To measure internal and external chamfers
- Made of stainless steel

internal chamfer



external chamfer



Code	Graduation	Accuracy	ØD
4844-1	0.5mm	±0.25mm	11mm

DIGITAL CHAMFER GAUGES

ATTENTION: CHAMFER OF HOLES CANNOT BE MEASURED

DATA OUTPUT

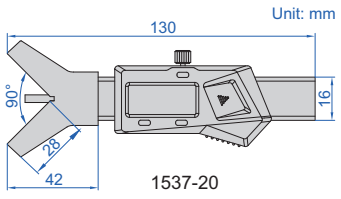
DIRECT READING, CALCULATION IS NOT REQUIRED

VIDEO



1537-20

Unit: mm

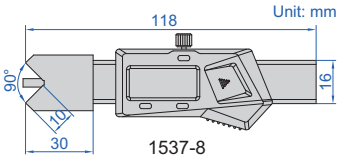


1537-20



1537-8

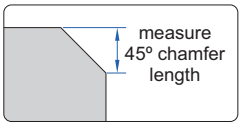
Unit: mm



1537-8

- Non waterproof
- Measure 45º chamfer length
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with pin gauge for zero setting
- Optional accessory: wireless transmitter code **7315-25** (receiver is needed) page 7

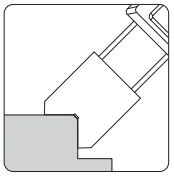
Code	Range	Accuracy
1537-20	0-20mm/0-0.787"	±0.05mm
1537-8	0-8mm/0-0.315"	±0.05mm



pin gauge (included)



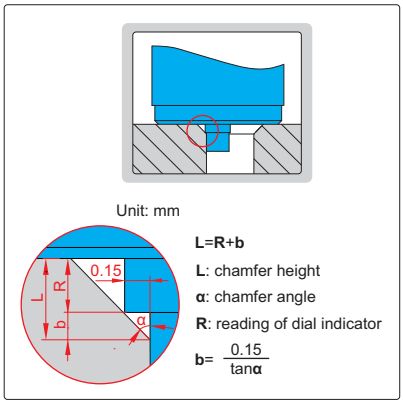
1537-8 can measure small workpieces or workpieces with steps



CHAMFER HEIGHT GAUGE

INSIZE PLUS

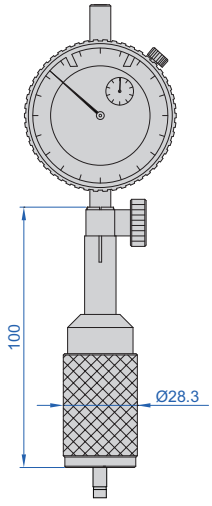
principle of measurement





2943-1

Unit: mm



setting gauge (included)



- Measure outside or inside chamfer height
- Suitable for diameter of bores≥6mm, chamfer angle α≥30°
- Setting gauge is included

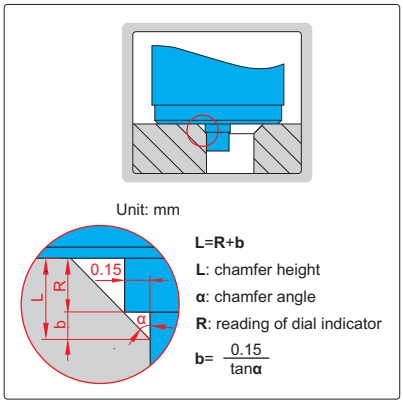
Code	Range (L)	Graduation	Accuracy
2943-1	0.2-5mm	0.01mm	±0.02mm

DIGITAL CHAMFER HEIGHT GAUGE

DATA OUTPUT

INSIZE PLUS

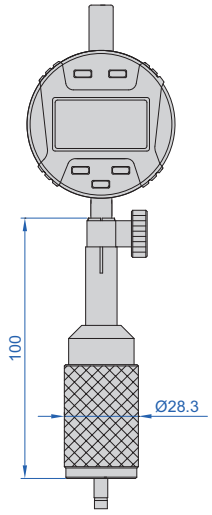
principle of measurement





2944-1

Unit: mm



setting gauge (included)



- Measure outside or inside chamfer height
- Suitable for diameter of bores≥6mm, chamfer angle α≥30°
- Resolution: 0.01mm/0.0005"
- Setting gauge is included
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Range (L)	Accuracy
2944-1	0.2-5mm/0.008-0.197"	±0.02mm

10 INDICATORS AND DIAL INDICATOR STANDS



Dial Test Indicators
Page 275-279



Styli For Dial Test Indicators
Page 279



Digital Indicators
Page 280-296



Zeroing Foot Switches
Page 290



High Precision Digital Indicators
Page 297-298



Dial Comparators
Page 299



Dial Indicators
Page 300-309



Points
Page 310-314



Backs
Page 315-316



Measuring Tools Dynamometers
Page 317



Dial Indicator Testers
Page 317



Dial Test Indicator Holders
Page 318-319



Magnetic Stands
Page 320-328



Dial Indicator Stands (Non-Magnetic)
Page 329-330



Dial Indicator Stands
Page 331-339

ANTI MAGNETIC CARBIDE CONTACT POINT

INSPECTION CERTIFICATE

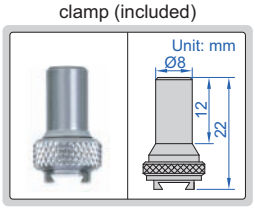
PRECISION DIAL TEST INDICATOR

INSIZE PLUS

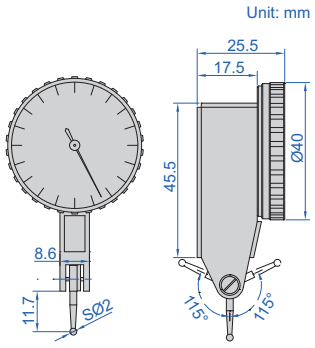


2897-02

clamp (included)



- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 279)



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2897-02*	0.2mm	0.001mm	4μm	2μm	0-100-0

*Supplied with manufacturer inspection certificate

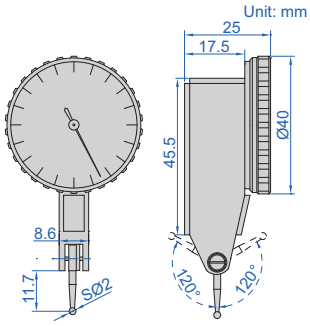
INSPECTION CERTIFICATE

PRECISION DIAL TEST INDICATORS

INSIZE PLUS



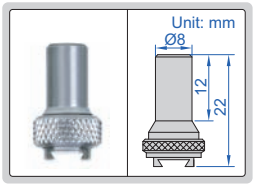
2880-02



ruby contact point of **2880-02R**



clamp (included)



- Meet DIN2270
- Ceramic bearing
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 279)

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Remark
2880-02*	0.2mm	0.002mm	4μm	2μm	0-100-0	anti magnetic carbide contact point
2880-02R*	0.2mm	0.002mm	4μm	2μm	0-100-0	ruby contact point

*Supplied with manufacturer inspection certificate

JEWELED BEARING

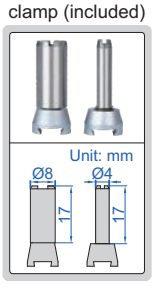
INSPECTION CERTIFICATE

DIAL TEST INDICATORS

10

POPULAR MODEL

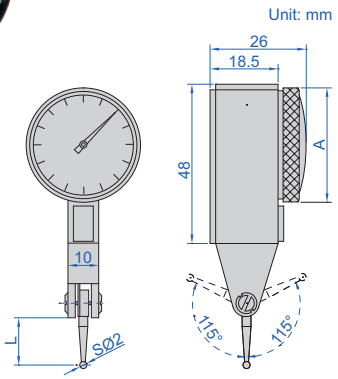
clamp (included)





2380-08

- Meet DIN2270 (except **2380-02**, **2381-02**, **2381-021**)
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 279)



(mm)

Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	A	L
2380-08*	0.8mm	0.01mm	13μm	3μm	0-40-0	Ø30	13.5
2381-08*	0.8mm	0.01mm	13μm	3μm	0-40-0	Ø37	13.5
2380-02*	0.2mm	0.002mm	6μm	2μm	0-100-0	Ø30	12.5
2381-02*	0.2mm	0.002mm	6μm	2μm	0-100-0	Ø37	12.5
2381-021*	0.2mm	0.001mm	6μm	2μm	0-100-0	Ø37	12.5

*Supplied with manufacturer inspection certificate

INCH DIAL TEST INDICATORS

JEWELED BEARING

INSPECTION CERTIFICATE

- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: 5/32" DIA and 3/8" DIA

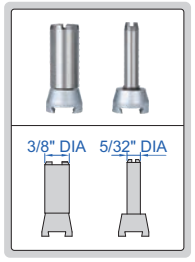


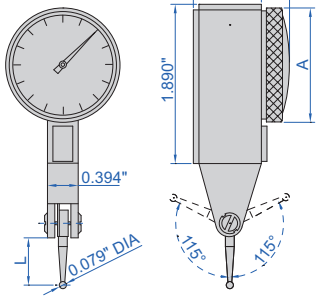
2380-31

Code	Range	Graduation	Accuracy	Dial reading	A	L
2380-31*	0.03"	0.001"	±0.001"	0-15-0	1.181" DIA	0.50"
2380-35*	0.03"	0.0005"	±0.0005"	0-15-0	1.181" DIA	0.50"
2380-301*	0.008"	0.0001"	±0.0001"	0-40-0	1.181" DIA	0.563"
2381-31*	0.03"	0.001"	±0.001"	0-15-0	1.457" DIA	0.50"
2381-35*	0.03"	0.0005"	±0.0005"	0-15-0	1.457" DIA	0.50"
2381-301*	0.008"	0.0001"	±0.0001"	0-40-0	1.457" DIA	0.563"

*Supplied with manufacturer inspection certificate

clamp (included)





DIAL TEST INDICATOR

INSIZE PLUS

ANTI MAGNETIC CARBIDE CONTACT POINT

INSPECTION CERTIFICATE

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 279)

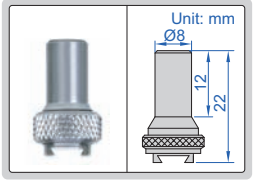


2895-08

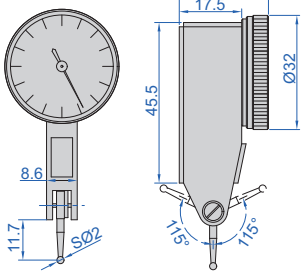
Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2895-08*	0.8mm	0.01mm	13μm	3μm	0-40-0

*Supplied with manufacturer inspection certificate

clamp (included)



Unit: mm



LONG STYLUS DIAL TEST INDICATOR

INSIZE PLUS

ANTI MAGNETIC CARBIDE CONTACT POINT

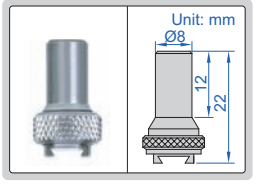
INSPECTION CERTIFICATE



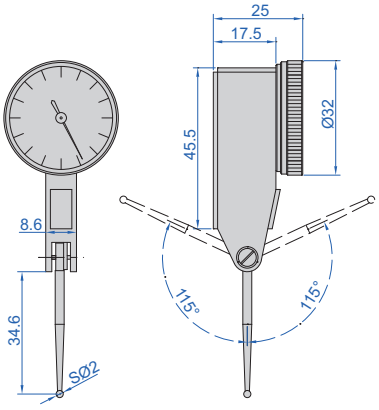
2896-05

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 279)

clamp (included)



Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2896-05*	0.5mm	0.01mm	13μm	5μm	0-25-0

*Supplied with manufacturer inspection certificate

LONG STYLUS DIAL TEST INDICATOR

INSPECTION CERTIFICATE

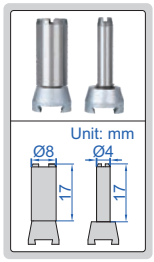
JEWELED BEARING

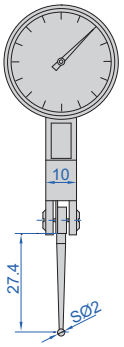


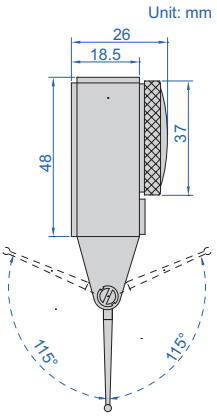
2383-08A

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 279)

clamp (included)







Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2383-08A*	0.8mm	0.01mm	13μm	3μm	0-40-0

*Supplied with manufacturer inspection certificate

VERTICAL TYPE LONG STYLUS DIAL TEST INDICATOR

INSPECTION CERTIFICATE

ANTI MAGNETIC CARBIDE CONTACT POINT

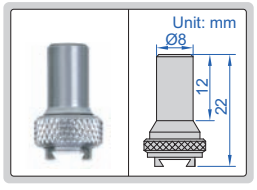
INSIZE PLUS

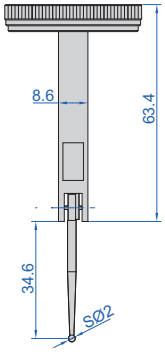


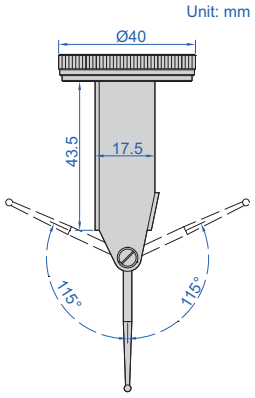
2899-05

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 279)

clamp (included)







Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2899-05*	0.5mm	0.01mm	13μm	3μm	0-25-0

*Supplied with manufacturer inspection certificate

10

VERTICAL TYPE DIAL TEST INDICATOR

INSPECTION CERTIFICATE

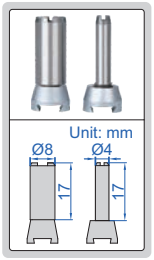
JEWELED BEARING

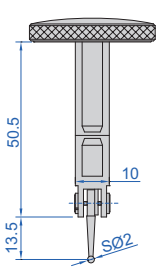


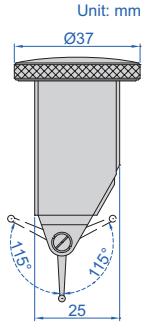
2398-08

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 279)

clamp (included)







Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2398-08*	0.8mm	0.01mm	13μm	3μm	0-40-0

*Supplied with manufacturer inspection certificate

SIDE TYPE DIAL TEST INDICATOR

INSIZE PLUS

INSPECTION CERTIFICATE

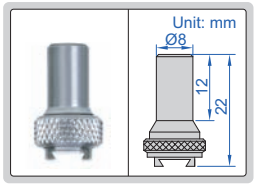
ANTI MAGNETIC CARBIDE CONTACT POINT

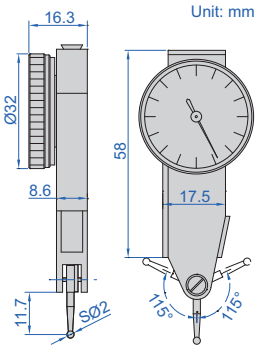


2898-08

- Meet DIN2270
- Ceramic bearing
- Anti magnetic carbide contact point
- Two measuring directions
- Supplied with one clamp: diameter Ø8mm
- Optional accessory: styli (page 279)

clamp (included)





Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2898-08*	0.8mm	0.01mm	13μm	3μm	0-40-0

*Supplied with manufacturer inspection certificate

TILTED FACE TYPE DIAL TEST INDICATOR

INSPECTION CERTIFICATE

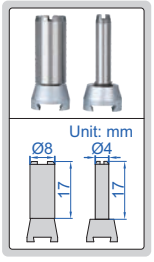
JEWELED BEARING

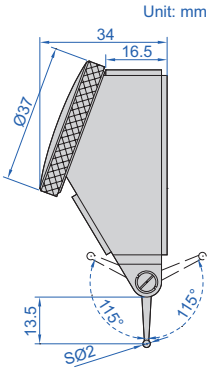


2399-08

- Meet DIN2270
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 279)

clamp (included)





Code	Range	Graduation	Accuracy	Hysteresis	Dial reading
2399-08*	0.8mm	0.01mm	13μm	3μm	0-40-0

*Supplied with manufacturer inspection certificate

LARGE RANGE DIAL TEST INDICATOR

INSPECTION CERTIFICATE

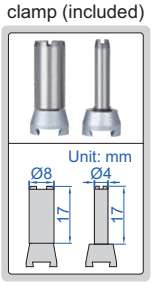
JEWELED BEARING

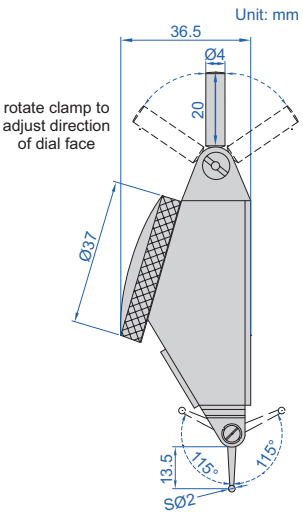


2386-16A

- Dial reading: 0-40-0
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 279)

clamp (included)





Code	Range	Graduation	Accuracy	Hysteresis
2386-16A*	1.6mm	0.01mm	25μm	8μm

*Supplied with manufacturer inspection certificate

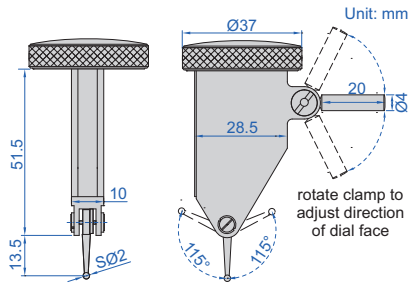
JEWELED BEARING

INSPECTION CERTIFICATE

LARGE RANGE VERTICAL TYPE DIAL TEST INDICATOR

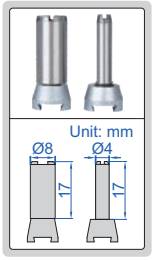


2480-16



- Dial reading: 0-40-0
- Jeweled bearing
- Carbide contact point
- Two measuring directions
- Anti magnetic body
- Supplied with two clamps: diameter Ø4mm and Ø8mm
- Optional accessory: styli (page 279)

clamp (included)



Code	Range	Graduation	Accuracy	Hysteresis
2480-16*	1.6mm	0.01mm	18μm	3μm

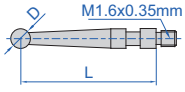
*Supplied with manufacturer inspection certificate

STYLI FOR DIAL TEST INDICATORS

Code	For dial test indicator	Material of contact point	L	D
6284-1	2380-08 2398-08 2381-08 2399-08	carbide	13.5mm	SØ1mm
6284-31		ruby	13.5mm	SØ1mm
6284-3		carbide	13.5mm	SØ2mm
6284-4		ruby	13.5mm	SØ2mm
6284-8		carbide	13.5mm	SØ3mm
6284-21	2380-02 2381-02 2381-021	carbide	12.5mm	SØ1mm
6284-22		carbide	12.5mm	SØ2mm
6284-24		ruby	12.5mm	SØ2mm
6284-23		carbide	12.5mm	SØ3mm
6284-61	2386-16A 2480-16	carbide	13.5mm	SØ1mm
6284-62		carbide	13.5mm	SØ2mm
6284-63		ruby	13.5mm	SØ2mm
6284-64		carbide	13.5mm	SØ3mm
6284-81	2383-08A	carbide	27.4mm	SØ1mm
6284-82		carbide	27.4mm	SØ2mm
6284-83		ruby	27.4mm	SØ2mm
6284-84		carbide	27.4mm	SØ3mm



6284-3



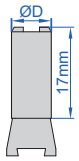
CLAMPS FOR DIAL TEST INDICATORS



6298-1



6298-2



Code	ØD
6298-1	Ø4mm
6298-2	Ø8mm

HIGH PRECISION DIGITAL INDICATOR

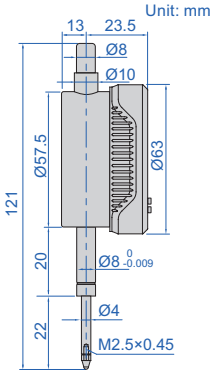
ATTENTION: RECHARGEABLE BATTERY, FOR 500 HOURS CONTINUOUS WORKING

INSPECTION CERTIFICATE

HIGH PRECISION



2503-101F



analog pointer



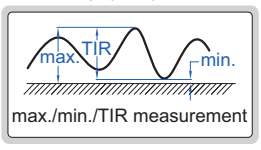
alarm when over tolerance



spindle lift knob is included



max./min./TIR



- Reading in digital and analog
- Button function: on/off, zero, data preset, tolerance Go and No-Go display, inch/metric conversion, measuring direction change, max./min./TIR measurement, absolute/incremental measurement
- Automatic power off (time is adjustable)
- Keep preset data and tolerance data in memory after restart
- Real-time data output (text format, virtual com port)
- Power: rechargeable Li-battery
- Optional accessory: contact points (page 310~314)

Code	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2503-101F*	12.7mm/0.5"	0.001mm/0.00005"	3μm	2μm	1.5N	cannot lift	flat back

*Supplied with manufacturer inspection certificate

DIGITAL INDICATORS (STANDARD TYPE)

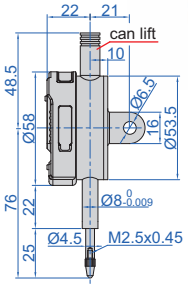
DATA OUTPUT

INSPECTION CERTIFICATE

POPULAR MODEL



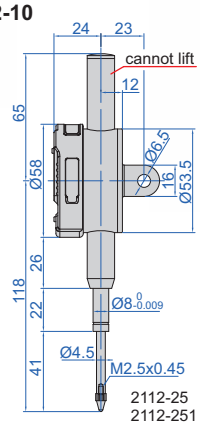
2112-10



2112-10
2112-101



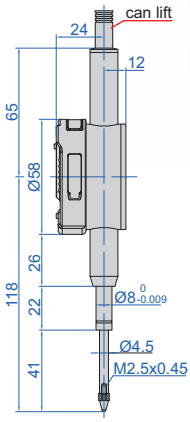
2112-251



2112-25
2112-251



2112-25P

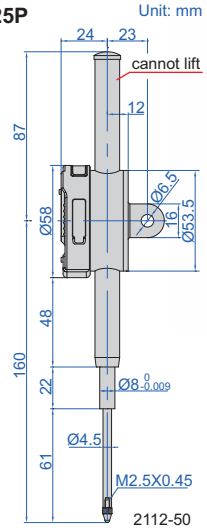


2112-25P
2112-251P

Unit: mm



2112-501



2112-50
2112-501

- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Switchable high/low frequency measurement mode, high frequency mode is suitable for high speed moving of spindle and has large power consumption, low power consumption in low frequency mode
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, data output cable code **7302-40M** page 16, **7305-40M** page 19, backs (page 315~316), contact points (page 310~314)

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2112-101F*	12.7mm/0.5"	5μm	2μm	1.5N	can lift	flat back
2112-251F*	25.4mm/1"	5μm	3μm	2.2N	cannot lift	flat back
2112-501F*	50.8mm/2"	6μm	3μm	2.5N	cannot lift	flat back
2112-101*	12.7mm/0.5"	5μm	2μm	1.5N	can lift	lug back
2112-251*	25.4mm/1"	5μm	3μm	2.2N	cannot lift	lug back
2112-501*	50.8mm/2"	6μm	3μm	2.5N	cannot lift	lug back
2112-251P*	25.4mm/1"	5μm	3μm	2.2N	can lift	flat back
2112-501P*	50.8mm/2"	6μm	3μm	2.5N	can lift	flat back

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2112-10F*	12.7mm/0.5"	20μm	10μm	1.5N	can lift	flat back
2112-25F*	25.4mm/1"	20μm	10μm	2.2N	cannot lift	flat back
2112-50F*	50.8mm/2"	30μm	10μm	2.5N	cannot lift	flat back
2112-10*	12.7mm/0.5"	20μm	10μm	1.5N	can lift	lug back
2112-25*	25.4mm/1"	20μm	10μm	2.2N	cannot lift	lug back
2112-50*	50.8mm/2"	30μm	10μm	2.5N	cannot lift	lug back
2112-25P*	25.4mm/1"	20μm	10μm	2.2N	can lift	flat back
2112-50P*	50.8mm/2"	30μm	10μm	2.5N	can lift	flat back

*Supplied with manufacturer inspection certificate



spindle lift knob is included



METRIC DIGITAL INDICATORS

DATA OUTPUT

INSPECTION CERTIFICATE



2116-10



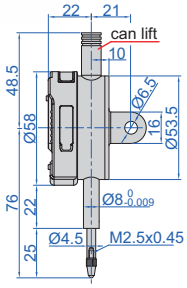
2116-251



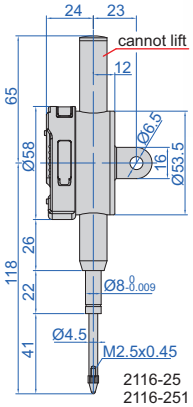
2116-251P



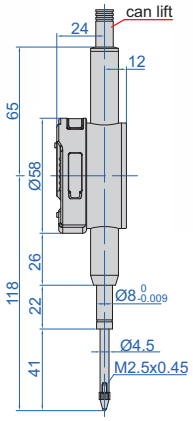
2116-501



2116-10
2116-101

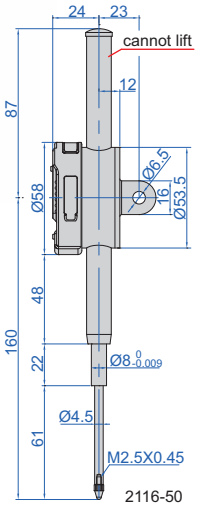


2116-25
2116-251



2116-25P
2116-251P

Unit: mm



2116-50
2116-501

- Button function: on/off, zero, data preset, change measuring direction, absolute/incremental measurement
- Switchable high/low frequency measurement mode, high frequency mode is suitable for high speed moving of spindle and has large power consumption, low power consumption in low frequency mode
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, data output cable code **7302-40M** page 16, **7305-40M** page 19, backs (page 315~316), contact points (page 310~314)

Resolution 0.001mm

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2116-101F*	12.7mm	5μm	2μm	1.5N	can lift	flat back
2116-251F*	25.4mm	5μm	3μm	2.2N	cannot lift	flat back
2116-501F*	50.8mm	6μm	3μm	2.5N	cannot lift	flat back
2116-101*	12.7mm	5μm	2μm	1.5N	can lift	lug back
2116-251*	25.4mm	5μm	3μm	2.2N	cannot lift	lug back
2116-501*	50.8mm	6μm	3μm	2.5N	cannot lift	lug back
2116-251P*	25.4mm	5μm	3μm	2.2N	can lift	flat back
2116-501P*	50.8mm	6μm	3μm	2.5N	can lift	flat back

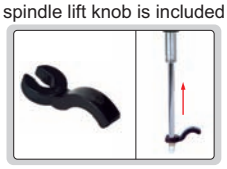
Resolution 0.01mm

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2116-10F*	12.7mm	20μm	10μm	1.5N	can lift	flat back
2116-25F*	25.4mm	20μm	10μm	2.2N	cannot lift	flat back
2116-50F*	50.8mm	30μm	10μm	2.5N	cannot lift	flat back
2116-10*	12.7mm	20μm	10μm	1.5N	can lift	lug back
2116-25*	25.4mm	20μm	10μm	2.2N	cannot lift	lug back
2116-50*	50.8mm	30μm	10μm	2.5N	cannot lift	lug back
2116-25P*	25.4mm	20μm	10μm	2.2N	can lift	flat back
2116-50P*	50.8mm	30μm	10μm	2.5N	can lift	flat back

*Supplied with manufacturer inspection certificate



spindle lift knob is included



DIGITAL INDICATORS (ADVANCED TYPE)

INSPECTION CERTIFICATE

DATA OUTPUT

VIDEO


2103-10


2104-25


2104-25P

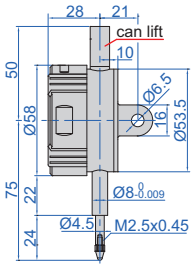

2103-50

analog pointer

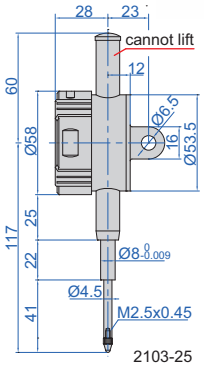


spindle lift knob is included

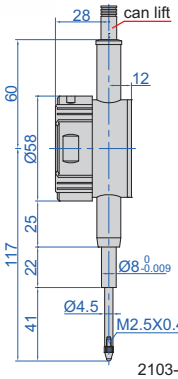




2103-10
2104-10

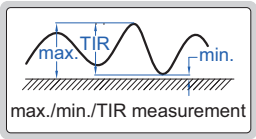


2103-25
2104-25



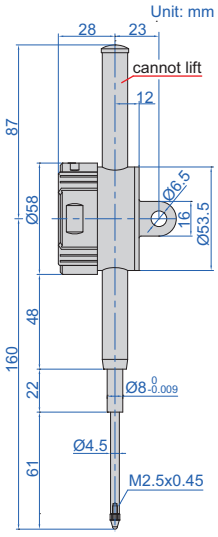
2103-25P
2104-25P

max./min./TIR



max./min./TIR measurement

Unit: mm



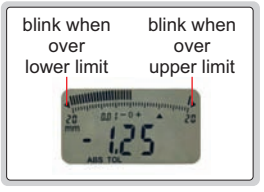
2103-50
2104-50

- Reading in digital and analog
- Display can be rotated by 320°
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable), data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, data output cable code **7302-40M** page 16, **7305-40M** page 19, backs (page 315~316), contact points (page 310~314)

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2103-10F*	12.7mm/0.5"	5μm	2μm	1.5N	can lift	flat back
2103-25F*	25.4mm/1"	5μm	3μm	2.2N	cannot lift	flat back
2103-50F*	50.8mm/2"	6μm	3μm	2.5N	cannot lift	flat back
2103-10 *	12.7mm/0.5"	5μm	2μm	1.5N	can lift	lug back
2103-25 *	25.4mm/1"	5μm	3μm	2.2N	cannot lift	lug back
2103-50 *	50.8mm/2"	6μm	3μm	2.5N	cannot lift	lug back
2103-25P*	25.4mm/1"	5μm	3μm	2.2N	can lift	flat back
2103-50P*	50.8mm/2"	6μm	3μm	2.5N	can lift	flat back

alarm when over tolerance



Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2104-10F*	12.7mm/0.5"	20μm	10μm	1.5N	can lift	flat back
2104-25F*	25.4mm/1"	20μm	10μm	2.2N	cannot lift	flat back
2104-50F*	50.8mm/2"	30μm	10μm	2.5N	cannot lift	flat back
2104-10 *	12.7mm/0.5"	20μm	10μm	1.5N	can lift	lug back
2104-25 *	25.4mm/1"	20μm	10μm	2.2N	cannot lift	lug back
2104-50 *	50.8mm/2"	30μm	10μm	2.5N	cannot lift	lug back
2104-25P*	25.4mm/1"	20μm	10μm	2.2N	can lift	flat back
2104-50P*	50.8mm/2"	30μm	10μm	2.5N	can lift	flat back



display can be rotated by 320°



*Supplied with manufacturer inspection certificate

DIGITAL INDICATORS (WITH TRANSMISSION BUTTON AND SIGNAL LIGHT)

DATA OUTPUT

INSPECTION CERTIFICATE

VIDEO



2138-10



2139-25



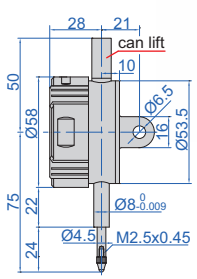
2139-25P



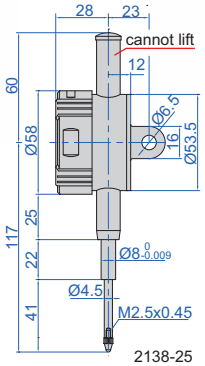
2138-50

spindle lift knob is included

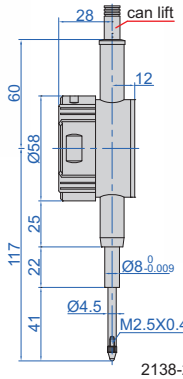




2138-10
2139-10

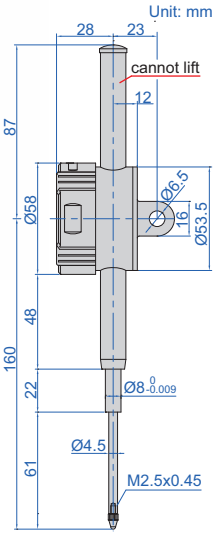


2138-25
2139-25



2138-25P
2139-25P

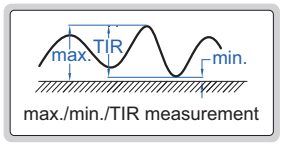
Unit: mm



2138-50
2139-50

- Reading in digital and analog
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  flat back: wireless transmitter code **7315-51** (receiver is needed) page 8,
  data output cable code **7302-40M** page 16, **7305-40M** page 19;
  lug back: wireless transmitter code **7315-50M** (receiver is needed) page 8,
  data output cable code **7302-40M** page 16, **7305-40M** page 19,
  backs (page 315~316), contact points (page 310~314)

max./min./TIR

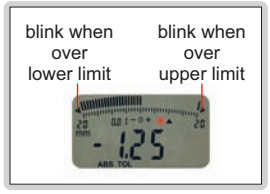


max./min./TIR measurement

analog pointer



alarm when over tolerance



Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2138-10F*	12.7mm/0.5"	5μm	2μm	1.5N	can lift	flat back
2138-25F*	25.4mm/1"	5μm	3μm	2.2N	cannot lift	flat back
2138-50F*	50.8mm/2"	6μm	3μm	2.5N	cannot lift	flat back
2138-10*	12.7mm/0.5"	5μm	2μm	1.5N	can lift	lug back
2138-25*	25.4mm/1"	5μm	3μm	2.2N	cannot lift	lug back
2138-50*	50.8mm/2"	6μm	3μm	2.5N	cannot lift	lug back
2138-25P*	25.4mm/1"	5μm	3μm	2.2N	can lift	flat back
2138-50P*	50.8mm/2"	6μm	3μm	2.5N	can lift	flat back

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2139-10F*	12.7mm/0.5"	20μm	10μm	1.5N	can lift	flat back
2139-25F*	25.4mm/1"	20μm	10μm	2.2N	cannot lift	flat back
2139-50F*	50.8mm/2"	30μm	10μm	2.5N	cannot lift	flat back
2139-10*	12.7mm/0.5"	20μm	10μm	1.5N	can lift	lug back
2139-25*	25.4mm/1"	20μm	10μm	2.2N	cannot lift	lug back
2139-50*	50.8mm/2"	30μm	10μm	2.5N	cannot lift	lug back
2139-25P*	25.4mm/1"	20μm	10μm	2.2N	can lift	flat back
2139-50P*	50.8mm/2"	30μm	10μm	2.5N	can lift	flat back

*Supplied with manufacturer inspection certificate





VIDEO

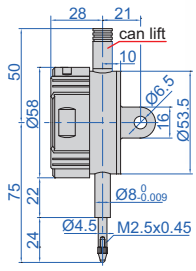
DATA OUTPUT

INSPECTION CERTIFICATE

WIRELESS DIGITAL INDICATORS (ZIGBEE)



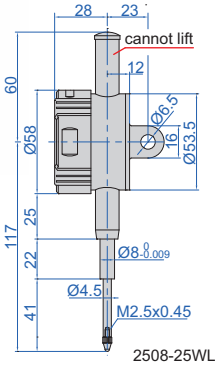
2508-10WL



2508-10WL
2509-10WL



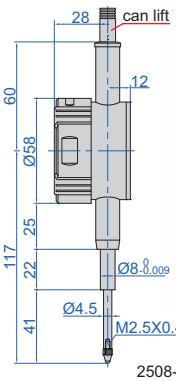
2509-25WL



2508-25WL
2509-25WL



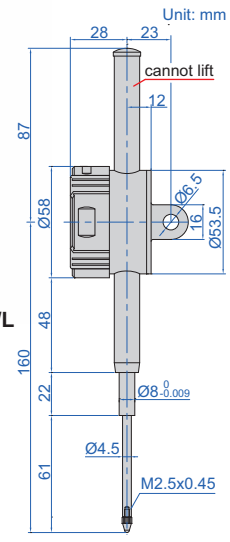
2509-25PWL



2508-25PWL
2509-25PWL



2508-50WL



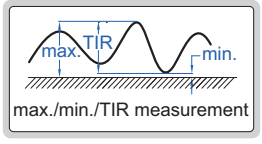
2508-50WL
2509-50WL

- Built-in wireless data transmission module, Zigbee signal
- Transmission distance is 10 meters (under the condition of no obstruction and no electromagnetic interference)
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- Keep preset data and tolerance data in memory after restart
- Automatic power off (time is adjustable)
- Power: rechargeable Li-battery
- Optional accessory: receiver (code **7315-2/3/6/7/8/9**), backs (page 315~316), contact points (page 310~314)





max./min./TIR



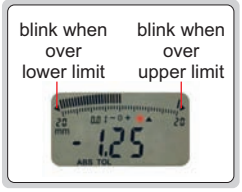
analog pointer



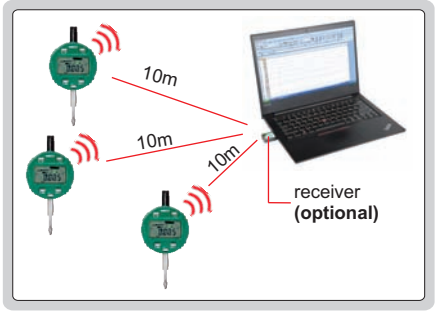
spindle lift knob is included



alarm when over tolerance



application



Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2508-10WL*	12.7mm/0.5"	5μm	2μm	1.5N	can lift	lug back
2508-25WL*	25.4mm/1"	5μm	3μm	2.2N	cannot lift	lug back
2508-50WL*	50.8mm/2"	6μm	3μm	2.5N	cannot lift	lug back
2508-10FWL*	12.7mm/0.5"	5μm	2μm	1.5N	can lift	flat back
2508-25FWL*	25.4mm/1"	5μm	3μm	2.2N	cannot lift	flat back
2508-50FWL*	50.8mm/2"	6μm	3μm	2.5N	cannot lift	flat back
2508-25PWL*	25.4mm/1"	5μm	3μm	2.2N	can lift	flat back
2508-50PWL*	50.8mm/2"	6μm	3μm	2.5N	can lift	flat back

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2509-10WL*	12.7mm/0.5"	20μm	10μm	1.5N	can lift	lug back
2509-25WL*	25.4mm/1"	20μm	10μm	2.2N	cannot lift	lug back
2509-50WL*	50.8mm/2"	30μm	10μm	2.5N	cannot lift	lug back
2509-10FWL*	12.7mm/0.5"	20μm	10μm	1.5N	can lift	flat back
2509-25FWL*	25.4mm/1"	20μm	10μm	2.2N	cannot lift	flat back
2509-50FWL*	50.8mm/2"	30μm	10μm	2.5N	cannot lift	flat back
2509-25PWL*	25.4mm/1"	20μm	10μm	2.2N	can lift	flat back
2509-50PWL*	50.8mm/2"	30μm	10μm	2.5N	can lift	flat back

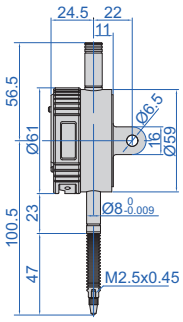
*Supplied with manufacturer inspection certificate

WATERPROOF DIGITAL INDICATORS

WATERPROOF | DATA OUTPUT | INSPECTION CERTIFICATE



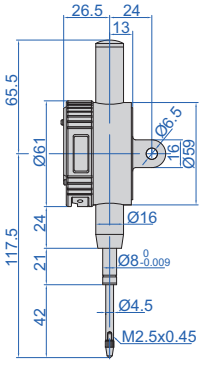
2115-10



2115-10
2115-101



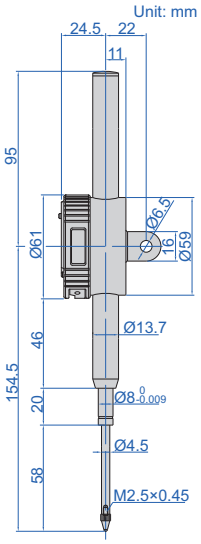
2115-25



2115-25
2115-251



2115-50



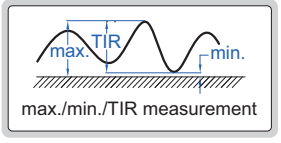
2115-50
2115-501

- Dust/waterproof
- Button function: on/off, zero, mm/inch, data preset, tolerance, change measuring direction, max./min./TIR measurement, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8,
  data output cable code **7302-40M** page 16, **7305-40M** page 19,
  backs (page 315~316), contact points (page 310~314)

spindle lift knob is included (except **2115-101/101F, 2115-10/10F**)



max./min./TIR



max./min./TIR measurement

alarm when over tolerance



Resolution 0.001mm/0.00005"

Code	Range	Dust/waterproof	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2115-101*	12.7mm/0.5"	IP65	5μm	2μm	1.5N	cannot lift	lug back
2115-251*	25.4mm/1"	IP54	5μm	3μm	2.2N	cannot lift	lug back
2115-501*	50.8mm/2"	IP54	6μm	3μm	2.5N	cannot lift	lug back
2115-101F*	12.7mm/0.5"	IP65	5μm	2μm	1.5N	cannot lift	flat back
2115-251F*	25.4mm/1"	IP54	5μm	3μm	2.2N	cannot lift	flat back
2115-501F*	50.8mm/2"	IP54	6μm	3μm	2.5N	cannot lift	flat back

Resolution 0.01mm/0.0005"

Code	Range	Dust/waterproof	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2115-10*	12.7mm/0.5"	IP65	20μm	10μm	1.5N	cannot lift	lug back
2115-25*	25.4mm/1"	IP54	20μm	10μm	2.2N	cannot lift	lug back
2115-50*	50.8mm/2"	IP54	30μm	10μm	2.5N	cannot lift	lug back
2115-10F*	12.7mm/0.5"	IP65	20μm	10μm	1.5N	cannot lift	flat back
2115-25F*	25.4mm/1"	IP54	20μm	10μm	2.2N	cannot lift	flat back
2115-50F*	50.8mm/2"	IP54	30μm	10μm	2.5N	cannot lift	flat back

*Supplied with manufacturer inspection certificate

VIDEO

DATA OUTPUT

INSPECTION CERTIFICATE

ADJUSTABLE COEFFICIENT DIGITAL INDICATORS



2501-10



2501-25

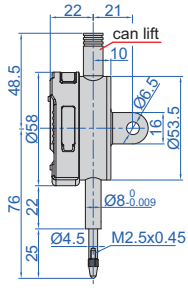


2501-25P

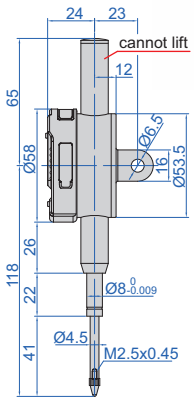


2501-50

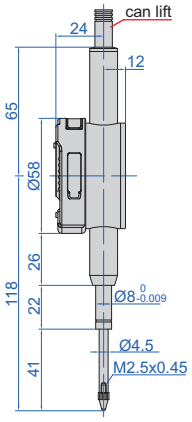
Unit: mm



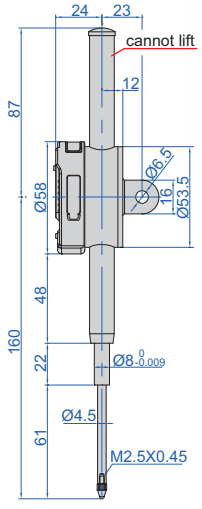
2501-10



2501-25



2501-25P



2501-50

- DISPLAY READING = COEFFICIENT X SPINDLE MOVEMENT.
  The coefficient can be adjusted from 0 to 9.9999.
  For example, coefficient is 4.5562, spindle moves 3.60mm,
  display reading is 4.5562x3.60=16.40mm
- Button function: on/off, zero, data preset, inch/mm,
  coefficient set, measuring direction change
- Switchable high/low frequency measurement mode, high frequency
  mode is suitable for high speed moving of spindle and has large power
  consumption, low power consumption in low frequency mode
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8,
  data output cable code **7302-40M** page 16, **7305-40M** page 19,
  backs (page 315~316), contact points (page 310~314)

spindle lift knob is included



10

Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2501-10*	12.7mm/0.5"	20μm	10μm	1.5N	can lift	lug back
2501-25*	25.4mm/1"	20μm	10μm	2.2N	cannot lift	lug back
2501-50*	50.8mm/2"	30μm	10μm	2.5N	cannot lift	lug back
2501-10F*	12.7mm/0.5"	20μm	10μm	1.5N	can lift	flat back
2501-25F*	25.4mm/1"	20μm	10μm	2.2N	cannot lift	flat back
2501-50F*	50.8mm/2"	30μm	10μm	2.5N	cannot lift	flat back
2501-25P*	25.4mm/1"	20μm	10μm	2.2N	can lift	flat back
2501-50P*	50.8mm/2"	30μm	10μm	2.5N	can lift	flat back

*Supplied with manufacturer inspection certificate



DIGITAL INDICATORS FOR BORE GAUGES (WITH TRANSMISSION BUTTON AND SIGNAL LIGHT)

VIDEO

INSPECTION CERTIFICATE

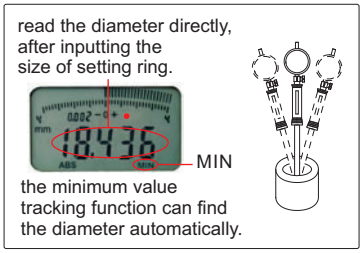
THE ORIGINAL DATA REMAINS AFTER POWER OFF

DATA OUTPUT

- Specially designed for bore gauges
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after inputting the size of setting ring
- Reading in digital and analog
- Display can be rotated by 320°
- Button function: on/off, minimum value tracking, calibration, data preset, inch/metric conversion, data output
- Data remains after power off, no need to recalibrate after power on
- Automatic power off (time is adjustable)
- Power: with data interface: CR2032 built-in wireless: rechargeable Li-battery
- Optional accessory: backs (page 315~316), contact points (page 310~314)







With data interface
(optional wireless transmitter code 7315-51B, receiver is needed page 9)

Code	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2108-10F*	12.7mm/0.5"	0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	20μm	10μm	1.5N	cannot lift	flat back
2108-101F*	12.7mm/0.5"	0.001mm/0.00005"	5μm	2μm	1.5N	cannot lift	flat back

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2108-10FWL*	12.7mm/0.5"	0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	20μm	10μm	1.5N	cannot lift	flat back
2108-101FWL*	12.7mm/0.5"	0.001mm/0.00005"	5μm	2μm	1.5N	cannot lift	flat back

*Supplied with manufacturer inspection certificate

WATERPROOF DIGITAL INDICATORS FOR BORE GAUGES

INSPECTION CERTIFICATE

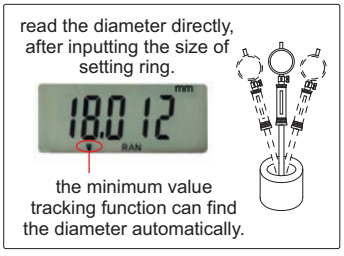
IP54 WATERPROOF

DATA OUTPUT

THE ORIGINAL DATA REMAINS AFTER POWER OFF

- Specially designed for bore gauges
- The minimum value tracking function can find the diameter automatically
- Read the diameter directly, after inputting the size of setting ring
- Button function: on/off, minimum value tracking, calibration, data preset, inch/metric conversion
- Data remains after power off, no need to recalibrate after power on
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-51B** (receiver is needed) page 9, data output cable code **7302-40M** page 16, backs (page 315~316), contact points (page 310~314)





Code	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2137-10F*	12.7mm/0.5"	0.002mm/0.0001" (can switch to: 0.01mm/0.0005")	20μm	10μm	1.5N	cannot lift	flat back
2137-101F*	12.7mm/0.5"	0.001mm/0.00005"	5μm	2μm	1.5N	cannot lift	flat back

*Supplied with manufacturer inspection certificate

DATA OUTPUT

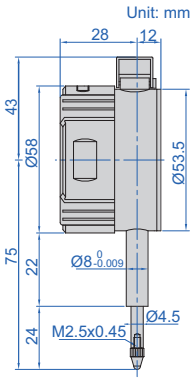
INSPECTION CERTIFICATE

DIGITAL INDICATORS WITH LIFTING LEVER

- Reading in digital and analog
- Display can be rotated by 320º
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8, data output cable code **7302-40M** page 16, **7305-40M** page 19, backs (page 315~316), contact points (page 310~314)



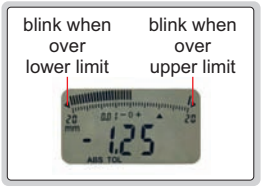
2109-10



analog pointer



alarm when over tolerance



Code	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Remark
2109-10*	10mm/0.4"	0.01mm/0.0005"	20μm	10μm	1.5N	flat back
2109-101*	10mm/0.4"	0.001mm/0.00005"	5μm	2μm	1.5N	flat back

*Supplied with manufacturer inspection certificate

DATA OUTPUT

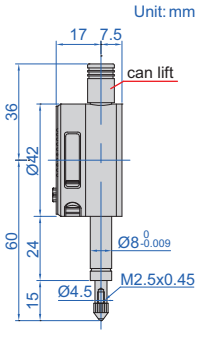
INSPECTION CERTIFICATE

COMPACT DIGITAL INDICATORS

- Button function:
  in/mm: short press for inch/metric conversion
  long press to change measuring direction
  ABS: short press for absolute/incremental measurement
  long press to preset data
  0/ON: short press to turn on when power is off
  short press to set zero when power is on
  long press to turn off
- Keep preset data in memory after restart
- CR1632 battery, automatic power off
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8, data output cable code **7302-40M** page 16, **7305-40M** page 19, backs (page 315~316), contact points (page 310~314)



2114-51F



Code	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2114-5F*	5mm/0.2"	0.01mm/0.0005"	20μm	10μm	1.5N	can lift	flat back
2114-51F*	5mm/0.2"	0.001mm/0.00005"	5μm	2μm	1.5N	can lift	flat back

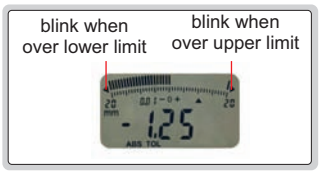
*Supplied with manufacturer inspection certificate

BACK PLUNGER TYPE DIGITAL INDICATORS

INSPECTION CERTIFICATE

DATA OUTPUT

alarm when over tolerance



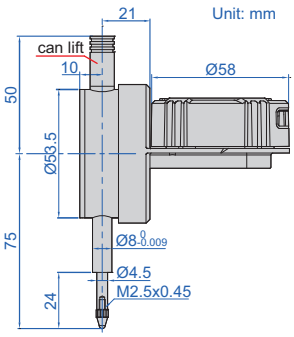
analog pointer



VIDEO



2118-10



- Display can rotate 320°, and display direction is changeable
- Reading in digital and analog
- Button function: tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, data output cable code **7302-40M** page 16, **7305-40M** page 19, backs (page 315~316), contact points (page 310~314)

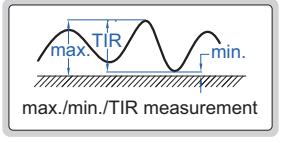
display can rotate 320°



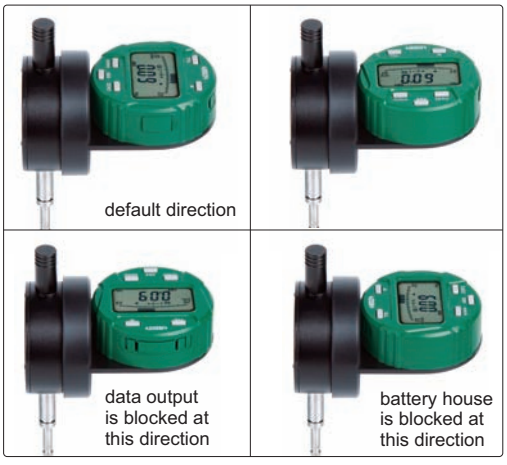
spindle lift knob is included



max./min./TIR



display direction is changeable



remark: to change above direction, 4 fixing screws on the back of display need to be removed first.

Code	Range	Resolution	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2118-10 *	12.7mm/0.5"	0.01mm/0.0005"	20μm	10μm	1.5N	can lift	flat back
2118-101 *	12.7mm/0.5"	0.001mm/0.00005"	5μm	2μm	1.5N	can lift	flat back

*Supplied with manufacturer inspection certificate

ZEROING FOOT SWITCH

VIDEO

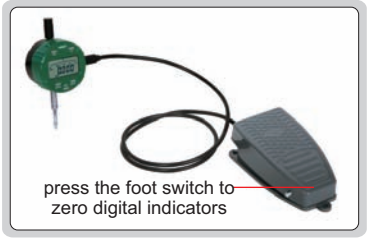
- For zeroing of digital indicators



7360-1M

Code	Description	Interface of digital indicators	Applicable products
7360-1M	zeroing foot switch with cable (length 2.5m)		 for digital indicators

application

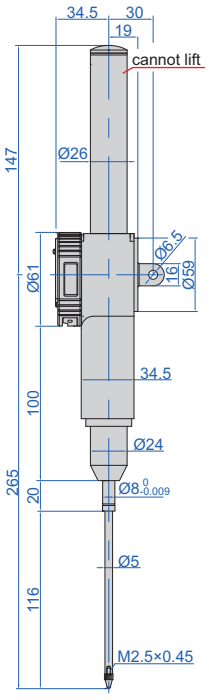


DATA OUTPUT

LARGE STROKE DIGITAL INDICATORS



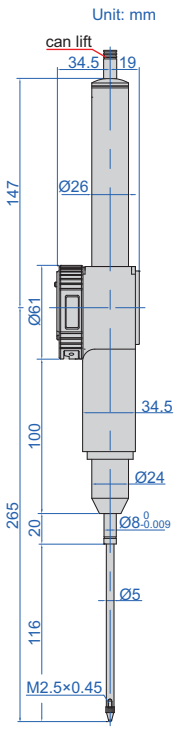
2117-100



2117-100
2117-1001



2117-100P



2117-100P
2117-1001P

alarm when over tolerance

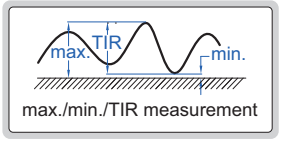


spindle lift knob is included



- Button function: on/off, zero, mm/inch, data preset, tolerance, change measuring direction, max./min./TIR measurement, absolute/incremental measurement
- Keep preset data and tolerance data in memory after restart
- CR2032 battery, automatic power off
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8, data output cable code **7302-40M** page 16, **7305-40M** page 19, backs (page 315~316), contact points (page 310~314)

max./min./TIR





Resolution 0.01mm/0.0005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2117-100	100mm/4"	30μm	10μm	3.2N	cannot lift	lug back
2117-100P	100mm/4"	30μm	10μm	3.2N	can lift	flat back

Resolution 0.001mm/0.00005"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2117-1001	100mm/4"	9μm	3μm	3.2N	cannot lift	lug back
2117-1001P	100mm/4"	9μm	3μm	3.2N	can lift	flat back

WIRELESS HIGH PRECISION DIGITAL INDICATORS

INSPECTION CERTIFICATE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

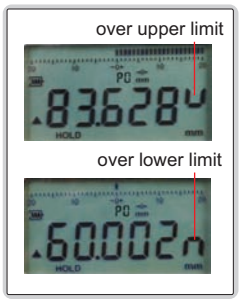
ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

CONTINUOUS DATA COLLECTION CAN BE CUSTOMIZED (PRESS "DATA" BUTTON TO START CONTINUOUS COLLECTION, PRESS AGAIN TO STOP; COLLECTION FREQUENCY CAN BE CUSTOMIZED, THE FASTEST DATA COLLECTION IS 10PCS PER SECOND)

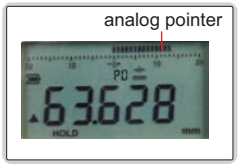
LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE

VIDEO

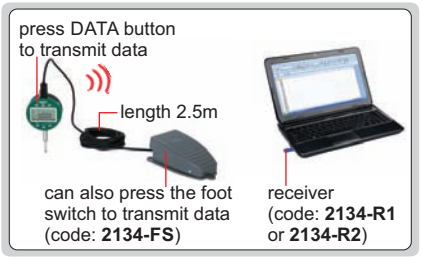
alarm when over tolerance



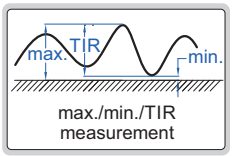
analog pointer



transmit data



max./min./TIR





2134-10

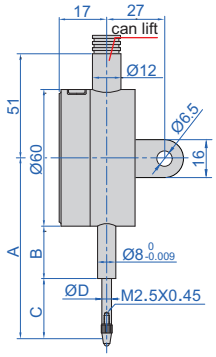


2134-25

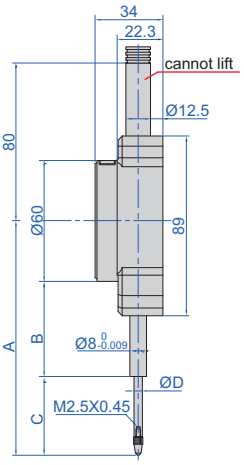


2134-50

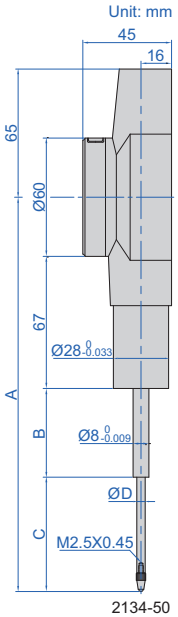
- Built-in wireless transmission, Zigbee singal
- Linear ball bearings for ten million times use
- Absolute encoder, the original data remains after power off
- Reading in digital and analog
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working
- Optional accessory: contact points (page 310~314), foot switch, code: **2134-FS**
  wireless receiver, code: **2134-R1** (keyboard format)
  2134-R2 (serial port format)



2134-10L
2134-101L



2134-25
2134-251



2134-50

Standard accuracy

Carbide probe

Adjustable resolution: 0.0005mm/0.00002"
0.001mm/0.00005"
0.01mm/0.0005"

(mm)

Code	Range	Accuracy	Hysteresis	A	B	C	ØD	Maximum measuring force	Cap	Remark
2134-10*	12.7mm/0.5"	3μm	1.5μm	75.4	20.6	24.8	5	1.5N	can lift	flat back
2134-10L*	12.7mm/0.5"	3μm	1.5μm	75.4	20.6	24.8	5	1.5N	can lift	lug back
2134-25*	25.4mm/1"	3μm	1.5μm	109.5	38.5	41	5	2.2N	cannot lift	flat back
2134-50*	50.8mm/2"	3μm	1.5μm	201	32	72	4.5	2.5N	—	flat back

High accuracy

Ruby probe

Adjustable resolution: 0.0002mm/0.00001"
0.001mm/0.00005"
0.01mm/0.0005"

(mm)

Code	Range	Accuracy	Hysteresis	A	B	C	ØD	Maximum measuring force	Cap	Remark
2134-101*	12.7mm/0.5"	1.5μm	1μm	77.4	26	21.4	4	1.5N	can lift	flat back
2134-101L*	12.7mm/0.5"	1.5μm	1μm	77.4	26	21.4	4	1.5N	can lift	lug back
2134-251*	25.4mm/1"	1.8μm	1μm	116.1	42.5	44	4	2.2N	cannot lift	flat back

*Supplied with manufacturer inspection certificate

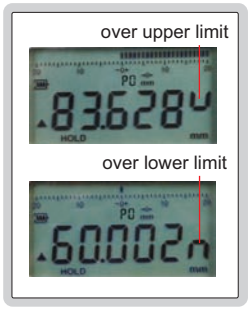
spindle lift knob is included



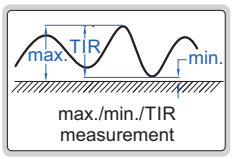
LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE | ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF | DATA OUTPUT

HIGH PRECISION DIGITAL INDICATORS

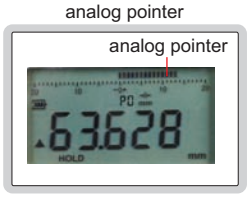
alarm when over tolerance



max./min./TIR



analog pointer



spindle lift knob is included



ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

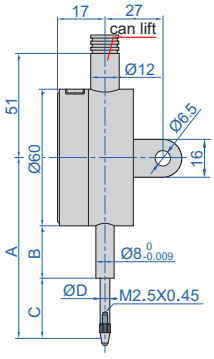
INSPECTION CERTIFICATE


2133-10

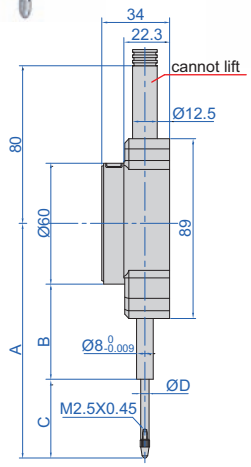

2133-25


2133-50

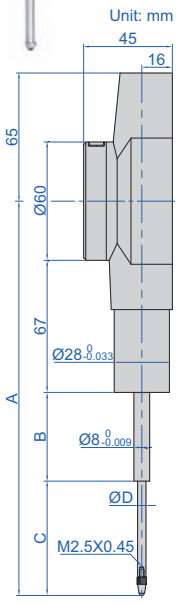
- Linear ball bearings for ten million times use
- Absolute encoder, the original data remains after power off
- Reading in digital and analog
- Data output
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working
- Optional accessory: contact points (page 310~314), wireless transmitter code **7315-60** (receiver is needed) page 9, data output cable (keyboard format) code **7302-60** page 16, data output cable (serial port format) code **7305-G60** page 21 (cable length 3m, optional cable length maximum 15m; RS232 protocol, optional RS485 protocol)



2133-10L
2133-101L



2133-25
2133-251



2133-50

Standard accuracy

Carbide probe

Adjustable resolution: 0.0005mm/0.00002", 0.001mm/0.00005", 0.01mm/0.0005"

(mm)

Code	Range	Accuracy	Hysteresis	A	B	C	ØD	Maximum measuring force	Cap	Remark
2133-10*	12.7mm/0.5"	3μm	1.5μm	75.4	20.6	24.8	5	1.5N	can lift	flat back
2133-10L*	12.7mm/0.5"	3μm	1.5μm	75.4	20.6	24.8	5	1.5N	can lift	lug back
2133-25*	25.4mm/1"	3μm	1.5μm	109.5	38.5	41	5	2.2N	cannot lift	flat back
2133-50*	50.8mm/2"	3μm	1.5μm	201	32	72	4.5	2.5N	—	flat back

High accuracy

Ruby probe

Adjustable resolution: 0.0002mm/0.00001", 0.001mm/0.00005", 0.01mm/0.0005"

(mm)

Code	Range	Accuracy	Hysteresis	A	B	C	ØD	Maximum measuring force	Cap	Remark
2133-101*	12.7mm/0.5"	1.5μm	1μm	77.4	26	21.4	4	1.5N	can lift	flat back
2133-101L*	12.7mm/0.5"	1.5μm	1μm	77.4	26	21.4	4	1.5N	can lift	lug back
2133-251*	25.4mm/1"	1.8μm	1μm	116.1	42.5	44	4	2.2N	cannot lift	flat back

- When the contact point moves, the program auto-starts data collection of the maximum value. After the contact point returns to the free position, it will automatically transmit the maximum value. Cyclic measurement is available.
- It is applicable for data collection in continuous measurement (such as collecting the highest point of each tooth during the rotation of a multi-tooth workpiece)

Smart digital indicators

Code
2133-□□□□S*

*Supplied with manufacturer inspection certificate

Code examples:

Original code	Smart digital indicator code
2133-10	**2133-10S**
2133-10L	**2133-10LS**

HIGH PRECISION DIGITAL INDICATORS

ATTENTION: RECHARGEABLE BATTERY, FOR 30 HOURS CONTINUOUS WORKING

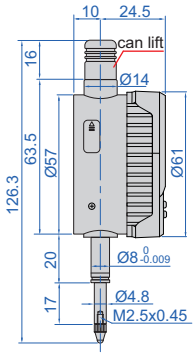
IP54 WATERPROOF

INSPECTION CERTIFICATE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

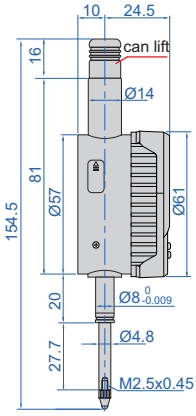
Unit: mm





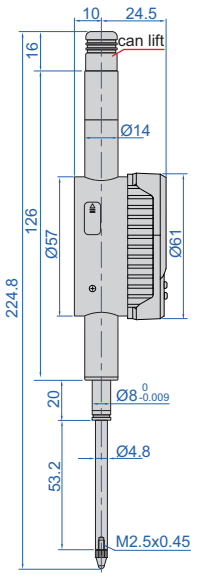
2136-10





2136-25

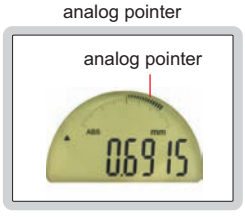




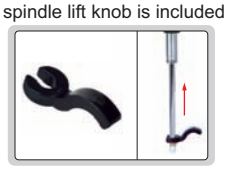
2136-50

- IP54 dust/waterproof (when cap is lifted, no dust/waterproof)
- Absolute encoder, the original data remains after power off
- Automatic power off
- Reading in digital and analog
- Display can be rotated by 270°
- Button function: on/off, zero setting, data preset, tolerance Go and No-Go display, data hold, mm/inch, measuring direction change, max./min./TIR, absolute/incremental measurement, data output
- Data output with USB cable (keyboard format), cable length 1.8 meters, single and continuous transmission (the fastest data output is 40pcs per 10s)
- Power: rechargeable battery, for 30 hours continuous working

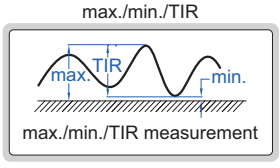
analog pointer

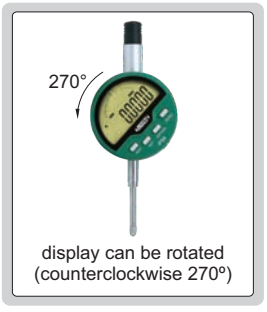


spindle lift knob is included



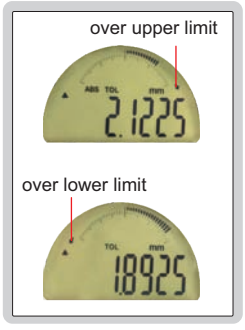
max./min./TIR







alarm when over tolerance



Resolution 0.0005mm/0.00002"

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2136-10 *	0-12.7mm/0-0.5"	2μm	1.5μm	1.5N	can lift	flat back
2136-25 *	0-25.4mm/0-1"	2μm	1.5μm	1.8N	can lift	flat back
2136-50 *	0-50.8mm/0-2"	4μm	2μm	2.3N	can lift	flat back

*Supplied with manufacturer inspection certificate

ATTENTION: RECHARGEABLE BATTERY, FOR 30 HOURS CONTINUOUS WORKING

BLUETOOTH HIGH PRECISION DIGITAL INDICATORS

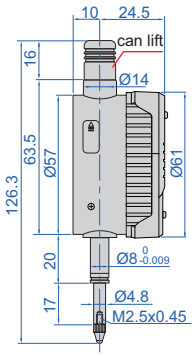
BUILT-IN BLUETOOTH | IP54 WATERPROOF | COLOR DISPLAY LARGE CHARACTERS WITH BACKLIGHT | ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

INSPECTION CERTIFICATE

VIDEO

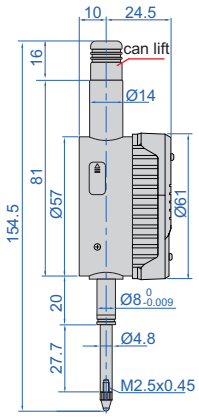
Unit: mm





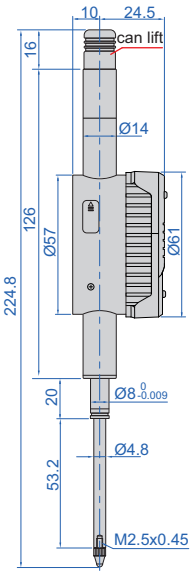
2135-10





2135-25





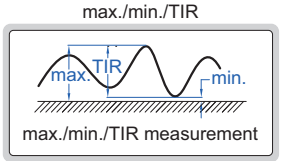
2135-50

- IP54 dust/waterproof (when cap is lifted, no dust/waterproof)
- Color display, large characters with backlight
- Absolute encoder, the original data remains after power off
- Automatic power off
- Display can be rotated by 270°
- Adjustable resolution: 0.0005mm/0.00002"
  0.001mm/0.00005"
- Button function: on/off, zero setting, data preset, tolerance Go and No-Go display, data hold, mm/inch, measuring direction change, bluetooth, max./min./TIR, adjust resolution, absolute/incremental measurement, data output
- Android and iPhone APP, USB type-C cable are included
- Power: rechargeable Li-battery, for 30 hours continuous working (bluetooth transmission reduces working hours)

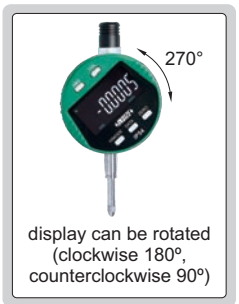
spindle lift knob is included



max./min./TIR



max./min./TIR measurement



display can be rotated (clockwise 180°, counterclockwise 90°)



alarm in red when over tolerance



Code	Range	Accuracy	Hysteresis	Maximum measuring force	Cap	Remark
2135-10 *	12.7mm/0.5"	2μm	1.5μm	1.5N	can lift	flat back
2135-25 *	25.4mm/1"	2μm	1.5μm	1.8N	can lift	flat back
2135-50 *	50.8mm/2"	4μm	2μm	2.3N	can lift	flat back

*Supplied with manufacturer inspection certificate

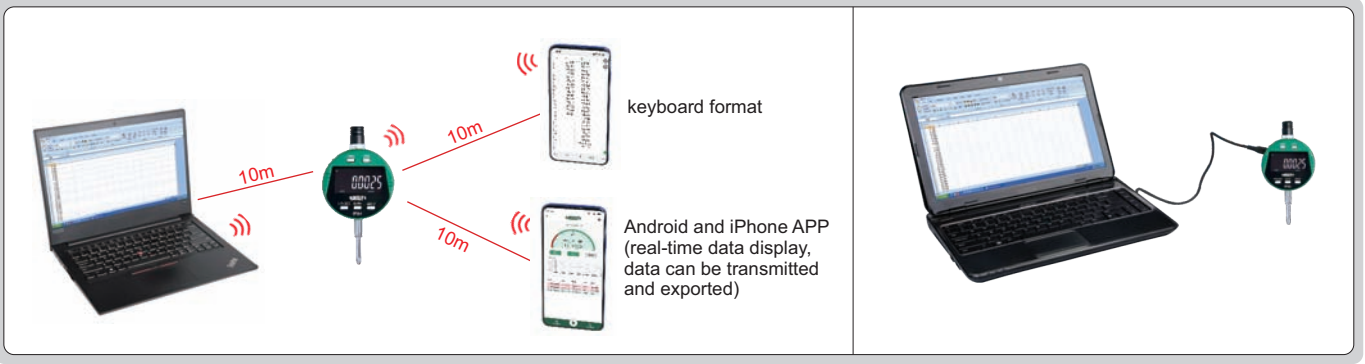
To be continued

Continued from previous page

Data output

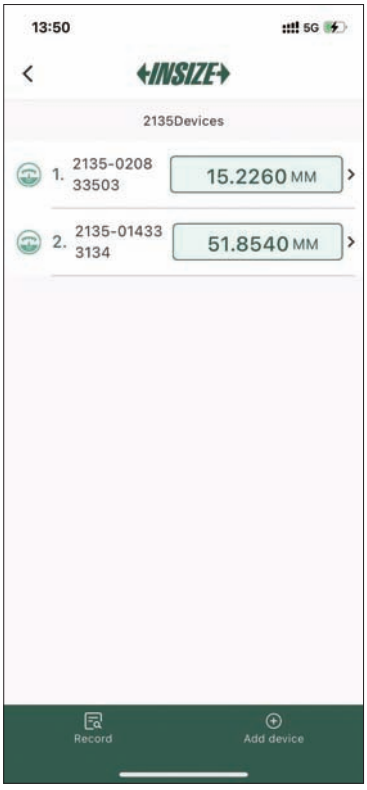
Data output with bluetooth (transmission distance is 10 meters)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single or continuous transmission (the fastest data output is 15pcs per 10s)
	virtual com port	data can be transmitted to Android and iPhone APP	real-time display (continuous transmission) or single transmission
Data output with USB cable (cable length 1.8 meters)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single or continuous transmission (the fastest data output is 40pcs per 10s)
	virtual com port and 485 data output can be customized		

data output with bluetooth and USB cable (included)

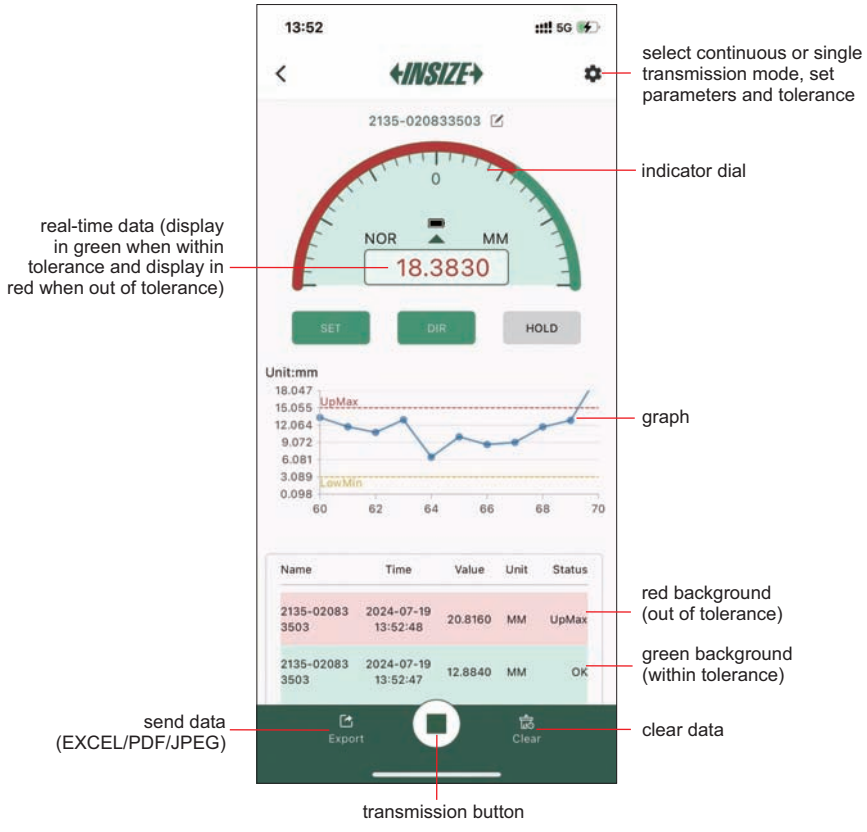


Android and iPhone APP (included), can choose real-time display (continuous transmission) or single transmission

Real-time data from multiple digital indicators (up to 7pcs simultaneously connected)



Transmission interface of single digital indicator



HIGH PRECISION DIGITAL INDICATORS

VIDEO

DATA OUTPUT

Ø28MM STEM SUITABLE FOR REINFORCED CLAMPING

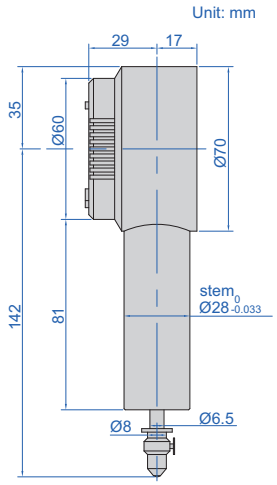
ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE

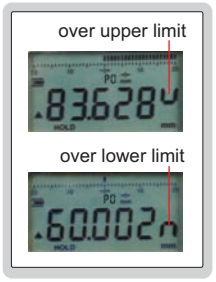
ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING



2140-6

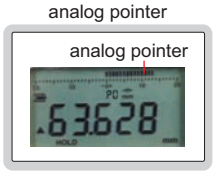


alarm when over tolerance

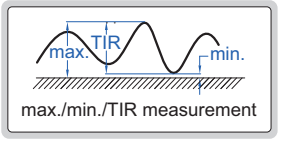


- Linear ball bearings for ten million times use
- Ø28mm stem suitable for reinforced clamping
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0002mm/0.00001"
  0.001mm/0.00005"
  0.01mm/0.0005"
- Reading in digital and analog
- Button function: data output, tolerance, data preset, data hold, measuring direction change, max./min./TIR, power off time, on/off, mm/inch, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working
- Ruby probe

analog pointer



max./min./TIR



10

With data interface
Optional accessory:
wireless transmitter code **7315-60** (receiver is needed) page 9
data output cable (keyboard format) code **7302-60** page 16
data output cable (serial port format) code **7305-G60** page 21
(cable length 3m, optional cable length maximum 15m; RS232 protocol, optional RS485 protocol)

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2140-6	0-6mm/0-0.24"	1.6μm	0.8μm	1.5N	flat back

Built-in wireless
Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), code **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), code **2134-R2**

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2140-6WL*	0-6mm/0-0.24"	1.6μm	0.8μm	1.5N	flat back

*Continuous data collection can be customized (press "DATA" button to start continuous collection, press again to stop; collection frequency can be customized, the fastest data collection is 10 pcs per second)

wireless receiver
2134-R1, 2134-R2 (optional)



SMART HIGH PRECISION DIGITAL INDICATORS

THE MEASURING TIME PERIOD CAN BE SET (1-99S IS ADJUSTABLE), THE MAX./MIN./TIR/AVG. CAN BE MEASURED AUTOMATICALLY DURING THIS PERIOD, AND THE DATA CAN BE TRANSMITTED AUTOMATICALLY AFTER EACH MEASUREMENT

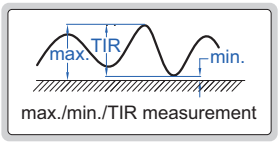
ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

DATA OUTPUT

VIDEO

PRESS BUTTON OR PROBE MOVEMENT CAN START AUTOMATIC MEASUREMENT, THE MEASUREMENT CAN BE DELAYED (1-99S IS ADJUSTABLE)

max./min./TIR

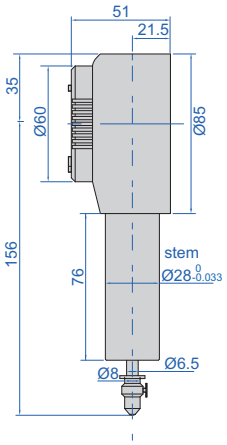


max./min./TIR measurement



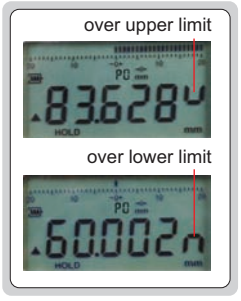
2150-5A

Unit: mm

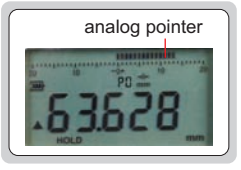


- Linear ball bearings for ten million times use
- Ø28mm stem suitable for reinforced clamping
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0001mm/0.00001"
  0.001mm/0.00005"
  0.01mm/0.0005"
- Reading in digital and analog
- Button function: on/off, adjust resolution, data hold, data output, max./min./TIR/avg., data preset, tolerance, mm/inch, automatic power off, measuring direction change, delay setting, measuring time setting
- Power: rechargeable Li-battery, for 24 hours continuous working
- Ruby probe

alarm when over tolerance



analog pointer



wireless receiver **2134-R1, 2134-R2 (optional)**



10

With data interface
Optional accessory:
wireless transmitter code **7315-60** (receiver is needed) page 9
data output cable (keyboard format) code **7302-60** page 16
data output cable (serial port format) code **7305-G60** page 21
(cable length 3m, optional cable length maximum 15m; RS232 protocol, optional RS485 protocol)

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2150-5A	0-5mm/0-0.2"	0.5μm	0.3μm	1.5N	probe movement starts measurement
2150-5B	0-5mm/0-0.2"	0.5μm	0.3μm	1.5N	press button starts measurement

Built-in wireless
Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), code **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), code **2134-R2**

Code	Range	Accuracy	Hysteresis	Maximum measuring force	Remark
2150-5AWL*	0-5mm/0-0.2"	0.5μm	0.3μm	1.5N	probe movement starts measurement
2150-5BWL*	0-5mm/0-0.2"	0.5μm	0.3μm	1.5N	press button starts measurement

*Continuous data collection can be customized (press "DATA" button to start continuous collection, press it again to stop; collection frequency can be customized, the fastest data collection is 10pcs per second)

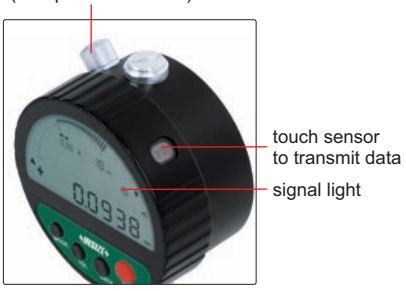
ATTENTION: RECHARGEABLE BATTERY, FOR 12 HOURS CONTINUOUS WORKING

INDUCTIVE DIGITAL COMPARATOR (HIGH ACCURACY)

VIDEO

IP54 WATERPROOF

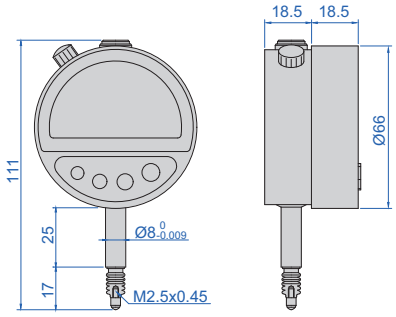
DATA OUTPUT





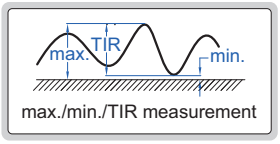
2149-2

Unit: mm



- Built-in wireless transmission
- IP54 dust/waterproof
- Reading in digital and analog
- Display can be rotated by 320°
- Can store 10 set parameters, and the parameter can be searched and recalled
- 999 groups value can be stored
- Touch sensor: use the sensor to transmit data, avoiding press the button to cause deformation of the dial indicator stand and affect the zero position
- Button function: on/off, zero, data hold, measuring direction change, inch/metric conversion, data preset, absolute/incremental measurement, max./min./TIR measurement, tolerance Go and No-Go display, data output, analog pointer resolution and range change, print data
- Power: rechargeable battery, for 12 hours continuous working
- Ruby probe
- Data output
- Optional accessory:
  wireless receiver (code **2149-RE**, transmission distance is 2 meters),
  printer (code **ISF-DF-PRINTER**)

max./min./TIR



max./min./TIR measurement

printer (**optional**)



wireless receiver (**optional**)



Code	Range	Resolution	Accuracy	Hysteresis	Repeatability	Measuring force
2149-2	2mm/0.08"	0.1μm/0.000005"	0.5μm	0.2μm	0.3μm	0.8-1N

JEWELED BEARING

SHOCK PROOF

INSPECTION CERTIFICATE

DIAL COMPARATOR

INSIZE PLUS

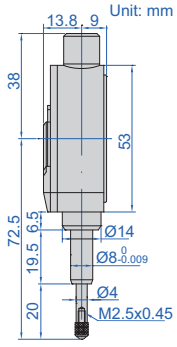
10

- Meet DIN879-1
- Shockproof
- Jeweled bearing
- Overtravel: 3mm
- Shadow free dial face cover
- Supplied with limit pointers
- Initial measuring force 1.2N
- Optional accessory:
  lifting lever (code **6289-150**)



2881-01

Unit: mm





lifting lever (**optional**)



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Maximum measuring force	Cap	Remark
2881-01*	0.1mm	0.001mm	1.2μm	0.5μm	50-0-50	1.5N	cannot lift	flat back

*Supplied with manufacturer inspection certificate

PRECISION DIAL INDICATORS

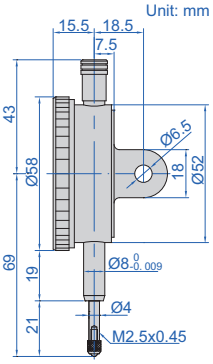
INSIZE PLUS

INSPECTION CERTIFICATE | SHOCK PROOF | JEWELED BEARING

- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory:
  backs (page 315~316),
  contact points (page 310~314)



2830-1



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2830-1*	1mm	0.001mm	5μm	2μm	0.2mm	0-100-0	2N	can lift	lug back
2830-1F*	1mm	0.001mm	5μm	2μm	0.2mm	0-100-0	2N	can lift	flat back

*Supplied with manufacturer inspection certificate

HIGH PRECISION DIAL INDICATORS

INSIZE PLUS

INSPECTION CERTIFICATE | SHOCK PROOF

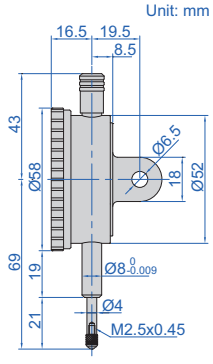
- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory:
  backs (page 315~316),
  contact points (page 310~314),
  lifting lever (code **6289-150**)

lifting lever (**optional**)





2891-1



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2891-1*	1mm	0.001mm	3μm	1.5μm	0.1mm	0-100	2N	can lift	lug back
2891-1F*	1mm	0.001mm	3μm	1.5μm	0.1mm	0-100	2N	can lift	flat back

*Supplied with manufacturer inspection certificate

10

HIGH PRECISION COMPACT DIAL INDICATORS

INSIZE PLUS

INSPECTION CERTIFICATE | SHOCK PROOF

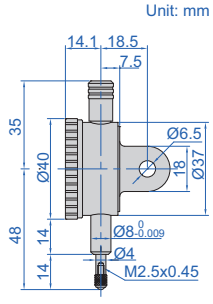
- Shockproof
- Jeweled bearing
- With limit pointers
- Optional accessory:
  backs (page 315~316),
  contact points (page 310~314),
  lifting lever (code **6289-150**)

lifting lever (**optional**)





2890-1



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2890-1*	1mm	0.001mm	3μm	1.5μm	0.1mm	0-100	2N	can lift	lug back
2890-1F*	1mm	0.001mm	3μm	1.5μm	0.1mm	0-100	2N	can lift	flat back

*Supplied with manufacturer inspection certificate

JEWELED BEARING

INSPECTION CERTIFICATE

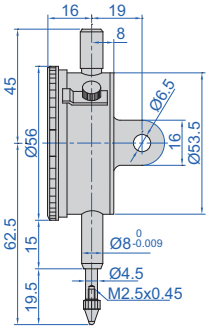
PRECISION DIAL INDICATORS



2313-1A

- Graduation: 0.001mm
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 315~316), contact points (page 310~314)

Unit: mm



Code	Range	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2313-1FA*	1mm	5μm	2μm	0.2mm	0-100-0	2N	cannot lift	flat back
2313-2FA*	2mm	6μm	2.5μm	0.2mm	0-100-0	2N	cannot lift	flat back
2313-1A*	1mm	5μm	2μm	0.2mm	0-100-0	2N	cannot lift	lug back
2313-2A*	2mm	6μm	2.5μm	0.2mm	0-100-0	2N	cannot lift	lug back

*Supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE

COMPACT DIAL INDICATOR

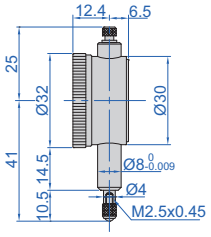
INSIZE PLUS



2886-3F

- Meet DIN878
- With limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314)

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2886-3F*	3mm	0.01mm	12μm	3μm	0.5mm	0-50	1.5N	can lift	flat back

*Supplied with manufacturer inspection certificate

10

INSPECTION CERTIFICATE

COMPACT DIAL INDICATORS

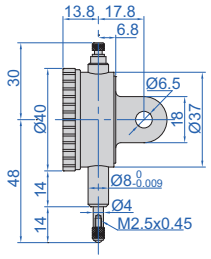
INSIZE PLUS



2887-5

- Meet DIN878
- With limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314)

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2887-5*	5mm	0.01mm	14μm	3μm	0.5mm	0-50	1.5N	can lift	lug back
2887-5F*	5mm	0.01mm	14μm	3μm	0.5mm	0-50	1.5N	can lift	flat back

*Supplied with manufacturer inspection certificate

COMPACT DIAL INDICATORS

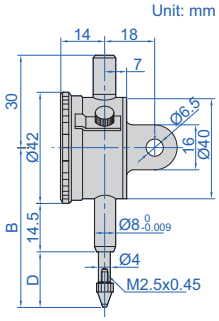
JEWELED BEARING

INSPECTION CERTIFICATE

- Meet DIN878
- Graduation: 0.01mm
- Dial reading: 0-50
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2311-5



(mm)

Code	Range	Accuracy	Hysteresis	Range/rev	Maximum measuring force	Cap	Remark	B	D
2311-3F *	3mm	12μm	3μm	0.5mm	1.5N	can lift	flat back	46	10.5
2311-5F *	5mm	14μm	3μm	0.5mm	1.5N	can lift	flat back	48	12.5
2311-3 *	3mm	12μm	3μm	0.5mm	1.5N	can lift	lug back	46	10.5
2311-5 *	5mm	14μm	3μm	0.5mm	1.5N	can lift	lug back	48	12.5

*Supplied with manufacturer inspection certificate

DIAL INDICATORS

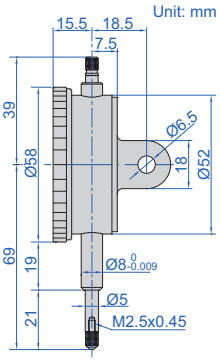
INSIZE PLUS

INSPECTION CERTIFICATE

- Meet DIN878
- With limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2892-10



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2892-10*	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	can lift	lug back
2892-10F *	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	can lift	flat back

*Supplied with manufacturer inspection certificate

DIAL INDICATORS (STANDARD TYPE)

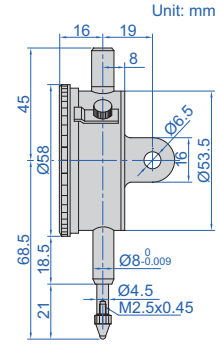
JEWELED BEARING

INSPECTION CERTIFICATE

- Meet DIN878
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2308-10A



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2308-3FA*	3mm	0.01mm	12μm	3μm	1mm	0-100	1.5N	can lift	flat back
2308-5FA*	5mm	0.01mm	14μm	3μm	1mm	0-100	1.5N	can lift	flat back
2308-10FA*	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	can lift	flat back
2308-3A*	3mm	0.01mm	12μm	3μm	1mm	0-100	1.5N	can lift	lug back
2308-5A*	5mm	0.01mm	14μm	3μm	1mm	0-100	1.5N	can lift	lug back
2308-10A*	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	can lift	lug back

*Supplied with manufacturer inspection certificate

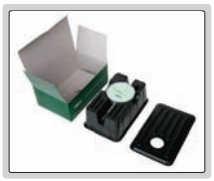
DIAL INDICATORS (BASIC TYPE)

JEWELED BEARING

INSPECTION CERTIFICATE

- Meet DIN878
- Graduation: 0.01mm
- Jeweled bearing
- Supplied with limit hands and bezel clamp
- Packed in carton box
- Optional accessory: backs (page 315~316), contact points (page 310~314)

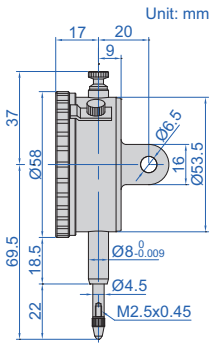
carton box





2301-10

POPULAR MODEL



Code	Range	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2301-10F*	10mm	17μm	3μm	1mm	0-100	1.5N	can lift	flat back
2301-10*	10mm	17μm	3μm	1mm	0-100	1.5N	can lift	lug back with spare flat back

*Supplied with manufacturer inspection certificate

REVERSE READING DIAL INDICATORS

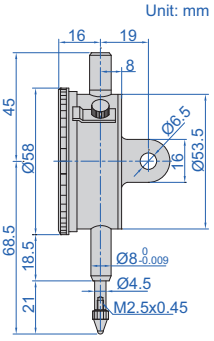
JEWELED BEARING

INSPECTION CERTIFICATE

- Meet DIN878
- Suitable for depth and step measurements
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2801-10



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2801-10F*	10mm	0.01mm	17μm	3μm	1mm	100-0	1.5N	can lift	flat back
2801-10*	10mm	0.01mm	17μm	3μm	1mm	100-0	1.5N	can lift	lug back

*Supplied with manufacturer inspection certificate

LARGE DIAL FACE DIAL INDICATOR

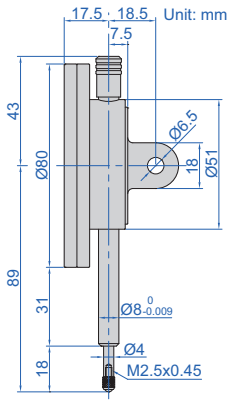
INSPECTION CERTIFICATE

INSIZE PLUS

- Large, easy-to-read dial face
- With limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2888-10



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2888-10*	10mm	0.01mm	17μm	5μm	1mm	0-100	1.5N	can lift	flat back, with spare lug back

*Supplied with manufacturer inspection certificate

SHOCKPROOF DIAL INDICATORS

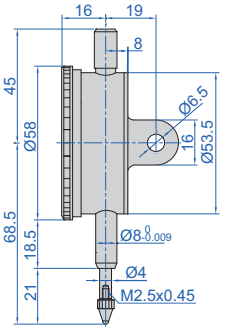
INSPECTION CERTIFICATE | SHOCK PROOF | JEWELED BEARING

- Meet DIN878
- Shockproof
- Jeweled bearing
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2314-10A

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2314-3FA*	3mm	0.01mm	12μm	3μm	1mm	0-100	1.5N	can lift	flat back
2314-5FA*	5mm	0.01mm	14μm	3μm	1mm	0-100	1.5N	can lift	flat back
2314-10FA*	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	can lift	flat back
2314-3A*	3mm	0.01mm	12μm	3μm	1mm	0-100	1.5N	can lift	lug back
2314-5A*	5mm	0.01mm	14μm	3μm	1mm	0-100	1.5N	can lift	lug back
2314-10A*	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	can lift	lug back

*Supplied with manufacturer inspection certificate

BACK PLUNGER DIAL INDICATOR

INSIZE PLUS

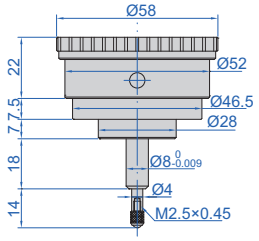
INSPECTION CERTIFICATE

- With limit pointers
- Optional accessory: contact points (page 310~314)



2893-3

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force
2893-3*	3mm	0.01mm	15μm	5μm	1mm	0-100	1.5N

*Supplied with manufacturer inspection certificate

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WATERPROOF DIAL INDICATOR

INSIZE PLUS

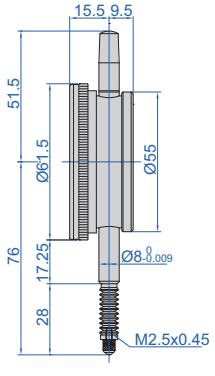
INSPECTION CERTIFICATE | SHOCK PROOF | IP67 WATERPROOF

- Meet DIN878
- Shockproof
- IP67 dust/waterproof
- With limit pointers
- Optional accessory: contact points (page 310~314)



2894-10F

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2894-10F*	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	cannot lift	flat back

*Supplied with manufacturer inspection certificate

WATERPROOF DIAL INDICATORS

IP54 WATERPROOF

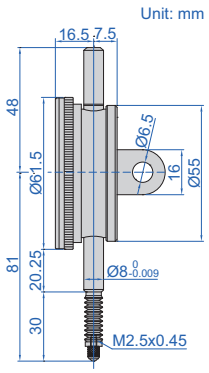
INSPECTION CERTIFICATE

- Meet DIN878
- IP54 dust/waterproof
- With limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2324-10A

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2324-10FA*	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	cannot lift	flat back
2324-10A*	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	cannot lift	lug back

*Supplied with manufacturer inspection certificate

DIAL INDICATORS (LONG STROKE)

INSPECTION CERTIFICATE

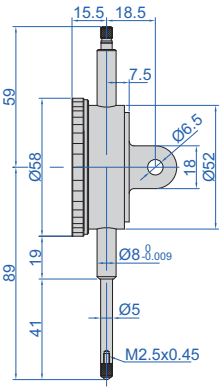
INSIZE PLUS

- With limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2889-30

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2889-30*	30mm	0.01mm	35μm	7μm	1mm	0-100	2.2N	can lift	lug back
2889-30F*	30mm	0.01mm	35μm	7μm	1mm	0-100	2.2N	can lift	flat back

*Supplied with manufacturer inspection certificate

DIAL INDICATORS (LONG STROKE)

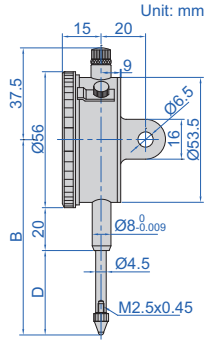
INSPECTION CERTIFICATE

- Graduation: 0.01mm
- Dial reading: 0-100
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2310-30A

Unit: mm



(mm)

Code	Range	Accuracy	Hysteresis	Range/rev	Maximum measuring force	Cap	Remark	B	D
2310-20FA*	20mm	25μm	5μm	1mm	2.0N	can lift	flat back	83	35
2310-30FA*	30mm	35μm	7μm	1mm	2.2N	can lift	flat back	88	40
2310-20A*	20mm	25μm	5μm	1mm	2.0N	can lift	lug back	83	35
2310-30A*	30mm	35μm	7μm	1mm	2.2N	can lift	lug back	88	40

*Supplied with manufacturer inspection certificate

DIAL INDICATORS (LONG STROKE, BASIC TYPE)

POPULAR MODEL

INSPECTION CERTIFICATE

- Supplied with limit pointers and bezel clamp
- Graduation: 0.01mm
- Packed in carton box
- Optional accessory: backs (page 315~316), contact points (page 310~314)

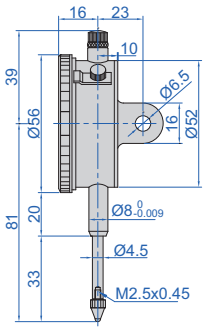
carton box





2302-25

Unit: mm



Code	Range	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap	Remark
2302-25F*	25mm	35μm	7μm	1mm	0-100	2.2N	can lift	flat back
2302-25*	25mm	35μm	7μm	1mm	0-100	2.2N	can lift	lug back with spare flat back

*Supplied with manufacturer inspection certificate

DOUBLE FACE DIAL INDICATOR

JEWELED BEARING

INSPECTION CERTIFICATE

- Meet DIN878
- Read from both sides
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: contact points (page 310~314)



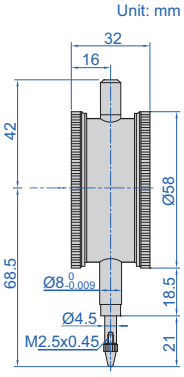
front

2328-10



back

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Range/rev	Dial reading	Maximum measuring force	Cap
2328-10*	10mm	0.01mm	17μm	3μm	1mm	0-100	1.5N	can lift

*Supplied with manufacturer inspection certificate

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DIAL INDICATORS (GRADUATION 0.1mm)

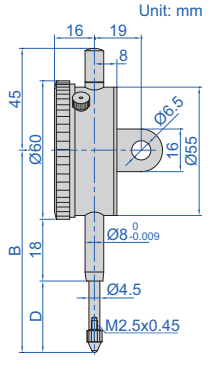
- Graduation: 0.1mm
- Dial reading: 0-10
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 315~316), contact points (page 310~314)



2318-30

(mm)

Unit: mm



Code	Range	Accuracy	Hysteresis	Range/rev	Maximum measuring force	Cap	Remark	B	D
2318-10F	10mm	40μm	20μm	10mm	2.0N	can lift	flat back	70	20
2318-20F	20mm	50μm	20μm	10mm	2.0N	can lift	flat back	85	35
2318-25F	25mm	60μm	20μm	10mm	2.2N	can lift	flat back	85	35
2318-30F	30mm	60μm	20μm	10mm	2.2N	can lift	flat back	90	40
2318-10	10mm	40μm	20μm	10mm	2.0N	can lift	lug back	70	20
2318-20	20mm	50μm	20μm	10mm	2.0N	can lift	lug back	85	35
2318-25	25mm	60μm	20μm	10mm	2.2N	can lift	lug back	85	35
2318-30	30mm	60μm	20μm	10mm	2.2N	can lift	lug back	90	40

JEWELED BEARING | SHOCK PROOF | INSPECTION CERTIFICATE

DIAL INDICATORS (LONG STROKE)



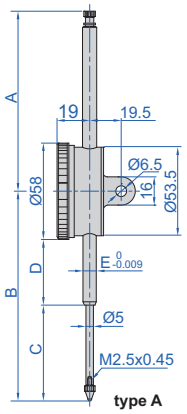
2309-50

stem clamp Ø10mm for **2309-100D**

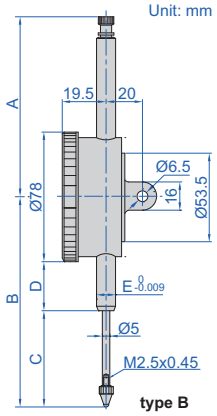


back of type B





Unit: mm



- Graduation: 0.01mm
- Dial reading: 0-100
- Shockproof
- Jeweled bearing
- Supplied with limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314)

(mm)

Code	Type	A	B	C	D	E
2309-30F	A	37.5	89.5	40.9	19.5	Ø8
2309-30	A	37.5	89.5	40.9	19.5	Ø8
2309-50	A	108.3	126.2	57.7	39.5	Ø8
2309-50D	B	108.3	126.2	57.7	29.5	Ø8
2309-80	A	138.4	168.4	88	51.3	Ø8
2309-80D	B	138.4	168.4	88	41.3	Ø8
2309-100D	B	167.6	207.8	108	60.8	Ø10

(mm)

Code	Range	Type	Accuracy	Hysteresis	Range/rev	Maximum measuring force	Cap	Remark
2309-30F*	30mm	A	35μm	7μm	1mm	2.2N	can lift	flat back
2309-30*	30mm	A	35μm	7μm	1mm	2.2N	can lift	lug back
2309-50*	50mm	A	40μm	8μm	1mm	2.5N	can lift	flat back with spare lug back
2309-50D*	50mm	B	40μm	8μm	1mm	2.5N	can lift	flat back with spare lug back
2309-80	80mm	A	50μm	9μm	1mm	3.2N	can lift	flat back with spare lug back
2309-80D	80mm	B	50μm	9μm	1mm	3.2N	can lift	flat back with spare lug back
2309-100D	100mm	B	50μm	9μm	1mm	3.2N	can lift	flat back with spare lug back

Note: 1) **2309-80, 2309-80D** and **2309-100D** can only be used vertically
2) **2309-100D** is supplied with stem clamp Ø10mm for magnetic stands (code **6200-60**, **6201-60**, **6202-80**, **6202-100**)
3) **2309-30** and **2309-30F** can not accept optional backs (page 315~316)

*Supplied with manufacturer inspection certificate

ONE REVOLUTION PRECISION DIAL INDICATORS

INSIZE PLUS

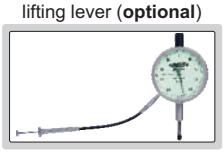
SHOCK PROOF

INSPECTION CERTIFICATE



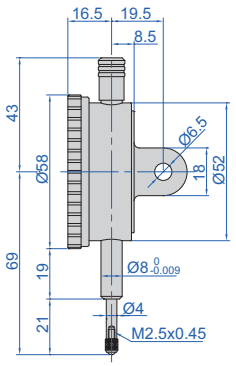
2885-008

lifting lever (**optional**)



- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Jeweled bearing
- Free stroke: 4.5mm
- With limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314), lifting lever (code **6289-150**)

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Maximum measuring force	Cap	Remark
2885-008*	0.08mm	0.001mm	3μm	1.5μm	40-0-40	2N	can lift	lug back
2885-008F*	0.08mm	0.001mm	3μm	1.5μm	40-0-40	2N	can lift	flat back

*Supplied with manufacturer inspection certificate

ONE REVOLUTION DIAL INDICATORS

INSIZE PLUS

SHOCK PROOF

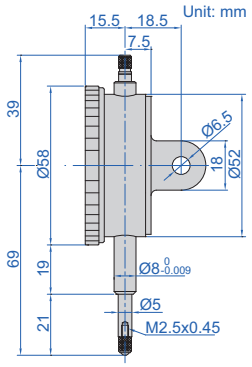
INSPECTION CERTIFICATE



2882-08

- Meet DIN878
- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Free stroke: 7mm
- With limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314)

Unit: mm



Code	Range	Graduation	Accuracy	Hysteresis	Dial reading	Maximum measuring force	Cap	Remark
2882-08*	0.8mm	0.01mm	9μm	3μm	40-0-40	1.5N	can lift	lug back
2882-08F*	0.8mm	0.01mm	9μm	3μm	40-0-40	1.5N	can lift	flat back

*Supplied with manufacturer inspection certificate

10

ONE REVOLUTION DIAL INDICATORS

SHOCK PROOF

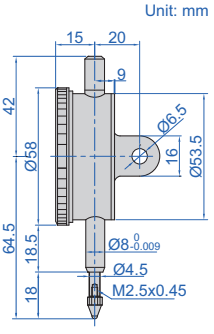
INSPECTION CERTIFICATE



2316-05

- Meet DIN878
- Graduation: 0.01mm
- Eliminate the possibility of reading errors due to miscounting
- Shockproof
- Supplied with limit pointers
- Optional accessory: backs (page 315~316), contact points (page 310~314)

Unit: mm



Code	Range	Dial indicator stroke	Accuracy	Hysteresis	Dial reading	Maximum measuring force	Cap	Remark
2316-05F*	0.5mm	5mm	9μm	3μm	25-0-25	1.5N	cannot lift	flat back
2316-1F*	1mm	5mm	9μm	3μm	50-0-50	1.5N	cannot lift	flat back
2316-05*	0.5mm	5mm	9μm	3μm	25-0-25	1.5N	cannot lift	lug back
2316-1*	1mm	5mm	9μm	3μm	50-0-50	1.5N	cannot lift	lug back

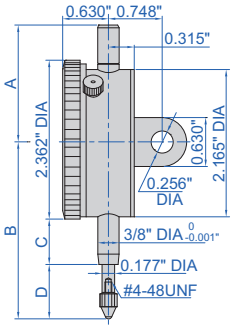
*Supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE

INCH DIAL INDICATORS



2307-1



- Meet ASME B89.1.10M-2001
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 315~316), contact points (page 310~314)

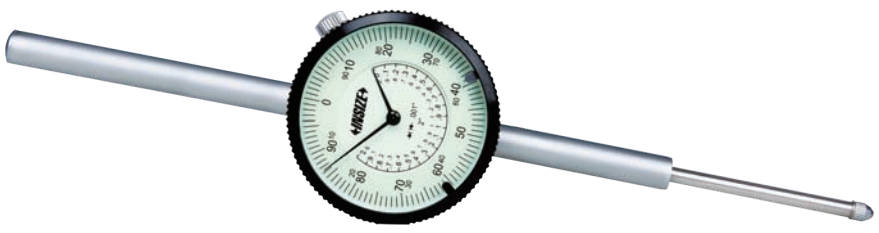
Range	A	B	C	D
0.25"	1.811"	2.953"	0.787"	0.984"
0.5"	1.811"	2.953"	0.787"	0.984"
1"	1.811"	3.346"	0.787"	1.378"
2"	4.370"	5.472"	1.969"	2.323"

Code	Range	Graduation	Accuracy		Range/rev	Dial reading	Maximum measuring force	Cap
			First 2.5 rev	Overall				
2307-025 *	0.25"	0.001"	±0.001"	±0.001"	0.1"	0-100	1.8N	can lift
2307-05 *	0.5"	0.001"	±0.001"	±0.002"	0.1"	0-100	1.8N	can lift
2307-1 *	1"	0.001"	±0.001"	±0.002"	0.1"	0-100	1.8N	can lift
2307-2 *	2"	0.001"	±0.001"	±0.004"	0.1"	0-100	2.5N	cannot lift
2307-0255 *	0.25"	0.0005"	±0.0005"	±0.0015"	0.05"	0-50	1.8N	can lift
2307-055 *	0.5"	0.0005"	±0.0005"	±0.0015"	0.05"	0-50	1.8N	can lift
2307-105 *	1"	0.0005"	±0.0005"	±0.002"	0.05"	0-50	1.8N	can lift
2307-205 *	2"	0.0005"	±0.0005"	±0.002"	0.05"	0-50	2.5N	cannot lift

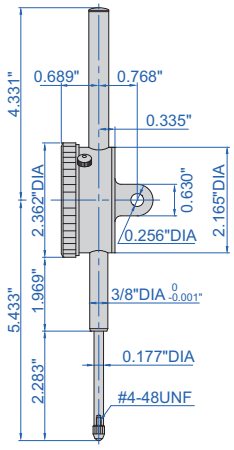
*Supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE

INCH LONG STROKE DIAL INDICATOR



2326-2



- Graduation 0.001"
- With lug back
- Supplied with limit pointers and bezel clamp
- Optional accessory: backs (page 315~316), contact points (page 310~314)

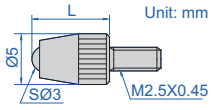
Code	Range	Accuracy		Range/rev	Dial reading	Maximum measuring force	Cap
		First 2.5 rev	Overall				
2326-2 *	2"	±0.001"	±0.004"	0.1"	0-100	2.5N	cannot lift

*Supplied with manufacturer inspection certificate

BALL POINTS



6282-0101

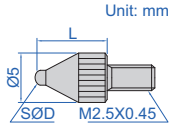


Code	Material of measuring face	L (mm)
6282-0101	carbide	7.3
6282-0103	ceramic	7.3
6282-0104	carbide	8.3
6282-0106	carbide	12.1
6282-0107	carbide	14
6282-0108	carbide	15
6282-0109	ceramic	15
6282-0110	carbide	17

Code	Material of measuring face	L (mm)
6282-0111	carbide	19.3
6282-0112	carbide	20
6282-0113	ceramic	20
6282-0114	carbide	22
6282-0115	carbide	25
6282-0116	ceramic	25
6282-0117	carbide	30
6282-0118	ceramic	30

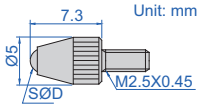
Code	Material of measuring face	L (mm)
6282-0119	carbide	35
6282-0120	ruby	35
6282-0121	carbide	40
6282-0122	ruby	40
6282-0123	carbide	45
6282-0124	ruby	45
6282-0125	carbide	50
6282-0126	ruby	50





6282-0301





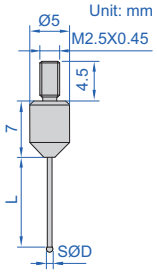
6282-0304

Code	Material of measuring face	SØD (mm)	L (mm)
6282-0301	steel	1	7.3
6282-0306	carbide	1	6
6282-0307	carbide	2	7
6282-0308	carbide	3	8
6282-0309	carbide	3.5	8.5
6282-0310	carbide	4	9
6282-0311	carbide	4.5	9.5
6282-0312	carbide	5.5	10
6282-0313	carbide	6	10.5
6282-0314	carbide	7	11.5

Code	Material of measuring face	SØD (mm)
6282-0302	carbide	1.5
6282-0303	carbide	1.8
6282-0304	carbide	2.5
6282-0305	carbide	4



6282-3407



(mm)

Code	Material of measuring face	L	SØD
6282-3401	ruby	10	1
6282-3402	ruby	20	1
6282-3403	ruby	30	1
6282-3404	ruby	40	1
6282-3405	ruby	50	1
6282-3406	ruby	10	2
6282-3407	ruby	20	2
6282-3408	ruby	30	2
6282-3409	ruby	40	2
6282-3410	ruby	50	2
6282-3411	carbide	10	1
6282-3412	carbide	20	1

(mm)

Code	Material of measuring face	L	SØD
6282-3413	carbide	30	1
6282-3414	carbide	40	1
6282-3415	carbide	50	1
6282-3416	carbide	10	1.5
6282-3417	carbide	20	1.5
6282-3418	carbide	30	1.5
6282-3419	carbide	40	1.5
6282-3420	carbide	50	1.5
6282-3421	carbide	10	2
6282-3422	carbide	20	2
6282-3423	carbide	30	2
6282-3424	carbide	40	2

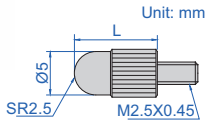
(mm)

Code	Material of measuring face	L	SØD
6282-3425	carbide	50	2
6282-3426	carbide	10	2.5
6282-3427	carbide	20	2.5
6282-3428	carbide	30	2.5
6282-3429	carbide	40	2.5
6282-3430	carbide	50	2.5
6282-3431	carbide	10	3
6282-3432	carbide	20	3
6282-3433	carbide	30	3
6282-3434	carbide	40	3
6282-3435	carbide	50	3

SHELL TYPE POINTS



6282-0202



Code	Material of measuring face	L (mm)
6282-0202	steel	5
6282-0203	steel	10
6282-0205	steel	15

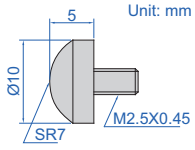
Code	Material of measuring face	L (mm)
6282-0207	steel	20
6282-0208	steel	25
6282-0210	steel	30

SPHERICAL POINT

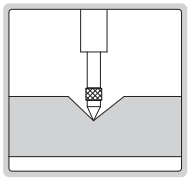
Code	Material of measuring face
6282-0401	steel



6282-0401



CONICAL POINTS





6282-0601



6282-0701

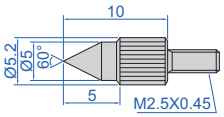


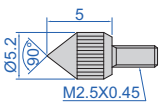
6282-0801

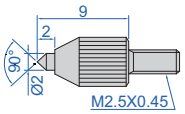


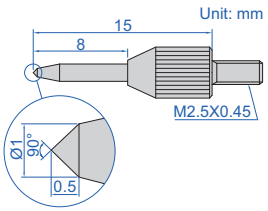
6282-0901

Code	Material of measuring face
6282-0601	steel
6282-0701	steel
6282-0801	steel
6282-0901	steel

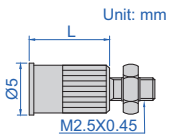








FLAT POINTS



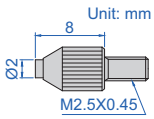


6282-1101

Code	Material of measuring face	L (mm)
6282-1101	steel	8
6282-1102	steel	10



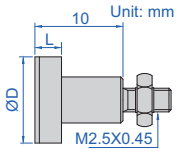
6282-1301



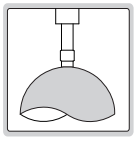
Code	Material of measuring face
6282-1301	carbide



6282-1201



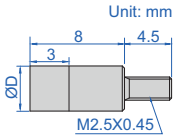
Code	Material of measuring face	ØD	L
6282-1201	steel	10mm	3mm
6282-1202	steel	15mm	4mm
6282-1203	steel	20mm	3mm
6282-1204	steel	25mm	4mm
6282-1205	steel	30mm	3mm



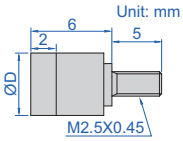
FLAT POINTS



6282-2902



type A



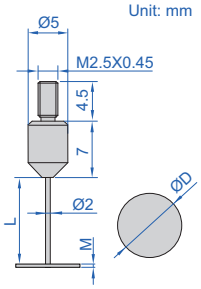
type B

Code	Material of measuring face	Type	ØD (mm)
6282-2901	carbide	A	4
6282-2902	carbide	A	5
6282-2903	carbide	A	6
6282-2904	carbide	A	8
6282-2905	carbide	A	10
6282-2906	carbide	B	12
6282-2907	carbide	B	15



6282-3004

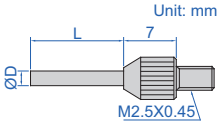
Code	Material of measuring face	L (mm)	M (mm)	ØD (mm)
6282-3001	carbide	13	0.4	3
6282-3002	carbide	13	0.4	4
6282-3003	carbide	13	0.4	5
6282-3004	carbide	13	0.4	6
6282-3005	carbide	16	1	6
6282-3006	carbide	33	0.4	6
6282-3007	carbide	13	0.4	8
6282-3008	carbide	13	0.4	10



NEEDLE POINTS



6282-1711



(mm)

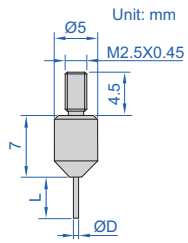
Code	Material of measuring face	ØD	L
6282-1701	steel	0.45	3
6282-1702	steel	0.45	5
6282-1703	carbide	1	3
6282-1704	carbide	1	5
6282-1705	carbide	1	8
6282-1706	carbide	1	10
6282-1707	carbide	1	20
6282-1708	carbide	1	40
6282-1709	carbide	1.5	5
6282-1710	carbide	1.5	10
6282-1711	carbide	1.5	13
6282-1712	carbide	1.5	20
6282-1713	carbide	1.5	40
6282-1714	carbide	2	8
6282-1715	carbide	2	18
6282-1716	carbide	2	28
6282-1717	carbide	2	40

(mm)

Code	Material of measuring face	ØD	L
6282-1718	carbide	1	50
6282-1719	carbide	1.5	50
6282-1720	carbide	2	50
6282-1721	ceramic	1	10
6282-1722	ceramic	1	20
6282-1723	ceramic	1.5	10
6282-1724	ceramic	1.5	20
6282-1725	ceramic	1.5	30
6282-1726	ceramic	1.5	40
6282-1727	ceramic	1.5	50
6282-1728	ceramic	2	10
6282-1729	ceramic	2	20
6282-1730	ceramic	2	30
6282-1731	ceramic	2	40
6282-1732	ceramic	2	50



6282-3303



(mm)

Code	Material of measuring face	ØD	L
6282-3301	carbide	0.5	3
6282-3302	carbide	0.5	5
6282-3303	carbide	0.5	10
6282-3304	carbide	0.6	10
6282-3305	carbide	0.7	10
6282-3306	carbide	0.8	10
6282-3307	carbide	0.9	10
6282-3308	carbide	1.2	10
6282-3309	carbide	0.5	15
6282-3310	carbide	0.6	15

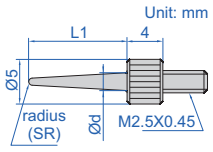
(mm)

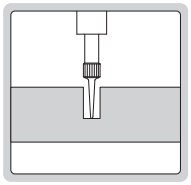
Code	Material of measuring face	ØD	L
6282-3311	carbide	0.7	15
6282-3312	carbide	0.8	15
6282-3313	carbide	0.9	15
6282-3314	carbide	1.2	15
6282-3315	carbide	0.5	20
6282-3316	carbide	0.6	20
6282-3317	carbide	0.7	20
6282-3318	carbide	0.8	20
6282-3319	carbide	0.9	20
6282-3320	carbide	1.2	20

NEEDLE POINTS



6282-1601





(mm)

Code	Material of measuring face	L1	Ød	SR
6282-1611	steel	7	2	0.15
6282-1612	steel	13	2	0.15
6282-1613	steel	22	2	0.15
6282-1614	steel	30	2	0.15
6282-1615	steel	40	2	0.15
6282-1602	steel	13	2	0.2
6282-1616	steel	50	2	0.2
6282-1617	steel	13	2	0.3
6282-1618	steel	17	2	0.3
6282-1619	steel	22	2	0.3
6282-1620	steel	30	2	0.3
6282-1621	steel	40	2	0.3
6282-1601	steel	11	2	0.4
6282-1603	steel	21	3	0.4
6282-1604	steel	31	3	0.4
6282-1622	steel	50	2	0.4

(mm)

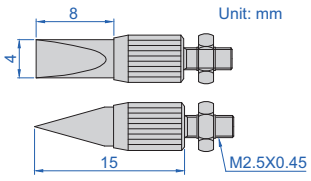
Code	Material of measuring face	L1	Ød	SR
6282-1623	carbide	13	2	0.2
6282-1624	carbide	23	2	0.2
6282-1625	carbide	30	2	0.2
6282-1626	carbide	40	2	0.2
6282-1627	carbide	50	2	0.2
6282-1628	carbide	13	2	0.35
6282-1629	carbide	23	2	0.35
6282-1630	carbide	30	2	0.35
6282-1631	carbide	40	2	0.35
6282-1632	carbide	50	2	0.35

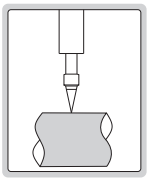
KNIFE EDGE POINT

Code	Material of measuring face
6282-1001	steel



6282-1001



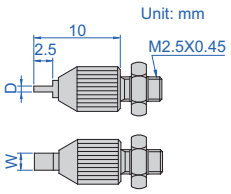


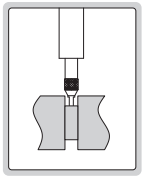
BLADE POINTS

Code	Material of measuring face	D	W
6282-1801	steel	0.4mm	2mm
6282-1802	steel	0.6mm	2mm
6282-1803	steel	1mm	4mm



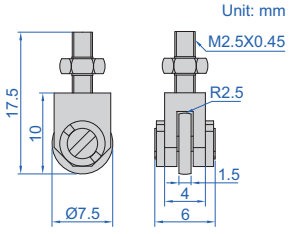
6282-1801





ROLLER POINT

Code	Material of measuring face
6282-1901	steel





6282-1901

EXTENSION RODS

(mm)

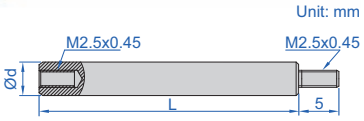
Code	Material	L	Ød
6282-2001	steel	10	4
6282-2002	steel	15	4
6282-2003	steel	20	4
6282-2004	steel	25	4
6282-2005	steel	30	4
6282-2006	steel	35	4
6282-2007	steel	40	4
6282-2008	steel	45	4
6282-2009	steel	50	4

(mm)

Code	Material	L	Ød
6282-2010	steel	55	4
6282-2011	steel	60	4
6282-2012	steel	65	4
6282-2013	steel	70	4
6282-2014	steel	75	4
6282-2015	steel	80	4
6282-2016	steel	90	4
6282-2017	steel	100	4
6282-2023	steel	150	5
6282-2024	steel	200	5
6282-2025	steel	300	5



6282-2010

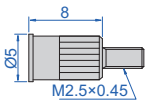


POINT SET

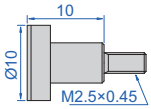


6282-S6

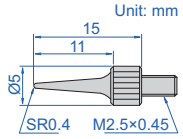
Code	Material of measuring face
6282-S6	steel



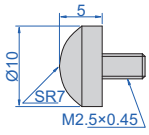
flat point



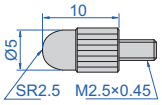
flat point



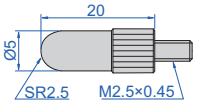
needle point



spherical point



shell type point



shell type point

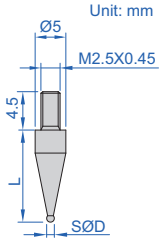
PRECISION BALL POINTS

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING TO CUSTOMER'S REQUEST

- Material of measuring face: carbide
- Accuracy: ±3μm

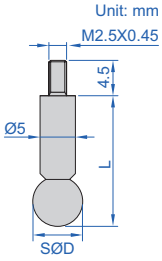


6282-3101





6282-3206



(mm)

Code	SØD	L
6282-3101	1	12
6282-3102	1.5	12
6282-3103	2	12
6282-3104	2.5	12
6282-3105	3	12
6282-3106	3.5	12
6282-3107	4	12
6282-3108	4.5	12
6282-3109	5	12
6282-3110	5.5	12
6282-3111	6	12
6282-3112	6.5	12

(mm)

Code	SØD	L
6282-3113	1	20
6282-3114	1.5	20
6282-3115	2	20
6282-3116	2.5	20
6282-3117	3	20
6282-3118	3.5	20
6282-3119	4	20
6282-3120	4.5	20
6282-3121	5	20
6282-3122	5.5	20
6282-3123	6	20
6282-3124	6.5	20

(mm)

Code	SØD	L
6282-3125	1	30
6282-3126	1.5	30
6282-3127	2	30
6282-3128	2.5	30
6282-3129	3	30
6282-3130	3.5	30
6282-3131	4	30
6282-3132	4.5	30
6282-3133	5	30
6282-3134	5.5	30
6282-3135	6	30
6282-3136	6.5	30

(mm)

Code	SØD	L
6282-3201	7	20
6282-3202	7.5	20
6282-3203	8	20
6282-3204	8.5	20
6282-3205	9	20
6282-3206	9.5	20
6282-3207	10	20
6282-3208	10.5	20
6282-3209	11	20
6282-3210	12	20
6282-3211	13	20
6282-3212	14	20

(mm)

Code	SØD	L
6282-3213	7	30
6282-3214	7.5	30
6282-3215	8	30
6282-3216	8.5	30
6282-3217	9	30
6282-3218	9.5	30
6282-3219	10	30
6282-3220	10.5	30
6282-3221	11	30
6282-3222	12	30
6282-3223	13	30
6282-3224	14	30

SPINDLE LIFT KNOB

- For dial/digital indicators with spindle diameter Ø4.5mm or Ø5mm

Code
7332

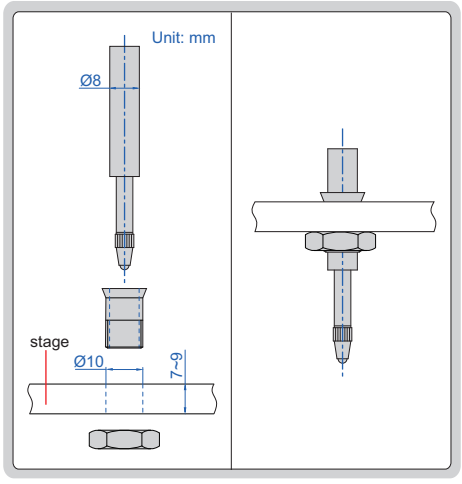




7332

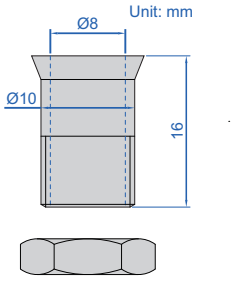
SHAFT SLEEVE







7333



- For dial indicators and probes with shaft diameter Ø8mm

Code
7333

MAGNETIC BACKS

Code	ØD	For digital/dial indicators
7331-M1	51.5mm	2103
		2104
		2108
		2109
		2112
		2115
		2116
		2117
		2118
		2137
		2138
		2139
		2501
		2301
		2302
		2308
		2309 (except 2309-30, 2309-30F)
		2313
		2314
		2316
		2324
		2801
		2508
		2509
7331-M2	54mm	2318

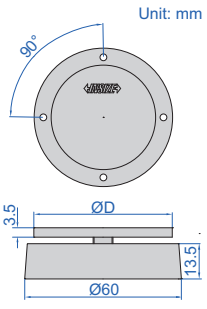


front



back

7331-M2





FLAT BACKS

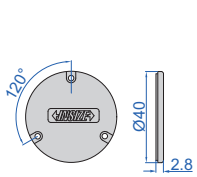


7330-F2

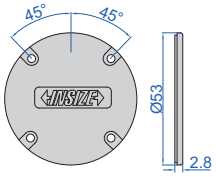


7330-F8

Unit: mm

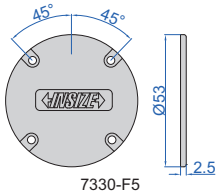


7330-F1

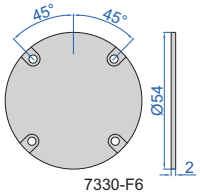


7330-F2 and 7330-F10

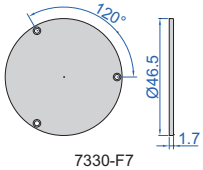
Code	For digital/ dial indicators
7330-F1	2311
7330-F2	2301, 2302, 2308, 2313, 2314, 2324, 2316, 2801, 2309 (except 2309-30, 2309-30F)
7330-F5	2103, 2104, 2108, 2109, 2112, 2115, 2137, 2116, 2117, 2118, 2501, 2138, 2139, 2508, 2509
7330-F6	2318, 2326, 2307
7330-F7	2830, 2882, 2885, 2888, 2889, 2891, 2892
7330-F8	2887, 2890
7330-F9	2886
7330-F10	2310



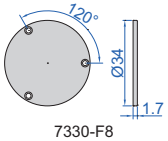
7330-F5



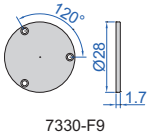
7330-F6



7330-F7



7330-F8



7330-F9

LUG BACKS

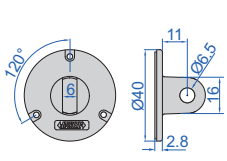


7330-L2

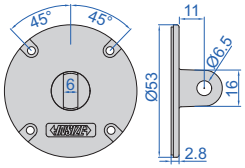


7330-L8

Unit: mm

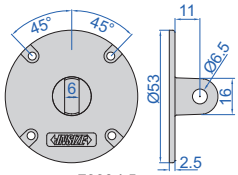


7330-L1

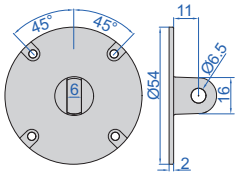


7330-L2 and 7330-L10

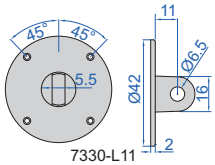
Code	For digital/ dial indicators
7330-L1	2311
7330-L2	2301, 2302, 2308, 2313, 2314, 2324, 2316, 2801 2309 (except 2309-30, 2309-30F)
7330-L5	2103, 2104, 2108, 2109, 2112, 2115, 2137, 2116, 2117, 2118, 2501, 2138, 2139, 2508, 2509
7330-L6	2318, 2326, 2307
7330-L7	2830, 2882, 2885, 2888, 2889, 2891, 2892
7330-L8	2887, 2890
7330-L10	2310
7330-L11	2114



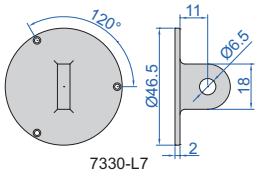
7330-L5



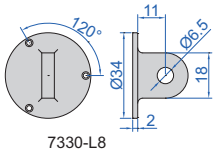
7330-L6



7330-L11



7330-L7



7330-L8

MEASURING TOOLS DYNAMOMETERS



ISF-DGD15



check the measuring force of dial test indicators



check the measuring force of dial indicators

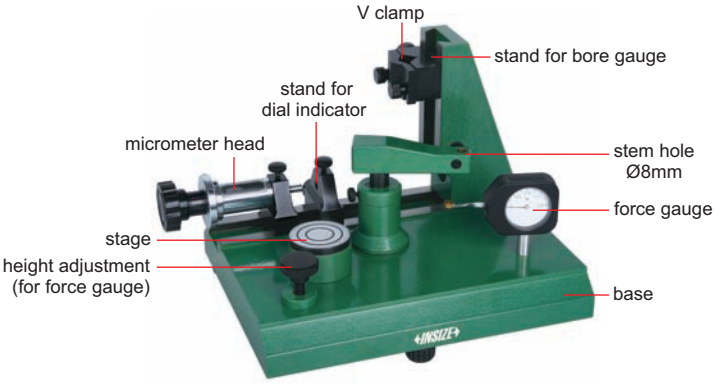
REFER TO PAGE 200 FOR DETAILS

ATTENTION: NOT SUITABLE FOR DIAL INDICATORS WITH GRADUATION 0.001MM

VIDEO

DIAL INDICATOR TESTER CODE 2396-25A

- To calibrate dial indicators, test indicators and dial bore gauges
- Dimension: 270x210x205mm
- Weight: 11kg



2396-25A

Micrometer head

Range	Sampling interval	Accuracy	Hysteresis
0-25mm	0.1mm	4μm (0-25mm), 3μm (0-10mm), 2μm (0-1mm)	1μm

Force gauge

Range	Graduation	Accuracy
0-1.6N	0.05N	±5% (of load capacity)

Stage

Diameter	Flatness	Roughness
50mm	1μm	0.05μm



inspect accuracy of dial indicators (range 0-25mm)



inspect accuracy of dial bore gauges (range 6-450mm)



inspect accuracy of test indicators



check force of dial indicators



check repeatability of dial indicators



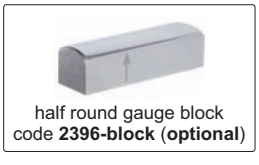
check the effect of lateral force on accuracy of dial indicators (half round gauge block is needed)



check the effect of lateral force on accuracy of test indicators (half round gauge block is needed)

Half round gauge block (optional)

Code	Parallelism
2396-block	1μm



half round gauge block code **2396-block** (**optional**)

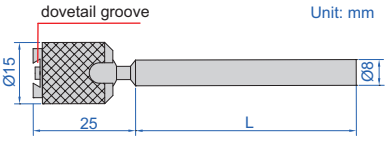
DIAL TEST INDICATOR UNIVERSAL HOLDERS



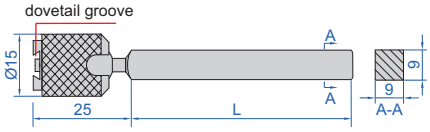
6297-1



6297-2



6297-1



6297-2/6297-3

- Set the indicators at the desired attitude to the workpiece

Code	Stem section	Stem lenth (L)
6297-1	Ø8mm	55mm
6297-2	9×9mm	50mm
6297-3	9×9mm	100mm

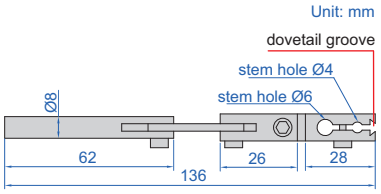


DIAL TEST INDICATOR HOLDER



6296-1

- Supplied with hex key



Code
6296-1



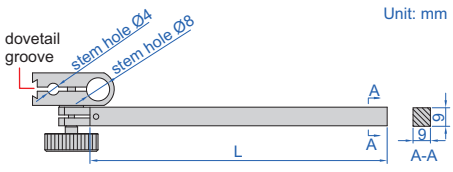
DIAL TEST INDICATOR HOLDERS



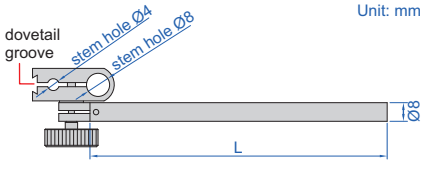
6293-1



6293-2



6293-1/6293-6/6293-8



6293-2

Code	Stem section	Stem length (L)
6293-1	9x9mm	100mm
6293-6	9x9mm	50mm
6293-8 *	9x9mm	200mm
6293-2	Ø8mm	115mm

*Only apply for 0.01mm dial test indicator

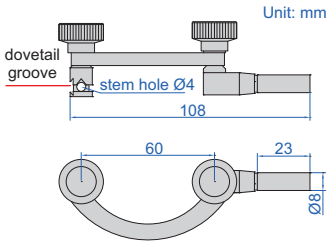


DIAL TEST INDICATOR HOLDER

- Can be used with dial test indicators



6291-1



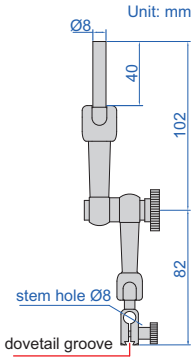
Code
6291-1

DIAL TEST INDICATOR HOLDER

- Can be used with dial test indicators



6295-1A



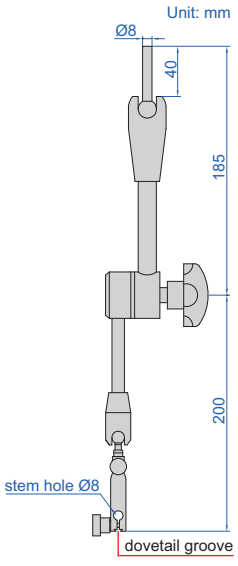
Code
6295-1A

DIAL INDICATOR HOLDER

- Can be used with dial test indicators or dial indicators

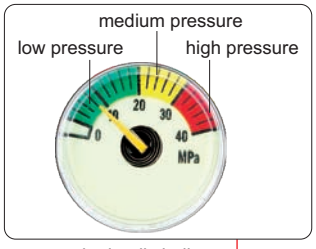


6294-1A



Code
6294-1A

HYDRAULIC UNIVERSAL MAGNETIC STANDS (WITH HYDRAULIC INDICATOR)





6232-60



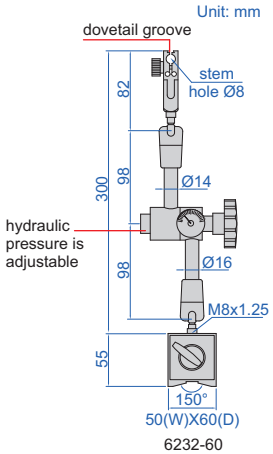
6232-80



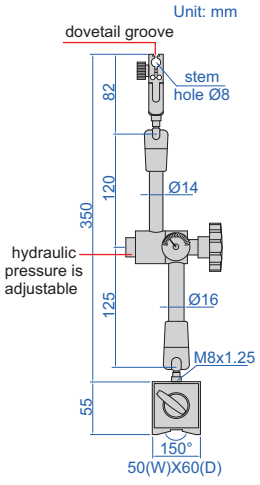
6232-100



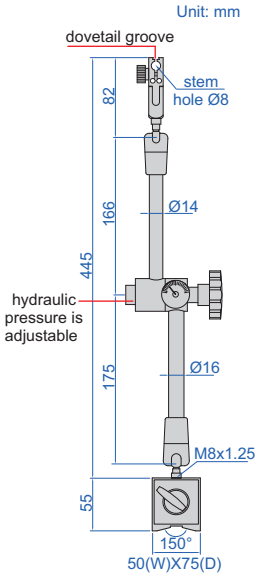
6232-101



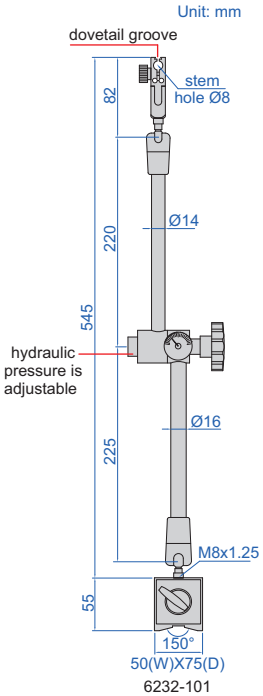
6232-60



6232-80



6232-100



6232-101

- Hydraulic pressure is adjustable, with hydraulic indicator
- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6232-60	60kgf	Ø8mm	with fine adjustment and dovetail groove, hydraulic pressure 0-40MPa
6232-80	80kgf	Ø8mm	with fine adjustment and dovetail groove, hydraulic pressure 0-40MPa
6232-100	100kgf	Ø8mm	with fine adjustment and dovetail groove, hydraulic pressure 0-40MPa
6232-101	100kgf	Ø8mm	with fine adjustment and dovetail groove, hydraulic pressure 0-40MPa

HYDRAULIC UNIVERSAL MAGNETIC STANDS



6229-60



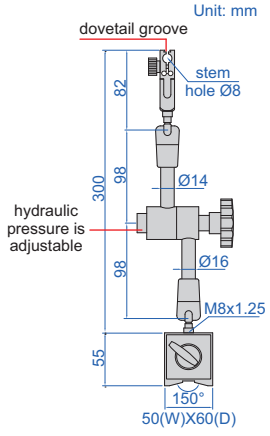
6229-80



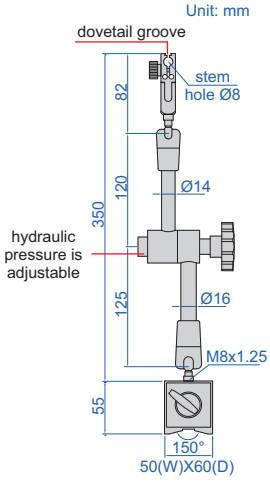
6229-100



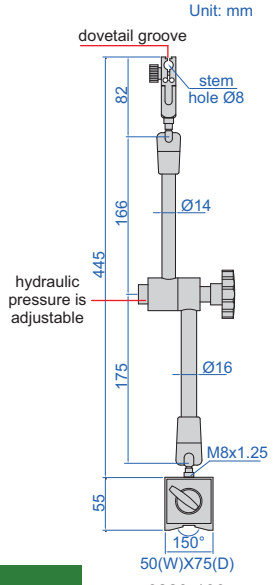
6229-101



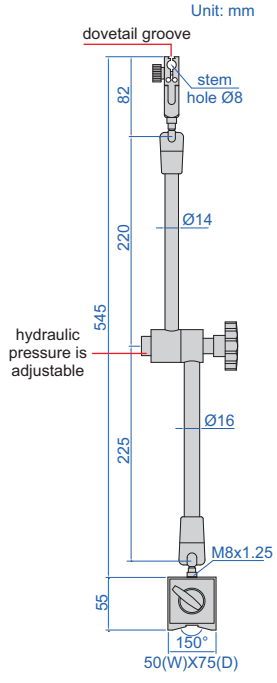
6229-60



6229-80



6229-100



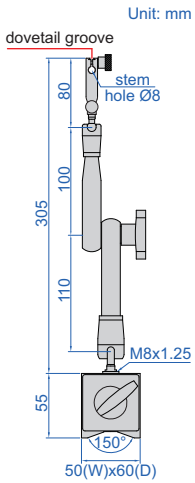
6229-101

- Hydraulic pressure is adjustable
- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6229-60	60kgf	Ø8mm	with fine adjustment and dovetail groove
6229-80	80kgf	Ø8mm	with fine adjustment and dovetail groove
6229-100	100kgf	Ø8mm	with fine adjustment and dovetail groove
6229-101	100kgf	Ø8mm	with fine adjustment and dovetail groove

10

LARGE LOCKING FORCE MAGNETIC STAND





6219-80

- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6219-80	80kgf	Ø8mm	with fine adjustment and dovetail groove

LARGE LOCKING FORCE MAGNETIC STANDS



6222-40



6222-80



6222-81

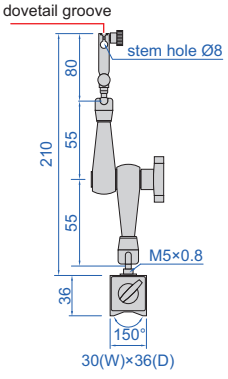


6222-100



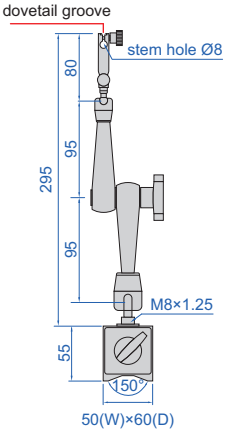
6222-101

Unit: mm



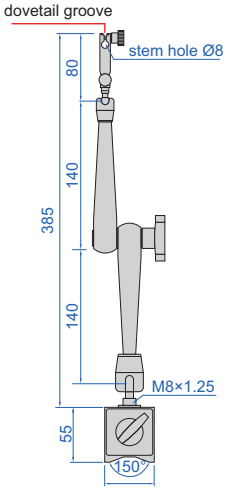
6222-40

Unit: mm



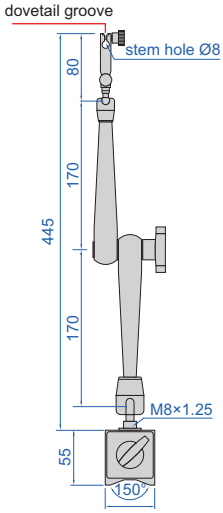
6222-80

Unit: mm



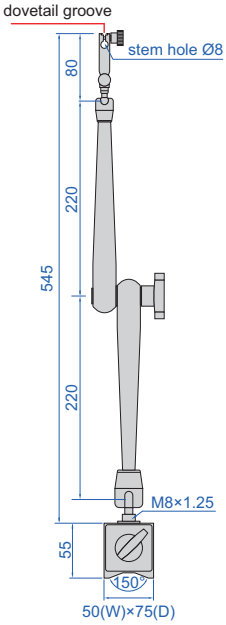
6222-81

Unit: mm



6222-100

Unit: mm



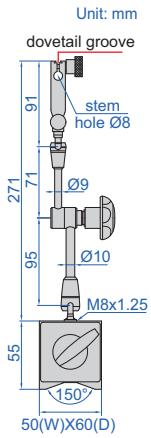
6222-101

- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6222-40	40kgf	Ø8mm	with fine adjustment and dovetail groove
6222-80	80kgf	Ø8mm	with fine adjustment and dovetail groove
6222-81	80kgf	Ø8mm	with fine adjustment and dovetail groove
6222-100	100kg	Ø8mm	with fine adjustment and dovetail groove
6222-101	100kg	Ø8mm	with fine adjustment and dovetail groove

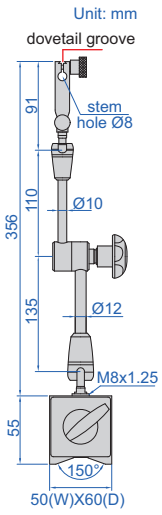
POPULAR MODEL

UNIVERSAL MAGNETIC STANDS



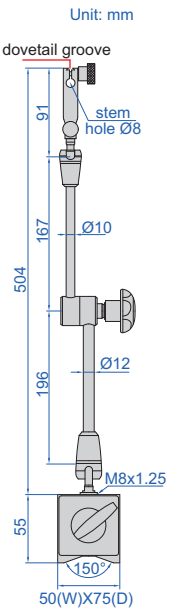
6210-81


6210-81



6210-80


6210-80



6210-100


6210-100

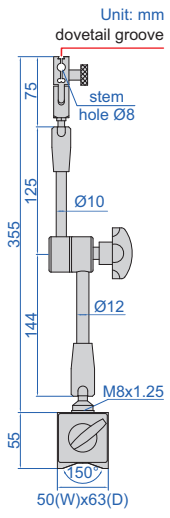
- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6210-81	80kgf	Ø8mm	with fine adjustment and dovetail groove
6210-80	80kgf	Ø8mm	with fine adjustment and dovetail groove
6210-100	100kgf	Ø8mm	with fine adjustment and dovetail groove

ATTENTION: LOW LOCKING FORCE

UNIVERSAL MAGNETIC STAND (ECONOMIC TYPE)


6208-80A



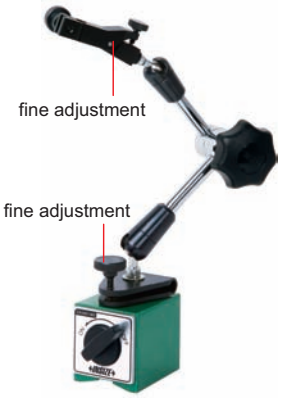
- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6208-80A	80kgf	Ø8mm	with fine adjustment and dovetail groove

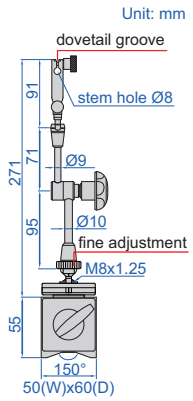
MAGNETIC STAND WITH TWO FINE ADJUSTMENTS

- With two fine adjustments on the head and on the base
- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6272-80	80kgf	Ø8mm	with two fine adjustments and dovetail groove



6272-80



HYDRAULIC MINI MAGNETIC STAND

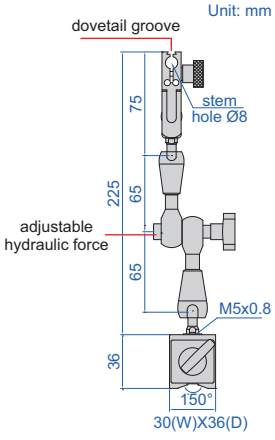
ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators
- With fine adjustment and dovetail groove
- Adjustable hydraulic force

Code	Magnetic force	Applicable holding stem
6228-40	40kgf	Ø8mm



6228-40



MINI MAGNETIC STAND

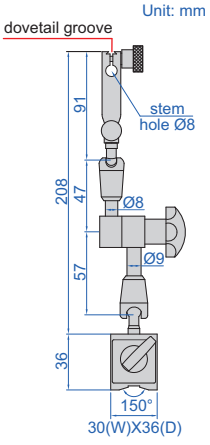
ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators
- With fine adjustment and dovetail groove

Code	Magnetic force	Applicable holding stem
6224-40	40kgf	Ø8mm



6224-40



MAGNETIC STAND
(FOR 0.001MM DIAL AND TEST INDICATORS)

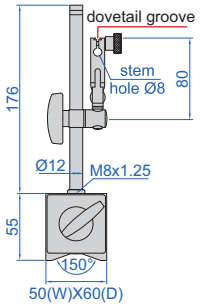
- For 0.001mm and 0.01mm dial and test indicators

Code	Magnetic force	Applicable holding stem	Remark
6221-80	80kgf	Ø8mm	with fine adjustment and dovetail groove



6221-80

Unit: mm



MAGNETIC STANDS

POPULAR MODEL



6200-60



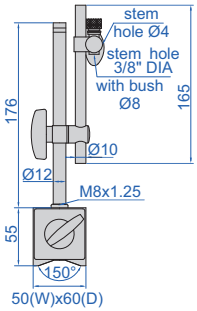
6201-60



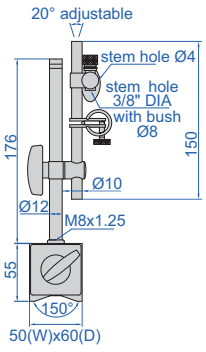
6202-80



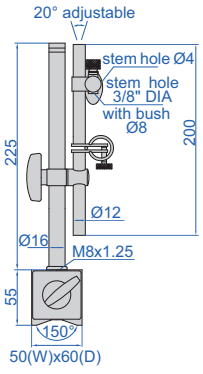
6202-100



6200-60

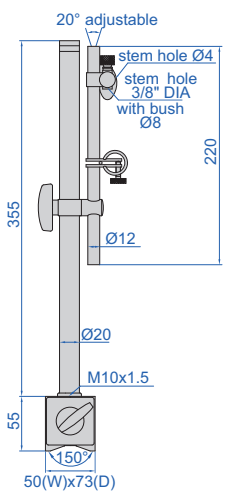


6201-60



6202-80

Unit: mm



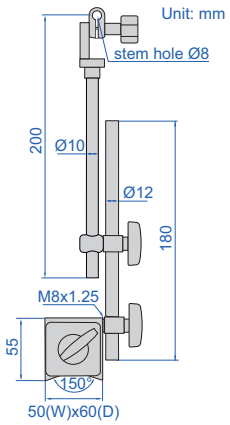
6202-100

- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6200-60	60kgf	Ø8mm, Ø4mm, 3/8" DIA	without fine adjustment
6201-60	60kgf	Ø8mm, Ø4mm, 3/8" DIA	with fine adjustment
6202-80	80kgf	Ø8mm, Ø4mm, 3/8" DIA	with fine adjustment
6202-100	100kgf	Ø8mm, Ø4mm, 3/8" DIA	with fine adjustment

MAGNETIC STAND



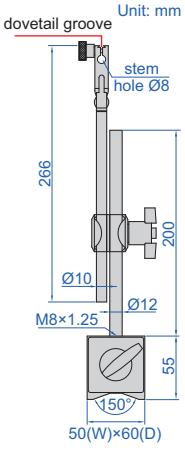


6231-60

- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6231-60	60kgf	Ø8mm	without fine adjustment or dovetail groove

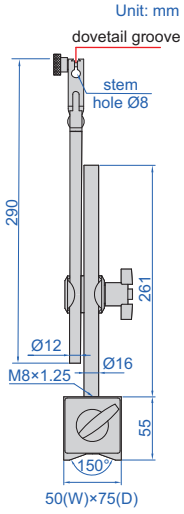
MAGNETIC STANDS



6216-80



6216-80



6216-100

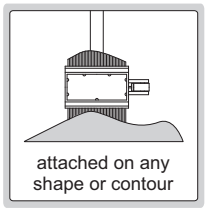


6216-100

- For digital/dial indicators and dial test indicators

Code	Magnetic force	Applicable holding stem	Remark
6216-80	80kgf	Ø8mm	with fine adjustment and dovetail groove
6216-100	100kgf	Ø8mm	with fine adjustment and dovetail groove

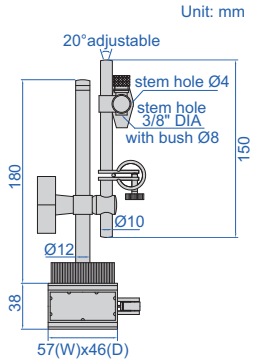
MAGNETIC STAND FOR UNEVEN SURFACES





6215-60

- For digital/dial indicators and dial test indicators
- With fine adjustment



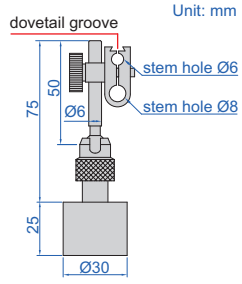
Code	Magnetic force	Applicable holding stem
6215-60	60kgf	Ø8mm, Ø4mm, 3/8" DIA

MINI MAGNETIC STAND

ATTENTION: FOR DIAL TEST INDICATORS ONLY



6211-10



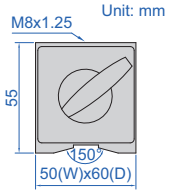
- For dial test indicators
- With dovetail groove

Code	Magnetic force	Applicable holding stem
6211-10	10kgf	Ø6mm, Ø8mm

MAGNETIC BASES



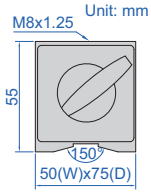
6212-80



6212-80



6212-100



6212-100

Code	Magnetic force
6212-80	80kgf
6212-100	100kgf

FLEX ARM MAGNETIC STAND

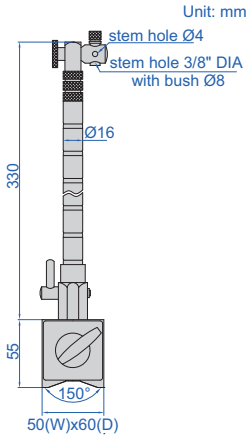
ATTENTION: FOR DIAL TEST INDICATORS ONLY

- For dial test indicators

Code	Magnetic force	Applicable holding stem
6207-80A	80kgf	Ø8mm, Ø4mm, 3/8" DIA



6207-80A



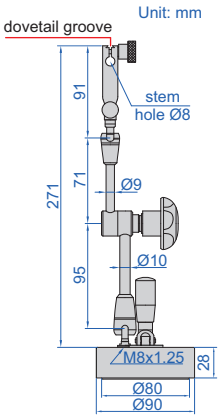
VACUUM STAND

- Suitable for granite surface plates or cast iron surface plates
- For digital/dial indicators and dial test indicators

Code	Diameter of vacuum disc	Vacuum force	Applicable holding stem	Remark
6217-B	Ø80mm	80kgf	Ø8mm	with fine adjustment and dovetail groove



6217-B



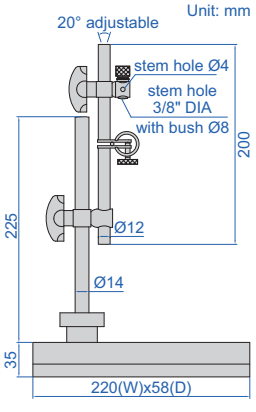
UNIVERSAL STAND

- For digital/dial indicators and dial test indicators
- With fine adjustment

Code	Applicable holding stem
6214-A	Ø8mm, Ø4mm, 3/8" DIA



6214-A



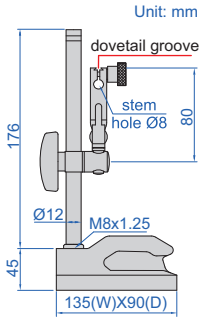
DIAL INDICATOR STAND (FOR 0.001MM DIAL AND TEST INDICATORS)

- Non-magnetic and hardened base
- Suitable for granite surface plates or cast iron surface plates
- For 0.001mm and 0.01mm dial and test indicators

Code	Applicable holding stem	Remark
6230-60	Ø8mm	with fine adjustment and dovetail groove



6230-60



DIAL INDICATOR STANDS (NON-MAGNETIC)



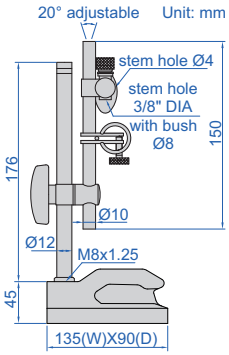
6226-60



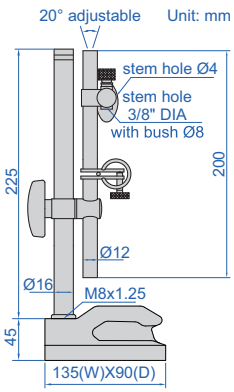
6226-80



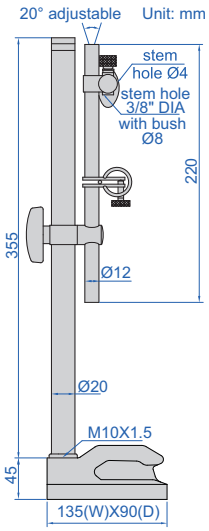
6226-100



6226-60



6226-80



6226-100

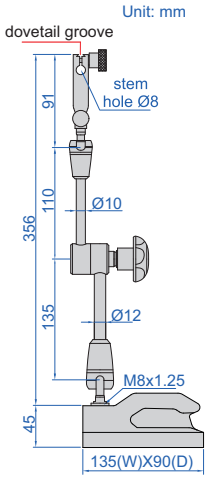
Code	Applicable holding stem	Remark
6226-60	Ø8mm, Ø4mm, 3/8" DIA	with fine adjustment
6226-80	Ø8mm, Ø4mm, 3/8" DIA	with fine adjustment
6226-100	Ø8mm, Ø4mm, 3/8" DIA	with fine adjustment

- Hardened base
- Suitable for granite surface plates and cast iron surface plates
- For digital/dial indicators and dial test indicators

UNIVERSAL DIAL INDICATOR STANDS (NON-MAGNETIC)



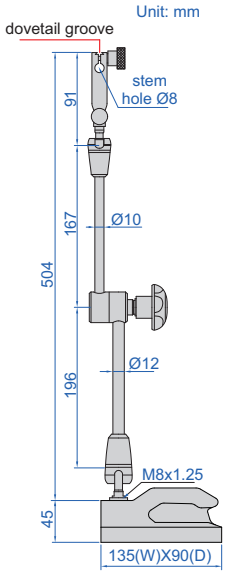
6225-80



6225-80



6225-100



6225-100

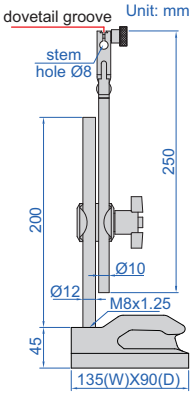
- Hardened base
- Suitable for granite surface plates and cast iron surface plates
- For digital/dial indicators and dial test indicators

Code	Applicable holding stem	Remark
6225-80	Ø8mm	with fine adjustment and dovetail groove
6225-100	Ø8mm	with fine adjustment and dovetail groove

DIAL INDICATOR STAND (NON-MAGNETIC)



6227-80

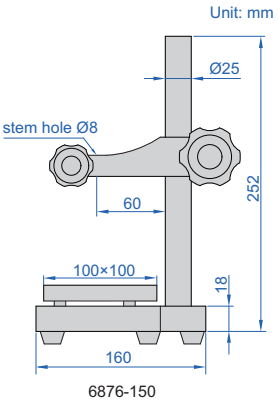


- Hardened base
- Suitable for granite surface plates and cast iron surface plates
- For digital/dial indicators and dial test indicators

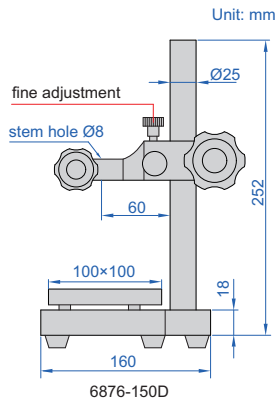
Code	Applicable holding stem	Remark
6227-80	Ø8mm	with fine adjustment and dovetail groove

DIAL INDICATOR STANDS









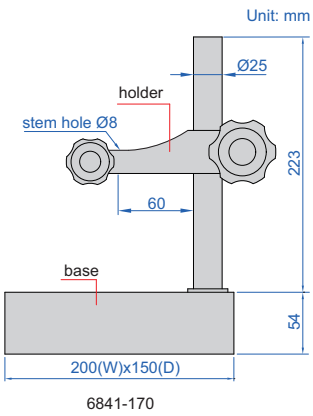
Code	Applicable holding stem	Anvil	Remark
6876-150	Ø8mm	ceramic, plain, flatness 1.5μm	without fine adjustment
6876-150D	Ø8mm	ceramic, plain, flatness 1.5μm	with fine adjustment, fine adjustment range 3mm

- Vertical travel of holder: 150mm
- Ceramic anvil
- Supplied with dust cover

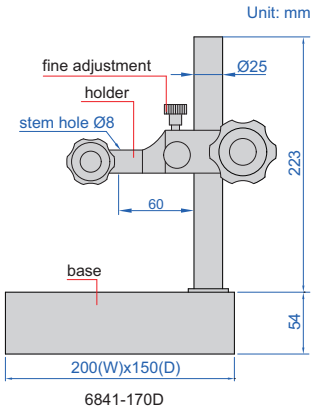
GRANITE DIAL INDICATOR STANDS (BASIC TYPE)

POPULAR MODEL









Code	Applicable holding stem	Base	Remark
6841-170	Ø8mm	flatness 2.5μm	without fine adjustment
6841-170D	Ø8mm	flatness 2.5μm	with fine adjustment, fine adjustment range 3mm

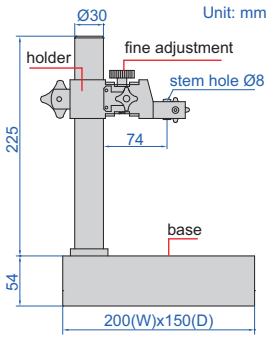
- Vertical travel of holder: 170mm
- Supplied with dust cover

10

GRANITE DIAL INDICATOR STAND

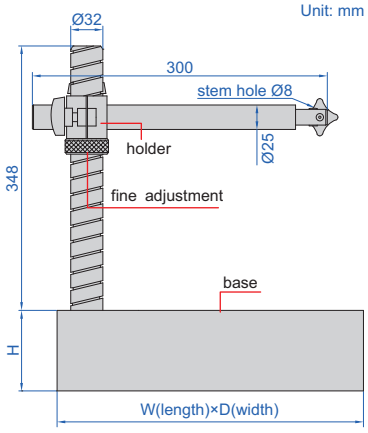
- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Supplied with dust cover





Code	Applicable holding stem	Base
6866-150	Ø8mm	flatness 2.5μm

GRANITE DIAL INDICATOR STANDS





6867-250



6867-400

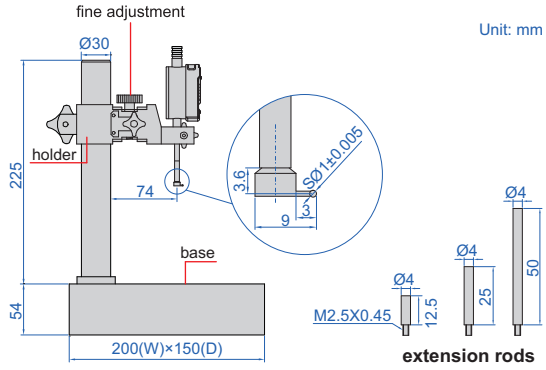
- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke
- Supplied with dust cover

Code	Applicable holding stem	W	D	H	Base
6867-250	Ø8mm	300mm	300mm	75mm	flatness 2.8μm
6867-400	Ø8mm	400mm	300mm	100mm	flatness 3μm

DIGITAL GROOVE MEASUREMENT STANDS

DATA OUTPUT

VIDEO

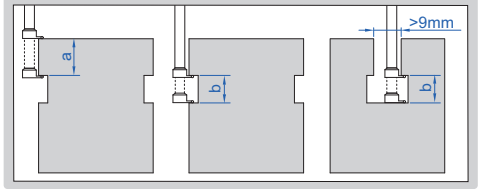




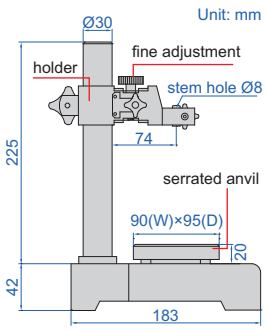
6870-150

- Button function: on/off, zero, mm/inch, measuring direction change, data preset, absolute/incremental measurement
- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Supplied with extension rods: 12.5mm (1pc), 25mm (1pc), 50mm (1pc)
- Supplied with groove point and dust cover
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8

measure width (b) and depth (a) of groove

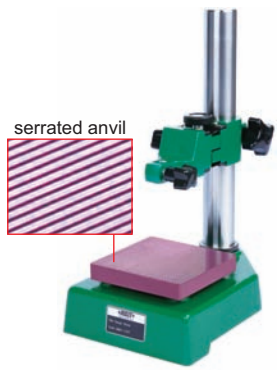


Code	Digital indicator stroke	Digital indicator resolution	Accuracy	Applicable holding stem	Base
6870-150	12.7mm/0.5"	0.01mm/0.0005"	±20μm	Ø8mm	flatness 2.5μm
6870-1501	12.7mm/0.5"	0.001mm/0.00005"	±5μm	Ø8mm	flatness 2.5μm





6863-150

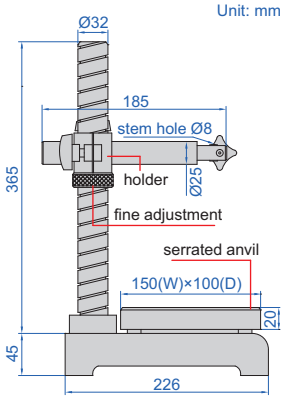


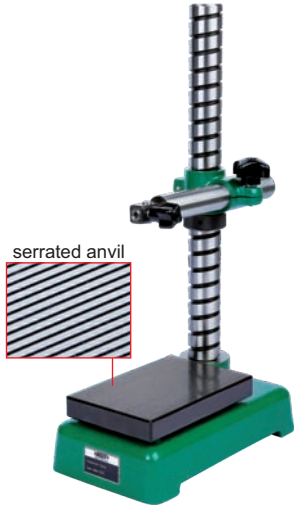
6863-150T

- Vertical travel of holder: 150mm
- Fine adjustment range: 2mm
- Supplied with dust cover

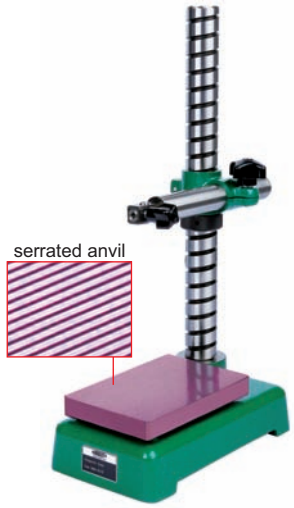
Code	Applicable holding stem	Anvil
6863-150	Ø8mm	steel (hardness HRC60±2), serrated, flatness 1.5μm
6863-150T	Ø8mm	ceramic, serrated, flatness 1.5μm

DIAL INDICATOR STANDS





6864-250



6864-250T

- Vertical travel of holder: 250mm
- Fine adjustment range: entire stroke
- Supplied with dust cover

Code	Applicable holding stem	Anvil
6864-250	Ø8mm	steel (hardness HRC60±2), serrated, flatness 1.5μm
6864-250T	Ø8mm	ceramic, serrated, flatness 1.5μm

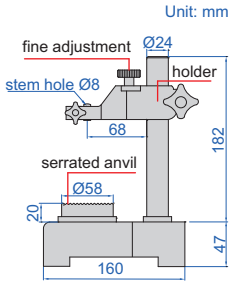
DIAL INDICATOR STANDS



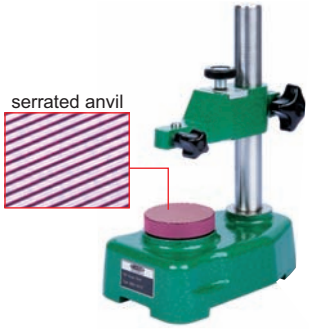
6862-1001



6862-1002



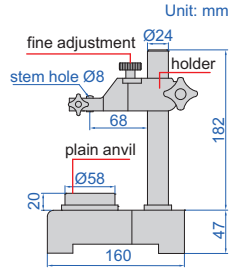
6862-1001
6862-1001T



6862-1001T



6862-1002T



6862-1002
6862-1002T

10

- Vertical travel of holder: 100mm
- Fine adjustment range: 2mm
- Supplied with dust cover

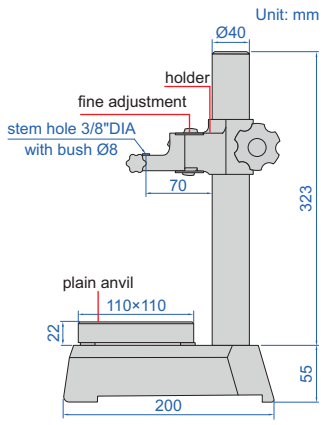
Code	Applicable holding stem	Anvil
6862-1001	Ø8mm	steel (hardness HRC60±2), serrated, flatness 1.5μm
6862-1002	Ø8mm	steel (hardness HRC60±2), plain, flatness 1.5μm
6862-1001T	Ø8mm	ceramic, serrated, flatness 1.5μm
6862-1002T	Ø8mm	ceramic, plain, flatness 1.5μm

DIAL INDICATOR STAND

- Vertical travel of holder: 250mm
- Fine adjustment range: 1mm
- Supplied with dust cover



6861-250

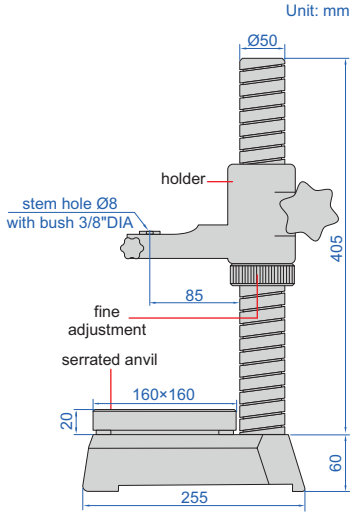


Code	Applicable holding stem	Anvil
6861-250	Ø8mm, 3/8"	ceramic, plain, flatness 1.5μm

HEAVY DUTY DIAL INDICATOR STAND



6868-300



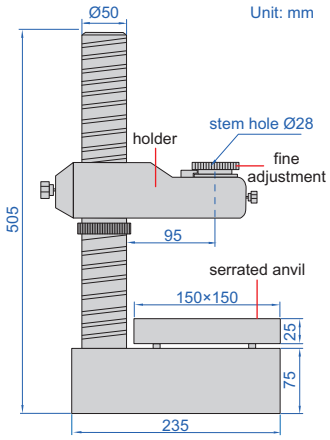
- Vertical travel of holder: 300mm
- Fine adjustment range: entire stroke
- Supplied with dust cover

Code	Applicable holding stem	Anvil
6868-300	Ø8mm, 3/8"	steel (hardness HRC60±2), serrated, flatness 1.5μm

HEAVY DUTY DIAL INDICATOR STAND



6877-300



- Vertical travel of holder: 300mm
- Holder fine adjustment range: entire stroke
- Indicator fine adjustment range: 5mm
- Optional accessory: high precision digital indicators (code **2140** series, **2150** series), gauge blocks (**4101** series, for zero setting)

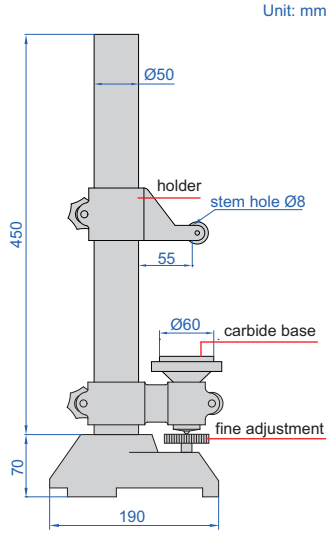
Code	Applicable holding stem	Anvil
6877-300	Ø28mm	steel (hardness HRC60±2), serrated, flatness 2μm

HEAVY DUTY DIAL INDICATOR STAND

VIDEO



6869-300



- Vertical travel of holder: 300mm
- Fine adjustment range: 5mm
- Carbide base
- Supplied with dust cover
- Optional accessory: holder with stem hole Ø28mm (code **6869-D28**)

Code	Applicable holding stem	Base
6869-300	Ø8mm	plain, flatness 1μm, carbide

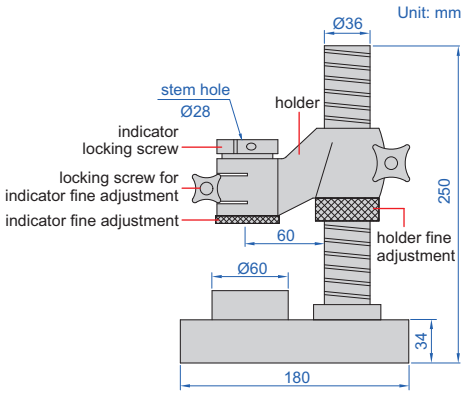
GAUGE BLOCKS ARE NEEDED FOR ZERO SETTING

DIAL INDICATOR STAND

VIDEO



6845-100



locating fork for workpieces (included)



- Vertical travel of holder: 100mm
- Holder fine adjustment range: entire stroke
- Indicator fine adjustment range: 3mm
- Optional accessory: Ø28mm/Ø8mm bush (code **6843-B8**), 0.001mm digital/dial indicators, high precision digital indicators (code **2140** series, **2150** series), gauge blocks (**4101** series, for zero setting)

Code	Applicable holding stem	Anvil
6845-100	Ø28mm	serrated, flatness 1μm

Ø28mm/Ø8mm bush (optional)



Code
6843-B8

application



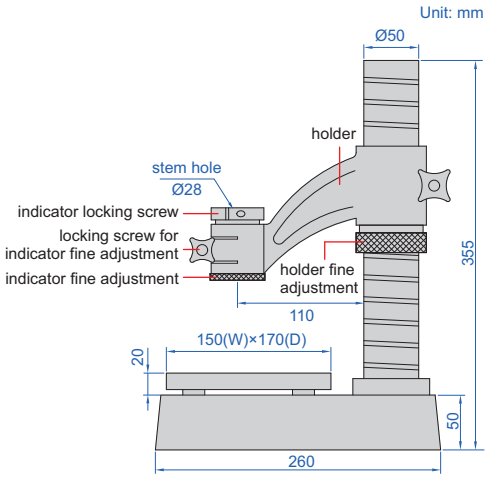
DIAL INDICATOR STAND

GAUGE BLOCKS ARE NEEDED FOR ZERO SETTING

VIDEO



6846-140



locating fork for workpieces (included)



- Vertical travel of holder: 140mm
- Holder fine adjustment range: entire stroke
- Indicator fine adjustment range: 3mm
- Optional accessory: Ø28mm/Ø8mm bush (code **6843-B8**), 0.001mm digital/dial indicators, high precision digital indicators (code **2140** series, **2150** series), gauge blocks (**4101** series, for zero setting)

Code	Applicable holding stem	Anvil
6846-140	Ø28mm	grid, flatness 1μm

Ø28mm/Ø8mm bush (optional)



Code
6843-B8

application



TRANSFER STANDS

application



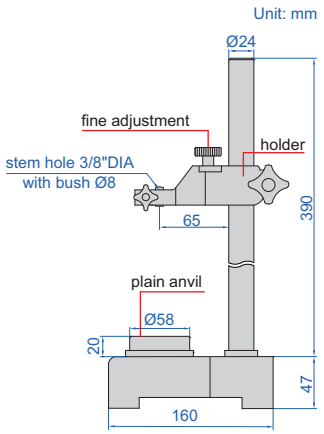
rigid construction, designed to make comparison height measurement (set zero with gauge block then measure height of workpiece) with dial indicators or digital indicators (variation of measuring force is high)



6865-300



6865-300T



- Vertical travel of holder: 335mm
- Fine adjustment range: 2mm
- Supplied with dust cover

Code	Applicable holding stem	Anvil
6865-300	3/8"DIA, Ø8mm	steel (hardness HRC60±2), plain, flatness 1.5μm
6865-300T	3/8"DIA, Ø8mm	ceramic, plain, flatness 1.5μm

DIGITAL HEIGHT GAUGES

REFER TO PAGE 102-105 FOR DETAILS



1155-505



1159-501



1157-501



1158-100

11 INDICATING MEASURING TOOLS



Internal Caliper Gauges
Page 342-347



External Caliper Gauges
Page 347-348



Thickness Gauges
Page 349-357



Geomembrane Thickness Gauges
Page 357



Rubber Thickness Gauges
Page 358-359



Leather Thickness Gauges
Page 360



Tube Thickness Gauges
Page 360-361



Thread/Lead Screw Pitch Diameter Snap Gauges
Page 362



Saw Teeth Setting Gauges
Page 363



Snap Gauges
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Step And Gap Gauges
Page 368



Mini Digital Height Gauges
Page 368-369



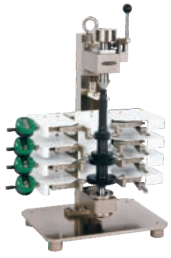
Height Gauges
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Gear Over Pins Measuring Instruments
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INDICATING MEASURING TOOLS

11



Thread Pitch Measuring Instruments
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Buttress Thread Run-Out Gauges
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Buttress Thread Tooth Thickness Gauges
Page 376



Thread Taper Measuring Instruments
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Thread Height Measuring Instruments
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Thread Connection Height Measuring Instruments
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Thread Crest Diameter Measuring Instruments
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Groove Diameter Measuring Instruments
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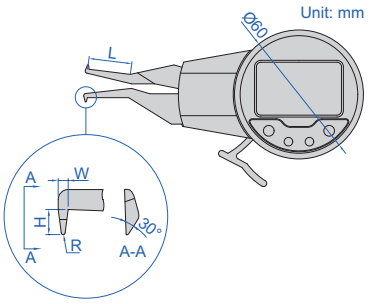
Groove Width Measuring Instruments
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DIGITAL INTERNAL CALIPER GAUGES

DATA OUTPUT

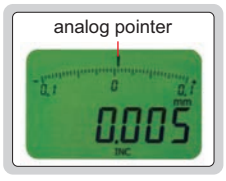


2121-15

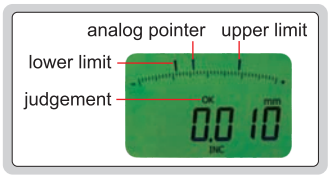


- Resolution: 0.005mm/0.0002"
- Reading in digit and analog
- Display can be rotated by 170°
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory:
  wireless transmitter code **7315-30** (receiver is needed) page 7

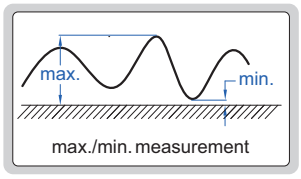
analog pointer



tolerance display



max./min.



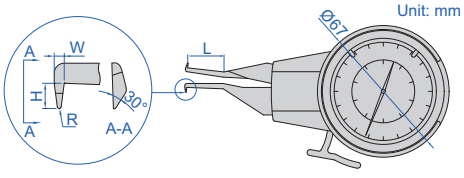
(mm)

Code	Range	Accuracy	Repeatability	L	H	W	R
2121-15	5-15mm/0.2-0.6"	±0.03mm	0.01mm	20	2	1.5	R0.3
2121-25	5-25mm/0.2-1.0"	±0.03mm	0.01mm	35	1.5	1.0	R0.3
2121-31	10-30mm/0.4-1.2"	±0.03mm	0.01mm	55	5.5	2.5	R0.5
2121-41	20-40mm/0.8-1.6"	±0.03mm	0.01mm	80	6.0	3.0	R0.5
2121-51	30-50mm/1.2-2.0"	±0.03mm	0.01mm	80	8.0	3.0	R0.5
2121-61	40-60mm/1.6-2.4"	±0.03mm	0.01mm	80	8.0	3.0	R0.5

INTERNAL DIAL CALIPER GAUGES



2222-15

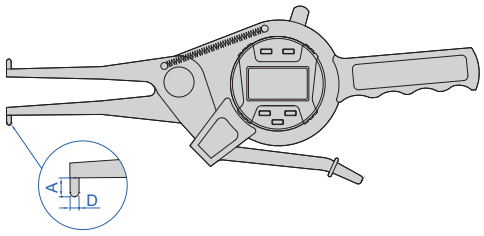


(mm)

Code	Range	Graduation	Accuracy	L	H	W	R
2222-15	5-15mm	0.01mm	±0.03mm	20	2	1.5	R0.3
2222-25	5-25mm	0.01mm	±0.03mm	35	1.5	1.0	R0.3
2222-301	10-30mm	0.01mm	±0.03mm	55	5.5	2.5	R0.5
2222-401	20-40mm	0.01mm	±0.03mm	80	6.0	3.0	R0.5
2222-501	30-50mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5
2222-60	40-60mm	0.01mm	±0.03mm	80	8.0	3.0	R0.5

DATA OUTPUT

DIGITAL INTERNAL CALIPER GAUGES



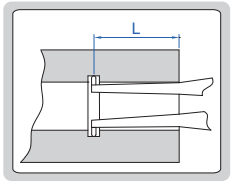


2151-35

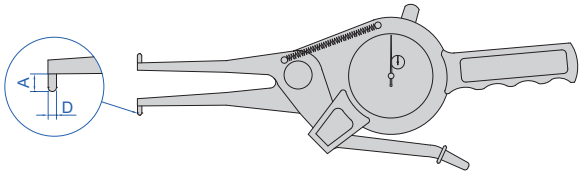
- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320º
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, data output, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

(mm)

Code	Range	Resolution	Accuracy	L	A	D
2151-35	15-35mm/0.6-1.4"	0.01mm/0.0005"	±0.04mm	<50	3	Ø3
2151-AL35	15-35mm/0.6-1.4"	0.01mm/0.0005"	±0.04mm	<200	3	Ø3
2151-55	35-55mm/1.4-2.2"	0.01mm/0.0005"	±0.04mm	<80	6	Ø3
2151-AL55	35-55mm/1.4-2.2"	0.01mm/0.0005"	±0.04mm	<250	8	Ø3
2151-75	55-75mm/2.2-3"	0.01mm/0.0005"	±0.04mm	<90	8	Ø3
2151-AL75	55-75mm/2.2-3"	0.01mm/0.0005"	±0.04mm	<250	8	Ø3
2151-95	75-95mm/3-3.8"	0.01mm/0.0005"	±0.04mm	<100	8	Ø3
2151-115	95-115mm/3.8-4.6"	0.01mm/0.0005"	±0.04mm	<120	10	Ø3.2
2151-135	115-135mm/4.6-5.4"	0.01mm/0.0005"	±0.04mm	<120	10	Ø3.2



INTERNAL DIAL CALIPER GAUGES



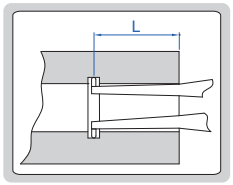


2321-35

- Carbide measuring tips

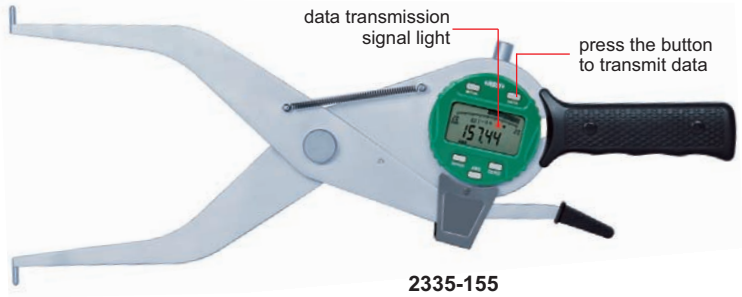
(mm)

Code	Range	Graduation	Accuracy	L	A	D
2321-35	15-35mm	0.01mm	±0.04mm	<50	3	Ø3
2321-AL35	15-35mm	0.01mm	±0.04mm	<200	3	Ø3
2321-55	35-55mm	0.01mm	±0.04mm	<80	6	Ø3
2321-AL55	35-55mm	0.01mm	±0.04mm	<250	8	Ø3
2321-75	55-75mm	0.01mm	±0.04mm	<90	8	Ø3
2321-AL75	55-75mm	0.01mm	±0.04mm	<250	8	Ø3
2321-95	75-95mm	0.01mm	±0.04mm	<100	8	Ø3
2321-115	95-115mm	0.01mm	±0.04mm	<120	10	Ø3.2
2321-135	115-135mm	0.01mm	±0.04mm	<120	10	Ø3.2

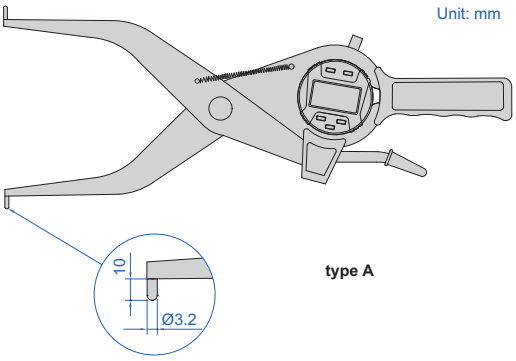


LARGE RANGE INTERNAL DIGITAL CALIPER GAUGES

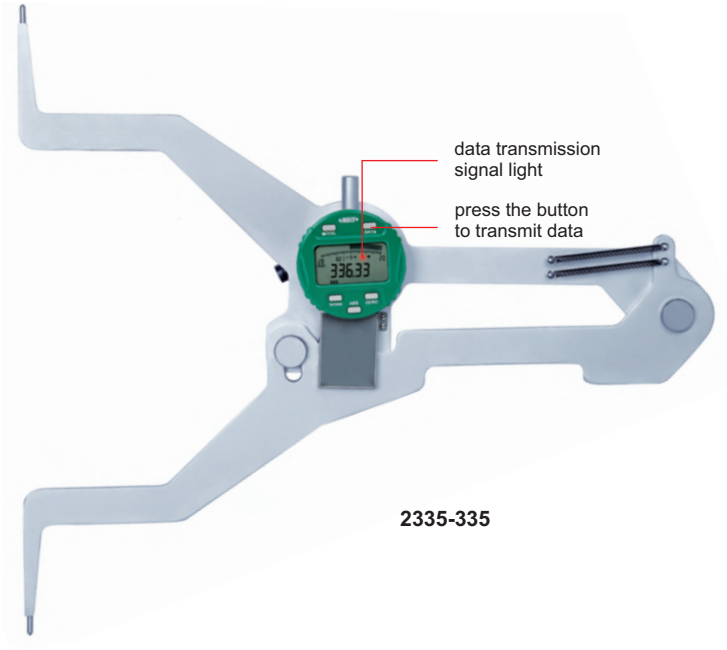
DATA OUTPUT



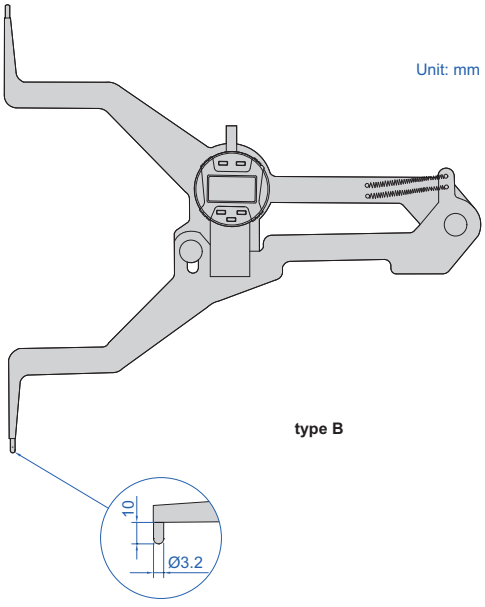
2335-155



type A



2335-335

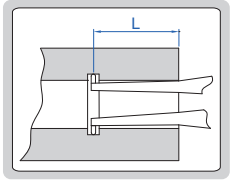


type B

- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320°
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, data output, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

11

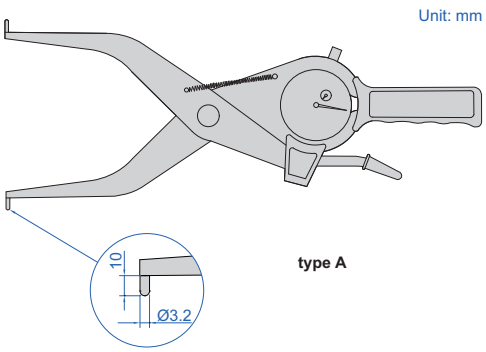
Code	Range	Resolution	Accuracy	Type	L
2335-155	135-155mm/5.32-6.10"	0.01mm/0.0005"	±0.04mm	A	<200mm
2335-175	155-175mm/6.10-6.89"	0.01mm/0.0005"	±0.04mm	A	<200mm
2335-195	175-195mm/6.68-7.68"	0.01mm/0.0005"	±0.04mm	A	<200mm
2335-215	195-215mm/7.68-8.46"	0.01mm/0.0005"	±0.04mm	A	<200mm
2335-235	215-235mm/8.46-9.25"	0.01mm/0.0005"	±0.04mm	A	<200mm
2335-255	235-255mm/9.25-10.04"	0.01mm/0.0005"	±0.04mm	A	<200mm
2335-275	255-275mm/10.04-10.83"	0.01mm/0.0005"	±0.04mm	A	<200mm
2335-295	275-295mm/10.83-11.61"	0.01mm/0.0005"	±0.04mm	A	<200mm
2335-315	295-315mm/11.61-12.40"	0.01mm/0.0005"	±0.04mm	A	<200mm
2335-335	315-335mm/12.40-13.19"	0.01mm/0.0005"	±0.04mm	B	<200mm
2335-355	335-355mm/13.19-13.98"	0.01mm/0.0005"	±0.04mm	B	<200mm
2335-375	355-375mm/13.98-14.76"	0.01mm/0.0005"	±0.04mm	B	<200mm



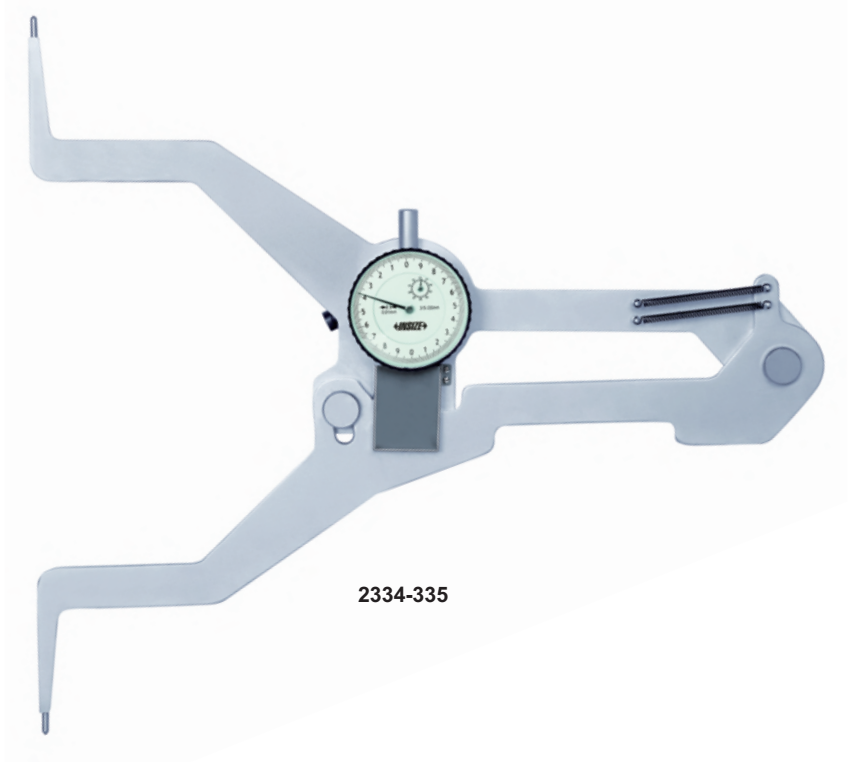


2334-155

Unit: mm

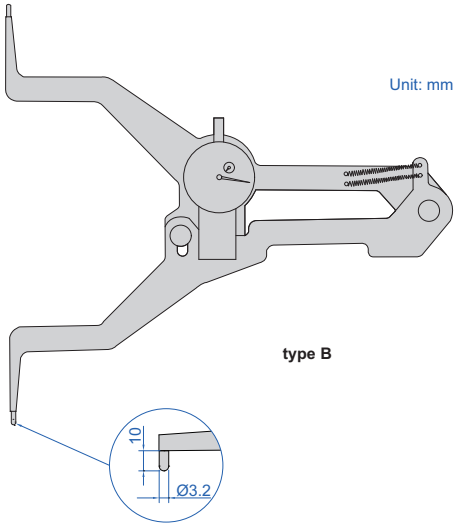


type A



2334-335

Unit: mm

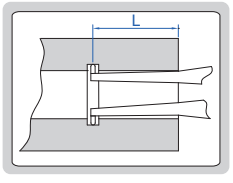


type B

- Carbide measuring tips

(mm)

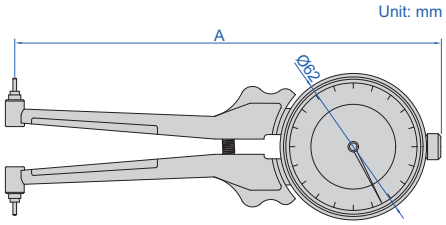
Code	Range	Graduation	Accuracy	Type	L
2334-155	135-155mm	0.01mm	±0.04mm	A	<200
2334-175	155-175mm	0.01mm	±0.04mm	A	<200
2334-195	175-195mm	0.01mm	±0.04mm	A	<200
2334-215	195-215mm	0.01mm	±0.04mm	A	<200
2334-235	215-235mm	0.01mm	±0.04mm	A	<200
2334-255	235-255mm	0.01mm	±0.04mm	A	<200
2334-275	255-275mm	0.01mm	±0.04mm	A	<200
2334-295	275-295mm	0.01mm	±0.04mm	A	<200
2334-315	295-315mm	0.01mm	±0.04mm	A	<200
2334-335	315-335mm	0.01mm	±0.04mm	B	<200
2334-355	335-355mm	0.01mm	±0.04mm	B	<200
2334-375	355-375mm	0.01mm	±0.04mm	B	<200

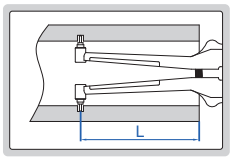


INTERNAL DIAL CALIPER GAUGES WITH INTERCHANGEABLE POINTS



2223-153



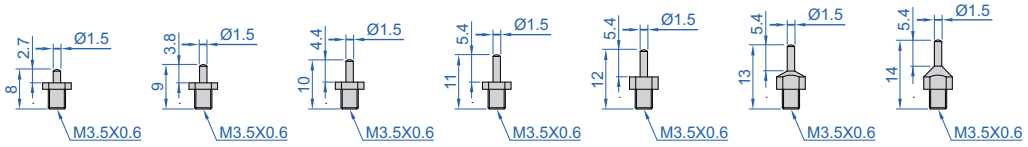


Code	Range	Dial indicator range	Graduation	Accuracy	A	L	Remark
2223-35	20-35mm	2mm	0.01mm	±0.02mm	164mm	<70mm	supplied with 7 pairs of points
2223-62	30-62mm	2mm	0.01mm	±0.02mm	170mm	<75mm	supplied with 5 pairs of points
2223-153	55-153mm	2mm	0.01mm	±0.02mm	179mm	<90mm	supplied with 6 pairs of points

2223-35 points (included)



Unit: mm

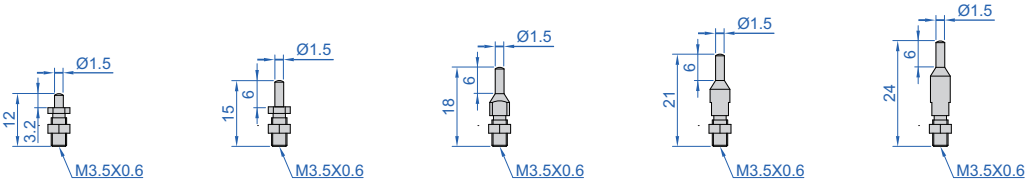


range 20-23mm | range 22-25mm | range 24-27mm | range 26-29mm | range 28-31mm | range 30-33mm | range 32-35mm

2223-62 points (included)



Unit: mm

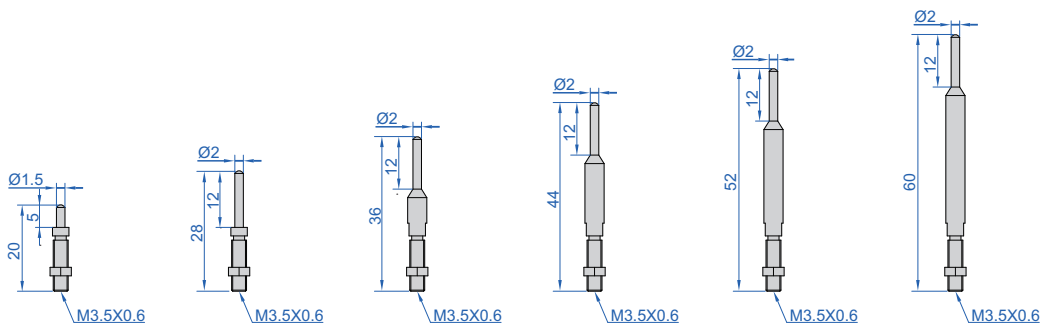


range 30-38mm | range 36-44mm | range 42-50mm | range 48-56mm | range 54-62mm

2223-153 points (included)



Unit: mm



range 55-73mm | range 71-89mm | range 87-105mm | range 103-121mm | range 119-137mm | range 135-153mm

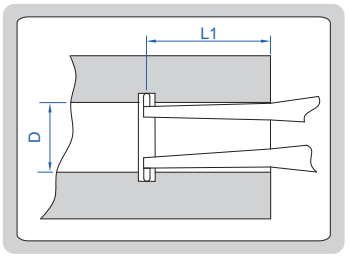
11

DIGITAL INTERNAL CALIPER GAUGES (ECONOMIC TYPE)

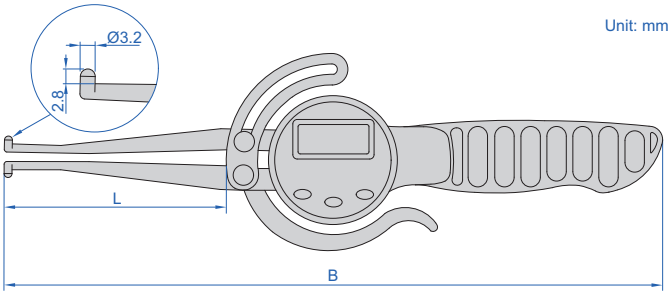


2711-165

sizes to be measured



Unit: mm



- Button function: on/off, zero, mm/inch, data hold
- Battery CR2032, automatic power off

(mm)

Code	Range	Resolution	Accuracy	Repeatability	L	B
2711-165	12.7-165mm/0.5-6.5"	0.1mm/0.01"	±0.3mm	0.2mm	85	252
2711-216	12.7-216mm/0.5-8.5"	0.1mm/0.01"	±0.3mm	0.2mm	160	327

(mm)

Code 2711-165		Code 2711-216	
D	L1	D	L1
Ø13	<42	Ø13	<50
Ø15	<45	Ø15	<55
Ø17	<50	Ø17	<60
Ø20	<60	Ø20	<65
Ø25	<75	Ø25	<75
Ø27	<80	Ø30	<95
Ø29~165	<85	Ø35~216	<160

DATA OUTPUT

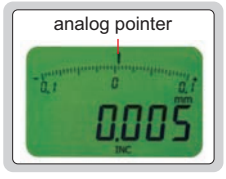
DIGITAL EXTERNAL CALIPER GAUGES

- Resolution: 0.005mm/0.0002"
- Reading in digit and analog
- Display can be rotated by 170º
- Button function: tolerance Go and No-Go display, data preset, max./min. measurement, data holding, inch/metric conversion, absolute/incremental measurement
- CR2032 battery, automatic power off
- Data output
- Optional accessory:
  wireless transmitter code **7315-30** (receiver is needed) page 7

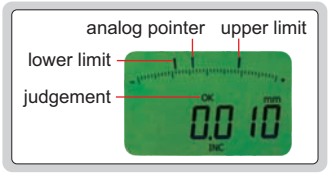


2131-21

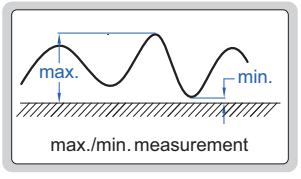
analog pointer



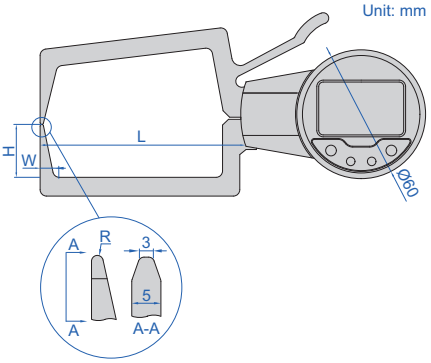
tolerance display



max./min.

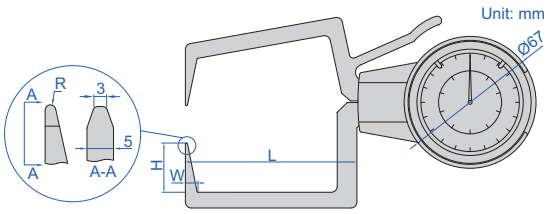


Unit: mm



Code	Range	Accuracy	Repeatability	L	H	W	R
2131-21	0-20mm/0-0.8"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm
2131-31	10-30mm/0.4-1.2"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm
2131-41	20-40mm/0.8-1.6"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm
2131-51	30-50mm/1.2-2.0"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm
2131-61	40-60mm/1.6-2.4"	±0.03mm	0.01mm	80mm	25mm	6.5mm	R0.5mm

EXTERNAL DIAL CALIPER GAUGES



(mm)

Code	Range	Graduation	Accuracy	L	H	W	R
2333-201	0-20mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-301	10-30mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-401	20-40mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-501	30-50mm	0.01mm	±0.03mm	80	25	6.5	R0.5
2333-601	40-60mm	0.01mm	±0.03mm	80	25	6.5	R0.5

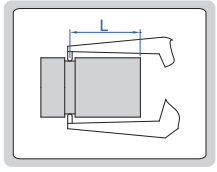


2333-201

DIGITAL EXTERNAL CALIPER GAUGES

DATA OUTPUT

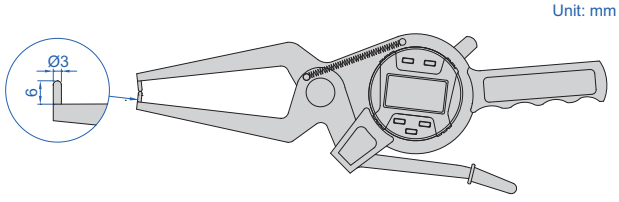
- Carbide measuring tips
- Reading in digit and analog
- With transmission button and signal light
- Display can be rotated by 320º
- Button function: on/off, zero, tolerance Go and No-Go display, data preset, measuring direction change, max./min./TIR measurement, inch/metric conversion, absolute/incremental measurement, data output
- CR2032 battery
- Automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8



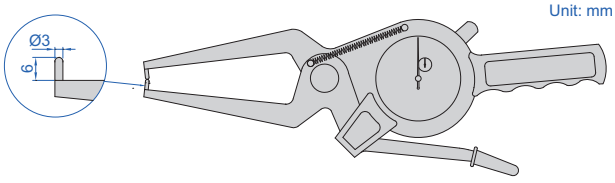


2132-20

Code	Range	Resolution	Accuracy	L
2132-20	0-20mm/0-0.8"	0.01mm/0.0005"	±0.04mm	<60mm
2132-40	20-40mm/0.8-1.6"	0.01mm/0.0005"	±0.04mm	<60mm
2132-60	40-60mm/1.6-2.4"	0.01mm/0.0005"	±0.04mm	<55mm
2132-80	60-80mm/2.4-3.2"	0.01mm/0.0005"	±0.04mm	<55mm
2132-100	80-100mm/3.2-4"	0.01mm/0.0005"	±0.04mm	<55mm



EXTERNAL DIAL CALIPER GAUGES



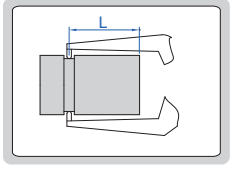
- Carbide measuring tips

(mm)

Code	Range	Graduation	Accuracy	L
2332-20	0-20mm	0.01mm	±0.04mm	<60
2332-40	20-40mm	0.01mm	±0.04mm	<60
2332-60	40-60mm	0.01mm	±0.04mm	<55
2332-80	60-80mm	0.01mm	±0.04mm	<55
2332-100	80-100mm	0.01mm	±0.04mm	<55



2332-20



HIGH PRECISION DIGITAL THICKNESS GAUGES

VIDEO

ATTENTION: RECHARGEABLE BATTERY, FOR 12 HOURS CONTINUOUS WORKING

DATA OUTPUT

MEASURING TIPS AND ANVILS CAN BE CUSTOM-MADE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF



2879-10

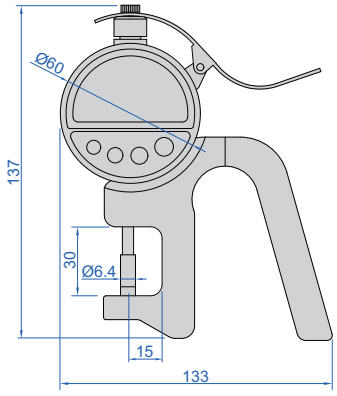


2879-30

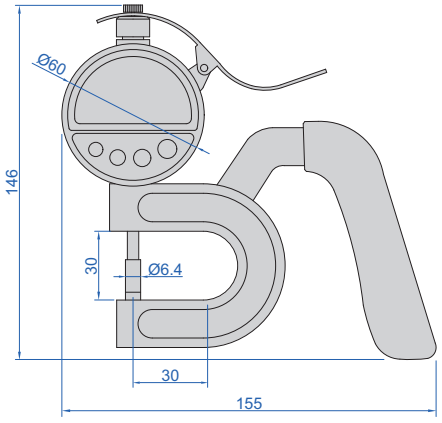


2879-60

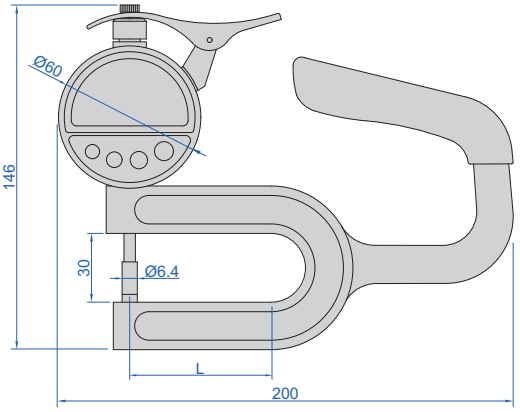
Unit: mm



2879-10
2879-101



2879-30



2879-60
2879-100

- Absolute encoder, the original data remains after power off
- Button function: on/off, zero, tolerance, absolute/incremental measurement, max./min./TIR, data preset, mm/inch, data output, data hold
- Reading in digital and analog
- Power: rechargeable battery, for 12 hours continuous working
- Data output
- Supplied with data output cable (keyboard format)

Code	Range	Resolution	Accuracy	Repeatability	Measuring force	L
2879-10	0-10mm/0-0.4"	0.001mm/0.00005"	±0.002mm	0.001mm	0.5-1N	—
2879-101	0-10mm/0-0.4"	0.0005mm/0.00002"	±0.0015mm	0.0005mm	0.5-1N	—
2879-30	0-10mm/0-0.4"	0.001mm/0.00005"	±0.002mm	0.001mm	0.5-1N	—
2879-60	0-10mm/0-0.4"	0.001mm/0.00005"	±0.003mm	0.001mm	0.5-1N	60mm
2879-100	0-10mm/0-0.4"	0.001mm/0.00005"	±0.004mm	0.001mm	0.5-1N	100mm

SMART DIGITAL THICKNESS GAUGES

VIDEO

AUTOMATIC MEASUREMENT OF THE MIN. VALUE, AND THE DATA CAN BE TRANSMITTED AUTOMATICALLY AFTER EACH MEASUREMENT

DATA OUTPUT

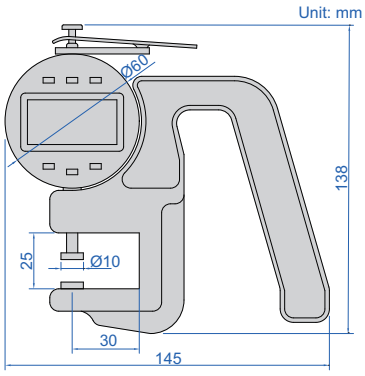
LINEAR BALL BEARINGS FOR TEN MILLION TIMES USE

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

ATTENTION: RECHARGEABLE BATTERY, FOR 24 HOURS CONTINUOUS WORKING

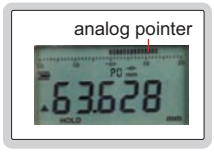


2850-10



- Linear ball bearings for ten million times use
- Absolute encoder, the original data remains after power off
- Adjustable resolution: 0.0005mm/0.00002"
  0.001mm/0.00005"
  0.01mm/0.0005"
- Ceramic spindle tip and anvil
- Reading in digital and analog
- Data output
- Automatic measurement of the min. value, and the data can be transmitted automatically after each measurement
- Button function: data output, tolerance, data preset, data hold, measuring direction change, power off time, on/off, mm/inch, adjust resolution
- Power: rechargeable battery, for 24 hours continuous working

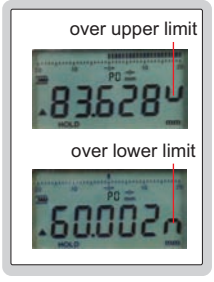
analog pointer



wireless receiver
2134-R1, 2134-R2 (optional)



alarm when over tolerance



With data interface
Optional accessory:
wireless transmitter code **7315-60,** receiver is needed page 9

Code	Range	Accuracy
2850-10	10mm/0.4"	±3μm

Built-in wireless
Optional accessory:
wireless receiver (keyboard format, connect up to 15 digital indicators), code **2134-R1**
wireless receiver (serial port format, connect up to 15 digital indicators), code **2134-R2**

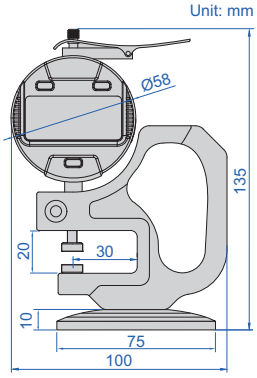
Code	Range	Accuracy
2850-10WL	10mm/0.4"	±3μm

DIGITAL THICKNESS GAUGES (WITH BASE)

DATA OUTPUT

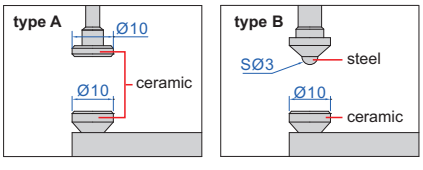


2673-10



- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Range	Resolution	Accuracy	Type
2673-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm	A
2673-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm	A
2673-10B	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm	B
2673-101B	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm	B



POPULAR MODEL

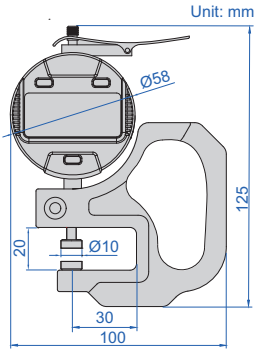
DATA OUTPUT

DIGITAL THICKNESS GAUGES

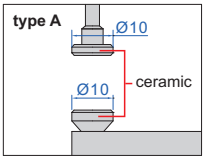
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8

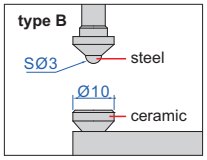


2871-101

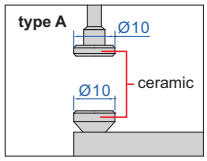


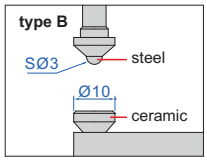
Code	Range	Resolution	Accuracy	Type
2871-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm	A
2871-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm	A
2871-10B	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm	B
2871-101B	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm	B

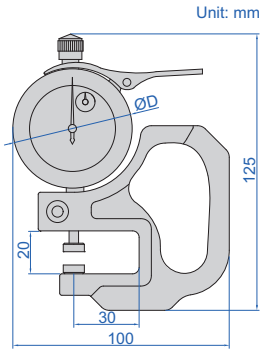




THICKNESS GAUGES









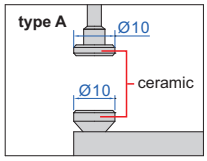
2364-10

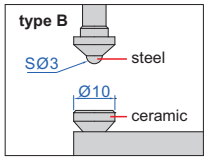


2364-1

Code	Range	Graduation	Accuracy	Type	ØD
2364-10	0-10mm	0.01mm	±0.02mm	A	58mm
2364-10B	0-10mm	0.01mm	±0.02mm	B	58mm
2364-1	0-1mm	0.001mm	±0.005mm	A	56mm

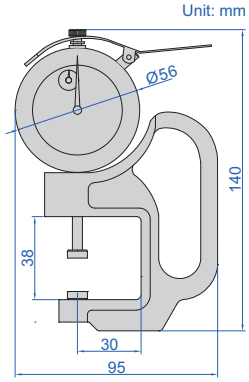
THICKNESS GAUGES







2366-30



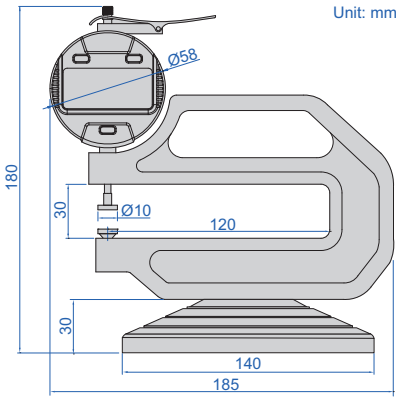
Code	Range	Graduation	Accuracy	Type
2366-30	0-30mm	0.01mm	±0.035mm	A
2366-30B	0-30mm	0.01mm	±0.035mm	B

DIGITAL THICKNESS GAUGES (WITH BASE)

DATA OUTPUT

measuring tips and anvils can be custom-made







2674-10

- Ceramic spindle tip and anvil
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

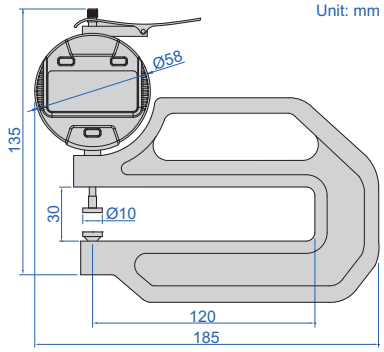
Code	Range	Resolution	Accuracy
2674-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2674-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.01mm

DIGITAL THICKNESS GAUGES

DATA OUTPUT

measuring tips and anvils can be custom-made





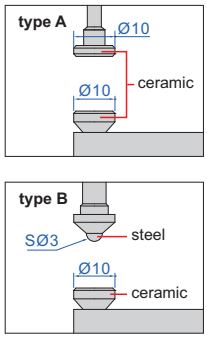


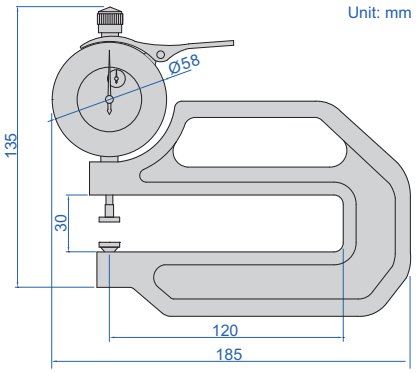
2872-10

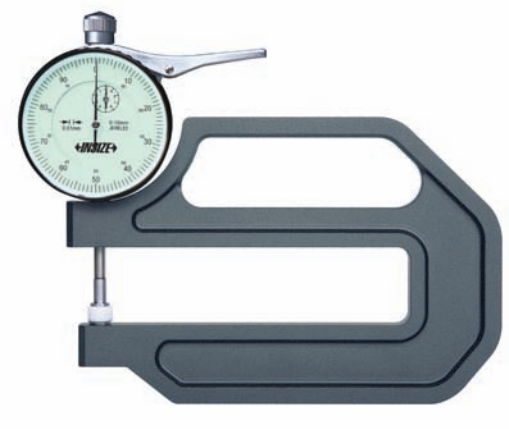
- Ceramic spindle tip and anvil
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Range	Resolution	Accuracy
2872-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2872-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.01mm

THICKNESS GAUGES







2365-10

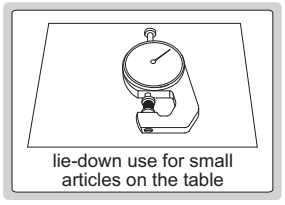
Code	Range	Graduation	Accuracy	Type
2365-10	0-10mm	0.01mm	±0.02mm	A
2365-20	0-20mm	0.01mm	±0.03mm	A
2365-10B	0-10mm	0.01mm	±0.02mm	B
2365-20B	0-20mm	0.01mm	±0.03mm	B

measuring tips and anvils can be custom-made



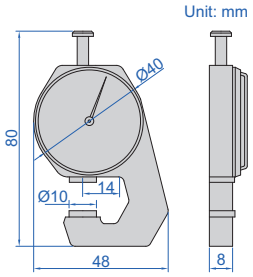
THICKNESS GAUGE

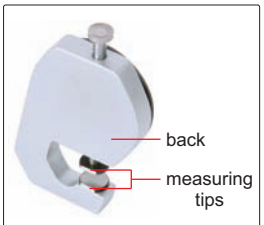
SUITABLE FOR JEWELLERY





2361-10



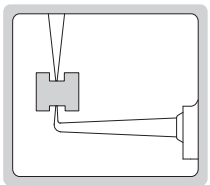


two measuring tips are flush with the back

Code	Range	Graduation	Accuracy
2361-10	0-10mm	0.1mm	±0.05mm

THICKNESS GAUGE WITH POINTED TIPS

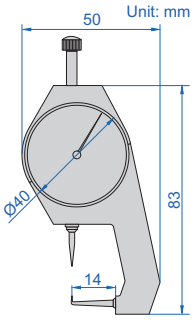
application



- Pointed tips fit into small grooves and recesses



2864-10



Code	Range	Graduation	Accuracy
2864-10	0-10mm	0.1mm	±0.1mm

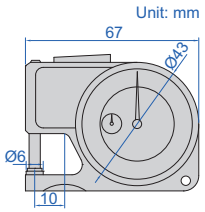
THICKNESS GAUGE

- Stainless steel spindle tip and anvil

Code	Range	Graduation	Accuracy
2363-10	0-10mm	0.01mm	±0.03mm

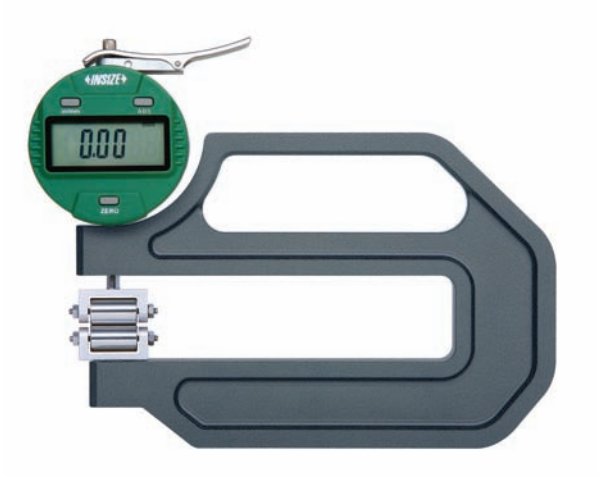


2363-10



DIGITAL ROLLER THICKNESS GAUGES

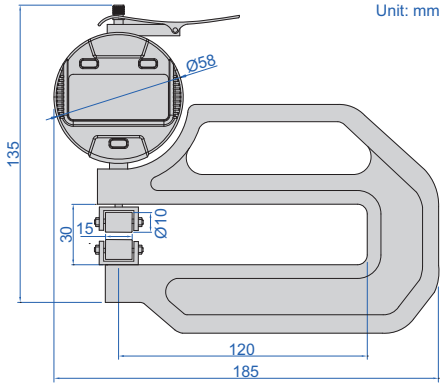
DATA OUTPUT



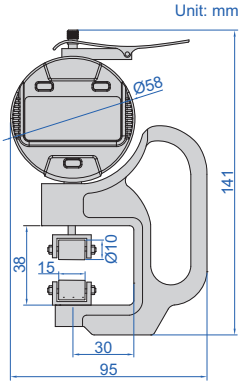
2877-4



2877-10



2877-4/2877-41



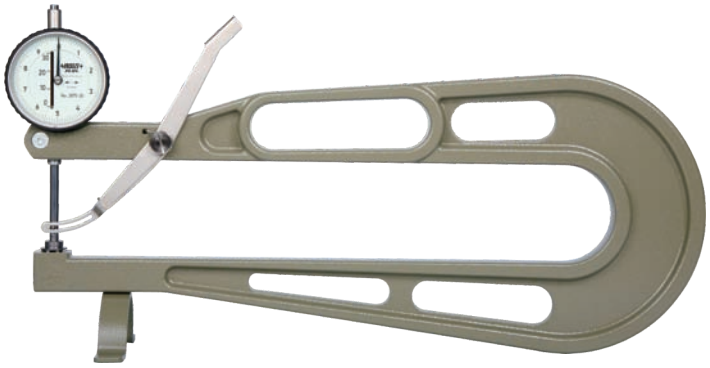
2877-10/2877-101

- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Range	Resolution	Accuracy
2877-4	0-3.5mm/0-0.14"	0.01mm/0.0005"	±0.02mm
2877-41	0-3.5mm/0-0.14"	0.001mm/0.00005"	±0.01mm
2877-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2877-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.01mm

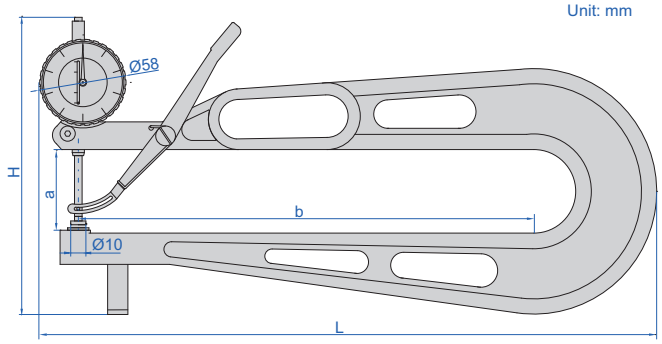
THICKNESS GAUGES

INSIZE PLUS



2875-30

Unit: mm



Code	Range	Graduation	Accuracy	L	H	a	b
2875-30	0-30mm	0.1mm	±0.05mm	400mm	195mm	55mm	300mm
2875-50	0-50mm	0.1mm	±0.05mm	700mm	295mm	75mm	600mm

INSPECTION CERTIFICATE

DATA OUTPUT

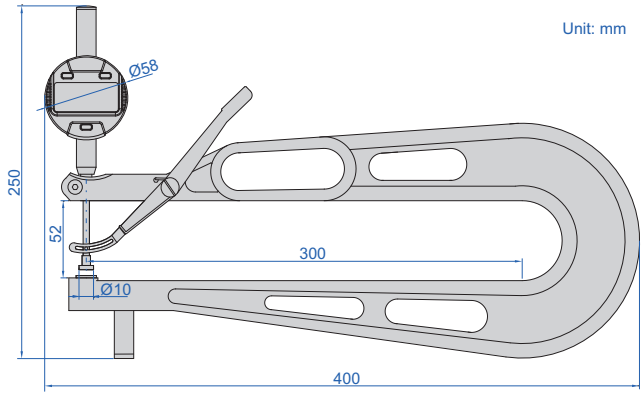
DIGITAL THICKNESS GAUGE

INSIZE PLUS



2860-25

Unit: mm

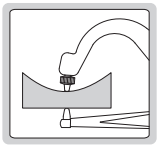


- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032 , automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Range	Resolution	Accuracy
2860-25*	0-25.4mm/0-1"	0.01mm/0.0005"	±0.05mm

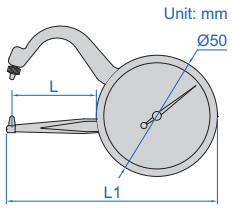
*Supplied with manufacturer inspection certificate

THICKNESS GAUGES



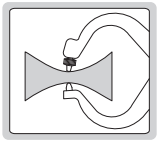


2862-101



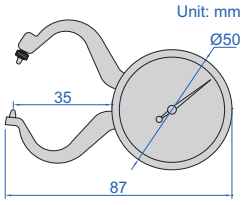
Code	Range	Graduation	Accuracy	L	L1
2862-101	0-10mm	0.05mm	±0.1mm	35mm	85mm
2862-102	0-10mm	0.05mm	±0.1mm	60mm	110mm

THICKNESS GAUGE





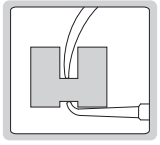
2863-10



Code	Range	Graduation	Accuracy
2863-10	0-10mm	0.05mm	±0.1mm

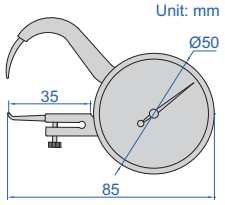
THICKNESS GAUGE WITH POINTED TIPS

- Pointed tips fit into small grooves and recesses





2866-10



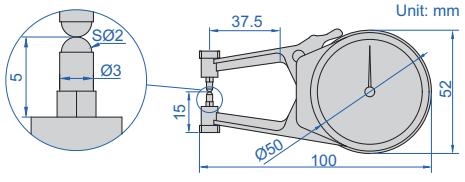
Code	Range	Graduation	Accuracy
2866-10	0-10mm	0.05mm	±0.1mm

THICKNESS GAUGE

- Main boby is made of hard plastic



2870-10

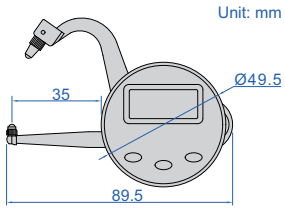


Code	Range	Graduation	Accuracy
2870-10	0-10mm	0.1mm	±0.1mm

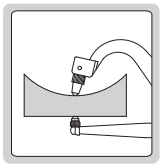
DIGITAL THICKNESS GAUGE



2710-25



- Resolution: 0.01mm, 0.001", 1/64"
- Buttons: on/off, zero, unit (mm/in/fraction), data hold
- Battery CR2032, automatic power off



Code	Range	Accuracy	Repeatability
2710-25	0-25.4mm/0-1"	0.05mm	0.02mm

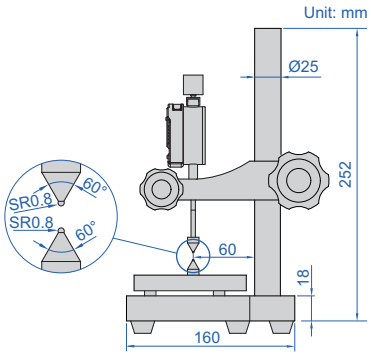
DIGITAL GEOMEMBRANE THICKNESS GAUGE

DATA OUTPUT

VIDEO



2259-10



- Measure thickness of geomembranes
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Supplied with dust cover
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Range	Resolution	Accuracy	Pressure
2259-10	12.7mm/0.5"	0.001mm/0.00005"	5μm	0.56±0.05N

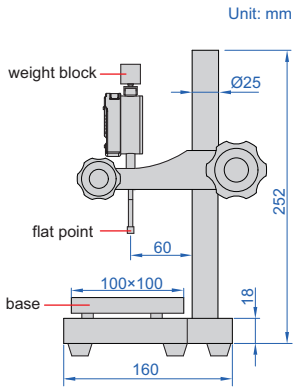
DIGITAL RUBBER THICKNESS GAUGES

DATA OUTPUT

VIDEO



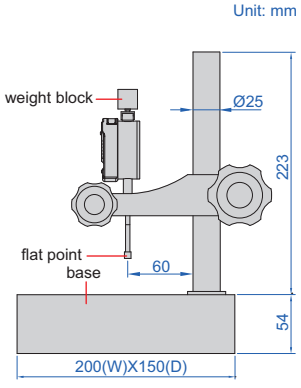
2878-6B



2878-6A
2878-6B



2878-71B



2878-71A
2878-71B

- Measure thickness of vulcanized rubber and plastic products
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- CR2032 battery, automatic power off (time is adjustable)
- Supplied with dust cover
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8,
  flat points, weight blocks

Code	Range	Resolution	Accuracy	Flat point diameter	Pressure	Base
2878-6A	10mm/0.4"	0.01mm/0.0005"	20μm	6mm	22kPa±5kPa	ceramic, plain, flatness 1.5μm
2878-6B	10mm/0.4"	0.001mm/0.00005"	5μm	6mm	22kPa±5kPa	ceramic, plain, flatness 1.5μm
2878-71A	10mm/0.4"	0.01mm/0.0005"	20μm	6mm	22kPa±5kPa	granite, plain, flatness 2.5μm
2878-71B	10mm/0.4"	0.001mm/0.00005"	5μm	6mm	22kPa±5kPa	granite, plain, flatness 2.5μm

Flat points and weight blocks (optional)

Flat point	Flat point code	Pressure				
		10kPa±2kPa	22kPa±5kPa	20kPa±3kPa	70kPa±5kPa	1.6kPa±0.1kPa
		weight block code	weight block code	weight block code	weight block code	weight block code
Ø4mm	**2878-P4**	–	**2878-W4B**	–	–	–
Ø5mm	**2878-P5**	**2878-W5A**	**2878-W5B**	**2878-W5C**	**2878-W5D**	–
Ø6mm	**2878-P6**	**2878-W6A**	**2878-W6B**	–	–	–
Ø8mm	**2878-P8**	**2878-W8A**	**2878-W8B**	–	–	–
Ø10mm	**2878-P10**	**2878-W10A**	**2878-W10B**	**2878-W10C**	–	–
Ø25mm	**2878-P25**	–	–	–	–	**2878-W25E**
1×4mm (rectangle)	**2878-P14**	–	–	–	**2878-W14D**	–

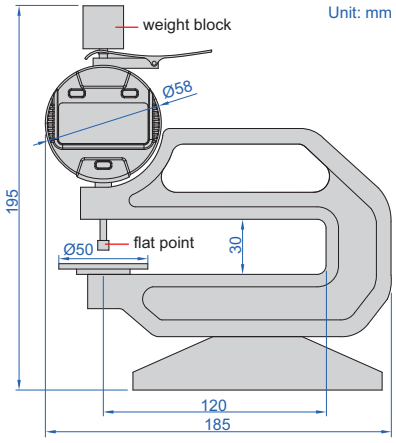
DIGITAL RUBBER THICKNESS GAUGES

DATA OUTPUT

VIDEO



2263-6B



- Measure thickness of vulcanized rubber and plastic products
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8, flat points, weight blocks

Code	Range	Resolution	Accuracy	Flat point diameter	Pressure
2263-6A	0-10mm/0-0.4"	0.01mm/0.0005"	20μm	6mm	22kPa±5kPa
2263-6B	0-10mm/0-0.4"	0.001mm/0.00005"	5μm	6mm	22kPa±5kPa

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Flat points and weight blocks (optional)

Flat point	Flat point code	Pressure				
		10kPa±2kPa	22kPa±5kPa	20kPa±3kPa	70kPa±5kPa	1.6kPa±0.1kPa
		weight block code	weight block code	weight block code	weight block code	weight block code
Ø4mm	**2878-P4**	–	**2878-W4B**	–	–	–
Ø5mm	**2878-P5**	**2878-W5A**	**2878-W5B**	**2878-W5C**	**2878-W5D**	–
Ø6mm	**2878-P6**	**2878-W6A**	**2878-W6B**	–	–	–
Ø8mm	**2878-P8**	**2878-W8A**	**2878-W8B**	–	–	–
Ø10mm	**2878-P10**	**2878-W10A**	**2878-W10B**	**2878-W10C**	–	–
Ø25mm	**2878-P25**	–	–	–	–	**2878-W25E**
1×4mm (rectangle)	**2878-P14**	–	–	–	**2878-W14D**	–

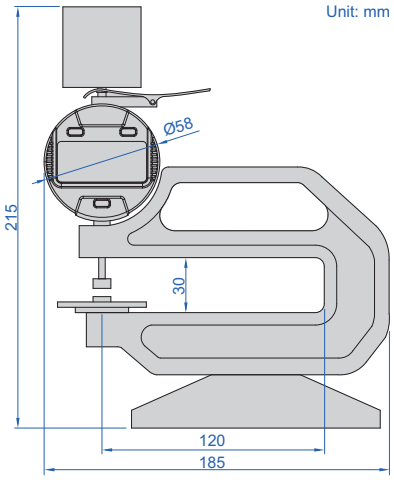
DIGITAL LEATHER THICKNESS GAUGES

DATA OUTPUT

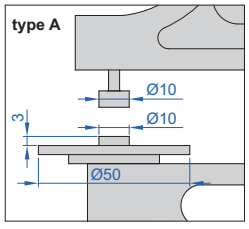
VIDEO

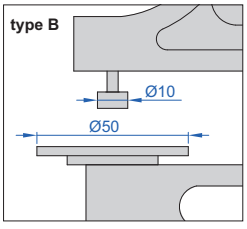


2262-10



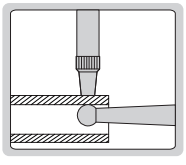
- Measure thickness of leather
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8





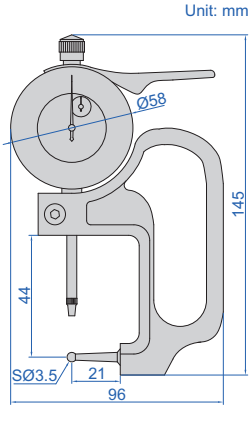
Code	Range	Resolution	Accuracy	Type
2262-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm	A
2262-10B	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm	B

TUBE THICKNESS GAUGE





2367-10A

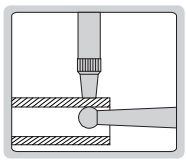


- Measure tube wall thickness

Code	Range	Graduation	Accuracy
2367-10A	0-10mm	0.01mm	±0.02mm

DIGITAL TUBE THICKNESS GAUGES

DATA OUTPUT



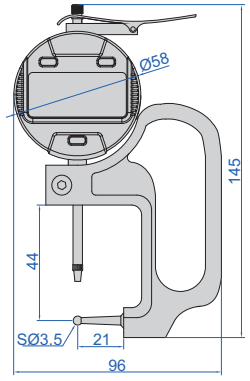
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Range	Resolution	Accuracy
2876-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2876-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm



2876-10

Unit: mm

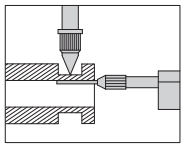


DIGITAL TUBE THICKNESS GAUGES

DATA OUTPUT



measure wall thickness of grooves



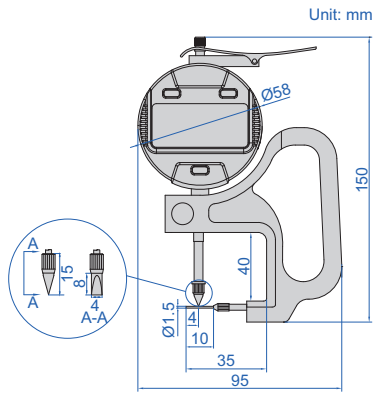
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Range	Resolution	Accuracy
2873-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2873-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm



2873-10

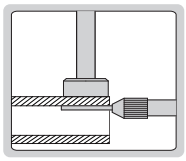
Unit: mm



DIGITAL TUBE THICKNESS GAUGES

DATA OUTPUT





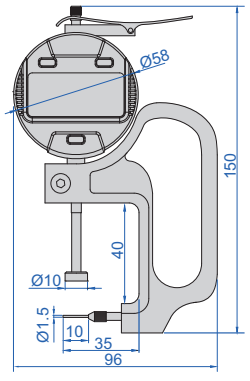
- Buttons: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- Battery CR2032, automatic power off (time is adjustable)
- Data output
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

Code	Range	Resolution	Accuracy
2859-10	0-10mm/0-0.4"	0.01mm/0.0005"	±0.02mm
2859-101	0-10mm/0-0.4"	0.001mm/0.00005"	±0.005mm



2859-101

Unit: mm



11

THREAD/LEAD SCREW PITCH DIAMETER SNAP GAUGES

BALL TIP DIAMETER CAN BE CUSTOMIZED

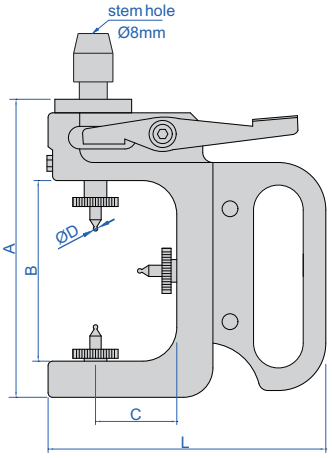
application



VIDEO



digital indicator is optional



2165-40

- Measure the pitch diameter of lead screw and external thread
- Ball tip diameter can be customized according to workpieces. Diameter of trapezoidal screw or external thread ball tips: ØD=0.5×pitch P/cos (thread angle α/2). Ball tips diameter ØD of ball screw is corresponding steel ball specification
- Probe retracting range: 3mm, measuring force: 20N
- Repeatability: 2μm
- Optional accessory: 0.001mm digital/dial indicators

Main body
(without ball probe, without digital indicator) **(mm)**

Code	Range	Accuracy	A	B	C	L
2165-20	3-20mm	±5μm	116	60	27	113
2165-40	20-40mm	±5μm	132	80	37	123
2165-60	40-60mm	±5μm	152	138	46	100
2165-80	60-80mm	±5μm	172	156	59	121
2165-100	80-100mm	±5μm	192	170	68	140



2165-A2D071

Ball probes
(for Metric trapezoidal thread 30° thread angle)

Code	ØD	Pitch
2165-A1D553	1.553mm	3mm
2165-A2D071	2.071mm	4mm
2165-A2D588	2.588mm	5mm
2165-A3D106	3.106mm	6mm
2165-A3D623	3.623mm	7mm
2165-A4D141	4.141mm	8mm
2165-A4D659	4.659mm	9mm
2165-A5D176	5.176mm	10mm
2165-A6D212	6.212mm	12mm
2165-A7D247	7.247mm	14mm
2165-A8D282	8.282mm	16mm
2165-A9D317	9.317mm	18mm
2165-A10D353	10.353mm	20mm

Ball probes
(for American trapezoidal thread 29° thread angle)

Code	ØD	TPI
2165-B0D0323	0.0323"	16
2165-B0D0369	0.0369"	14
2165-B0D043	0.0430"	12
2165-B0D0516	0.0516"	10
2165-B0D0646	0.0646"	8
2165-B0D0861	0.0861"	6
2165-B0D1033	0.1033"	5
2165-B0D1291	0.1291"	4
2165-B0D1722	0.1722"	3
2165-B0D2582	0.2582"	2

Ball probes
(for Metric external thread 60° thread angle)

Code	ØD	Pitch
2165-C0D557	0.577mm	1mm
2165-C0D722	0.722mm	1.25mm
2165-C0D866	0.866mm	1.5mm
2165-C1D155	1.155mm	2mm
2165-C1D732	1.732mm	3mm
2165-C2D021	2.021mm	3.5mm
2165-C2D309	2.309mm	4mm
2165-C2D887	2.887mm	5mm
2165-C3D464	3.464mm	6mm
2165-C4D619	4.619mm	8mm

SAW TEETH SETTING GAUGE

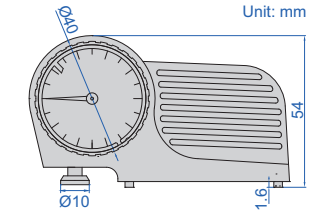
INSIZE PLUS

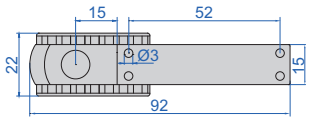


front back

2874-02

- Supplied with limit pointer
- Read from both sides





Code	Range	Graduation	Accuracy
2874-02	0-2mm	0.05mm	±0.05mm

VIDEO

DIAL SNAP GAUGES

INSIZE PLUS

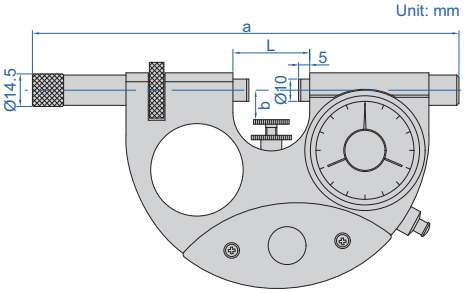
IP54 WATERPROOF



3335-25

- Quick Go/No-Go measurement for mass production
- Anvil retracting stroke: 2.5mm
- Dial indicator: measuring range ±0.07mm, graduation 1μm, accuracy ±1μm
- Constant measuring force over the whole range: 8.5N
- Carbide measuring faces
- IP54 dust/waterproof
- Zero position of dial indicator is adjustable and can be locked (supplied with locking wrench)
- Adjustable platform height





Code	Range	L	a	b
3335-25	0-25mm	35mm	191mm	<15mm
3335-50	25-50mm	60mm	215mm	<25mm
3335-75	50-75mm	84mm	239mm	<37.5mm
3335-100	75-100mm	110mm	265mm	<50mm

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED

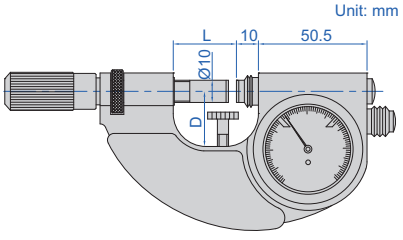
IP54 WATERPROOF

DIAL SNAP GAUGES

- Quick measurement for mass production
- Dial indicator: range ±0.04mm, graduation 0.001mm, accuracy 0.001mm
- IP54 dust/waterproof
- Measuring force: 5-10N
- Carbide measuring faces
- Optional accessory: gauge blocks grade 0 (**4101-A** series), for zero setting



3334-25



Code	Range	L	D
3334-25	0-25mm	28.5mm	25mm
3334-50	25-50mm	53.5mm	35mm
3334-75	50-75mm	78.5mm	47.5mm
3334-100	75-100mm	103.5mm	60mm

BLUETOOTH DIGITAL INDICATING SNAP GAUGES

BUILT-IN BLUETOOTH

IP54 WATERPROOF

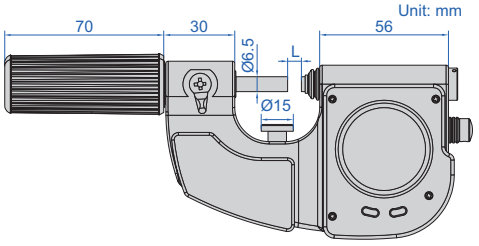
ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

ATTENTION: SETTING STANDARDS ARE NOT INCLUDED



3509-25

- Absolute encoder, the original data remains after power off
- Measuring stroke of anvil: 1mm
- Reading in digital and analog
- Button function: on/off, zero setting, mm/inch, tolerance, display setting, bluetooth, signal mode setting, data output
- Android and iPhone APP, USB type-C cable are included
- Carbide measuring faces
- Power: rechargeable Li-battery, for 20 hours continuous working (bluetooth transmission reduce working hours)
- Optional accessory: gage blocks grade 0 (**4101-A** series), for zero setting



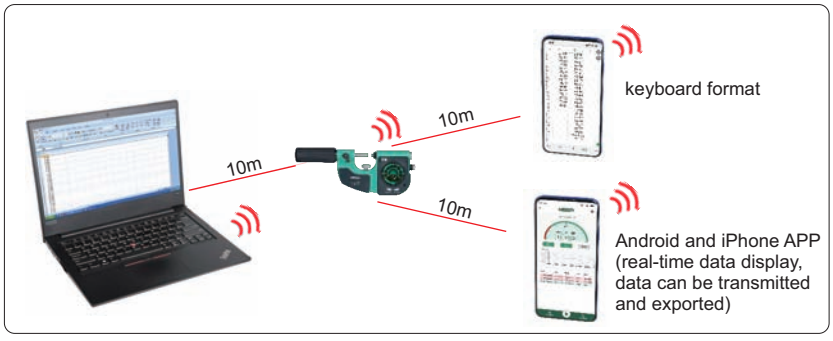
Code	Range (L)	Resolution	Accuracy	Repeatability
3509-25	0-25mm	0.1μm	1μm	0.3μm
3509-50	25-50mm	0.1μm	1μm	0.3μm

warning in red or yellow when over tolerance



Data output

Data output with bluetooth (transmission distance is 10 meters)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single transmission
	virtual com port	data can be transmitted to Android and iPhone APP	real-time display, data can be transmitted and exported
Data output with USB cable (cable length 1.8 meters)	keyboard format	data can be transmitted to Excel, Word, txt, etc.	single transmission
	virtual com port	data can be transmitted to serial communication software	single transmission



data output with bluetooth (included)



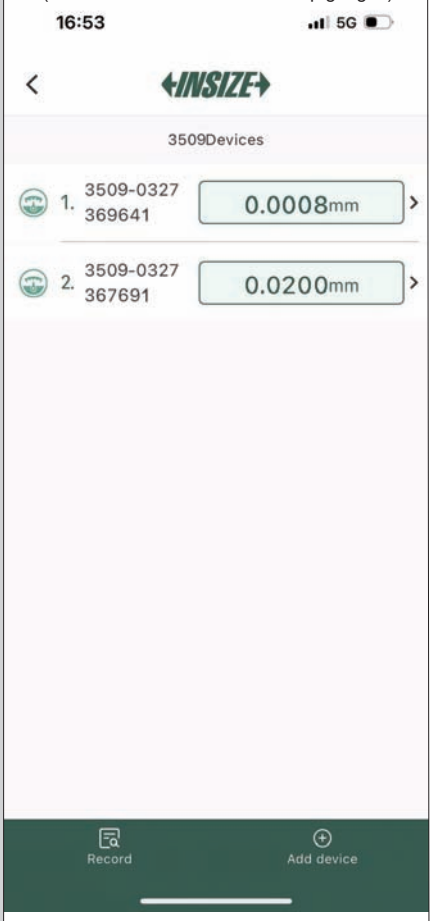
data output with USB cable (included)

To be continued

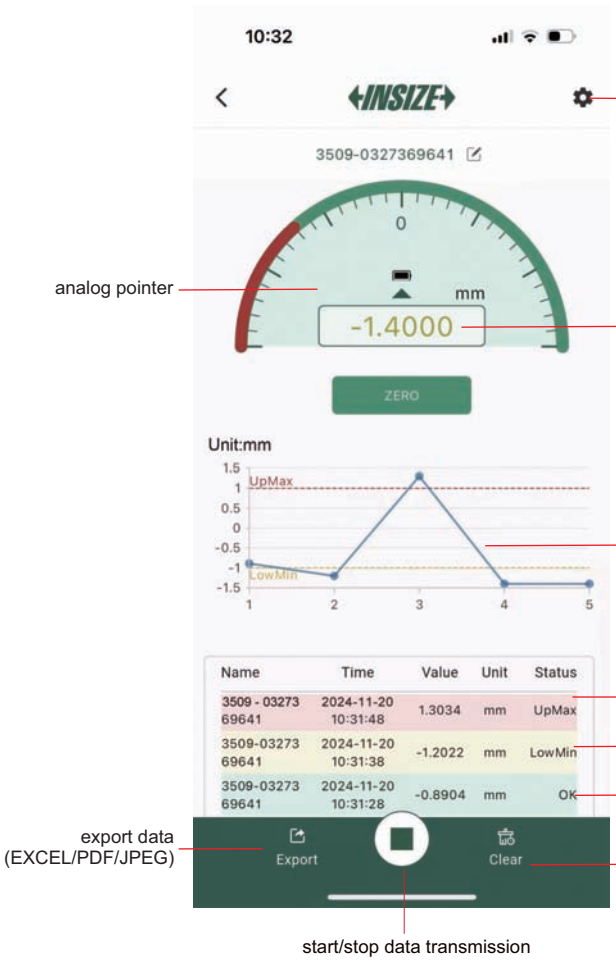
Continued from previous page

data collection application (included)
real-time display (continuous streaming) or single acquisition mode selectable

real-time display of multiple snap gauges
(connected with maximum 7 snap gauges)



single snap gauge display interface



set parameters and tolerance

analog pointer

real-time data :
(within tolerance in green,
over upper tolerance in red,
over lower tolerance in yellow)

graph

over upper tolerance in red background

over lower tolerance in yellow background

within tolerance in green background

export data
(EXCEL/PDF/JPEG)

clear data

start/stop data transmission

DIGITAL INDICATING MICROMETERS

REFER TO PAGE 159-160 FOR DETAILS



3507-25

INDICATING MICROMETERS

REFER TO PAGE 160 FOR DETAILS



3332-25

DIAL SNAP GAUGES

QUICK AND ACCURATE MEASUREMENT OF CYLINDRICAL WORKPIECES

VIDEO

INSPECTION CERTIFICATE

- Left anvil retracting stroke: 2mm
- Measuring force: 6-8N
- Flatness of anvil: 1.5μm
- Repeatability: 1μm
- Carbide measuring faces for anvils
- Front edges of anvils are chamfered for easy workpiece insertion
- Optional accessory: dial indicators and digital indicators (reading 0.001mm or 0.01mm)



digital indicator is optional

2186-25

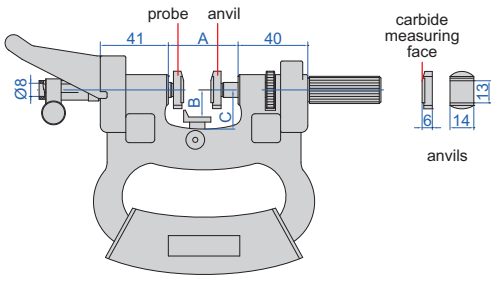
application



(mm)

Code	Range	Parallelism of measuring faces	A	B	C
2186-25*	0-25mm	4μm	42	11-18	20
2186-50*	25-50mm	4μm	69	11-32	41
2186-75*	50-75mm	5μm	94	17-41	51
2186-100*	75-100mm	6μm	119	31-55	65
2186-125*	100-125mm	6μm	144	42-70	75
2186-150*	125-150mm	8μm	169	55-82	90
2186-175*	150-175mm	8μm	194	68-95	100
2186-200*	175-200mm	10μm	219	85-110	115
2186-225*	200-225mm	10μm	244	95-120	130
2186-250*	225-250mm	10μm	269	110-135	145
2186-275*	250-275mm	12μm	294	120-150	160
2186-300*	275-300mm	12μm	319	128-160	170

Unit: mm



*Supplied with manufacturer inspection certificate

DIAL SNAP GAUGES

ATTENTION: NOT SUITABLE FOR 0.001MM DIAL INDICATORS

- Quick measurement for mass production
- Anvil retracting stroke: 3mm
- Measuring force: 6-9N
- Carbide measuring faces
- Optional accessory: dial indicators (graduation 0.01mm), digital indicators (resolution 0.01mm/0.0005")

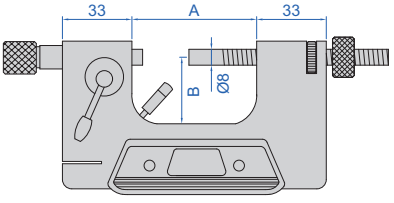


digital indicator is optional

2184-50W

Code	Range	A	B
2184-25W	0-25mm	34mm	18mm
2184-50W	0-50mm	62mm	32mm
2184-100W	50-100mm	112mm	62mm
2184-150W	100-150mm	162mm	85mm
2184-200W	150-200mm	212mm	110mm

Unit: mm



DIGITAL SNAP GAUGE

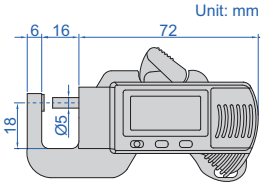
ATTENTION: NO DATA OUTPUT

Code	Range	Resolution	Accuracy
2166-12	0-12mm/0-0.5"	0.01mm/0.0005"	±0.03mm



2166-12

Unit: mm

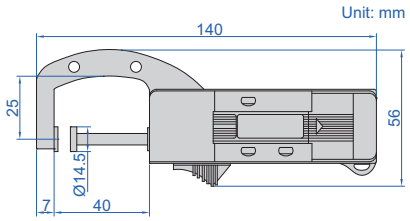


DIGITAL SNAP GAUGE

ATTENTION: NO DATA OUTPUT



2167-25



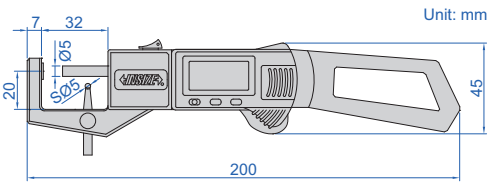
Code	Range	Resolution	Accuracy
2167-25	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm

DIGITAL SNAP GAUGE

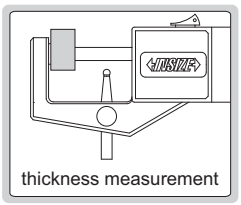
ATTENTION: NO DATA OUTPUT

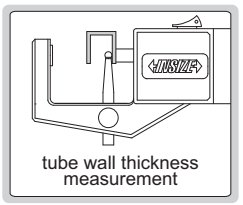


2163-25



- Resolution: 0.01mm/0.0005"
- Accuracy: ±0.04mm
- For thickness and tube wall thickness measurement





Code	Thickness range	Tube wall thickness range
2163-25	0-25mm/0-1"	0-2mm/0.08"

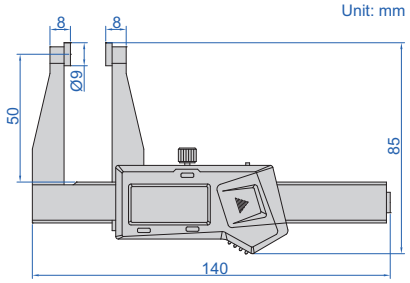
DIGITAL SNAP GAUGES

DATA OUTPUT



1163-50A

- Non waterproof
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Resolution	Accuracy
1163-50A	0-50mm/0-2"	0.01mm/0.0005"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Resolution	Accuracy
1163-50AWL	0-50mm/0-2"	0.01mm/0.0005"	±0.03mm

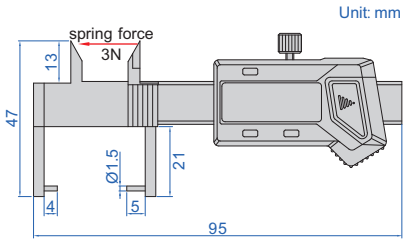
DIGITAL 3-PURPOSE SNAP GAUGE

ATTENTION: NO DATA OUTPUT

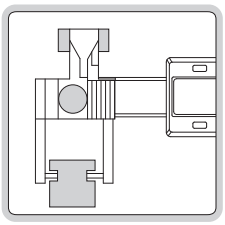
SUITABLE FOR JEWELLERY



2164-25A



VIDEO



Code	Range	Resolution	Accuracy
2164-25A	0-25mm/0-1"	0.01mm/0.0005"	±0.03mm

- Non waterproof
- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel

STEP AND GAP GAUGES

DATA OUTPUT

spring force
3N



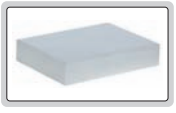
front



back

2168-12

zero setting block
(included)



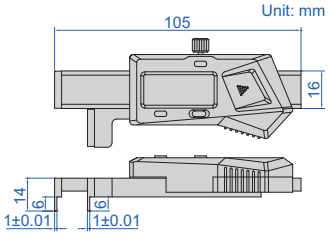
- Non waterproof
- Measure step height and gap width
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel
- Supplied with zero setting block

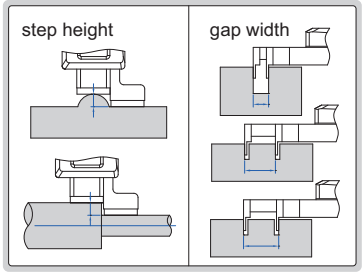
With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
2168-12	0-12.7mm/0-0.5"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

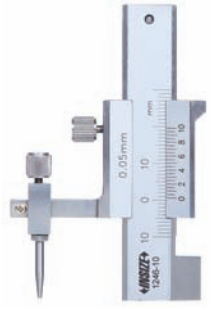
Code	Range	Accuracy
2168-12WL	0-12.7mm/0-0.5"	±0.03mm



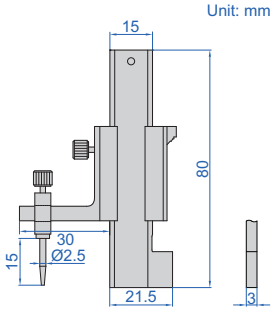


11

MINI VERNIER HEIGHT GAUGE



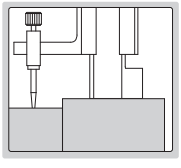
1246-10



- Measure height difference of two surfaces
- Graduation: 0.05mm
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Accuracy
1246-10	0~±10mm	±0.05mm

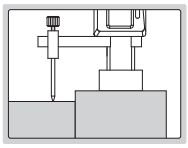
application



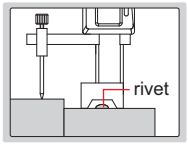
MINI DIGITAL HEIGHT GAUGES

DATA OUTPUT

application of
1146-20A/1146-20AWL



application of
1146-20B/1146-20BWL

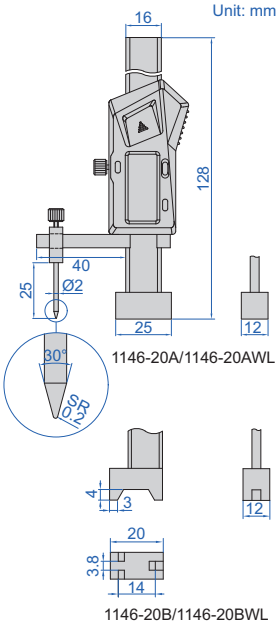




1146-20A



1146-20B



- Non waterproof
- Measure height difference of two surfaces (**1146-20B**, **1146-20BWL** suitable for surfaces with barrier, such as rivet)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (optional wireless transmitter code 7315-25, receiver is needed page 7)

Code	Range	Accuracy
1146-20A	0~±20mm/0~±0.8"	±0.02mm
1146-20B	0~±20mm/0~±0.8"	±0.02mm

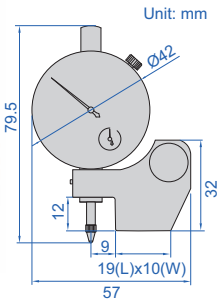
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy
1146-20AWL	0~±20mm/0~±0.8"	±0.02mm
1146-20BWL	0~±20mm/0~±0.8"	±0.02mm

DIAL HEIGHT GAUGES



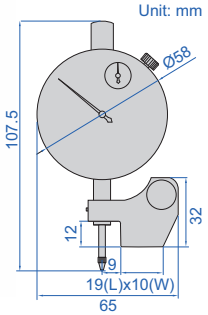
2147-4A



2147-4A



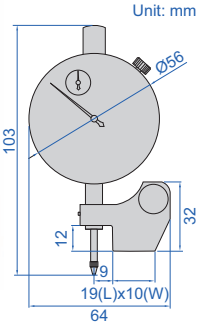
2147-4B



2147-4B



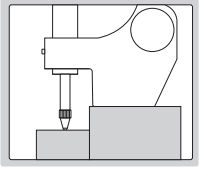
2147-21



2147-21

- Measure height difference of two surfaces

Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy
2147-4A	0~±5mm (adjustable)	5mm	0.01mm	±0.014mm
2147-4B	0~±5mm	10mm	0.01mm	±0.017mm
2147-21	0~±2mm (adjustable)	2mm	0.001mm	±0.006mm

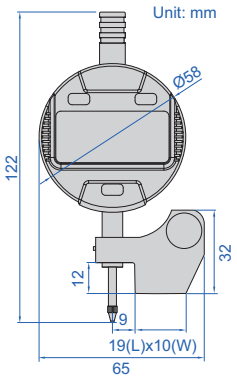


DIGITAL HEIGHT GAUGES

DATA OUTPUT



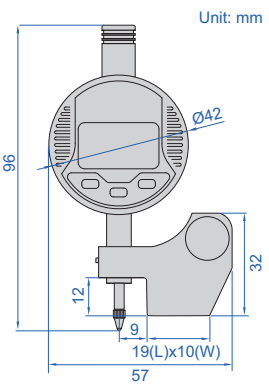
2146-4A



2146-4A
2146-41A



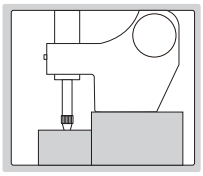
2146-4B



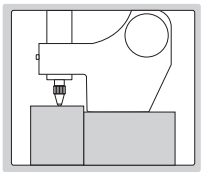
2146-4B
2146-41B

- Measure height difference of two surfaces
- Button function: on/off, inch/mm, zero, data preset, change measuring direction, absolute/incremental measurement
- Keep preset data in memory after restart
- CR2032 battery, automatic power off (time is adjustable)
- Data output
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8

measure sinked step



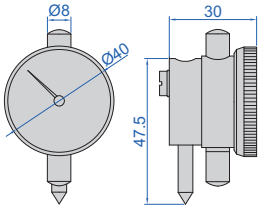
measure raised step



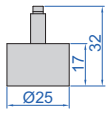
Code	Range (adjustable)	Digital indicator stroke	Digital indicator resolution	Accuracy
2146-4A	0~4mm/0~0.16" (sinked) 0~12.7mm/0~0.5" (raised)	12.7mm/0.5"	0.01mm/0.0005"	±0.02mm
2146-41A		12.7mm/0.5"	0.001mm/0.00005"	±0.005mm
2146-4B	0~4mm/0~0.16" (sinked) 0~5mm/0~0.2" (raised)	5mm/0.2"	0.01mm/0.0005"	±0.02mm
2146-41B		5mm/0.2"	0.001mm/0.00005"	±0.005mm

CRANKSHAFT TESTERS

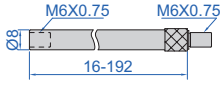
Unit: mm



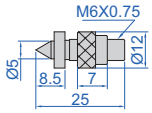
dial indicator

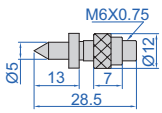


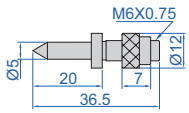
balance block



extension rods



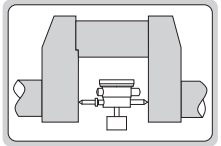




anvils



2841-500

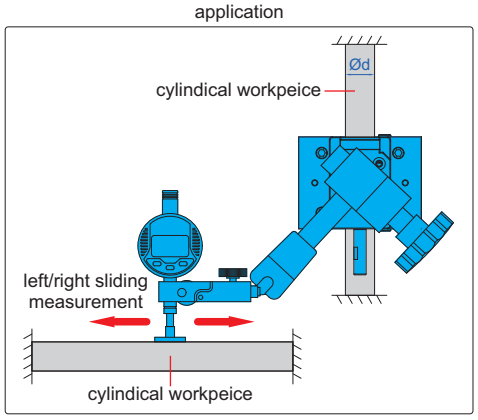


- To test crankshaft deflection
- The balance block is mounted on the back of dial indicator to keep the dial indicator facing up

Code	Range	Dial indicator range	Graduation	Extension rods	Accuracy
2841-300	60-300mm	3mm	0.01mm	16mm, 32mm, 64mm, 128mm	±0.02mm
2841-500	60-500mm	3mm	0.01mm	16mm, 32mm, 64mm, 96mm, 128mm, 192mm	±0.02mm

PERPENDICULARITY COMPARISON GAUGE

application

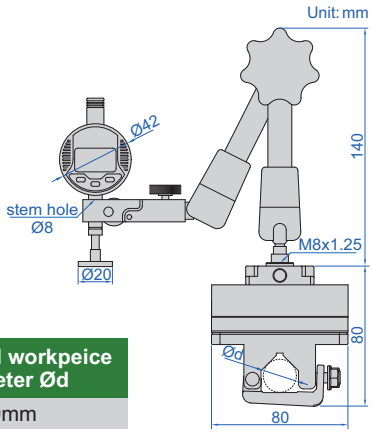




CUSTOMIZED ACCORDING TO WORKPIECES

VIDEO

2253-20



- Measurement perpendicularity between two cylinders
- Optional accessory: measurement software (code **7377**) wireless transmission code **7213-56** (receiver is needed) page 13

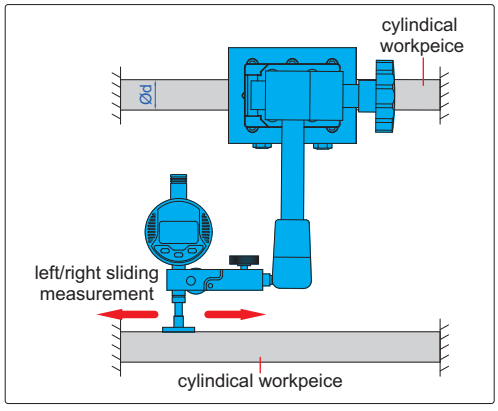
Code	Digital indicator stroke	Digital indicator resolution	Perpendicularity	Left/right slide stroke	Cylindical workpeice diameter Ød
2253-20	5mm/0.2"	0.01mm/0.0005"	0.01mm	45mm	20mm

PARALLELISM COMPARISON GAUGE

VIDEO

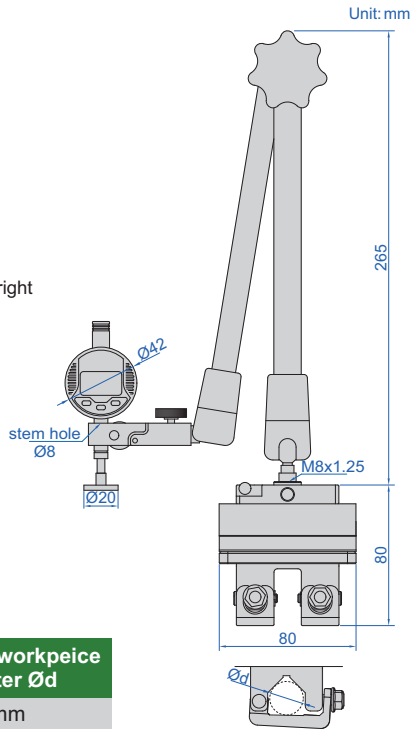
CUSTOMIZED ACCORDING TO WORKPIECES

application





2254-20



- Measurement parallelism between two cylinders
- Optional accessory: measurement software (code **7377**) wireless transmission code **7213-56** (receiver is needed) page 13

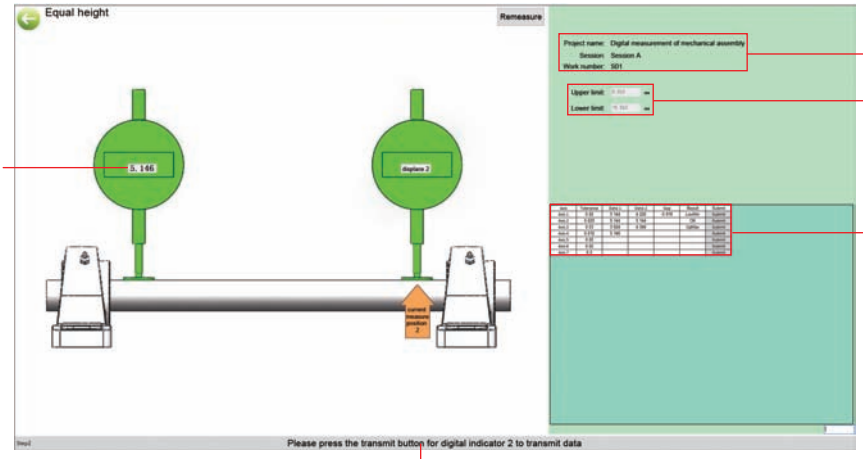
Code	Digital indicator stroke	Digital indicator resolution	Parallelism	Left/right slide stroke	Cylindical workpeice diameter Ød
2254-20	5mm/0.2"	0.01mm/0.0005"	0.01mm	45mm	20mm

PARALLELISM/PERPENDICULARITY COMPARISON GAUGE SOFTWARE CODE 7377

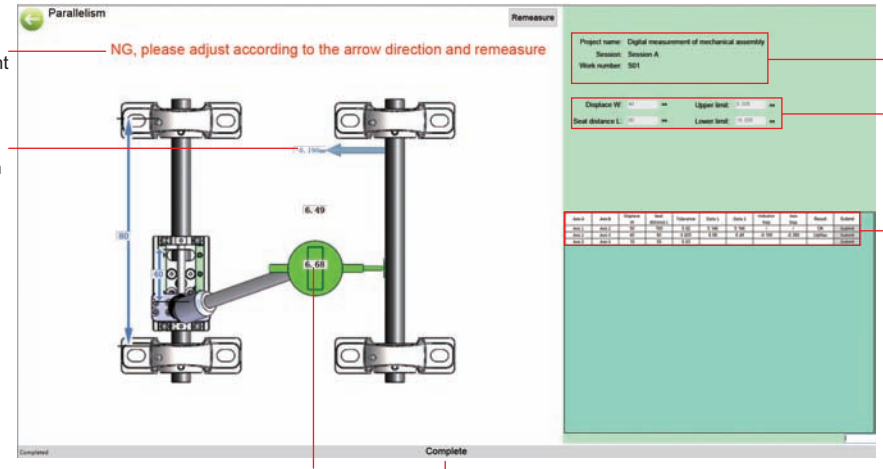
VIDEO

- Suitable for digital measurement of mechanical assembly such as equal height, parallelism, and perpendicularity
- Real-time collect of measurement data, automatic judgment of measurement results (out of upper tolerance, within tolerance, and out of lower tolerance), guiding measurement, prompting adjustment direction, and exporting measurement reports

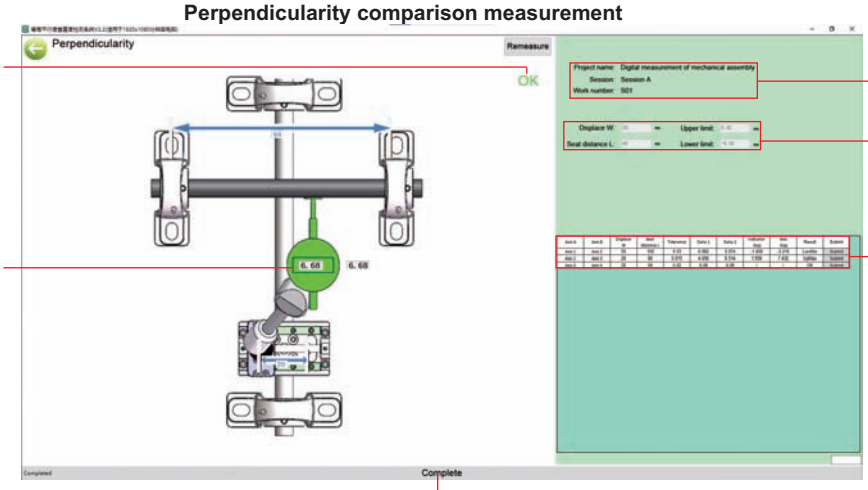
Equal height comparison measurement



Parallelism comparison measurement

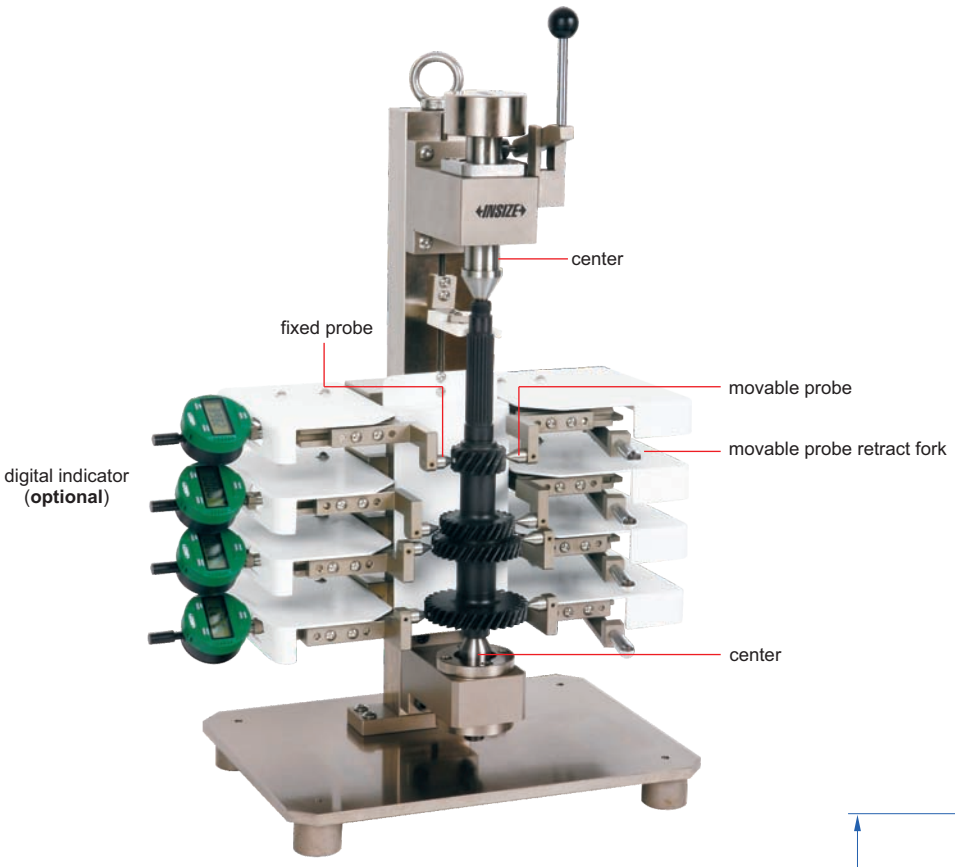


Perpendicularity comparison measurement



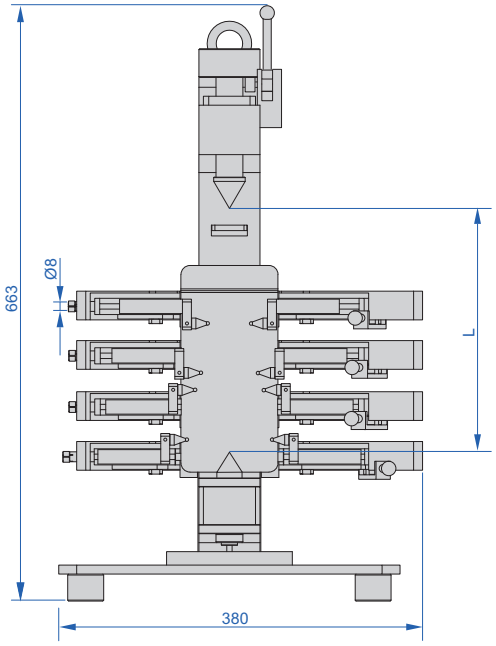
CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

GEAR OVER PINS MEASURING INSTRUMENT



2855-90

Unit: mm

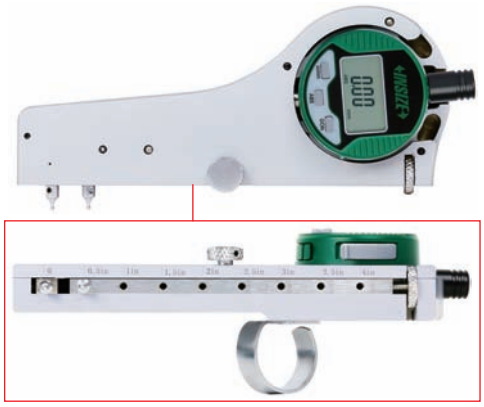


- Measure the over pins of the gear shaft
- Carbide probes
- Probe position is adjustable
- Optional accessory: digital indicator

Code	Over pins range	Distance between two centers (L)	Accuracy	Repeatability	Weight	Load capacity of centers
2855-90	20-90mm	50-304mm	5μm	4μm	75kg	10kg

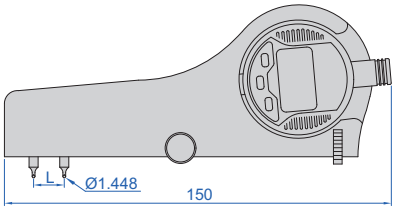
DIGITAL THREAD PITCH MEASURING INSTRUMENT

MEET INTERNATIONAL STANDARD API5B

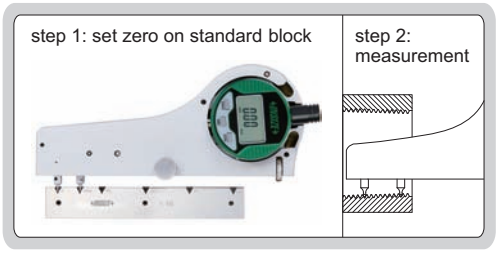


2245-4

Unit: mm



application

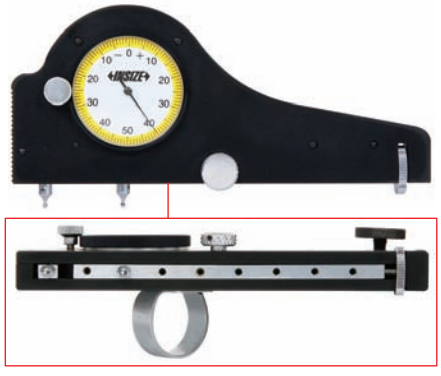


- Measure the pitch of external thread and internal thread with nominal diameter larger than 5 1/2" (139.7mm)
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, ball points (code **6252** series), standard pitch blocks (code **6251** series)

Code	Range (L)	Digital indicator stroke	Resolution	Accuracy
2245-4	0.5-4"/12.7-101.6mm	0.2"/5mm	0.0005"/0.01mm	0.02mm

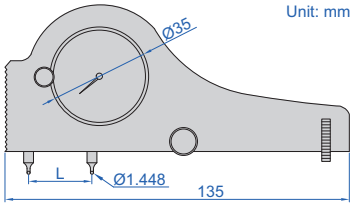
THREAD PITCH MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B

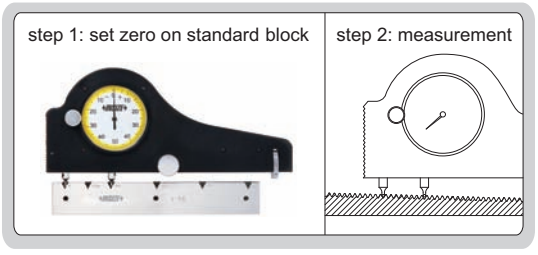


2234-4

Unit: mm



application



- Measure the pitch of external thread and internal thread with nominal diameter larger than 5 1/2" (139.7mm)
- Optional accessory: ball points (code **6252** series), standard pitch blocks (code **6251** series)

Code	Range (L)	Dial indicator stroke	Dial indicator graduation	Accuracy
2234-4	0.5-4"/12.7-101.6mm	0.5mm	0.01mm	0.02mm
2234-4E	0.5-4"/12.7-101.6mm	0.025"	0.0005"	0.0008"

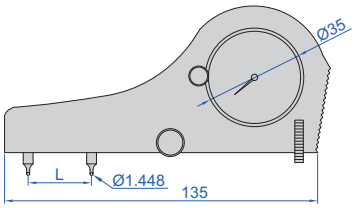
INTERNAL THREAD PITCH MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B

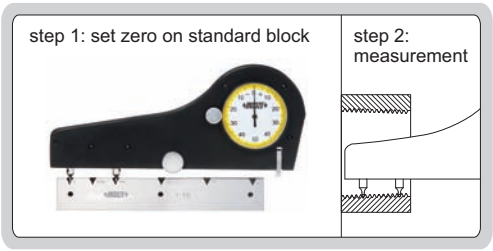


2235-4

Unit: mm



application



- Measure the pitch of internal thread with nominal diameter larger than 1 1/2" (38.1mm) and less than 5 1/2" (139.7mm)
- Optional accessory: ball points (code **6252** series), standard pitch blocks (code **6251** series)

Code	Range (L)	Dial indicator stroke	Dial indicator graduation	Accuracy
2235-4	0.5-4"/12.7-101.6mm	0.5mm	0.01mm	0.02mm
2235-4E	0.5-4"/12.7-101.6mm	0.025"	0.0005"	0.0008"

STANDARD PITCH BLOCKS

CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

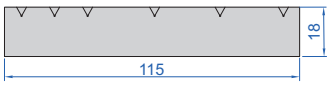
- Set zero of internal and external pitch measuring instruments (code **2234**, **2235**, **2245**)

Code	Taper	Threads per inch
6251-S8	1:16	8, 10
6251-S5	1:16	5
6251-S4	1:6	4



6251-S8

Unit: mm

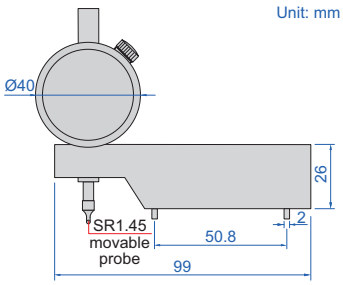


BUTTRESS THREAD RUN-OUT GAUGE



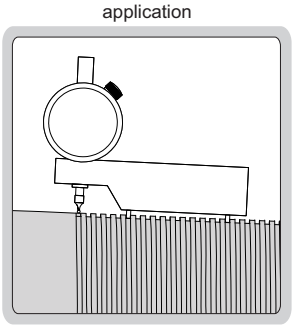
2238-4

Unit: mm



MEET INTERNATIONAL STANDARD API5B

application

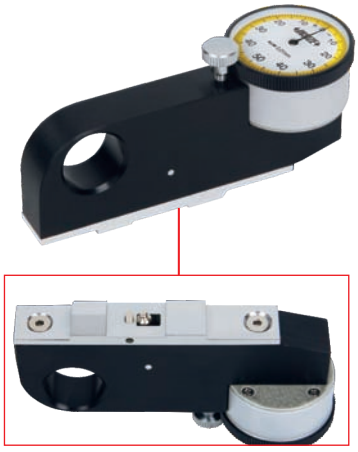


- The run-out gauge is used to check the run-out thread root and insure that the external thread is sufficiently long and is a true run-out thread

Code	Range	Dial indicator graduation	Dial indicator stroke	Accuracy
2238-4	0-4mm	0.01mm	5mm	0.02mm

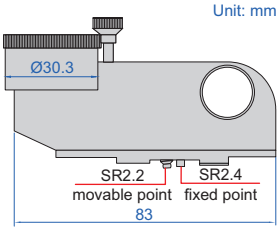
BUTTRESS THREAD TOOTH THICKNESS GAUGES

MEET INTERNATIONAL STANDARD API5B

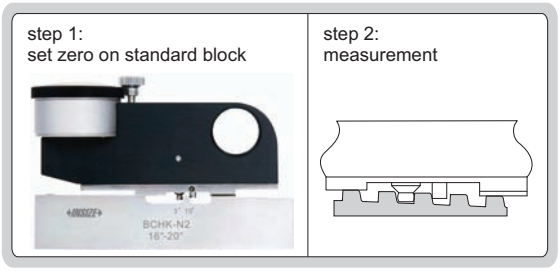


2239-21

Unit: mm



application



- Optional accessory: buttress thread tooth thickness standard blocks(code **6253** series)

Code	Range	Dial indicator graduation	Accuracy	Remark
2239-2	1mm	0.01mm	0.02mm	can measure 4 1/2"~13 3/8" buttress thread
2239-21	1mm	0.01mm	0.02mm	can measure ≥16" buttress thread

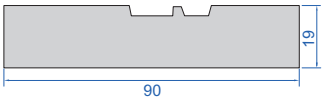
BUTTRESS THREAD TOOTH THICKNESS STANDARD BLOCKS

CAN BE CUSTOMIZED ACCORDING TO WORKPIECES



6253-N2

Unit: mm



- Set zero of buttress thread tooth thickness gauges (code **2239** series)

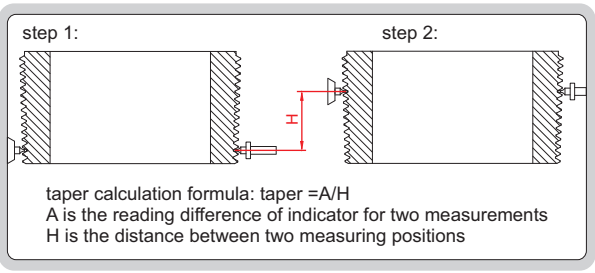
Code	Taper	Threads per inch	Remark
6253-N1	1:16	5	can calibrate 4 1/2"~13 3/8" buttress internal thread gauge
6253-W1	1:16	5	can calibrate 4 1/2"~13 3/8" buttress external thread gauge
6253-N2	1:12	5	can calibrate ≥16" buttress internal thread gauge
6253-W2	1:12	5	can calibrate ≥16" buttress external thread gauge

MEET INTERNATIONAL STANDARD API5B

DIGITAL EXTERNAL THREAD TAPER MEASURING INSTRUMENT

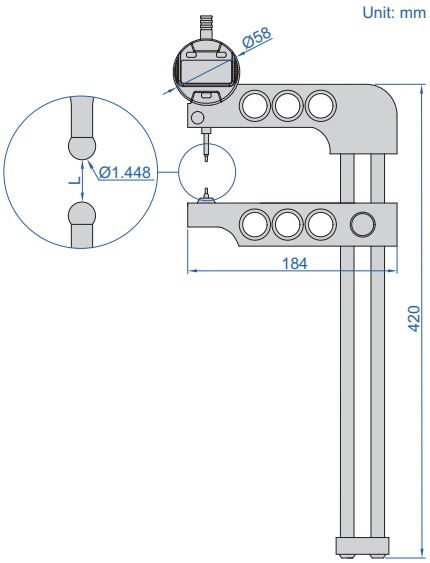
- Measure the taper of external thread
- Digital indicator stroke: 10mm/0.4"
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, ball points (code **6252** series)

principle of measurement





2240-10



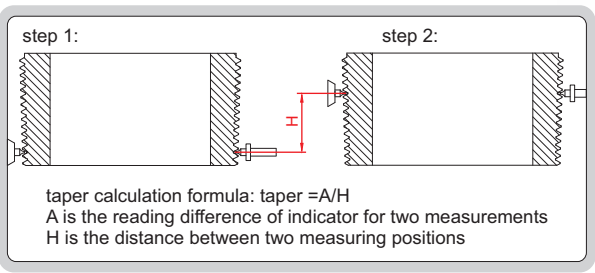
Code	Range (L)	Resolution	Accuracy
2240-10	0-10"/0-254mm	0.0005"/0.01mm	0.03mm

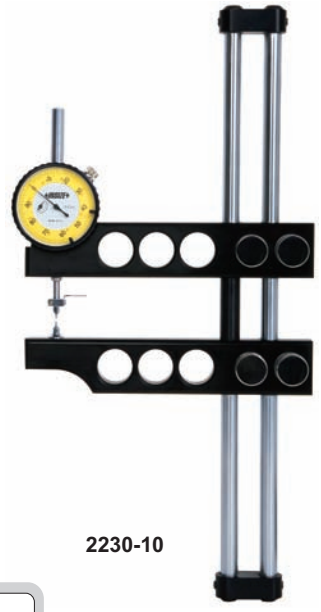
MEET INTERNATIONAL STANDARD API5B

EXTERNAL THREAD TAPER MEASURING INSTRUMENTS

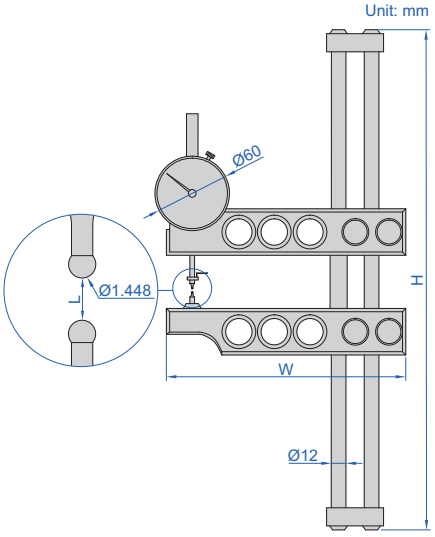
- Measure the taper of external thread
- Dial indicator stroke: 0.5"
- Dial indicator graduation: 0.001"
- Optional accessory: ball points (code **6252** series)

principle of measurement





2230-10



Code	Range (L)	Accuracy	H	W
2230-10	0-10"/0-254mm	0.0015"	400mm	200mm
2230-45	1-4 1/2"/25.4-114.3mm	0.0015"	278mm	178mm
2230-16	1-16"/25.4-406.4mm	0.0015"	600mm	260mm
2230-20	1-20"/25.4-508mm	0.0015"	680mm	260mm

INTERNAL THREAD TAPER MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B

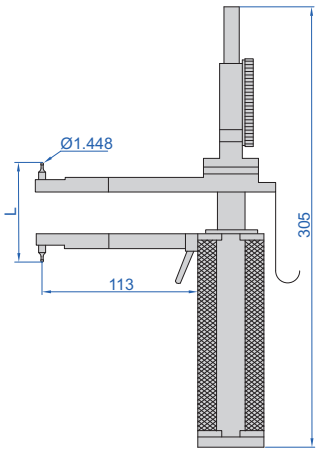


2231-6

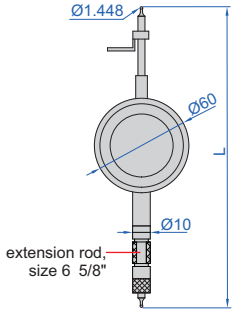


2231-16

Unit: mm

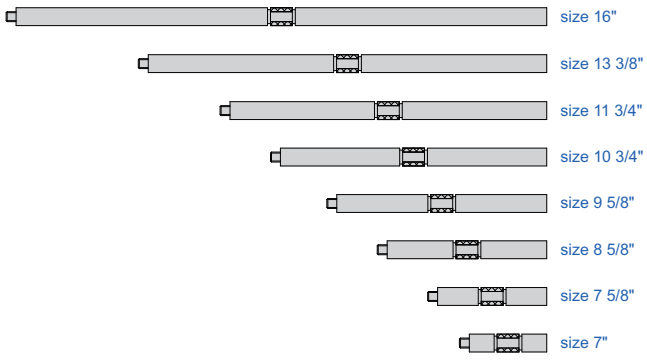


2231-6



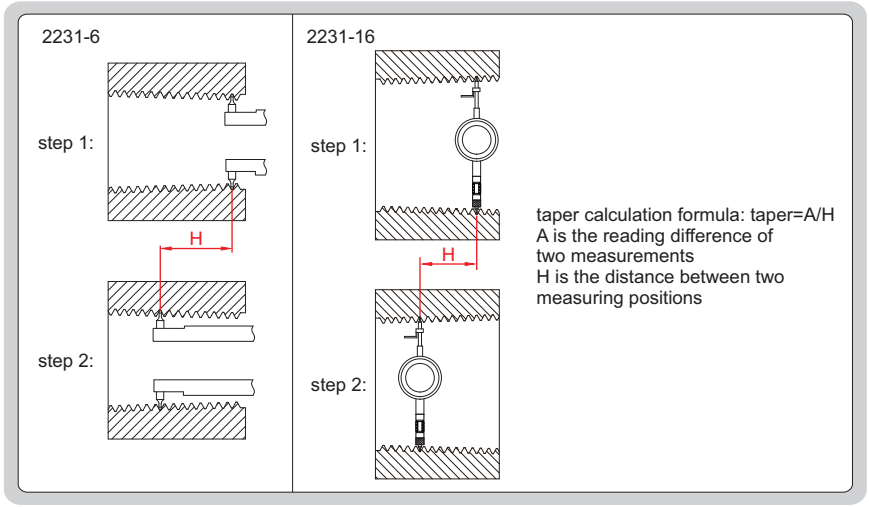
2231-16

Unit: mm



- Measure the taper of internal thread
- Optional accessory:
  ball points (code **6252** series)

principle of measurement

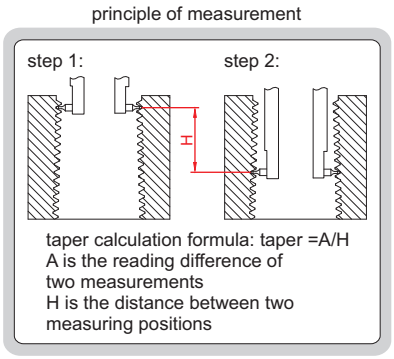


Code	Range (L)	Dial indicator stroke	Dial indicator graduation	Accuracy	Remark
2231-6	1.5-6"/38.1-152.4mm	1"	0.001"	0.0015"	—
2231-16	5 1/2-16"/139.7-406.4mm	0.5"	0.001"	0.0015"	with 9 extension rods

MEET INTERNATIONAL STANDARD API5B

DIGITAL INTERNAL THREAD TAPER MEASURING INSTRUMENT

principle of measurement

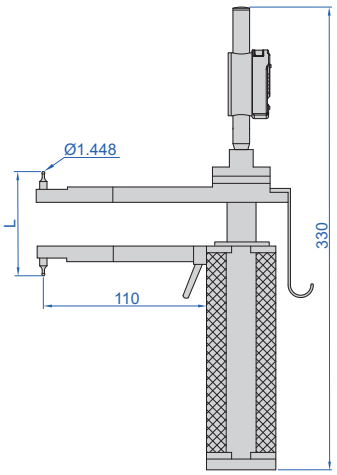




2241-6

- Measure the taper of internal thread
- Digital indicator stroke: 25.4mm/1"
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8,
  ball points (code **6252** series)

Unit: mm



Code	Range (L)	Travel of measuring tip	Resolution	Any 6mm accuracy
2241-6	1.5-6"/38.1-152.4mm	1"/25.4mm	0.0005"/0.01mm	0.04mm

BALL POINTS

- Supplied in pair
- For taper measuring instruments (code **2230**, **2231**, **2240**, **2241**) and pitch measuring instruments (code **2234**, **2235**, **2245**)

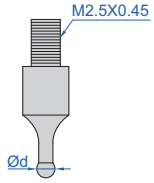


6252-B10

Code	Thread type	Threads per inch	Ball dia. (Ød)	
			taper	pitch
6252-B8	round thread, line pipe	8	1.829mm	1.829mm
6252-B10	round thread, line pipe	10	1.448mm	1.448mm
6252-B115	line pipe	11.5	1.27mm	1.27mm
6252-B14	line pipe	14	1.041mm	1.041mm
6252-B18	line pipe	18	0.813mm	0.813mm
6252-B27	line pipe	27	0.533mm	0.533mm
6252-B5	buttress thread	5	2.286mm	—
6252-B51	buttress thread	5	—	1.575mm
6252-B52	extreme line thread	5, 6	1.524mm	—
6252-B53	extreme line thread	5	—	2.667mm*
6252-B6	extreme line thread	6	—	2.210mm*

*0.58mm off the top of ball

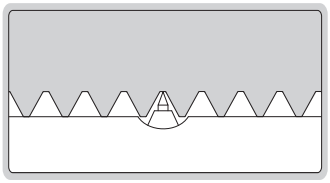
Unit: mm



DIGITAL INTERNAL THREAD HEIGHT MEASURING INSTRUMENT

MEET INTERNATIONAL STANDARD API5B

application

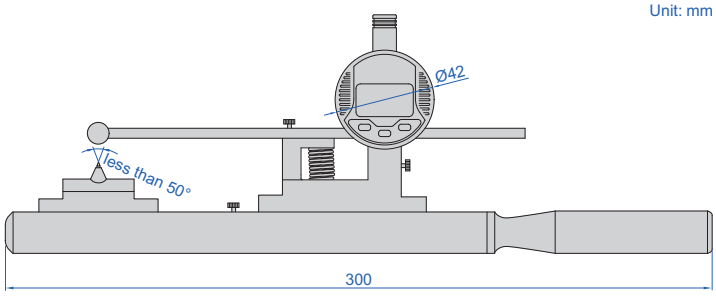




2243-35

- Measure the height of internal thread with nominal diameter less than 5 1/2" (139.7mm)
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, thread height standard blocks (code **6250**)

Unit: mm

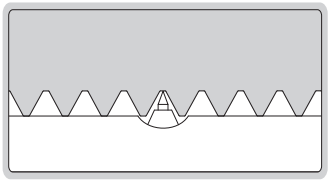


Code	Range	Resolution	Accuracy
2243-35	0-0.135"/0-3.5mm	0.0005"/0.01mm	0.02mm

INTERNAL THREAD HEIGHT MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B

application

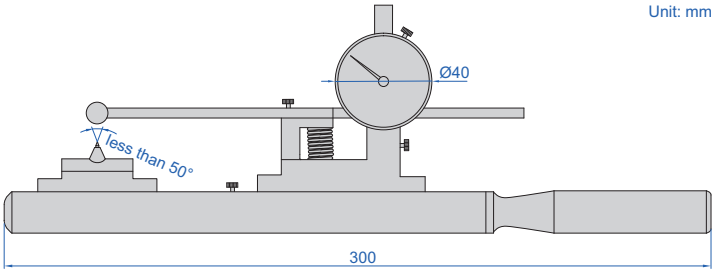




2233-35

- Measure the height of internal thread with nominal diameter less than 5 1/2" (139.7mm)
- Optional accessory: thread height standard blocks (code **6250**)

Unit: mm

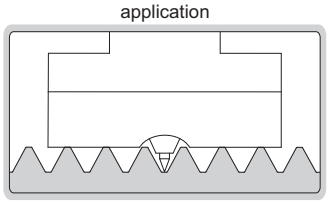


Code	Range	Dial indicator graduation	Accuracy
2233-35	0-3.5mm	0.01mm	0.02mm
2233-35E	0-1/4"	0.0005"	0.0008"

DIGITAL THREAD HEIGHT MEASURING INSTRUMENT

MEET INTERNATIONAL STANDARD API5B

application

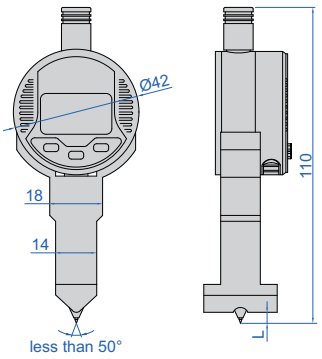


- Measure the height of external thread and internal thread with nominal diameter larger than 5 1/2" (139.7mm)
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, thread height standard blocks (code **6250**)



2242-35

Unit: mm

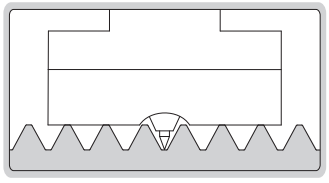


Code	Range (L)	Resolution	Accuracy
2242-35	0-0.135"/0-3.5mm	0.0005"/0.01mm	0.02mm

THREAD HEIGHT MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B

application

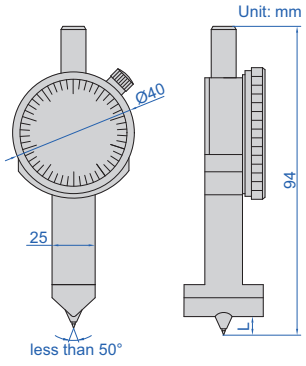


- Measure the height of external thread and internal thread with nominal diameter larger than 5 1/2" (139.7mm)
- Optional accessory: thread height standard blocks (code **6250**)



2232-35

Unit: mm



Code	Range (L)	Dial indicator graduation	Accuracy
2232-35	0-3.5mm	0.01mm	0.02mm
2232-35E	0-1/4"	0.0005"	0.0008"

THREAD HEIGHT STANDARD BLOCKS

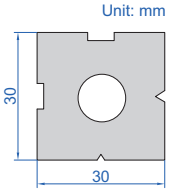
CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

- Set zero of internal and external thread height measuring instruments (code **2232**, **2233**, **2242**, **2243**)



6250-8

Unit: mm

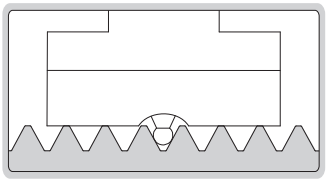


Code	Taper	Number of thread per inch
6250-4	1:4	4
6250-5	1:4	5
6250-8	1:16	8, 10
6250-51	1:16	5

ROTARY SHOULDERED EXTERNAL THREAD CONNECTION HEIGHT MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API 7-2

application



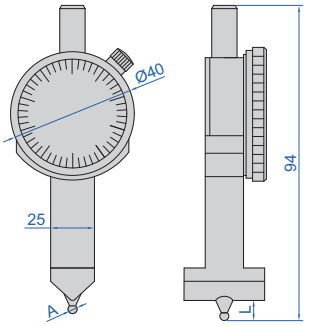
- Measure the height of rotary shouldered external thread connections
- Dial indicator graduation: 0.01mm
- Accuracy: 0.02mm
- Optional accessory: thread height standard blocks (code **6255**)

Code	Form of thread to be inspected	Range (L)	A
2255-038	V-0.038R	0-3.5mm	Ø1.829mm
2255-040	V-0.040	0-3.5mm	Ø0.864mm
2255-050	V-0.050	0-5mm	Ø1.118mm
2255-055	V-0.055	0-3.5mm	Ø1.829mm



2255-038

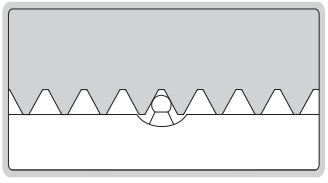
Unit: mm



ROTARY SHOULDERED INTERNAL THREAD CONNECTION HEIGHT MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API 7-2

application



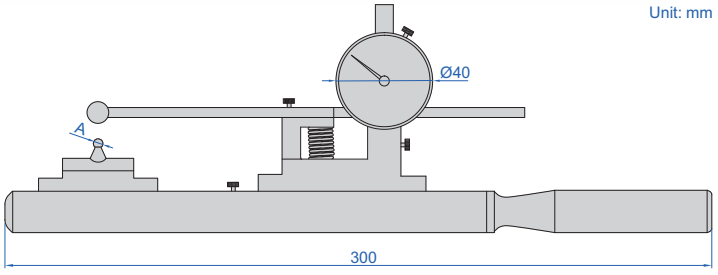
- Measure the height of rotary shouldered internal thread connections
- Dial indicator graduation: 0.01mm
- Accuracy: 0.02mm
- Optional accessory: thread height standard blocks (code **6255**)

Code	Form of thread to be inspected	Range (L)	A
2256-038	V-0.038R	0-3.5mm	Ø1.829mm
2256-040	V-0.040	0-3.5mm	Ø0.864mm
2256-050	V-0.050	0-5mm	Ø1.118mm
2256-055	V-0.055	0-3.5mm	Ø1.829mm



2256-038

Unit: mm



THREAD HEIGHT STANDARD BLOCKS

CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

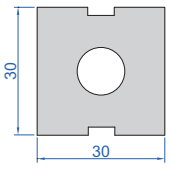
- Set zero of internal and external thread height measuring instruments (code **2255**, **2256**)

Code	Form of thread to be inspected	Taper	Number of thread per inch
6255-038	V-0.038R	1:6 and 1:4	4
6255-040	V-0.040	1:4	5
6255-050	V-0.050	1:6 and 1:4	4
6255-055	V-0.055	1:8	6



6255-038

Unit: mm



REFER TO PAGE 97
FOR DETAILS

DIGITAL DEPTH GAUGE (60° KNIFE EDGE BASE)



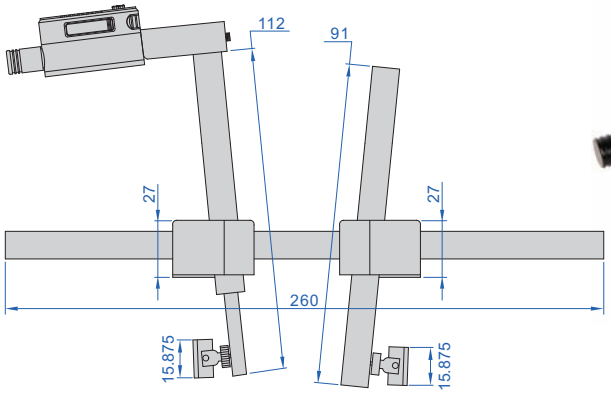
front view side view

2143-101

DIGITAL INTERNAL THREAD CREST DIAMETER MEASURING INSTRUMENT

MEET INTERNATIONAL STANDARD API5B

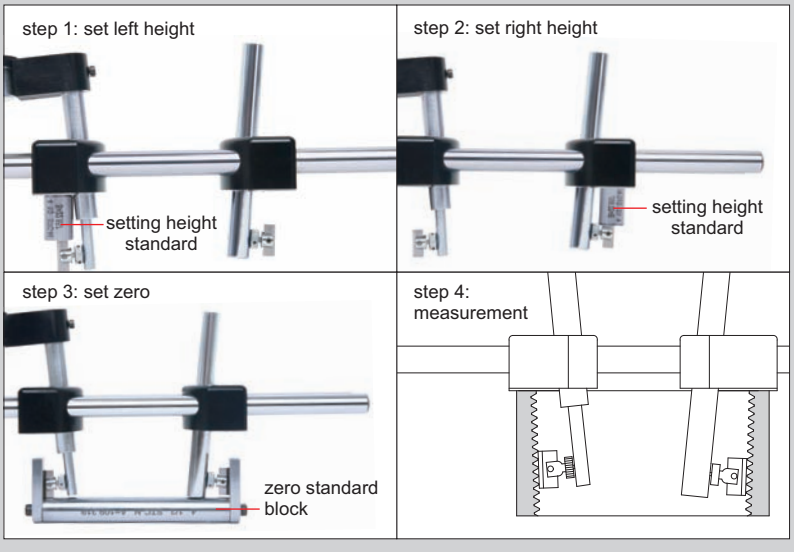
Unit: mm





2247-5

application



- Measure the crest diameter of internal thread with nominal diameter larger than 2 3/8" (60.325mm) and less than 5 1/2" (139.7mm)
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, height standard and zero standard block (code **2237-G□□□**, **2237-K□□□**)

Code	Range	Digital indicator stroke	Resolution	Accuracy
2247-5	2 3/8-5 1/2"/60.325-139.7mm	0.2"/5mm	0.0005"/0.01mm	0.02mm

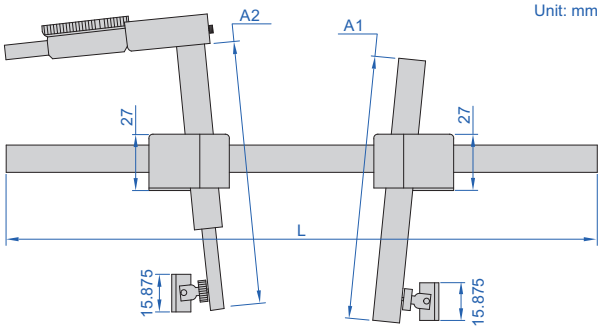
INTERNAL THREAD CREST DIAMETER MEASURING INSTRUMENTS

MEET INTERNATIONAL STANDARD API5B

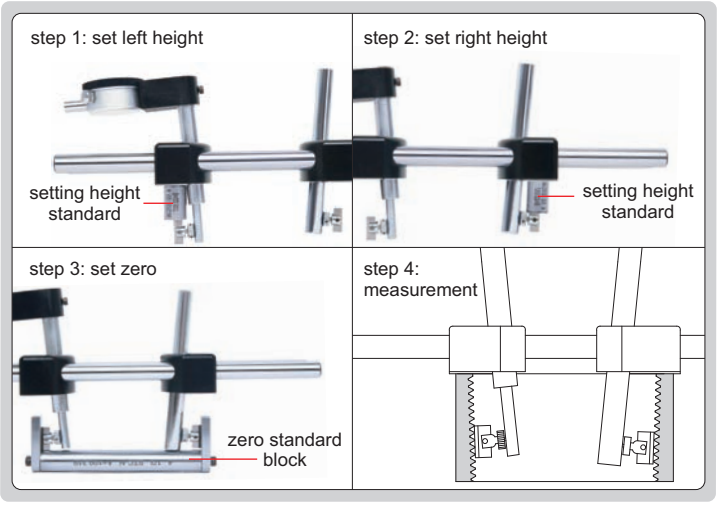


2237-5

Unit: mm



application



- Measure the crest diameter of internal thread with nominal diameter larger than 2 3/8" (60.325mm) and less than 20" (508mm)
- Optional accessory: height standard and zero standard block

Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy	L	A1	A2
2237-5	2 3/8-5 1/2"/60.325-139.7mm	5mm	0.01mm	0.02mm	260mm	112mm	91mm
2237-5E	2 3/8-5 1/2"/60.325-139.7mm	0.25"	0.0005"	0.0008"	260mm	112mm	91mm
2237-20	4 1/2-20"/114.3-508mm	0.50"	0.0005"	0.002"	12", 18" or 24" *	177mm	182mm

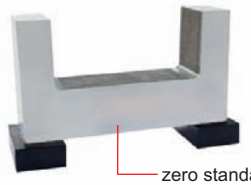
* Select suitable length of arm according to workpieces



height standard



zero standard block A



zero standard block B

HEIGHT STANDARD AND ZERO STANDARD BLOCK (optional)

Code	Remark
2237-G□□□**	including height standard and zero standard block A (without taper)
2237-K□□□**	including height standard and zero standard block B (with taper)

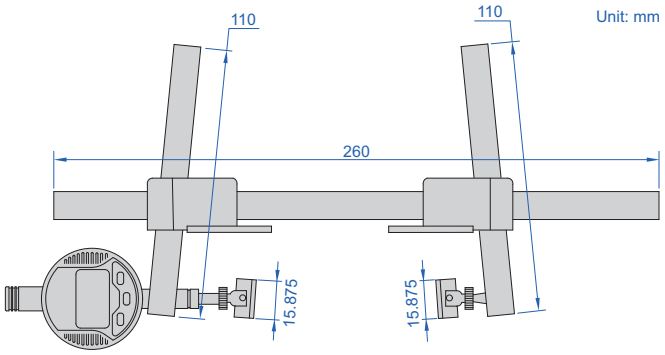
** Can be customized according to workpieces

DIGITAL EXTERNAL THREAD CREST DIAMETER MEASURING INSTRUMENT

MEET INTERNATIONAL STANDARD API5B

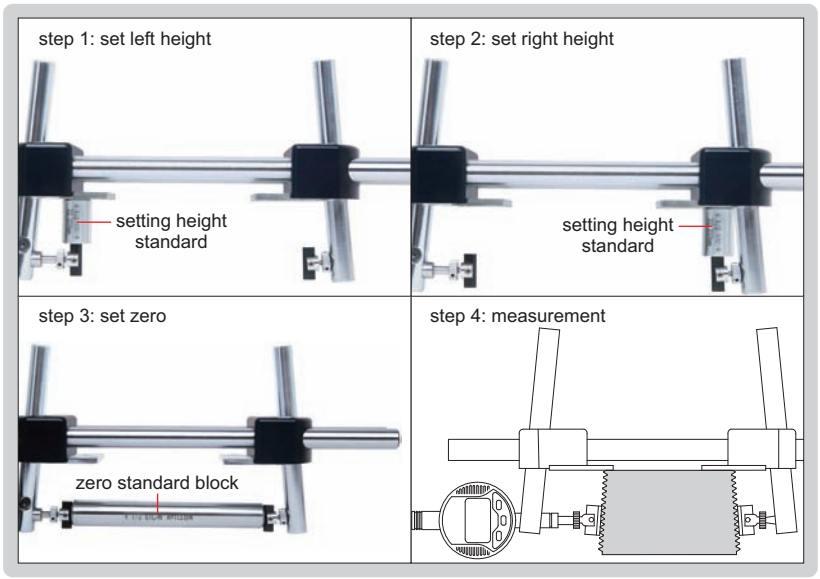


2246-5



- Measure the crest diameter of external thread with nominal diameter larger than 2 3/8" (60.325mm) and less than 5 1/2" (139.7mm)
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, height standard and zero standard block (code **2236-G□□□**, **2236-K□□□**)

application



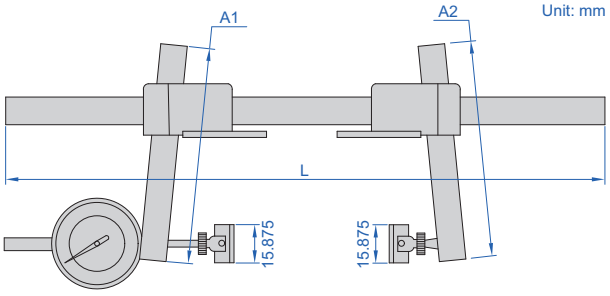
Code	Range	Digital indicator stroke	Resolution	Accuracy
2246-5	2 3/8-5 1/2"/60.325-139.7mm	0.2"/5mm	0.0005"/0.01mm	0.02mm

EXTERNAL THREAD CREST DIAMETER MEASURING INSTRUMENTS

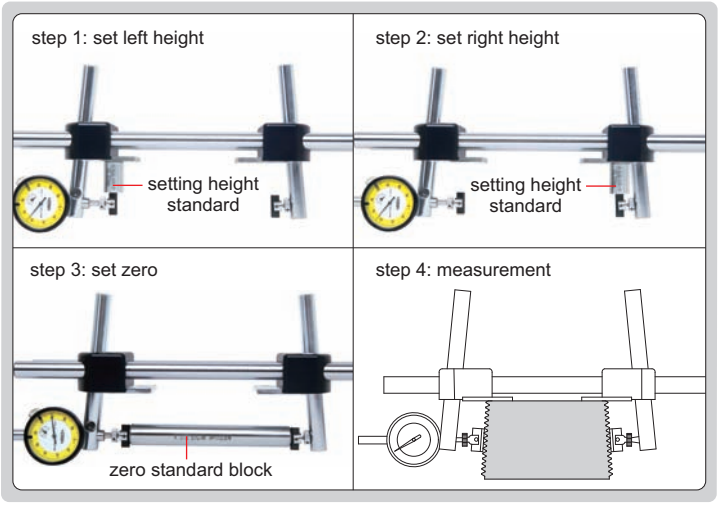
MEET INTERNATIONAL STANDARD API5B



2236-5



application



- Measure the crest diameter of external thread with nominal diameter larger than 2 3/8" (60.325mm) and less than 20" (508mm)
- Optional accessory: height standard and zero standard block

Code	Range	Dial indicator stroke	Dial indicator graduation	Accuracy	L	A1	A2
2236-5	2 3/8-5 1/2"/60.325-139.7mm	5mm	0.01mm	0.02mm	260mm	110mm	110mm
2236-5E	2 3/8-5 1/2"/60.325-139.7mm	0.25"	0.0005"	0.0008"	260mm	110mm	110mm
2236-20	2 3/8-20"/60.325-508mm	0.50"	0.0005"	0.002"	12", 18" or 24" *	177mm	160mm

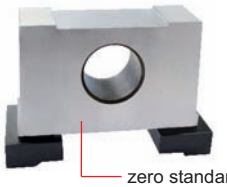
* Select suitable length of arm according to workpieces



height standard



zero standard block A



zero standard block B

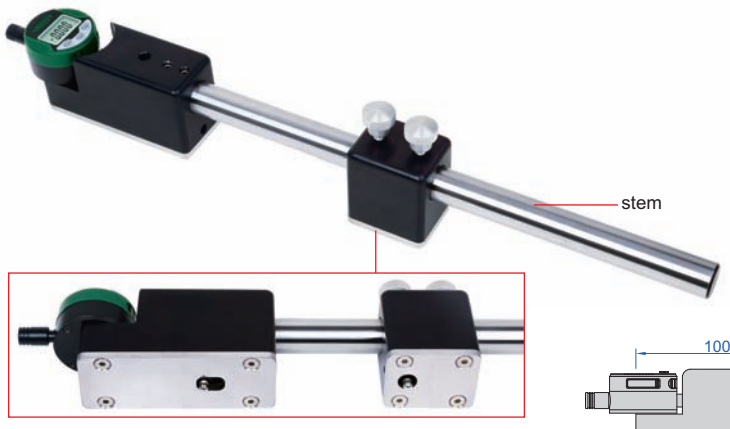
HEIGHT STANDARD AND ZERO STANDARD BLOCK (optional)

Code	Remark
2236-G□□□**	including height standard and zero standard block A (without taper)
2236-K□□□**	including height standard and zero standard block B (with taper)

** Can be customized according to workpieces

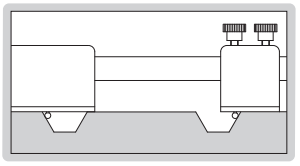
DIGITAL GROOVE DIAMETER MEASURING INSTRUMENT

POINT DIAMETER CAN BE CUSTOM-MADE

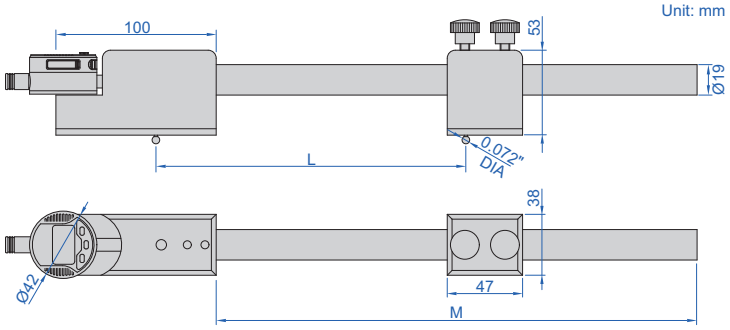


2261-5

application



Unit: mm



- Measure the groove diameter of flange ring groove
- Point height is adjustable
- Optional accessory:
  wireless transmitter code **7315-50M** (receiver is needed) page 8,
  groove standard block (code **6254**)

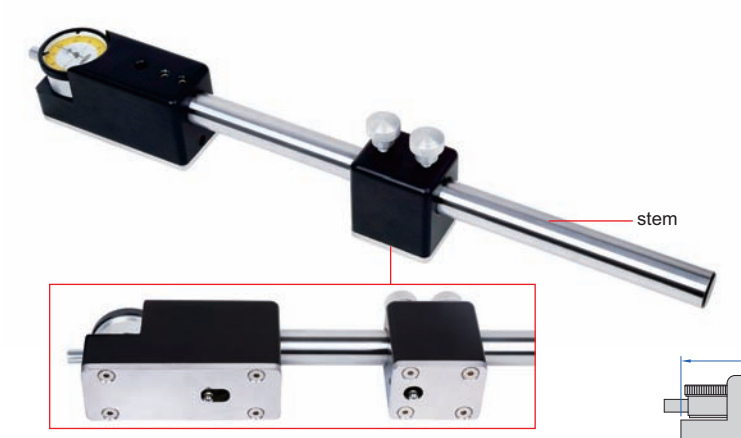
Code	Range (L)	Movable point stroke	Resolution	Repeatability	M
2261-5	2.6-13"/66-330mm	0.14"/3.5mm	0.00005"/0.001mm	0.002mm	12"/300mm

Stem (optional)

Code	M
2261-M24	24"/600mm
2261-M30	30"/750mm
2261-M36	36"/900mm

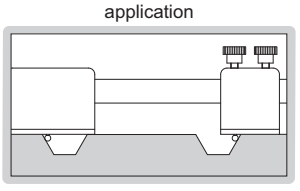
GROOVE DIAMETER MEASURING INSTRUMENTS

POINT DIAMETER CAN BE CUSTOM-MADE

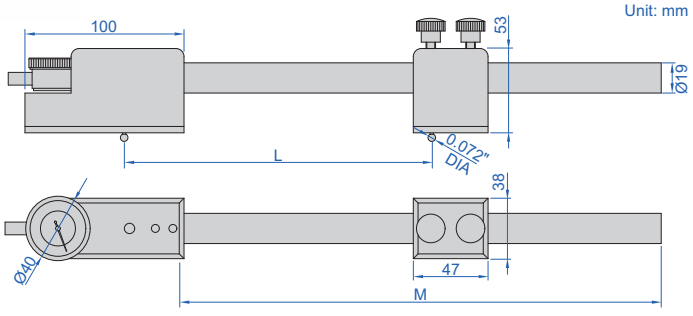


2251-5

application



Unit: mm



- Measure the groove diameter of flange ring groove
- Point height is adjustable
- Optional: groove standard block (code **6254**)

Code	Range (L)	Movable point stroke	Graduation	Repeatability	M
2251-5	2.6-13"/66-330mm	0.14"/3.5mm	0.01mm	0.005mm	12"/300mm
2251-5E	2.6-13"/66-330mm	0.14"/3.5mm	0.0005"	0.0002"	12"/300mm

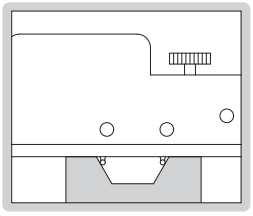
Stem (optional)

Code	M
2261-M24	24"/600mm
2261-M30	30"/750mm
2261-M36	36"/900mm

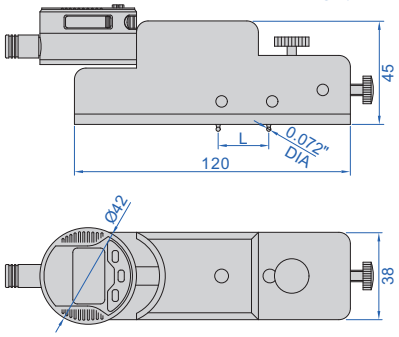
DIGITAL GROOVE WIDTH MEASURING INSTRUMENT

POINT DIAMETER CAN BE CUSTOM-MADE

application



Unit: mm





- Measure the groove width of flange ring groove
- Point height is adjustable
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8, groove standard block (code **6254**)

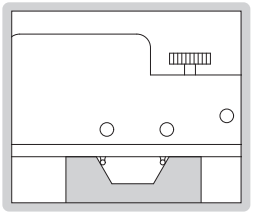
2260-4

Code	Range (L)	Movable point stroke	Resolution	Repeatability
2260-4	0.55-1.4"/14-35.5mm	0.16"/4mm	0.00005"/0.001mm	0.002mm

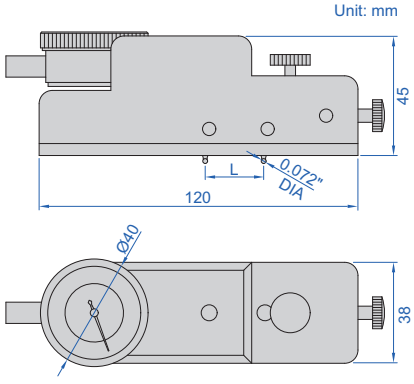
GROOVE WIDTH MEASURING INSTRUMENTS

POINT DIAMETER CAN BE CUSTOM-MADE

application



Unit: mm





- Measure the groove width of flange ring groove
- Point height is adjustable
- Optional: groove standard block (code **6254**)

2250-4

Code	Range (L)	Movable point stroke	Graduation	Repeatability
2250-4	0.55-1.4"/14-35.5mm	0.16"/4mm	0.01mm	0.005mm
2250-4E	0.55-1.4"/14-35.5mm	0.16"/4mm	0.0005"	0.0002"

STANDARD GROOVE BLOCK CODE 6254

CUSTOM-MADE



- Set zero of groove width and groove diameter measuring instruments (code **2250**, **2251**, **2260**, **2261**)

STANDARDS AND GAUGE BLOCKS

12



Gauge Blocks
Page 391-398



Caliper Inspection Gauge Block Sets
Page 399



Micrometer Inspection Gauge Block Sets
Page 400



Cylinder Gauge Blocks
Page 401



Gauge Block Accessories
Page 402-403



Gauge Block Holders
Page 403



Caliper/Height Gauge Checkers
Page 404



Angle Gauge Blocks
Page 405-406



Pin Gauges
Page 406-412



Pin Gauges With Handle
Page 409/412



Pin Gauge Handles
Page 413-415



Setting Rings
Page 416-418



Cylinder Gauges
Page 419



Adjustable Snap Gauges
Page 420



Plain Plug Gauges
Page 421-424



Spline Ring/Plug Gauges
Page 424-425

12 STANDARDS AND GAUGE BLOCKS



Measuring Balls
Page 425-427



Threaded Hole Location Gauges
Page 427-428



Thread Depth Gauges
Page 429-430



Thread Ring/Plug Gauges
Page 431-454



Semi-Automatic Thread Inspectors
Page 454-455



Handheld Thread Inspection Machines
Page 456-457



External Thread Measuring Devices
Page 458-459

Accuracy according to ISO3650

Nominal length (mm)	Grade 0		Grade 1		Grade 2	
	Limit deviation of length	Tolerance for the variation in length	Limit deviation of length	Tolerance for the variation in length	Limit deviation of length	Tolerance for the variation in length
over 0.5 to 10	±0.12μm	0.10μm	±0.20μm	0.16μm	±0.45μm	0.30μm
over 10 to 25	±0.14μm	0.10μm	±0.30μm	0.16μm	±0.60μm	0.30μm
over 25 to 50	±0.20μm	0.10μm	±0.40μm	0.18μm	±0.80μm	0.30μm
over 50 to 75	±0.25μm	0.12μm	±0.50μm	0.18μm	±1.00μm	0.35μm
over 75 to 100	±0.30μm	0.12μm	±0.60μm	0.20μm	±1.20μm	0.35μm
over 100 to 150	±0.40μm	0.14μm	±0.80μm	0.20μm	±1.60μm	0.40μm
over 150 to 200	±0.50μm	0.16μm	±1.00μm	0.25μm	±2.00μm	0.40μm
over 200 to 250	±0.60μm	0.16μm	±1.20μm	0.25μm	±2.40μm	0.45μm
over 250 to 300	±0.70μm	0.18μm	±1.40μm	0.25μm	±2.80μm	0.50μm
over 300 to 400	±0.90μm	0.20μm	±1.80μm	0.30μm	±3.60μm	0.50μm
over 400 to 500	±1.10μm	0.25μm	±2.20μm	0.35μm	±4.40μm	0.60μm
over 500 to 600	±1.30μm	0.25μm	±2.60μm	0.40μm	±5.00μm	0.70μm
over 600 to 700	±1.50μm	0.30μm	±3.00μm	0.45μm	±6.00μm	0.70μm
over 700 to 800	±1.70μm	0.30μm	±3.40μm	0.50μm	±6.50μm	0.80μm
over 800 to 900	±1.90μm	0.35μm	±3.80μm	0.50μm	±7.50μm	0.90μm
over 900 to 1000	±2.00μm	0.40μm	±4.20μm	0.60μm	±8.00μm	1.00μm

Grade and application

Grade	Application
0	To be used as basic standards in calibration laboratories by skilled inspection staff, to calibrate or set high accuracy measuring instruments, to calibrate gauge blocks of grade 1 and 2.
1	To be used in inspection rooms, to check gauges, inspect high accuracy parts and set measuring instruments.
2	To be used in workshops, to check production gauges, set measuring instruments and mount tools.

INSPECTION CERTIFICATE

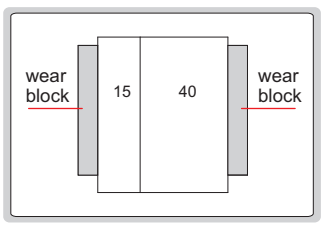
WEAR BLOCK SETS



4111-2

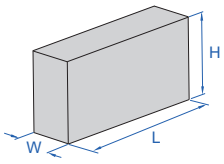
- Protect the measuring surfaces of gauge blocks from excessive wear
- Meet ISO3650
- Supplied with manufacturer inspection certificate

Blocks per set	Size	Material	Code	
			Grade 0	Grade 1
2	1.0mm	ceramic	**4111-1**	**4111-11**
2	1.0mm	alloy steel	**4111-1A**	**4111-11A**
2	2.0mm	ceramic	**4111-2**	**4111-12**
2	2.0mm	alloy steel	**4111-2A**	**4111-12A**



CERAMIC GAUGE BLOCK SETS

INSPECTION CERTIFICATE



Dimension:

Size (L)	W	H
0.5≤L≤10mm	9mm	30mm
L>10mm	9mm	35mm



4105-87

- Made of ceramic, extremely wear resistance and corrosion resistance, excellent dimension stability
- Meet ISO3650
- Supplied with manufacturer inspection certificate

Blocks per set	Gauge blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
112	1.0005		1	4105-112	4105-1112
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
103	1.005		1	4105-103	4105-1103
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
88	1.0005		1	4105-88	4105-188
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-100	10	10		
87	1.001-1.009	0.001	9	4105-87	4105-187
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-100	10	10		
76	1.005		1	4105-76	4105-176
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-40	10	4		
	50-100	25	3		
56	0.5		1	4105-56	4105-156
	1.001-1.009	0.001	9		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
	25-100	25	4		

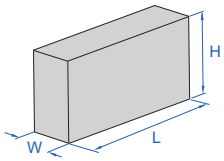
Blocks per set	Gauge blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
47	1.005		1	4105-47A	4105-147A
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
	25-100	25	4		
47	1.005		1	4105-47	4105-147
	1.01-1.19	0.01	19		
	1.2-1.9	0.1	8		
	1-9	1	9		
	10-100	10	10		
46	1.001-1.009	0.001	9	4105-46	4105-146
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-100	10	10		
34	1.0005		1	4105-34	4105-134
	1.001-1.009	0.001	9		
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-5	1	5		
	10		1		
32	1.005		1	4105-32	4105-132
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-30	10	3		
	50		1		

INSPECTION CERTIFICATE

CERAMIC INDIVIDUAL GAUGE BLOCKS



4106-A80



Dimension:

Size (L)	W	H
0.5≤L≤10mm	9mm	30mm
L>10mm	9mm	35mm

- Grade 0 and 1 gauge blocks are available
- Made of ceramic, extremely wear resistance and corrosion resistance
- Meet ISO3650
- Supplied with manufacturer inspection certificate

Code explanation:

4106-X□□□□□

→ **A for grade 0**

→ **B for grade 1**

Code examples:

Size (L)	Grade	Code
0.5mm	0	4106-AD5
10mm	1	4106-B10

Size	Code
0.5mm	4106-XD5
1mm	4106-X1
1.0005mm	4106-X1D0005
1.001mm	4106-X1D001
1.002mm	4106-X1D002
1.003mm	4106-X1D003
1.004mm	4106-X1D004
1.005mm	4106-X1D005
1.006mm	4106-X1D006
1.007mm	4106-X1D007
1.008mm	4106-X1D008
1.009mm	4106-X1D009
1.01mm	4106-X1D01
1.02mm	4106-X1D02
1.03mm	4106-X1D03
1.04mm	4106-X1D04
1.05mm	4106-X1D05
1.06mm	4106-X1D06
1.07mm	4106-X1D07
1.08mm	4106-X1D08
1.09mm	4106-X1D09
1.1mm	4106-X1D1
1.11mm	4106-X1D11
1.12mm	4106-X1D12
1.13mm	4106-X1D13
1.14mm	4106-X1D14
1.15mm	4106-X1D15
1.16mm	4106-X1D16
1.17mm	4106-X1D17
1.18mm	4106-X1D18
1.19mm	4106-X1D19
1.2mm	4106-X1D2
1.21mm	4106-X1D21
1.22mm	4106-X1D22

Size	Code
1.23mm	4106-X1D23
1.24mm	4106-X1D24
1.25mm	4106-X1D25
1.26mm	4106-X1D26
1.27mm	4106-X1D27
1.28mm	4106-X1D28
1.29mm	4106-X1D29
1.3mm	4106-X1D3
1.31mm	4106-X1D31
1.32mm	4106-X1D32
1.33mm	4106-X1D33
1.34mm	4106-X1D34
1.35mm	4106-X1D35
1.36mm	4106-X1D36
1.37mm	4106-X1D37
1.38mm	4106-X1D38
1.39mm	4106-X1D39
1.4mm	4106-X1D4
1.41mm	4106-X1D41
1.42mm	4106-X1D42
1.43mm	4106-X1D43
1.44mm	4106-X1D44
1.45mm	4106-X1D45
1.46mm	4106-X1D46
1.47mm	4106-X1D47
1.48mm	4106-X1D48
1.49mm	4106-X1D49
1.5mm	4106-X1D5
1.6mm	4106-X1D6
1.7mm	4106-X1D7
1.8mm	4106-X1D8
1.9mm	4106-X1D9
2mm	4106-X2
2.5mm	4106-X2D5

Size	Code
3mm	4106-X3
3.5mm	4106-X3D5
4mm	4106-X4
4.5mm	4106-X4D5
5mm	4106-X5
5.1mm	4106-X5D1
5.5mm	4106-X5D5
6mm	4106-X6
6.5mm	4106-X6D5
7mm	4106-X7
7.5mm	4106-X7D5
7.7mm	4106-X7D7
8mm	4106-X8
8.5mm	4106-X8D5
9mm	4106-X9
9.5mm	4106-X9D5
10mm	4106-X10
10.3mm	4106-X10D3
10.5mm	4106-X10D5
11mm	4106-X11
11.5mm	4106-X11D5
12mm	4106-X12
12.5mm	4106-X12D5
12.9mm	4106-X12D9
13mm	4106-X13
13.5mm	4106-X13D5
14mm	4106-X14
14.5mm	4106-X14D5
15mm	4106-X15
15.5mm	4106-X15D5
16mm	4106-X16
16.5mm	4106-X16D5
17mm	4106-X17
17.5mm	4106-X17D5

Size	Code
17.6mm	4106-X17D6
18mm	4106-X18
18.5mm	4106-X18D5
19mm	4106-X19
19.5mm	4106-X19D5
20mm	4106-X20
20.2mm	4106-X20D2
20.5mm	4106-X20D5
21mm	4106-X21
21.5mm	4106-X21D5
22mm	4106-X22
22.5mm	4106-X22D5
22.8mm	4106-X22D8
23mm	4106-X23
23.5mm	4106-X23D5
24mm	4106-X24
24.5mm	4106-X24D5
25mm	4106-X25
30mm	4106-X30
40mm	4106-X40
41.3mm	4106-X41D3
50mm	4106-X50
60mm	4106-X60
70mm	4106-X70
75mm	4106-X75
80mm	4106-X80
90mm	4106-X90
100mm	4106-X100
125mm	4106-X125
131.4mm	4106-X131D4
150mm	4106-X150

CERAMIC INDIVIDUAL GAUGE BLOCKS

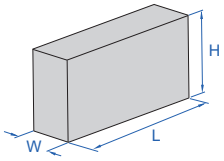
INSIZE PLUS

INSPECTION CERTIFICATE

CUSTOM-MADE
CAN SUPPLY ANY SIZES FROM
0.5 TO 100MM, SUCH AS 70.672MM



4103-A80



Dimension:

Size (L)	W	H
0.5≤L≤10mm	9mm	30mm
L>10mm	9mm	35mm

- Grade K, 0 and 1 gauge blocks are available
- Made of ceramic, extremely wear resistance and corrosion resistance
- Meet ISO3650
- Supplied with manufacturer inspection certificate

Code explanation:

4103-X□□□□□

- **K for grade K**
- **A for grade 0**
- **B for grade 1**

Code examples:

Size (L)	Grade	Code
0.5mm	K	4103-KD5
10mm	0	4103-A10
10mm	1	4103-B10

Size	Code
0.5mm	4103-XD5
1mm	4103-X1
1.0005mm	4103-X1D0005
1.001mm	4103-X1D001
1.002mm	4103-X1D002
1.003mm	4103-X1D003
1.004mm	4103-X1D004
1.005mm	4103-X1D005
1.006mm	4103-X1D006
1.007mm	4103-X1D007
1.008mm	4103-X1D008
1.009mm	4103-X1D009
1.01mm	4103-X1D01
1.02mm	4103-X1D02
1.03mm	4103-X1D03
1.04mm	4103-X1D04
1.05mm	4103-X1D05
1.06mm	4103-X1D06
1.07mm	4103-X1D07
1.08mm	4103-X1D08
1.09mm	4103-X1D09
1.1mm	4103-X1D1
1.11mm	4103-X1D11
1.12mm	4103-X1D12
1.13mm	4103-X1D13
1.14mm	4103-X1D14
1.15mm	4103-X1D15
1.16mm	4103-X1D16
1.17mm	4103-X1D17
1.18mm	4103-X1D18
1.19mm	4103-X1D19
1.2mm	4103-X1D2
1.21mm	4103-X1D21
1.22mm	4103-X1D22

Size	Code
1.23mm	4103-X1D23
1.24mm	4103-X1D24
1.25mm	4103-X1D25
1.26mm	4103-X1D26
1.27mm	4103-X1D27
1.28mm	4103-X1D28
1.29mm	4103-X1D29
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1.36mm	4103-X1D36
1.37mm	4103-X1D37
1.38mm	4103-X1D38
1.39mm	4103-X1D39
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1.42mm	4103-X1D42
1.43mm	4103-X1D43
1.44mm	4103-X1D44
1.45mm	4103-X1D45
1.46mm	4103-X1D46
1.47mm	4103-X1D47
1.48mm	4103-X1D48
1.49mm	4103-X1D49
1.5mm	4103-X1D5
1.6mm	4103-X1D6
1.7mm	4103-X1D7
1.8mm	4103-X1D8
1.9mm	4103-X1D9
2mm	4103-X2
2.5mm	4103-X2D5

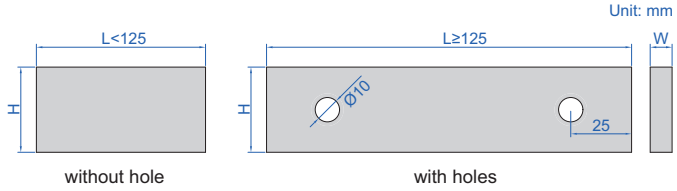
Size	Code
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3.5mm	4103-X3D5
4mm	4103-X4
4.5mm	4103-X4D5
5mm	4103-X5
5.5mm	4103-X5D5
6mm	4103-X6
6.5mm	4103-X6D5
7mm	4103-X7
7.5mm	4103-X7D5
8mm	4103-X8
8.5mm	4103-X8D5
9mm	4103-X9
9.5mm	4103-X9D5
10mm	4103-X10
10.5mm	4103-X10D5
11mm	4103-X11
11.5mm	4103-X11D5
12mm	4103-X12
12.5mm	4103-X12D5
13mm	4103-X13
13.5mm	4103-X13D5
14mm	4103-X14
14.5mm	4103-X14D5
15mm	4103-X15
15.5mm	4103-X15D5
16mm	4103-X16
16.5mm	4103-X16D5
17mm	4103-X17
17.5mm	4103-X17D5
18mm	4103-X18
18.5mm	4103-X18D5
19mm	4103-X19
19.5mm	4103-X19D5

Size	Code
20mm	4103-X20
20.5mm	4103-X20D5
21mm	4103-X21
21.5mm	4103-X21D5
22mm	4103-X22
22.5mm	4103-X22D5
23mm	4103-X23
23.5mm	4103-X23D5
24mm	4103-X24
24.5mm	4103-X24D5
25mm	4103-X25
30mm	4103-X30
40mm	4103-X40
50mm	4103-X50
60mm	4103-X60
70mm	4103-X70
75mm	4103-X75
80mm	4103-X80
90mm	4103-X90
100mm	4103-X100

STEEL GAUGE BLOCK SETS

INSPECTION CERTIFICATE

Unit: mm



Dimension:

Size (L)	W	H
0.5≤L≤10mm	9mm	30mm
L>10mm	9mm	35mm

Code example:
"**-122**" stands for "**4100-122**"

- Made of alloy steel
- Meet ISO3650
- Gauge blocks ≥125mm have clamping holes
- Supplied with manufacturer inspection certificate



4100-87

POPULAR MODEL

Blocks per set	Gauge blocks included in set			Code (4100)		
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1	Grade 2
122	1.0005		1	-122	-1122	-2122
	1.001-1.009	0.001	9			
	1.01-1.49	0.01	49			
	1.6-1.9	0.1	4			
	0.5-24.5	0.5	49			
	30-100	10	8			
	25-75	50	2			
112	1.0005		1	-112	-1112	-2112
	1.001-1.009	0.001	9			
	1.01-1.49	0.01	49			
	0.5-24.5	0.5	49			
	25-100	25	4			
103	1.005		1	-103	-1103	-2103
	1.01-1.49	0.01	49			
	0.5-24.5	0.5	49			
	25-100	25	4			
88	1.0005		1	-88	-188	-288
	1.001-1.009	0.001	9			
	1.01-1.49	0.01	49			
	0.5-9.5	0.5	19			
	10-100	10	10			
87	1.001-1.009	0.001	9	-87	-187	-287
	1.01-1.49	0.01	49			
	0.5-9.5	0.5	19			
	10-100	10	10			
83	0.5		1	-83	-183	-283
	1		1			
	1.005		1			
	1.01-1.49	0.01	49			
	1.5-1.9	0.1	5			
	2-9.5	0.5	16			
	10-100	10	10			
76	1.005		1	-76	-176	-276
	1.01-1.49	0.01	49			
	0.5-9.5	0.5	19			
	10-40	10	4			
	50-100	25	3			

Blocks per set	Gauge blocks included in set			Code (4100)		
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1	Grade 2
56	0.5		1	-56	-156	-256
	1.001-1.009	0.001	9			
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-24	1	24			
	25-100	25	4			
47	1.005		1	-47A	-147A	-247A
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-24	1	24			
	25-100	25	4			
47	1.005		1	-47	-147	-247
	1.01-1.19	0.01	19			
	1.2-1.9	0.1	8			
	1-9	1	9			
	10-100	10	10			
46	1.001-1.009	0.001	9	-46	-146	-246
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-9	1	9			
	10-100	10	10			
34	1.0005		1	-34	-134	-234
	1.001-1.009	0.001	9			
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-5	1	5			
	10		1			
32	1.005		1	-32	-132	-232
	1.01-1.09	0.01	9			
	1.1-1.9	0.1	9			
	1-9	1	9			
	10-30	10	3			
	50		1			
9	1.001-1.009	0.001	9	-9	-19	-29
9	0.991-0.999	0.001	9	-9A	-19A	-29A
8	125-175	25	3	-8	-18	-28
	200-250	50	2			
	300-500	100	3			

STEEL INDIVIDUAL GAUGE BLOCKS

INSPECTION CERTIFICATE

CUSTOM-MADE
CAN SUPPLY ANY SIZES FROM
0.5 TO 1000MM, SUCH AS 72.672MM



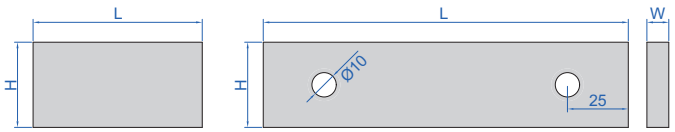
4101-A70



4101-A200

- Grade 0, 1 and 2 gauge blocks are available
- Made of alloy steel
- Meet ISO3650
- Gauge blocks with clamping holes: 125, 150, 175, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000mm
- Supplied with manufacturer inspection certificate

Unit: mm



without hole　　with holes

Code explanation:

4101-X□□□□□

- A for grade 0
- B for grade 1
- C for grade 2

Code examples:

Size (L)	Grade	Code
0.5mm	0	4101-AD5
1mm	1	4101-B1
10.5mm	2	4101-C10D5

Dimension:

Size (L)	W	H
0.5≤L≤10mm	9mm	30mm
L>10mm	9mm	35mm

Size	Code
0.5mm	4101-XD5
0.991mm	4101-XD991
0.992mm	4101-XD992
0.993mm	4101-XD993
0.994mm	4101-XD994
0.995mm	4101-XD995
0.996mm	4101-XD996
0.997mm	4101-XD997
0.998mm	4101-XD998
0.999mm	4101-XD999
1mm	4101-X1
1.0005mm	4101-X1D0005
1.001mm	4101-X1D001
1.002mm	4101-X1D002
1.003mm	4101-X1D003
1.004mm	4101-X1D004
1.005mm	4101-X1D005
1.006mm	4101-X1D006
1.007mm	4101-X1D007
1.008mm	4101-X1D008
1.009mm	4101-X1D009
1.01mm	4101-X1D01
1.02mm	4101-X1D02
1.03mm	4101-X1D03
1.04mm	4101-X1D04
1.05mm	4101-X1D05
1.06mm	4101-X1D06
1.07mm	4101-X1D07
1.08mm	4101-X1D08
1.09mm	4101-X1D09
1.1mm	4101-X1D1
1.11mm	4101-X1D11
1.12mm	4101-X1D12
1.13mm	4101-X1D13
1.14mm	4101-X1D14
1.15mm	4101-X1D15
1.16mm	4101-X1D16
1.17mm	4101-X1D17
1.18mm	4101-X1D18

Size	Code
1.19mm	4101-X1D19
1.2mm	4101-X1D2
1.21mm	4101-X1D21
1.22mm	4101-X1D22
1.23mm	4101-X1D23
1.24mm	4101-X1D24
1.25mm	4101-X1D25
1.26mm	4101-X1D26
1.27mm	4101-X1D27
1.28mm	4101-X1D28
1.29mm	4101-X1D29
1.3mm	4101-X1D3
1.31mm	4101-X1D31
1.32mm	4101-X1D32
1.33mm	4101-X1D33
1.34mm	4101-X1D34
1.35mm	4101-X1D35
1.36mm	4101-X1D36
1.37mm	4101-X1D37
1.38mm	4101-X1D38
1.39mm	4101-X1D39
1.4mm	4101-X1D4
1.41mm	4101-X1D41
1.42mm	4101-X1D42
1.43mm	4101-X1D43
1.44mm	4101-X1D44
1.45mm	4101-X1D45
1.46mm	4101-X1D46
1.47mm	4101-X1D47
1.48mm	4101-X1D48
1.49mm	4101-X1D49
1.5mm	4101-X1D5
1.6mm	4101-X1D6
1.7mm	4101-X1D7
1.8mm	4101-X1D8
1.9mm	4101-X1D9
2mm	4101-X2
2.5mm	4101-X2D5
3mm	4101-X3

Size	Code
3.5mm	4101-X3D5
4mm	4101-X4
4.5mm	4101-X4D5
5mm	4101-X5
5.1mm	4101-X5D1
5.5mm	4101-X5D5
6mm	4101-X6
6.5mm	4101-X6D5
7mm	4101-X7
7.5mm	4101-X7D5
7.7mm	4101-X7D7
8mm	4101-X8
8.5mm	4101-X8D5
9mm	4101-X9
9.5mm	4101-X9D5
10mm	4101-X10
10.3mm	4101-X10D3
10.5mm	4101-X10D5
11mm	4101-X11
11.5mm	4101-X11D5
12mm	4101-X12
12.5mm	4101-X12D5
12.9mm	4101-X12D9
13mm	4101-X13
13.5mm	4101-X13D5
14mm	4101-X14
14.5mm	4101-X14D5
15mm	4101-X15
15.5mm	4101-X15D5
16mm	4101-X16
16.5mm	4101-X16D5
17mm	4101-X17
17.5mm	4101-X17D5
17.6mm	4101-X17D6
18mm	4101-X18
18.5mm	4101-X18D5
19mm	4101-X19
19.5mm	4101-X19D5
20mm	4101-X20

Size	Code
20.2mm	4101-X20D2
20.5mm	4101-X20D5
21mm	4101-X21
21.5mm	4101-X21D5
22mm	4101-X22
22.5mm	4101-X22D5
22.8mm	4101-X22D8
23mm	4101-X23
23.5mm	4101-X23D5
24mm	4101-X24
24.5mm	4101-X24D5
25mm	4101-X25
30mm	4101-X30
35mm	4101-X35
40mm	4101-X40
41.3mm	4101-X41D3
45mm	4101-X45
50mm	4101-X50
60mm	4101-X60
70mm	4101-X70
75mm	4101-X75
80mm	4101-X80
90mm	4101-X90
100mm	4101-X100
125mm	4101-X125
131.4mm	4101-X131D4
150mm	4101-X150
175mm	4101-X175
200mm	4101-X200
250mm	4101-X250
300mm	4101-X300
400mm	4101-X400
500mm	4101-X500
600mm	4101-X600
700mm	4101-X700
750mm	4101-X750
800mm	4101-X800
900mm	4101-X900
1000mm	4101-X1000

INSPECTION CERTIFICATE

STEEL INDIVIDUAL GAUGE BLOCKS

INSIZE PLUS

CUSTOM-MADE
CAN SUPPLY ANY SIZES FROM
0.1 TO 1000MM, SUCH AS 72.672MM



4104-A70



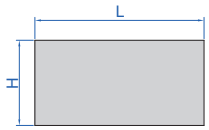
4104-A200

Code explanation:

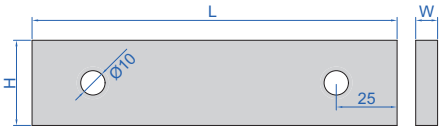
4104-X□□□□□

- **K for grade K**
- **A for grade 0**
- **B for grade 1**

Unit: mm



without hole



with holes

Code examples:

Size (L)	Grade	Code
0.5mm	**K**	**4104-KD5**
1mm	**0**	**4104-A1**
10.5mm	**1**	**4104-B10D5**

Dimension:

Size (L)	W	H
0.5≤L≤10mm	9mm	30mm
L>10mm	9mm	35mm

- Grade K, 0 and 1 gauge blocks are available
- Made of alloy steel
- Meet ISO3650
- Gauge blocks with clamping holes: 125, 150, 175, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000mm
- Supplied with manufacturer inspection certificate

Size	Code
0.1mm	4104-XD1
0.2mm	4104-XD2
0.3mm	4104-XD3
0.4mm	4104-XD4
0.5mm	4104-XD5
1mm	4104-X1
1.0005mm	4104-X1D0005
1.001mm	4104-X1D001
1.002mm	4104-X1D002
1.003mm	4104-X1D003
1.004mm	4104-X1D004
1.005mm	4104-X1D005
1.006mm	4104-X1D006
1.007mm	4104-X1D007
1.008mm	4104-X1D008
1.009mm	4104-X1D009
1.01mm	4104-X1D01
1.02mm	4104-X1D02
1.03mm	4104-X1D03
1.04mm	4104-X1D04
1.05mm	4104-X1D05
1.06mm	4104-X1D06
1.07mm	4104-X1D07
1.08mm	4104-X1D08
1.09mm	4104-X1D09
1.1mm	4104-X1D1
1.11mm	4104-X1D11
1.12mm	4104-X1D12
1.13mm	4104-X1D13
1.14mm	4104-X1D14
1.15mm	4104-X1D15
1.16mm	4104-X1D16
1.17mm	4104-X1D17
1.18mm	4104-X1D18
1.19mm	4104-X1D19
1.2mm	4104-X1D2

Size	Code
1.21mm	4104-X1D21
1.22mm	4104-X1D22
1.23mm	4104-X1D23
1.24mm	4104-X1D24
1.25mm	4104-X1D25
1.26mm	4104-X1D26
1.27mm	4104-X1D27
1.28mm	4104-X1D28
1.29mm	4104-X1D29
1.3mm	4104-X1D3
1.31mm	4104-X1D31
1.32mm	4104-X1D32
1.33mm	4104-X1D33
1.34mm	4104-X1D34
1.35mm	4104-X1D35
1.36mm	4104-X1D36
1.37mm	4104-X1D37
1.38mm	4104-X1D38
1.39mm	4104-X1D39
1.4mm	4104-X1D4
1.41mm	4104-X1D41
1.42mm	4104-X1D42
1.43mm	4104-X1D43
1.44mm	4104-X1D44
1.45mm	4104-X1D45
1.46mm	4104-X1D46
1.47mm	4104-X1D47
1.48mm	4104-X1D48
1.49mm	4104-X1D49
1.5mm	4104-X1D5
1.6mm	4104-X1D6
1.7mm	4104-X1D7
1.8mm	4104-X1D8
1.9mm	4104-X1D9
2mm	4104-X2
2.5mm	4104-X2D5

Size	Code
3mm	4104-X3
3.5mm	4104-X3D5
4mm	4104-X4
4.5mm	4104-X4D5
5mm	4104-X5
5.5mm	4104-X5D5
6mm	4104-X6
6.5mm	4104-X6D5
7mm	4104-X7
7.5mm	4104-X7D5
8mm	4104-X8
8.5mm	4104-X8D5
9mm	4104-X9
9.5mm	4104-X9D5
10mm	4104-X10
10.5mm	4104-X10D5
11mm	4104-X11
11.5mm	4104-X11D5
12mm	4104-X12
12.5mm	4104-X12D5
13mm	4104-X13
13.5mm	4104-X13D5
14mm	4104-X14
14.5mm	4104-X14D5
15mm	4104-X15
15.5mm	4104-X15D5
16mm	4104-X16
16.5mm	4104-X16D5
17mm	4104-X17
17.5mm	4104-X17D5
18mm	4104-X18
18.5mm	4104-X18D5
19mm	4104-X19
19.5mm	4104-X19D5
20mm	4104-X20
20.5mm	4104-X20D5

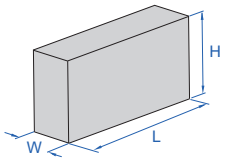
Size	Code
21mm	4104-X21
21.5mm	4104-X21D5
22mm	4104-X22
22.5mm	4104-X22D5
23mm	4104-X23
23.5mm	4104-X23D5
24mm	4104-X24
24.5mm	4104-X24D5
25mm	4104-X25
30mm	4104-X30
40mm	4104-X40
50mm	4104-X50
60mm	4104-X60
70mm	4104-X70
75mm	4104-X75
80mm	4104-X80
90mm	4104-X90
100mm	4104-X100
125mm	4104-X125
131.4mm	4104-X131D4
150mm	4104-X150
175mm	4104-X175
200mm	4104-X200
243.5mm	4104-X243D5
250mm	4104-X250
281.2mm	4104-X281D2
300mm	4104-X300
400mm	4104-X400
481.1mm	4104-X481D1
500mm	4104-X500
550mm	4104-X550
600mm	4104-X600
700mm	4104-X700
800mm	4104-X800
900mm	4104-X900
1000mm	4104-X1000

CARBIDE GAUGE BLOCK SETS

INSPECTION CERTIFICATE



4164-32



- Made of carbide, extremely wear resistance and corrosion resistance, excellent dimension stability
- Meet ISO3650
- Supplied with manufacturer inspection certificate

Dimension:

Size (L)	W	H
0.5≤L≤10mm	9mm	30mm
L>10mm	9mm	35mm

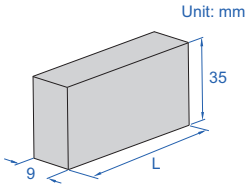
Blocks per set	Gauge blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
122	1.0005		1	4164-122	4164-1122
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	1.6-1.9	0.1	4		
	0.5-24.5	0.5	49		
	30-100	10	8		
	25-75	50	2		
112	1.0005		1	4164-112	4164-1112
	1.001-1.009	0.001	9		
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
103	1.005		1	4164-103	4164-1103
	1.01-1.49	0.01	49		
	0.5-24.5	0.5	49		
	25-100	25	4		
87	1.001-1.009	0.001	9	4164-87	4164-187
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-100	10	10		
83	0.5		1	4164-83	4164-183
	1		1		
	1.005		1		
	1.01-1.49	0.01	49		
	1.5-1.9	0.1	5		
	2-9.5	0.5	16		
	10-100	10	10		

Blocks per set	Gauge blocks included in set			Code	
	Size (mm)	Step (mm)	Quantity	Grade 0	Grade 1
76	1.005		1	4164-76	4164-176
	1.01-1.49	0.01	49		
	0.5-9.5	0.5	19		
	10-40	10	4		
	50-100	25	3		
47	1.005		1	4164-47A	4164-147A
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-24	1	24		
	25-100	25	4		
47	1.005		1	4164-47	4164-147
	1.01-1.19	0.01	19		
	1.2-1.9	0.1	8		
	1-9	1	9		
	10-100	10	10		
46	1.001-1.009	0.001	9	4164-46	4164-146
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-100	10	10		
32	1.005		1	4164-32	4164-132
	1.01-1.09	0.01	9		
	1.1-1.9	0.1	9		
	1-9	1	9		
	10-30	10	3		
	50		1		

CALIPER INSPECTION GAUGE BLOCK SET



4108-3005

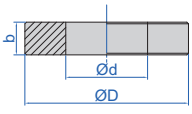


- Meet ISO3650/grade 2
- Supplied with manufacturer inspection certificate

(mm)

Code	Material	Gauge blocks included in set (L)	Applicable calipers
4108-3005	alloy steel	30, 41.3, 131.4, 243.5, 281.2	0-150, 0-200, 0-300

CALIPER INSPECTION GAUGE BLOCK AND RING GAUGE SETS



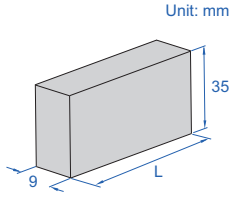
Ring gauge sizes:

diameter (Ød) *	b	ØD
Ø10mm	8mm	32mm
Ø25mm	14mm	53mm

*The size of the ring gauge actually supplied may have deviation. For example, the size Ø25mm may be 24.996mm



4176-30



- Gauge blocks meet ISO3650, ring gauges meet DIN2250-1:2008
- Supplied with manufacturer inspection certificate

Grade of gauge blocks: 2

(mm)

Code	Material	Gauge blocks included in set (L)	Ring gauges included in set (Ød)	Applicable calipers
4176-30	alloy steel	30, 41.3, 131.4	10, 25	0-150

Grade of gauge blocks: 1

(mm)

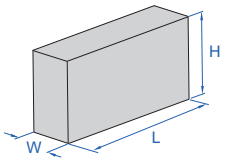
Code	Material	Gauge blocks included in set (L)	Ring gauges included in set (Ød)	Applicable calipers
4176-301	alloy steel	30, 41.3, 131.4	10, 25	0-150

MICROMETER INSPECTION GAUGE BLOCK SETS

INSPECTION CERTIFICATE



4107-10



- One piece of optical flat is included in **4107-10** and **4107-101**
- Meet ISO3650/grade 0
- Supplied with manufacturer inspection certificate

Dimension:

Size (L)	W	H
0.5≤L≤10mm	9mm	30mm
L>10mm	9mm	35mm

Code	Material	Gauge blocks included in set (mm)	Applicable micrometer	Optical flat
4107-10	ceramic	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25, optical flat	0-25mm	included
4107-101	alloy steel	2.5, 5.1, 7.7, 10.3, 12.9, 15, 17.6, 20.2, 22.8, 25, optical flat	0-25mm	included
4107-112	alloy steel	25, 27.5, 30.1, 32.7, 35.3, 37.9, 40, 42.6, 45.2, 47.8, 50	25-50mm	not included
4107-113	alloy steel	50, 52.5, 55.1, 57.7, 60.3, 62.9, 65, 67.6, 70.2, 72.8, 75	50-75mm	not included
4107-114	alloy steel	75, 77.5, 80.1, 82.7, 85.3, 87.9, 90, 92.6, 95.2, 97.8, 100	75-100mm	not included
4107-115	alloy steel	5.12, 10.24, 15.36, 21.5, 25, 30.12, 35.24, 40.36, 46.5, 50, 55.12, 60.24, 65.36, 71.5, 75, 80.12, 85.24, 90.36, 96.5, 100	0-100mm	not included

MICROMETER INSPECTION GAUGE BLOCK SET

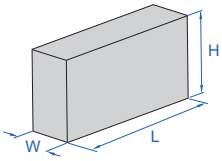
INSPECTION CERTIFICATE

application





4160-10



Dimension:

Size (L)	W	H
0.5≤L≤10mm	9mm	30mm
L>10mm	9mm	35mm

- Meet ISO3650/grade 0
- One piece of optical flat is included (size Ø30x12mm)
- Supplied with manufacturer inspection certificate

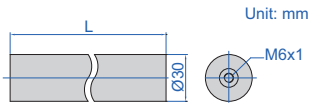
optical flat (included)



Code	Material	Gauge blocks included in set	Applicable micrometer
4160-10	alloy steel	2.5mm, 5.1mm, 7.7mm, 10.3mm, 12.9mm, 15mm, 17.6mm, 20.2mm, 22.8mm, 25mm	0-25mm

CYLINDER GAUGE BLOCKS

CUSTOM-MADE
CAN SUPPLY ANY LENGTH, SUCH AS 80.672MM



- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Meet ISO3650 grade 1
- Can be connected with M6x1 screw and combined to any sizes up to 4m



INSPECTION CERTIFICATE

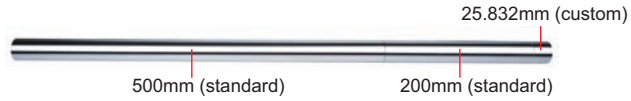
VIDEO

Code	Length (L)
4001-25*	25mm
4001-50*	50mm
4001-75*	75mm
4001-100*	100mm
4001-200*	200mm
4001-300*	300mm
4001-400*	400mm
4001-500*	500mm

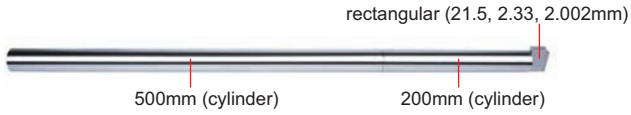
*Supplied with manufacturer inspection certificate

can be combined to any sizes up to 4m

Combination 1: combined by several standard size cylinder gauge blocks and one custom size cylinder gauge block
For example: 500 (standard) + 200 (standard) + 25.832 (custom)=725.832mm
Note: in order to reduce cost, custom size should be within 100mm



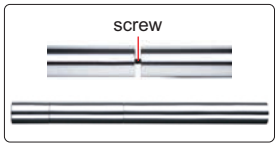
Combination 2: combined by standard size cylinder gauge blocks and rectangular gauge blocks
For example: 500 (cylinder) + 200 (cylinder) + 21.5 (rectangular) + 2.33 (rectangular) + 2.002 (rectangular)=725.832mm



high stability in vertical position, suitable for checking height gauges



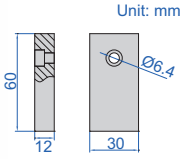
connected with M6x1mm screw



INTERNAL BLOCKS



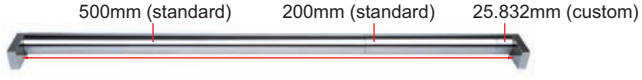
4001-A



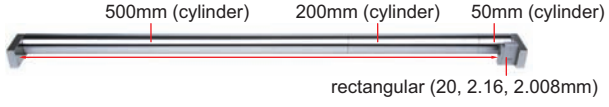
- Can be attached to cylinder and rectangular gauge blocks
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Supplied in a matched pair

Code	Size	Flatness
4001-A	12mm	0.2μm

Combination 1: combined by several standard size cylinder gauge blocks and one custom size cylinder gauge block
For example: 500 (standard) + 200 (standard) + 25.832 (custom)=725.832mm
Note: in order to reduce cost, custom size should be within 100mm



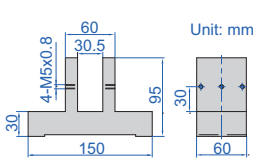
Combination 2: combined by standard size cylinder gauge blocks and rectangular gauge blocks
For example: 500 (cylinder) + 200 (cylinder) + 50 (rectangular) - 20 (rectangular) - 2.16 (rectangular) - 2.008 (rectangular)=725.832mm



BASE

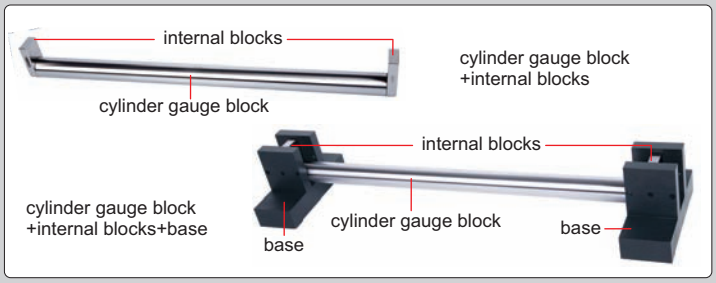


4001-B



Code	Remark
4001-B	supplied in pair

working with base

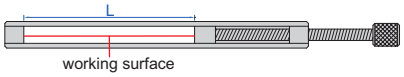


12

GAUGE BLOCK ACCESSORIES

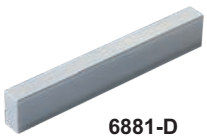


6881-A3

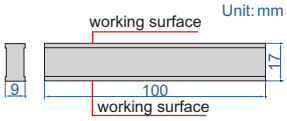


Code	Name	Clamping range* (L)
6881-A1	holder	3.5-29mm
6881-A2	holder	29-50mm
6881-A3	holder	50-100mm
6881-A4	holder	100-200mm
6881-A5	holder	200-300mm
6881-A6**	holder	300-500mm
6881-A7**	holder	500-750mm
6881-A8**	holder	750-1000mm

*The actual clamping range should deduct the width of jaws
Not suitable for base **6881-B



6881-D



Code	Name	Remark
6881-D	parallel jaw	made of carbide



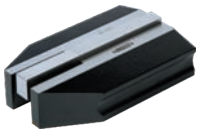
6881-S17

GAUGE BLOCK ACCESSORY SET

Code	Remark
6881-S17	17 pcs (including below items)

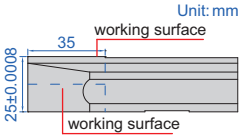
holder, 0-25mm (code 6881-A1)	1 pc
holder, 25-50mm (code 6881-A2)	1 pc
holder, 50-100mm (code 6881-A3)	1 pc
holder, 100-200mm (code 6881-A4)	1 pc
holder, 200-300mm (code 6881-A5)	1 pc
base (code 6881-B)	1 pc
plain jaw (code 6881-C)	1 pair
parallel jaw (code 6881-D)	1 pc
half round jaw, 2.5mm (code 6881-E1)	1 pair
half round jaw, 5.0mm (code 6881-E2)	1 pair
half round jaw, 6.0mm (code 6881-E3)	1 pair
scriber (code 6881-F)	1 pc
centre point (code 6881-G)	1 pc

VIDEO



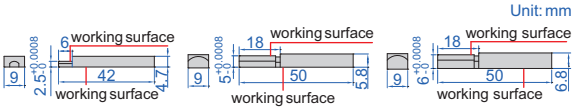
6881-B

Code	Name
6881-B	base





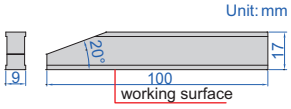
6881-E2



Code	Name	Size	Remark
6881-E1	half round jaw	2.5mm	made of carbide, supplied in pair
6881-E2	half round jaw	5.0mm	made of carbide, supplied in pair
6881-E3	half round jaw	6.0mm	made of carbide, supplied in pair



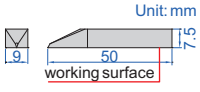
6881-C



Code	Name	Remark
6881-C	plain jaw	made of carbide, supplied in pair



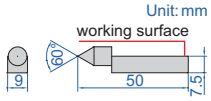
6881-F



Code	Name	Remark
6881-F	scriber	made of carbide

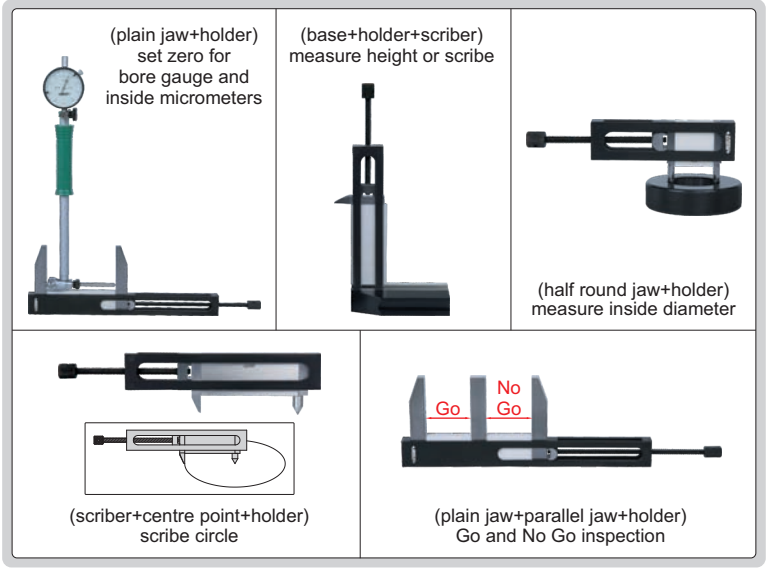


6881-G



Code	Name	Remark
6881-G	centre point	the tip is made of carbide

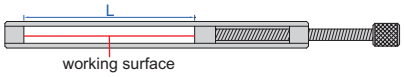
application



GAUGE BLOCK ACCESSORIES (BASIC TYPE)



6981-A3



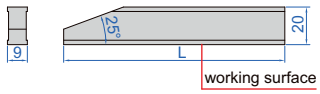
Code	Name	Clamping range* (L)
6981-A1	holder	0-25mm
6981-A2	holder	25-50mm
6981-A3	holder	50-100mm
6981-A4	holder	100-200mm
6981-A5	holder	200-300mm

*The actural clamping range should deduct the width of jaws

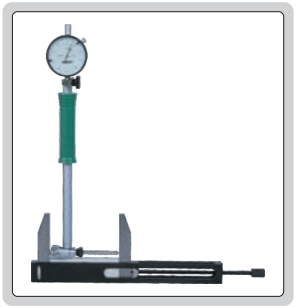


6981-C1

Unit: mm



application



Code	Name	Size	Remark
6981-C1	plain jaw	100mm	made of steel, supplied in pair
6981-C2	plain jaw	150mm	made of steel, supplied in pair

GAUGE BLOCK HOLDERS

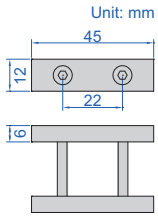
- Made of aluminum
- To be used with individual steel gauge blocks (code **4101**) as Go and No-Go gauge

Code	Applicable gauge block size
6883-1	1.5-5mm
6883-2	5-10mm
6883-3	10-15mm
6883-4	15-20mm
6883-5	20-25mm



6883-4

Unit: mm



to be used as Go and No-Go gauge



GAUGE BLOCK HOLDER

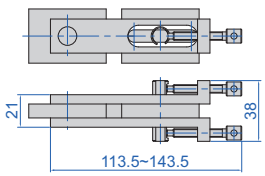
VIDEO

- For gauge blocks over 125mm with clamping holes
- Optional accessory: gauge block holder accessory, gauge block accessory (code **6881**)



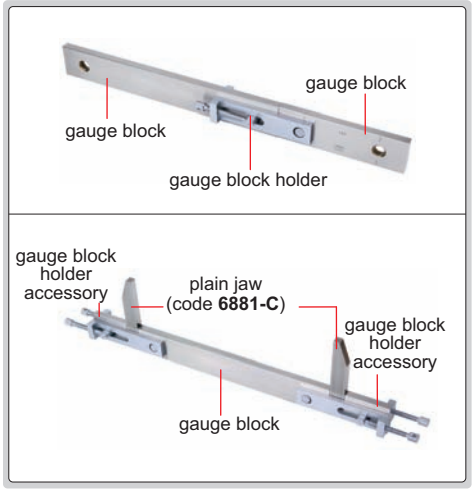
6886-1

Unit: mm



Code
6886-1

application

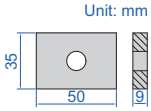


GAUGE BLOCK HOLDER ACCESSORY



6886-A

Unit: mm



Code
6886-A

12

CALIPER/HEIGHT GAUGE CHECKERS

INSPECTION CERTIFICATE



horizontal use



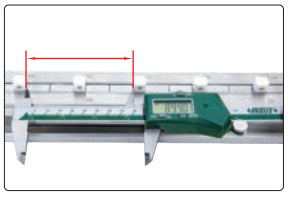
vertical use

6884-300A

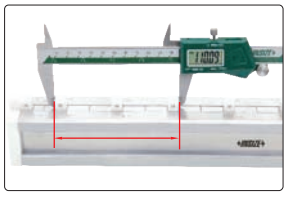
check height gauges



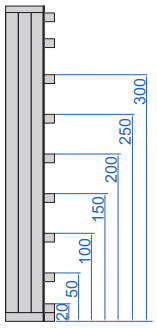
check upper jaws of calipers



check lower jaws of calipers

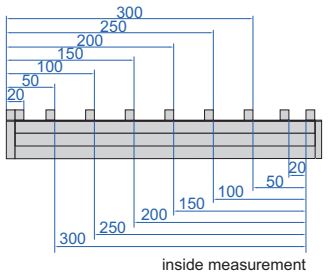


height measurement



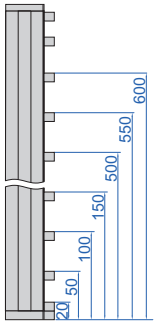
Unit: mm

outside measurement

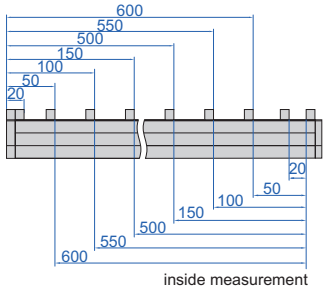


6884-300A

height measurement

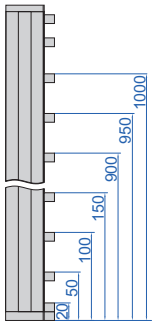


outside measurement

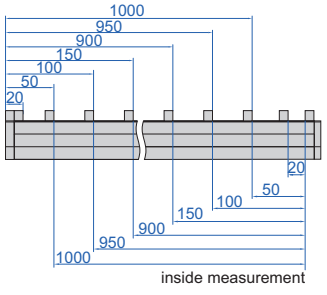


6884-600A

height measurement



outside measurement



6884-1000A

- To check calipers and height gauges
- Constructed with ceramic gauge blocks

(mm)

Code	Size	Range of inside measurement	Range of outside measurement	Range of height measurement	Accuracy
6884-300A*	0-300mm	20, 50, 100, 150, 200, 250, 300	20, 50, 100, 150, 200, 250, 300	20, 50, 100, 150, 200, 250, 300	±2μm
6884-600A*	0-600mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600	±3.5μm
6884-1000A*	0-1000mm	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000	20, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000	±5μm

*Supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE

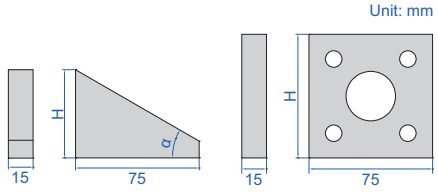
ANGLE GAUGE BLOCKS



4002-15

- Accuracy: ±2"
- To inspect protractor, taper gauge, index plate, index head and goniometer, can also be used to set angle
- Made of special alloy steel, hardness HRC64, high stability, wear resistance and easy combination
- Can be combined to any angle with interval 6 seconds after combination (6", 12", 18", ... , 360°)

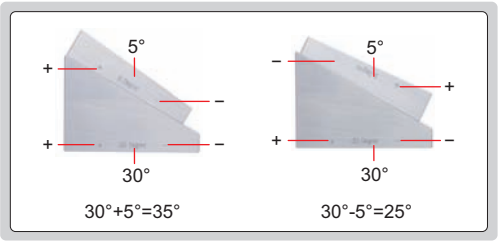
Unit: mm



Individual

Code	Angle (α)	H (mm)
4002-A1*	1°	11.5
4002-A3*	3°	14.0
4002-A5*	5°	16.5
4002-A9*	9°	22.0
4002-A15*	15°	30. 5
4002-A27*	27°	48.0
4002-A30*	30°	53.5
4002-A41*	41°	75.0
4002-A45*	45°	84.0
4002-B1*	1'	10.0
4002-B3*	3'	10.0
4002-B5*	5'	10.0
4002-B9*	9'	10.0
4002-B20*	20'	10.0
4002-B27*	27'	10.0
4002-B30*	30'	10.0
4002-C6*	6"	10.0
4002-C12*	12"	10.0
4002-C18*	18"	10.0
4002-C30*	30"	10.0
4002-D*	90°/90°/90°/90°	75.0

combination



set angle of plate

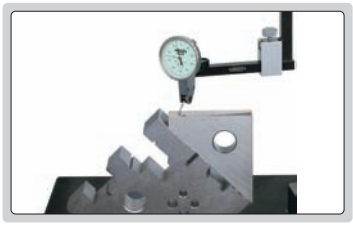


Set

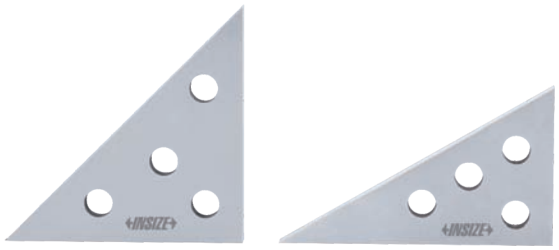
Code	Angle (α)	Total quantity
4002-13*	1°, 3°, 9°, 27°, 41°, 1', 3', 9', 27', 6", 18", 30", 90°/90°/90°/90°	13
4002-15*	1°, 3°, 5°, 15°, 30°, 45°, 1', 3', 5', 20', 30', 6", 12", 30", 90°/90°/90°/90°	15

*Supplied with manufacturer inspection certificate

inspect angle

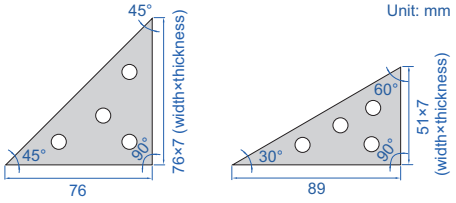


ANGLE BLOCK SET



6540-1

- For angle set-up in tooling, production and inspection
- Accuracy of angle: ±9 seconds
- Made of alloy steel
- Hardness HRC60±2



Code	Angle plates included	Angle
6540-1	2	45°, 45°, 90°
		30°, 60°, 90°

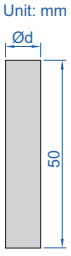
CARBIDE PIN GAUGE SETS



4194-10D

- Meet DIN2269, grade 1
- Made of carbide
- Hardness HRA90-90.5
- Diameter accuracy: ±1μm

Code	Diameter Ød (mm)	Step	Pin gauges per set
4194-1S	0.30, 0.31, 0.32, ···· 1.00	0.01mm	71
4194-2S	1.00, 1.01, 1.02, ···· 2.00	0.01mm	101
4194-3S	2.00, 2.01, 2.02, ···· 3.00	0.01mm	101
4194-4S	3.00, 3.01, 3.02, ···· 4.00	0.01mm	101
4194-5S	4.00, 4.01, 4.02, ···· 5.00	0.01mm	101
4194-6S	5.00, 5.01, 5.02, ···· 6.00	0.01mm	101
4194-7S	6.00, 6.01, 6.02, ···· 7.00	0.01mm	101
4194-8S	7.00, 7.01, 7.02, ···· 8.00	0.01mm	101
4194-9S	8.00, 8.01, 8.02, ···· 9.00	0.01mm	101
4194-10S	9.00, 9.01, 9.02, ···· 10.00	0.01mm	101
4194-10D	10.00, 10.01, 10.02, ···· 10.50	0.01mm	51
4194-11	10.50, 10.51, 10.52, ···· 11.00	0.01mm	51
4194-11D	11.00, 11.01, 11.02, ···· 11.50	0.01mm	51
4194-12	11.50, 11.51, 11.52, ···· 12.00	0.01mm	51
4194-12D	12.00, 12.01, 12.02, ···· 12.50	0.01mm	51
4194-13	12.50, 12.51, 12.52, ···· 13.00	0.01mm	51
4194-13D	13.00, 13.01, 13.02, ···· 13.50	0.01mm	51
4194-14	13.50, 13.51, 13.52, ···· 14.00	0.01mm	51
4194-14D	14.00, 14.01, 14.02, ···· 14.50	0.01mm	51
4194-15	14.50, 14.51, 14.52, ···· 15.00	0.01mm	51

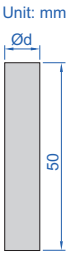


CERAMIC PIN GAUGE SETS

- Meet DIN2269, grade 1
- Made of ceramic, extremely wear resistance, corrosion resistance and dimensional stability
- Diameter accuracy: ±1μm



4169-3



Code	Diameter Ød (mm)	Step	Pin gauges per set
4169-2S	1.00, 1.01, 1.02, ···· 2.00	0.01mm	101
4169-3S	2.00, 2.01, 2.02, ···· 3.00	0.01mm	101
4169-4S	3.00, 3.01, 3.02, ···· 4.00	0.01mm	101
4169-5S	4.00, 4.01, 4.02, ···· 5.00	0.01mm	101
4169-6S	5.00, 5.01, 5.02, ···· 6.00	0.01mm	101
4169-7S	6.00, 6.01, 6.02, ···· 7.00	0.01mm	101
4169-8S	7.00, 7.01, 7.02, ···· 8.00	0.01mm	101
4169-9S	8.00, 8.01, 8.02, ···· 9.00	0.01mm	101
4169-10S	9.00, 9.01, 9.02, ···· 10.00	0.01mm	101

Code	Diameter Ød (mm)	Step	Pin gauges per set
4169-411	1.0, 1.1, 1.2, ···· 5.0	0.1mm	41
4169-511	5.0, 5.1, 5.2, ···· 10.0	0.1mm	51
4169-512	10.0, 10.1, 10.2, ···· 15.0	0.1mm	51
4169-513	15.0, 15.1, 15.2, ···· 20.0	0.1mm	51

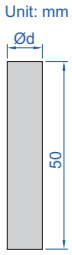
Code	Diameter Ød (mm)	Step	Pin gauges per set
4169-0D	0.30, 0.31, 0.32, ···· 0.50	0.01mm	21
4169-1	0.50, 0.51, 0.52, ···· 1.00	0.01mm	51
4169-1D	1.00, 1.01, 1.02, ···· 1.50	0.01mm	51
4169-2	1.50, 1.51, 1.52, ···· 2.00	0.01mm	51
4169-2D	2.00, 2.01, 2.02, ···· 2.50	0.01mm	51
4169-3	2.50, 2.51, 2.52, ···· 3.00	0.01mm	51
4169-3D	3.00, 3.01, 3.02, ···· 3.50	0.01mm	51
4169-4	3.50, 3.51, 3.52, ···· 4.00	0.01mm	51
4169-4D	4.00, 4.01, 4.02, ···· 4.50	0.01mm	51
4169-5	4.50, 4.51, 4.52, ···· 5.00	0.01mm	51
4169-5D	5.00, 5.01, 5.02, ···· 5.50	0.01mm	51
4169-6	5.50, 5.51, 5.52, ···· 6.00	0.01mm	51
4169-6D	6.00, 6.01, 6.02, ···· 6.50	0.01mm	51
4169-7	6.50, 6.51, 6.52, ···· 7.00	0.01mm	51
4169-7D	7.00, 7.01, 7.02, ···· 7.50	0.01mm	51
4169-8	7.50, 7.51, 7.52, ···· 8.00	0.01mm	51
4169-8D	8.00, 8.01, 8.02, ···· 8.50	0.01mm	51
4169-9	8.50, 8.51, 8.52, ···· 9.00	0.01mm	51
4169-9D	9.00, 9.01, 9.02, ···· 9.50	0.01mm	51
4169-10	9.50, 9.51, 9.52, ···· 10.00	0.01mm	51

Code	Diameter Ød (mm)	Step	Pin gauges per set
4169-10D	10.00, 10.01, 10.02, ···· 10.50	0.01mm	51
4169-11	10.50, 10.51, 10.52, ···· 11.00	0.01mm	51
4169-11D	11.00, 11.01, 11.02, ···· 11.50	0.01mm	51
4169-12	11.50, 11.51, 11.52, ···· 12.00	0.01mm	51
4169-12D	12.00, 12.01, 12.02, ···· 12.50	0.01mm	51
4169-13	12.50, 12.51, 12.52, ···· 13.00	0.01mm	51
4169-13D	13.00, 13.01, 13.02, ···· 13.50	0.01mm	51
4169-14	13.50, 13.51, 13.52, ···· 14.00	0.01mm	51
4169-14D	14.00, 14.01, 14.02, ···· 14.50	0.01mm	51
4169-15	14.50, 14.51, 14.52, ···· 15.00	0.01mm	51
4169-15D	15.00, 15.01, 15.02, ···· 15.50	0.01mm	51
4169-16	15.50, 15.51, 15.52, ···· 16.00	0.01mm	51
4169-16D	16.00, 16.01, 16.02, ···· 16.50	0.01mm	51
4169-17	16.50, 16.51, 16.52, ···· 17.00	0.01mm	51
4169-17D	17.00, 17.01, 17.02, ···· 17.50	0.01mm	51
4169-18	17.50, 17.51, 17.52, ···· 18.00	0.01mm	51
4169-18D	18.00, 18.01, 18.02, ···· 18.50	0.01mm	51
4169-19	18.50, 18.51, 18.52, ···· 19.00	0.01mm	51
4169-19D	19.00, 19.01, 19.02, ···· 19.50	0.01mm	51
4169-20	19.50, 19.51, 19.52, ···· 20.00	0.01mm	51

STEEL PIN GAUGE SETS

POPULAR MODEL

- Meet DIN2269, grade 1
- Made of alloy steel
- Hardness HRC62-65
- Diameter accuracy: ±1μm





4166-10

Code	Diameter Ød (mm)	Step	Pin gauges per set
4166-2S	1.00, 1.01, 1.02, ···· 2.00	0.01mm	101
4166-3S	2.00, 2.01, 2.02, ···· 3.00	0.01mm	101
4166-4S	3.00, 3.01, 3.02, ···· 4.00	0.01mm	101
4166-5S	4.00, 4.01, 4.02, ···· 5.00	0.01mm	101
4166-6S	5.00, 5.01, 5.02, ···· 6.00	0.01mm	101
4166-7S	6.00, 6.01, 6.02, ···· 7.00	0.01mm	101
4166-8S	7.00, 7.01, 7.02, ···· 8.00	0.01mm	101
4166-9S	8.00, 8.01, 8.02, ···· 9.00	0.01mm	101
4166-10S	9.00, 9.01, 9.02, ···· 10.00	0.01mm	101

Code	Diameter Ød (mm)	Step	Pin gauges per set
4166-411	1.0, 1.1, 1.2, ···· 5.0	0.1mm	41
4166-511	5.0, 5.1, 5.2, ···· 10.0	0.1mm	51
4166-512	10.0, 10.1, 10.2, ···· 15.0	0.1mm	51
4166-513	15.0, 15.1, 15.2, ···· 20.0	0.1mm	51

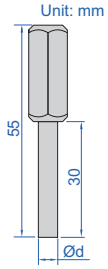
Code	Diameter Ød (mm)	Step	Pin gauges per set
4166-0D	0.20, 0.21, 0.22, ···· 0.50	0.01mm	31
4166-1	0.50, 0.51, 0.52, ···· 1.00	0.01mm	51
4166-1D	1.00, 1.01, 1.02, ···· 1.50	0.01mm	51
4166-2	1.50, 1.51, 1.52, ···· 2.00	0.01mm	51
4166-2D	2.00, 2.01, 2.02, ···· 2.50	0.01mm	51
4166-3	2.50, 2.51, 2.52, ···· 3.00	0.01mm	51
4166-3D	3.00, 3.01, 3.02, ···· 3.50	0.01mm	51
4166-4	3.50, 3.51, 3.52, ···· 4.00	0.01mm	51
4166-4D	4.00, 4.01, 4.02, ···· 4.50	0.01mm	51
4166-5	4.50, 4.51, 4.52, ···· 5.00	0.01mm	51
4166-5D	5.00, 5.01, 5.02, ···· 5.50	0.01mm	51
4166-6	5.50, 5.51, 5.52, ···· 6.00	0.01mm	51
4166-6D	6.00, 6.01, 6.02, ···· 6.50	0.01mm	51
4166-7	6.50, 6.51, 6.52, ···· 7.00	0.01mm	51
4166-7D	7.00, 7.01, 7.02, ···· 7.50	0.01mm	51
4166-8	7.50, 7.51, 7.52, ···· 8.00	0.01mm	51
4166-8D	8.00, 8.01, 8.02, ···· 8.50	0.01mm	51
4166-9	8.50, 8.51, 8.52, ···· 9.00	0.01mm	51
4166-9D	9.00, 9.01, 9.02, ···· 9.50	0.01mm	51
4166-10	9.50, 9.51, 9.52, ···· 10.00	0.01mm	51

Code	Diameter Ød (mm)	Step	Pin gauges per set
4166-10D	10.00, 10.01, 10.02, ···· 10.50	0.01mm	51
4166-11	10.50, 10.51, 10.52, ···· 11.00	0.01mm	51
4166-11D	11.00, 11.01, 11.02, ···· 11.50	0.01mm	51
4166-12	11.50, 11.51, 11.52, ···· 12.00	0.01mm	51
4166-12D	12.00, 12.01, 12.02, ···· 12.50	0.01mm	51
4166-13	12.50, 12.51, 12.52, ···· 13.00	0.01mm	51
4166-13D	13.00, 13.01, 13.02, ···· 13.50	0.01mm	51
4166-14	13.50, 13.51, 13.52, ···· 14.00	0.01mm	51
4166-14D	14.00, 14.01, 14.02, ···· 14.50	0.01mm	51
4166-15	14.50, 14.51, 14.52, ···· 15.00	0.01mm	51
4166-15D	15.00, 15.01, 15.02, ···· 15.50	0.01mm	51
4166-16	15.50, 15.51, 15.52, ···· 16.00	0.01mm	51
4166-16D	16.00, 16.01, 16.02, ···· 16.50	0.01mm	51
4166-17	16.50, 16.51, 16.52, ···· 17.00	0.01mm	51
4166-17D	17.00, 17.01, 17.02, ···· 17.50	0.01mm	51
4166-18	17.50, 17.51, 17.52, ···· 18.00	0.01mm	51
4166-18D	18.00, 18.01, 18.02, ···· 18.50	0.01mm	51
4166-19	18.50, 18.51, 18.52, ···· 19.00	0.01mm	51
4166-19D	19.00, 19.01, 19.02, ···· 19.50	0.01mm	51
4166-20	19.50, 19.51, 19.52, ···· 20.00	0.01mm	51

PIN GAUGE SETS WITH HANDLE



4266-5



- Meet DIN2269, grade 1
- Made of alloy steel
- Hardness HRC62-65
- Diameter accuracy: ±1μm

Code	Diameter Ød (mm)	Step	Pin gauges per set
4266-411	1.0, 1.1, 1.2, ···· 5.0	0.1mm	41
4266-511	5.0, 5.1, 5.2, ···· 10.0	0.1mm	51
4266-512	10.0, 10.1, 10.2, ···· 15.0	0.1mm	51
4266-513	15.0, 15.1, 15.2, ···· 20.0	0.1mm	51

Code	Diameter Ød (mm)	Step	Pin gauges per set
4266-2S	1.00, 1.01, 1.02, ···· 2.00	0.01mm	101
4266-3S	2.00, 2.01, 2.02, ···· 3.00	0.01mm	101
4266-4S	3.00, 3.01, 3.02, ···· 4.00	0.01mm	101
4266-5S	4.00, 4.01, 4.02, ···· 5.00	0.01mm	101
4266-6S	5.00, 5.01, 5.02, ···· 6.00	0.01mm	101
4266-7S	6.00, 6.01, 6.02, ···· 7.00	0.01mm	101
4266-8S	7.00, 7.01, 7.02, ···· 8.00	0.01mm	101
4266-9S	8.00, 8.01, 8.02, ···· 9.00	0.01mm	101
4266-10S	9.00, 9.01, 9.02, ···· 10.00	0.01mm	101

Code	Diameter Ød (mm)	Step	Pin gauges per set
4266-1D	1.00, 1.01, 1.02, ···· 1.50	0.01mm	51
4266-2	1.50, 1.51, 1.52, ···· 2.00	0.01mm	51
4266-2D	2.00, 2.01, 2.02, ···· 2.50	0.01mm	51
4266-3	2.50, 2.51, 2.52, ···· 3.00	0.01mm	51
4266-3D	3.00, 3.01, 3.02, ···· 3.50	0.01mm	51
4266-4	3.50, 3.51, 3.52, ···· 4.00	0.01mm	51
4266-4D	4.00, 4.01, 4.02, ···· 4.50	0.01mm	51
4266-5	4.50, 4.51, 4.52, ···· 5.00	0.01mm	51
4266-5D	5.00, 5.01, 5.02, ···· 5.50	0.01mm	51
4266-6	5.50, 5.51, 5.52, ···· 6.00	0.01mm	51
4266-6D	6.00, 6.01, 6.02, ···· 6.50	0.01mm	51
4266-7	6.50, 6.51, 6.52, ···· 7.00	0.01mm	51
4266-7D	7.00, 7.01, 7.02, ···· 7.50	0.01mm	51
4266-8	7.50, 7.51, 7.52, ···· 8.00	0.01mm	51
4266-8D	8.00, 8.01, 8.02, ···· 8.50	0.01mm	51
4266-9	8.50, 8.51, 8.52, ···· 9.00	0.01mm	51
4266-9D	9.00, 9.01, 9.02, ···· 9.50	0.01mm	51
4266-10	9.50, 9.51, 9.52, ···· 10.00	0.01mm	51
4266-10D	10.00, 10.01, 10.02, ···· 10.50	0.01mm	51

Code	Diameter Ød (mm)	Step	Pin gauges per set
4266-11	10.50, 10.51, 10.52, ···· 11.00	0.01mm	51
4266-11D	11.00, 11.01, 11.02, ···· 11.50	0.01mm	51
4266-12	11.50, 11.51, 11.52, ···· 12.00	0.01mm	51
4266-12D	12.00, 12.01, 12.02, ···· 12.50	0.01mm	51
4266-13	12.50, 12.51, 12.52, ···· 13.00	0.01mm	51
4266-13D	13.00, 13.01, 13.02, ···· 13.50	0.01mm	51
4266-14	13.50, 13.51, 13.52, ···· 14.00	0.01mm	51
4266-14D	14.00, 14.01, 14.02, ···· 14.50	0.01mm	51
4266-15	14.50, 14.51, 14.52, ···· 15.00	0.01mm	51
4266-15D	15.00, 15.01, 15.02, ···· 15.50	0.01mm	51
4266-16	15.50, 15.51, 15.52, ···· 16.00	0.01mm	51
4266-16D	16.00, 16.01, 16.02, ···· 16.50	0.01mm	51
4266-17	16.50, 16.51, 16.52, ···· 17.00	0.01mm	51
4266-17D	17.00, 17.01, 17.02, ···· 17.50	0.01mm	51
4266-18	17.50, 17.51, 17.52, ···· 18.00	0.01mm	51
4266-18D	18.00, 18.01, 18.02, ···· 18.50	0.01mm	51
4266-19	18.50, 18.51, 18.52, ···· 19.00	0.01mm	51
4266-19D	19.00, 19.01, 19.02, ···· 19.50	0.01mm	51
4266-20	19.50, 19.51, 19.52, ···· 20.00	0.01mm	51

CARBIDE INDIVIDUAL PIN GAUGES

INSPECTION CERTIFICATE

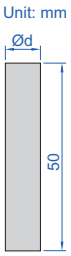
- Meet DIN2269, grade 1
- Diameter range: Ø0.300~Ø30.000mm with three decimal, for example 0.311mm, 5.562mm, 16.298mm
- Diameter accuracy: ±1μm
- Made of carbide
- Hardness HRA90-90.5

Code	Diameter range Ød (mm)
4193-□□□□□*	0.300~30.000

*Supplied with manufacturer inspection certificate



4193-8D015



Ordering examples:

Diameter	Code
0.311mm	4193-0D311
5.562mm	4193-5D562
16.298mm	4193-16D298

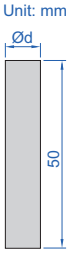
Note: “D” stands for “.”

CERAMIC INDIVIDUAL PIN GAUGES WITH TWO DECIMAL PLACES (0.01MM STEP)

- Meet DIN2269, grade 1
- Diameter range: Ø0.30~Ø20.00mm
- Diameter accuracy: ±1μm
- Made of ceramic, extremely wear resistance, corrosion resistance and dimensional stability



4113-10D00



Ordering examples:

Diameter	Code
1.21mm	4113-1D21
5.56mm	4113-5D56
15.00mm	4113-15D00

Note: “D” stands for “.”

Code
4113-□□□□

Diameter Ød (mm)
0.30, 0.31, 0.32, 0.33, ···· 1.00
1.01, 1.02, 1.03, 1.04, ···· 2.00
2.01, 2.02, 2.03, 2.04, ···· 3.00
3.01, 3.02, 3.03, 3.04, ···· 4.00
4.01, 4.02, 4.03, 4.04, ···· 5.00
5.01, 5.02, 5.03, 5.04, ···· 6.00
6.01, 6.02, 6.03, 6.04, ···· 7.00
7.01, 7.02, 7.03, 7.04, ···· 8.00
8.01, 8.02, 8.03, 8.04, ···· 9.00
9.01, 9.02, 9.03, 9.04, ···· 10.00

Diameter Ød (mm)
10.01, 10.02, 10.03, 10.04, ···· 11.00
11.01, 11.02, 11.03, 11.04, ···· 12.00
12.01, 12.02, 12.03, 12.04, ···· 13.00
13.01, 13.02, 13.03, 13.04, ···· 14.00
14.01, 14.02, 14.03, 14.04, ···· 15.00
15.01, 15.02, 15.03, 15.04, ···· 16.00
16.01, 16.02, 16.03, 16.04, ···· 17.00
17.01, 17.02, 17.03, 17.04, ···· 18.00
18.01, 18.02, 18.03, 18.04, ···· 19.00
19.01, 19.02, 19.03, 19.04, ···· 20.00

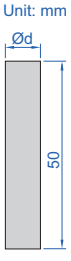
CERAMIC INDIVIDUAL PIN GAUGES WITH THREE DECIMAL PLACES (0.001MM STEP)

- Meet DIN2269, grade 1
- Diameter range: Ø0.300~Ø30.000mm
- With three decimal, for example 1.211mm, 5.562mm, 14.955mm
- Diameter accuracy: ±1μm
- Made of ceramic, extremely wear resistance, corrosion resistance and dimensional stability

Code	Diameter range Ød (mm)
4192-□□□□	0.300-30.000



4192-10D000



Ordering examples:

Diameter	Code
1.211mm	4192-1D211
5.562mm	4192-5D562
14.955mm	4192-14D955

Note: “D” stands for “.”

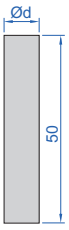
STEEL INDIVIDUAL PIN GAUGES WITH TWO DECIMAL PLACES (0.01MM STEP)

Ordering examples:
Diameter Code
0.21mm 4110-0D21
5.56mm 4110-5D56
16.00mm 4110-16D00
Note: “D” stands for “.”



4110-9D98

Unit: mm



- Meet DIN2269, grade 1
- Diameter range: Ø0.20~Ø20.00mm
- Diameter accuracy: ±1μm
- Made of alloy steel
- Hardness HRC62-65

Code
4110-□□□□

Diameter Ød (mm)
0.20, 0.21, 0.22, 0.23, ···· 1.00
1.01, 1.02, 1.03, 1.04, ···· 2.00
2.01, 2.02, 2.03, 2.04, ···· 3.00
3.01, 3.02, 3.03, 3.04, ···· 4.00
4.01, 4.02, 4.03, 4.04, ···· 5.00
5.01, 5.02, 5.03, 5.04, ···· 6.00
6.01, 6.02, 6.03, 6.04, ···· 7.00
7.01, 7.02, 7.03, 7.04, ···· 8.00
8.01, 8.02, 8.03, 8.04, ···· 9.00
9.01, 9.02, 9.03, 9.04, ···· 10.00
10.01, 10.02, 10.03, 10.04, ···· 11.00
11.01, 11.02, 11.03, 11.04, ···· 12.00
12.01, 12.02, 12.03, 12.04, ···· 13.00
13.01, 13.02, 13.03, 13.04, ···· 14.00
14.01, 14.02, 14.03, 14.04, ···· 15.00
15.01, 15.02, 15.03, 15.04, ···· 16.00
16.01, 16.02, 16.03, 16.04, ···· 17.00
17.01, 17.02, 17.03, 17.04, ···· 18.00
18.01, 18.02, 18.03, 18.04, ···· 19.00
19.01, 19.02, 19.03, 19.04, ···· 20.00

STEEL INDIVIDUAL PIN GAUGES WITH THREE DECIMAL PLACES (0.001MM STEP)

INSPECTION CERTIFICATE

- Meet DIN2269, grade 1
- Diameter range: Ø0.200~Ø30.000mm with three decimal, for example 0.211mm, 5.562mm, 16.298mm
- Diameter accuracy: ±1μm
- Made of alloy steel
- Hardness HRC62-65



4118-8D015

Unit: mm



Code	Diameter range Ød (mm)
4118-□□□□□*	0.200~30.000

*Supplied with manufacturer inspection certificate

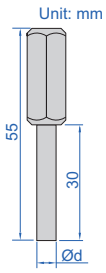
Ordering examples:
Diameter Code
0.211mm 4118-0D211
5.562mm 4118-5D562
16.298mm 4118-16D298
Note: “D” stands for “.”

INDIVIDUAL PIN GAUGES WITH HANDLE (0.01MM STEP)

- Meet DIN2269, grade 1
- Diameter range: Ø1.00~Ø20.00mm
- Available in sizes with two decimal places, for example 5.56mm,16.00mm
- Diameter accuracy: ±1μm
- Made of alloy steel
- Hardness HRC62-65



4214-5D00



Diameter Ød (mm)
1.00, 1.01, 1.02, 1.03, ···· 2.00
2.01, 2.02, 2.03, 2.04, ···· 3.00
3.01, 3.02, 3.03, 3.04, ···· 4.00
4.01, 4.02, 4.03, 4.04, ···· 5.00
5.01, 5.02, 5.03, 5.04, ···· 6.00
6.01, 6.02, 6.03, 6.04, ···· 7.00
7.01, 7.02, 7.03, 7.04, ···· 8.00
8.01, 8.02, 8.03, 8.04, ···· 9.00
9.01, 9.02, 9.03, 9.04, ···· 10.00

Diameter Ød (mm)
10.01, 10.02, 10.03, 10.04, ···· 11.00
11.01, 11.02, 11.03, 11.04, ···· 12.00
12.01, 12.02, 12.03, 12.04, ···· 13.00
13.01, 13.02, 13.03, 13.04, ···· 14.00
14.01, 14.02, 14.03, 14.04, ···· 15.00
15.01, 15.02, 15.03, 15.04, ···· 16.00
16.01, 16.02, 16.03, 16.04, ···· 17.00
17.01, 17.02, 17.03, 17.04, ···· 18.00
18.01, 18.02, 18.03, 18.04, ···· 19.00
19.01, 19.02, 19.03, 19.04, ···· 20.00

Ordering examples:

Diameter	Code
5.56mm	4214-5D56
16.00mm	4214-16D00

Note: "D" stands for "."

Code
4214-□□□□

INDIVIDUAL PIN GAUGES WITH HANDLE (0.001MM STEP)

INSPECTION CERTIFICATE

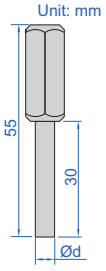
- Meet DIN2269, grade 1
- Diameter range: Ø1.000~Ø20.000mm
- Available in sizes with three decimal places, for example 5.562mm,16.298mm
- Diameter accuracy: ±1μm
- Made of alloy steel
- Hardness HRC62-65

Code	Diameter range Ød (mm)
4218-□□□□□*	1.000~20.000

*Supplied with manufacturer inspection certificate



4218-5D000



Ordering examples:

Diameter	Code
5.562mm	4218-5D562
16.298mm	4218-16D298

Note: "D" stands for "."

BOXES FOR PIN GAUGES

- For individual pin gauges (**4110, 4118, 4192, 4113** and **4193** series)

Code	Applicable pin gauge diameter Ød	Quantity of pin gauges
7340	0.20-10.00mm	51 pcs
7340-101	0.20-10.00mm	101 pcs
7340-201	10.00-15.00mm	51 pcs
7340-202	15.00-20.00mm	51 pcs



7340

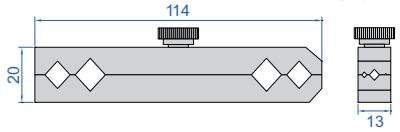
PIN GAUGE HANDLE



7345-13

- Operated without wrench
- Made of aluminum

Unit: mm



application



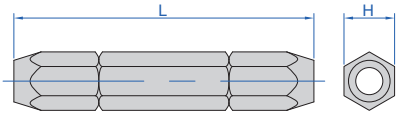
Code	Applicable pin gauge diameter
7345-13	1~13mm

PIN GAUGE HANDLES (OPERATED WITHOUT WRENCH)



7342-M1

- Operated without wrench
- Made of aluminum
- Pin gauges can be installed



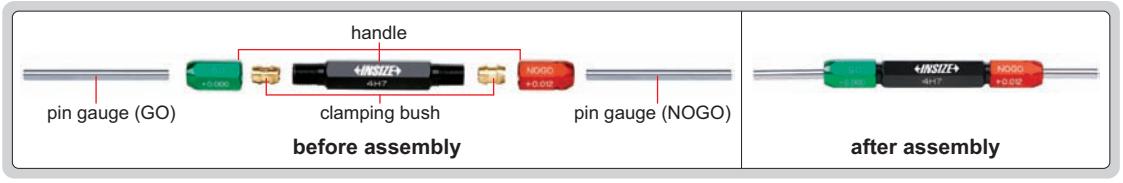
(mm)

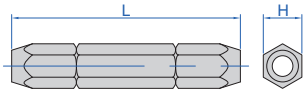
Code	Applicable pin gauge diameter	H	L
7342-M0	0.30-1.50mm/0.011-0.049"	10	112
7342-M1	1.51-6.35mm/0.050-0.250"	24	131
7342-M2	6.36-12.70mm/0.251-0.500"	32	152
7342-M3	12.71-15.88mm/0.501-0.625"	37	152
7342-M4	15.89-19.00mm/0.626-0.750"	37	152
7342-M5	19.01-21.13mm/0.751-0.832"	40	158
7342-M6	21.14-23.27mm/0.833-0.916"	40	158
7342-M7	23.28-25.40mm/0.917-1.000"	40	158

application



PIN GAUGE HANDLES (OPERATED WITH WRENCH)







handle



brass clamping bush
(0.2~7.14mm)



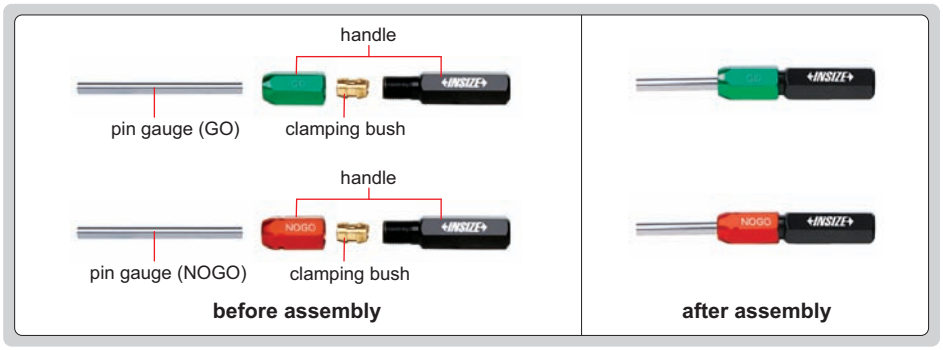
aluminum clamping bush
(7.14~24.80mm)

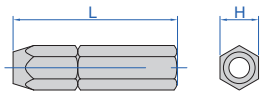
- Wrench is needed to install pins
- Clamping bushes (0.2~7.14mm) are made of brass, clamping bushes (7.14~24.80mm) are made of aluminum

(mm)

Code	Applicable pin gauge diameter	Including		H	L
		handle	clamping bush (mm)		
7341-0S	0.2-1.02mm	1 pc	6 pairs (the clamping range are 0.2-0.38, 0.38-0.51, 0.51-0.64, 0.64-0.76, 0.76-0.89, 0.89-1.02)	7	57
7341-1S	1.02-1.91mm	1 pc	7 pairs (the clamping range are 1.02-1.14, 1.14-1.27, 1.27-1.40, 1.40-1.52, 1.52-1.65, 1.65-1.78, 1.78-1.91)	7	57
7341-2S	1.91-3.33mm	1 pc	8 pairs (the clamping range are 1.91-2.08, 2.08-2.26, 2.26-2.44, 2.44-2.62, 2.62-2.79, 2.79-2.97, 2.97-3.15, 3.15-3.33)	9	73
7341-3S	3.33-4.57mm	1 pc	7 pairs (the clamping range are 3.33-3.51, 3.51-3.68, 3.68-3.86, 3.86-4.04, 4.04-4.22, 4.22-4.39, 4.39-4.57)	9	73
7341-4S	4.57-5.79mm	1 pc	6 pairs (the clamping range are 4.57-4.78, 4.78-4.98, 4.98-5.18, 5.18-5.38, 5.38-5.59, 5.59-5.79)	14	79
7341-5S	5.79-7.14mm	1 pc	6 pairs (the clamping range are 5.79-5.99, 5.99-6.20, 6.20-6.40, 6.40-6.63, 6.63-6.88, 6.88-7.14)	14	79
7341-6S	7.14-8.66mm	1 pc	6 pairs (the clamping range are 7.14-7.39, 7.39-7.65, 7.65-7.90, 7.90-8.15, 8.15-8.41, 8.41-8.66)	19	91
7341-7S	8.66-10.31mm	1 pc	6 pairs (the clamping range are 8.66-8.92, 8.9 -9.17, 9.17-9.42, 9.42-9.70, 9.70-10.01, 10.01-10.31)	19	91
7341-8S	10.31-11.81mm	1 pc	4 pairs (the clamping range are 10.31-10.67, 10.67-11.05, 11.05-11.43, 11.43-11.81)	22	106
7341-9S	11.81-12.95mm	1 pc	3 pairs (the clamping range are 11.81-12.19, 12.19-12.57, 12.57-12.95)	22	106
7341-10S	12.95-14.71mm	1 pc	4 pairs (the clamping range are 12.95-13.51, 13.51-13.89, 13.89-14.30, 14.30-14.71)	24	115
7341-11S	14.71-16.13mm	1 pc	4 pairs (the clamping range are 14.71-15.09, 15.09-15.49, 15.49-15.88, 15.88-16.13)	24	115
7341-12S	16.13-17.88mm	1 pc	4 pairs (the clamping range are 16.13-16.66, 16.66-17.07, 17.07-17.48, 17.48-17.88)	27	118
7341-13S	17.88-19.30mm	1 pc	4 pairs (the clamping range are 17.88-18.26, 18.26-18.67, 18.67-19.05, 19.05-19.30)	27	118
7341-15S	19.30-24.80mm	1 pc	8 pairs (the clamping range are 19.30-19.84, 19.84-20.62, 20.62-21.41, 21.41-22.23, 22.23-23.03, 23.03-23.80, 23.80-24.59, 24.59-24.80)	32	133

SINGLE END PIN GAUGE HANDLES (OPERATED WITH WRENCH)





- Wrench is needed to install pins
- Clamping bushes (0.2~7.14mm) are made of brass, clamping bushes (7.14~24.80mm) are made of aluminum



7344-4G
green (GO)



7344-4R
red (NOGO)



brass clamping bush
(0.2~7.14mm)



aluminum clamping bush
(7.14~24.80mm)

(mm)

Code		Including		Applicable pin gauge diameter	H	L
green (GO)	red (NOGO)	handle	clamping bush (mm)			
7344-0G	7344-0R	1 pc	6 pcs (the clamping range are 0.2-0.38, 0.38-0.51, 0.51-0.64, 0.64-0.76, 0.76-0.89, 0.89-1.02)	0.2-1.02mm	7	52
7344-1G	7344-1R	1 pc	7 pcs (the clamping range are 1.02-1.14, 1.14-1.27, 1.27-1.40, 1.40-1.52, 1.52-1.65, 1.65-1.78, 1.78-1.91)	1.02-1.91mm	7	52
7344-2G	7344-2R	1 pc	8 pcs (the clamping range are 1.91-2.08, 2.08-2.26, 2.26-2.44, 2.44-2.62, 2.62-2.79, 2.79-2.97, 2.97-3.15, 3.15 -3.33)	1.91-3.33mm	9	68
7344-3G	7344-3R	1 pc	7 pcs (the clamping range are 3.33-3.51, 3.51-3.68, 3.68-3.86, 3.86-4.04, 4.04-4.22, 4.22-4.39, 4.39-4.57)	3.33-4.57mm	9	68
7344-4G	7344-4R	1 pc	6 pcs (the clamping range are 4.57-4.78, 4.78-4.98, 4.98-5.18, 5.18-5.38, 5.38-5.59, 5.59-5.79)	4.57-5.79mm	14	73
7344-5G	7344-5R	1 pc	6 pcs (the clamping range are 5.79-5.99, 5.99-6.20, 6.20-6.40, 6.40-6.63, 6.63-6.88, 6.88-7.14)	5.79-7.14mm	14	73
7344-6G	7344-6R	1 pc	6 pcs (the clamping range are 7.14-7.39, 7.39-7.65, 7.65-7.90, 7.90-8.15, 8.15-8.41, 8.41-8.66)	7.14-8.66mm	19	79
7344-7G	7344-7R	1 pc	6 pcs (the clamping range are 8.66-8.92, 8.92-9.17, 9.17-9.42, 9.42-9.70, 9.70-10.01, 10.01-10.31)	8.66-10.31mm	19	79
7344-8G	7344-8R	1 pc	4 pcs (the clamping range are 10.31-10.67, 10.67-11.05, 11.05-11.43, 11.43-11.81)	10.31-11.81mm	22	93
7344-9G	7344-9R	1 pc	3 pcs (the clamping range are 11.81-12.19, 12.19-12.57, 12.57-12.95)	11.81-12.95mm	22	93
7344-10G	7344-10R	1 pc	4 pcs (the clamping range are 12.95-13.51, 13.51-13.89, 13.89-14.30, 14.30-14.71)	12.95-14.71mm	24	98
7344-11G	7344-11R	1 pc	4 pcs (the clamping range are 14.71-15.09, 15.09-15.49, 15.49-15.88, 15.88-16.13)	14.71-16.13mm	24	98
7344-12G	7344-12R	1 pc	4 pcs (the clamping range are 16.13-16.66, 16.66-17.07, 17.07-17.48, 17.48-17.88)	16.13-17.88mm	27	110
7344-13G	7344-13R	1 pc	4 pcs (the clamping range are 17.88-18.26, 18.26-18.67, 18.67-19.05, 19.05-19.30)	17.88-19.30mm	27	110
7344-15G	7344-15R	1 pc	8 pcs (the clamping range are 19.30-19.84, 19.84-20.62, 20.62-21.41, 21.41-22.23, 22.23-23.03, 23.03-23.80, 23.80-24.59, 24.59-24.80)	19.30-24.80mm	32	118

SETTING RINGS

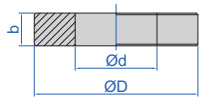
INSPECTION CERTIFICATE

CAN SUPPLY CUSTOM SETTING RINGS FROM Ø1.50MM TO Ø400.00MM, FOR EXAMPLE, Ø17.08MM

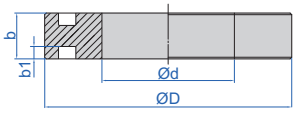
- For zero setting of inside micrometers, three points internal micrometers and bore gauges
- The size marked on the setting ring is checked at the direction of the marking line
- Size difference (difference between the ordered size and the size marked on the setting ring when supplied): For example, the ordered size is Ø10.12mm, the size marked on the setting ring when supplied may be Ø10.130mm



6312-20



Ø1.5mm-100mm



Ø100mm-400mm

(mm)

Diameter d**	b	ØD	Size difference	Roundness and cylindricity
Ø1.5-2.5	4	22	±10.0μm	0.3μm
Ø2.5-3	5	22	±10.0μm	0.3μm
Ø3-5	5	22	±10.0μm	0.4μm
Ø5-10	8	32	±10.0μm	0.4μm
Ø10-15	10	38	±10.0μm	0.5μm
Ø15-18	12	45	±10.0μm	0.5μm
Ø18-20	12	45	±10.0μm	0.6μm
Ø20-25	14	53	±10.0μm	0.6μm
Ø25-30	16	63	±10.0μm	0.6μm
Ø30-32	16	63	±10.0μm	0.7μm
Ø32-40	18	71	±10.0μm	0.7μm
Ø40-50	20	85	±10.0μm	0.7μm
Ø50-60	20	100	±10.0μm	0.8μm
Ø60-70	24	112	±10.0μm	0.8μm
Ø70-80	24	125	±10.0μm	0.8μm
Ø80-90	24	140	±10.0μm	1.0μm
Ø90-100	24	160	±10.0μm	1.0μm

**For example Ø3-5mm means Ø3mm<diameter d≤Ø5mm

(mm)

Diameter d**	b	b1	ØD	Size difference	Roundness and cylindricity
Ø100-110	30	8	164	±10.0μm	1.0μm
Ø110-130	34	10	192	±10.0μm	1.0μm
Ø130-150	34	10	220	±10.0μm	1.2μm
Ø150-170	36	10	248	±10.0μm	1.5μm
Ø170-190	36	10	276	±10.0μm	1.5μm
Ø190-210	38	10	300	±10.0μm	1.5μm
Ø210-230	38	10	324	±10.0μm	2.5μm
Ø230-250	40	12	350	±10.0μm	2.5μm
Ø250-270	40	12	375	±10.0μm	3.0μm
Ø270-290	42	12	400	±10.0μm	3.0μm
Ø290-300	42	12	425	±10.0μm	3.0μm
Ø300-320	42	12	430	±10.0μm	4.0μm
Ø320-330	42	12	440	±10.0μm	4.0μm
Ø330-340	42	12	450	±10.0μm	4.0μm
Ø340-350	42	12	460	±10.0μm	4.0μm
Ø350-360	42	12	470	±10.0μm	4.0μm
Ø360-370	42	12	480	±10.0μm	4.0μm
Ø370-380	42	12	490	±10.0μm	4.0μm
Ø380-390	42	12	500	±10.0μm	4.0μm
Ø390-400	42	12	510	±10.0μm	4.0μm

(mm)

Code	Size
6312-1D5 *	Ø1.5
6312-2 *	Ø2
6312-2D5 *	Ø2.5
6312-3 *	Ø3
6312-3D5 *	Ø3.5
6312-4 *	Ø4
6312-4D5 *	Ø4.5
6312-5 *	Ø5
6312-5D5 *	Ø5.5
6312-6 *	Ø6
6312-6D5 *	Ø6.5
6312-7 *	Ø7
6312-7D5 *	Ø7.5
6312-8 *	Ø8
6312-8D5 *	Ø8.5
6312-9 *	Ø9
6312-9D5 *	Ø9.5
6312-10 *	Ø10
6312-10D5 *	Ø10.5
6312-11 *	Ø11
6312-11D5 *	Ø11.5
6312-12 *	Ø12

(mm)

Code	Size
6312-12D5 *	Ø12.5
6312-13 *	Ø13
6312-13D5 *	Ø13.5
6312-14 *	Ø14
6312-14D5 *	Ø14.5
6312-15 *	Ø15
6312-15D5 *	Ø15.5
6312-16 *	Ø16
6312-16D5 *	Ø16.5
6312-17 *	Ø17
6312-17D5 *	Ø17.5
6312-18 *	Ø18
6312-18D5 *	Ø18.5
6312-19 *	Ø19
6312-19D5 *	Ø19.5
6312-20 *	Ø20
6312-20D5 *	Ø20.5
6312-21 *	Ø21
6312-21D5 *	Ø21.5
6312-22 *	Ø22
6312-22D5 *	Ø22.5
6312-23 *	Ø23

(mm)

Code	Size
6312-23D5 *	Ø23.5
6312-24 *	Ø24
6312-24D5 *	Ø24.5
6312-25 *	Ø25
6312-25D5 *	Ø25.5
6312-26 *	Ø26
6312-26D5 *	Ø26.5
6312-27 *	Ø27
6312-27D5 *	Ø27.5
6312-28 *	Ø28
6312-28D5 *	Ø28.5
6312-29 *	Ø29
6312-29D5 *	Ø29.5
6312-30 *	Ø30
6312-31 *	Ø31
6312-32 *	Ø32
6312-33 *	Ø33
6312-34 *	Ø34
6312-35 *	Ø35
6312-36 *	Ø36
6312-37 *	Ø37
6312-38 *	Ø38

(mm)

Code	Size
6312-39 *	Ø39
6312-40 *	Ø40
6312-41 *	Ø41
6312-42 *	Ø42
6312-43 *	Ø43
6312-44 *	Ø44
6312-45 *	Ø45
6312-46 *	Ø46
6312-47 *	Ø47
6312-48 *	Ø48
6312-49 *	Ø49
6312-50 *	Ø50
6312-55 *	Ø55
6312-60 *	Ø60
6312-62 *	Ø62
6312-65 *	Ø65
6312-70 *	Ø70
6312-75 *	Ø75
6312-80 *	Ø80
6312-85 *	Ø85
6312-87 *	Ø87
6312-90 *	Ø90

(mm)

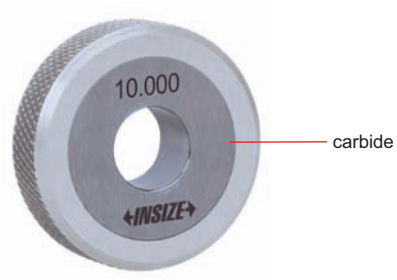
Code	Size
6312-95 *	Ø95
6312-100 *	Ø100
6312-112D5 *	Ø112.5
6312-125 *	Ø125
6312-137D5 *	Ø137.5
6312-150 *	Ø150
6312-162D5 *	Ø162.5
6312-175 *	Ø175
6312-187D5 *	Ø187.5
6312-200 *	Ø200
6312-212D5 *	Ø212.5
6312-225 *	Ø225
6312-237D5 *	Ø237.5
6312-250 *	Ø250
6312-262D5 *	Ø262.5
6312-275 *	Ø275
6312-287D5 *	Ø287.5
6312-300 *	Ø300
6312-350 *	Ø350
6312-400 *	Ø400

*Supplied with manufacturer inspection certificate

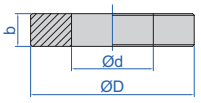
CAN SUPPLY CUSTOM SETTING RINGS FROM Ø0.40MM TO Ø50.00MM, FOR EXAMPLE, Ø17.08MM

CARBIDE SETTING RINGS

INSPECTION CERTIFICATE



6317-10



- For zero setting of inside micrometers, three points internal micrometers and bore gauges
- Size difference (difference between the ordered size and the size marked on the setting ring when supplied): For example, the ordered size is Ø10.00mm, the size marked on the setting ring when supplied may be Ø10.002mm
- Meet DIN2250-1:2008

(mm)

Diameter d **	b	ØD	Size difference	Roundness and cylindricity
Ø0.4-0.5	4	10	±10μm	0.3μm
Ø0.5-1.6	6	10	±10μm	0.3μm
Ø1.6-12.1	8	30	±10μm	0.3μm
Ø12.1-18.1	12	40	±10μm	0.4μm
Ø18.1-25	15	50	±10μm	0.4μm
Ø25-30	15	60	±10μm	0.4μm
Ø30-35	18	80	±10μm	0.4μm
Ø35-40	20	80	±10μm	0.4μm
Ø40-45	20	90	±10μm	0.4μm
Ø45-50	20	100	±10μm	0.4μm

**For example Ø0.4-0.5mm means Ø0.4mm<diameter d≤Ø0.5mm

Code	Size
6317-0D5 *	Ø0.5mm
6317-1 *	Ø1mm
6317-1D5 *	Ø1.5mm
6317-2 *	Ø2mm
6317-2D5 *	Ø2.5mm
6317-3 *	Ø3mm
6317-3D5 *	Ø3.5mm
6317-4 *	Ø4mm
6317-4D5 *	Ø4.5mm
6317-5 *	Ø5mm
6317-5D5 *	Ø5.5mm
6317-6 *	Ø6mm
6317-6D5 *	Ø6.5mm
6317-7 *	Ø7mm
6317-7D5 *	Ø7.5mm
6317-8 *	Ø8mm
6317-8D5 *	Ø8.5mm
6317-9 *	Ø9mm
6317-9D5 *	Ø9.5mm
6317-10 *	Ø10mm

Code	Size
6317-10D5 *	Ø10.5mm
6317-11 *	Ø11mm
6317-11D5 *	Ø11.5mm
6317-12 *	Ø12mm
6317-12D5 *	Ø12.5mm
6317-13 *	Ø13mm
6317-13D5 *	Ø13.5mm
6317-14 *	Ø14mm
6317-14D5 *	Ø14.5mm
6317-15 *	Ø15mm
6317-15D5 *	Ø15.5mm
6317-16 *	Ø16mm
6317-16D5 *	Ø16.5mm
6317-17 *	Ø17mm
6317-17D5 *	Ø17.5mm
6317-18 *	Ø18mm
6317-18D5 *	Ø18.5mm
6317-19 *	Ø19mm
6317-19D5 *	Ø19.5mm
6317-20 *	Ø20mm

Code	Size
6317-20D5 *	Ø20.5mm
6317-21 *	Ø21mm
6317-21D5 *	Ø21.5mm
6317-22 *	Ø22mm
6317-22D5 *	Ø22.5mm
6317-23 *	Ø23mm
6317-23D5 *	Ø23.5mm
6317-24 *	Ø24mm
6317-24D5 *	Ø24.5mm
6317-25 *	Ø25mm
6317-25D5 *	Ø25.5mm
6317-26 *	Ø26mm
6317-26D5 *	Ø26.5mm
6317-27 *	Ø27mm
6317-27D5 *	Ø27.5mm
6317-28 *	Ø28mm
6317-28D5 *	Ø28.5mm
6317-29 *	Ø29mm
6317-29D5 *	Ø29.5mm
6317-30 *	Ø30mm

Code	Size
6317-31 *	Ø31mm
6317-32 *	Ø32mm
6317-33 *	Ø33mm
6317-34 *	Ø34mm
6317-35 *	Ø35mm
6317-36 *	Ø36mm
6317-37 *	Ø37mm
6317-38 *	Ø38mm
6317-39 *	Ø39mm
6317-40 *	Ø40mm
6317-41 *	Ø41mm
6317-42 *	Ø42mm
6317-43 *	Ø43mm
6317-44 *	Ø44mm
6317-45 *	Ø45mm
6317-46 *	Ø46mm
6317-47 *	Ø47mm
6317-48 *	Ø48mm
6317-49 *	Ø49mm
6317-50 *	Ø50mm

*Supplied with manufacturer inspection certificate

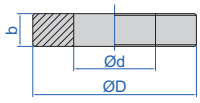
CERAMIC SETTING RINGS

CAN SUPPLY CUSTOM SETTING RINGS FROM Ø1.30MM TO Ø50.00MM, FOR EXAMPLE, Ø17.08MM

INSPECTION CERTIFICATE



6319-10



- For zero setting of inside micrometers, three points internal micrometers and bore gauges
- Size difference (difference between the ordered size and the size marked on the setting ring when supplied): For example, the ordered size is Ø10.12mm, the size marked on the setting ring when supplied may be Ø10.130mm
- Made of ceramic, extremely wear resistance and corrosion resistance, dimensional stability
- Meet DIN2250-1:2008

(mm)

Diameter d **	b	ØD	Size difference	Roundness and cylindricity
Ø1.3-2.7	6	20	±10μm	0.3μm
Ø2.7-12.1	8	30	±10μm	0.3μm
Ø12.1-18.1	12	40	±10μm	0.4μm
Ø18.1-25	15	50	±10μm	0.4μm
Ø25-30	15	60	±10μm	0.4μm
Ø30-35	18	80	±10μm	0.4μm
Ø35-40	20	80	±10μm	0.4μm
Ø40-45	20	90	±10μm	0.4μm
Ø45-50	20	100	±10μm	0.4μm

**For example Ø1.3-2.7mm means Ø1.3mm<diameter d≤Ø2.7mm

Code	Size
6319-1D5 *	Ø1.5mm
6319-2 *	Ø2mm
6319-2D5 *	Ø2.5mm
6319-3 *	Ø3mm
6319-3D5 *	Ø3.5mm
6319-4 *	Ø4mm
6319-4D5 *	Ø4.5mm
6319-5 *	Ø5mm
6319-5D5 *	Ø5.5mm
6319-6 *	Ø6mm
6319-6D5 *	Ø6.5mm
6319-7 *	Ø7mm
6319-7D5 *	Ø7.5mm
6319-8 *	Ø8mm
6319-8D5 *	Ø8.5mm
6319-9 *	Ø9mm
6319-9D5 *	Ø9.5mm
6319-10 *	Ø10mm
6319-10D5 *	Ø10.5mm

Code	Size
6319-11 *	Ø11mm
6319-11D5 *	Ø11.5mm
6319-12 *	Ø12mm
6319-12D5 *	Ø12.5mm
6319-13 *	Ø13mm
6319-13D5 *	Ø13.5mm
6319-14 *	Ø14mm
6319-14D5 *	Ø14.5mm
6319-15 *	Ø15mm
6319-15D5 *	Ø15.5mm
6319-16 *	Ø16mm
6319-16D5 *	Ø16.5mm
6319-17 *	Ø17mm
6319-17D5 *	Ø17.5mm
6319-18 *	Ø18mm
6319-18D5 *	Ø18.5mm
6319-19 *	Ø19mm
6319-19D5 *	Ø19.5mm
6319-20 *	Ø20mm

Code	Size
6319-20D5 *	Ø20.5mm
6319-21 *	Ø21mm
6319-21D5 *	Ø21.5mm
6319-22 *	Ø22mm
6319-22D5 *	Ø22.5mm
6319-23 *	Ø23mm
6319-23D5 *	Ø23.5mm
6319-24 *	Ø24mm
6319-24D5 *	Ø24.5mm
6319-25 *	Ø25mm
6319-25D5 *	Ø25.5mm
6319-26 *	Ø26mm
6319-26D5 *	Ø26.5mm
6319-27 *	Ø27mm
6319-27D5 *	Ø27.5mm
6319-28 *	Ø28mm
6319-28D5 *	Ø28.5mm
6319-29 *	Ø29mm
6319-29D5 *	Ø29.5mm
6319-30 *	Ø30mm

Code	Size
6319-31 *	Ø31mm
6319-32 *	Ø32mm
6319-33 *	Ø33mm
6319-34 *	Ø34mm
6319-35 *	Ø35mm
6319-36 *	Ø36mm
6319-37 *	Ø37mm
6319-38 *	Ø38mm
6319-39 *	Ø39mm
6319-40 *	Ø40mm
6319-41 *	Ø41mm
6319-42 *	Ø42mm
6319-43 *	Ø43mm
6319-44 *	Ø44mm
6319-45 *	Ø45mm
6319-46 *	Ø46mm
6319-47 *	Ø47mm
6319-48 *	Ø48mm
6319-49 *	Ø49mm
6319-50 *	Ø50mm

*Supplied with manufacturer inspection certificate

CAN SUPPLY CUSTOM SIZES FROM Ø3.000mm TO Ø200.000mm, FOR EXAMPLE, Ø20.218mm

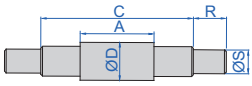
CYLINDER GAUGES

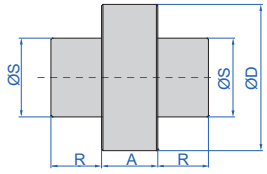
INSPECTION CERTIFICATE

- Made of tungsten steel, quenched, ultra-low temperature treatment
- Wear resistant, long life, dimension stability
- Hardness HRC60-62



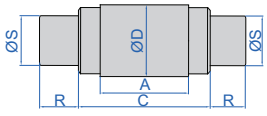
6316-30





(mm)

Diameter ØD **	A	C	R	ØS	Size *** difference	Roundness and cylindricity
3.0-3.81	9.52	17.46	11.1	2.4	±5μm	0.5μm
3.81-5.84	11.11	19.05	11.1	3.2	±5μm	0.5μm
5.84-9.27	12.7	20.64	11.1	5.6	±5μm	0.5μm



(mm)

Diameter ØD **	A	C	R	ØS	Size *** difference	Roundness and cylindricity
9.27-12.95	14.29	22.22	12.7	8.7	±5μm	0.5μm
12.95-20.96	15.88	23.81	12.7	12.7	±5μm	0.5μm
20.96-28.83	17.46	25.4	15.9	19	±5μm	0.7μm
28.83-38.35	20.64	28.58	15.9	25.4	±5μm	0.7μm

(mm)

Diameter ØD **	A	ØS	R	Size *** difference	Roundness and cylindricity
38.35-51.05	22.2	31.8	15.8	±5μm	1μm
51.05-63.75	22.2	31.8	15.8	±5μm	1μm
63.75-76.45	25.4	38.1	39.8	±5μm	1.2μm
76.45-89.15	25.4	38.1	39.8	±5μm	1.2μm
89.15-101.85	25.4	38.1	39.8	±5μm	1.2μm
101.85-114.55	25.4	38.1	39.8	±5μm	1.2μm
114.55-127.25	25.4	38.1	39.8	±5μm	1.6μm
127.25-139.95	25.4	38.1	39.8	±5μm	1.6μm
139.95-152.62	25.4	38.1	39.8	±5μm	1.6μm
152.65-165.35	25.4	38.1	39.8	±5μm	1.6μm
165.35-178.05	25.4	38.1	39.8	±5μm	2μm
178.05-190.75	25.4	38.1	39.8	±5μm	2μm
190.75-203.45	25.4	38.1	39.8	±5μm	2μm

** For example, 3-3.81 indicates 3mm<D≤3.8mm

*** Size difference (difference between the ordered size and the size marked on the cylinder gauges when supplied).
For example, the ordered size is Ø3.000mm, the size marked on the cylinder gauges when supplied may be Ø3.003mm

Code	ØD
6316-3*	Ø3mm
6316-4*	Ø4mm
6316-5*	Ø5mm
6316-6*	Ø6mm
6316-7*	Ø7mm
6316-8*	Ø8mm
6316-9*	Ø9mm
6316-10*	Ø10mm
6316-11*	Ø11mm
6316-12*	Ø12mm
6316-13*	Ø13mm
6316-14*	Ø14mm
6316-15*	Ø15mm

Code	ØD
6316-16*	Ø16mm
6316-17*	Ø17mm
6316-18*	Ø18mm
6316-19*	Ø19mm
6316-20*	Ø20mm
6316-21*	Ø21mm
6316-22*	Ø22mm
6316-23*	Ø23mm
6316-24*	Ø24mm
6316-25*	Ø25mm
6316-26*	Ø26mm
6316-27*	Ø27mm
6316-28*	Ø28mm

Code	ØD
6316-29*	Ø29mm
6316-30*	Ø30mm
6316-31*	Ø31mm
6316-32*	Ø32mm
6316-33*	Ø33mm
6316-34*	Ø34mm
6316-35*	Ø35mm
6316-36*	Ø36mm
6316-37*	Ø37mm
6316-38*	Ø38mm
6316-39*	Ø39mm
6316-40*	Ø40mm
6316-41*	Ø41mm

Code	ØD
6316-42*	Ø42mm
6316-43*	Ø43mm
6316-44*	Ø44mm
6316-45*	Ø45mm
6316-46*	Ø46mm
6316-47*	Ø47mm
6316-48*	Ø48mm
6316-49*	Ø49mm
6316-50*	Ø50mm
6316-55*	Ø55mm
6316-60*	Ø60mm
6316-62*	Ø62mm
6316-65*	Ø65mm

Code	ØD
6316-70*	Ø70mm
6316-75*	Ø75mm
6316-80*	Ø80mm
6316-85*	Ø85mm
6316-87*	Ø87mm
6316-90*	Ø90mm
6316-95*	Ø95mm
6316-100*	Ø100mm
6316-125*	Ø125mm
6316-150*	Ø150mm
6316-175*	Ø175mm
6316-200*	Ø200mm

*Supplied with manufacturer inspection certificate

ADJUSTABLE SNAP GAUGES

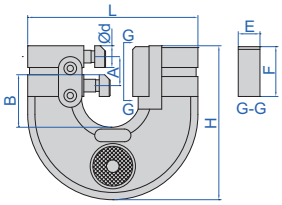
FAST AND ACCURATE MEASUREMENT OF CYLINDERS

VIDEO

- Used as Go/No-Go gauge by setting upper and lower limits
- Flatness of anvil: 1.5μm
- Parallelism of measuring faces:
  range 0-32mm: 3μm
  range 32-89mm: 4μm
  range 89-300mm: 5μm



2187-19

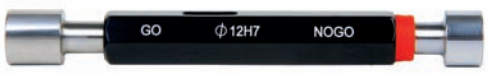


(mm)

Code	Range	L	A	B	E	F	H	Ød
2187-6	0-6mm	74	15	17.5	12.2	27.2	71.5	7
2187-13	6-13mm	85	15	26	12.2	27.2	79.5	12.3
2187-19	13-19mm	93	15	27	12.2	27.2	83	12.3
2187-25	19-25mm	100	15	33.5	12.2	27.2	89.5	12.3
2187-32	25-32mm	111	18	38.5	15.2	35.2	104	15.3
2187-38	32-38mm	117	18	41.5	15.2	35.2	105	15.3
2187-44	38-44mm	123	18	44.5	15.2	35.2	109	15.3
2187-51	44-51mm	130	18	48	15.2	35.2	117	15.3
2187-57	51-57mm	136	18	45	15.2	35.2	119	15.3
2187-63	57-63mm	143	18	50	15.2	35.2	122	15.3
2187-70	63-70mm	156	20	58	15.2	35.2	132	15.3
2187-76	70-76mm	163	20	60.5	15.2	35.2	137	15.3
2187-82	76-82mm	169	20	64.5	15.2	35.2	140	15.3
2187-89	82-89mm	175	20	66.5	15.2	35.2	146	15.3
2187-95	89-95mm	181	20	69.5	15.2	35.2	149	15.3
2187-101	95-101mm	188	20	70	15.2	35.2	154	15.3
2187-108	101-108mm	198	24	79	15.2	39.2	166	15.3
2187-114	108-114mm	204	24	81	15.2	39.2	172	15.3
2187-120	114-120mm	210	24	86	15.2	39.2	179	15.3
2187-127	120-127mm	217	24	89.5	15.2	39.2	186	15.3
2187-133	127-133mm	223	24	92.5	15.2	39.2	192	15.3
2187-139	133-139mm	229	24	95.5	15.2	39.2	197	15.3
2187-146	139-146mm	235	24	98.5	15.2	39.2	201	15.3
2187-152	146-152mm	242	24	102	15.2	39.2	205	15.3
2187-163	152-163mm	273	21.4	106.7	18.2	39.2	211	18.3
2187-175	163-175mm	273	21.4	106.7	18.2	39.2	211	18.3
2187-188	175-188mm	298.5	21.4	119.7	18.2	39.2	227	18.3
2187-200	188-200mm	298.5	21.4	119.7	18.2	39.2	227	18.3
2187-213	200-213mm	324	21.4	131.7	18.2	39.2	242	18.3
2187-225	213-225mm	324	21.4	131.7	18.2	39.2	242	18.3
2187-238	225-238mm	349.5	21.4	144.7	18.2	39.2	250	18.3
2187-250	238-250mm	349.5	21.4	149	18.2	39.2	250	18.3
2187-263	250-263mm	375.5	21.4	157.7	18.2	39.2	278	18.3
2187-275	263-275mm	375.5	21.4	157.7	18.2	39.2	278	18.3
2187-288	275-288mm	400	21.4	170.7	18.2	39.2	291	18.3
2187-300	288-300mm	400	21.4	170.7	18.2	39.2	291	18.3

PLAIN PLUG GAUGES

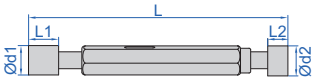
CUSTOM-MADE
OTHER CLASSES ARE AVAILABLE, SUCH AS H8, H9
OTHER DIAMETERS ARE AVAILABLE, SUCH AS 19.003mm
OTHER LENGTHS ARE AVAILABLE, SUCH AS 70mm



4124-12

type A

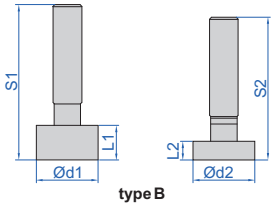




type A

type B





type B

- Supplied with Go and No-Go gauges together
- Class H7
- Hardness HRC 60±2
- Standard DIN7150-2

Size tolerance of H7 **(mm)**

Diameter Ød	Type	Size tolerance of Go gauge (μm)	Size tolerance of No-Go gauge (μm)	L1	L2	L	S1, S2
≥2, ≤3	A	+0.5/+2.5	+9/+11	6.5	4.5	62	–
>3, ≤6	A	+0.75/+3.25	+10.75/+13.25	8	6	74	–
>6, ≤10	A	+0.75/+3.25	+13.75/+16.25	10	7	87	–
>10, ≤14	A	+1/+4	+16.5/+19.5	12	8	99	–
>14, ≤18	A	+1/+4	+16.5/+19.5	14	10	114	–
>18, ≤24	A	+1/+5	+19/+23	16	12	132	–
>24, ≤30	A	+1/+5	+19/+23	18	14	136	–
>30, ≤40	A	+1.5/+5.5	+23/+27	20	15	155	–
>40, ≤50	A	+1.5/+5.5	+23/+27	25	18	169	–
>50, ≤65	B	+1.5/+6.5	+27.5/+32.5	30	18	–	164, 152
>65, ≤80	B	+1.5/+6.5	+27.5/+32.5	35	25	–	169, 159
>80, ≤100	B	+2/+8	+32/+38	35	25	–	169, 159

Code	Diameter	Type
4124-2	2mm	A
4124-3	3mm	A
4124-4	4mm	A
4124-5	5mm	A
4124-6	6mm	A
4124-7	7mm	A
4124-8	8mm	A
4124-9	9mm	A
4124-10	10mm	A
4124-11	11mm	A
4124-12	12mm	A
4124-13	13mm	A
4124-14	14mm	A
4124-15	15mm	A
4124-16	16mm	A

Code	Diameter	Type
4124-17	17mm	A
4124-18	18mm	A
4124-19	19mm	A
4124-20	20mm	A
4124-21	21mm	A
4124-22	22mm	A
4124-23	23mm	A
4124-24	24mm	A
4124-25	25mm	A
4124-26	26mm	A
4124-27	27mm	A
4124-28	28mm	A
4124-29	29mm	A
4124-30	30mm	A
4124-31	31mm	A

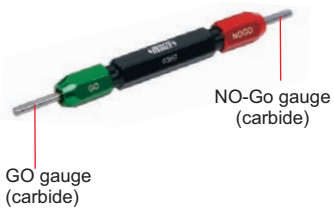
Code	Diameter	Type
4124-32	32mm	A
4124-33	33mm	A
4124-34	34mm	A
4124-35	35mm	A
4124-36	36mm	A
4124-37	37mm	A
4124-38	38mm	A
4124-39	39mm	A
4124-40	40mm	A
4124-41	41mm	A
4124-42	42mm	A
4124-43	43mm	A
4124-44	44mm	A
4124-45	45mm	A
4124-46	46mm	A

Code	Diameter	Type
4124-47	47mm	A
4124-48	48mm	A
4124-49	49mm	A
4124-50	50mm	A
4124-52	52mm	B
4124-55	55mm	B
4124-60	60mm	B
4124-65	65mm	B
4124-70	70mm	B
4124-75	75mm	B
4124-80	80mm	B
4124-85	85mm	B
4124-90	90mm	B
4124-95	95mm	B
4124-100	100mm	B

CARBIDE PLAIN PLUG GAUGES

CUSTOM-MADE
OTHER CLASSES ARE AVAILABLE, SUCH AS H8, H9, G7
OTHER DIAMETERS ARE AVAILABLE, SUCH AS 19.003mm
OTHER LENGTHS ARE AVAILABLE, SUCH AS 70mm

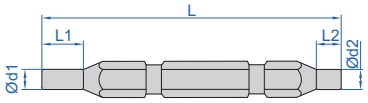
INSPECTION CERTIFICATE



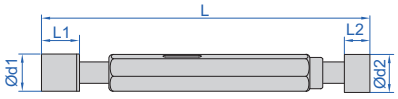
4128-3



4128-50



type A



type B

- Supplied with Go and No-Go gauges together
- Standard DIN7150-2

Size tolerance of H7 **(mm)**

Diameter	Size tolerance of Go gauge Ød1 (μm)	Size tolerance of No-Go gauge Ød2 (μm)	L1	L2	L
≥1, ≤1.9	+0.5/+2.5	+9/+11	15	12	67
>1.9, ≤3	+0.5/+2.5	+9/+11	15	12	79
>3, ≤4.7	+0.75/+3.25	+10.75/+13.25	15	12	79
>4.7, ≤6	+0.75/+3.25	+10.75/+13.25	15	12	88.5
>6, ≤7.1	+0.75/+3.25	+13.75/+16.25	15	12	88.5
>7.1, ≤8	+0.75/+3.25	+13.75/+16.25	15	12	99
>8, ≤10	+0.75/+3.25	+13.75/+16.25	12	7	75
>10, ≤14	+1/+4	+16.5/+19.5	12	7	82
>14, ≤18	+1/+4	+16.5/+19.5	17	10	97
>18, ≤24	+1/+5	+19/+23	17	12	109
>24, ≤30	+1/+5	+19/+23	17	14	111
>30, ≤40	+1.5/+5.5	+23/+27	20	15	115
>40, ≤50	+1.5/+5.5	+23/+27	20	15	160
>50, ≤60	+1.5/+6.5	+27.5/+32.5	20	15	160

H7 **(mm)**

Code	Diameter	Type	Code	Diameter	Type	Code	Diameter	Type	Code	Diameter	Type
4128-1*	1	A	4128-14*	14	B	4128-27*	27	B	4128-40*	40	B
4128-2*	2	A	4128-15*	15	B	4128-28*	28	B	4128-41*	41	B
4128-3*	3	A	4128-16*	16	B	4128-29*	29	B	4128-42*	42	B
4128-4*	4	A	4128-17*	17	B	4128-30*	30	B	4128-43*	43	B
4128-5*	5	A	4128-18*	18	B	4128-31*	31	B	4128-44*	44	B
4128-6*	6	A	4128-19*	19	B	4128-32*	32	B	4128-45*	45	B
4128-7*	7	A	4128-20*	20	B	4128-33*	33	B	4128-46*	46	B
4128-8*	8	A	4128-21*	21	B	4128-34*	34	B	4128-47*	47	B
4128-9*	9	B	4128-22*	22	B	4128-35*	35	B	4128-48*	48	B
4128-10*	10	B	4128-23*	23	B	4128-36*	36	B	4128-49*	49	B
4128-11*	11	B	4128-24*	24	B	4128-37*	37	B	4128-50*	50	B
4128-12*	12	B	4128-25*	25	B	4128-38*	38	B	4128-52*	52	B
4128-13*	13	B	4128-26*	26	B	4128-39*	39	B	4128-55*	55	B
									4128-60*	60	B

*Supplied with manufacturer inspection certificate

CARBIDE PLAIN PLUG GAUGES (SINGLE END)

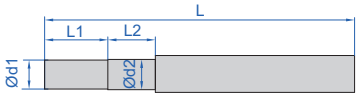
CUSTOM-MADE
OTHER CLASSES ARE AVAILABLE, SUCH AS H8, H9, G7
OTHER DIAMETERS ARE AVAILABLE, SUCH AS 19.003mm
OTHER LENGTHS ARE AVAILABLE, SUCH AS 70mm

INSPECTION CERTIFICATE



6331-9

- Supplied with Go and No-Go gauges together
- Standard DIN7150-2



Size tolerance of H7 (mm)

Diameter	Size tolerance of Go gauge Ød1 (μm)	Size tolerance of No-Go gauge Ød2 (μm)	L1	L2	L
≥0.5, ≤3	+0.5/+2.5	+9/+11	20	15	95
>3, ≤6	+0.75/+3.25	+10.75/+13.25	20	15	95
>6, ≤10	+0.75/+3.25	+13.75/+16.25	20	15	95
>10, ≤15	+1/+4	+16.5/+19.5	20	15	95
>15, ≤18	+1/+4	+16.5/+19.5	20	15	115
>18, ≤30	+1/+5	+19/+23	20	15	115
>30, ≤40	+1.5/+5.5	+23/+27	20	15	115

H7 (mm)

Code	Diameter	Code	Diameter
6331-1*	1	6331-21*	21
6331-2*	2	6331-22*	22
6331-3*	3	6331-23*	23
6331-4*	4	6331-24*	24
6331-5*	5	6331-25*	25
6331-6*	6	6331-26*	26
6331-7*	7	6331-27*	27
6331-8*	8	6331-28*	28
6331-9*	9	6331-29*	29
6331-10*	10	6331-30*	30
6331-11*	11	6331-31*	31
6331-12*	12	6331-32*	32
6331-13*	13	6331-33*	33
6331-14*	14	6331-34*	34
6331-15*	15	6331-35*	35
6331-16*	16	6331-36*	36
6331-17*	17	6331-37*	37
6331-18*	18	6331-38*	38
6331-19*	19	6331-39*	39
6331-20*	20	6331-40*	40

*Supplied with manufacturer inspection certificate

CERAMIC PLAIN PLUG GAUGES (SINGLE END)

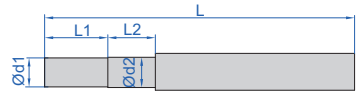
CUSTOM-MADE
OTHER CLASSES ARE AVAILABLE, SUCH AS H8, H9, G7
OTHER DIAMETERS ARE AVAILABLE, SUCH AS 19.003mm
OTHER LENGTHS ARE AVAILABLE, SUCH AS 70mm

INSPECTION CERTIFICATE



6333-10

- Supplied with Go and No-Go gauges together
- Made of ceramic, extremely wear resistance and corrosion resistance, dimensional stability
- Standard DIN7150-2



Size tolerance of H7 (mm)

Diameter	Size tolerance of Go gauge Ød1 (μm)	Size tolerance of No-Go gauge Ød2 (μm)	L1	L2	L
≥0.5, ≤3	+0.5/+2.5	+9/+11	20	15	95
>3, ≤6	+0.75/+3.25	+10.75/+13.25	20	15	95
>6, ≤10	+0.75/+3.25	+13.75/+16.25	20	15	95
>10, ≤15	+1/+4	+16.5/+19.5	20	15	95
>15, ≤18	+1/+4	+16.5/+19.5	20	15	115
>18, ≤30	+1/+5	+19/+23	20	15	115
>30, ≤40	+1.5/+5.5	+23/+27	20	15	115

H7 (mm)

Code	Diameter	Code	Diameter
6333-1*	1	6333-21*	21
6333-2*	2	6333-22*	22
6333-3*	3	6333-23*	23
6333-4*	4	6333-24*	24
6333-5*	5	6333-25*	25
6333-6*	6	6333-26*	26
6333-7*	7	6333-27*	27
6333-8*	8	6333-28*	28
6333-9*	9	6333-29*	29
6333-10*	10	6333-30*	30
6333-11*	11	6333-31*	31
6333-12*	12	6333-32*	32
6333-13*	13	6333-33*	33
6333-14*	14	6333-34*	34
6333-15*	15	6333-35*	35
6333-16*	16	6333-36*	36
6333-17*	17	6333-37*	37
6333-18*	18	6333-38*	38
6333-19*	19	6333-39*	39
6333-20*	20	6333-40*	40

*Supplied with manufacturer inspection certificate

CERAMIC PLAIN PLUG GAUGES

INSPECTION CERTIFICATE

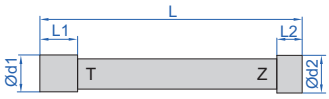
CUSTOM-MADE
OTHER CLASSES ARE AVAILABLE, SUCH AS H8, H9, G7
OTHER DIAMETERS ARE AVAILABLE, SUCH AS 19.003mm
OTHER LENGTHS ARE AVAILABLE, SUCH AS 70mm



- Supplied with Go and No-Go gauges together
- Made of ceramic, extremely wear resistance and corrosion resistance, dimensional stability
- Standard DIN7150-2

Size tolerance of H7 **(mm)**

Diameter	Size tolerance of Go gauge Ød1 (μm)	Size tolerance of No-Go gauge Ød2 (μm)	L1	L2	L
≥0.5, ≤3	+0.5/+2.5	+9/+11	20	15	95
>3, ≤6	+0.75/+3.25	+10.75/+13.25	20	15	95
>6, ≤10	+0.75/+3.25	+13.75/+16.25	20	15	95
>10, ≤15	+1/+4	+16.5/+19.5	20	15	95
>15, ≤18	+1/+4	+16.5/+19.5	20	15	115
>18, ≤30	+1/+5	+19/+23	20	15	115
>30, ≤40	+1.5/+5.5	+23/+27	20	15	115



H7 **(mm)**

Code	Diameter	Code	Diameter	Code	Diameter	Code	Diameter	Code	Diameter
6332-1*	1	6332-11*	11	6332-21*	21	6332-31*	31	6332-41*	41
6332-2*	2	6332-12*	12	6332-22*	22	6332-32*	32	6332-42*	42
6332-3*	3	6332-13*	13	6332-23*	23	6332-33*	33	6332-43*	43
6332-4*	4	6332-14*	14	6332-24*	24	6332-34*	34	6332-44*	44
6332-5*	5	6332-15*	15	6332-25*	25	6332-35*	35	6332-45*	45
6332-6*	6	6332-16*	16	6332-26*	26	6332-36*	36	6332-46*	46
6332-7*	7	6332-17*	17	6332-27*	27	6332-37*	37	6332-47*	47
6332-8*	8	6332-18*	18	6332-28*	28	6332-38*	38	6332-48*	48
6332-9*	9	6332-19*	19	6332-29*	29	6332-39*	39	6332-49*	49
6332-10*	10	6332-20*	20	6332-30*	30	6332-40*	40	6332-50*	50

*Supplied with manufacturer inspection certificate

SPLINE PLUG GAUGES
CODE 6341

CUSTOM-MADE



- Suitable for pass or fail inspection of internal splines
- Made of high carbon alloy tool steel
- Hardness HRC60-62
- Information required for order: number of teeth, module, pressure angle and lerance grade of splines

CUSTOM-MADE

SPLINE RING GAUGES
CODE 6342



- Suitable for pass or fail inspection of external splines
- Made of high carbon alloy tool steel
- Hardness HRC60-62
- Information required for order: number of teeth, module, pressure angle and lerance grade of splines

CARBIDE MEASURING BALLS

INSPECTION CERTIFICATE

- To measure angle and diameter of taper holes
- Material: carbide
- Hardness: ≥HRA87
- Diameter accuracy: ±3μm
- Roundness: 1μm
- Supplied with manufacturer inspection certificate



4172-20

Individual

Code	Diameter
4172-2	2mm
4172-2D5	2.5mm
4172-3	3mm
4172-3D5	3.5mm
4172-4	4mm
4172-4D5	4.5mm
4172-5	5mm
4172-6	6mm
4172-6D5	6.5mm
4172-8	8mm

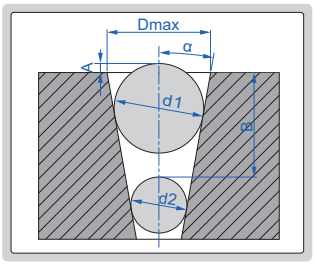
Individual

Code	Diameter
4172-8D5	8.5mm
4172-10	10mm
4172-12	12mm
4172-14	14mm
4172-15	15mm
4172-16	16mm
4172-18	18mm
4172-20	20mm
4172-30	30mm

Set (19 pairs)

Code	Carbide balls included (one pair per size)
4172-S19	2mm, 2.5mm, 3mm, 3.5mm, 4mm, 4.5mm, 5mm, 6mm, 6.5mm, 8mm, 8.5mm, 10mm, 12mm, 14mm, 15mm, 16mm, 18mm, 20mm, 30mm

Calculate angle (α) and diameter (Dmax) according to the ball diameter (d1, d2), height (A) and depth (B)



CERAMIC MEASURING BALLS

INSPECTION CERTIFICATE



4190-40D000

- Zirconia material, high strength and hardness, extremely wear resistance and corrosion resistance, good insulation, antistatic and magnetic resistance
- Mirror surface without holes
- Supplied with manufacturer inspection certificate

Individual

Code	Diameter	Accuracy	Roundness
4190-1D000	1.000mm	±2μm	0.5μm
4190-1D200	1.200mm	±2μm	0.5μm
4190-1D300	1.300mm	±2μm	0.5μm
4190-1D340	1.340mm	±2μm	0.5μm
4190-1D500	1.500mm	±2μm	0.5μm
4190-1D588	1.588mm (1/16")	±2μm	0.5μm
4190-1D750	1.750mm	±2μm	0.5μm
4190-2D000	2.000mm	±2μm	0.5μm
4190-2D381	2.381mm (3/32")	±2μm	0.5μm
4190-2D500	2.500mm	±2μm	0.5μm
4190-2D778	2.778mm (7/64")	±2μm	0.5μm
4190-3D000	3.000mm	±2μm	0.5μm
4190-3D175	3.175mm (1/8")	±2μm	0.5μm
4190-3D500	3.500mm	±2μm	0.5μm
4190-3D969	3.969mm (5/32")	±2μm	0.5μm
4190-4D000	4.000mm	±2μm	0.5μm
4190-4D500	4.500mm	±2μm	0.5μm
4190-4D763	4.763mm (3/16")	±2μm	0.5μm
4190-5D000	5.000mm	±2μm	0.5μm
4190-5D556	5.556mm (7/32")	±2μm	0.5μm
4190-5D953	5.953mm (15/64")	±2μm	0.5μm
4190-6D000	6.000mm	±2μm	0.5μm
4190-6D350	6.350mm (1/4")	±2μm	0.5μm
4190-6D500	6.500mm	±2μm	0.5μm
4190-6D747	6.747mm (17/64")	±2μm	0.5μm
4190-7D000	7.000mm	±2μm	0.5μm
4190-7D144	7.144mm (9/32")	±2μm	0.5μm
4190-7D500	7.500mm	±2μm	0.5μm
4190-7D938	7.938mm (5/16")	±2μm	0.5μm
4190-8D000	8.000mm	±2μm	0.5μm
4190-8D731	8.731mm (11/32")	±2μm	0.5μm

Individual

Code	Diameter	Accuracy	Roundness
4190-9D525	9.525mm (3/8")	±2μm	0.5μm
4190-10D000	10.000mm	±2μm	0.5μm
4190-10D318	10.318mm (13/32")	±2μm	0.5μm
4190-11D000	11.000mm	±2μm	0.5μm
4190-11D113	11.113mm (7/16")	±2μm	0.5μm
4190-11D509	11.509mm (29/64")	±2μm	0.5μm
4190-11D906	11.906mm (15/32")	±2μm	0.5μm
4190-12D000	12.000mm	±2μm	0.5μm
4190-12D303	12.303mm (31/64")	±2μm	0.5μm
4190-12D700	12.700mm (1/2")	±2μm	0.5μm
4190-13D000	13.000mm	±2μm	0.6μm
4190-13D494	13.494mm (17/32")	±2μm	0.6μm
4190-14D000	14.000mm	±2μm	0.6μm
4190-14D288	14.288mm (9/16")	±2μm	0.6μm
4190-15D000	15.000mm	±2μm	0.6μm
4190-15D081	15.081mm (19/32")	±2.5μm	0.6μm
4190-15D875	15.875mm (5/8 ")	±2.5μm	0.6μm
4190-16D000	16.000mm	±2.5μm	0.6μm
4190-16D669	16.669mm (21/32")	±2.5μm	0.6μm
4190-17D462	17.462mm (11/16")	±2.5μm	0.6μm
4190-18D000	18.000mm	±2.5μm	0.6μm
4190-18D256	18.256mm (23/32")	±2.5μm	0.6μm
4190-19D050	19.050mm (3/4")	±2.5μm	0.6μm
4190-19D844	19.844mm (25/32")	±2.5μm	0.6μm
4190-20D000	20.000mm	±2.5μm	0.6μm
4190-22D000	22.000mm	±2.5μm	1μm
4190-22D225	22.225mm (7/8")	±2.5μm	1μm
4190-23D812	23.812mm (15/16")	±2.5μm	1μm
4190-25D000	25.000mm	±2.5μm	1μm
4190-40D000	40.000mm	±2.5μm	1.5μm

Set (25 pairs)

Code	Ceramic balls included (one pair per size)
4190-S25	1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 6, 6.5, 7, 7.5, 8, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 25mm

STEEL MEASURING BALLS

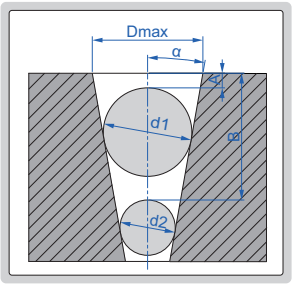
- To measure angle and diameter of taper holes
- Material: tool steel
- Hardness: HRC63
- Diameter accuracy: ±3μm
- Roundness: 1μm
- Supplied with manufacturer inspection certificate

INSPECTION CERTIFICATE



4168-S25

calculate angle (α) and diameter (Dmax) according to the ball diameter (d1, d2), height (A) and depth (B)



Individual

Code	Diameter
4168-01	1mm
4168-02	2mm
4168-03	3mm
4168-04	4mm
4168-05	5mm
4168-06	6mm
4168-07	7mm
4168-08	8mm
4168-09	9mm
4168-10	10mm
4168-11	11mm
4168-12	12mm
4168-13	13mm

Individual

Code	Diameter
4168-14	14mm
4168-15	15mm
4168-16	16mm
4168-17	17mm
4168-18	18mm
4168-19	19mm
4168-20	20mm
4168-21	21mm
4168-22	22mm
4168-23	23mm
4168-24	24mm
4168-25	25mm

Set (25 pairs)

Code	Steel balls included (one pair per size)
4168-S25	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25mm

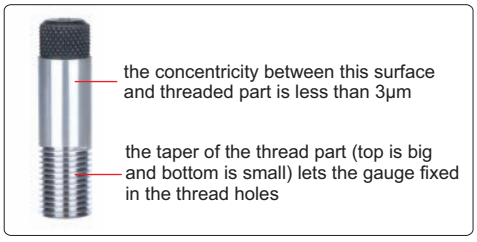
THREADED HOLE LOCATION GAUGES

INSIZE PLUS

ANY SIZE WITHIN THE RANGE OF M3-M150MM CAN BE CUSTOMIZED

ACCURACY CLASS CAN BE CUSTOMIZED

VIDEO

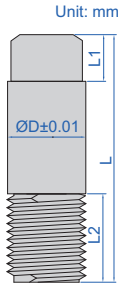




4662-12R



4662-3

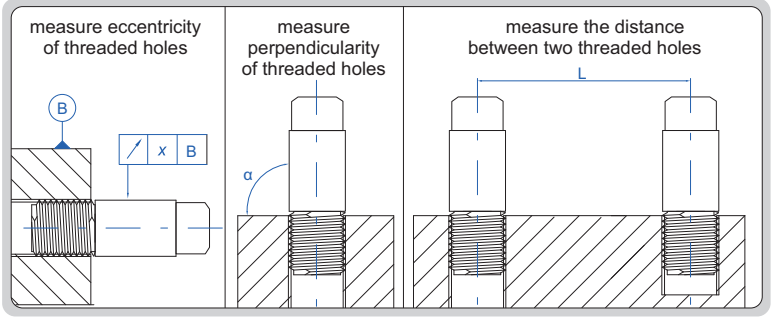


(mm)

Code	Size	L	L1	L2	ØD
4662-3	M3×0.5-6H	29	8	6	3
4662-4	M4×0.7-6H	31.4	8	8.4	4
4662-5	M5×0.8-6H	32.6	8	9.6	5
4662-6	M6×1-6H	47	10	12	6
4662-8	M8×1.25-6H	50	10	15	8
4662-8P	M8×1-6H	47	10	12	8
4662-10	M10×1.5-6H	53	10	18	10
4662-10P	M10×1-6H	47	10	12	10
4662-12	M12×1.75-6H	56	10	21	12
4662-12P	M12×1-6H	47	10	12	12
4662-12R	M12×1.5-6H	53	10	18	12
4662-14	M14×2-6H	59	10	24	14
4662-14P	M14×1-6H	47	10	12	14
4662-14R	M14×1.5-6H	53	10	18	14
4662-16	M16×2-6H	59	10	24	16
4662-16P	M16×1-6H	47	10	12	16
4662-16R	M16×1.5-6H	53	10	18	16
4662-20	M20×2.5-6H	65	10	30	20
4662-20P	M20×1-6H	47	10	12	20
4662-20R	M20×1.5-6H	53	10	18	20

- Hardness: HRC60-63

application

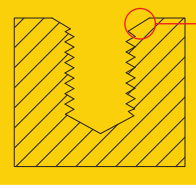


THREADED HOLE LOCATION GAUGES

INSIZE PLUS

VIDEO

ATTENTION: ONLY FOR THE WORKPIECES THAT THE CHAMFER IS CONCENTRIC WITH THE SCREW PART

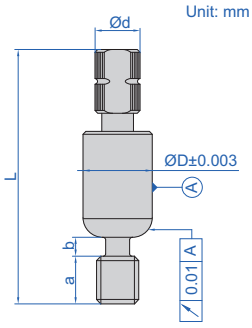




the concentricity between this surface and threaded part is less than 0.01mm

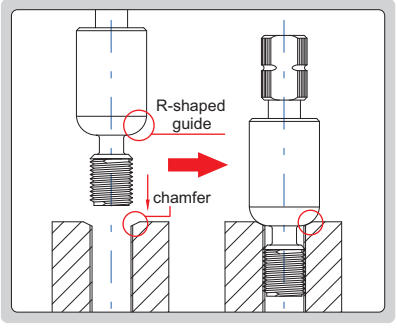


4676-12

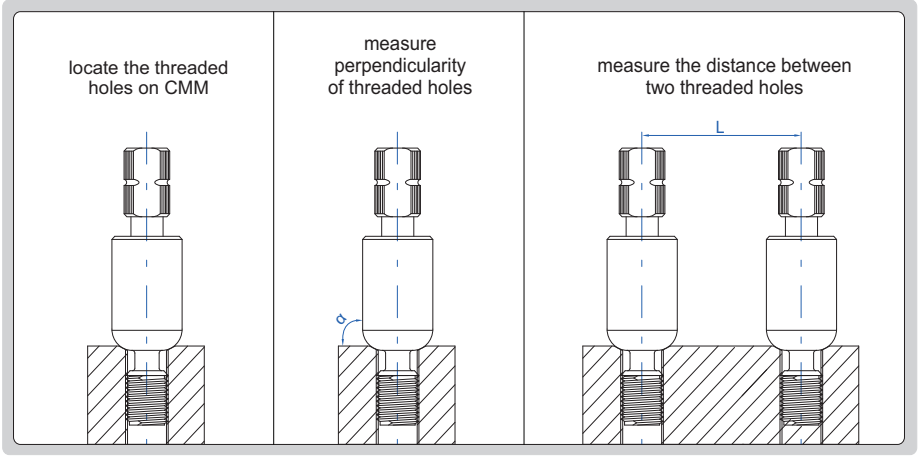


- Only for the workpieces that the chamfer is concentric with the screw part

there is a R-shaped guide, which leads the gauge to the center of the threaded holes by fitting the R-shaped guide on the chamfer of the threaded holes



application



12

(mm)

Code	Size	Ød	ØD	a	b	L
4676-3	M3×0.5	4	7	4	2	26
4676-4	M4×0.7	4	7	4	2	26
4676-5	M5×0.8	5.5	9	6	2	33
4676-6	M6×1.0	5.5	9	6	2	33
4676-8	M8×1.25	8.5	13	9	3.5	48
4676-10	M10×1.5	8.5	13	9	3.5	48
4676-12	M12×1.75	12	17	10	3.5	55

INSPECTION CERTIFICATE

DATA OUTPUT

DIGITAL THREAD DEPTH GAUGES

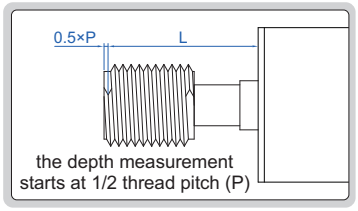
INSIZE PLUS

VIDEO

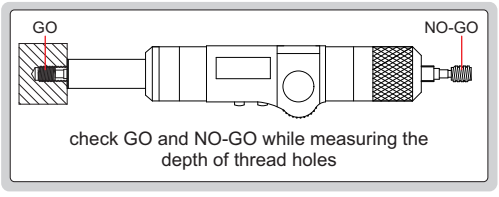


4649-6

- Supplied with GO and NO-GO gauges together
- Check GO and NO-GO while measuring the depth of thread holes
- Resolution: 0.01mm/0.0005"
- Depth 0-40mm: accuracy ±0.04mm; Depth 40-80mm: accuracy ±0.06mm
- Data output
- Button function: on/off, inch/metric conversion, reading hold, data preset, absolute/incremental measurement
- Battery CR2032, automatic power off, move the digital unit to turn on power
- The GO gauge can be replaced after wear
- Optional accessory: data output cable (code **7302-85**), zero block (code **4668-SETTER**), removal tool (code **4668-TOOL**)



the depth measurement starts at 1/2 thread pitch (P)



check GO and NO-GO while measuring the depth of thread holes

Metric thread

Code	Size (mm)	Depth range
4649-2*	M2x0.4-6H	0-8mm
4649-2D5*	M2.5x0.45-6H	0-10mm
4649-3*	M3x0.5-6H	0-12mm
4649-3D5*	M3.5x0.6-6H	0-14mm
4649-4*	M4x0.7-6H	0-16mm
4649-5*	M5x0.8-6H	0-20mm
4649-6*	M6x1-6H	0-24mm
4649-7*	M7x1-6H	0-28mm
4649-8*	M8x1.25-6H	0-32mm
4649-10*	M10x1.5-6H	0-40mm
4649-12*	M12x1.75-6H	0-48mm
4649-14*	M14x2-6H	0-56mm
4649-16*	M16x2-6H	0-64mm
4649-18*	M18x2.5-6H	0-72mm
4649-20*	M20x2.5-6H	0-80mm
4649-22*	M22x2.5-6H	0-80mm
4649-24*	M24x3-6H	0-80mm
4649-27*	M27x3-6H	0-80mm
4649-30*	M30x3.5-6H	0-80mm

Metric fine thread

Code	Size (mm)	Depth range
4649-8P*	M8x1-6H	0-32mm
4649-10P*	M10x1-6H	0-40mm
4649-10T*	M10x1.25-6H	0-40mm
4649-12P*	M12x1-6H	0-48mm
4649-12T*	M12x1.25-6H	0-48mm
4649-12R*	M12x1.5-6H	0-48mm
4649-14P*	M14x1-6H	0-56mm
4649-14T*	M14x1.25-6H	0-56mm
4649-14R*	M14x1.5-6H	0-56mm
4649-16P*	M16x1-6H	0-64mm
4649-16R*	M16x1.5-6H	0-64mm
4649-18P*	M18x1-6H	0-72mm
4649-18R*	M18x1.5-6H	0-72mm
4649-20P*	M20x1-6H	0-80mm
4649-20R*	M20x1.5-6H	0-80mm
4649-22P*	M22x1-6H	0-80mm
4649-22R*	M22x1.5-6H	0-80mm
4649-24P*	M24x1-6H	0-80mm
4649-24R*	M24x1.5-6H	0-80mm

*Supplied with manufacturer inspection certificate

THREAD DEPTH GAUGES

INSIZE PLUS

INSPECTION CERTIFICATE

- Supplied with GO and NO-GO gauges together
- Check GO and NO-GO while measuring the depth thread holes
- The GO gauge can be replaced after wear
- Optional accessory: zero block (code **4668-SETTER**), removal tool (code **4668-TOOL**)

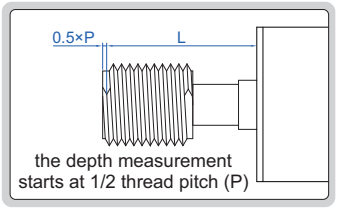


4666-6

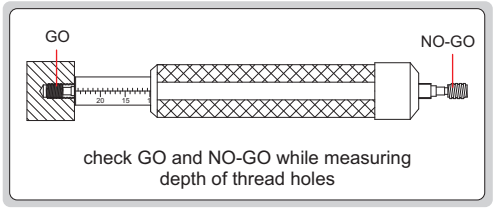
with vernier reading



4666-14PA



the depth measurement starts at 1/2 thread pitch (P)



check GO and NO-GO while measuring depth of thread holes

Metric thread (without vernier reading, graduation: 0.5mm, accuracy: ±0.25mm)

Code	Size (mm)	Depth range
4666-2*	M2x0.4-6H	0-8mm
4666-2D5*	M2.5x0.45-6H	0-10mm
4666-3*	M3x0.5-6H	0-11mm
4666-3D5*	M3.5x0.6-6H	0-14mm
4666-4*	M4x0.7-6H	0-15mm
4666-5*	M5x0.8-6H	0-20mm
4666-6*	M6x1-6H	0-24mm
4666-7*	M7x1-6H	0-28mm
4666-8*	M8x1.25-6H	0-32mm
4666-10*	M10x1.5-6H	0-40mm
4666-12*	M12x1.75-6H	0-48mm
4666-14*	M14x2-6H	0-56mm
4666-16*	M16x2-6H	0-64mm
4666-18*	M18x2.5-6H	0-72mm
4666-20*	M20x2.5-6H	0-80mm
4666-22*	M22x2.5-6H	0-80mm
4666-24*	M24x3-6H	0-80mm
4666-27*	M27x3-6H	0-80mm
4666-30*	M30x3.5-6H	0-80mm

Metric thread (with vernier reading, graduation: 0.1mm, accuracy: ±0.1mm)

Code	Size (mm)	Depth range
4666-2A*	M2x0.4-6H	0-8mm
4666-2D5A*	M2.5x0.45-6H	0-10mm
4666-3A*	M3x0.5-6H	0-11mm
4666-3D5A*	M3.5x0.6-6H	0-14mm
4666-4A*	M4x0.7-6H	0-15mm
4666-5A*	M5x0.8-6H	0-20mm
4666-6A*	M6x1-6H	0-24mm
4666-7A*	M7x1-6H	0-28mm
4666-8A*	M8x1.25-6H	0-32mm
4666-10A*	M10x1.5-6H	0-40mm
4666-12A*	M12x1.75-6H	0-48mm
4666-14A*	M14x2-6H	0-56mm
4666-16A*	M16x2-6H	0-64mm
4666-18A*	M18x2.5-6H	0-72mm
4666-20A*	M20x2.5-6H	0-80mm
4666-22A*	M22x2.5-6H	0-80mm
4666-24A*	M24x3-6H	0-80mm
4666-27A*	M27x3-6H	0-80mm
4666-30A*	M30x3.5-6H	0-80mm

VIDEO

Metric fine thread (without vernier reading, graduation: 0.5mm, accuracy: ±0.25mm)

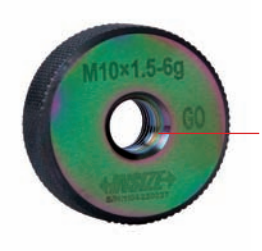
Code	Size (mm)	Depth range
4666-8P*	M8x1-6H	0-32mm
4666-10P*	M10x1-6H	0-40mm
4666-10T*	M10x1.25-6H	0-40mm
4666-12P*	M12x1-6H	0-48mm
4666-12T*	M12x1.25-6H	0-48mm
4666-12R*	M12x1.5-6H	0-48mm
4666-14P*	M14x1-6H	0-56mm
4666-14T*	M14x1.25-6H	0-56mm
4666-14R*	M14x1.5-6H	0-56mm
4666-16P*	M16x1-6H	0-64mm
4666-16R*	M16x1.5-6H	0-64mm
4666-18P*	M18x1-6H	0-72mm
4666-18R*	M18x1.5-6H	0-72mm
4666-20P*	M20x1-6H	0-80mm
4666-20R*	M20x1.5-6H	0-80mm
4666-22P*	M22x1-6H	0-80mm
4666-22R*	M22x1.5-6H	0-80mm
4666-24P*	M24x1-6H	0-80mm
4666-24R*	M24x1.5-6H	0-80mm

Metric fine thread (with vernier reading, graduation: 0.1mm, accuracy: ±0.1mm)

Code	Size (mm)	Depth range
4666-8PA*	M8x1-6H	0-32mm
4666-10PA*	M10x1-6H	0-40mm
4666-10TA*	M10x1.25-6H	0-40mm
4666-12PA*	M12x1-6H	0-48mm
4666-12TA*	M12x1.25-6H	0-48mm
4666-12RA*	M12x1.5-6H	0-48mm
4666-14PA*	M14x1-6H	0-56mm
4666-14TA*	M14x1.25-6H	0-56mm
4666-14RA*	M14x1.5-6H	0-56mm
4666-16PA*	M16x1-6H	0-64mm
4666-16RA*	M16x1.5-6H	0-64mm
4666-18PA*	M18x1-6H	0-72mm
4666-18RA*	M18x1.5-6H	0-72mm
4666-20PA*	M20x1-6H	0-80mm
4666-20RA*	M20x1.5-6H	0-80mm
4666-22PA*	M22x1-6H	0-80mm
4666-22RA*	M22x1.5-6H	0-80mm
4666-24PA*	M24x1-6H	0-80mm
4666-24RA*	M24x1.5-6H	0-80mm

*Supplied with manufacturer inspection certificate

DLC COATED THREAD RING GAUGES AND PLUG GAUGES





Code example:

Original code	DLC coating code
4120-12	4120-12-DLC
4130-4	4130-4-DLC

- The DLC coating has the following advantages:
  – High hardness, extremely wear resistance
  – Low friction coefficient
  – Corrosion resistance
- Plug gauges: GO is coated, NO-GO is not;
  Ring gauges: GO is coated, NO-GO is not
- The following thread ring gauges and plug gauges are available with DLC coating:
  Metric fine thread ring gauges and plug gauges (**4139, 4129** series);
  Metric thread ring gauges and plug gauges (**4130, 4120** series);
  American standard thread ring gauges and plug gauges (**4131, 4121** series)

DLC coating characteristics

Hardness	6000HV
Friction coefficient	0.15
Coating color	interference color

LEFT HAND THREAD RING GAUGES AND PLUG GAUGES





- The following thread ring gauges and plug gauges are available with left hand:
  Metric thread ring gauges and plug gauges (**4130**, **4120** series)
  Metric fine thread ring gauges and plug gauges (**4139**, **4129** series)
  American standard thread ring gauges and plug gauges (**4131**, **4121** series)
  Metric aerospace thread ring gauges and plug gauges (**4230**, **4220** series)
  American standard aerospace thread ring gauges and plug gauges (**4231**, **4221** series)
  ST thread plug gauges (**4678** series)
  Check plugs for metric thread ring gauges (**4647** series)
  Check plugs for metric fine thread ring gauges (**4677** series)

Code example:

Original code	Left hand code
4120-12	4120-12-LH
4130-4	4130-4-LH

METRIC THREAD PLUG GAUGES

WARNING: LIFE TIME IS LIMITED, IT CAN BE USED FOR ABOUT 2000 TIMES NORMALLY. THE ACCURACY NEEDS TO BE CHECKED REGULARLY

INSPECTION CERTIFICATE



4130-10

- Supplied with Go and No-Go gauges together
- Standard ISO1502
- Supplied with manufacturer inspection certificate

Individual

Size (mm)		Code		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M0.8	0.2	**4130-D8**	**4130-D8G**	**4130-D8H**
M0.9	0.225	**4130-D9**	**4130-D9G**	**4130-D9H**
M1	0.25	**4130-1**	**4130-1G**	**4130-1H**
M1.1	0.25	**4130-1D1**	**4130-1D1G**	**4130-1D1H**
M1.2	0.25	**4130-1D2**	**4130-1D2G**	**4130-1D2H**
M1.4	0.3	**4130-1D4**	**4130-1D4G**	**4130-1D4H**
M1.6	0.35	**4130-1D6**	**4130-1D6G**	**4130-1D6H**
M1.7	0.35	**4130-1D7**	**4130-1D7G**	**4130-1D7H**
M1.8	0.35	**4130-1D8**	**4130-1D8G**	**4130-1D8H**
M2	0.4	**4130-2**	**4130-2G**	**4130-2H**
M2.2	0.45	**4130-2D2**	**4130-2D2G**	**4130-2D2H**
M2.3	0.4	**4130-2D3**	**4130-2D3G**	**4130-2D3H**
M2.5	0.45	**4130-2D5**	**4130-2D5G**	**4130-2D5H**
M2.6	0.45	**4130-2D6**	**4130-2D6G**	**4130-2D6H**
M3	0.5	**4130-3**	**4130-3G**	**4130-3H**
M3.5	0.6	**4130-3D5**	**4130-3D5G**	**4130-3D5H**
M4	0.7	**4130-4**	**4130-4G**	**4130-4H**
M4.5	0.75	**4130-4D5**	**4130-4D5G**	**4130-4D5H**
M5	0.8	**4130-5**	**4130-5G**	**4130-5H**
M6	1	**4130-6**	**4130-6G**	**4130-6H**
M7	1	**4130-7**	**4130-7G**	**4130-7H**
M8	1.25	**4130-8**	**4130-8G**	**4130-8H**

Individual

Size (mm)		Code		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M9	1.25	**4130-9**	**4130-9G**	**4130-9H**
M10	1.5	**4130-10**	**4130-10G**	**4130-10H**
M11	1.5	**4130-11**	**4130-11G**	**4130-11H**
M12	1.75	**4130-12**	**4130-12G**	**4130-12H**
M14	2	**4130-14**	**4130-14G**	**4130-14H**
M16	2	**4130-16**	**4130-16G**	**4130-16H**
M18	2.5	**4130-18**	**4130-18G**	**4130-18H**
M20	2.5	**4130-20**	**4130-20G**	**4130-20H**
M22	2.5	**4130-22**	**4130-22G**	**4130-22H**
M24	3	**4130-24**	**4130-24G**	**4130-24H**
M27	3	**4130-27**	**4130-27G**	**4130-27H**
M30	3.5	**4130-30**	**4130-30G**	**4130-30H**
M33	3.5	**4130-33**	**4130-33G**	**4130-33H**
M36	4	**4130-36**	**4130-36G**	**4130-36H**
M39	4	**4130-39**	**4130-39G**	**4130-39H**
M42	4.5	**4130-42**	**4130-42G**	**4130-42H**
M45	4.5	**4130-45**	**4130-45G**	**4130-45H**
M48	5	**4130-48**	**4130-48G**	**4130-48H**
M52	5	**4130-52**	**4130-52G**	**4130-52H**
M56	5.5	**4130-56**	**4130-56G**	**4130-56H**
M60	5.5	**4130-60**	**4130-60G**	**4130-60H**
M64	6	**4130-64**	**4130-64G**	**4130-64H**
M68	6	**4130-68**	**4130-68G**	**4130-68H**

Set (class 6H)

Code	Thread plug gauges included (mm)
4130-S7	M3x0.5 (**4130-3**), M4x0.7 (**4130-4**), M5x0.8 (**4130-5**), M6x1 (**4130-6**), M8x1.25 (**4130-8**), M10x1.5 (**4130-10**), M12x1.75 (**4130-12**)

METRIC FINE THREAD PLUG GAUGES

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INSPECTION CERTIFICATE



4139-20G

- Supplied with Go and No-Go gauges together
- Standard ISO1502
- Supplied with manufacturer inspection certificate

Code example:
"**-1A**" stands for "**4139-1A**"

Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M1	0.2	-1A	-1AG	-1AH
M1.2	0.2	-1D2A	-1D2AG	-1D2AH
M1.4	0.2	-1D4A	-1D4AG	-1D4AH
M1.6	0.2	-1D6A	-1D6AG	-1D6AH
M1.8	0.2	-1D8A	-1D8AG	-1D8AH
M2	0.2	-2A	-2AG	-2AH
	0.25	-2B	-2BG	-2BH
M2.5	0.2	-2D5A	-2D5AG	-2D5AH
	0.25	-2D5B	-2D5BG	-2D5BH
	0.35	-2D5D	-2D5DG	-2D5DH
M3	0.25	-3B	-3BG	-3BH
	0.35	-3D	-3DG	-3DH
M3.5	0.25	-3D5B	-3D5BG	-3D5BH
	0.35	-3D5D	-3D5DG	-3D5DH
	0.5	-3D5G	-3D5GG	-3D5GH
M4	0.25	-4B	-4BG	-4BH
	0.35	-4D	-4DG	-4DH
	0.5	-4G	-4GG	-4GH
M4.5	0.35	-4D5D	-4D5DG	-4D5DH
	0.5	-4D5G	-4D5GG	-4D5GH
M5	0.25	-5B	-5BG	-5BH
	0.35	-5D	-5DG	-5DH
	0.5	-5G	-5GG	-5GH
M5.5	0.5	-5D5G	-5D5GG	-5D5GH
M6	0.25	-6B	-6BG	-6BH
	0.35	-6D	-6DG	-6DH
	0.5	-6G	-6GG	-6GH
M6.5	0.5	-6D5G	-6D5GG	-6D5GH
M7	0.35	-7D	-7DG	-7DH
	0.5	-7G	-7GG	-7GH
M7.5	0.5	-7D5G	-7D5GG	-7D5GH
M8	0.35	-8D	-8DG	-8DH
	0.5	-8G	-8GG	-8GH

Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M8	1	-8P	-8PG	-8PH
M8.5	0.5	-8D5G	-8D5GG	-8D5GH
M9	0.35	-9D	-9DG	-9DH
	0.5	-9G	-9GG	-9GH
	0.75	-9L	-9LG	-9LH
	1	-9P	-9PG	-9PH
M10	0.35	-10D	-10DG	-10DH
	0.5	-10G	-10GG	-10GH
	1	-10P	-10PG	-10PH
	1.25	-10Q	-10QG	-10QH
M11	0.5	-11G	-11GG	-11GH
	1	-11P	-11PG	-11PH
M12	0.5	-12G	-12GG	-12GH
	1	-12P	-12PG	-12PH
	1.25	-12Q	-12QG	-12QH
	1.5	-12R	-12RG	-12RH
M13	0.5	-13G	-13GG	-13GH
	1	-13P	-13PG	-13PH
	1.5	-13R	-13RG	-13RH
M14	0.5	-14G	-14GG	-14GH
	1	-14P	-14PG	-14PH
	1.25	-14Q	-14QG	-14QH
	1.5	-14R	-14RG	-14RH
M15	0.5	-15G	-15GG	-15GH
	1	-15P	-15PG	-15PH
	1.5	-15R	-15RG	-15RH
M16	0.5	-16G	-16GG	-16GH
	1	-16P	-16PG	-16PH
	1.25	-16Q	-16QG	-16QH
	1.5	-16R	-16RG	-16RH
M17	0.5	-17G	-17GG	-17GH
	1	-17P	-17PG	-17PH
	1.5	-17R	-17RG	-17RH

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Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M18	0.5	-18G	-18GG	-18GH
	1	-18P	-18PG	-18PH
	1.25	-18Q	-18QG	-18QH
	1.5	-18R	-18RG	-18RH
	2	-18T	-18TG	-18TH
M19	0.5	-19G	-19GG	-19GH
	1	-19P	-19PG	-19PH
	1.5	-19R	-19RG	-19RH
M20	0.5	-20G	-20GG	-20GH
	1	-20P	-20PG	-20PH
	1.25	-20Q	-20QG	-20QH
	1.5	-20R	-20RG	-20RH
	2	-20T	-20TG	-20TH
M21	0.5	-21G	-21GG	-21GH
	1	-21P	-21PG	-21PH
	1.5	-21R	-21RG	-21RH
M22	0.5	-22G	-22GG	-22GH
	1	-22P	-22PG	-22PH
	1.25	-22Q	-22QG	-22QH
	1.5	-22R	-22RG	-22RH
	2	-22T	-22TG	-22TH
M23	0.5	-23G	-23GG	-23GH
	1	-23P	-23PG	-23PH
M24	0.5	-24G	-24GG	-24GH
	1	-24P	-24PG	-24PH
	1.25	-24Q	-24QG	-24QH
	1.5	-24R	-24RG	-24RH
	2	-24T	-24TG	-24TH
M25	0.5	-25G	-25GG	-25GH
	1	-25P	-25PG	-25PH
	1.5	-25R	-25RG	-25RH
	2	-25T	-25TG	-25TH
M26	0.5	-26G	-26GG	-26GH
	1	-26P	-26PG	-26PH
	1.5	-26R	-26RG	-26RH
	2	-26T	-26TG	-26TH
M27	0.5	-27G	-27GG	-27GH
	1	-27P	-27PG	-27PH
	1.5	-27R	-27RG	-27RH
	2	-27T	-27TG	-27TH
M28	0.5	-28G	-28GG	-28GH
	1	-28P	-28PG	-28PH
	1.5	-28R	-28RG	-28RH
	2	-28T	-28TG	-28TH
M29	0.5	-29G	-29GG	-29GH
	0.75	-29L	-29LG	-29LH
	1	-29P	-29PG	-29PH
M30	0.5	-30G	-30GG	-30GH
	0.75	-30L	-30LG	-30LH
	1	-30P	-30PG	-30PH
	1.5	-30R	-30RG	-30RH
	2	-30T	-30TG	-30TH
	3	-30V	-30VG	-30VH

Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M31	0.5	-31G	-31GG	-31GH
	0.75	-31L	-31LG	-31LH
M32	0.5	-32G	-32GG	-32GH
	0.75	-32L	-32LG	-32LH
	1	-32P	-32PG	-32PH
	1.5	-32R	-32RG	-32RH
	2	-32T	-32TG	-32TH
M33	0.5	-33G	-33GG	-33GH
	0.75	-33L	-33LG	-33LH
	1	-33P	-33PG	-33PH
	1.5	-33R	-33RG	-33RH
	2	-33T	-33TG	-33TH
	3	-33V	-33VG	-33VH
M34	0.75	-34L	-34LG	-34LH
	1	-34P	-34PG	-34PH
	1.5	-34R	-34RG	-34RH
	2	-34T	-34TG	-34TH
M35	0.75	-35L	-35LG	-35LH
	1	-35P	-35PG	-35PH
	1.5	-35R	-35RG	-35RH
	2	-35T	-35TG	-35TH
M36	0.75	-36L	-36LG	-36LH
	1	-36P	-36PG	-36PH
	1.5	-36R	-36RG	-36RH
	2	-36T	-36TG	-36TH
	3	-36V	-36VG	-36VH
M37	0.75	-37L	-37LG	-37LH
M38	0.75	-38L	-38LG	-38LH
	1	-38P	-38PG	-38PH
	1.5	-38R	-38RG	-38RH
	2	-38T	-38TG	-38TH
M39	0.75	-39L	-39LG	-39LH
	1	-39P	-39PG	-39PH
	1.5	-39R	-39RG	-39RH
	2	-39T	-39TG	-39TH
	3	-39V	-39VG	-39VH
M40	0.75	-40L	-40LG	-40LH
	1	-40P	-40PG	-40PH
	1.5	-40R	-40RG	-40RH
	2	-40T	-40TG	-40TH
	3	-40V	-40VG	-40VH
M42	1	-42P	-42PG	-42PH
	1.5	-42R	-42RG	-42RH
	2	-42T	-42TG	-42TH
	3	-42V	-42VG	-42VH
M45	1	-45P	-45PG	-45PH
	1.5	-45R	-45RG	-45RH
	2	-45T	-45TG	-45TH
	3	-45V	-45VG	-45VH
M48	1	-48P	-48PG	-48PH
	1.5	-48R	-48RG	-48RH
	2	-48T	-48TG	-48TH
	3	-48V	-48VG	-48VH

To be continued

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Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M50	1	-50P	-50PG	-50PH
	1.5	-50R	-50RG	-50RH
	2	-50T	-50TG	-50TH
	3	-50V	-50VG	-50VH
M52	1	-52P	-52PG	-52PH
	1.5	-52R	-52RG	-52RH
	2	-52T	-52TG	-52TH
	3	-52V	-52VG	-52VH
	4	-52X	-52XG	-52XH
M55	1	-55P	-55PG	-55PH
	1.5	-55R	-55RG	-55RH
	2	-55T	-55TG	-55TH
	3	-55V	-55VG	-55VH
	4	-55X	-55XG	-55XH
M56	1	-56P	-56PG	-56PH
	1.5	-56R	-56RG	-56RH
	2	-56T	-56TG	-56TH
	3	-56V	-56VG	-56VH
	4	-56X	-56XG	-56XH
M58	1	-58P	-58PG	-58PH
	1.5	-58R	-58RG	-58RH
	2	-58T	-58TG	-58TH
	3	-58V	-58VG	-58VH
	4	-58X	-58XG	-58XH
M60	1	-60P	-60PG	-60PH
	1.5	-60R	-60RG	-60RH
	2	-60T	-60TG	-60TH
	3	-60V	-60VG	-60VH
	4	-60X	-60XG	-60XH
M62	1.5	-62R	-62RG	-62RH
	2	-62T	-62TG	-62TH
	3	-62V	-62VG	-62VH
	4	-62X	-62XG	-62XH
M64	1.5	-64R	-64RG	-64RH
	2	-64T	-64TG	-64TH
	3	-64V	-64VG	-64VH
	4	-64X	-64XG	-64XH
M65	1.5	-65R	-65RG	-65RH
	2	-65T	-65TG	-65TH
	3	-65V	-65VG	-65VH
	4	-65X	-65XG	-65XH
M68	1.5	-68R	-68RG	-68RH
	2	-68T	-68TG	-68TH
	3	-68V	-68VG	-68VH
	4	-68X	-68XG	-68XH
M70	1.5	-70R	-70RG	-70RH
	2	-70T	-70TG	-70TH
	3	-70V	-70VG	-70VH
	4	-70X	-70XG	-70XH
	6	-70O	-70OG	-70OH
M72	1.5	-72R	-72RG	-72RH

Size (mm)		Code (4139)		
Nominal diameter	Pitch	Class 6H	Class 6G	Class 4H
M72	2	-72T	-72TG	-72TH
	3	-72V	-72VG	-72VH
	4	-72X	-72XG	-72XH
	6	-72O	-72OG	-72OH
M75	1.5	-75R	-75RG	-75RH
	2	-75T	-75TG	-75TH
	3	-75V	-75VG	-75VH
	4	-75X	-75XG	-75XH
M76	1.5	-76R	-76RG	-76RH
	2	-76T	-76TG	-76TH
	3	-76V	-76VG	-76VH
	4	-76X	-76XG	-76XH
	6	-76O	-76OG	-76OH
M78	2	-78T	-78TG	-78TH
M80	1.5	-80R	-80RG	-80RH
	2	-80T	-80TG	-80TH
	3	-80V	-80VG	-80VH
	4	-80X	-80XG	-80XH
	6	-80O	-80OG	-80OH
M82	2	-82T	-82TG	-82TH
M85	2	-85T	-85TG	-85TH
	3	-85V	-85VG	-85VH
	4	-85X	-85XG	-85XH
	6	-85O	-85OG	-85OH
M90	2	-90T	-90TG	-90TH
	3	-90V	-90VG	-90VH
	4	-90X	-90XG	-90XH
	6	-90O	-90OG	-90OH
M95	2	-95T	-95TG	-95TH
	3	-95V	-95VG	-95VH
	4	-95X	-95XG	-95XH
	6	-95O	-95OG	-95OH
M100	2	-100T	-100TG	-100TH
	3	-100V	-100VG	-100VH
	4	-100X	-100XG	-100XH
	6	-100O	-100OG	-100OH
M105	2	-105T	-105TG	-105TH
	3	-105V	-105VG	-105VH
	4	-105X	-105XG	-105XH
	6	-105O	-105OG	-105OH
M110	2	-110T	-110TG	-110TH
	3	-110V	-110VG	-110VH
	4	-110X	-110XG	-110XH
	6	-110O	-110OG	-110OH
M115	2	-115T	-115TG	-115TH
	3	-115V	-115VG	-115VH
	4	-115X	-115XG	-115XH
	6	-115O	-115OG	-115OH
M120	2	-120T	-120TG	-120TH
	3	-120V	-120VG	-120VH
	4	-120X	-120XG	-120XH
	6	-120O	-120OG	-120OH

METRIC THREAD RING GAUGES

WARNING: LIFE TIME IS LIMITED, IT CAN BE USED FOR ABOUT 2000 TIMES NORMALLY. THE ACCURACY NEEDS TO BE CHECKED REGULARLY

INSPECTION CERTIFICATE

- Standard ISO1502
- Supplied with manufacturer inspection certificate



4120-16



4120-16N

Code example:
"**-2**" stands for "**4120-2**"

Individual

Size (mm)		Code (4120)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M2	0.4	**-2**	**-2N**	**-2E**	**-2EN**	**-2H**	**-2HN**
M2.2	0.45	**-2D2**	**-2D2N**	**-2D2E**	**-2D2EN**	**-2D2H**	**-2D2HN**
M2.3	0.4	**-2D3**	**-2D3N**	**-2D3E**	**-2D3EN**	**-2D3H**	**-2D3HN**
M2.5	0.45	**-2D5**	**-2D5N**	**-2D5E**	**-2D5EN**	**-2D5H**	**-2D5HN**
M2.6	0.45	**-2D6**	**-2D6N**	**-2D6E**	**-2D6EN**	**-2D6H**	**-2D6HN**
M3	0.5	**-3**	**-3N**	**-3E**	**-3EN**	**-3H**	**-3HN**
M3.5	0.6	**-3D5**	**-3D5N**	**-3D5E**	**-3D5EN**	**-3D5H**	**-3D5HN**
M4	0.7	**-4**	**-4N**	**-4E**	**-4EN**	**-4H**	**-4HN**
M4.5	0.75	**-4D5**	**-4D5N**	**-4D5E**	**-4D5EN**	**-4D5H**	**-4D5HN**
M5	0.8	**-5**	**-5N**	**-5E**	**-5EN**	**-5H**	**-5HN**
M6	1	**-6**	**-6N**	**-6E**	**-6EN**	**-6H**	**-6HN**
M7	1	**-7**	**-7N**	**-7E**	**-7EN**	**-7H**	**-7HN**
M8	1.25	**-8**	**-8N**	**-8E**	**-8EN**	**-8H**	**-8HN**
M9	1.25	**-9**	**-9N**	**-9E**	**-9EN**	**-9H**	**-9HN**
M10	1.5	**-10**	**-10N**	**-10E**	**-10EN**	**-10H**	**-10HN**
M11	1.5	**-11**	**-11N**	**-11E**	**-11EN**	**-11H**	**-11HN**
M12	1.75	**-12**	**-12N**	**-12E**	**-12EN**	**-12H**	**-12HN**
M14	2	**-14**	**-14N**	**-14E**	**-14EN**	**-14H**	**-14HN**
M16	2	**-16**	**-16N**	**-16E**	**-16EN**	**-16H**	**-16HN**
M18	2.5	**-18**	**-18N**	**-18E**	**-18EN**	**-18H**	**-18HN**
M20	2.5	**-20**	**-20N**	**-20E**	**-20EN**	**-20H**	**-20HN**
M22	2.5	**-22**	**-22N**	**-22E**	**-22EN**	**-22H**	**-22HN**
M24	3	**-24**	**-24N**	**-24E**	**-24EN**	**-24H**	**-24HN**
M27	3	**-27**	**-27N**	**-27E**	**-27EN**	**-27H**	**-27HN**
M30	3.5	**-30**	**-30N**	**-30E**	**-30EN**	**-30H**	**-30HN**
M33	3.5	**-33**	**-33N**	**-33E**	**-33EN**	**-33H**	**-33HN**
M36	4	**-36**	**-36N**	**-36E**	**-36EN**	**-36H**	**-36HN**
M39	4	**-39**	**-39N**	**-39E**	**-39EN**	**-39H**	**-39HN**
M42	4.5	**-42**	**-42N**	**-42E**	**-42EN**	**-42H**	**-42HN**
M45	4.5	**-45**	**-45N**	**-45E**	**-45EN**	**-45H**	**-45HN**
M48	5	**-48**	**-48N**	**-48E**	**-48EN**	**-48H**	**-48HN**
M52	5	**-52**	**-52N**	**-52E**	**-52EN**	**-52H**	**-52HN**
M56	5.5	**-56**	**-56N**	**-56E**	**-56EN**	**-56H**	**-56HN**
M60	5.5	**-60**	**-60N**	**-60E**	**-60EN**	**-60H**	**-60HN**
M64	6	**-64**	**-64N**	**-64E**	**-64EN**	**-64H**	**-64HN**
M68	6	**-68**	**-68N**	**-68E**	**-68EN**	**-68H**	**-68HN**

Go ring gauge set (Class 6g)

Code	Thread ring gauges included (mm)
4120-S7	M3x0.5 (**4120-3**), M4x0.7 (**4120-4**), M5x0.8 (**4120-5**), M6x1 (**4120-6**), M8x1.25 (**4120-8**), M10x1.5 (**4120-10**), M12x1.75 (**4120-12**)

No Go ring gauge set (Class 6g)

Code	Thread ring gauges included (mm)
4120-S7N	M3x0.5 (**4120-3N**), M4x0.7 (**4120-4N**), M5x0.8 (**4120-5N**), M6x1 (**4120-6N**), M8x1.25 (**4120-8N**), M10x1.5 (**4120-10N**), M12x1.75 (**4120-12N**)

WARNING: LIFE TIME IS LIMITED, IT CAN BE USED FOR ABOUT 2000 TIMES NORMALLY. THE ACCURACY NEEDS TO BE CHECKED REGULARLY

METRIC FINE THREAD RING GAUGES

INSPECTION CERTIFICATE

- Standard ISO1502
- Supplied with manufacturer inspection certificate (except gauges larger than M100)



4129-10P



4129-10PN

Code example:
"**-3D5G**" stands for "**4129-3D5G**"

Size (mm)		Code (4129)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M3.5	0.5	-3D5G	-3D5GN	-3D5GE	-3D5GEN	-3D5GH	-3D5GHN
M4	0.5	-4G	-4GN	-4GE	-4GEN	-4GH	-4GHN
M4.5	0.5	-4D5G	-4D5GN	-4D5GE	-4D5GEN	-4D5GH	-4D5GHN
M5	0.5	-5G	-5GN	-5GE	-5GEN	-5GH	-5GHN
M5.5	0.5	-5D5G	-5D5GN	-5D5GE	-5D5GEN	-5D5GH	-5D5GHN
M6	0.5	-6G	-6GN	-6GE	-6GEN	-6GH	-6GHN
	0.75	-6L	-6LN	-6LE	-6LEN	-6LH	-6LHN
M6.5	0.5	-6D5G	-6D5GN	-6D5GE	-6D5GEN	-6D5GH	-6D5GHN
M7	0.5	-7G	-7GN	-7GE	-7GEN	-7GH	-7GHN
	0.75	-7L	-7LN	-7LE	-7LEN	-7LH	-7LHN
M7.5	0.5	-7D5G	-7D5GN	-7D5GE	-7D5GEN	-7D5GH	-7D5GHN
M8	0.5	-8G	-8GN	-8GE	-8GEN	-8GH	-8GHN
	0.75	-8L	-8LN	-8LE	-8LEN	-8LH	-8LHN
	1	-8P	-8PN	-8PE	-8PEN	-8PH	-8PHN
M8.5	0.5	-8D5G	-8D5GN	-8D5GE	-8D5GEN	-8D5GH	-8D5GHN
M9	0.5	-9G	-9GN	-9GE	-9GEN	-9GH	-9GHN
	0.75	-9L	-9LN	-9LE	-9LEN	-9LH	-9LHN
	1	-9P	-9PN	-9PE	-9PEN	-9PH	-9PHN
M10	0.5	-10G	-10GN	-10GE	-10GEN	-10GH	-10GHN
	0.75	-10L	-10LN	-10LE	-10LEN	-10LH	-10LHN
	1	-10P	-10PN	-10PE	-10PEN	-10PH	-10PHN
	1.25	-10Q	-10QN	-10QE	-10QEN	-10QH	-10QHN
M11	0.5	-11G	-11GN	-11GE	-11GEN	-11GH	-11GHN
	0.75	-11L	-11LN	-11LE	-11LEN	-11LH	-11LHN
	1	-11P	-11PN	-11PE	-11PEN	-11PH	-11PHN
M12	0.5	-12G	-12GN	-12GE	-12GEN	-12GH	-12GHN
	0.75	-12L	-12LN	-12LE	-12LEN	-12LH	-12LHN
	1	-12P	-12PN	-12PE	-12PEN	-12PH	-12PHN
	1.25	-12Q	-12QN	-12QE	-12QEN	-12QH	-12QHN
	1.5	-12R	-12RN	-12RE	-12REN	-12RH	-12RHN
M13	0.5	-13G	-13GN	-13GE	-13GEN	-13GH	-13GHN
	0.75	-13L	-13LN	-13LE	-13LEN	-13LH	-13LHN
	1	-13P	-13PN	-13PE	-13PEN	-13PH	-13PHN
	1.5	-13R	-13RN	-13RE	-13REN	-13RH	-13RHN
M14	0.5	-14G	-14GN	-14GE	-14GEN	-14GH	-14GHN
	0.75	-14L	-14LN	-14LE	-14LEN	-14LH	-14LHN
	1	-14P	-14PN	-14PE	-14PEN	-14PH	-14PHN
	1.25	-14Q	-14QN	-14QE	-14QEN	-14QH	-14QHN
	1.5	-14R	-14RN	-14RE	-14REN	-14RH	-14RHN

To be continued

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Size (mm)		Code (4129)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M15	0.5	-15G	-15GN	-15GE	-15GEN	-15GH	-15GHN
	0.75	-15L	-15LN	-15LE	-15LEN	-15LH	-15LHN
	1	-15P	-15PN	-15PE	-15PEN	-15PH	-15PHN
	1.5	-15R	-15RN	-15RE	-15REN	-15RH	-15RHN
M16	0.5	-16G	-16GN	-16GE	-16GEN	-16GH	-16GHN
	0.75	-16L	-16LN	-16LE	-16LEN	-16LH	-16LHN
	1	-16P	-16PN	-16PE	-16PEN	-16PH	-16PHN
	1.25	-16Q	-16QN	-16QE	-16QEN	-16QH	-16QHN
	1.5	-16R	-16RN	-16RE	-16REN	-16RH	-16RHN
M17	0.5	-17G	-17GN	-17GE	-17GEN	-17GH	-17GHN
	0.75	-17L	-17LN	-17LE	-17LEN	-17LH	-17LHN
	1	-17P	-17PN	-17PE	-17PEN	-17PH	-17PHN
	1.5	-17R	-17RN	-17RE	-17REN	-17RH	-17RHN
M18	0.5	-18G	-18GN	-18GE	-18GEN	-18GH	-18GHN
	0.75	-18L	-18LN	-18LE	-18LEN	-18LH	-18LHN
	1	-18P	-18PN	-18PE	-18PEN	-18PH	-18PHN
	1.25	-18Q	-18QN	-18QE	-18QEN	-18QH	-18QHN
	1.5	-18R	-18RN	-18RE	-18REN	-18RH	-18RHN
	2	-18T	-18TN	-18TE	-18TEN	-18TH	-18THN
M19	0.5	-19G	-19GN	-19GE	-19GEN	-19GH	-19GHN
	0.75	-19L	-19LN	-19LE	-19LEN	-19LH	-19LHN
	1	-19P	-19PN	-19PE	-19PEN	-19PH	-19PHN
	1.5	-19R	-19RN	-19RE	-19REN	-19RH	-19RHN
M20	0.5	-20G	-20GN	-20GE	-20GEN	-20GH	-20GHN
	0.75	-20L	-20LN	-20LE	-20LEN	-20LH	-20LHN
	1	-20P	-20PN	-20PE	-20PEN	-20PH	-20PHN
	1.25	-20Q	-20QN	-20QE	-20QEN	-20QH	-20QHN
	1.5	-20R	-20RN	-20RE	-20REN	-20RH	-20RHN
	2	-20T	-20TN	-20TE	-20TEN	-20TH	-20THN
M21	0.75	-21L	-21LN	-21LE	-21LEN	-21LH	-21LHN
	1	-21P	-21PN	-21PE	-21PEN	-21PH	-21PHN
	1.5	-21R	-21RN	-21RE	-21REN	-21RH	-21RHN
M22	0.75	-22L	-22LN	-22LE	-22LEN	-22LH	-22LHN
	1	-22P	-22PN	-22PE	-22PEN	-22PH	-22PHN
	1.25	-22Q	-22QN	-22QE	-22QEN	-22QH	-22QHN
	1.5	-22R	-22RN	-22RE	-22REN	-22RH	-22RHN
	2	-22T	-22TN	-22TE	-22TEN	-22TH	-22THN
M23	0.75	-23L	-23LN	-23LE	-23LEN	-23LH	-23LHN
	1	-23P	-23PN	-23PE	-23PEN	-23PH	-23PHN
M24	0.75	-24L	-24LN	-24LE	-24LEN	-24LH	-24LHN
	1	-24P	-24PN	-24PE	-24PEN	-24PH	-24PHN
	1.25	-24Q	-24QN	-24QE	-24QEN	-24QH	-24QHN
	1.5	-24R	-24RN	-24RE	-24REN	-24RH	-24RHN
	2	-24T	-24TN	-24TE	-24TEN	-24TH	-24THN
M25	0.75	-25L	-25LN	-25LE	-25LEN	-25LH	-25LHN
	1	-25P	-25PN	-25PE	-25PEN	-25PH	-25PHN
	1.5	-25R	-25RN	-25RE	-25REN	-25RH	-25RHN
	2	-25T	-25TN	-25TE	-25TEN	-25TH	-25THN
M26	0.75	-26L	-26LN	-26LE	-26LEN	-26LH	-26LHN
	1	-26P	-26PN	-26PE	-26PEN	-26PH	-26PHN
	1.5	-26R	-26RN	-26RE	-26REN	-26RH	-26RHN
	2	-26T	-26TN	-26TE	-26TEN	-26TH	-26THN

To be continued

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Size (mm)		Code (4129)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M27	0.75	-27L	-27LN	-27LE	-27LEN	-27LH	-27LHN
	1	-27P	-27PN	-27PE	-27PEN	-27PH	-27PHN
	1.5	-27R	-27RN	-27RE	-27REN	-27RH	-27RHN
	2	-27T	-27TN	-27TE	-27TEN	-27TH	-27THN
M28	0.75	-28L	-28LN	-28LE	-28LEN	-28LH	-28LHN
	1	-28P	-28PN	-28PE	-28PEN	-28PH	-28PHN
	1.5	-28R	-28RN	-28RE	-28REN	-28RH	-28RHN
	2	-28T	-28TN	-28TE	-28TEN	-28TH	-28THN
M29	0.75	-29L	-29LN	-29LE	-29LEN	-29LH	-29LHN
	1	-29P	-29PN	-29PE	-29PEN	-29PH	-29PHN
M30	0.75	-30L	-30LN	-30LE	-30LEN	-30LH	-30LHN
	1	-30P	-30PN	-30PE	-30PEN	-30PH	-30PHN
	1.5	-30R	-30RN	-30RE	-30REN	-30RH	-30RHN
	2	-30T	-30TN	-30TE	-30TEN	-30TH	-30THN
	3	-30V	-30VN	-30VE	-30VEN	-30VH	-30VHN
M31	0.75	-31L	-31LN	-31LE	-31LEN	-31LH	-31LHN
M32	0.75	-32L	-32LN	-32LE	-32LEN	-32LH	-32LHN
	1	-32P	-32PN	-32PE	-32PEN	-32PH	-32PHN
	1.5	-32R	-32RN	-32RE	-32REN	-32RH	-32RHN
	2	-32T	-32TN	-32TE	-32TEN	-32TH	-32THN
M33	0.75	-33L	-33LN	-33LE	-33LEN	-33LH	-33LHN
	1	-33P	-33PN	-33PE	-33PEN	-33PH	-33PHN
	1.5	-33R	-33RN	-33RE	-33REN	-33RH	-33RHN
	2	-33T	-33TN	-33TE	-33TEN	-33TH	-33THN
	3	-33V	-33VN	-33VE	-33VEN	-33VH	-33VHN
M34	1	-34P	-34PN	-34PE	-34PEN	-34PH	-34PHN
	1.5	-34R	-34RN	-34RE	-34REN	-34RH	-34RHN
	2	-34T	-34TN	-34TE	-34TEN	-34TH	-34THN
M35	1	-35P	-35PN	-35PE	-35PEN	-35PH	-35PHN
	1.5	-35R	-35RN	-35RE	-35REN	-35RH	-35RHN
	2	-35T	-35TN	-35TE	-35TEN	-35TH	-35THN
M36	1	-36P	-36PN	-36PE	-36PEN	-36PH	-36PHN
	1.5	-36R	-36RN	-36RE	-36REN	-36RH	-36RHN
	2	-36T	-36TN	-36TE	-36TEN	-36TH	-36THN
	3	-36V	-36VN	-36VE	-36VEN	-36VH	-36VHN
M38	1	-38P	-38PN	-38PE	-38PEN	-38PH	-38PHN
	1.5	-38R	-38RN	-38RE	-38REN	-38RH	-38RHN
	2	-38T	-38TN	-38TE	-38TEN	-38TH	-38THN
M39	1	-39P	-39PN	-39PE	-39PEN	-39PH	-39PHN
	1.5	-39R	-39RN	-39RE	-39REN	-39RH	-39RHN
	2	-39T	-39TN	-39TE	-39TEN	-39TH	-39THN
	3	-39V	-39VN	-39VE	-39VEN	-39VH	-39VHN
M40	1.5	-40R	-40RN	-40RE	-40REN	-40RH	-40RHN
	2	-40T	-40TN	-40TE	-40TEN	-40TH	-40THN
	3	-40V	-40VN	-40VE	-40VEN	-40VH	-40VHN
M42	1.5	-42R	-42RN	-42RE	-42REN	-42RH	-42RHN
	2	-42T	-42TN	-42TE	-42TEN	-42TH	-42THN
	3	-42V	-42VN	-42VE	-42VEN	-42VH	-42VHN
M45	1.5	-45R	-45RN	-45RE	-45REN	-45RH	-45RHN
	2	-45T	-45TN	-45TE	-45TEN	-45TH	-45THN
	3	-45V	-45VN	-45VE	-45VEN	-45VH	-45VHN

To be continued

Continued from previous page

Size (mm)		Code (4129)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M48	1.5	-48R	-48RN	-48RE	-48REN	-48RH	-48RHN
	2	-48T	-48TN	-48TE	-48TEN	-48TH	-48THN
	3	-48V	-48VN	-48VE	-48VEN	-48VH	-48VHN
M50	1.5	-50R	-50RN	-50RE	-50REN	-50RH	-50RHN
	2	-50T	-50TN	-50TE	-50TEN	-50TH	-50THN
	3	-50V	-50VN	-50VE	-50VEN	-50VH	-50VHN
M52	1.5	-52R	-52RN	-52RE	-52REN	-52RH	-52RHN
	2	-52T	-52TN	-52TE	-52TEN	-52TH	-52THN
	3	-52V	-52VN	-52VE	-52VEN	-52VH	-52VHN
	4	-52X	-52XN	-52XE	-52XEN	-52XH	-52XHN
M55	1.5	-55R	-55RN	-55RE	-55REN	-55RH	-55RHN
	2	-55T	-55TN	-55TE	-55TEN	-55TH	-55THN
	3	-55V	-55VN	-55VE	-55VEN	-55VH	-55VHN
	4	-55X	-55XN	-55XE	-55XEN	-55XH	-55XHN
M56	1.5	-56R	-56RN	-56RE	-56REN	-56RH	-56RHN
	2	-56T	-56TN	-56TE	-56TEN	-56TH	-56THN
	3	-56V	-56VN	-56VE	-56VEN	-56VH	-56VHN
	4	-56X	-56XN	-56XE	-56XEN	-56XH	-56XHN
M58	1.5	-58R	-58RN	-58RE	-58REN	-58RH	-58RHN
	2	-58T	-58TN	-58TE	-58TEN	-58TH	-58THN
	3	-58V	-58VN	-58VE	-58VEN	-58VH	-58VHN
	4	-58X	-58XN	-58XE	-58XEN	-58XH	-58XHN
M60	1.5	-60R	-60RN	-60RE	-60REN	-60RH	-60RHN
	2	-60T	-60TN	-60TE	-60TEN	-60TH	-60THN
	3	-60V	-60VN	-60VE	-60VEN	-60VH	-60VHN
	4	-60X	-60XN	-60XE	-60XEN	-60XH	-60XHN
M62	1.5	-62R	-62RN	-62RE	-62REN	-62RH	-62RHN
	2	-62T	-62TN	-62TE	-62TEN	-62TH	-62THN
	3	-62V	-62VN	-62VE	-62VEN	-62VH	-62VHN
	4	-62X	-62XN	-62XE	-62XEN	-62XH	-62XHN
M64	1.5	-64R	-64RN	-64RE	-64REN	-64RH	-64RHN
	2	-64T	-64TN	-64TE	-64TEN	-64TH	-64THN
	3	-64V	-64VN	-64VE	-64VEN	-64VH	-64VHN
	4	-64X	-64XN	-64XE	-64XEN	-64XH	-64XHN
M65	1.5	-65R	-65RN	-65RE	-65REN	-65RH	-65RHN
	2	-65T	-65TN	-65TE	-65TEN	-65TH	-65THN
	3	-65V	-65VN	-65VE	-65VEN	-65VH	-65VHN
	4	-65X	-65XN	-65XE	-65XEN	-65XH	-65XHN
M68	1.5	-68R	-68RN	-68RE	-68REN	-68RH	-68RHN
	2	-68T	-68TN	-68TE	-68TEN	-68TH	-68THN
	3	-68V	-68VN	-68VE	-68VEN	-68VH	-68VHN
	4	-68X	-68XN	-68XE	-68XEN	-68XH	-68XHN
M70	1.5	-70R	-70RN	-70RE	-70REN	-70RH	-70RHN
	2	-70T	-70TN	-70TE	-70TEN	-70TH	-70THN
	3	-70V	-70VN	-70VE	-70VEN	-70VH	-70VHN
	4	-70X	-70XN	-70XE	-70XEN	-70XH	-70XHN
	6	-70O	-70ON	-70OE	-70OEN	-70OH	-70OHN
M72	1.5	-72R	-72RN	-72RE	-72REN	-72RH	-72RHN
	2	-72T	-72TN	-72TE	-72TEN	-72TH	-72THN

To be continued

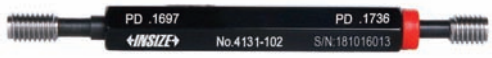
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Size (mm)		Code (4129)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M72	3	-72V	-72VN	-72VE	-72VEN	-72VH	-72VHN
	4	-72X	-72XN	-72XE	-72XEN	-72XH	-72XHN
	6	-72O	-72ON	-72OE	-72OEN	-72OH	-72OHN
M75	1.5	-75R	-75RN	-75RE	-75REN	-75RH	-75RHN
	2	-75T	-75TN	-75TE	-75TEN	-75TH	-75THN
	3	-75V	-75VN	-75VE	-75VEN	-75VH	-75VHN
	4	-75X	-75XN	-75XE	-75XEN	-75XH	-75XHN
M76	1.5	-76R	-76RN	-76RE	-76REN	-76RH	-76RHN
	2	-76T	-76TN	-76TE	-76TEN	-76TH	-76THN
	3	-76V	-76VN	-76VE	-76VEN	-76VH	-76VHN
	4	-76X	-76XN	-76XE	-76XEN	-76XH	-76XHN
	6	-76O	-76ON	-76OE	-76OEN	-76OH	-76OHN
M78	2	-78T	-78TN	-78TE	-78TEN	-78TH	-78THN
M80	1.5	-80R	-80RN	-80RE	-80REN	-80RH	-80RHN
	2	-80T	-80TN	-80TE	-80TEN	-80TH	-80THN
	3	-80V	-80VN	-80VE	-80VEN	-80VH	-80VHN
	4	-80X	-80XN	-80XE	-80XEN	-80XH	-80XHN
	6	-80O	-80ON	-80OE	-80OEN	-80OH	-80OHN
M82	2	-82T	-82TN	-82TE	-82TEN	-82TH	-82THN
M85	2	-85T	-85TN	-85TE	-85TEN	-85TH	-85THN
	3	-85V	-85VN	-85VE	-85VEN	-85VH	-85VHN
	4	-85X	-85XN	-85XE	-85XEN	-85XH	-85XHN
	6	-85O	-85ON	-85OE	-85OEN	-85OH	-85OHN
M90	2	-90T	-90TN	-90TE	-90TEN	-90TH	-90THN
	3	-90V	-90VN	-90VE	-90VEN	-90VH	-90VHN
	4	-90X	-90XN	-90XE	-90XEN	-90XH	-90XHN
	6	-90O	-90ON	-90OE	-90OEN	-90OH	-90OHN
M95	2	-95T	-95TN	-95TE	-95TEN	-95TH	-95THN
	3	-95V	-95VN	-95VE	-95VEN	-95VH	-95VHN
	4	-95X	-95XN	-95XE	-95XEN	-95XH	-95XHN
	6	-95O	-95ON	-95OE	-95OEN	-95OH	-95OHN
M100	2	-100T	-100TN	-100TE	-100TEN	-100TH	-100THN
	3	-100V	-100VN	-100VE	-100VEN	-100VH	-100VHN
	4	-100X	-100XN	-100XE	-100XEN	-100XH	-100XHN
	6	-100O	-100ON	-100OE	-100OEN	-100OH	-100OHN
M105	2	-105T	-105TN	-105TE	-105TEN	-105TH	-105THN
	3	-105V	-105VN	-105VE	-105VEN	-105VH	-105VHN
	4	-105X	-105XN	-105XE	-105XEN	-105XH	-105XHN
	6	-105O	-105ON	-105OE	-105OEN	-105OH	-105OHN
M110	2	-110T	-110TN	-110TE	-110TEN	-110TH	-110THN
	3	-110V	-110VN	-110VE	-110VEN	-110VH	-110VHN
	4	-110X	-110XN	-110XE	-110XEN	-110XH	-110XHN
	6	-110O	-110ON	-110OE	-110OEN	-110OH	-110OHN
M115	2	-115T	-115TN	-115TE	-115TEN	-115TH	-115THN
	3	-115V	-115VN	-115VE	-115VEN	-115VH	-115VHN
	4	-115X	-115XN	-115XE	-115XEN	-115XH	-115XHN
	6	-115O	-115ON	-115OE	-115OEN	-115OH	-115OHN
M120	2	-120T	-120TN	-120TE	-120TEN	-120TH	-120THN
	3	-120V	-120VN	-120VE	-120VEN	-120VH	-120VHN
	4	-120X	-120XN	-120XE	-120XEN	-120XH	-120XHN
	6	-120O	-120ON	-120OE	-120OEN	-120OH	-120OHN

AMERICAN STANDARD THREAD PLUG GAUGES

INSPECTION CERTIFICATE

WARNING: LIFE TIME IS LIMITED, IT CAN BE USED FOR ABOUT 2000 TIMES NORMALLY. THE ACCURACY NEEDS TO BE CHECKED REGULARLY



4131-102

- Supplied with Go and No-Go gauges together
- Standard ANSI/ASME B1.2
- Supplied with manufacturer inspection certificate

Size	Code	
	Class 2B	Class 3B
No. 0-80UNF	**4131-02**	**4131-02B**
No. 1-64UNC	**4131-11**	**4131-11B**
No. 1-72UNF	**4131-12**	**4131-12B**
No. 2-56UNC	**4131-21**	**4131-21B**
No. 2-64UNF	**4131-22**	**4131-22B**
No. 3-48UNC	**4131-31**	**4131-31B**
No. 3-56UNF	**4131-32**	**4131-32B**
No. 4-40UNC	**4131-41**	**4131-41B**
No. 4-48UNF	**4131-42**	**4131-42B**
No. 5-40UNC	**4131-51**	**4131-51B**
No. 5-44UNF	**4131-52**	**4131-52B**
No. 6-32UNC	**4131-61**	**4131-61B**
No. 6-40UNF	**4131-62**	**4131-62B**
No. 8-32UNC	**4131-81**	**4131-81B**
No. 8-36UNF	**4131-82**	**4131-82B**
No. 10-24UNC	**4131-101**	**4131-101B**
No. 10-32UNF	**4131-102**	**4131-102B**
No. 12-24UNC	**4131-121**	**4131-121B**
No. 12-28UNF	**4131-122**	**4131-122B**
No. 12-32UNEF	**4131-123**	**4131-123B**
1/4-20UNC	**4131-1B1**	**4131-1B1B**
1/4-28UNF	**4131-1B2**	**4131-1B2B**
1/4-32UNEF	**4131-1B3**	**4131-1B3B**
1/4-36UNS	**4131-1B4**	**4131-1B4B**
5/16-18UNC	**4131-5D1**	**4131-5D1B**
5/16-24UNF	**4131-5D2**	**4131-5D2B**
5/16-32UNEF	**4131-5D3**	**4131-5D3B**
3/8-16UNC	**4131-3C1**	**4131-3C1B**
3/8-24UNF	**4131-3C2**	**4131-3C2B**
3/8-32UNEF	**4131-3C3**	**4131-3C3B**
7/16-14UNC	**4131-7D1**	**4131-7D1B**
7/16-20UNF	**4131-7D2**	**4131-7D2B**
7/16-28UNEF	**4131-7D3**	**4131-7D3B**
1/2-13UNC	**4131-1A1**	**4131-1A1B**
1/2-20UNF	**4131-1A2**	**4131-1A2B**
1/2-28UNEF	**4131-1A3**	**4131-1A3B**

Size	Code	
	Class 2B	Class 3B
9/16-12UNC	**4131-9D1**	**4131-9D1B**
9/16-18UNF	**4131-9D2**	**4131-9D2B**
9/16-24UNEF	**4131-9D3**	**4131-9D3B**
5/8-11UNC	**4131-5C1**	**4131-5C1B**
5/8-18UNF	**4131-5C2**	**4131-5C2B**
5/8-24UNEF	**4131-5C3**	**4131-5C3B**
11/16-16UN	**4131-11D516**	**4131-11D516B**
11/16-24UNEF	**4131-11D3**	**4131-11D3B**
3/4-10UNC	**4131-3B1**	**4131-3B1B**
3/4-16UNF	**4131-3B2**	**4131-3B2B**
3/4-20UNEF	**4131-3B3**	**4131-3B3B**
13/16-16UN	**4131-13D516**	**4131-13D516B**
13/16-20UNEF	**4131-13D3**	**4131-13D3B**
7/8-9UNC	**4131-7C1**	**4131-7C1B**
7/8-14UNF	**4131-7C2**	**4131-7C2B**
7/8-16UN	**4131-7C516**	**4131-7C516B**
7/8-20UNEF	**4131-7C3**	**4131-7C3B**
15/16-20UNEF	**4131-15D3**	**4131-15D3B**
1-8UNC	**4131-2A1**	**4131-2A1B**
1-12UNF	**4131-2A2**	**4131-2A2B**
1-14UNS	**4131-2A514**	**4131-2A514B**
1-20UNEF	**4131-2A3**	**4131-2A3B**
1-32UN	**4131-2A532**	**4131-2A532B**
1 1/16-12UN	**4131-1E512**	**4131-1E512B**
1 1/16-18UNEF	**4131-1E3**	**4131-1E3B**
1 1/8-7UNC	**4131-1F1**	**4131-1F1B**
1 1/8-8UN	**4131-1F58**	**4131-1F58B**
1 1/8-12UNF	**4131-1F2**	**4131-1F2B**
1 1/8-18UNEF	**4131-1F3**	**4131-1F3B**
1 3/16-12UN	**4131-3E512**	**4131-3E512B**
1 3/16-18UNEF	**4131-3E3**	**4131-3E3B**
1 1/4-7UNC	**4131-1G1**	**4131-1G1B**
1 1/4-8UN	**4131-1G58**	**4131-1G58B**
1 1/4-12UNF	**4131-1G2**	**4131-1G2B**
1 1/4-18UNEF	**4131-1G3**	**4131-1G3B**
1 5/16-12UN	**4131-5E512**	**4131-5E512B**

AMERICAN STANDARD THREAD RING GAUGES

INSPECTION CERTIFICATE

WARNING: LIFE TIME IS LIMITED, IT CAN BE USED FOR ABOUT 2000 TIMES NORMALLY. THE ACCURACY NEEDS TO BE CHECKED REGULARLY



front back

4121-1B1



front back

4121-1B1N

- Standard ANSI/ASME B1.2
- Class 2A
- Supplied with manufacturer inspection certificate

Size	Code	
	GO	NOGO
No. 4-40UNC	4121-41	4121-41N
No. 4-48UNF	4121-42	4121-42N
No. 5-40UNC	4121-51	4121-51N
No. 5-44UNF	4121-52	4121-52N
No. 6-32UNC	4121-61	4121-61N
No. 6-40UNF	4121-62	4121-62N
No. 8-32UNC	4121-81	4121-81N
No. 8-36UNF	4121-82	4121-82N
No. 10-24UNC	4121-101	4121-101N
No. 10-32UNF	4121-102	4121-102N
No. 12-24UNC	4121-121	4121-121N
No. 12-28UNF	4121-122	4121-122N
No. 12-32UNEF	4121-123	4121-123N
1/4-20UNC	4121-1B1	4121-1B1N
1/4-28UNF	4121-1B2	4121-1B2N
1/4-32UNEF	4121-1B3	4121-1B3N
1/4-36UNS	4121-1B4	4121-1B4N
5/16-18UNC	4121-5D1	4121-5D1N
5/16-24UNF	4121-5D2	4121-5D2N
5/16-32UNEF	4121-5D3	4121-5D3N
3/8-16UNC	4121-3C1	4121-3C1N
3/8-24UNF	4121-3C2	4121-3C2N
3/8-32UNEF	4121-3C3	4121-3C3N
7/16-14UNC	4121-7D1	4121-7D1N
7/16-20UNF	4121-7D2	4121-7D2N
7/16-28UNEF	4121-7D3	4121-7D3N
1/2-13UNC	4121-1A1	4121-1A1N
1/2-20UNF	4121-1A2	4121-1A2N
1/2-28UNEF	4121-1A3	4121-1A3N
9/16-12UNC	4121-9D1	4121-9D1N
9/16-18UNF	4121-9D2	4121-9D2N
9/16-24UNEF	4121-9D3	4121-9D3N

Size	Code	
	GO	NOGO
5/8-11UNC	4121-5C1	4121-5C1N
5/8-18UNF	4121-5C2	4121-5C2N
5/8-24UNEF	4121-5C3	4121-5C3N
11/16-16UN	4121-11D516	4121-11D516N
11/16-24UNEF	4121-11D3	4121-11D3N
3/4-10UNC	4121-3B1	4121-3B1N
3/4-16UNF	4121-3B2	4121-3B2N
3/4-20UNEF	4121-3B3	4121-3B3N
13/16-16UN	4121-13D516	4121-13D516N
13/16-20UNEF	4121-13D3	4121-13D3N
7/8-9UNC	4121-7C1	4121-7C1N
7/8-14UNF	4121-7C2	4121-7C2N
7/8-16UN	4121-7C516	4121-7C516N
7/8-20UNEF	4121-7C3	4121-7C3N
15/16-20UNEF	4121-15D3	4121-15D3N
1-8UNC	4121-2A1	4121-2A1N
1-12UNF	4121-2A2	4121-2A2N
1-14UNS	4121-2A514	4121-2A514N
1-20UNEF	4121-2A3	4121-2A3N
1-32UN	4121-2A532	4121-2A532N
1 1/16-12UN	4121-1E512	4121-1E512N
1 1/16-18UNEF	4121-1E3	4121-1E3N
1 1/8-7UNC	4121-1F1	4121-1F1N
1 1/8-8UN	4121-1F58	4121-1F58N
1 1/8-12UNF	4121-1F2	4121-1F2N
1 1/8-18UNEF	4121-1F3	4121-1F3N
1 3/16-12UN	4121-3E512	4121-3E512N
1 3/16-18UNEF	4121-3E3	4121-3E3N
1 1/4-7UNC	4121-1G1	4121-1G1N
1 1/4-8UN	4121-1G58	4121-1G58N
1 1/4-12UNF	4121-1G2	4121-1G2N
1 1/4-18UNEF	4121-1G3	4121-1G3N
1 5/16-12UN	4121-5E512	4121-5E512N

AMERICAN STANDARD AEROSPACE THREAD PLUG GAUGES

INSPECTION CERTIFICATE

WARNING: LIFE TIME IS LIMITED, IT CAN BE USED FOR ABOUT 2000 TIMES NORMALLY. THE ACCURACY NEEDS TO BE CHECKED REGULARLY



4231-102

- Supplied with Go and No-Go gauges together
- Standard ANSI/ASME B1.2
- Supplied with manufacturer inspection certificate

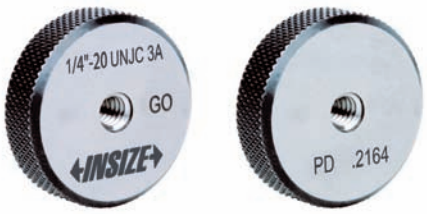
Size	Code	
	Class 2B	Class 3B
No. 0-80UNJF	**4231-02**	**4231-02B**
No. 1-64UNJC	**4231-11**	**4231-11B**
No. 1-72UNJF	**4231-12**	**4231-12B**
No. 2-56UNJC	**4231-21**	**4231-21B**
No. 2-64UNJF	**4231-22**	**4231-22B**
No. 3-48UNJC	**4231-31**	**4231-31B**
No. 3-56UNJF	**4231-32**	**4231-32B**
No. 4-40UNJC	**4231-41**	**4231-41B**
No. 4-48UNJF	**4231-42**	**4231-42B**
No. 5-40UNJC	**4231-51**	**4231-51B**
No. 5-44UNJF	**4231-52**	**4231-52B**
No. 6-32UNJC	**4231-61**	**4231-61B**
No. 6-40UNJF	**4231-62**	**4231-62B**
No. 8-32UNJC	**4231-81**	**4231-81B**
No. 8-36UNJF	**4231-82**	**4231-82B**
No. 10-24UNJC	**4231-101**	**4231-101B**
No. 10-32UNJF	**4231-102**	**4231-102B**
No. 12-24UNJC	**4231-121**	**4231-121B**
No. 12-28UNJF	**4231-122**	**4231-122B**
No. 12-32UNJEF	**4231-123**	**4231-123B**
1/4-20UNJC	**4231-1B1**	**4231-1B1B**
1/4-28UNJF	**4231-1B2**	**4231-1B2B**
1/4-32UNJEF	**4231-1B3**	**4231-1B3B**
1/4-36UNJS	**4231-1B4**	**4231-1B4B**
5/16-18UNJC	**4231-5D1**	**4231-5D1B**
5/16-24UNJF	**4231-5D2**	**4231-5D2B**
5/16-32UNJEF	**4231-5D3**	**4231-5D3B**
3/8-16UNJC	**4231-3C1**	**4231-3C1B**
3/8-24UNJF	**4231-3C2**	**4231-3C2B**
3/8-32UNJEF	**4231-3C3**	**4231-3C3B**
7/16-14UNJC	**4231-7D1**	**4231-7D1B**
7/16-20UNJF	**4231-7D2**	**4231-7D2B**
7/16-28UNJEF	**4231-7D3**	**4231-7D3B**
1/2-13UNJC	**4231-1A1**	**4231-1A1B**
1/2-20UNJF	**4231-1A2**	**4231-1A2B**
1/2-28UNJEF	**4231-1A3**	**4231-1A3B**

Size	Code	
	Class 2B	Class 3B
9/16-12UNJC	**4231-9D1**	**4231-9D1B**
9/16-18UNJF	**4231-9D2**	**4231-9D2B**
9/16-24UNJEF	**4231-9D3**	**4231-9D3B**
5/8-11UNJC	**4231-5C1**	**4231-5C1B**
5/8-18UNJF	**4231-5C2**	**4231-5C2B**
5/8-24UNJEF	**4231-5C3**	**4231-5C3B**
11/16-16UNJ	**4231-11D516**	**4231-11D516B**
11/16-24UNJEF	**4231-11D3**	**4231-11D3B**
3/4-10UNJC	**4231-3B1**	**4231-3B1B**
3/4-16UNJF	**4231-3B2**	**4231-3B2B**
3/4-20UNJEF	**4231-3B3**	**4231-3B3B**
13/16-16UNJ	**4231-13D516**	**4231-13D516B**
13/16-20UNJEF	**4231-13D3**	**4231-13D3B**
7/8-9UNJC	**4231-7C1**	**4231-7C1B**
7/8-14UNJF	**4231-7C2**	**4231-7C2B**
7/8-16UNJ	**4231-7C516**	**4231-7C516B**
7/8-20UNJEF	**4231-7C3**	**4231-7C3B**
15/16-20UNJEF	**4231-15D3**	**4231-15D3B**
1-8UNJC	**4231-2A1**	**4231-2A1B**
1-12UNJF	**4231-2A2**	**4231-2A2B**
1-14UNJS	**4231-2A514**	**4231-2A514B**
1-20UNJEF	**4231-2A3**	**4231-2A3B**
1-32UNJ	**4231-2A532**	**4231-2A532B**
1 1/16-12UNJ	**4231-1E512**	**4231-1E512B**
1 1/16-18UNJEF	**4231-1E3**	**4231-1E3B**
1 1/8-7UNJC	**4231-1F1**	**4231-1F1B**
1 1/8-8UNJ	**4231-1F58**	**4231-1F58B**
1 1/8-12UNJF	**4231-1F2**	**4231-1F2B**
1 1/8-18UNJEF	**4231-1F3**	**4231-1F3B**
1 3/16-12UNJJ	**4231-3E512**	**4231-3E512B**
1 3/16-18UNJJEF	**4231-3E3**	**4231-3E3B**
1 1/4-7UNJC	**4231-1G1**	**4231-1G1B**
1 1/4-8UNJ	**4231-1G58**	**4231-1G58B**
1 1/4-12UNJF	**4231-1G2**	**4231-1G2B**
1 1/4-18UNJEF	**4231-1G3**	**4231-1G3B**
1 5/16-12UNJ	**4231-5E512**	**4231-5E512B**

AMERICAN STANDARD AEROSPACE THREAD RING GAUGES

INSPECTION CERTIFICATE

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front back

4221-1B1A



front back

4221-1B1AN

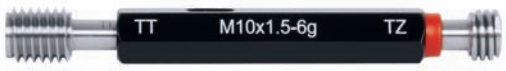
- Standard ANSI/ASME B1.2
- Class 3A
- Supplied with manufacturer inspection certificate

Size	Code	
	GO	NOGO
No. 4-40UNJC	4221-41A	4221-41AN
No. 4-48UNJF	4221-42A	4221-42AN
No. 5-40UNJC	4221-51A	4221-51AN
No. 5-44UNJF	4221-52A	4221-52AN
No. 6-32UNJC	4221-61A	4221-61AN
No. 6-40UNJF	4221-62A	4221-62AN
No. 8-32UNJC	4221-81A	4221-81AN
No. 8-36UNJF	4221-82A	4221-82AN
No. 10-24UNJC	4221-101A	4221-101AN
No. 10-32UNJF	4221-102A	4221-102AN
No. 12-24UNJC	4221-121A	4221-121AN
No. 12-28UNJF	4221-122A	4221-122AN
No. 12-32UNJEF	4221-123A	4221-123AN
1/4-20UNJC	4221-1B1A	4221-1B1AN
1/4-28UNJF	4221-1B2A	4221-1B2AN
1/4-32UNJEF	4221-1B3A	4221-1B3AN
1/4-36UNJS	4221-1B4A	4221-1B4AN
5/16-18UNJC	4221-5D1A	4221-5D1AN
5/16-24UNJF	4221-5D2A	4221-5D2AN
5/16-32UNJEF	4221-5D3A	4221-5D3AN
3/8-16UNJC	4221-3C1A	4221-3C1AN
3/8-24UNJF	4221-3C2A	4221-3C2AN
3/8-32UNJEF	4221-3C3A	4221-3C3AN
7/16-14UNJC	4221-7D1A	4221-7D1AN
7/16-20UNJF	4221-7D2A	4221-7D2AN
7/16-28UNJEF	4221-7D3A	4221-7D3AN
1/2-13UNJC	4221-1A1A	4221-1A1AN
1/2-20UNJF	4221-1A2A	4221-1A2AN
1/2-28UNJEF	4221-1A3A	4221-1A3AN
9/16-12UNJC	4221-9D1A	4221-9D1AN
9/16-18UNJF	4221-9D2A	4221-9D2AN
9/16-24UNJEF	4221-9D3A	4221-9D3AN

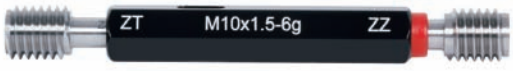
Size	Code	
	GO	NOGO
5/8-11UNJC	4221-5C1A	4221-5C1AN
5/8-18UNJF	4221-5C2A	4221-5C2AN
5/8-24UNJEF	4221-5C3A	4221-5C3AN
11/16-16UNJ	4221-11D516A	4221-11D516AN
11/16-24UNJEF	4221-11D3A	4221-11D3AN
3/4-10UNJC	4221-3B1A	4221-3B1AN
3/4-16UNJF	4221-3B2A	4221-3B2AN
3/4-20UNJEF	4221-3B3A	4221-3B3AN
13/16-16UNJ	4221-13D516A	4221-13D516AN
13/16-20UNJEF	4221-13D3A	4221-13D3AN
7/8-9UNJC	4221-7C1A	4221-7C1AN
7/8-14UNJF	4221-7C2A	4221-7C2AN
7/8-16UNJ	4221-7C516A	4221-7C516AN
7/8-20UNJEF	4221-7C3A	4221-7C3AN
15/16-20UNJEF	4221-15D3A	4221-15D3AN
1-8UNJC	4221-2A1A	4221-2A1AN
1-12UNJF	4221-2A2A	4221-2A2AN
1-14UNJS	4221-2A514A	4221-2A514AN
1-20UNJEF	4221-2A3A	4221-2A3AN
1-32UNJ	4221-2A532A	4221-2A532AN
1 1/16-12UNJ	4221-1E512A	4221-1E512AN
1 1/16-18UNJEF	4221-1E3A	4221-1E3AN
1 1/8-7UNJC	4221-1F1A	4221-1F1AN
1 1/8-8UNJ	4221-1F58A	4221-1F58AN
1 1/8-12UNJF	4221-1F2A	4221-1F2AN
1 1/8-18UNJEF	4221-1F3A	4221-1F3AN
1 3/16-12UNJ	4221-3E512A	4221-3E512AN
1 3/16-18UNJEF	4221-3E3A	4221-3E3AN
1 1/4-7UNJC	4221-1G1A	4221-1G1AN
1 1/4-8UNJ	4221-1G58A	4221-1G58AN
1 1/4-12UNJF	4221-1G2A	4221-1G2AN
1 1/4-18UNJEF	4221-1G3A	4221-1G3AN
1 5/16-12UNJ	4221-5E512A	4221-5E512AN

CHECK PLUGS FOR METRIC THREAD RING GAUGES

INSPECTION CERTIFICATE



4647-10



4647-10N

- Standard ISO1502
- Check thread ring gauges
- Supplied with manufacturer inspection certificate

Code example:
"**-2**" stands for "**4647-2**"

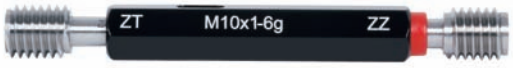
Size (mm)		Code (4647)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M2	0.4	-2	-2N	-2E	-2EN	-2H	-2HN
M2.2	0.45	-2D2	-2D2N	-2D2E	-2D2EN	-2D2H	-2D2HN
M2.3	0.4	-2D3	-2D3N	-2D3E	-2D3EN	-2D3H	-2D3HN
M2.5	0.45	-2D5	-2D5N	-2D5E	-2D5EN	-2D5H	-2D5HN
M2.6	0.45	-2D6	-2D6N	-2D6E	-2D6EN	-2D6H	-2D6HN
M3	0.5	-3	-3N	-3E	-3EN	-3H	-3HN
M3.5	0.6	-3D5	-3D5N	-3D5E	-3D5EN	-3D5H	-3D5HN
M4	0.7	-4	-4N	-4E	-4EN	-4H	-4HN
M4.5	0.75	-4D5	-4D5N	-4D5E	-4D5EN	-4D5H	-4D5HN
M5	0.8	-5	-5N	-5E	-5EN	-5H	-5HN
M6	1	-6	-6N	-6E	-6EN	-6H	-6HN
M7	1	-7	-7N	-7E	-7EN	-7H	-7HN
M8	1.25	-8	-8N	-8E	-8EN	-8H	-8HN
M9	1.25	-9	-9N	-9E	-9EN	-9H	-9HN
M10	1.5	-10	-10N	-10E	-10EN	-10H	-10HN
M11	1.5	-11	-11N	-11E	-11EN	-11H	-11HN
M12	1.75	-12	-12N	-12E	-12EN	-12H	-12HN
M14	2	-14	-14N	-14E	-14EN	-14H	-14HN
M16	2	-16	-16N	-16E	-16EN	-16H	-16HN
M18	2.5	-18	-18N	-18E	-18EN	-18H	-18HN
M20	2.5	-20	-20N	-20E	-20EN	-20H	-20HN
M22	2.5	-22	-22N	-22E	-22EN	-22H	-22HN
M24	3	-24	-24N	-24E	-24EN	-24H	-24HN
M27	3	-27	-27N	-27E	-27EN	-27H	-27HN
M30	3.5	-30	-30N	-30E	-30EN	-30H	-30HN
M33	3.5	-33	-33N	-33E	-33EN	-33H	-33HN
M36	4	-36	-36N	-36E	-36EN	-36H	-36HN
M39	4	-39	-39N	-39E	-39EN	-39H	-39HN
M42	4.5	-42	-42N	-42E	-42EN	-42H	-42HN
M45	4.5	-45	-45N	-45E	-45EN	-45H	-45HN
M48	5	-48	-48N	-48E	-48EN	-48H	-48HN
M52	5	-52	-52N	-52E	-52EN	-52H	-52HN
M56	5.5	-56	-56N	-56E	-56EN	-56H	-56HN
M60	5.5	-60	-60N	-60E	-60EN	-60H	-60HN
M64	6	-64	-64N	-64E	-64EN	-64H	-64HN
M68	6	-68	-68N	-68E	-68EN	-68H	-68HN

INSPECTION CERTIFICATE

CHECK PLUGS FOR METRIC FINE THREAD RING GAUGES



4677-10P



4677-10PN

- Standard ISO1502
- Check thread ring gauges
- Supplied with manufacturer inspection certificate

Code example:
"**-3D5G**" stands for "**4677-3D5G**"

Size (mm)		Code (4677)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M3.5	0.5	-3D5G	-3D5GN	-3D5GE	-3D5GEN	-3D5GH	-3D5GHN
M4	0.5	-4G	-4GN	-4GE	-4GEN	-4GH	-4GHN
M4.5	0.5	-4D5G	-4D5GN	-4D5GE	-4D5GEN	-4D5GH	-4D5GHN
M5	0.5	-5G	-5GN	-5GE	-5GEN	-5GH	-5GHN
M5.5	0.5	-5D5G	-5D5GN	-5D5GE	-5D5GEN	-5D5GH	-5D5GHN
M6	0.5	-6G	-6GN	-6GE	-6GEN	-6GH	-6GHN
	0.75	-6L	-6LN	-6LE	-6LEN	-6LH	-6LHN
M6.5	0.5	-6D5G	-6D5GN	-6D5GE	-6D5GEN	-6D5GH	-6D5GHN
M7	0.5	-7G	-7GN	-7GE	-7GEN	-7GH	-7GHN
	0.75	-7L	-7LN	-7LE	-7LEN	-7LH	-7LHN
M7.5	0.5	-7D5G	-7D5GN	-7D5GE	-7D5GEN	-7D5GH	-7D5GHN
M8	0.5	-8G	-8GN	-8GE	-8GEN	-8GH	-8GHN
	0.75	-8L	-8LN	-8LE	-8LEN	-8LH	-8LHN
	1	-8P	-8PN	-8PE	-8PEN	-8PH	-8PHN
M8.5	0.5	-8D5G	-8D5GN	-8D5GE	-8D5GEN	-8D5GH	-8D5GHN
M9	0.5	-9G	-9GN	-9GE	-9GEN	-9GH	-9GHN
	0.75	-9L	-9LN	-9LE	-9LEN	-9LH	-9LHN
	1	-9P	-9PN	-9PE	-9PEN	-9PH	-9PHN
M10	0.5	-10G	-10GN	-10GE	-10GEN	-10GH	-10GHN
	0.75	-10L	-10LN	-10LE	-10LEN	-10LH	-10LHN
	1	-10P	-10PN	-10PE	-10PEN	-10PH	-10PHN
	1.25	-10Q	-10QN	-10QE	-10QEN	-10QH	-10QHN
M11	0.5	-11G	-11GN	-11GE	-11GEN	-11GH	-11GHN
	0.75	-11L	-11LN	-11LE	-11LEN	-11LH	-11LHN
	1	-11P	-11PN	-11PE	-11PEN	-11PH	-11PHN
M12	0.5	-12G	-12GN	-12GE	-12GEN	-12GH	-12GHN
	0.75	-12L	-12LN	-12LE	-12LEN	-12LH	-12LHN
	1	-12P	-12PN	-12PE	-12PEN	-12PH	-12PHN
	1.25	-12Q	-12QN	-12QE	-12QEN	-12QH	-12QHN
	1.5	-12R	-12RN	-12RE	-12REN	-12RH	-12RHN
M13	0.5	-13G	-13GN	-13GE	-13GEN	-13GH	-13GHN
	0.75	-13L	-13LN	-13LE	-13LEN	-13LH	-13LHN
	1	-13P	-13PN	-13PE	-13PEN	-13PH	-13PHN
	1.5	-13R	-13RN	-13RE	-13REN	-13RH	-13RHN
M14	0.5	-14G	-14GN	-14GE	-14GEN	-14GH	-14GHN
	0.75	-14L	-14LN	-14LE	-14LEN	-14LH	-14LHN
	1	-14P	-14PN	-14PE	-14PEN	-14PH	-14PHN
	1.25	-14Q	-14QN	-14QE	-14QEN	-14QH	-14QHN
	1.5	-14R	-14RN	-14RE	-14REN	-14RH	-14RHN

To be continued

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Size (mm)		Code (4677)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M15	0.5	-15G	-15GN	-15GE	-15GEN	-15GH	-15GHN
	0.75	-15L	-15LN	-15LE	-15LEN	-15LH	-15LHN
	1	-15P	-15PN	-15PE	-15PEN	-15PH	-15PHN
	1.5	-15R	-15RN	-15RE	-15REN	-15RH	-15RHN
M16	0.5	-16G	-16GN	-16GE	-16GEN	-16GH	-16GHN
	0.75	-16L	-16LN	-16LE	-16LEN	-16LH	-16LHN
	1	-16P	-16PN	-16PE	-16PEN	-16PH	-16PHN
	1.25	-16Q	-16QN	-16QE	-16QEN	-16QH	-16QHN
	1.5	-16R	-16RN	-16RE	-16REN	-16RH	-16RHN
M17	0.5	-17G	-17GN	-17GE	-17GEN	-17GH	-17GHN
	0.75	-17L	-17LN	-17LE	-17LEN	-17LH	-17LHN
	1	-17P	-17PN	-17PE	-17PEN	-17PH	-17PHN
	1.5	-17R	-17RN	-17RE	-17REN	-17RH	-17RHN
M18	0.5	-18G	-18GN	-18GE	-18GEN	-18GH	-18GHN
	0.75	-18L	-18LN	-18LE	-18LEN	-18LH	-18LHN
	1	-18P	-18PN	-18PE	-18PEN	-18PH	-18PHN
	1.25	-18Q	-18QN	-18QE	-18QEN	-18QH	-18QHN
	1.5	-18R	-18RN	-18RE	-18REN	-18RH	-18RHN
	2	-18T	-18TN	-18TE	-18TEN	-18TH	-18THN
M19	0.5	-19G	-19GN	-19GE	-19GEN	-19GH	-19GHN
	0.75	-19L	-19LN	-19LE	-19LEN	-19LH	-19LHN
	1	-19P	-19PN	-19PE	-19PEN	-19PH	-19PHN
	1.5	-19R	-19RN	-19RE	-19REN	-19RH	-19RHN
M20	0.5	-20G	-20GN	-20GE	-20GEN	-20GH	-20GHN
	0.75	-20L	-20LN	-20LE	-20LEN	-20LH	-20LHN
	1	-20P	-20PN	-20PE	-20PEN	-20PH	-20PHN
	1.25	-20Q	-20QN	-20QE	-20QEN	-20QH	-20QHN
	1.5	-20R	-20RN	-20RE	-20REN	-20RH	-20RHN
	2	-20T	-20TN	-20TE	-20TEN	-20TH	-20THN
M21	0.75	-21L	-21LN	-21LE	-21LEN	-21LH	-21LHN
	1	-21P	-21PN	-21PE	-21PEN	-21PH	-21PHN
	1.5	-21R	-21RN	-21RE	-21REN	-21RH	-21RHN
M22	0.75	-22L	-22LN	-22LE	-22LEN	-22LH	-22LHN
	1	-22P	-22PN	-22PE	-22PEN	-22PH	-22PHN
	1.25	-22Q	-22QN	-22QE	-22QEN	-22QH	-22QHN
	1.5	-22R	-22RN	-22RE	-22REN	-22RH	-22RHN
	2	-22T	-22TN	-22TE	-22TEN	-22TH	-22THN
M23	0.75	-23L	-23LN	-23LE	-23LEN	-23LH	-23LHN
	1	-23P	-23PN	-23PE	-23PEN	-23PH	-23PHN
M24	0.75	-24L	-24LN	-24LE	-24LEN	-24LH	-24LHN
	1	-24P	-24PN	-24PE	-24PEN	-24PH	-24PHN
	1.25	-24Q	-24QN	-24QE	-24QEN	-24QH	-24QHN
	1.5	-24R	-24RN	-24RE	-24REN	-24RH	-24RHN
	2	-24T	-24TN	-24TE	-24TEN	-24TH	-24THN
M25	0.75	-25L	-25LN	-25LE	-25LEN	-25LH	-25LHN
	1	-25P	-25PN	-25PE	-25PEN	-25PH	-25PHN
	1.5	-25R	-25RN	-25RE	-25REN	-25RH	-25RHN
	2	-25T	-25TN	-25TE	-25TEN	-25TH	-25THN
M26	0.75	-26L	-26LN	-26LE	-26LEN	-26LH	-26LHN
	1	-26P	-26PN	-26PE	-26PEN	-26PH	-26PHN
	1.5	-26R	-26RN	-26RE	-26REN	-26RH	-26RHN
	2	-26T	-26TN	-26TE	-26TEN	-26TH	-26THN

To be continued

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Size (mm)		Code (4677)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M27	0.75	-27L	-27LN	-27LE	-27LEN	-27LH	-27LHN
	1	-27P	-27PN	-27PE	-27PEN	-27PH	-27PHN
	1.5	-27R	-27RN	-27RE	-27REN	-27RH	-27RHN
	2	-27T	-27TN	-27TE	-27TEN	-27TH	-27THN
M28	0.75	-28L	-28LN	-28LE	-28LEN	-28LH	-28LHN
	1	-28P	-28PN	-28PE	-28PEN	-28PH	-28PHN
	1.5	-28R	-28RN	-28RE	-28REN	-28RH	-28RHN
	2	-28T	-28TN	-28TE	-28TEN	-28TH	-28THN
M29	0.75	-29L	-29LN	-29LE	-29LEN	-29LH	-29LHN
	1	-29P	-29PN	-29PE	-29PEN	-29PH	-29PHN
M30	0.75	-30L	-30LN	-30LE	-30LEN	-30LH	-30LHN
	1	-30P	-30PN	-30PE	-30PEN	-30PH	-30PHN
	1.5	-30R	-30RN	-30RE	-30REN	-30RH	-30RHN
	2	-30T	-30TN	-30TE	-30TEN	-30TH	-30THN
	3	-30V	-30VN	-30VE	-30VEN	-30VH	-30VHN
M31	0.75	-31L	-31LN	-31LE	-31LEN	-31LH	-31LHN
M32	0.75	-32L	-32LN	-32LE	-32LEN	-32LH	-32LHN
	1	-32P	-32PN	-32PE	-32PEN	-32PH	-32PHN
	1.5	-32R	-32RN	-32RE	-32REN	-32RH	-32RHN
	2	-32T	-32TN	-32TE	-32TEN	-32TH	-32THN
M33	0.75	-33L	-33LN	-33LE	-33LEN	-33LH	-33LHN
	1	-33P	-33PN	-33PE	-33PEN	-33PH	-33PHN
	1.5	-33R	-33RN	-33RE	-33REN	-33RH	-33RHN
	2	-33T	-33TN	-33TE	-33TEN	-33TH	-33THN
	3	-33V	-33VN	-33VE	-33VEN	-33VH	-33VHN
M34	1	-34P	-34PN	-34PE	-34PEN	-34PH	-34PHN
	1.5	-34R	-34RN	-34RE	-34REN	-34RH	-34RHN
	2	-34T	-34TN	-34TE	-34TEN	-34TH	-34THN
M35	1	-35P	-35PN	-35PE	-35PEN	-35PH	-35PHN
	1.5	-35R	-35RN	-35RE	-35REN	-35RH	-35RHN
	2	-35T	-35TN	-35TE	-35TEN	-35TH	-35THN
M36	1	-36P	-36PN	-36PE	-36PEN	-36PH	-36PHN
	1.5	-36R	-36RN	-36RE	-36REN	-36RH	-36RHN
	2	-36T	-36TN	-36TE	-36TEN	-36TH	-36THN
	3	-36V	-36VN	-36VE	-36VEN	-36VH	-36VHN
M38	1	-38P	-38PN	-38PE	-38PEN	-38PH	-38PHN
	1.5	-38R	-38RN	-38RE	-38REN	-38RH	-38RHN
	2	-38T	-38TN	-38TE	-38TEN	-38TH	-38THN
M39	1	-39P	-39PN	-39PE	-39PEN	-39PH	-39PHN
	1.5	-39R	-39RN	-39RE	-39REN	-39RH	-39RHN
	2	-39T	-39TN	-39TE	-39TEN	-39TH	-39THN
	3	-39V	-39VN	-39VE	-39VEN	-39VH	-39VHN
M40	1.5	-40R	-40RN	-40RE	-40REN	-40RH	-40RHN
	2	-40T	-40TN	-40TE	-40TEN	-40TH	-40THN
	3	-40V	-40VN	-40VE	-40VEN	-40VH	-40VHN
M42	1.5	-42R	-42RN	-42RE	-42REN	-42RH	-42RHN
	2	-42T	-42TN	-42TE	-42TEN	-42TH	-42THN
	3	-42V	-42VN	-42VE	-42VEN	-42VH	-42VHN
M45	1.5	-45R	-45RN	-45RE	-45REN	-45RH	-45RHN
	2	-45T	-45TN	-45TE	-45TEN	-45TH	-45THN
	3	-45V	-45VN	-45VE	-45VEN	-45VH	-45VHN

To be continued

Continued from previous page

Size (mm)		Code (4677)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M48	1.5	-48R	-48RN	-48RE	-48REN	-48RH	-48RHN
	2	-48T	-48TN	-48TE	-48TEN	-48TH	-48THN
	3	-48V	-48VN	-48VE	-48VEN	-48VH	-48VHN
M50	1.5	-50R	-50RN	-50RE	-50REN	-50RH	-50RHN
	2	-50T	-50TN	-50TE	-50TEN	-50TH	-50THN
	3	-50V	-50VN	-50VE	-50VEN	-50VH	-50VHN
M52	1.5	-52R	-52RN	-52RE	-52REN	-52RH	-52RHN
	2	-52T	-52TN	-52TE	-52TEN	-52TH	-52THN
	3	-52V	-52VN	-52VE	-52VEN	-52VH	-52VHN
	4	-52X	-52XN	-52XE	-52XEN	-52XH	-52XHN
M55	1.5	-55R	-55RN	-55RE	-55REN	-55RH	-55RHN
	2	-55T	-55TN	-55TE	-55TEN	-55TH	-55THN
	3	-55V	-55VN	-55VE	-55VEN	-55VH	-55VHN
	4	-55X	-55XN	-55XE	-55XEN	-55XH	-55XHN
M56	1.5	-56R	-56RN	-56RE	-56REN	-56RH	-56RHN
	2	-56T	-56TN	-56TE	-56TEN	-56TH	-56THN
	3	-56V	-56VN	-56VE	-56VEN	-56VH	-56VHN
	4	-56X	-56XN	-56XE	-56XEN	-56XH	-56XHN
M58	1.5	-58R	-58RN	-58RE	-58REN	-58RH	-58RHN
	2	-58T	-58TN	-58TE	-58TEN	-58TH	-58THN
	3	-58V	-58VN	-58VE	-58VEN	-58VH	-58VHN
	4	-58X	-58XN	-58XE	-58XEN	-58XH	-58XHN
M60	1.5	-60R	-60RN	-60RE	-60REN	-60RH	-60RHN
	2	-60T	-60TN	-60TE	-60TEN	-60TH	-60THN
	3	-60V	-60VN	-60VE	-60VEN	-60VH	-60VHN
	4	-60X	-60XN	-60XE	-60XEN	-60XH	-60XHN
M62	1.5	-62R	-62RN	-62RE	-62REN	-62RH	-62RHN
	2	-62T	-62TN	-62TE	-62TEN	-62TH	-62THN
	3	-62V	-62VN	-62VE	-62VEN	-62VH	-62VHN
	4	-62X	-62XN	-62XE	-62XEN	-62XH	-62XHN
M64	1.5	-64R	-64RN	-64RE	-64REN	-64RH	-64RHN
	2	-64T	-64TN	-64TE	-64TEN	-64TH	-64THN
	3	-64V	-64VN	-64VE	-64VEN	-64VH	-64VHN
	4	-64X	-64XN	-64XE	-64XEN	-64XH	-64XHN
M65	1.5	-65R	-65RN	-65RE	-65REN	-65RH	-65RHN
	2	-65T	-65TN	-65TE	-65TEN	-65TH	-65THN
	3	-65V	-65VN	-65VE	-65VEN	-65VH	-65VHN
	4	-65X	-65XN	-65XE	-65XEN	-65XH	-65XHN
M68	1.5	-68R	-68RN	-68RE	-68REN	-68RH	-68RHN
	2	-68T	-68TN	-68TE	-68TEN	-68TH	-68THN
	3	-68V	-68VN	-68VE	-68VEN	-68VH	-68VHN
	4	-68X	-68XN	-68XE	-68XEN	-68XH	-68XHN
M70	1.5	-70R	-70RN	-70RE	-70REN	-70RH	-70RHN
	2	-70T	-70TN	-70TE	-70TEN	-70TH	-70THN
	3	-70V	-70VN	-70VE	-70VEN	-70VH	-70VHN
	4	-70X	-70XN	-70XE	-70XEN	-70XH	-70XHN
	6	-70O	-70ON	-70OE	-70OEN	-70OH	-70OHN
M72	1.5	-72R	-72RN	-72RE	-72REN	-72RH	-72RHN
	2	-72T	-72TN	-72TE	-72TEN	-72TH	-72THN
	3	-72V	-72VN	-72VE	-72VEN	-72VH	-72VHN

To be continued

Continued from previous page

Size (mm)		Code (4677)					
		Class 6g		Class 6e		Class 6h	
Nominal diameter	Pitch	GO	NOGO	GO	NOGO	GO	NOGO
M72	4	-72X	-72XN	-72XE	-72XEN	-72XH	-72XHN
	6	-72O	-72ON	-72OE	-72OEN	-72OH	-72OHN
M75	1.5	-75R	-75RN	-75RE	-75REN	-75RH	-75RHN
	2	-75T	-75TN	-75TE	-75TEN	-75TH	-75THN
	3	-75V	-75VN	-75VE	-75VEN	-75VH	-75VHN
	4	-75X	-75XN	-75XE	-75XEN	-75XH	-75XHN
M76	1.5	-76R	-76RN	-76RE	-76REN	-76RH	-76RHN
	2	-76T	-76TN	-76TE	-76TEN	-76TH	-76THN
	3	-76V	-76VN	-76VE	-76VEN	-76VH	-76VHN
	4	-76X	-76XN	-76XE	-76XEN	-76XH	-76XHN
	6	-76O	-76ON	-76OE	-76OEN	-76OH	-76OHN
M78	2	-78T	-78TN	-78TE	-78TEN	-78TH	-78THN
M80	1.5	-80R	-80RN	-80RE	-80REN	-80RH	-80RHN
	2	-80T	-80TN	-80TE	-80TEN	-80TH	-80THN
	3	-80V	-80VN	-80VE	-80VEN	-80VH	-80VHN
	4	-80X	-80XN	-80XE	-80XEN	-80XH	-80XHN
	6	-80O	-80ON	-80OE	-80OEN	-80OH	-80OHN
M82	2	-82T	-82TN	-82TE	-82TEN	-82TH	-82THN
M85	2	-85T	-85TN	-85TE	-85TEN	-85TH	-85THN
	3	-85V	-85VN	-85VE	-85VEN	-85VH	-85VHN
	4	-85X	-85XN	-85XE	-85XEN	-85XH	-85XHN
	6	-85O	-85ON	-85OE	-85OEN	-85OH	-85OHN
M90	2	-90T	-90TN	-90TE	-90TEN	-90TH	-90THN
	3	-90V	-90VN	-90VE	-90VEN	-90VH	-90VHN
	4	-90X	-90XN	-90XE	-90XEN	-90XH	-90XHN
	6	-90O	-90ON	-90OE	-90OEN	-90OH	-90OHN
M95	2	-95T	-95TN	-95TE	-95TEN	-95TH	-95THN
	3	-95V	-95VN	-95VE	-95VEN	-95VH	-95VHN
	4	-95X	-95XN	-95XE	-95XEN	-95XH	-95XHN
	6	-95O	-95ON	-95OE	-95OEN	-95OH	-95OHN
M100	2	-100T	-100TN	-100TE	-100TEN	-100TH	-100THN
	3	-100V	-100VN	-100VE	-100VEN	-100VH	-100VHN
	4	-100X	-100XN	-100XE	-100XEN	-100XH	-100XHN
	6	-100O	-100ON	-100OE	-100OEN	-100OH	-100OHN
M105	2	-105T	-105TN	-105TE	-105TEN	-105TH	-105THN
	3	-105V	-105VN	-105VE	-105VEN	-105VH	-105VHN
	4	-105X	-105XN	-105XE	-105XEN	-105XH	-105XHN
	6	-105O	-105ON	-105OE	-105OEN	-105OH	-105OHN
M110	2	-110T	-110TN	-110TE	-110TEN	-110TH	-110THN
	3	-110V	-110VN	-110VE	-110VEN	-110VH	-110VHN
	4	-110X	-110XN	-110XE	-110XEN	-110XH	-110XHN
	6	-110O	-110ON	-110OE	-110OEN	-110OH	-110OHN
M115	2	-115T	-115TN	-115TE	-115TEN	-115TH	-115THN
	3	-115V	-115VN	-115VE	-115VEN	-115VH	-115VHN
	4	-115X	-115XN	-115XE	-115XEN	-115XH	-115XHN
	6	-115O	-115ON	-115OE	-115OEN	-115OH	-115OHN
M120	2	-120T	-120TN	-120TE	-120TEN	-120TH	-120THN
	3	-120V	-120VN	-120VE	-120VEN	-120VH	-120VHN
	4	-120X	-120XN	-120XE	-120XEN	-120XH	-120XHN
	6	-120O	-120ON	-120OE	-120OEN	-120OH	-120OHN

THREAD GAUGES FOR ROTARY SHOULDERED CONNECTIONS OF PETROLEUM EQUIPMENT

API PRODUCTION LICENSE



- Measure the thread of rotary shouldered connections

4177-23

Number style gauges

Code	Gauge code	Form of thread to be inspected	Number of thread per inch	Taper	Angle of thread	Basic pitch dia
4177-10	NC10	V-0.055	6	1:8	60°	27.000mm
4177-12	NC12	V-0.055	6	1:8	60°	32.121mm
4177-13	NC13	V-0.055	6	1:8	60°	35.331mm
4177-16	NC16	V-0.055	6	1:8	60°	40.869mm
4177-23	NC23	V-0.038R	4	1:6	60°	59.817mm
4177-26	NC26	V-0.038R	4	1:6	60°	67.767mm
4177-31	NC31	V-0.038R	4	1:6	60°	80.848mm
4177-35	NC35	V-0.038R	4	1:6	60°	89.687mm
4177-38	NC38	V-0.038R	4	1:6	60°	96.723mm
4177-40	NC40	V-0.038R	4	1:6	60°	103.429mm
4177-44	NC44	V-0.038R	4	1:6	60°	112.192mm
4177-46	NC46	V-0.038R	4	1:6	60°	117.500mm
4177-50	NC50	V-0.038R	4	1:6	60°	128.059mm
4177-56	NC56	V-0.038R	4	1:4	60°	142.646mm
4177-61	NC61	V-0.038R	4	1:4	60°	156.921mm
4177-70	NC70	V-0.038R	4	1:4	60°	179.146mm
4177-77	NC77	V-0.038R	4	1:4	60°	196.621mm

Regular style gauges

Code	Gauge code	Form of thread to be inspected	Number of thread per inch	Taper	Angle of thread	Basic pitch dia
4177-2R	2 3/8 REG	V-0.040	5	1:4	60°	60.080mm
4177-21R	2 7/8 REG	V-0.040	5	1:4	60°	69.605mm
4177-3R	3 1/2 REG	V-0.040	5	1:4	60°	82.293mm
4177-4R	4 1/2 REG	V-0.040	5	1:4	60°	110.868mm
4177-5R	5 1/2 REG	V-0.050	4	1:4	60°	132.944mm
4177-6R	6 5/8 REG	V-0.050	4	1:6	60°	146.248mm
4177-7R	7 5/8 REG	V-0.050	4	1:4	60°	170.549mm
4177-8R	8 5/8 REG	V-0.050	4	1:4	60°	194.731mm

Full-hole style gauges

Code	Gauge code	Form of thread to be inspected	Number of thread per inch	Taper	Angle of thread	Basic pitch dia
4177-3H	3 1/2 FH	V-0.040	5	1:4	60°	94.844mm
4177-4H	4 1/2 FH	V-0.040	5	1:4	60°	115.113mm
4177-5H	5 1/2 FH	V-0.050	4	1:6	60°	142.011mm
4177-6H	6 5/8 FH	V-0.050	4	1:6	60°	165.598mm

Internal-flush style gauge

Code	Gauge code	Form of thread to be inspected	Number of thread per inch	Taper	Angle of thread	Basic pitch dia
4177-5F	5 1/2 IF	V-0.065	4	1:6	60°	157.201mm

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CASING, TUBING AND LINE PIPE THREAD GAUGES OF PETROLEUM AND GAS EQUIPMENT

Casing round thread gauges

Code	Gauge code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-4	4 1/2 CSG	114.30mm	8	1:16	60°
4178-4L	4 1/2 LCSG				
4178-5	5 CSG	127.00mm	8	1:16	60°
4178-5L	5 LCSG				
4178-51	5 1/2 CSG	139.70mm	8	1:16	60°
4178-51L	5 1/2 LCSG				
4178-6	6 5/8 CSG	168.28mm	8	1:16	60°
4178-6L	6 5/8 LCSG				
4178-7	7 CSG	177.80mm	8	1:16	60°
4178-7L	7 LCSG				
4178-71	7 5/8 CSG	193.68mm	8	1:16	60°
4178-71L	7 5/8 LCSG				
4178-8	8 5/8 CSG	219.08mm	8	1:16	60°
4178-8L	8 5/8 LCSG				
4178-9	9 5/8 CSG	244.48mm	8	1:16	60°
4178-9L	9 5/8 LCSG				
4178-10	10 3/4 CSG	273.05mm	8	1:16	60°
4178-10L	10 3/4 LCSG				
4178-11	11 3/4 CSG	298.45mm	8	1:16	60°
4178-11L	11 3/4 LCSG				
4178-13	13 3/8 CSG	339.73mm	8	1:16	60°
4178-13L	13 3/8 LCSG				
4178-16	16 CSG	406.40mm	8	1:16	60°
4178-16L	16 LCSG				



4178-21T

- Measure the casing, tubing and line pipe threads

Non-upset tubing thread gauges

Code	Gauge code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-11T	1.050 TBG	26.67mm	10	1:16	60°
4178-13T	1.315 TBG	33.40mm	10	1:16	60°
4178-16T	1.660 TBG	42.16mm	10	1:16	60°
4178-19T	1.900 TBG	48.26mm	10	1:16	60°
4178-2T	2 3/8 TBG	60.33mm	10	1:16	60°
4178-21T	2 7/8 TBG	73.03mm	10	1:16	60°
4178-3T	3 1/2 TBG	88.90mm	10	1:16	60°
4178-4T	4 TBG	101.60mm	8	1:16	60°
4178-41T	4 1/2 TBG	114.30mm	8	1:16	60°

External-upset tubing thread gauges

Code	Gauge code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-11U	1.050 UP TBG	26.67mm	10	1:16	60°
4178-13U	1.315 UP TBG	33.40mm	10	1:16	60°
4178-16U	1.660 UP TBG	42.16mm	10	1:16	60°
4178-19U	1.900 UP TBG	48.26mm	10	1:16	60°
4178-2U	2 3/8 UP TBG	60.33mm	8	1:16	60°
4178-21U	2 7/8 UP TBG	73.03mm	8	1:16	60°
4178-3U	3 1/2 UP TBG	88.90mm	8	1:16	60°
4178-4U	4 UP TBG	101.60mm	8	1:16	60°
4178-41U	4 1/2 UP TBG	114.30mm	8	1:16	60°

To be continued

Continued from previous page

Buttress casing thread gauges

Code	Gauge code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-4B	4 1/2 BCSG	114.30mm	5	1:16	3°, 10°
4178-5B	5 BCSG	127.00mm	5	1:16	3°, 10°
4178-51B	5 1/2 BCSG	139.70mm	5	1:16	3°, 10°
4178-6B	6 5/8 BCSG	168.28mm	5	1:16	3°, 10°
4178-7B	7 BCSG	177.80mm	5	1:16	3°, 10°
4178-71B	7 5/8 BCSG	193.68mm	5	1:16	3°, 10°
4178-8B	8 5/8 BCSG	219.08mm	5	1:16	3°, 10°
4178-9B	9 5/8 BCSG	244.48mm	5	1:16	3°, 10°
4178-10B	10 3/4 BCSG	273.05mm	5	1:16	3°, 10°
4178-11B	11 3/4 BCSG	298.45mm	5	1:16	3°, 10°
4178-13B	13 3/8 BCSG	339.73mm	5	1:16	3°, 10°
4178-16B	16 BCSG	406.40mm	5	1:12	3°, 10°

Line pipe thread gauges

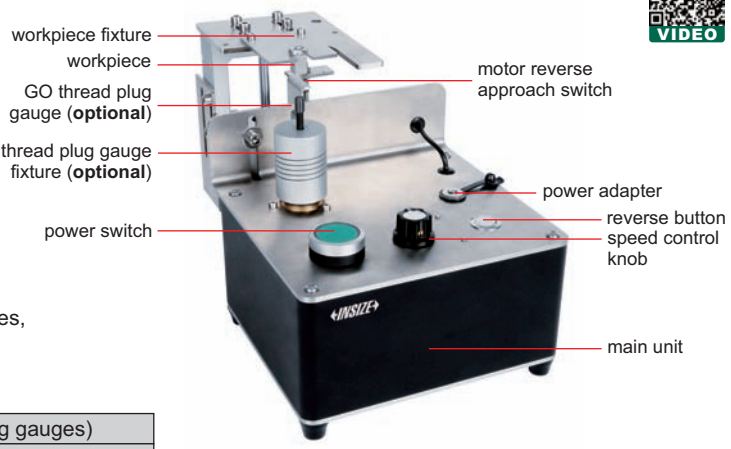
Code	Gauge code	Outer dia	Number of thread per inch	Taper	Angle of thread
4178-01P	1/8 LP	3.18mm	27	1:16	60°
4178-02P	1/4 LP	6.35mm	18	1:16	60°
4178-03P	3/8 LP	9.53mm	18	1:16	60°
4178-05P	1/2 LP	12.70mm	14	1:16	60°
4178-07P	3/4 LP	19.05mm	14	1:16	60°
4178-10P	1 LP	25.40mm	11 1/2	1:16	60°
4178-12P	1 1/4 LP	31.75mm	11 1/2	1:16	60°
4178-15P	1 1/2 LP	38.10mm	11 1/2	1:16	60°
4178-20P	2 LP	50.80mm	11 1/2	1:16	60°
4178-25P	2 1/2 LP	63.50mm	8	1:16	60°
4178-30P	3 LP	76.20mm	8	1:16	60°
4178-35P	3 1/2 LP	88.90mm	8	1:16	60°
4178-40P	4 LP	101.60mm	8	1:16	60°
4178-50P	5 LP	127.00mm	8	1:16	60°
4178-60P	6 LP	152.40mm	8	1:16	60°
4178-80P	8 LP	203.20mm	8	1:16	60°
4178-100P	10 LP	254.00mm	8	1:16	60°

SEMI-AUTOMATIC THREAD INSPECTOR CODE TGI

VIDEO

CUSTOM-MADE

- Rapid inspection of thread
- Speed and torque are adjustable
- Reverse button: if abnormal thread is detected, thread gauge will be stuck, press the reverse button to exit
- Different thread gauges and workpiece fixtures can be replaced
- Thread gauges with DLC coating, excellent wear resistance
- For different lenght of thread by adjusting the position of approach switch
- Optional accessory: GO thread plug gauges, GO thread ring gauges, thread plug gauge fixtures, custom-made workpiece fixtures



GO thread ring gauge (**optional**)



SPECIFICATION

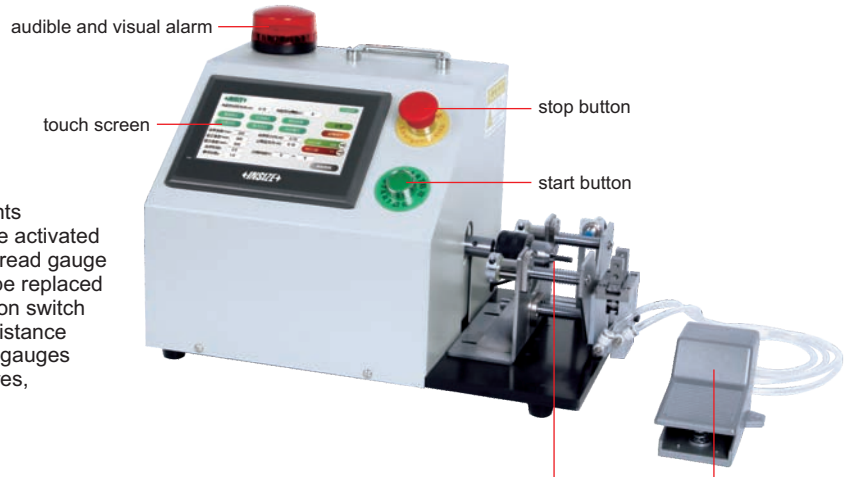
Measuring range	external thread: M5~M20 (Go thread ring gauges)
	internal thread: M3~M36 (Go thread plug gauges)
Torque range	clearance fit: 0.1~0.35Nm, interference fit: 0.4~1.4Nm
Speed range	100~2200r/min
Power supply	power adapter
Rated power	24W
Weight	3kg
Dimension	160×190×250mm

CUSTOM-MADE

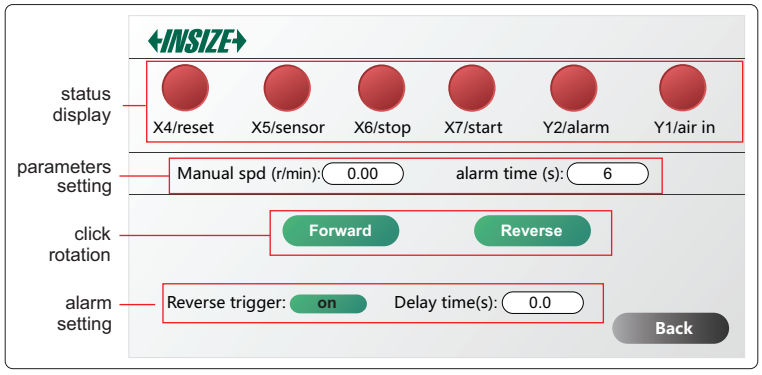
AUTOMATIC THREAD INSPECTION MACHINE
CODE TCM

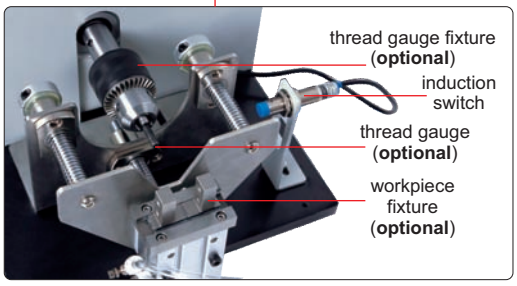
VIDEO

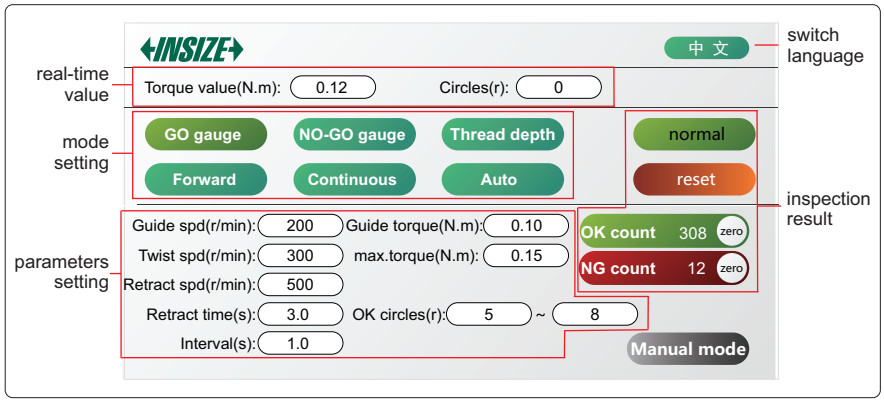
- For inspection of GO, NO-GO and depth of threads
- Can be for repair of thread defects
- Real-time display of torque, circles, OK and NG counts
- If NG thread is detected, audible and visual alarm are activated and the motor is automatically reversed to exit the thread gauge
- Different thread gauges and workpiece fixtures can be replaced
- For different length of thread by adjusting the induction switch
- Thread gauges with DLC coating, excellent wear resistance
- Optional accessory: thread plug gauges, thread ring gauges thread gauge fixtures, custom-made workpiece fixtures, foot switch (code **TCM-01**)



manual mode







thread plug gauges (**optional**)



thread ring gauges (**optional**)



SPECIFICATION

Measuring range	thread: M1~M30
Reprocessing range	thread: M1~M20
Torque range	guide torque: 0~1.27N.m, max. torque: 0~1.27N.m
Speed range	0~3000 r/min
Time range	retract time: 0.1~99s, interval: 0.1~99s
Power supply	220V, 50/60Hz
Rated power	400W
Weight	13kg
Dimension	460x290x330mm

HANDHELD THREAD INSPECTION MACHINES

CUSTOMIZED THREAD PLUG GAUGES ARE AVAILABLE

ATTENTION: TORQUE TESTERS ARE NEEDED FOR CALIBRATION

ATTENTION: SPEED SHOULD BE BELOW 100RPM FOR THE FINAL STAGE



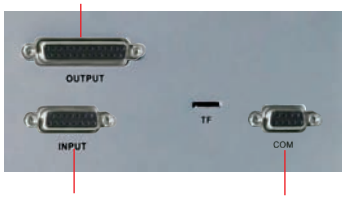
HES-TP01
main body (included)

thread plug gauge (**optional**)
code **HES-TP-□□**

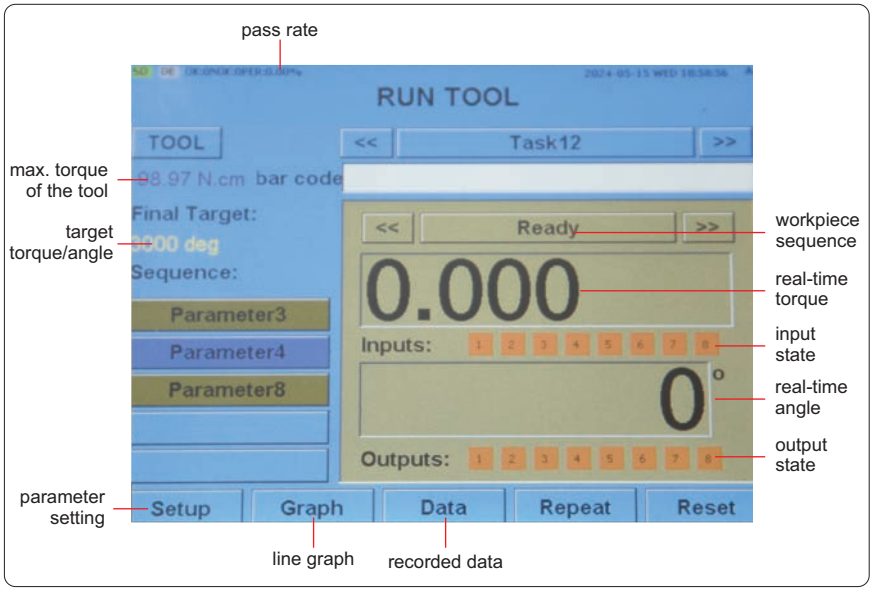




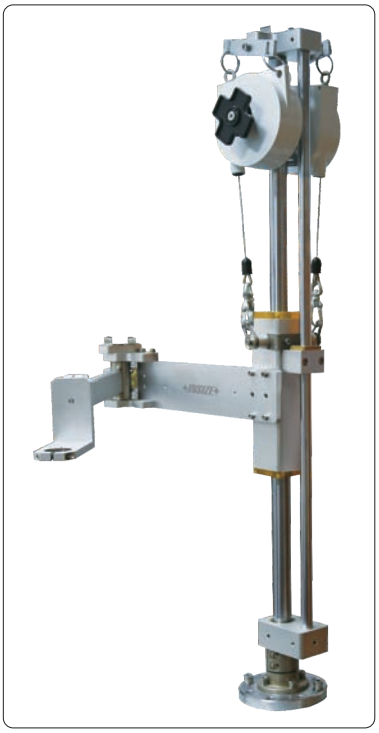
controller (included)



communication port (included)



controller (included)

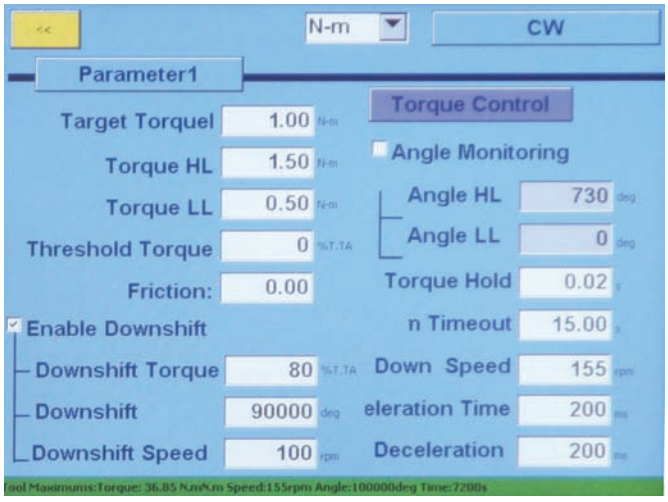


balance arm (**optional**)
code **HES-E-X**

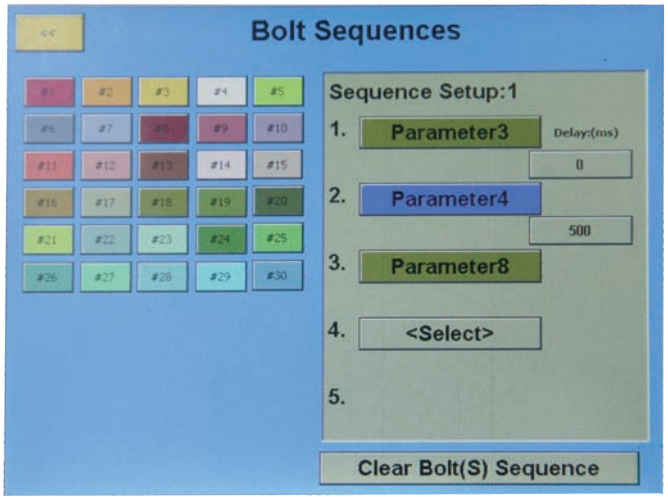
- For inspection of left-hand and right-hand internal thread
- High precision torque+angle control
- Real-time display torque, OK counts, NG counts and pass rate
- If NG thread is detected, the alarm is activated and the corresponding NG parameter is displayed in red on the controller
- Provide programmable IO and RS485 communication port for process control and data transmission
- Thread plug gauges can be replaced with different sizes
- Thread gauges with DLC coating, excellent wear resistance
- Optional accessory: thread plug gauges, balance arm, torque tester

To be continued

Continued from previous page



interface of tightening parameter setting



interface of workpiece sequence matching parameters

SPECIFICATION

Code		HES-TP01	HES-TP02
Torque range		0.02~0.23N.m	0.15~0.90N.m
Motor power		DC40W	
Max. speed		5000rpm	1200rpm
Measuring range		internal thread: M4~M13	internal thread: M14~M30
Power supply		AC 85~264V, 47~63Hz	
Operation interface display		touch screen menu operation mode, 3 function buttons+3 LED indicators	
Torque accuracy		±5% at 30%~80% of maximum output torque, ±8% in other range	
Dimension	main body	214×64.4×38mm	231×64.4×38mm
	controller	151.5×185.8×221mm	
Weight	main body	400g	500g
	controller	3500g	

STANDARD DELIVERY

Main body	1 pc
Controller	1 pc
USB transmission cable	1 pc

OPTIONAL ACCESSORY

Thread plug gauge (Go)	HES-TP-□□
Balance arm	HES-E-X
Torque tester	IST-HP1

THREAD PLUG GAUGE (Go)

metric

Code	Size (Go)
HES-TP-4	M4×0.7-6H
HES-TP-5	M5×0.8-6H
HES-TP-6	M6×1-6H
HES-TP-7	M7×1-6H
HES-TP-8	M8×1.25-6H
HES-TP-10	M10×1.5-6H
HES-TP-12	M12×1.75-6H
HES-TP-14	M14×2-6H
HES-TP-16	M16×2-6H
HES-TP-18	M18×2.5-6H
HES-TP-20	M20×2.5-6H
HES-TP-22	M22×2.5-6H
HES-TP-24	M24×3-6H
HES-TP-27	M27×3-6H
HES-TP-30	M30×3.5-6H

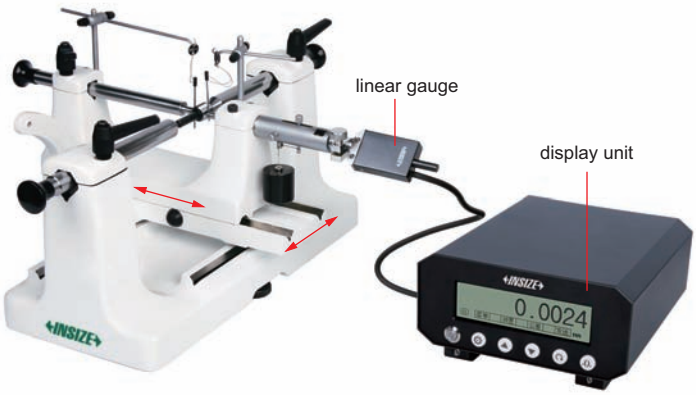
metric fine

Code	Size (Go)
HES-TP-8P	M8×1-6H
HES-TP-10P	M10×1-6H
HES-TP-10Q	M10×1.25-6H
HES-TP-12P	M12×1-6H
HES-TP-12Q	M12×1.25-6H
HES-TP-12R	M12×1.5-6H
HES-TP-14P	M14×1-6H
HES-TP-14Q	M14×1.25-6H
HES-TP-14R	M14×1.5-6H
HES-TP-16P	M16×1-6H

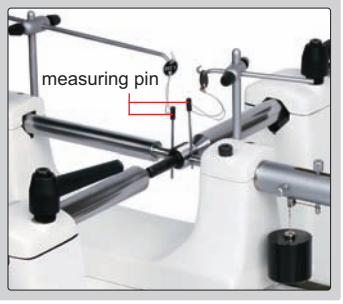
metric fine

Code	Size (Go)
HES-TP-16R	M16×1.5-6H
HES-TP-18P	M18×1-6H
HES-TP-18R	M18×1.5-6H
HES-TP-20P	M20×1-6H
HES-TP-20R	M20×1.5-6H
HES-TP-22P	M22×1-6H
HES-TP-22R	M22×1.5-6H
HES-TP-24P	M24×1-6H
HES-TP-24R	M24×1.5-6H
HES-TP-30R	M30×1.5-6H

EXTERNAL THREAD MEASURING DEVICE
CODE ISQ-TE100



measure pitch diameter of thread



- Quickly measure major, pitch and minor diameters of external thread
- Suitable for metric, inch, whitworth, NPT and BSPT

SPECIFICATION

Code	Range	Resolution	Accuracy	Repeatability
ISQ-TE100	0-100mm	0.1μm	2μm	0.5μm

OPTIONAL ACCESSORY

Measuring pin	ISQ-TE100-A
Measuring prism	ISQ-TE100-B
Female center	ISQ-TE100-C
Clamp	ISQ-TE100-D
Setting disc	ISQ-TE100-E
60° find pointer	ISQ-TE100-F
55° find pointer	ISQ-TE100-G
Display unit	7131-1A
Linear gauge	7131-01

Measuring pin (optional)



- To measure pitch diameter of external thread
- Each size is supplied in pair
- Hardness: 60±2HRC

Code	Pins included	Pin diameter (mm)
ISQ-TE100-A	21 pairs	0.170, 0.195, 0.220, 0.250, 0.290, 0.335, 0.390, 0.455, 0.530, 0.620, 0.725, 0.895, 1.100, 1.350, 1.650, 2.050, 2.550, 3.200, 4.000, 5.050, 6.350

Measuring prism (optional)



- To measure minor diameter of external thread
- Each size is supplied in pair

Code	Prisms included	Size
ISQ-TE100-B	4 pairs	A, B, C, D (for different types and sizes of thread)

Setting disc (optional)



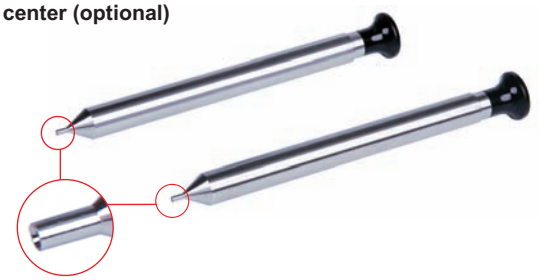
- To set initial value

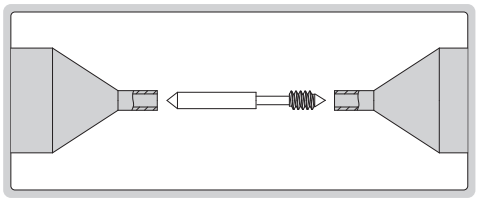
Code	Discs included	Disc diameter (mm)
ISQ-TE100-E	22 pcs	3, 5, 8, 12, 16, 20, 24, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100

To be continued

Continued from previous page

Female center (optional)





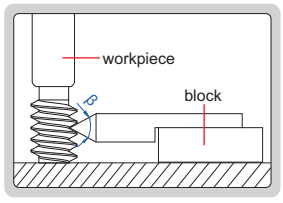
- With small holes to support small workpieces without female centers
- Supplied in pair

Code
ISQ-TE100-C

Find pointer (optional)



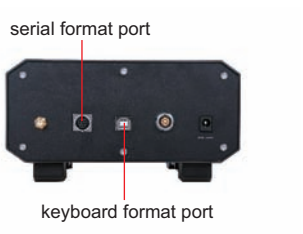
- To find measuring point of NPT or BSPT



Code	Angle β	Applicable thread
ISQ-TE100-F	60°	NPT
ISQ-TE100-G	55°	BSPT

Display unit (optional)

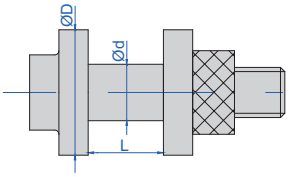


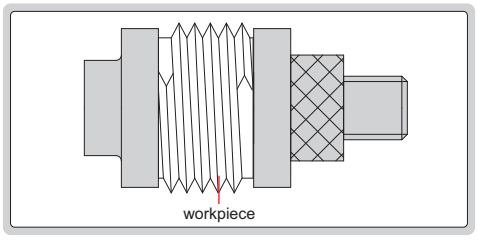


Code	7131-1A
Display mode	4" LCD
Display unit	mm, μm
Resolution	0.1μm

Clamp (optional)







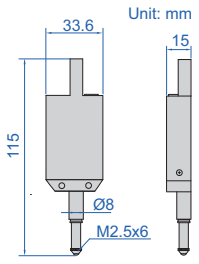
- To hold large workpieces with inner bore

(mm)

Code	Clamps included	Ød	ØD	L
ISQ-TE100-D	3 pcs	13.5	30	0-18
		23	60	0-18
		23	75	0-18

Linear gauge (optional)





Code	7131-01
Measuring range	12.5mm
Resolution	0.1μm
Accuracy	1μm
Repeatability	0.2μm

13 ANGLE, STRAIGHTNESS, FLATNESS MEASURING TOOLS



Angle Meters
Page 461



Protractors
Page 461-466



Granite Squares
Page 466-467



Cylinder Squares
Page 467



Perpendicularity Testers
Page 468



Squares
Page 468-474



Straight Edges
Page 474-475



Straight Edges
Page 475-476



Optical Flats
Page 477



Sodium Light Cabinets
Page 477



Flatness Measurement Stands
Page 478

INSPECTION CERTIFICATE

VIDEO

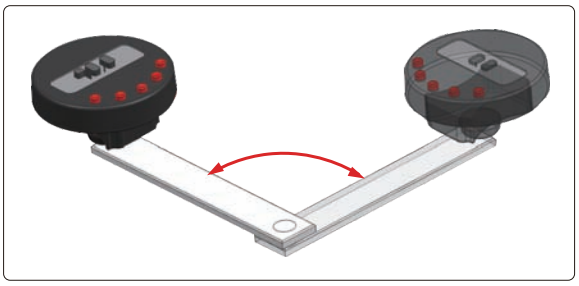
DIGITAL ANGLE METER
CODE 2177-121





- Clockwise and counter-clockwise operation
- 9 target angle values can be set, with audible and visible alarm:
  – Green LED light on and buzzer sounds when angle value is 80%~99.5% of target angle
  – Both green and red LED light on and buzzer sounds when angle value is over 99.5% of target angle
- Memory of 250 results, can upload to the computer
- Back with magnet
- Power off in 2 minutes automatically

measurement of angle rotation in any direction (gyro technique)

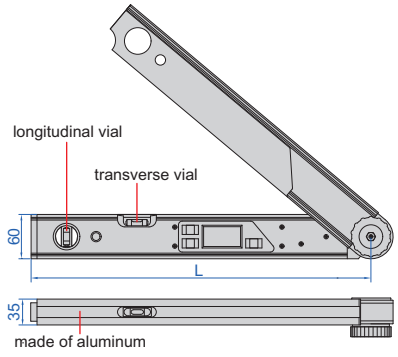


SPECIFICATION

Display range	0~999°
Setting range	1~360° (increment 1°)
Resolution	0.1°
Accuracy	±2° for 90° rotation @30°/sec
Power supply	2×1.5V AAA batteries
Dimension	58×58×41mm
Weight	70g

WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

Unit: mm

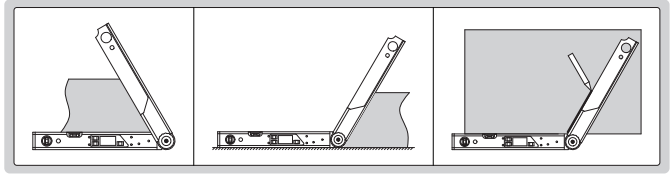


AUTOMATIC BACKLIGHT | ABSOLUTE LEVEL | IP54 WATERPROOF



2174-225

- Suitable for setting horizontal and vertical mitre angles of cutting machines
- Buttons: ON/OFF, HOLD/SUP, SPR/CNR/MTR/BVL
- IP54 dust/waterproof
- With transverse and longitudinal vials
- 2xAAA batteries
- Absolute level, zero setting is not needed when batteries are replaced
- Backlight turns off in one minute after reading is stable, automatic power off in 5 minutes

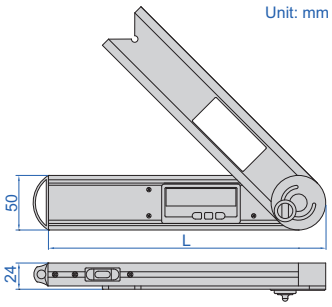


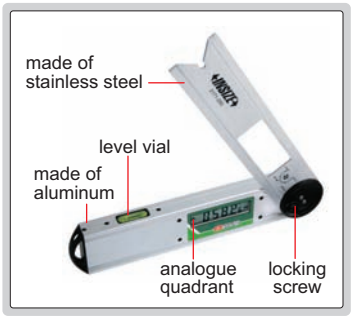
Code	Size (L)	Range	Resolution	Accuracy
2174-225	460mm	0-225°	0.05°	±0.10°

DIGITAL PROTRACTOR

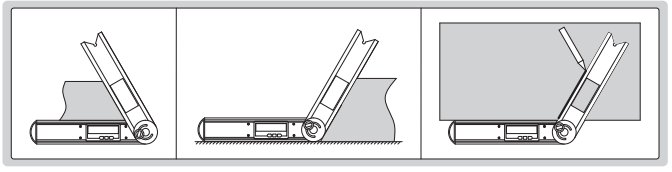


2171-250





- Buttons: on/off, hold (keep the reading), zero, ABS (absolute and incremental measurement)
- Fix the locking screw at 4 positions for different measuring ranges: 0°~225°, -225°~0°, -45°~180°, -180°~45°
- Remove the locking screw for 360° range
- With level vial
- Battery CR2032, automatic power off

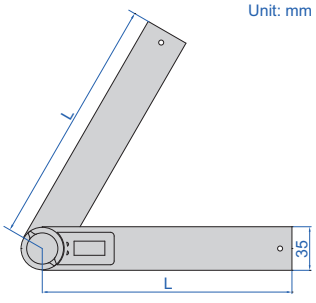


Code	Size (L)	Range	Resolution	Accuracy
2171-250	250mm	0-360°	0.05°	±0.15°

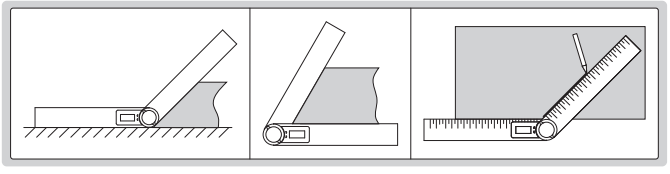
DIGITAL PROTRACTORS



2176-200



- Buttons: on/off, zero
- With clamping screw to lock the blades
- Graduation of blade: 1mm and 1/32"
- Made of stainless steel
- CR2032 battery
- Automatic power off



Code	Size (L)	Range	Resolution	Accuracy
2176-200	200mm	0-360°	0.1°	±0.3°
2176-300	300mm	0-360°	0.1°	±0.3°

DIGITAL LEVELS AND SLOPE METERS

REFER TO PAGE
575~579 FOR DETAILS



2179-360



2175-360



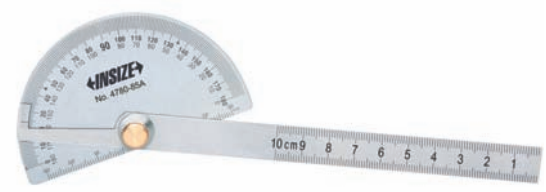
2199-1



2170-1

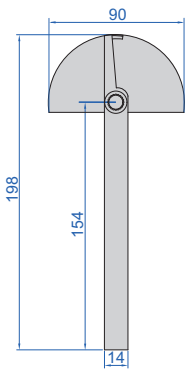
PROTRACTOR (ECONOMIC TYPE)

- Graduation: 1°
- Made of stainless steel
- With clamping screw



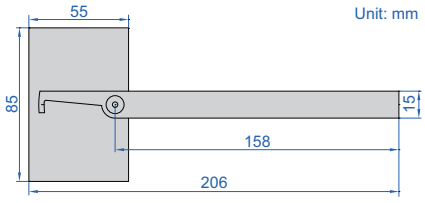
4780-85A

Unit: mm



Code	Size	Range	Accuracy
4780-85A	90x154mm	0-180°	±0.5°

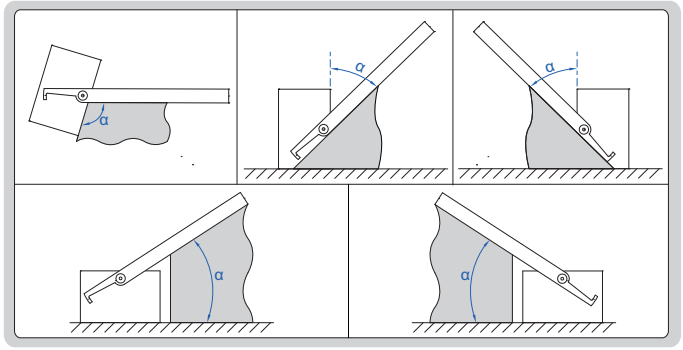
PROTRACTOR



Unit: mm



4781-85A



- Made of stainless steel
- Satin chrome plated scale
- With clamping screw

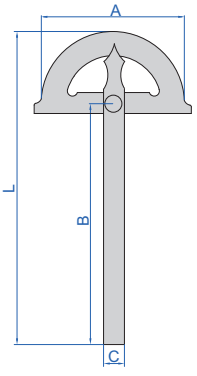
Code	Size	Range	Graduation	Accuracy
4781-85A	85x158mm	0-180°	1°	±0.3°

PROTRACTORS

- Graduation: 1°
- Made of stainless steel
  (**4799-1300** is made of carbon steel)
- Satin chrome plated scale
- With clamping screw



4799-180



Code	Size (AxB)	Range	Accuracy	L	C
4799-180	80x120mm	0-180°	±0.3°	168mm	11mm
4799-1120	120x150mm	0-180°	±0.3°	220mm	14mm
4799-1150	150x200mm	0-180°	±0.3°	285mm	16mm
4799-1200	200x300mm	0-180°	±0.3°	413mm	20mm
4799-1300	300x500mm	0-180°	±0.3°	675mm	30mm

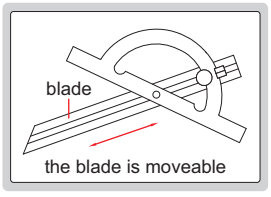
PROTRACTORS

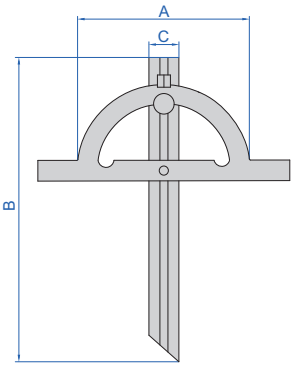
- Graduation: 1°
- Made of carbon steel
- Satin chrome plated scale
- With clamping screw
- The blade is moveable



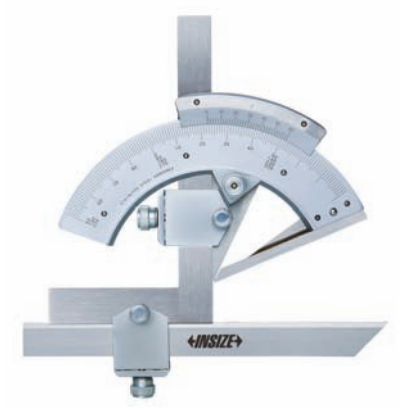
4797-100

Code	Size (AxB)	Range	Accuracy	C
4797-100	100x150mm	10-170°	±0.3°	18mm
4797-150	150x300mm	10-170°	±0.3°	22mm
4797-200	200x400mm	10-170°	±0.3°	24mm
4797-250	250x500mm	10-170°	±0.3°	28mm
4797-300	300x600mm	10-170°	±0.3°	32mm

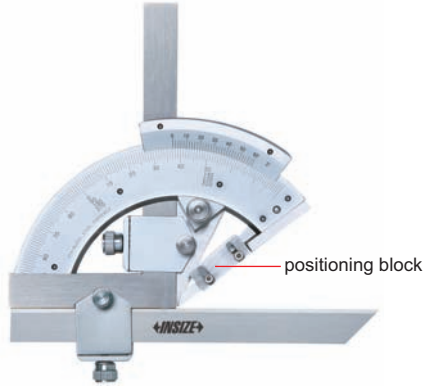




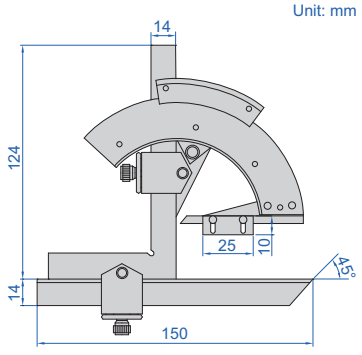
PROTRACTORS



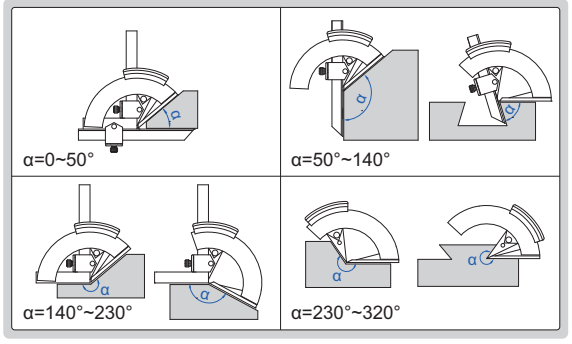
2374-320



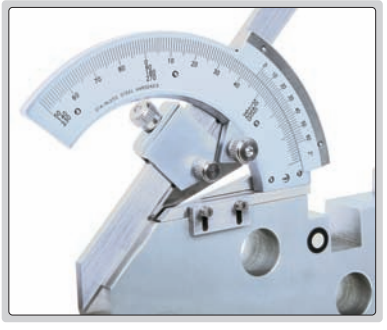
2374-320D



- Made of stainless steel
- Satin chrome plated scale



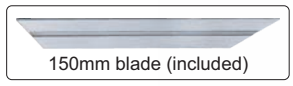
application of **2374-320D**

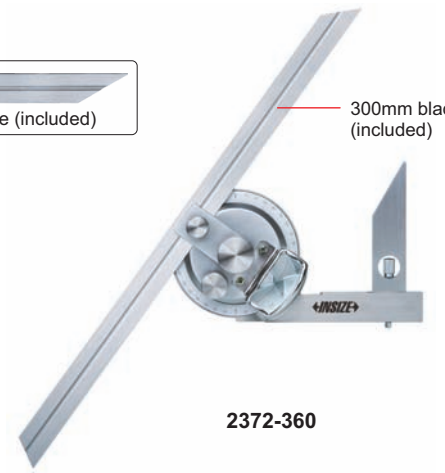


the positioning block can be moved down for positioning, and moved up when not in use

Code	Range	Graduation	Accuracy	Remark
2374-320	0-320°	2'	±2'	without positioning block
2374-320D	0-320°	2'	±2'	with positioning block

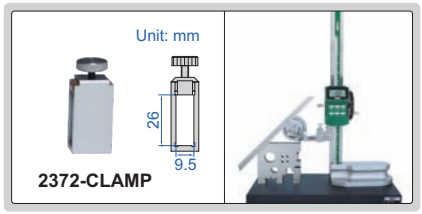
UNIVERSAL PROTRACTOR

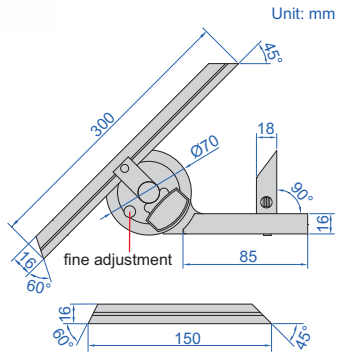




2372-360

clamp for height gauges (**optional**)

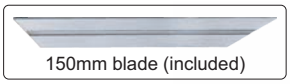


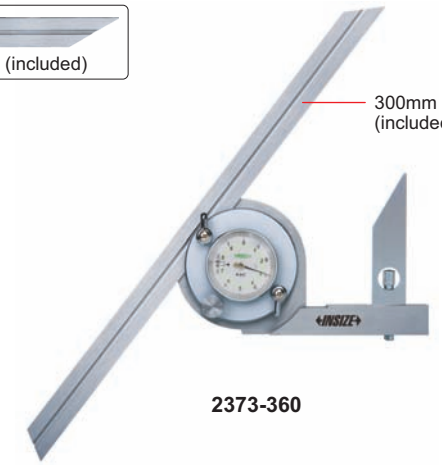


- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gauges **1156**, **1150-300**, **1351**, **1250** and **1151**

Code	Range	Graduation	Accuracy
2372-360	0-360°	5'	±5'

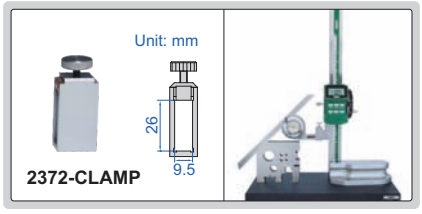
DIAL PROTRACTOR

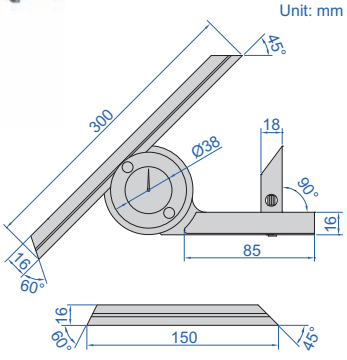




2373-360

clamp for height gauges (**optional**)



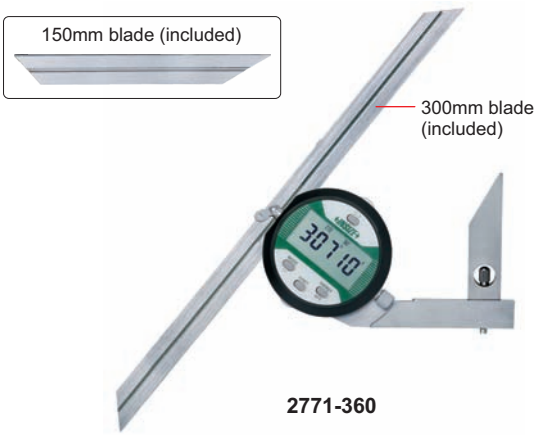


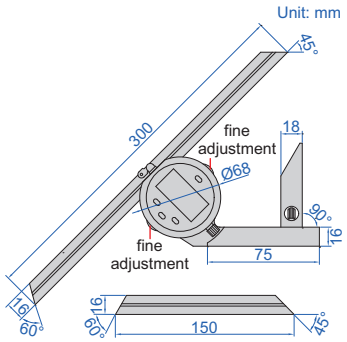
- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gauges **1156**, **1150-300**, **1351**, **1250** and **1151**

Code	Range	Graduation	Accuracy
2373-360	0-360°	5'	±5'

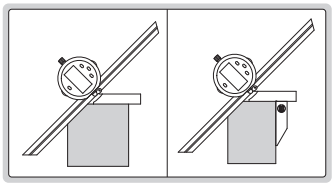
DIGITAL PROTRACTOR

POPULAR MODEL | DATA OUTPUT | ABSOLUTE ZERO





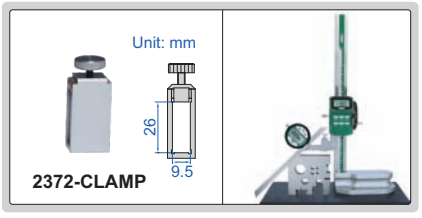
- Absolute zero, zero setting is not needed when batteries are replaced
- Button function: choose 0-90°, 0-180° or 0-360° display, change resolution, display flips over, data hold, zero, on/off supplementary angle measurement
- Battery CR2032, automatic power off, data output
- Made of stainless steel
- Optional square for zero setting
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gauges **1156**, **1150-300**, **1351**, **1250** and **1151**, wireless transmitter code **7315-2771** (receiver is needed) page 10



square (**optional**)



clamp for height gauges (**optional**)



Code	Range	Resolution	Accuracy
2771-360	0-360°	1'/0.01°	±5'

Square (for zero setting, optional)

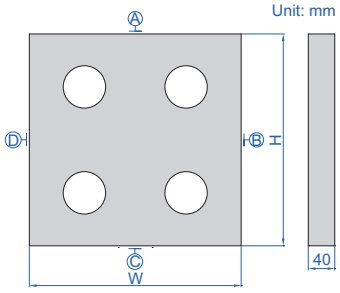
Code
2771-S90

GRANITE SQUARE

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING TO CUSTOMER'S REQUEST



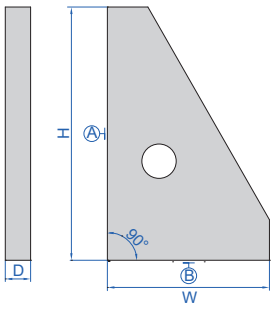
4144-315



Code	Size (HxW)	Flatness of A, B, C and D	Squareness and parallelism between A, B, C and D
4144-315	315x315mm	1.1μm	2.6μm

GRANITE SQUARES

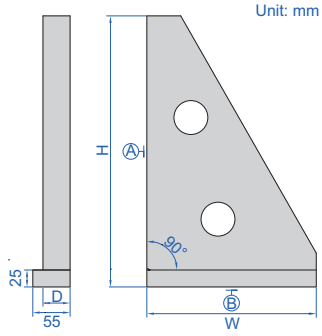
CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING TO CUSTOMER'S REQUEST



type A


4141-250

Unit: mm



type B


4141-400B

- DIN875 grade 000

Code	Size (HxW)	Type	Flatness of A	Flatness of B	Squareness of A to B	D
4141-250	250x160mm	A	1μm	1μm	2μm	25mm
4141-400	400x250mm	A	1.5μm	1μm	3μm	40mm
4141-630	630x400mm	A	2μm	1.5μm	4μm	63mm
4141-400B	400x250mm	B	1.5μm	1μm	3μm	40mm

CYLINDER SQUARES

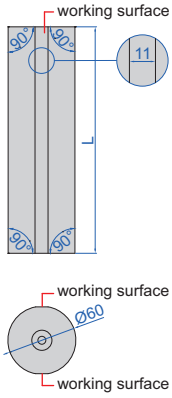
INSPECTION CERTIFICATE

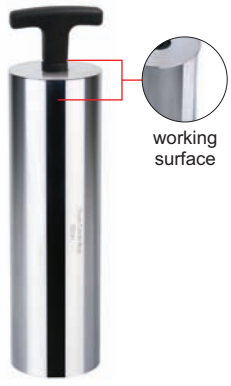
- Made of special alloy steel, hardness HRC58~60
- The handle can be removed

Code	Length (L)	Squareness
4710-200*	200mm	1μm
4710-300*	300mm	2μm

*Supplied with manufacturer inspection certificate

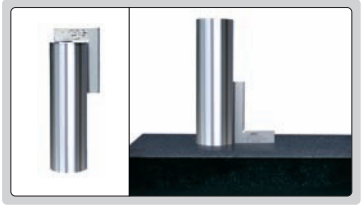
Unit: mm





4710-200

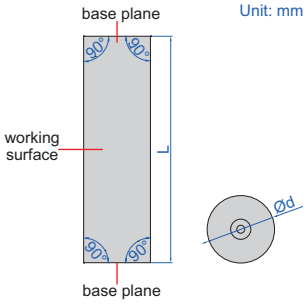
inspect 90° internal and external angles



CYLINDER SQUARES

- DIN875
- Made of special alloy steel, hardness >HRC58
- The handle can be removed

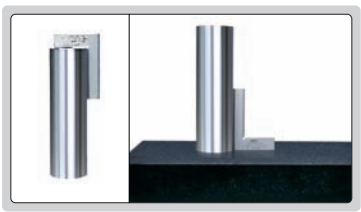
Unit: mm



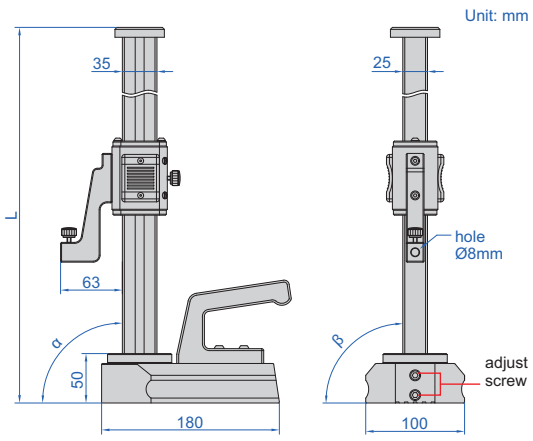
Code	Length (L)	Diameter(Ød)	Squareness
4712-200	200mm	80mm	4μm
4712-315	315mm	100mm	5μm
4712-500	500mm	100mm	7μm


4712-200

inspect 90° internal and external angles



PERPENDICULARITY TESTERS





4770-300



- Optional accessory:
  dial test indicators
  (graduation: 1μm or 2μm)

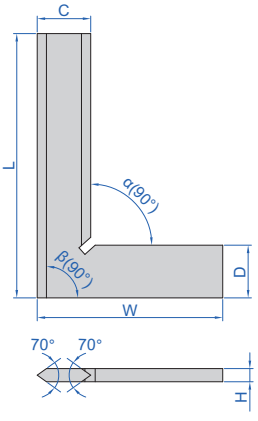
Code	Range (H)	Perpendicularity (α)	Side perpendicularity (β)	L
4770-300	0-300mm	3μm	10μm	460mm
4770-600	0-600mm	5μm	20μm	760mm

90° BEVELED EDGE SQUARES

- Satin chrome plating
- Beveled edges for inside and outside measurements
- Made of hardened stainless steel



4790-0100



DIN875 grade 00 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-050	50x40mm	2.4μm	2.5μm	13	13	4
4790-075	75x50mm	2.6μm	2.8μm	15	15	4
4790-0100	100x70mm	2.8μm	3.0μm	20	20	5
4790-0150	150x100mm	3.2μm	3.5μm	30	30	6
4790-0200	200x130mm	3.7μm	4.0μm	34	34	7
4790-0250	250x165mm	4.2μm	4.5μm	35	35	7
4790-0300	300x200mm	4.6μm	5.0μm	40	40	8

DIN875 grade 0 (mm)

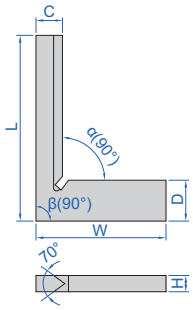
Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-500	50x40mm	6μm	6μm	13	13	4
4790-750	75x50mm	6μm	7μm	15	15	4
4790-1000	100x70mm	7μm	7μm	20	20	5
4790-1500	150x100mm	7μm	8μm	30	30	6
4790-2000	200x130mm	8μm	9μm	34	34	7
4790-2500	250x165mm	9μm	10μm	35	35	7
4790-3000	300x200mm	10μm	11μm	40	40	8

90° TOOL MAKER SQUARES

- DIN875 grade 00
- Beveled edge for inside measurement
- Made of hardened stainless steel



4794-040



(mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4794-025	25x20mm	2.2μm	2.3μm	4	6.5	3.5
4794-040	40x28mm	2.3μm	2.4μm	5.5	8.5	3.5

90° FLAT EDGE SQUARES

- Made of hardened stainless steel

DIN875 grade 0 (mm)

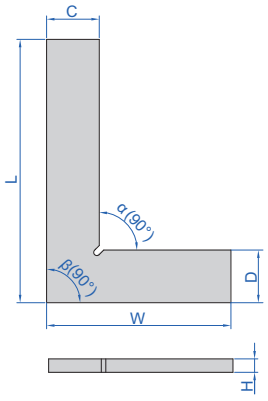
Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-50	50x40mm	6μm	6μm	15	15	4
4791-75	75x50mm	6μm	7μm	15	15	4
4791-100	100x70mm	7μm	7μm	20	20	5
4791-150	150x100mm	7μm	8μm	30	30	6
4791-200	200x130mm	8μm	9μm	30	30	7
4791-250	250x165mm	9μm	10μm	35	35	7
4791-300	300x200mm	10μm	11μm	40	40	8



4791-100

DIN875 grade 1 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-501	50x40mm	12μm	13μm	15	15	4
4791-751	75x50mm	13μm	14μm	15	15	4
4791-1001	100x70mm	14μm	15μm	20	20	5
4791-1501	150x100mm	16μm	18μm	30	30	6
4791-2001	200x130mm	19μm	20μm	30	30	7
4791-2501	250x165mm	21μm	23μm	35	35	7
4791-3001	300x200mm	23μm	25μm	40	40	8



DIN875 grade 2 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-502	50x40mm	24μm	25μm	15	15	4
4791-752	75x50mm	26μm	28μm	15	15	4
4791-1002	100x70mm	28μm	30μm	20	20	5
4791-1502	150x100mm	33μm	35μm	30	30	6
4791-2002	200x130mm	38μm	40μm	30	30	7
4791-2502	250x165mm	43μm	45μm	35	35	7
4791-3002	300x200mm	47μm	50μm	40	40	8

MACHINIST SQUARES (ECONOMIC TYPE)

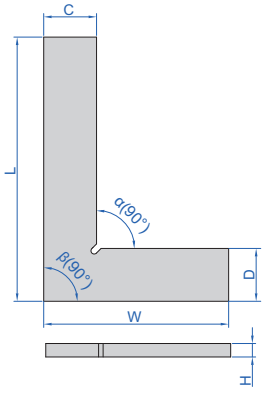
ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDEND

- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardend

(mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4796-50	50×30mm	24μm	25μm	12	12	3
4796-75	75×50mm	26μm	28μm	16	16	3
4796-100	100×70mm	28μm	30μm	19	19	5
4796-125	125×80mm	30μm	33μm	22	22	5
4796-150	150×100mm	33μm	35μm	25	25	6
4796-200	200×130mm	38μm	40μm	25	25	6
4796-250	250×165mm	43μm	45μm	25	25	6
4796-300	300×200mm	47μm	50μm	30	30	6
4796-350	350×200mm	51μm	55μm	38	38	6
4796-400	400×200mm	56μm	60μm	38	38	9
4796-450	450×250mm	58μm	65μm	38	38	9
4796-500	500×300mm	69μm	70μm	38	38	9





4796-150

90° FLAT EDGE SQUARES WITH WIDE BASE

- Made of hardened stainless steel

DIN875 grade 0

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4793-50	50x40mm	6μm	6μm	15	15	4	13
4793-75	75x50mm	6μm	7μm	15	15	4	15
4793-100	100x70mm	7μm	7μm	20	20	5	20
4793-150	150x100mm	7μm	8μm	30	30	6	30
4793-200	200x130mm	8μm	9μm	30	30	7	30
4793-250	250x165mm	9μm	10μm	35	35	7	35
4793-300	300x200mm	10μm	11μm	40	40	8	40



4793-100

DIN875 grade 1

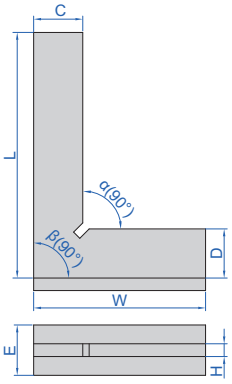
(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4793-501	50x40mm	12μm	13μm	15	15	4	13
4793-751	75x50mm	13μm	14μm	15	15	4	15
4793-1001	100x70mm	14μm	15μm	20	20	5	20
4793-1501	150x100mm	16μm	18μm	30	30	6	30
4793-2001	200x130mm	19μm	20μm	30	30	7	30
4793-2501	250x165mm	21μm	23μm	35	35	7	35
4793-3001	300x200mm	23μm	25μm	40	40	8	40

DIN875 grade 2

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4793-502	50x40mm	24μm	25μm	15	15	4	13
4793-752	75x50mm	26μm	28μm	15	15	4	15
4793-1002	100x70mm	28μm	30μm	20	20	5	20
4793-1502	150x100mm	33μm	35μm	30	30	6	30
4793-2002	200x130mm	38μm	40μm	30	30	7	30
4793-2502	250x165mm	43μm	45μm	35	35	7	35
4793-3002	300x200mm	47μm	50μm	40	40	8	40



90° FLAT EDGE SQUARES WITH WIDE BASE

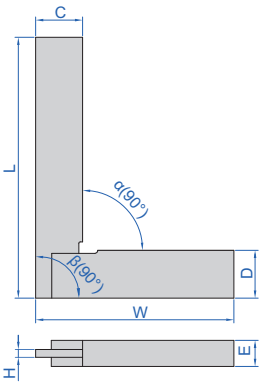
- DIN875 grade 0
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4792-50	50x40mm	6μm	6μm	12	12	3	10
4792-75	75x50mm	6μm	7μm	14	14	3	10
4792-100	100x70mm	7μm	7μm	18	18	3	10
4792-150	150x100mm	8μm	8μm	22	22	4	12
4792-200	200x130mm	9μm	9μm	25	25	4	12



4792-100



MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDEND

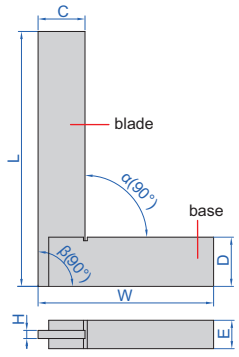
- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardend

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4707-50	50x40mm	24μm	25μm	16	12	3	9
4707-75	75x50mm	26μm	28μm	16	16	3	9
4707-100	100x70mm	28μm	30μm	19	19	3	12
4707-150	150x100mm	33μm	35μm	25	25	3	16
4707-200	200x130mm	37μm	40μm	30	32	4	16
4707-250	250x165mm	42μm	45μm	30	32	4	19
4707-300	300x200mm	47μm	50μm	32	32	4	19
4707-400	400x250mm	56μm	60μm	38	38	5	22
4707-500	500x300mm	65μm	70μm	45	50	6	25
4707-600	600x350mm	75μm	80μm	50	50	6	30
4707-750	750x400mm	90μm	95μm	55	55	6	50
4707-900	900x500mm	103μm	110μm	65	75	9	50
4707-1000	1000x550mm	113μm	120μm	65	75	9	50



4707-100



90° BEVELED EDGE SQUARES WITH WIDE BASE

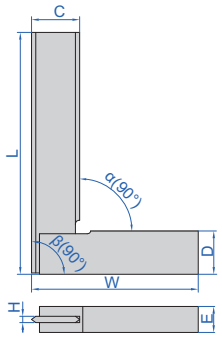
- DIN875 grade 0
- Beveled edges for inside and outside measurements
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4795-50	50x40mm	6μm	6μm	12	12	3	10
4795-75	75x50mm	6μm	7μm	14	14	3	10
4795-100	100x70mm	7μm	7μm	18	18	3	10
4795-150	150x100mm	8μm	8μm	22	22	4	12
4795-200	200x130mm	9μm	9μm	25	25	4	12



4795-100



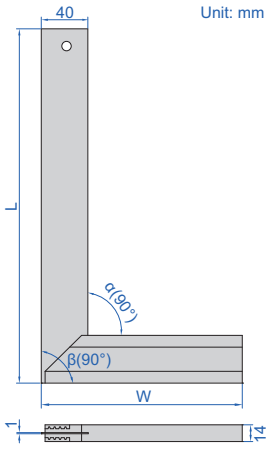
TRY SQUARE

- Graduation: 1mm
- Stainless steel blade, aluminum base

Code	Size (LxW)	Squareness	
		Inside (α)	Outside (β)
2275-300	300x170mm	0.5mm	0.5mm



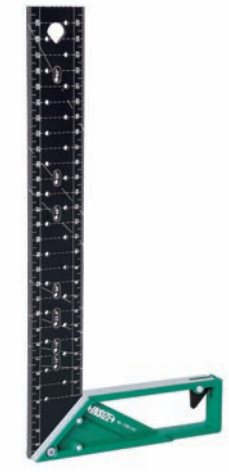
2275-300



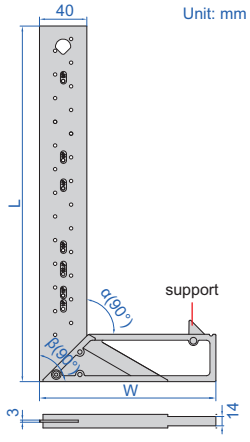
TRY SQUARE

- Graduation: 1mm
- Aluminum blade and base
- 4 milled surfaces
- Retractable metal ledge support
- Etchings and holes for beveling and framing: 10°, 15°, 22.5°, 30°, 45°, 50° and 60°
- Etchings and holes every cm for fluid pencil marking

Code	Size (LxW)	Squareness	
		Inside (α)	Outside (β)
2280-300	300x150mm	0.5mm	0.5mm

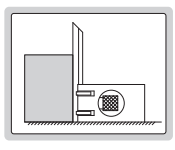


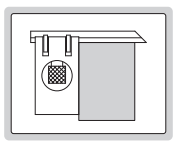
2280-300



ADJUSTABLE SQUARE

- The straight edge can move and can be locked by the clamping screw
- Made of hardened stainless steel

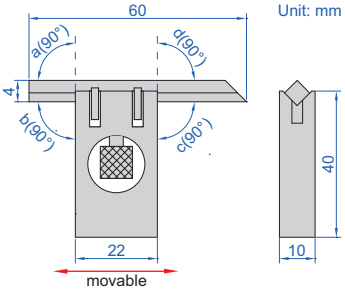




Code	Squareness (a, b, c, d)
4701-1	7μm



4701-1



45° SQUARES

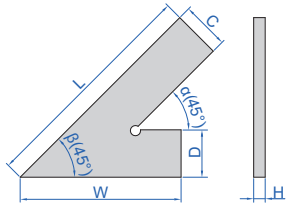
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4745-1100	100x70mm	27μm	30μm	20	20	5
4745-1120	120x80mm	29μm	32μm	20	20	5
4745-1150	150x100mm	32μm	35μm	20	20	5
4745-1200	200x130mm	36μm	40μm	25	25	5



4745-1100



45° SQUARES WITH WIDE BASE

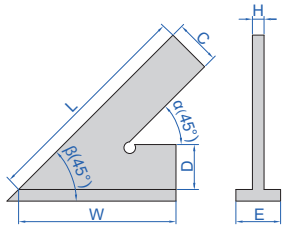
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4747-100	100x70mm	27μm	30μm	20	20	5	20
4747-120	120x80mm	29μm	32μm	20	20	5	20
4747-150	150x100mm	32μm	35μm	20	20	5	20
4747-200	200x130mm	36μm	40μm	25	25	5	25



4747-100



60° SQUARES

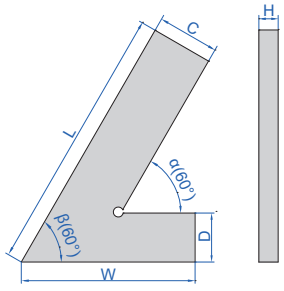
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4760-1120	120x80mm	30μm	32μm	20	20	5
4760-1150	150x100mm	32μm	35μm	20	20	5
4760-1200	200x130mm	37μm	40μm	25	25	5



4760-1120



60° SQUARES WITH WIDE BASE

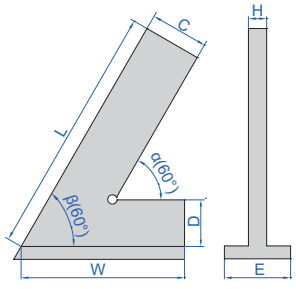
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4762-120	120x80mm	30μm	33μm	20	20	5	20
4762-150	150x100mm	33μm	36μm	20	20	5	20
4762-200	200x130mm	37μm	41μm	25	25	5	25



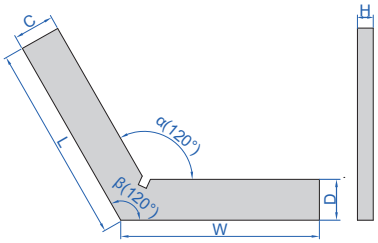
4762-120



120° SQUARES



4706-1100



(mm)

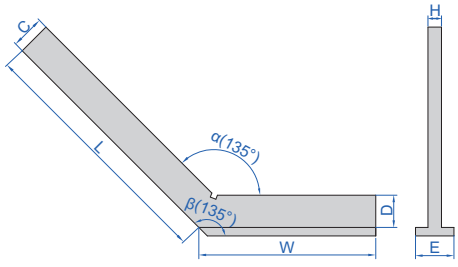
Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4706-150	50x50mm	24μm	25μm	15	15	5
4706-175	75x75mm	26μm	28μm	20	20	5
4706-1100	100x100mm	29μm	30μm	20	20	5

- Made of hardened stainless steel

135° SQUARES WITH WIDE BASE



4754-3120



(mm)

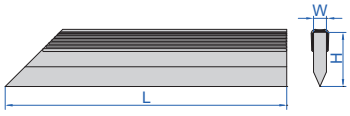
Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4754-3120	120x80mm	31μm	33μm	20	20	5	20
4754-3150	150x100mm	34μm	36μm	20	20	5	20
4754-3200	200x130mm	39μm	41μm	30	30	7	30

- Made of hardened stainless steel

STRAIGHT EDGES



4700-100

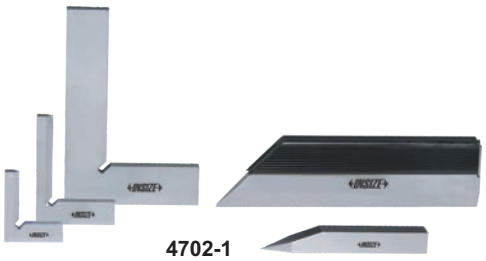


Code	Size (L)	Straightness	W	H
4700-50	50mm	2.2μm	5mm	25mm
4700-75	75mm	2.3μm	5mm	25mm
4700-100	100mm	2.4μm	5mm	25mm
4700-125	125mm	2.5μm	6mm	30mm
4700-150	150mm	2.6μm	6mm	30mm
4700-200	200mm	2.8μm	6mm	30mm
4700-250	250mm	3.0μm	8mm	40mm
4700-300	300mm	3.2μm	8mm	40mm
4700-400	400mm	3.6μm	10mm	50mm
4700-500	500mm	4.0μm	10mm	50mm

- DIN874
- Beveled edge
- Made of hardened stainless steel
- Satin chrome plating

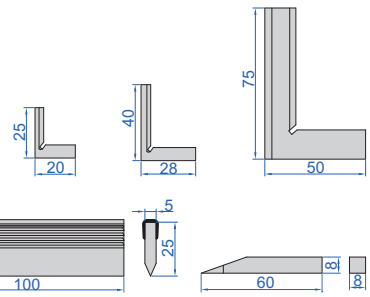
SQUARE SET

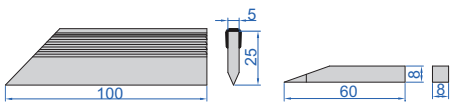
- Includes:
  - 90° tool maker square 25x20mm DIN875 grade 00 (code **4794-025**)
  - 90° tool maker square 40x28mm DIN875 grade 00 (code **4794-040**)
  - 90° beveled edge square 75x50mm DIN875 grade 00 (code **4790-075**)
  - straight edge 100mm DIN874 (code **4700-100**)
  - scriber
- Made of hardened stainless steel



4702-1

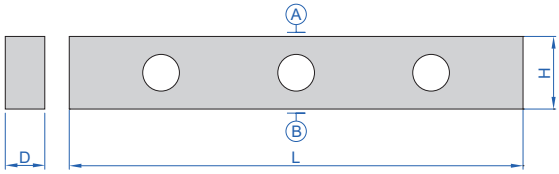
Unit: mm





Code
4702-1

GRANITE STRAIGHT EDGES





4147-500A

Code	Length (L)	Flatness of A and B	Parallelism between A and B	D	H
4147-500A	500mm	2.1μm	3.2μm	50mm	80mm
4147-1000A	1000mm	3.0μm	4.5μm	60mm	120mm

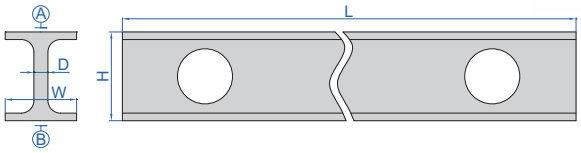
LIGHT WEIGHT

MAGNALIUM STRAIGHT EDGES

- Made of magnalium, light weight, non-deform, no rusty



4180-1500

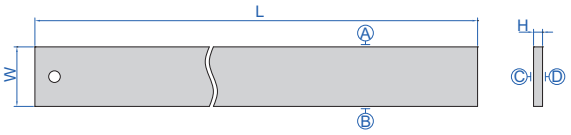


Code	Length (L)	Flatness of A and B	Parallelism between A and B	H	W	D	Weight
4180-500	500mm	3μm	4μm	60mm	30mm	5mm	1kg
4180-1000	1000mm	5μm	8μm	60mm	30mm	5mm	1.5kg
4180-1500	1500mm	15μm	22μm	100mm	40mm	7mm	4.5kg
4180-2000	2000mm	18μm	27μm	100mm	40mm	7mm	6kg
4180-2500	2500mm	22μm	33μm	100mm	40mm	7mm	7.5kg
4180-3000	3000mm	48μm	72μm	150mm	80mm	8mm	21kg

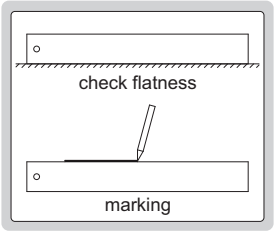
PRECISION STRAIGHT EDGES



7117-300



- Check flatness and for marking
- Made of tool steel

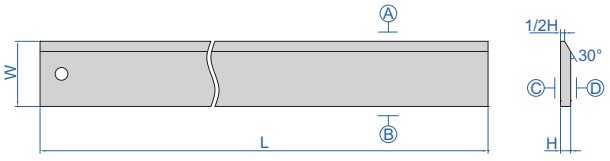


Code	Range (L)	Flatness of A and B	Flatness of C and D	W	H
7117-300	305mm	0.005mm	0.05mm	41mm	6.3mm
7117-600	610mm	0.006mm	0.06mm	51mm	7.9mm
7117-900	914mm	0.007mm	0.06mm	64mm	9.5mm

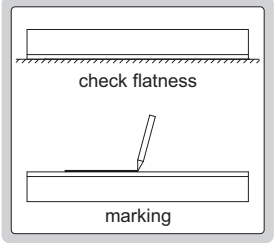
PRECISION STRAIGHT EDGES WITH BEVELED EDGE



7118-300



- Check flatness and for marking
- Made of tool steel

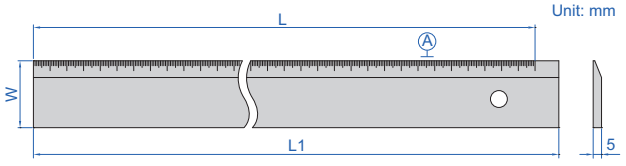


Code	Range (L)	Flatness of A and B	Flatness of C and D	W	H
7118-300	305mm	0.005mm	0.05mm	41mm	6.3mm
7118-600	610mm	0.006mm	0.06mm	51mm	7.9mm
7118-900	914mm	0.007mm	0.06mm	64mm	9.5mm

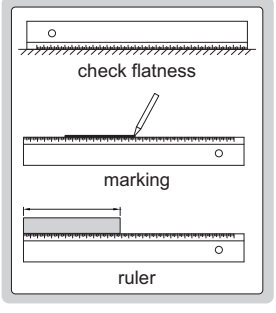
STRAIGHT EDGES



7111-300A



- Check flatness and straightness, as well as for marking
- Graduation on the beveled edge
- Made of stainless steel
- Graduation: 1mm



Code	Range (L)	Straightness of A	L1	W
7111-300A	300mm	0.02mm	310mm	40mm
7111-500A	500mm	0.03mm	510mm	40mm
7111-1000A	1000mm	0.04mm	1010mm	50mm

OPTICAL FLATS

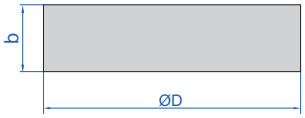
CAN BE CUSTOM-MADE

VIDEO

- Check flatness
- Single working face, the arrow indicates the working face



4191-45B



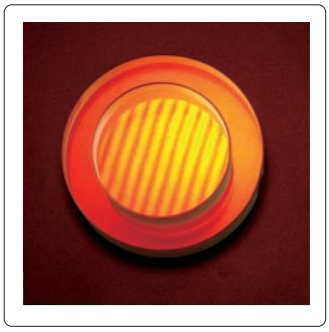
Code	b	ØD	Flatness
4191-45A	12mm	45mm	0.03μm
4191-60A	15mm	60mm	0.03μm

Code	b	ØD	Flatness
4191-45B	12mm	45mm	0.1μm
4191-60B	15mm	60mm	0.1μm

SODIUM LIGHT CABINET CODE CAC-SL300

CAN BE CUSTOMILZED

VIDEO



used with optical flats



- The high-frequency light source is effective in preventing eye damage
- Sodium lamps radiate strong sodium spectral lines at wavelengths of 589.0nm and 589.6nm, featuring good monochromaticity
- The lampshade is made of flame retardant plastic and has a fully sealed design, which is dustproof, waterproof and anti-glare
- The lamp reflector uses UV spraying for better corrosion resistance
- Special damping materials are used on the inspection platform to protect the workpieces
- Optional accessory: optical flats (**4191** series)

SPECIFICATION

Range*	maximum diameter 300mm
Power supply	220V, 50Hz
Dimension (L×W×H)	300×300×500mm
Weight	11.1kg

*Range can be customized

STANDARD DELIVERY

Main unit	1 pc
Power cable	1 pc

STRAIGHTNESS/FLATNESS GAUGE

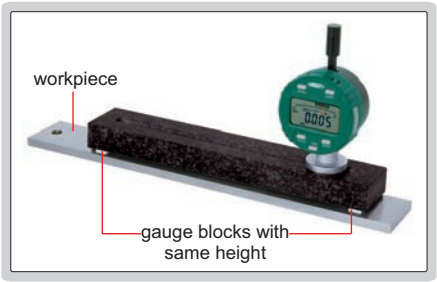
GRANITE HOLDER CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

DATA OUTPUT

VIDEO

- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

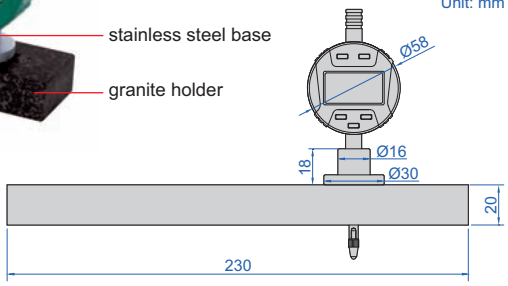
application





2144-200

Unit: mm



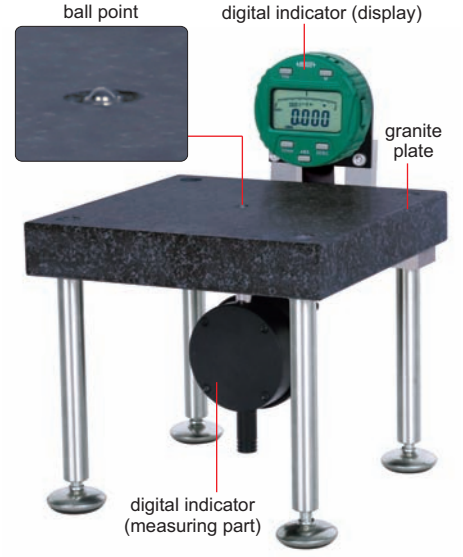
Code	Range	Digital indicator resolution	Straightness measurement accuracy	Parallelism of top and bottom surfaces of granite holder	Flatness of top and bottom surfaces of granite holder
2144-200	200mm	0.001mm/0.00005"	3μm	2μm	1.5μm

FLATNESS MEASUREMENT STANDS

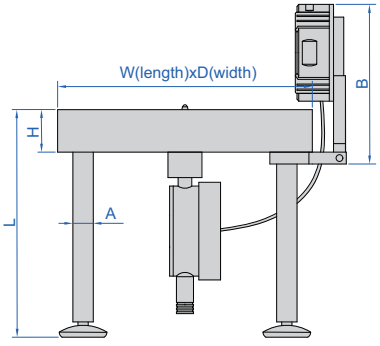
GRANITE PLATE CAN BE CUSTOMIZED ACCORDING TO WORKPIECES

DATA OUTPUT

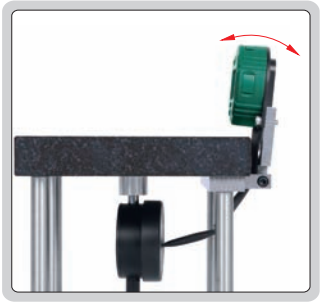
VIDEO



6852-150



display can be rotated



application



- Digital indicator resolution: 0.001mm/0.00005"
- Optional accessory: wireless transmitter code **7315-50M** (receiver is needed) page 8

(mm)

Code	Flatness measurement accuracy	Flatness of granite plate	W	D	H	L	A	B	Remark
6852-150	2μm	2μm	150	150	25	135	Ø12	100	non-waterproof digital indicator
6852-300	2μm	2μm	300	300	50	210	Ø20	135	non-waterproof digital indicator
6852-300WP	2μm	2μm	300	300	50	210	Ø20	135	IP65 waterproof digital indicator

CONCENTRICITY AND RUNOUT TESTERS

14



Concentricity Gauges
Page 480-487



Bench Centers
Page 488-493



V-Blocks
Page 493-494



Expansion Mandrels
Page 494

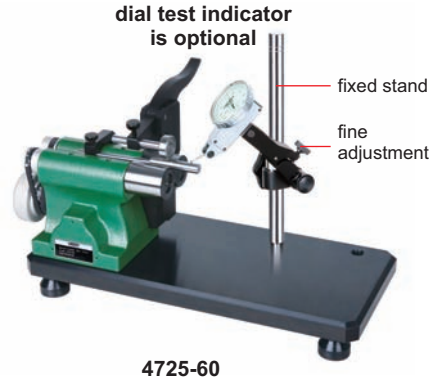
CONCENTRICITY GAUGES

HIGH STABILITY, LONG WORKING LIFE

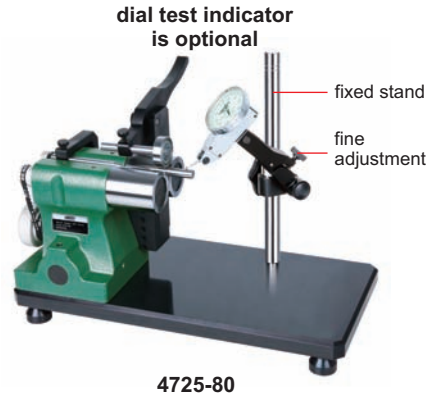
VIDEO



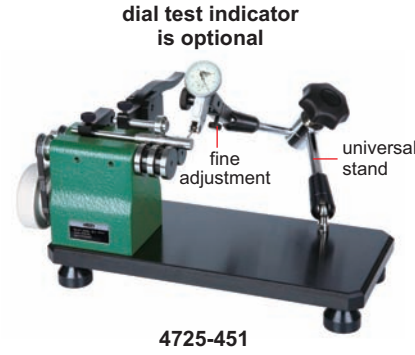
4725-45



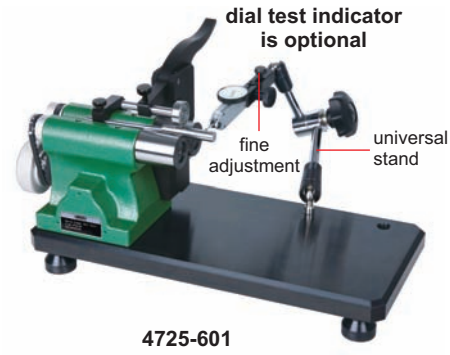
4725-60



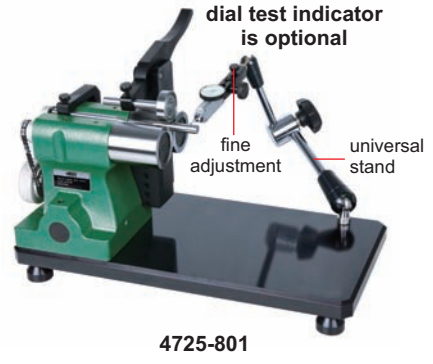
4725-80



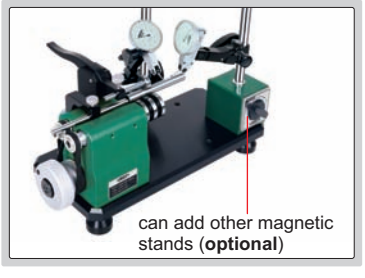
4725-451

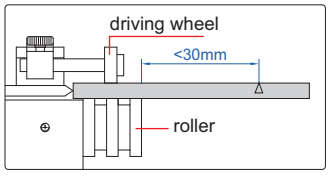


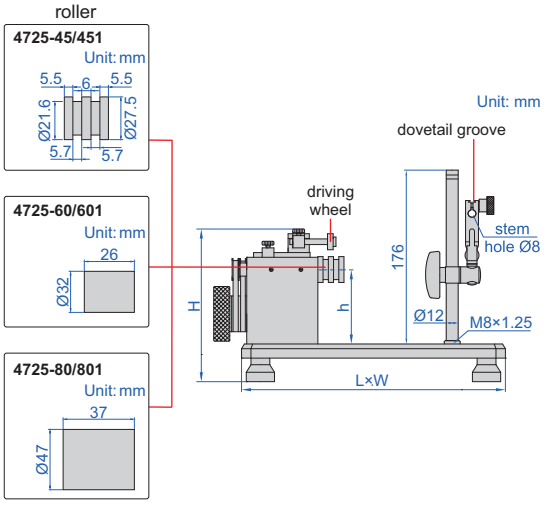
4725-601



4725-801





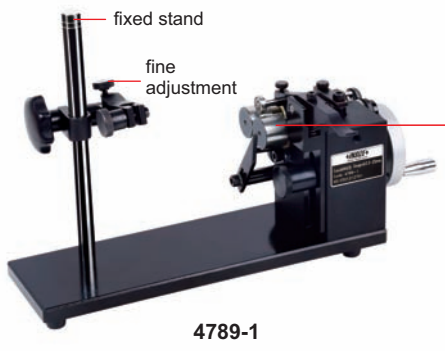


- With ball bearing, high stability, long working life
- Accuracy: 2μm
- Optional accessory: dial test indicator

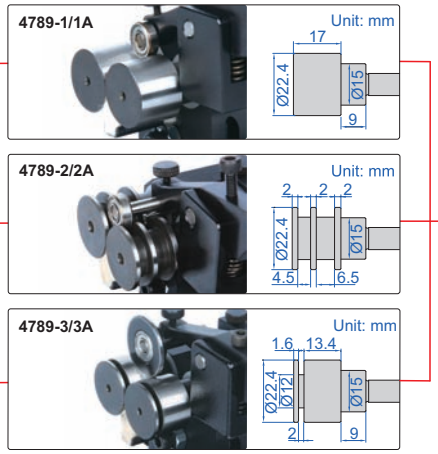
Code	Diameter range	Center height (h)	L×W×H	Weight	Remark
4725-45	Ø3-45mm	80mm	280×130×170mm	6kg	fixed stand, good rigidity
4725-60	Ø8-60mm	90mm	350×160×190mm	15.6kg	fixed stand, good rigidity
4725-80	Ø8-80mm	130mm	400×200×250mm	25kg	fixed stand, good rigidity
4725-451	Ø3-45mm	80mm	280×130×170mm	6kg	universal stand, convenient operation
4725-601	Ø8-60mm	90mm	350×160×190mm	15.6kg	universal stand, convenient operation
4725-801	Ø8-80mm	130mm	400×200×250mm	25kg	universal stand, convenient operation

CONCENTRICITY GAUGES

VIDEO



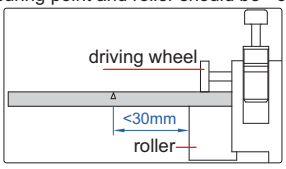
4789-1





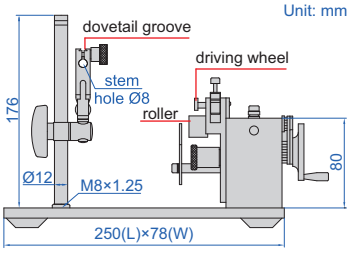
4789-2A

to ensure the accuracy 2μm, the distance between measuring point and roller should be <30mm



- Accuracy 2μm
- Optional accessory: dial test indicator

Code	Applicable diameter	Remark
4789-1	Ø3.5mm-25mm	fixed stand, good rigidity
4789-2	Ø1mm-25mm	fixed stand, good rigidity
4789-3	Ø1mm-25mm	fixed stand, good rigidity
4789-1A	Ø3.5mm-25mm	universal stand, convenient operation
4789-2A	Ø1mm-25mm	universal stand, convenient operation
4789-3A	Ø1mm-25mm	universal stand, convenient operation

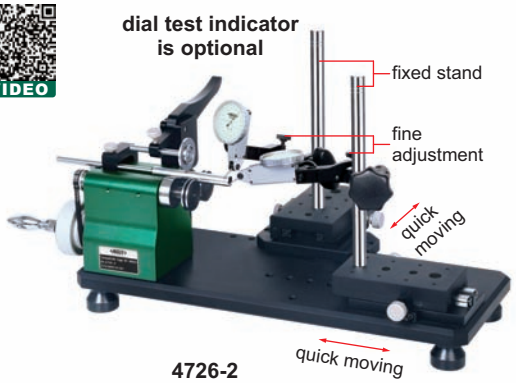


4789-1

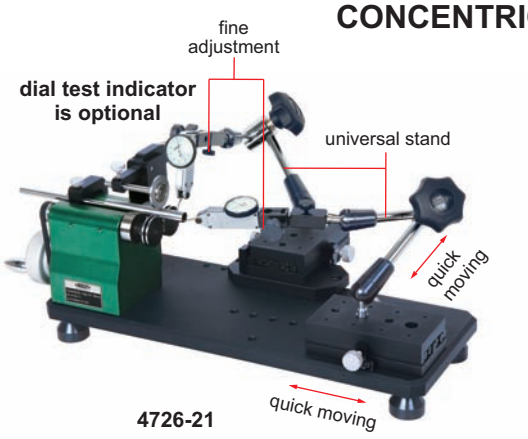
CONCENTRICITY GAUGES

QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT

VIDEO

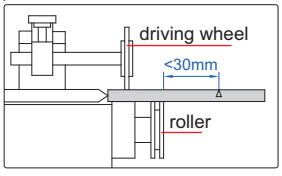


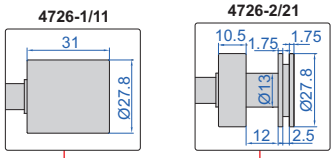
4726-2

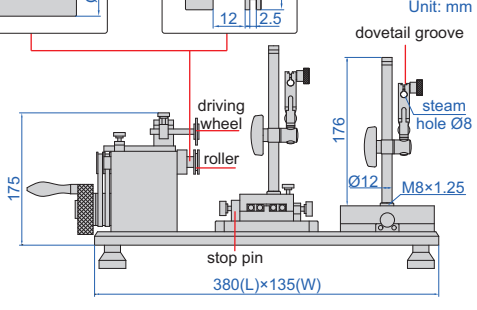


4726-21

to ensure the accuracy 2μm, the distance between measuring point and roller should be <30mm







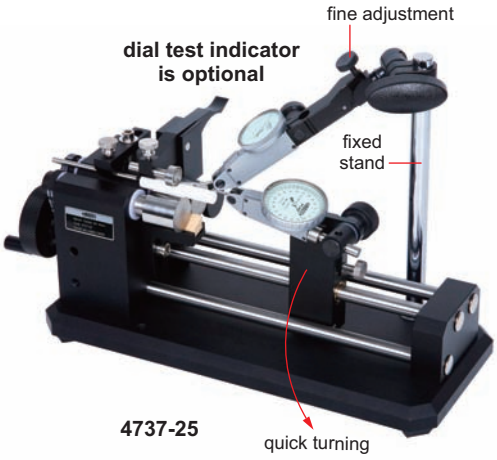
- With ball bearing, high stability, long working life
- Accuracy: 2μm
- Optional accessory: dial test indicator

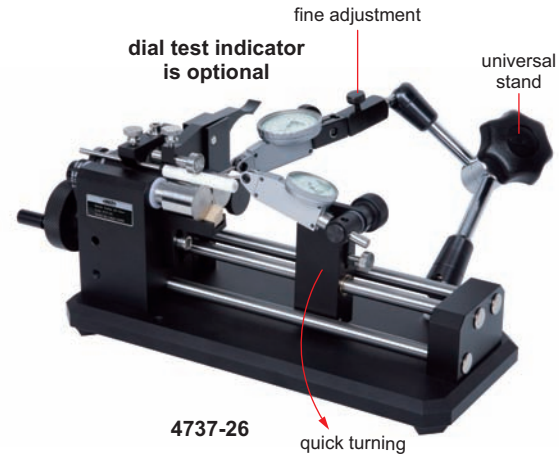
Code	Applicable diameter	Remark
4726-1	Ø4-40mm	fixed stand, good rigidity
4726-2	Ø2-40mm	fixed stand, good rigidity
4726-11	Ø4-40mm	universal stand, convenient operation
4726-21	Ø2-40mm	universal stand, convenient operation

QUICK POSITIONING CONCENTRICITY GAUGES

QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT

VIDEO

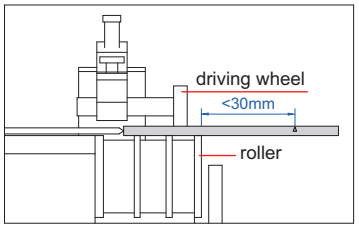


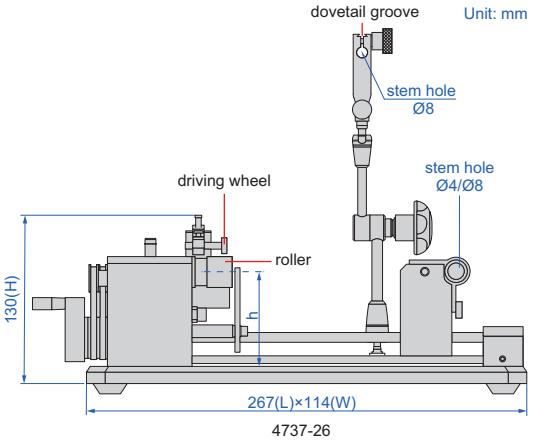


standard rod (included)



to ensure the accuracy 2μm, the distance between measuring point and roller should be <30mm





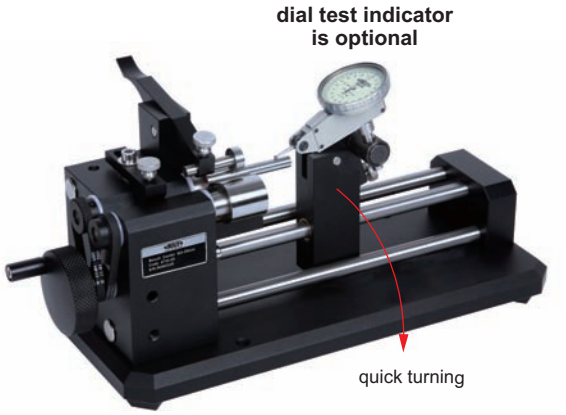
- Quick positioning, suitable for mass measurement
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators

Code	Diameter range	Workpiece length	Accuracy	Center height (h)	L×W×H	Weight	Remark
4737-25	Ø3-25mm	15-100mm	2μm	70mm	267×114×130mm	3kg	fixed stand, good rigidity
4737-26	Ø3-25mm	15-100mm	2μm	70mm	267×114×130mm	3kg	universal stand, convenient operation

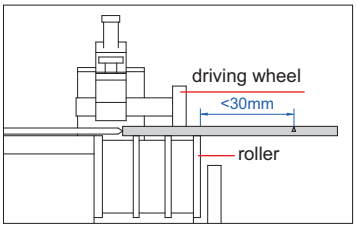
QUICK POSITIONING CONCENTRICITY GAUGE

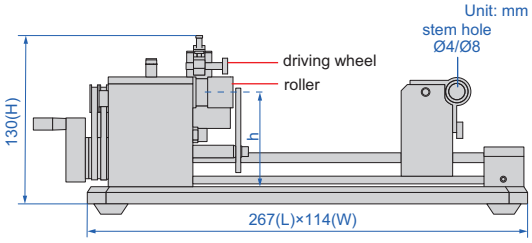
QUICK-POSITIONING, SUITABLE FOR MASS MEASUREMENT

VIDEO



4734-25

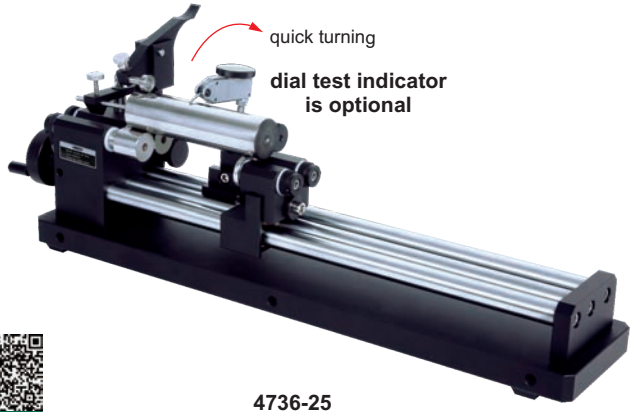




- Quick positioning, suitable for mass measurement
- Optional accessory: dial test indicators

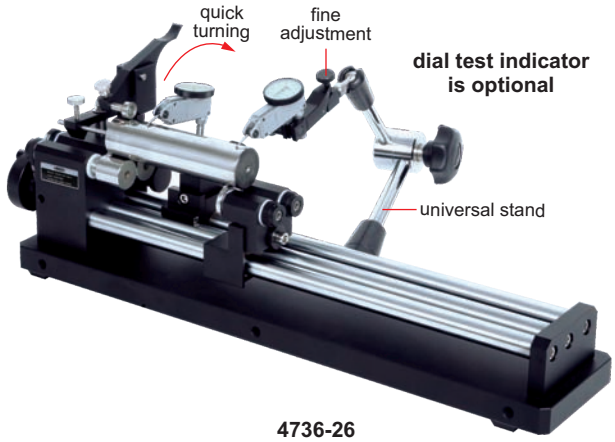
Code	Diameter range	Workpiece length	Accuracy	Center height (h)	L×W×H	Weight
4734-25	Ø3-25mm	15-100mm	2μm	70mm	267×114×130mm	3kg

CONCENTRICITY GAUGES



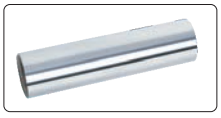
VIDEO

4736-25

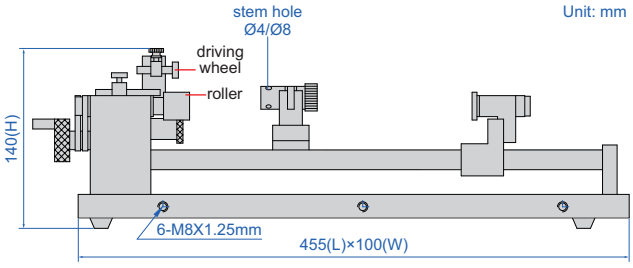


4736-26

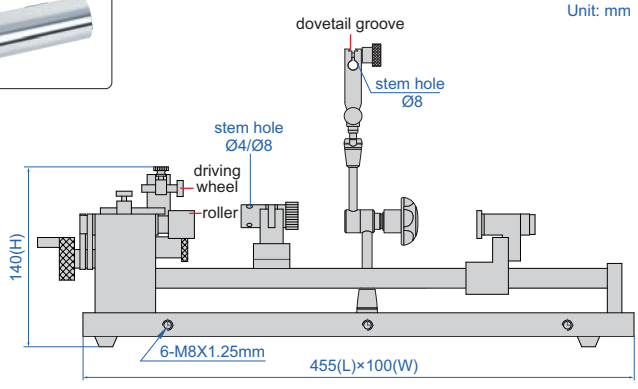
standard rod (included)



- Quick positioning, suitable for mass measurement
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators



4736-25

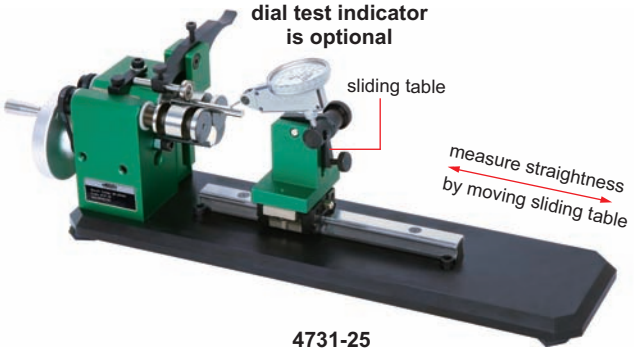


4736-26

Code	Diameter range	Workpiece length	Accuracy	L×W×H	Weight	Remark
4736-25	Ø3-25mm	15-305mm	2μm	455×100×140mm	6kg	without universal stand
4736-26	Ø3-25mm	15-305mm	2μm	455×100×140mm	6.5kg	with universal stand

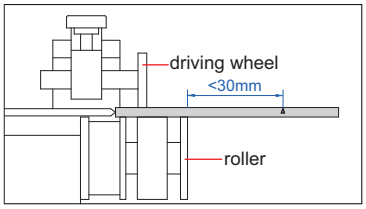
CONCENTRICITY GAUGE WITH STRAIGHTNESS MEASUREMENT

VIDEO

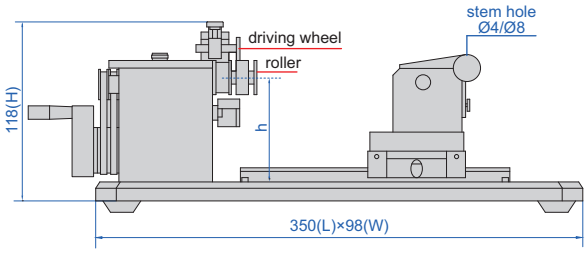


4731-25

to ensure the accuracy 2μm,
the distance between measuring
point and roller should be <30mm



Unit: mm

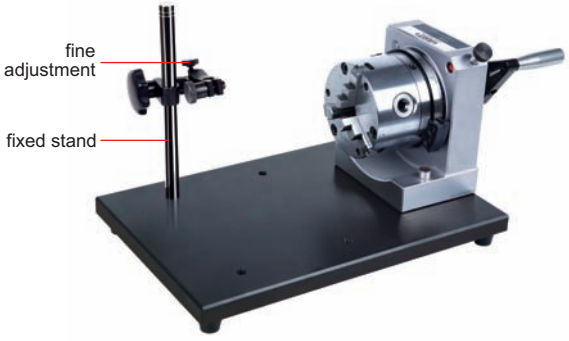


- Maximum moving range of sliding table: 120mm
- Optional accessory: dial test indicator

Code	Diameter range	Workpiece length	Roller concentricity accuracy	Straightness measurement accuracy	Center height (h)	L×W×H	Weight
4731-25	Ø1-25mm	15-80mm	2μm	0.01mm	70mm	350×98×118mm	5.3kg

CONCENTRICITY GAUGES

VIDEO



4786-1



4786-2

- Accuracy: 3μm
- Ø50mm setting ring and
  Ø55mm calibration cylinder are included
- Optional accessory: dial test indicator

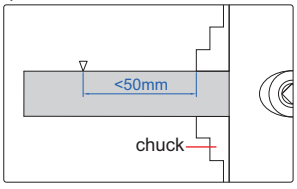
for cylinder



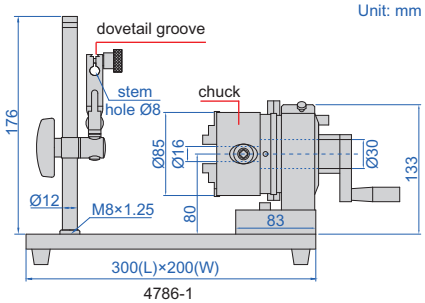
for tube



to ensure the accuracy 3μm,
the distance between measuring
point and roller should be <50mm



Unit: mm



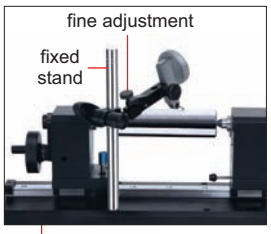
4786-1

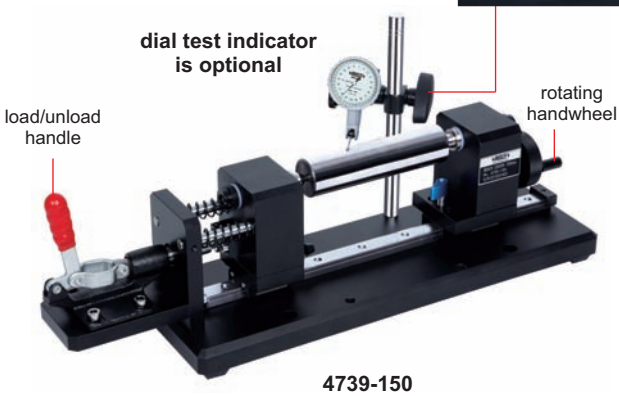
Code	Applicable inside diameter	Applicable outside diameter	Remark
4786-1	Ø24-64mm	Ø2-70mm	fixed stand, good rigidity
4786-2	Ø24-64mm	Ø2-70mm	universal stand, convenient operation

BENCH CENTERS

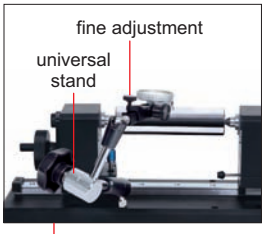
VIDEO

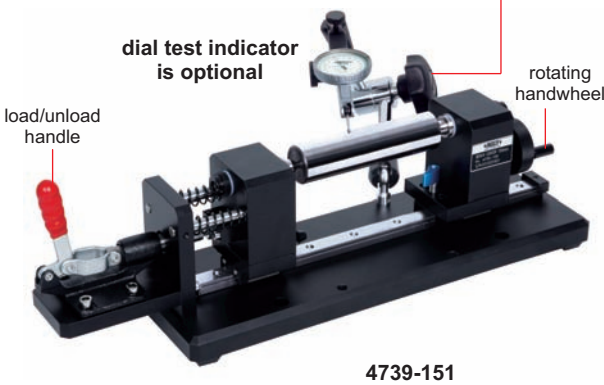
POPULAR MODEL





4739-150



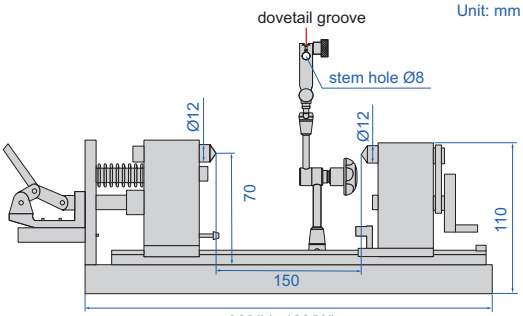


4739-151

standard rod (included)



Unit: mm

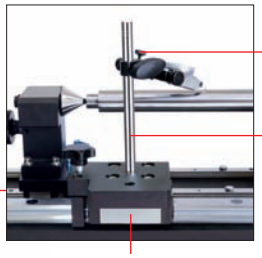


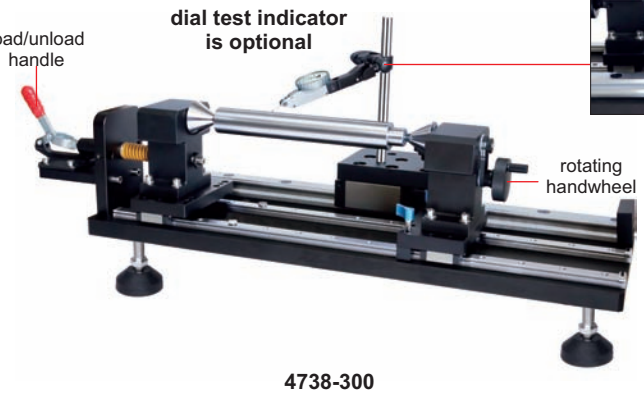
4739-151

- Quick positioning, suitable for mass measurement
- Suitable for cylinders with outside diameter Ø3-140mm or inside diameter Ø1-12mm
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators

Code	Center height	Distance between two centers	Runout accuracy	Weight	Load	Remark
4739-150	70mm	150mm	2μm	6.5kg	15kg	fixed stand, good rigidity
4739-151	70mm	150mm	2μm	6.5kg	15kg	universal stand, convenient operation

BENCH CENTERS

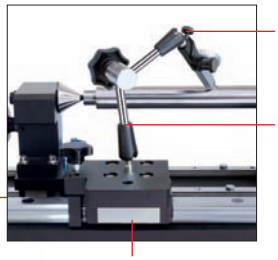




4738-300

standard rod (included)

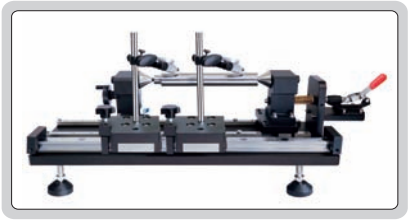






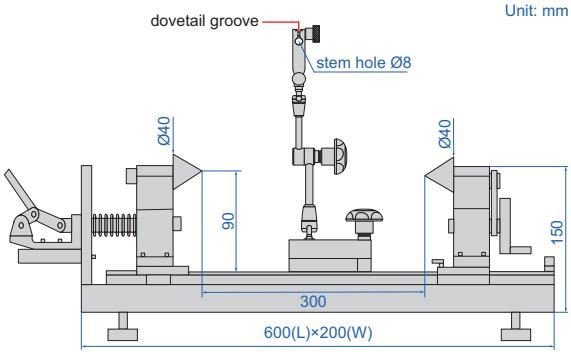
4738-301

dual base (**optional**)



- Quick positioning, suitable for mass measurement
- Suitable for cylinders with outside diameter Ø3-180mm or inside diameter Ø1-40mm
- Supplied with standard rod to verify accuracy
- Optional accessory: dial test indicators

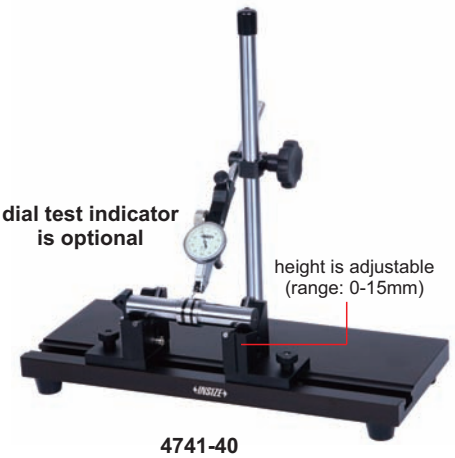
Unit: mm



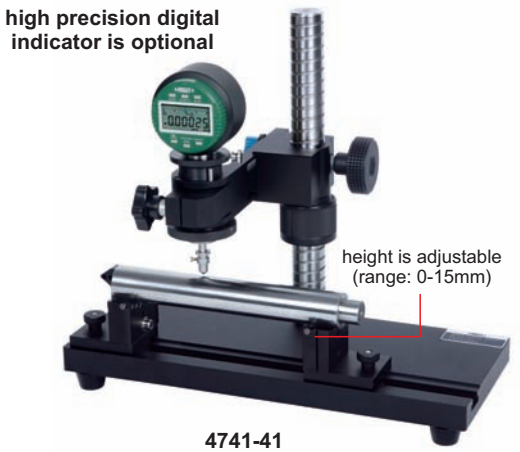
4738-301

Code	Center height	Distance between two centers	Runout accuracy	Weight	Load	Remark
4738-300	90mm	300mm	2μm	15kg	20kg	fixed stand, good rigidity
4738-301	90mm	300mm	2μm	15kg	20kg	universal stand, convenient operation

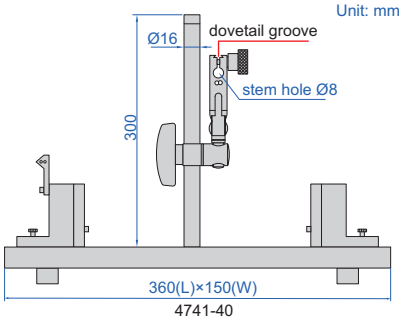
VIDEO



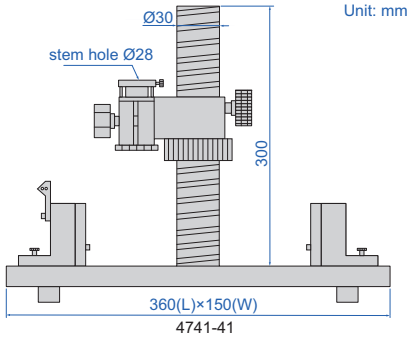
4741-40



4741-41



4741-40



4741-41

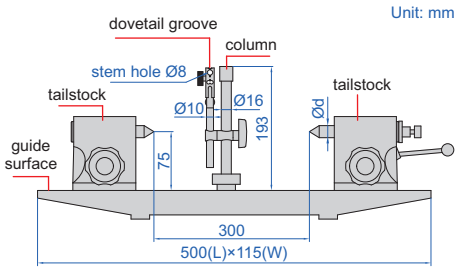
- Quick positioning, suitable for mass measurement
- **4741-40** optional accessory: dial test indicators
- **4741-41** optional accessory: high precision digital indicators (code **2140-6**, **2140-6WL**)

Code	Stem hole	Diameter range	Workpiece length	Accuracy
4741-40	Ø8mm	Ø3-40mm	15-300mm	2μm
4741-41	Ø28mm	Ø3-40mm	15-300mm	2μm

BENCH CENTER (BASIC TYPE)



4742-300

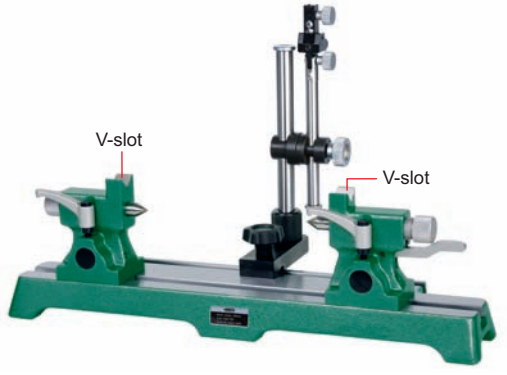


- Hardened cast-iron guide surface
- Movable column

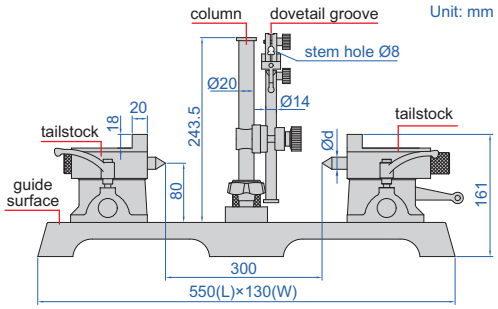
Code	Parallelism*	Runout accuracy	Center height	Distance between two centers	Diameter of center (Ød)	Load
4742-300	0.02mm	2μm	75mm	300mm	Ø16mm	15kg

*Parallelism of two centers to the guide surface

BENCH CENTER



4782-300

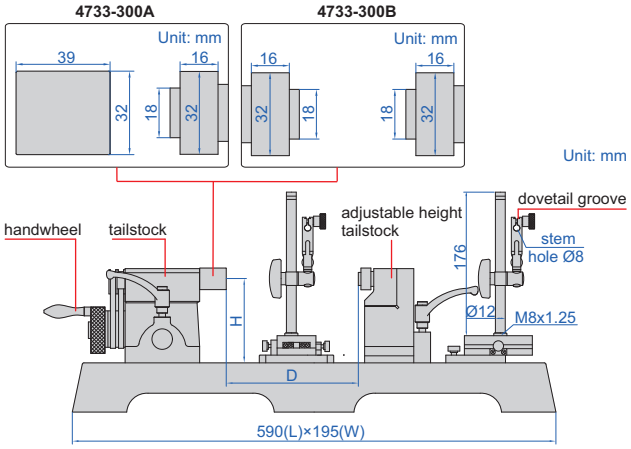


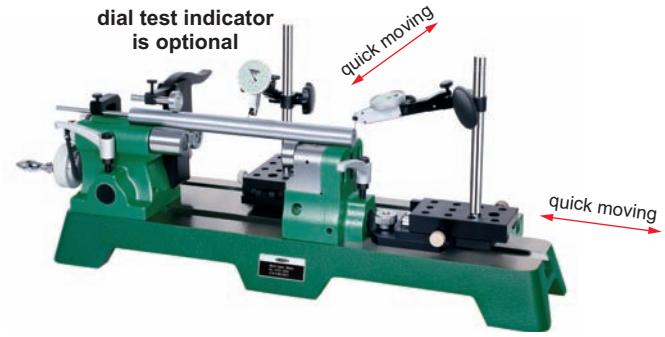
- Hardened cast-iron guide surface
- Movable column
- V-slot for cylinder Ø4~Ø22mm

Code	Parallelism*	Runout accuracy	Center height	Distance between two centers	Diameter of center (Ød)	Load
4782-300	0.01mm	2μm	80mm	300mm	Ø16mm	25kg

*Parallelism of two centers to the guide surface

BENCH CENTERS



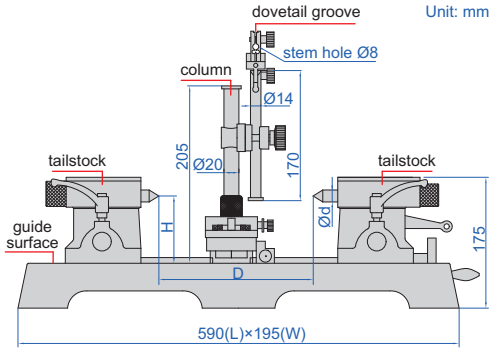


4733-300A

- Hardened cast-iron guide surface
- Quick moving is suitable for mass production inspection
- Adjustable height tailstock: 0-15mm, suitable for inspecting workpieces with different diameters
- Optional accessory: dial test indicator

Code	Runout accuracy	Center height (H)	Distance between two centers (D)	Applicable diameter	Adjustable height	Remarks
4733-300A	2μm	90mm	300mm	Ø8-60mm	0-15mm	with handwheel
4733-300B	2μm	90mm	300mm	Ø8-60mm	0-15mm	without handwheel

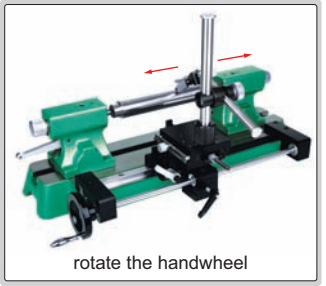
BENCH CENTER WITH STRAIGHTNESS MEASUREMENT





4723-300

straightness measurement



rotate the handwheel

- Hardened cast-iron guide surface

Code	Parallelism*	Runout accuracy	Accuracy of straightness measurement	Center height (H)	Distance between two centers (D)	Diameter of center (Ød)	Taper of center	Weight	Load
4723-300	4μm	2μm	0.02mm	90mm	300mm	18mm	MT2	38kg	25kg

*Parallelism of two centers to the guide surface

BENCH CENTERS

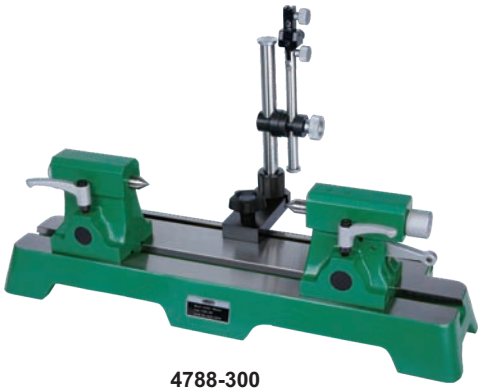
rotary centers (**optional**) code: **6392-MT2/MT3/MT4**



umbrella centers (**optional**) code: **6391-MT2/MT3**

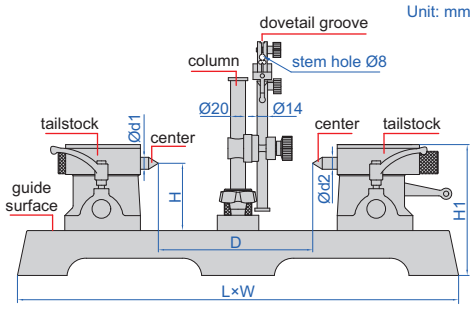


- Movable column
- Optional accessory: centers (only for high accuracy series)



4788-300

Unit: mm



High accuracy **(mm)**

Code	Parallelism*	Runout accuracy	Center height (H)	Distance between two centers (D)	L	W	H1	Diameter of center (Ød1=Ød2)	Taper of center	Weight	Load
4788-300	0.010mm	2μm	90	300	590	192	175	18.0	MT2	34kg	25kg
4788-400	0.010mm	2μm	130	400	770	206	241	24.1	MT3	66kg	60kg
4788-600	0.010mm	2μm	130	600	930	220	250	24.1	MT3	90kg	60kg
4788-600H2	0.010mm	2μm	200	600	930	220	325	24.1	MT3	105kg	60kg
4788-1000	0.010mm	3μm	130	1000	1330	220	262	24.1	MT3	112kg	60kg
4788-1000H2	0.010mm	3μm	200	1000	1330	220	337	24.1	MT3	125kg	85kg
4788-1000H3	0.010mm	3μm	300	1000	1330	220	442	31.6	MT4	165kg	85kg

Standard accuracy **(mm)**

Code	Parallelism*	Runout accuracy	Center height (H)	Distance between two centers (D)	L	W	H1	Diameter of center (Ød1/Ød2)	Weight	Load
4788-D2	0.010mm	3μm	90	200	490	180	175	18/25	27kg	25kg
4788-D3	0.010mm	3μm	90	300	590	195	175	18/25	36kg	25kg
4788-D4	0.012mm	3μm	130	400	730	205	241	30/30	68kg	60kg
4788-D6	0.015mm	3μm	130	600	930	220	250	30/30	91kg	60kg
4788-D8	0.015mm	3μm	130	800	1130	220	250	30/30	99kg	60kg
4788-D10	0.015mm	3μm	130	1000	1330	220	262	30/30	116kg	60kg

*Parallelism of two centers to the guide surface

DEAD CENTERS

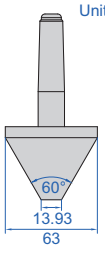
- Supplied in pair
- Suitable for **4723** and **4788** series bench centers

Code	Taper of handle
6391-MT2	MT2
6391-MT3	MT3

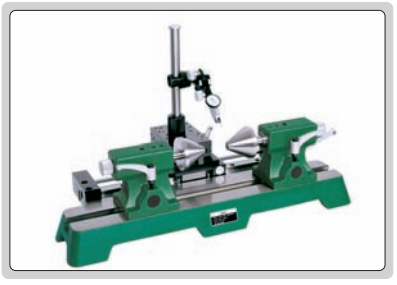


6391-MT2

Unit: mm



application



ROTARY CENTERS

- Supplied in pair
- Carbide tip
- Rotational repeatability 0.005mm
- Suitable for **4723** and **4788** series bench centers

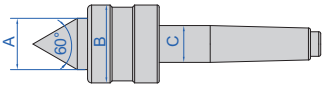
(mm)

Code	Taper of handle	A	B	C
6392-MT2	MT2	Ø25	Ø38	Ø18
6392-MT3	MT3	Ø38	Ø45	Ø24.1
6392-MT4	MT4	Ø38	Ø45	Ø31.6

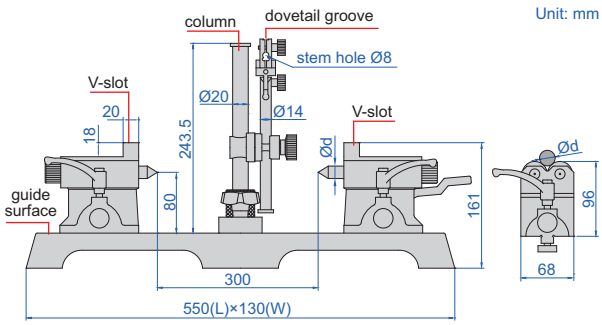


6392-MT2

ACTIVE CENTER DIAMETER A CAN BE CUSTOMIZED RANGE (MT2: 25~40mm, MT3: 38~55mm, MT4: 38~70mm)

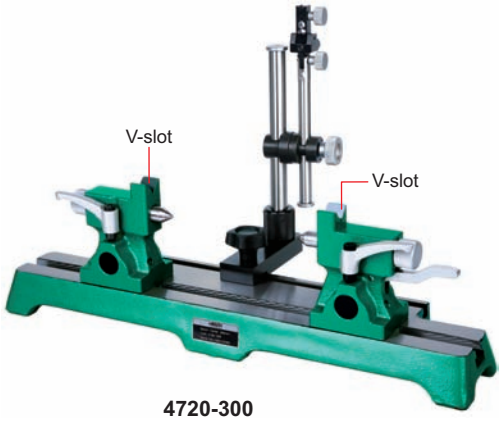


BENCH CENTER WITH ROLLER TAILSTOCKS



roller tailstocks (included)





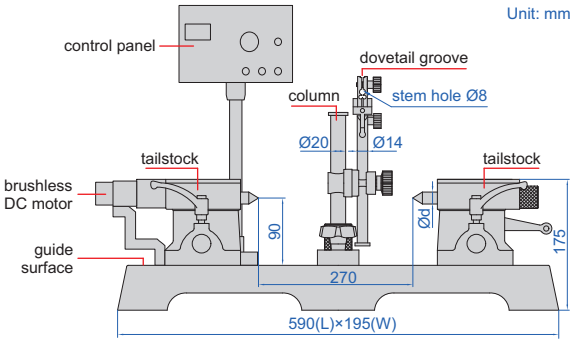
4720-300

- Hardened cast-iron guide surface
- Supplied with V-slot/center tailstocks and roller tailstocks
- V-slot for cylinder Ø4~22mm
- Roller for cylinder Ø5~100mm

Code	Parallelism*	Runout accuracy	Center height	Distance between two centers	Diameter of center (Ød)	Taper of center	Load
4720-300	0.01mm	2μm	80mm	300mm	16mm	MT1	25kg (40kg for roller tailstocks)

*Parallelism of two centers to the guide surface

MOTORIZED BENCH CENTER





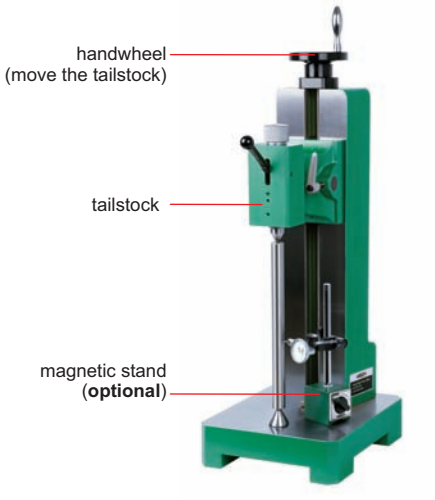
4735-270

- Moveable column
- Hardened cast-iron guide surface
- Motorized measurement is suitable for mass production inspection
- Power supply: AC220V/10A/(50/60)Hz
- Optional accessory: dial test indicators

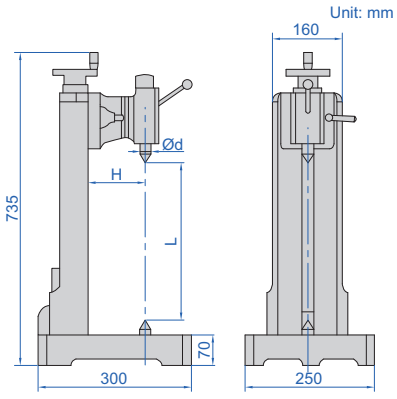
Code	Parallelism*	Runout accuracy	Center height	Distance between two centers	Diameter of center (Ød)	Taper of center	Weight	Load
4735-270	0.010mm	2μm	90mm	270mm	18mm	MT2	40kg	25kg

*Parallelism of two centers to the guide surface

VERTICAL BENCH CENTER



4728-360



- Distance between two centers (L): 360mm
- Hardened cast-iron guide surface
- Use handwheel to move the tailstock
- Optional accessory:
  magnetic stands, dial test indicator

Code	Parallelism*	Runout accuracy	Center height (H)	Diameter of center (Ød)	Taper of center	Weight	Load
4728-360	0.01mm	2μm	130mm	24.1mm	MT3	85kg	80kg

*Parallelism of two centers to the guide surface

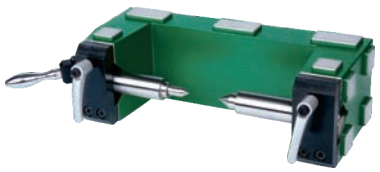
VERTICAL AND HORIZONTAL BENCH CENTER



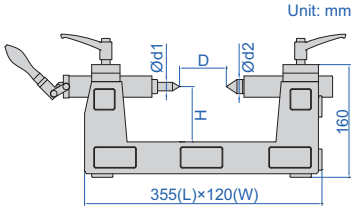
vertical use



horizontal use



side use



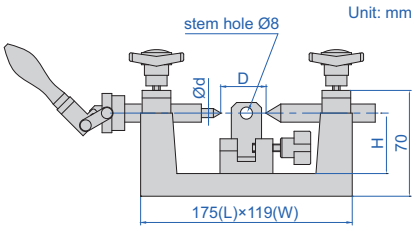
- For vertical, side and horizontal use

Code	Runout accuracy	Center height (H)	Distance between two centers (D)	Diameter of center (Ød1/Ød2)	Weight	Load
4722-200	2μm	80mm	200mm	16mm/20.2mm	22kg	25kg

MINI BENCH CENTER



4721-75A

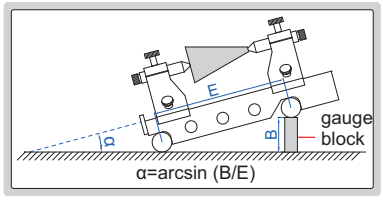


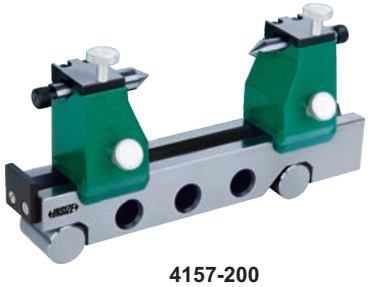
Code	Runout accuracy	Center height (H)	Distance between two centers (D)	Diameter of center (Ød)	Taper of center	Weight	Load
4721-75A	2μm	40mm	35-100mm	6mm	MT1	4.5kg	4kg

VIDEO

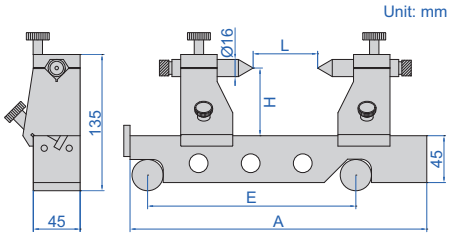
CAN BE CUSTOMIZED

TAPER INSPECTION INSTRUMENTS





4157-200



- Check the taper angle of taper bar/taper plug gauges /Morse taper/ISO taper etc. The run out can be checked as well

Code	Center height (H)	Center distance (L)	Sine bar accuracy (when α=30°)	E	A
4157-200	65mm	200mm	±5 seconds	200mm	285mm
4157-300	65mm	300mm	±8 seconds	300mm	385mm

REFER TO PAGE 554 FOR DETAILS

MAGNETIC SQUARE WITH V GROOVE



6539-100

V-BLOCKS

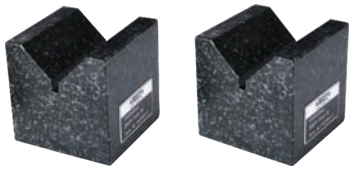
REFER TO PAGE 547~554 FOR DETAILS



6896-11



6887-3



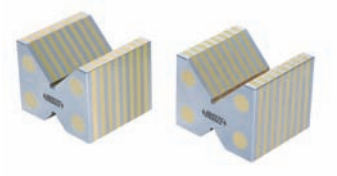
6897-1



6890-702



6888-1



6878-1



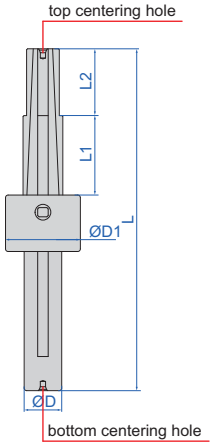
6891-1

EXPANSION MANDRELS

CUSTOMIZED HIGH PRECISION MANDREL WITH 3μm RADIAL RUNOUT IS AVAILABLE



6335-3A



- Checking runout of gears with the bore as a reference
- With centering holes on top and bottom ends, it can rotate between two centers for easy measurement
- Radial runout: 5μm

(mm)

Code	Bore clamping range	L	L1	L2	ØD	ØD1
6335-0A	Ø9.53-12.70mm	121.9	12.7	12.7	14.7	38.1
6335-1A	Ø12.70-19.05mm	147.7	24.9	24.9	14.7	38.1
6335-2A	Ø19.05-25.40mm	147.7	24.9	24.9	14.7	38.1
6335-3A	Ø25.40-38.10mm	260.4	60.5	50.3	28.6	57.2
6335-4A	Ø38.10-50.80mm	308.0	75.7	66.0	36.5	76.2
6335-5A	Ø50.80-63.50mm	308.0	75.7	66.0	36.5	76.2
6335-6A	Ø63.50-76.20mm	308.0	72.4	66.0	36.5	76.2
6335-7A	Ø50.80-76.20mm	425.5	90.2	89.9	50.4	95.3
6335-8A	Ø76.20-101.60mm	425.5	83.3	89.9	50.4	95.3
6335-9A	Ø101.60-127.00mm	425.5	83.3	89.9	50.4	95.3
6335-10A	Ø127.00-152.40mm	425.5	83.3	89.9	50.4	95.3
6335-11A	Ø152.40-177.80mm	425.5	83.3	89.9	50.4	95.3

application



SIMPLE MEASURING TOOLS 15



Feeler Gauges
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Pitch Gauges
Page 502



Gear Tooth Pitch Gauges
Page 503



Center Gauges
Page 503



Thread Gauges
Page 503



Angle Gauges
Page 504



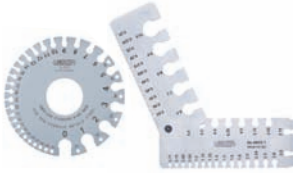
Radius Gauges
Page 504-505



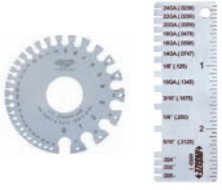
Drill Gauges
Page 505-506



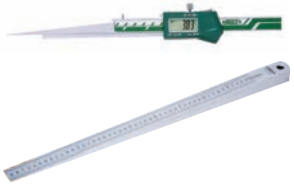
Angle Gauges
Page 506



Wire Gauges
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Thickness Gauges
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Taper Slot Gauges
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Taper Gauges
Page 509-510



Taper Bore Gauges
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Welding Gauges
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Fillet Welding Gauges
Page 514-515

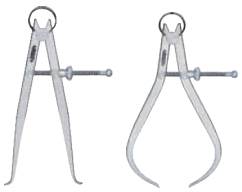
15 SIMPLE MEASURING TOOLS



Welding Gauges
Page 515-516



Pipe Welding Gauges
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Inside/Outside Calipers
Page 519-520



Dividers
Page 520



Length Meters
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Measuring Tapes
Page 521-525



Long Measuring Tapes
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Automatic Measuring Tape Calibration Systems
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Measuring Wheels
Page 526-527



Digital Measuring Wheels
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Steel Rulers
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Automatic Steel Ruler Calibration Systems
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Digital Scales With Microscope
Page 531



Combination Squares
Page 532-533



Plastic Angle Squares
Page 534



T-Bevels
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SIMPLE MEASURING TOOLS 15



Marking Gauges
Page 534



Center Marking Gauges
Page 535



Locators
Page 535



Scribing Calipers
Page 536



Height Scribers
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Scribers
Page 537



Precision Screwdriver Sets
Page 537



LED Flashlights
Page 537



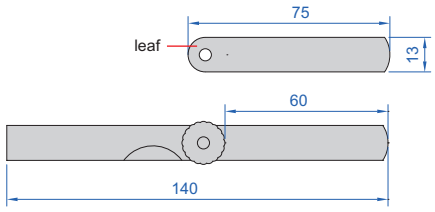
Measuring Tool Sets
Page 538-542

FEELER GAUGE



4601-25

Unit: mm



- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy: ±(3+T/80)μm,
  'T' is the thickness of leaves in μm

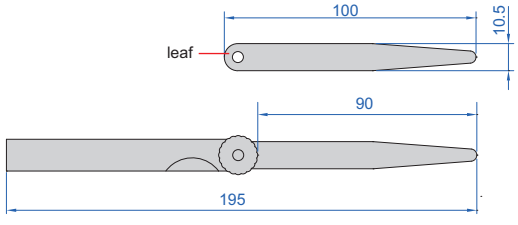
Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4601-25	0.04-1.00mm	0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	25

FEELER GAUGES



4602-20

Unit: mm



- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy: ±(3+T/80)μm,
  'T' is the thickness of leaves in μm

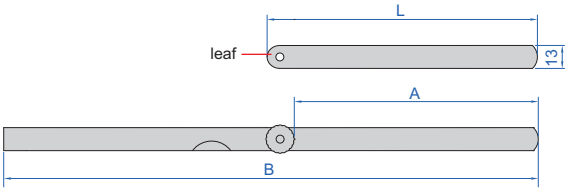
Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4602-13A	0.03-0.50mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50	13
4602-13	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13
4602-17	0.02-1.00mm	0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.75, 1.00	17
4602-20	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20
4602-28	0.05-1.00mm	0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.11, 0.12, 0.13, 0.14, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	28
4602-32	0.03-1.00mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.13, 0.15, 0.18, 0.20, 0.23, 0.25, 0.28, 0.30, 0.33, 0.35, 0.38, 0.40, 0.45, 0.50, 0.55, 0.60, 0.63, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 1.00	32
4602-15	0.05-2.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00, 1.50, 2.00	15

LONG FEELER GAUGES



4605-20

Unit: mm



- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy: ±(3+T/80)μm,
  'T' is the thickness of leaves in μm

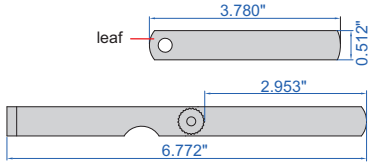
Code	Range	Thickness of leaves included (mm)	Quantity of leaves	L	A	B
4605-13	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13	150mm	135mm	295mm
4605-131	0.05-1.00mm		13	200mm	185mm	395mm
4605-132	0.05-1.00mm		13	300mm	285mm	590mm
4605-20	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20	150mm	135mm	295mm
4605-201	0.05-1.00mm		20	200mm	185mm	395mm
4605-202	0.05-1.00mm		20	300mm	285mm	590mm

INCH FEELER GAUGE

- 0.010" is made of brass, others are made of hardened alloy steel
- Each blade is marked with inch/metric size



4608-31



Code	Range	Quantity of Leaves
4608-31	0.0015"~0.035"	32

Thickness of leaves included	Accuracy
0.010" (brass)	±0.00039"
0.0015", 0.002"	±0.0002"
0.0025", 0.003", 0.004", 0.005", 0.006", 0.007"	±0.00028"
0.008", 0.009"	±0.00035"
0.010", 0.011"	±0.00039"
0.012", 0.013"	±0.00047"
0.014", 0.015"	±0.00051"

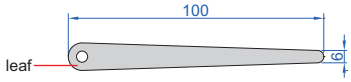
Thickness of leaves included	Accuracy
0.016", 0.017"	±0.00055"
0.018", 0.019"	±0.00059"
0.020", 0.021"	±0.00067"
0.022", 0.023"	±0.00071"
0.024", 0.025", 0.026"	±0.00075"
0.028"	±0.00091"
0.030"	±0.00094"
0.032", 0.035"	±0.00102"

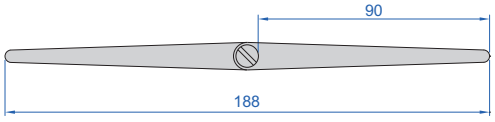
PLASTIC FEELER GAUGES



4623-2

Unit: mm

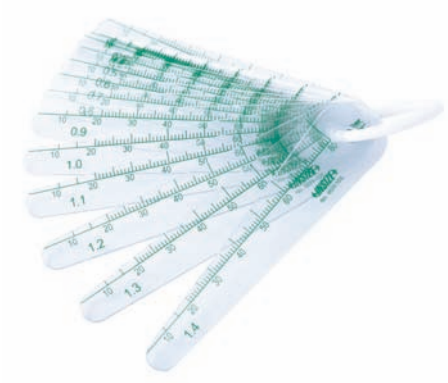




- Accuracy: ±0.04mm (thickness of leaves: 0.25mm)
  ±0.05mm (thickness of leaves: 0.5mm)
  ±0.08mm (thickness of leaves: ≥1mm)

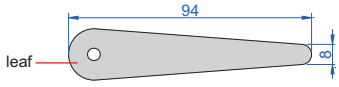
Code	Range	Thickness of leaves included	Quantity of leaves
4623-2	0.25-2.00mm	2.00mm (0.078"), 1.00mm (0.039"), 0.50mm (0.020"), 0.50mm (0.020"), 0.50mm (0.020"), 0.25mm (0.010"), 0.25mm (0.010"), 1.00mm (0.039"), 2.00mm (0.078"), 1.00mm (0.039"), 2.00mm (0.078"), 1.00mm (0.039"), 2.00mm (0.078")	13
4623-5	0.25-5.00mm	1.00mm (0.039"), 0.25mm (0.010"), 0.50mm (0.020"), 1.50mm (0.059"), 2.00mm (0.078"), 2.50mm (0.098"), 3.00mm (0.118"), 3.50mm (0.138"), 4.00mm (0.157"), 4.50mm (0.177"), 5.00mm (0.196")	11

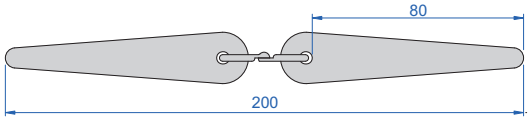
PLASTIC FEELER GAUGE



4624-1D5

Unit: mm





- Accuracy: ±0.02mm (thickness of leaves: 0.05-0.1mm)
  ±0.03mm (thickness of leaves: 0.15-0.6mm)
  ±0.04mm (thickness of leaves: ≥0.7mm)

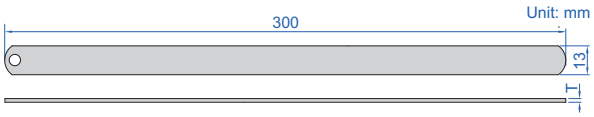
Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4624-1D5	0.05-1.5mm	0.05, 0.1, 0.15, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5	17

FEELER GAUGE STOCKS





4622-10



- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 300mm
- Width 13mm
- 10 pcs per package

Code	Thickness (T)	Accuracy
4622-02	0.02mm	±3μm
4622-03	0.03mm	±3μm
4622-04	0.04mm	±3μm
4622-05	0.05mm	±3μm
4622-06	0.06mm	±3μm
4622-07	0.07mm	±4μm
4622-08	0.08mm	±4μm
4622-09	0.09mm	±4μm
4622-10	0.10mm	±4μm
4622-12	0.12mm	±5μm

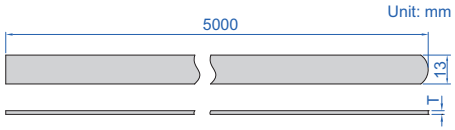
Code	Thickness (T)	Accuracy
4622-15	0.15mm	±5μm
4622-18	0.18mm	±6μm
4622-20	0.20mm	±6μm
4622-25	0.25mm	±6μm
4622-30	0.30mm	±7μm
4622-35	0.35mm	±7μm
4622-40	0.40mm	±8μm
4622-45	0.45mm	±8μm
4622-50	0.50mm	±9μm
4622-55	0.55mm	±9μm

Code	Thickness (T)	Accuracy
4622-60	0.60mm	±9μm
4622-65	0.65mm	±9μm
4622-70	0.70mm	±12μm
4622-75	0.75mm	±12μm
4622-80	0.80mm	±13μm
4622-85	0.85mm	±13μm
4622-90	0.90mm	±14μm
4622-95	0.95mm	±14μm
4622-100	1.00mm	±16μm

FEELER GAUGE ROLLS



4621-30



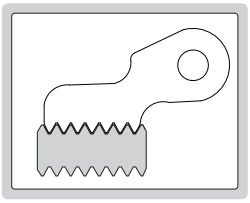
Code	Thickness (T)	Accuracy
4621-02	0.02mm	±4μm
4621-03	0.03mm	±4μm
4621-04	0.04mm	±4μm
4621-05	0.05mm	±4μm
4621-06	0.06mm	±4μm
4621-07	0.07mm	±5μm
4621-08	0.08mm	±5μm
4621-09	0.09mm	±5μm
4621-10	0.10mm	±5μm
4621-12	0.12mm	±5μm
4621-15	0.15mm	±6μm
4621-18	0.18mm	±7μm
4621-20	0.20mm	±8μm
4621-25	0.25mm	±9μm

Code	Thickness (T)	Accuracy
4621-30	0.30mm	±9μm
4621-35	0.35mm	±11μm
4621-40	0.40mm	±12μm
4621-45	0.45mm	±12μm
4621-50	0.50mm	±14μm
4621-55	0.55mm	±14μm
4621-60	0.60mm	±14μm
4621-65	0.65mm	±14μm
4621-70	0.70mm	±17μm
4621-75	0.75mm	±17μm
4621-80	0.80mm	±19μm
4621-85	0.85mm	±19μm
4621-90	0.90mm	±22μm
4621-95	0.95mm	±22μm
4621-100	1.00mm	±24μm

- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 5m
- Width 13mm

PITCH GAUGES





- Identify the pitch of screw thread
- Made of medium carbon steel

4820-122

Metric 60° screw

Code	Range	Pitch of leaves included (mm)	Quantity of leaves
4820-122	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	22
4820-124	0.25-7.0mm	0.25, 0.3, 0.35, 0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	24
4820-1241	0.25-6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6	24

Unified 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-230	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30

Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-330	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30
4820-328	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	28

Metric 60° and Whitworth 55° screw

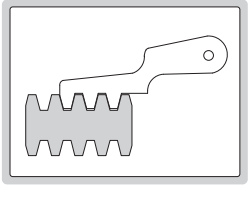
Code	Range	Pitch of leaves included	Quantity of leaves
4820-452	0.25-6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm	52
	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	
4820-450	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	50
	4-62TPI	4, 4-1/2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60, 62TPI	

Metric 60° and Unified 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-552	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	52
	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	

PITCH GAUGES





- Check the pitch of screw thread
- Accuracy: ±0.07mm
- Made of medium carbon steel

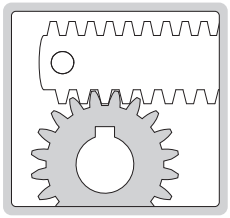
4824-12

Code	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-12	2-20mm	Tr 30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12
4824-16	1-12TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI	16

GEAR TOOTH PITCH GAUGES

- Check the module pitch of gear tooth
- Accuracy: ±0.05mm
- Made of hardened stainless steel

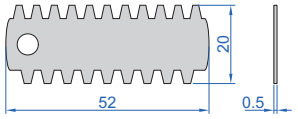




4860-245

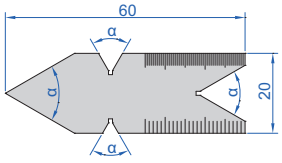
Code	Range	Pressure angle	Quantity of leaves
4860-145	0.35-4.5mm	14.5°	15
4860-245	0.35-4.5mm	20°	15
4860-112	5-12mm	14.5°	8
4860-212	5-12mm	20°	8

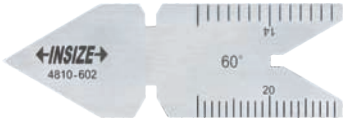
Unit: mm



CENTER GAUGES

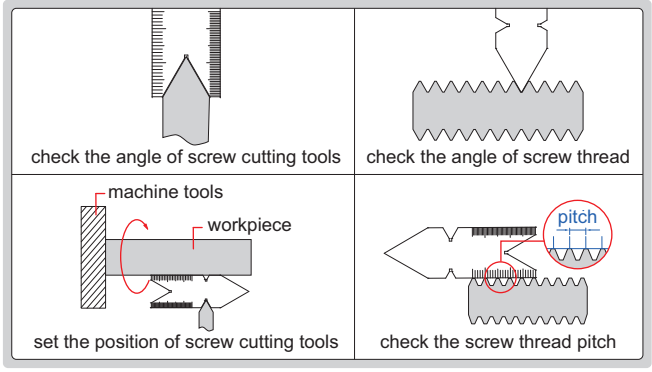
Unit: mm





4810-602

- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy: ±30min.
- Made of stainless steel



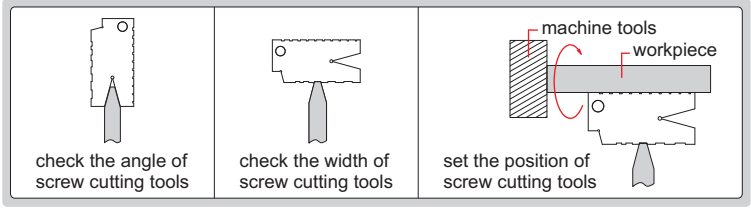
Code	Thread type	Angle (α)	Graduation
4810-601	METRIC 60°	60°	0.5mm and 1mm
4810-602	UNIFIED 60°	60°	14ths and 20ths on front side, 24ths and 32ths on back side
4810-55	WHITWORTH 55°	55°	14ths and 20ths on front side, 24ths and 32ths on back side

THREAD GAUGES

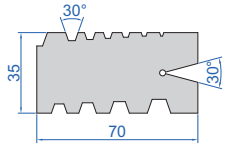


4812-E

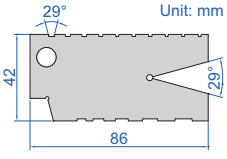
- To check and set screw cutting tools
- Made of medium carbon steel



Unit: mm



4812-12



4812-E

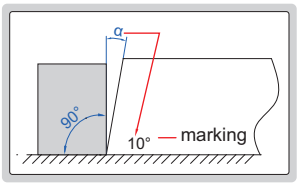
Code	Range	Thread type	Pitch
4812-12	2-12mm	Tr 30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm
4812-E	1-10TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI

ANGLE GAUGE

- To check complementary angles
- Made of stainless steel

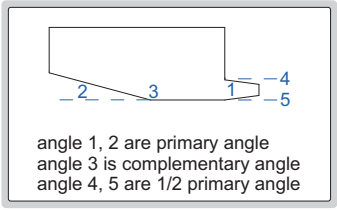


4806-20



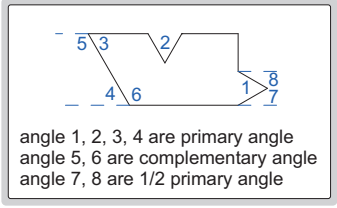
Code	Range (α)	Angle of leaves included	Quantity of leaves	Accuracy
4806-20	1°-45°	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45°	20	±30'

ANGLE GAUGE SET



angle 1, 2 are primary angle
angle 3 is complementary angle
angle 4, 5 are 1/2 primary angle

type A



angle 1, 2, 3, 4 are primary angle
angle 5, 6 are complementary angle
angle 7, 8 are 1/2 primary angle

type B



4807

- Each blade checks primary, 1/2 primary and complementary angles
- Made of medium carbon steel

Code	Quantity of leaves	Accuracy
4807	18	±10'

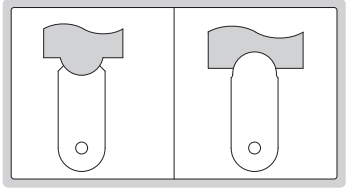
Primary angle	½ primary angle	Complementary angle	Type
5°	2°30'	175°	A
10°	5°	170°	A
15°	7°30'	165°	A
20°	10°	160°	B
25°	12°30'	155°	B
30°	15°	150°	B
35°	17°30'	145°	B
40°	20°	140°	B
45°	22°30'	135°	B
50°	25°	130°	B
55°	27°30'	125°	B
60°	30°	120°	B
65°	32°30'	115°	B
70°	35°	110°	B
75°	37°30'	105°	B
80°	40°	100°	B
85°	42°30'	95°	B
90°	45°	90°	B

RADIUS GAUGES

- Made of medium carbon steel



4801-17



Code	Range	Radius of leaves included (mm)	Quantity of leaves (internal + external)
4801-17	1-7mm	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	17+17
4801-16	7.5-15mm	7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15	16+16
4801-15	15.5-25mm	15.5, 16, 16.5, 17, 17.5, 18, 18.5, 19, 19.5, 20, 21, 22, 23, 24, 25	15+15

RADIUS GAUGES



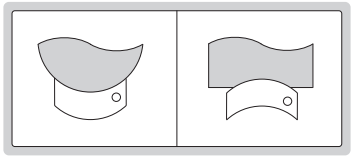
4802-31



4802-51

- Made of stainless steel

Code	Range	Radius of leaves included (mm)	Quantity of leaves
4802-31	25-40mm	25, 25.5, 26, 26.5, 27, 27.5, 28, 28.5, 29, 29.5, 30, 30.5, 31, 31.5, 32, 32.5, 33, 33.5, 34, 34.5, 35, 35.5, 36, 36.5, 37, 37.5, 38, 38.5, 39, 39.5, 40	31
4802-41	41-50mm	41, 42, 43, 44, 45, 46, 47, 48, 49, 50	10
4802-51	51-60mm	51, 52, 53, 54, 55, 56, 57, 58, 59, 60	10
4802-61	61-70mm	61, 62, 63, 64, 65, 66, 67, 68, 69, 70	10
4802-71	71-80mm	71, 72, 73, 74, 75, 76, 77, 78, 79, 80	10
4802-81	81-90mm	81, 82, 83, 84, 85, 86, 87, 88, 89, 90	10
4802-91	91-100mm	91, 92, 93, 94, 95, 96, 97, 98, 99, 100	10

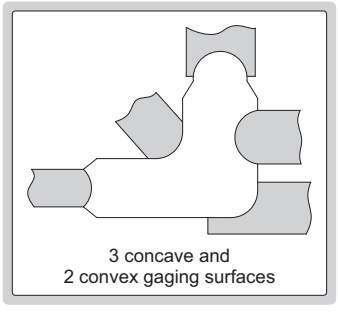


RADIUS GAUGE SET

- Each piece has 3 concave and 2 convex gauging surfaces
- Supplied with handle
- Made of medium carbon steel



use of handle



3 concave and
2 convex gaging surfaces



4804-26

Code	Range	Radius of leaves included (mm)	Quantity of leaves
4804-26	0.5-13mm	0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13	26

DRILL POINT GAUGE

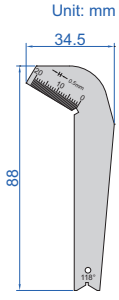
- For twist drills with 118° angle, to check if the center of tip is concentric with the drill body
- Made of stainless steel

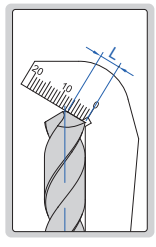
Code	Accuracy	
	Angle	Length
4843-1	±0.5°	±0.5mm

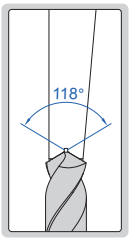


4843-1

Unit: mm







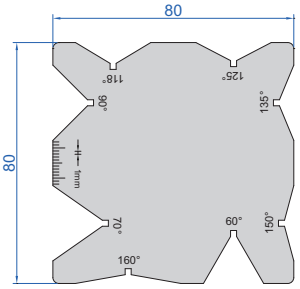
15

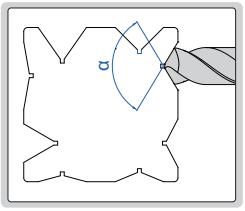
DRILL ANGLE GAUGE



4842-1

Unit: mm

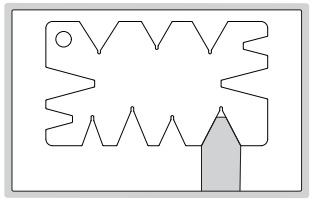




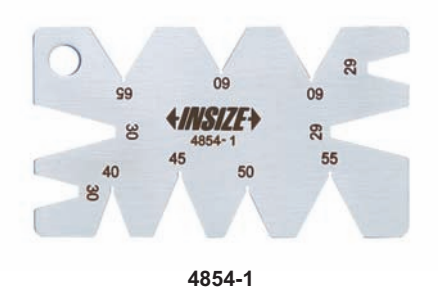
- Check drills with angle 60°, 70°, 90°, 118°, 125°, 135°, 150° or 160°
- Made of stainless steel

Code	Accuracy
4842-1	±0.5°

ANGLE GAUGE

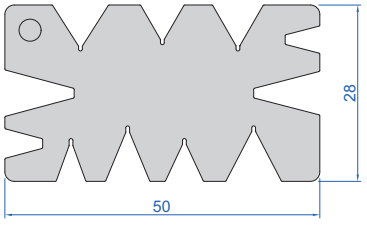


check the angle of screw cutting tools



4854-1

Unit: mm

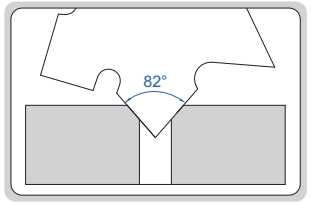


- Made of stainless steel

Code	Range	Accuracy
4854-1	29°, 30°, 40°, 45°, 50°, 55°, 60°	±10'

ANGLE GAUGE OF COUNTERSUNK HOLES

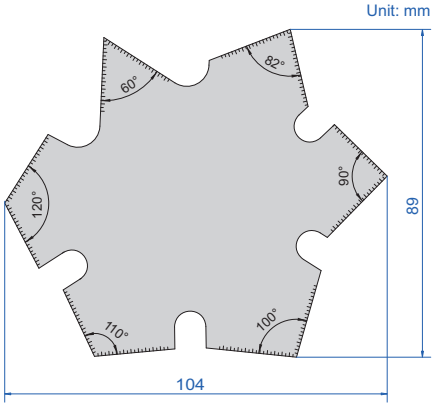
application





4856-1

Unit: mm



- For measurement of countersunk hole angles
- With graduation (graduation 1mm)
- Made of stainless steel

Code	Range	Accuracy
4856-1	60°, 82°, 90°, 100°, 110°, 120°	±0.5°

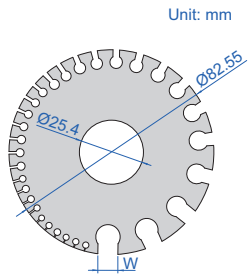
AMERICAN STANDARD WIRE GAUGE

No.	W
0	8.250mm/0.3249"
1	7.350mm/0.2893"
2	6.540mm/0.2576"
3	5.830mm/0.2294"
4	5.190mm/0.2043"
5	4.620mm/0.1819"
6	4.110mm/0.1620"
7	3.670mm/0.1443"
8	3.260mm/0.1285"
9	2.910mm/0.1144"
10	2.590mm/0.1019"
11	2.300mm/0.0907"
12	2.050mm/0.0808"
13	1.820mm/0.0720"
14	1.630mm/0.0641"
15	1.450mm/0.0571"
16	1.290mm/0.0508"
17	1.150mm/0.0453"

No.	W
18	1.020mm/0.0403"
19	0.912mm/0.0359"
20	0.813mm/0.0320"
21	0.724mm/0.0285"
22	0.643mm/0.0253"
23	0.574mm/0.0226"
24	0.511mm/0.0201"
25	0.440mm/0.0179"
26	0.404mm/0.0159"
27	0.361mm/0.0142"
28	0.320mm/0.0126"
29	0.287mm/0.0113"
30	0.254mm/0.0100"
31	0.226mm/0.0089"
32	0.203mm/0.0080"
33	0.180mm/0.0071"
34	0.160mm/0.0063"
35	0.142mm/0.0056"
36	0.127mm/0.0050"



4808



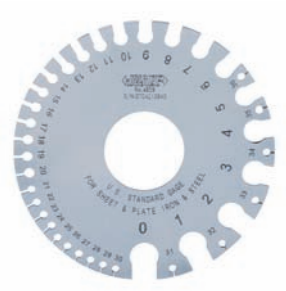
Code	Range
4808	0-36 (8.250-0.127mm/0.3249-0.0050")

- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC50-57

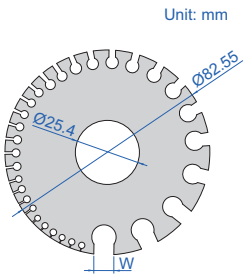
U.S. STANDARD SHEET METAL GAUGE

No.	W
0	7.938mm/0.3125"
1	7.144mm/0.2813"
2	6.747mm/0.2656"
3	6.350mm/0.2500"
4	5.953mm/0.2344"
5	5.556mm/0.2188"
6	5.159mm/0.2031"
7	4.763mm/0.1875"
8	4.366mm/0.1719"
9	3.969mm/0.1563"
10	3.572mm/0.1406"
11	3.175mm/0.1250"
12	2.778mm/0.1094"
13	2.381mm/0.0938"
14	1.984mm/0.0781"
15	1.786mm/0.0703"
16	1.588mm/0.0625"
17	1.429mm/0.0563"

No.	W
18	1.270mm/0.0500"
19	1.111mm/0.0438"
20	0.953mm/0.0375"
21	0.873mm/0.0344"
22	0.794mm/0.0313"
23	0.714mm/0.0281"
24	0.635mm/0.0250"
25	0.556mm/0.0219"
26	0.476mm/0.0188"
27	0.437mm/0.0172"
28	0.397mm/0.0156"
29	0.357mm/0.0141"
30	0.318mm/0.0125"
31	0.278mm/0.0109"
32	0.258mm/0.0102"
33	0.238mm/0.0094"
34	0.218mm/0.0086"
35	0.198mm/0.0078"
36	0.179mm/0.0070"



4809



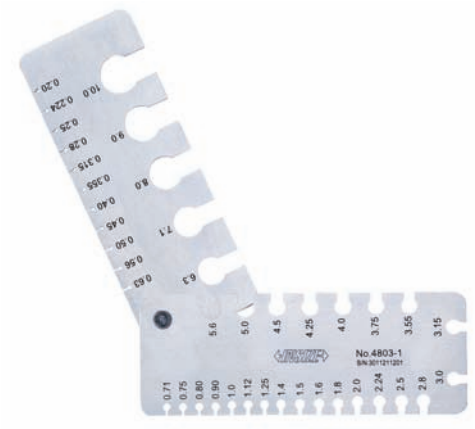
Code	Range
4809	0-36 (7.938-0.179mm/0.3125-0.0070")

- For gaging sheet metal, plate iron and steel
- Hardened to HRC50-57

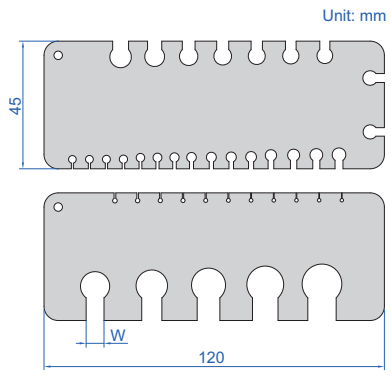
WIRE GAUGE

Wire diameter (W)
0.200mm
0.224mm
0.250mm
0.280mm
0.315mm
0.355mm
0.400mm
0.450mm
0.500mm
0.560mm
0.630mm
0.710mm
0.750mm
0.800mm
0.900mm
1.000mm
1.120mm
1.250mm
1.400mm
1.500mm

Wire diameter (W)
1.60mm
1.80mm
2.00mm
2.24mm
2.50mm
2.80mm
3.00mm
3.15mm
3.55mm
3.75mm
4.00mm
4.25mm
4.50mm
5.00mm
5.60mm
6.30mm
7.10mm
8.00mm
9.00mm
10.00mm



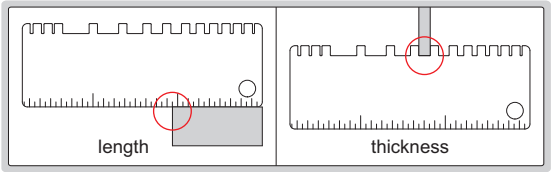
4803-1



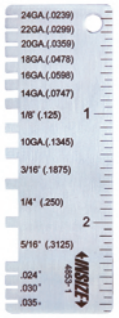
Code	Range
4803-1	0.2-10mm

- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC51-53
- Including 2 pcs wire gauges

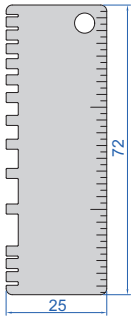
THICKNESS GAUGE



- Made of stainless steel



Unit: mm



4853-1

Code	Measurement	Range	Graduation	Accuracy
4853-1	length	0-2 3/4"	1/16"	1/32"
	thickness	24GA. (0.0239"), 22GA. (0.0299"), 20GA. (0.0359")	—	±0.002"
		18GA. (0.0478"), 16GA. (0.0598"), 14GA. (0.0747"), 1/8" (0.125"), 10GA. (0.1345"), 3/16" (0.1875"), 1/4" (0.250"), 5/16" (0.3125")		±0.004"
		0.024", 0.030", 0.035"		±0.002"

DIGITAL TAPER SLOT GAUGES

DIRECT READING, CALCULATION IS NOT REQUIRED

DATA OUTPUT

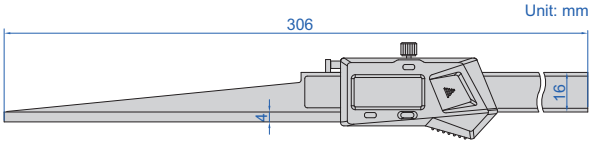
VIDEO



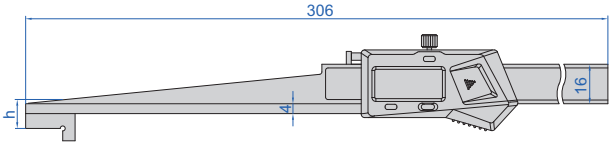
1160-10

- Non waterproof
- Measuring opening, slot width
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Optional accessory: wireless transmitter code **7315-25** (receiver is needed) page 7

Unit: mm



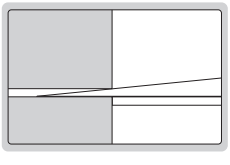
1160-10



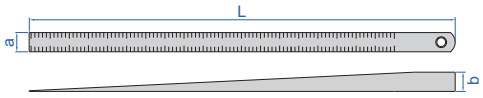
1160-20, 1160-30, 1160-40

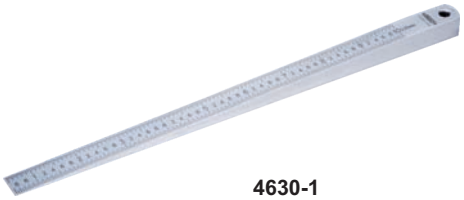
Code	Range	Accuracy	h
1160-10	0.2-10mm/0.01-0.39"	±0.03mm	—
1160-20	10-20mm/0.39-0.79"	±0.05mm	10mm
1160-30	20-30mm/0.79-1.18"	±0.05mm	20mm
1160-40	30-40mm/1.18-1.58"	±0.05mm	30mm

measure slot width



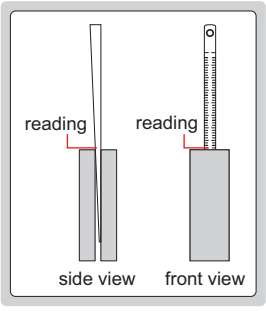
TAPER SLOT GAUGES





4630-1

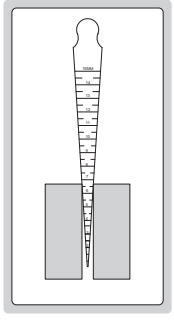
- For quick measurement of slot width
- Satin chrome plated reading surface
- Made of stainless steel

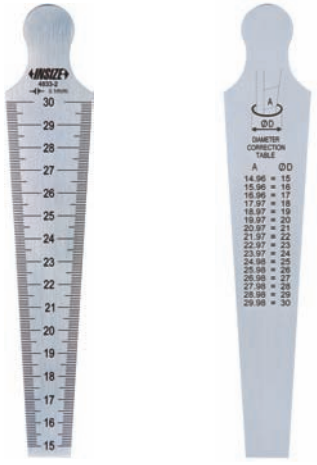


Code	Range	Graduation	Accuracy	L	a	b
4630-3	0.4-6mm	0.05mm	±0.04mm	164mm	12.5mm	6.5mm
4630-1	0.5-10mm	0.05mm	±0.07mm	220mm	10mm	10.5mm
4630-2	0.5-15mm	0.1mm	±0.08mm	184mm	12.5mm	16.5mm

TAPER GAUGES

measure slot width

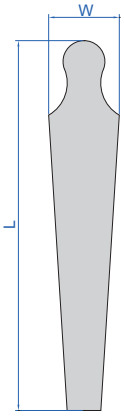




front

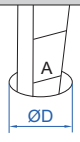
back

4833-2



- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (only for **4833-1**, **4833-2**)
- Made of stainless steel

measure diameter of hole



when measuring diameter of holes, correction on reading is needed due to the thickness of taper gauge. for example, when reading A is 14.96mm, diameter ØD is 15mm.

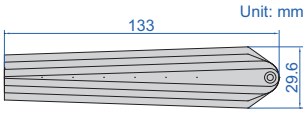
Code	Range	Graduation	Accuracy	L	W
4833-1	0.8-15mm	0.1mm	±0.05mm	146mm	17mm
4833-2	15-30mm	0.1mm	±0.05mm	159mm	30.4mm
4833-3	30-45mm	0.1mm	±0.05mm	166mm	45.4mm
4833-4	45-60mm	0.1mm	±0.05mm	170mm	60.5mm

TAPER GAUGE SET

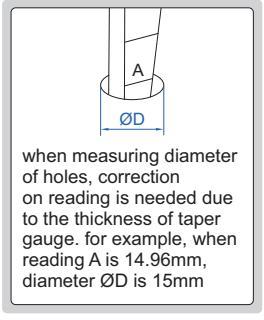


front back

4837-1

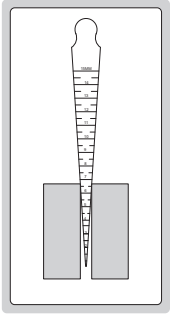


measure diameter of hole



when measuring diameter of holes, correction on reading is needed due to the thickness of taper gauge. for example, when reading A is 14.96mm, diameter ØD is 15mm

measure slot width

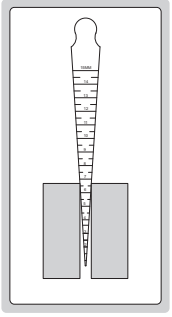


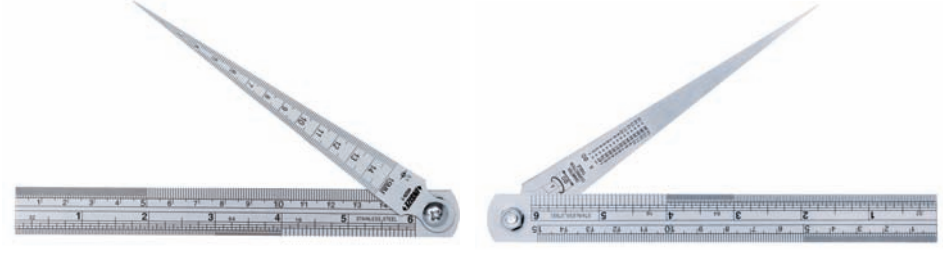
- Include 4 pcs (1~8mm, 8~15mm, 15~22mm, 22~29mm)
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back
- Made of stainless steel

Code	Range	Graduation	Accuracy
4837-1	1-29mm	0.05mm	±0.05mm

TAPER GAUGE AND STEEL RULER SET

use the taper gauge to measure slot width

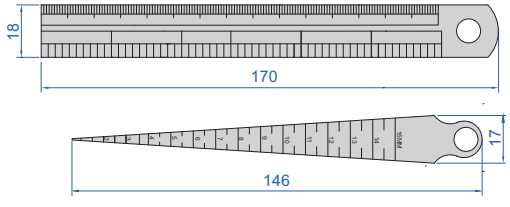




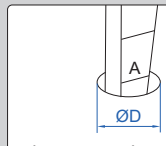
front back

4829-1

Unit: mm



use the taper gauge to measure diameter of hole



when measuring diameter of holes, correction on reading is needed due to the thickness of taper gauge. for example, when reading A is 14.96mm, diameter ØD is 15mm

- Diameter correction table on the taper gauge back
- Made of stainless steel

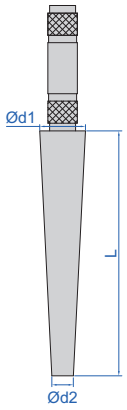
Code	Tool	Range	Graduation	Accuracy
4829-1	taper gauge	0.8-15mm	0.1mm	±0.05mm
	steel ruler	150mm/6"	1.0mm	±0.18mm

TAPER BORE GAUGES

- Quick measurement of bore diameter
- Hardened steel, HRC50-58
- Satin chrome plated surface
- Aluminium oxided handle



4852-15



(mm)

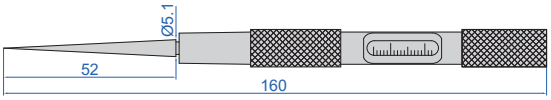
Code	Range	Graduation	Accuracy	L	Ød1	Ød2
4852-1	1-6.5mm	0.1mm	±0.05mm	62.5	7	0.8
4852-3	3-16mm	0.1mm	±0.05mm	143	17	2.8
4852-15	15-30mm	0.1mm	±0.05mm	165	31	14.7
4852-30	30-45mm	0.1mm	±0.05mm	165	46	29.6
4852-45	45-60mm	0.1mm	±0.05mm	167	61	44.3

SMALL TAPER BORE GAUGE



4855-5

Unit: mm



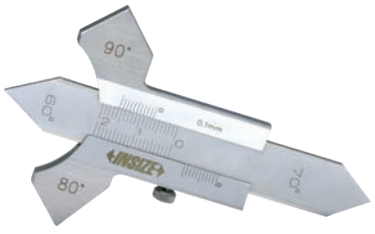
- Quick measurement of small bore diameter
- Hardened working face
- Supplied with protection cap

supplied with protection cap



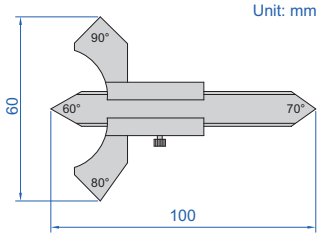
Code	Range	Graduation	Accuracy
4855-5	0.1-5mm	0.01mm	±0.03mm

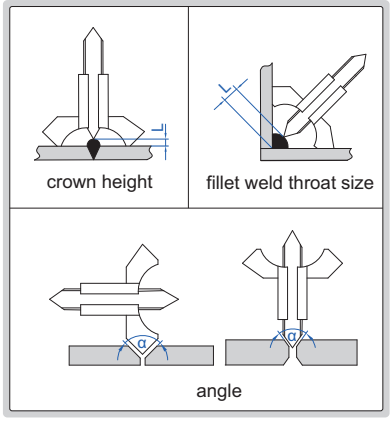
WELDING GAUGE



4830

Unit: mm





- Made of stainless steel
- Satin chrome plated reading surface

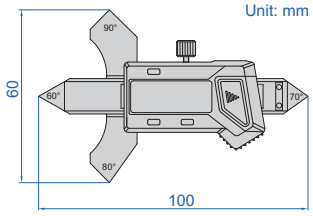
Code	Measurement	Range	Graduation	Accuracy
4830	crown height	0-8mm	0.1mm	±0.1mm
	fillet weld throat size	0-20mm	0.1mm	±0.3mm
	angle	60°, 70°, 80°, 90°	—	±1°

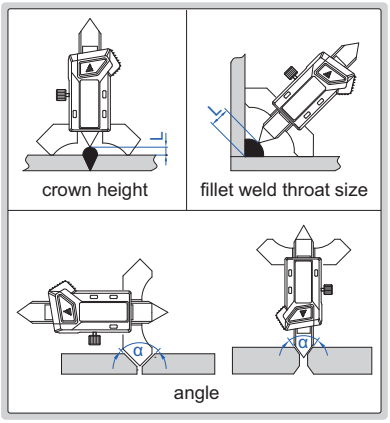
DIGITAL WELDING GAUGE

ATTENTION:
NO DATA OUTPUT



4831-20A





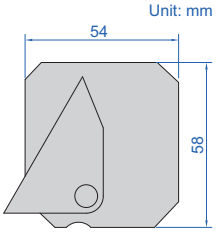
- Non waterproof
- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel

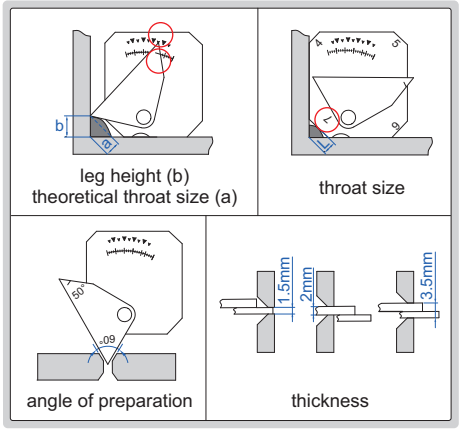
Code	Measurement	Range	Resolution	Accuracy
4831-20A	crown height	0-7mm	0.01mm/0.0005"	±0.03mm
	fillet weld throat size	0-20mm	0.01mm/0.0005"	±0.1mm
	angle	60°, 70°, 80°, 90°	—	±1°

WELDING GAUGE



4850-1





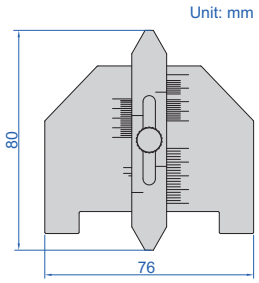
- Made of stainless steel

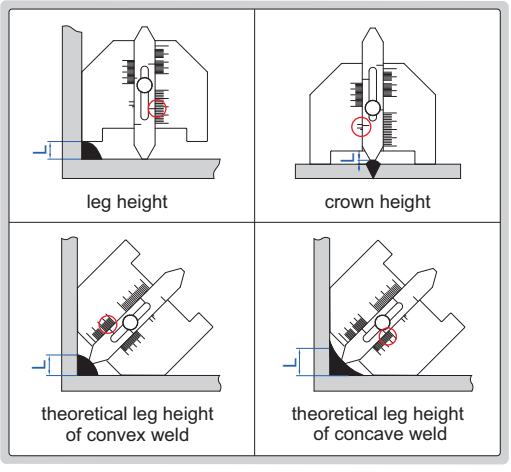
Code	Measurement	Range	Graduation	Accuracy
4850-1	leg height (b)	0-18mm	1mm	±0.5mm
	theoretical throat size (a)	2-12mm	1mm	±0.5mm
	throat size	4, 5, 6, 7mm	—	±0.5mm
	angle of preparation	50°, 60°	—	±1°
	thickness	1.5, 2, 3.5mm	—	±0.2mm

WELDING GAUGE



4851-1

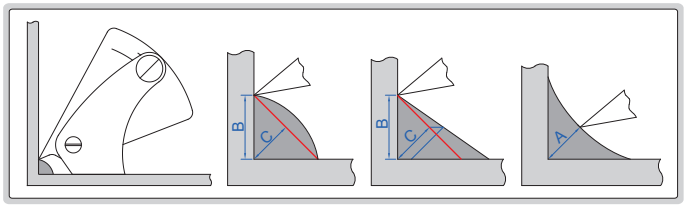


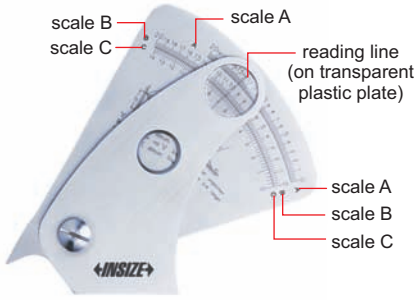


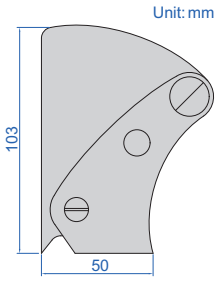
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4851-1	leg height	0-20mm	1mm	±0.5mm
	crown height	0-3mm	—	±0.5mm
	theoretical leg height of convex weld	0-20mm	1mm	±0.5mm
	theoretical leg height of concave weld	0-20mm	1mm	±0.5mm

WELDING GAUGE





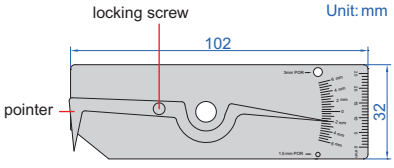


Code	Graduation	Accuracy
4840-1	0.2mm	±0.3mm

- Made of stainless steel

4840-1

WELDING GAUGE

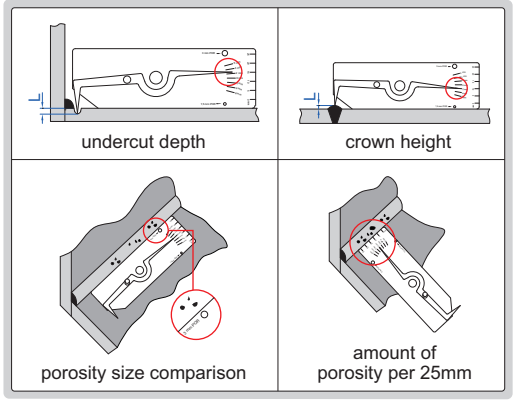




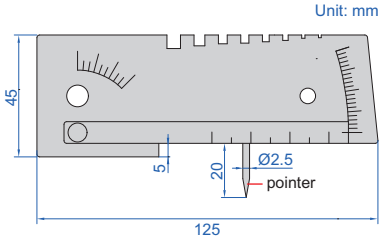
4834-1

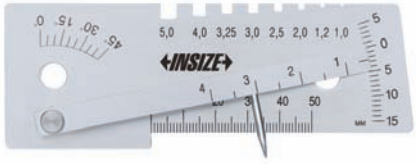
- Pointer can be locked for later reference
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4834-1	undercut depth	0-6mm	0.5mm	±0.5mm
	crown height	0-6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—



WELDING GAUGE

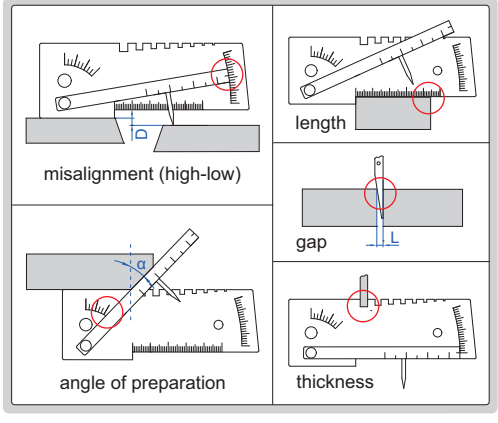




4848-1

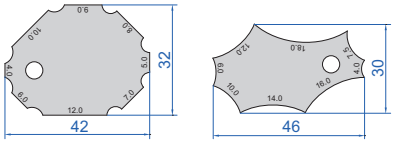
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4848-1	misalignment (high-low)	-5mm~+15mm	1mm	±0.5mm
	angle of preparation	0°-45°	5°	±2.5°
	length	0-50mm	1mm	±0.5mm
	gap	1-4mm	0.5mm	±0.25mm
	thickness	1, 1.2, 2.0, 2.5, 3.0, 3.25, 4.0, 5.0mm	—	±0.1mm



FILLET WELDING GAUGE

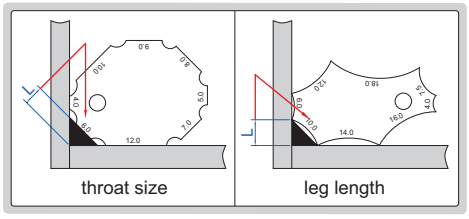
Unit: mm



- Made of stainless steel
- Sizes marked on both faces

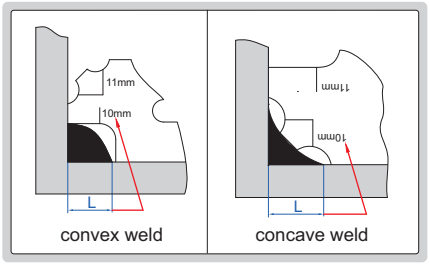


4832-1



Code	Throat size	Leg length	Accuracy
4832-1	4, 5, 6, 7, 8, 9, 10, 12mm	4, 6, 7.5, 10, 12, 14, 16, 18mm	±0.5mm

FILLET WELDING GAUGES



- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel



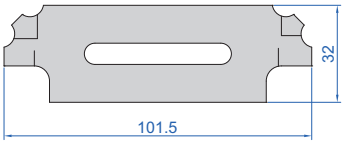
4836-1



4836-2

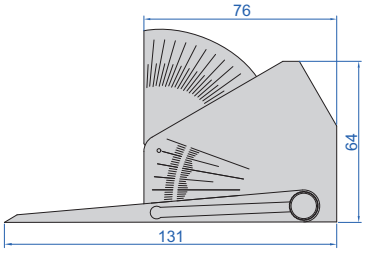
Code	Size	Accuracy
4836-1	3mm, 4mm, 5mm, 6mm, 8mm, 9mm, 10mm, 11mm, 12mm, 14mm, 16mm, 19mm, 22mm, 25mm	±0.5mm
4836-2	1/8" (3.2mm), 3/16" (4.8mm), 1/4" (6.4mm), 5/16" (7.9mm), 3/8" (9.5mm), 7/16" (11.1mm), 1/2" (12.7mm), 5/8" (15.9mm), 3/4" (19.1mm), 7/8" (22.2mm), 1" (25.4mm)	±0.02" (0.5mm)

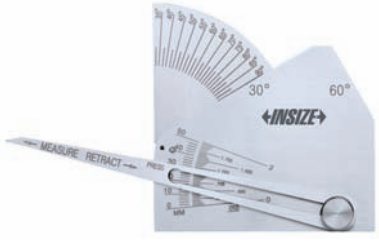
Unit: mm



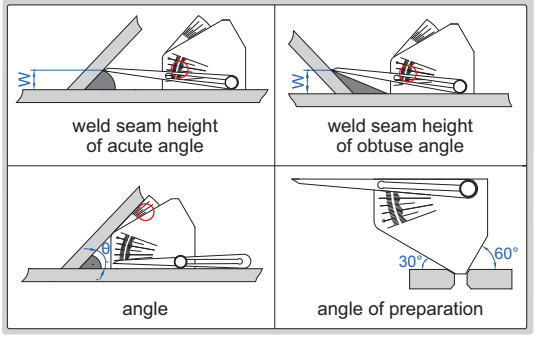
FILLET WELDING GAUGE

Unit: mm



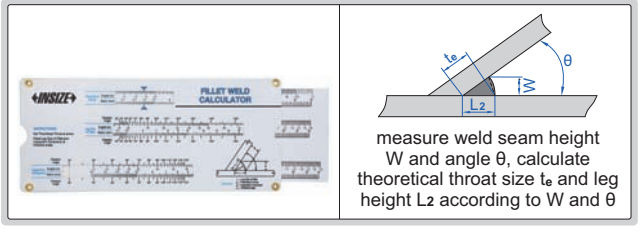


4846-1



- Calculating card is included
- Made of stainless steel

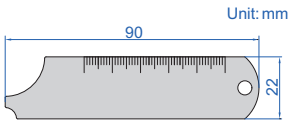
calculating card (included)



Code	Measurement	Range	Graduation	Accuracy
4846-1	weld seam height W	0-50mm/0-2"	2mm/0.05"	±1mm
	angle θ	30°-90°	2.5°	±1°
	60° angle	—	—	±0.5°

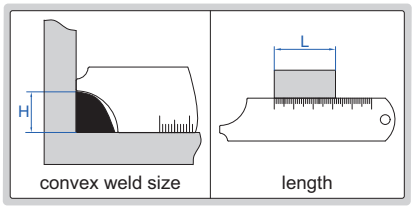
FILLET WELDING GAUGE

- Measure convex weld sizes
- 3 blades are included
- Made of stainless steel



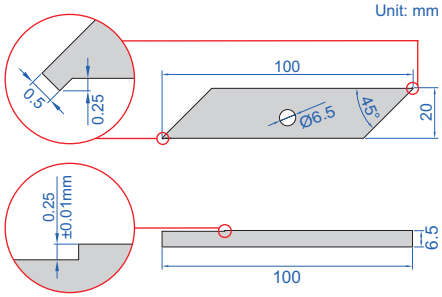


4847-1



Code	Measurement	Range	Graduation	Accuracy
4847-1	convex weld size	4, 6, 8, 10, 12, 14mm	—	±0.5mm
	length	0-50mm	1mm	±0.5mm

WELDING UNDERCUT GAUGE



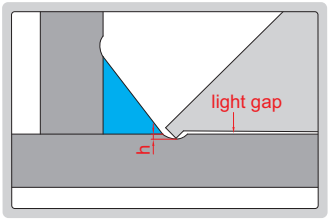


4849-1

calibration block (included)



application

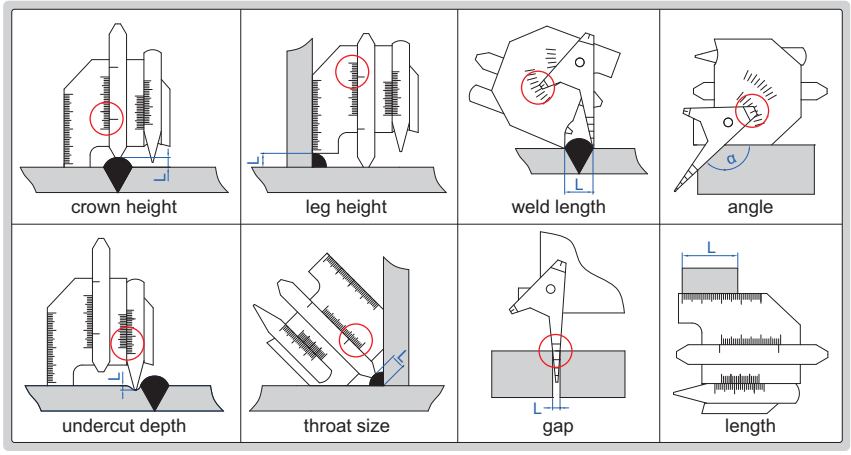


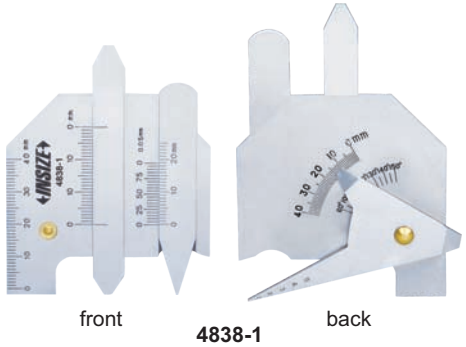
when there is a light gap, h<0.25mm;
when there is no light gap, h≥0.25mm

Code
4849-1

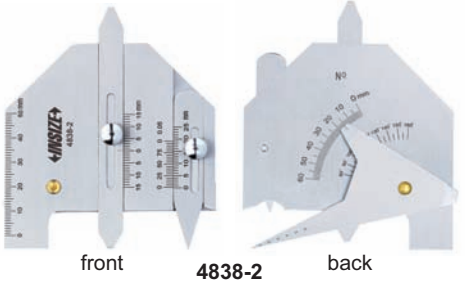
- Measure undercut
- Calibration block is included
- Made of stainless steel

WELDING GAUGES

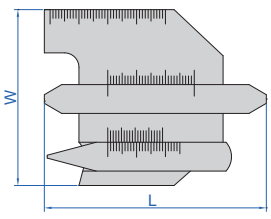




4838-1



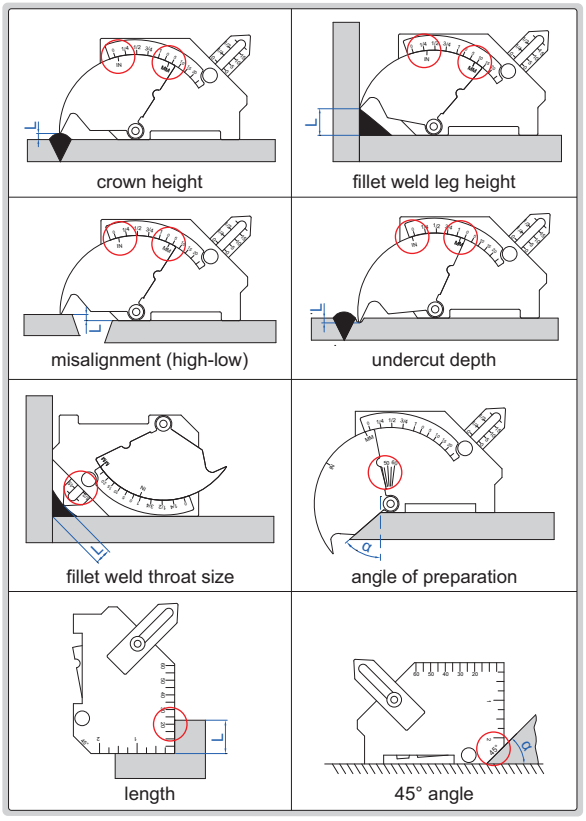
4838-2

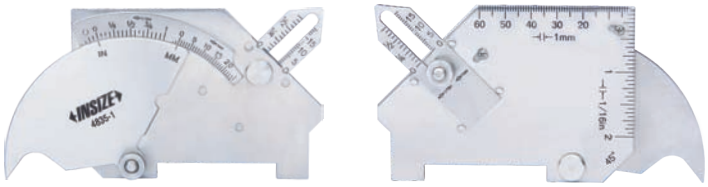


- Made of stainless steel

Measurement	Code 4838-1			Code 4838-2		
	Range	Graduation	Accuracy	Range	Graduation	Accuracy
crown height	0-10mm	1mm	±0.5mm	0-15mm	1mm	±0.5mm
leg height	0-14mm	1mm	±0.5mm	0-15mm	1mm	±0.5mm
undercut depth	0-5mm	0.05mm	±0.05mm	0-5mm	0.05mm	±0.05mm
throat size	0-13mm	1mm	±0.5mm	0-13mm	1mm	±0.5mm
weld length	0-40mm	1mm	±1mm	0-60mm	1mm	±1mm
angle	90°-150°	5°	±1°	80°-160°	5°	±1°
gap	0.5-5mm	1mm	±0.5mm	1-6mm	1mm	±0.5mm
length	0-40mm	1mm	±0.5mm	0-50mm	1mm	±0.5mm
LxW	62x77mm			99x84mm		

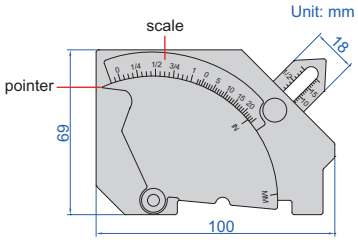
WELDING GAUGE





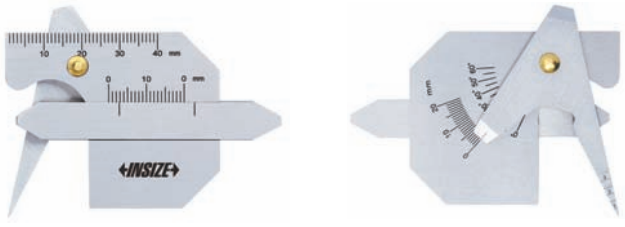
4835-1

- Adjustable scale to compensate pointer wear
- Made of stainless steel

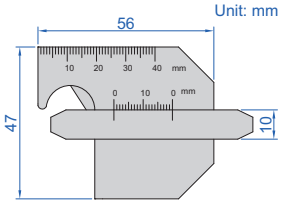


Code	Measurement	Range	Graduation	Accuracy
4835-1	crown height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	fillet weld leg height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	misalignment (high-low)	0-25mm (0-1")	1mm (1/16")	±0.5mm
	undercut depth	0-2mm (0-1/8")	1mm (1/16")	±0.5mm
	fillet weld throat size	0-20mm (0-3/4")	1mm (1/16")	±0.5mm
	angle of preparation	0-60°	5°	±1°
	length	0-60mm (0-2")	1mm (1/16")	±0.5mm
	45° angle	—	—	±1°

WELDING GAUGE

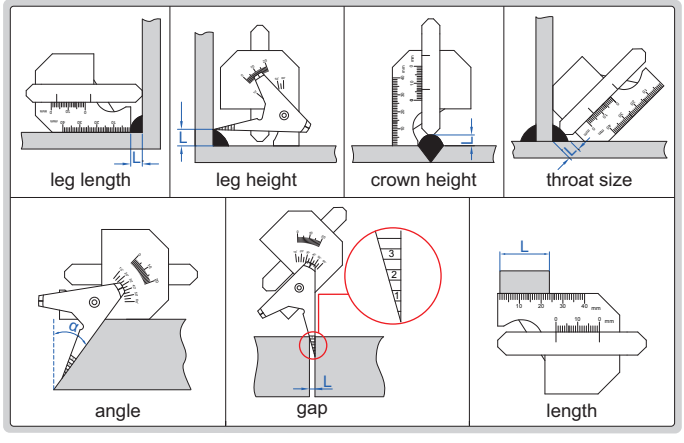


6832-1



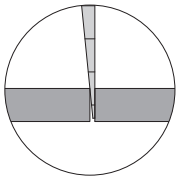
- Made of stainless steel
- Satin chrome plated surface

Code	Measurement	Range	Graduation	Accuracy
6832-1	leg length	0-20mm	1mm	±0.3mm
	leg height	0-20mm	1mm	±0.3mm
	crown height	0-20mm	1mm	±0.3mm
	throat size	0-10mm	1mm	±0.3mm
	angle	0°-60°	5°	±1°
	gap	1-3.5mm	0.5mm	±0.2mm
	length	0-40mm	1mm	±0.3mm



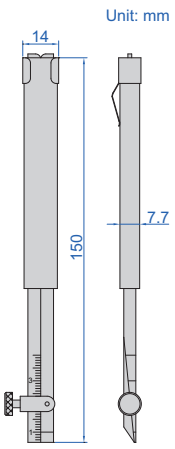
PIPE WELDING GAUGE

- Made of stainless steel



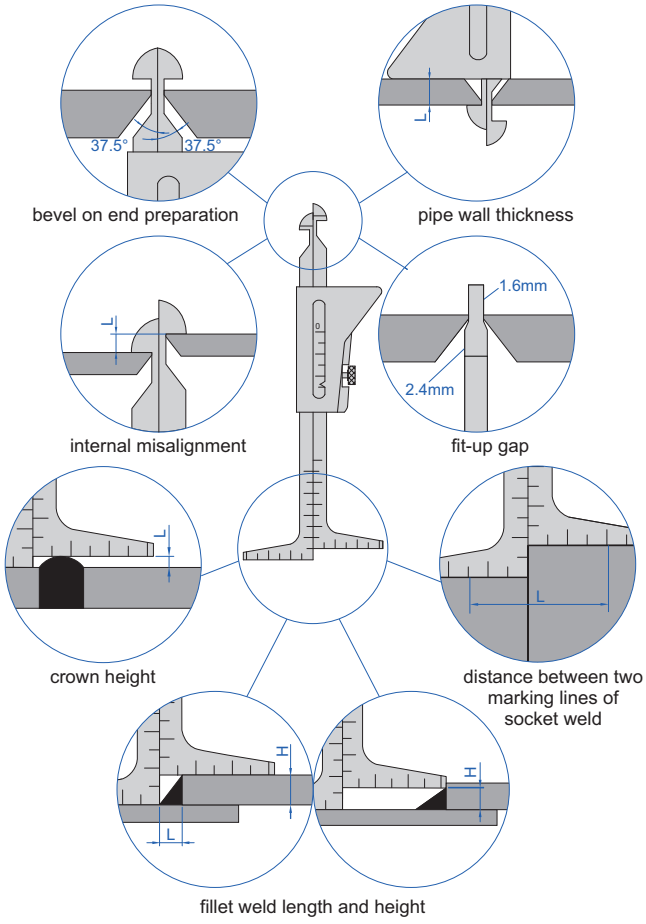


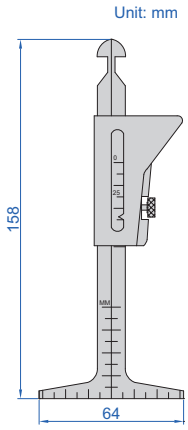
4841-1



Code	Measurement	Range	Graduation	Accuracy
4841-1	internal misalignment	0-30mm	1mm	±0.5mm
	fit-up gap	0.7-4mm	0.1mm	±0.1mm

PIPE WELDING GAUGE







4839-1

Code	Measurement	Range	Graduation	Accuracy
4839-1	bevel on end preparation	37.5°	—	±1°
	pipe wall thickness	0-45mm (0~1-3/4")	1mm (1/16")	±0.5mm
	internal misalignment	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm
	fit-up gap	1.6mm, 2.4mm	—	±0.1mm
	crown height	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm
	distance between two marking lines of socket weld	0-60mm (0~2-3/8")	1mm (1/16")	±0.5mm
	fillet weld length	0-30mm (0~1-1/4")	1mm (1/16")	±0.5mm
	fillet weld height	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm

- Made of stainless steel

6-PIECE WELDING GAUGE SET

- Includes:
  1) Welding gauge (code **4834-1**)
  2) Fillet welding gauge, size 3~25mm, 7 blades (code **4836-1**)
  3) Pipe welding gauge (code **4841-1**)
  4) Telescoping inspection mirror, size of mirror Ø32mm, length 178~505mm (code **7160-1**)
  5) Pocket ruler with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code **7119-150**)
  6) LED flashlight (code **ISGF-0501**)



5064

Code
5064

7-PIECE WELDING GAUGE SET

- Includes:
  1) Welding gauge (code **4834-1**)
  2) Welding gauge (code **4851-1**)
  3) Pipe welding gauge (code **4839-1**)
  4) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
  5) Telescoping inspection mirror, size of mirror Ø32mm, length 178~505mm (code **7160-1**)
  6) Magnifier with illumination, magnification 4X (code **7513-4**)
  7) Steel ruler, range 150mm/6", graduation 0.5mm, 1mm, 1/64", 1/32", 1/16" (code **7110-150**)



5071

Code
5071

7-PIECE WELDING GAUGE SET

- Includes:
  1) Welding gauge (code **4834-1**)
  2) Welding gauge (code **4851-1**)
  3) Fillet welding gauge, size 3~25mm, 7 blades (code **4836-1**)
  4) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
  5) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.005" (code **1108-150**)
  6) Pocket ruler with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code **7119-150**)
  7) Magnifier with illumination, magnification 4X (code **7513-4**)

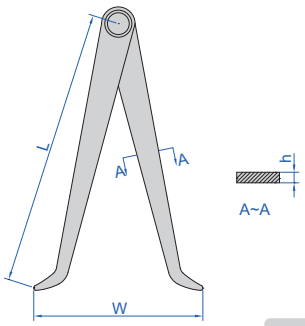


5072

Code
5072

INSIDE CALIPERS

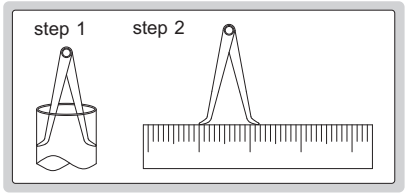




- Made of carbon steel

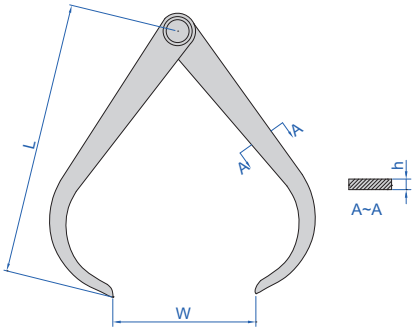
7240-150

Code	Size (L)	Range (W)	h
7240-150	150mm	17-150mm	2mm
7240-200	200mm	17-200mm	3mm
7240-300	300mm	18-300mm	3mm



OUTSIDE CALIPERS

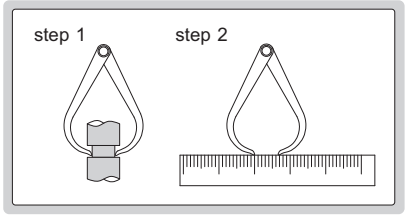




- Made of carbon steel

7241-150

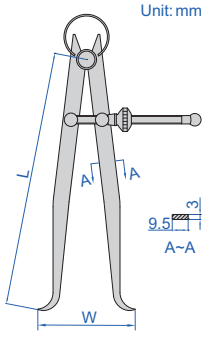
Code	Size (L)	Range (W)	h
7241-150	150mm	0-150mm	2mm
7241-200	200mm	0-200mm	3mm
7241-300	300mm	0-300mm	3mm



INSIDE SPRING CALIPERS



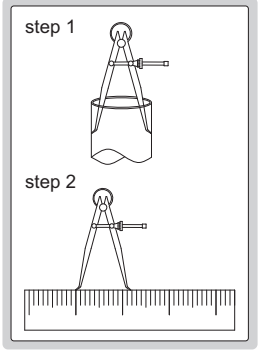




- Made of carbon steel

7261-150

Code	Size (L)	Range (W)
7261-150	150mm	20-150mm
7261-200	200mm	22-200mm
7261-250	245mm	30-250mm
7261-300	300mm	30-300mm



OUTSIDE SPRING CALIPERS

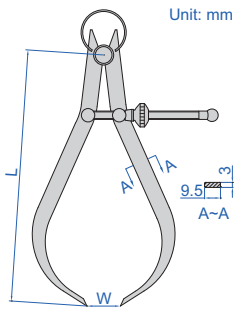
- Made of carbon steel

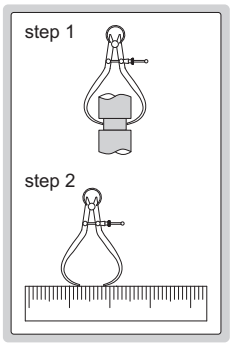
Code	Size (L)	Range (W)
7262-150	155mm	0-150mm
7262-200	210mm	0-200mm
7262-250	265mm	0-250mm
7262-300	310mm	0-300mm





7262-150





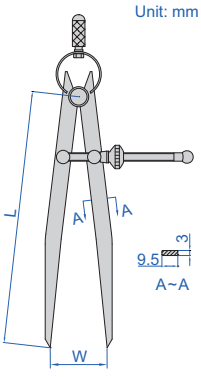
SPRING DIVIDERS

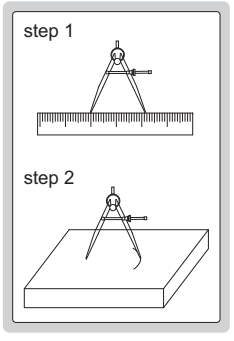
- Made of carbon steel
- Hardened points

Code	Size (L)	Range (W)
7260-150	150mm	0-150mm
7260-200	200mm	0-200mm
7260-250	245mm	0-250mm
7260-300	300mm	0-300mm



7260-150





DIVIDERS

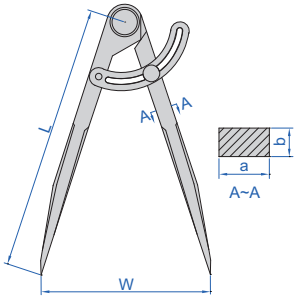
- Made of carbon steel
- Hardened points

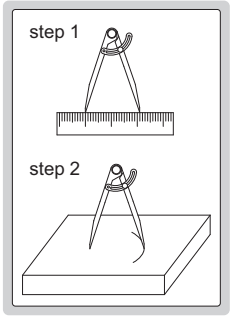
(mm)

Code	Size (L)	Range (W)	a	b
7247-150	150mm	0-140mm	8.5	7
7247-200	200mm	0-190mm	10	7
7247-300	300mm	0-290mm	12	7



7247-150

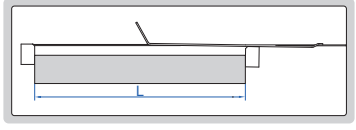




LENGTH METERS

INSIZE PLUS

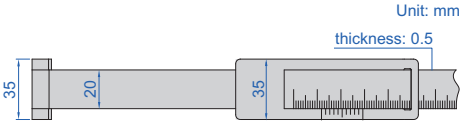
- Measure the distance between two parallel surfaces
- Laser engraved scale
- Made of stainless steel



Code	Range (L)	Graduation	Accuracy
7141-950	60-950mm	0.1mm	±0.15mm
7141-2200	900-2200mm	0.1mm	±0.20mm
7141-3460	2190-3460mm	0.1mm	±0.20mm
7141-4780	3400-4780mm	0.1mm	±0.25mm
7141-6000	4700-6000mm	0.1mm	±0.30mm



7141-2200



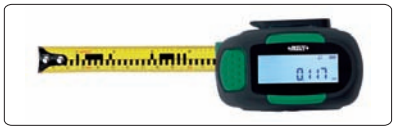
VIDEO

WIRELESS DIGITAL MEASURING TAPES + LASER DISTANCE METERS



9563-C40

digital measuring tape



laser distance meter

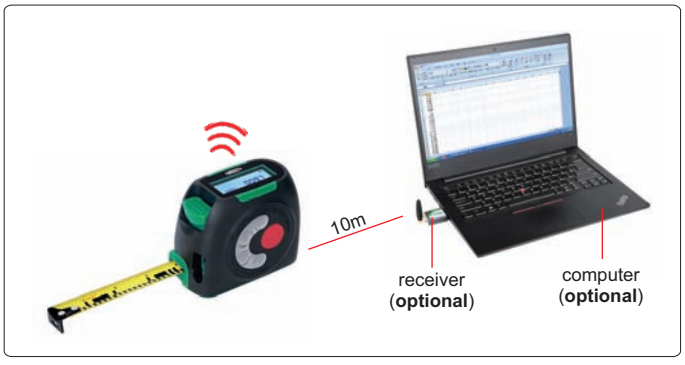


- Two transmission modes:
  Bluetooth: data transmission to mobile APP
  Wireless Zigbee: data transmission to Excel, WORD, Txt via receiver
- Transmission distance is 10 meters (no obstacles, no electromagnetic interference)
- Built-in bluetooth or wireless Zigbee transmission
- Display with backlight
- Automatic power off: laser 30s, main unit 180s
- Can work continuously for 5 hours
- Can store 50 groups of measurement data

bluetooth connect to phone (APP)



wireless Zigbee connect to computer



SPECIFICATION

Code		9563-C40	9563-C60	9563-WL40	9563-WL60
Output		bluetooth (data can be transmitted to APP)		wireless Zigbee (optional receiver needed: code **7315-2/3/6/7/8/9**) (data can be transmitted to excel, word, txt etc.)	
Digital measuring tape	range	5m			
	resolution	0.001m			
	digital measurement accuracy	±1mm			
	graduation accuracy	±(0.5+D/5000)mm, D: measured distance rounded to whole meters, when D<1m, D takes to 1m			
	digital measurement units	m, ft, in, ft+in			
	graduation units	m, ft			
	blade width	19mm			
	horizontal stand-out	≥1.8m			
	measurement function	single size, area, volume			
Laser distance meter	range	40m	60m	40m	60m
	resolution	0.001m			
	accuracy	±(3+D/20)mm, D: measured distance, unit: m			
	units	m, ft, in, ft+in			
	laser type	630~670nm, <1mW, class 2			
	measurement function	single, continuous, area, volume, pythagoras measurement			
Operation temperature		0~40°C			
Storage temperature		-10~60°C			
Power supply		built-in rechargeable lithium battery			
Dimension (L×W×H)		95×56×74mm			
Weight		313g			

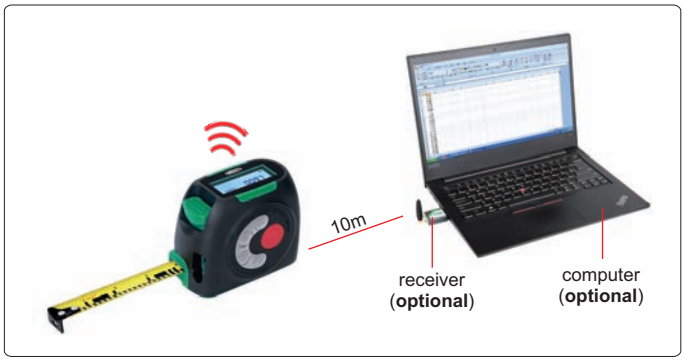
DIGITAL MEASURING TAPES

VIDEO



9570-A5

wireless Zigbee connect to computer



- Display with backlight
- Up to 5 hours of continuous use on one charge
- Can store 50 groups of measurement data

SPECIFICATION

Code	9570-A5	9570-AM5	9570-B5	9570-BM5
Output	wireless Zigbee keyboard signal, receiver is needed: code **7315-2/3/6/7/8/9** (**optional**), transmission data to excel, word, txt etc., transmission distance is 10m (no obstacles, no electromagnetic interference)		no	
Range	5m/16ft			
Digital resolution	0.001m, 0.001ft, 1/16"	1mm	0.001m, 0.001ft, 1/16"	1mm
Digital measurement accuracy	±1mm			
Blade graduation	1mm, 1/16"			
Blade graduation accuracy	±(0.5+D/5000)mm, D: measured distance rounded to whole metres, when D<1m, D takes to 1m			
Blade width	19mm			
Horizontal stand-out	≥1.8m			
Measurement function	single size, area, volume			
Operation temperature	0~40°C			
Storage temperature	-10~60°C			
Power supply	built-in rechargeable lithium battery			
Dimension (L×W×H)	95×56×74mm			
Weight	313g			

EG II

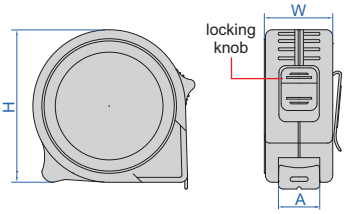
MEASURING TAPES

graduation





7140-5



- With TPR round case
- Non-glare nylon surface for wear resistance
- Accuracy: ±(0.3+0.2L)mm (L is the measured length rounded up to the next whole meter), meet MI-008 of DIRECTIVE 2014/32/EU

Individual (1 pc per package)

Code	Range	Graduation	Width of tape A	W	H
7140-3	0-3m	1mm	16mm	28mm	62mm
7140-5	0-5m	1mm	19mm	30mm	68mm
7140-8	0-8m	1mm	25mm	38mm	78mm

Set (12 pcs per package)

Code	Range	Graduation	Width of tape A	W	H
7140-3A	0-3m	1mm	16mm	28mm	62mm
7140-5A	0-5m	1mm	19mm	30mm	68mm
7140-8A	0-8m	1mm	25mm	38mm	78mm

EG II

MEASURING TAPES (ECONOMIC TYPE)



7147-5



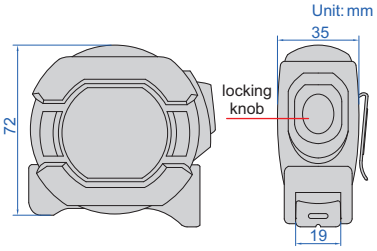
7147-5S

- With TPR round case
- Non-glare nylon surface for wear resistance
- Accuracy: ±(0.3+0.2L)mm (L is the measured length rounded up to the next whole meter), meet MI-008 of DIRECTIVE 2014/32/EU

graduation



Unit: mm



Individual

Code	Range	Graduation	Width of tape
7147-5	0-5m	1mm	19mm

Set

Code	Range	Graduation	Width of tape	Remark
7147-5S	0-5m	1mm	19mm	include 12pcs **7147-5**

EG II

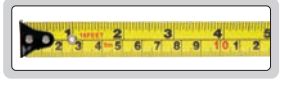
MEASURING TAPES

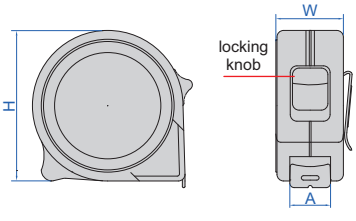


7142-5

- Non-glare nylon coating tape, wear resistance
- Accuracy: ±(0.3+0.2L)mm (L is the measured length rounded up to the next whole meter), meet MI-008 of DIRECTIVE 2014/32/EU

graduation





Individual (1 pc per package)

Code	Range	Graduation	Width of tape A	W	H
7142-5	0-5m/0-16ft	1mm, 1/16"	19mm	31mm	64mm

Set (12 pcs per package)

Code	Range	Graduation	Width of tape A	W	H
7142-5A	0-5m/0-16ft	1mm, 1/16"	19mm	31mm	64mm

MEASURING TAPES (ECONOMIC TYPE)

EG II



7148-5



7148-5S

- Matte coating
- Accuracy: ±(0.3+0.2L)mm (L is the measured length rounded up to the next whole meter), meet MI-008 of DIRECTIVE 2014/32/EU

graduation

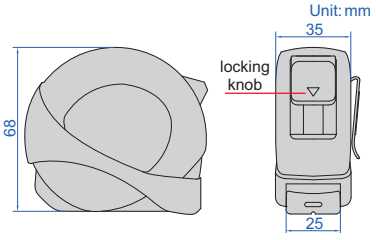


Individual

Code	Range	Graduation	Width of tape
7148-5	0-5m	1mm	25mm

Set

Code	Range	Graduation	Width of tape	Remark
7148-5S	0-5m	1mm	25mm	include 12pcs **7148-5**



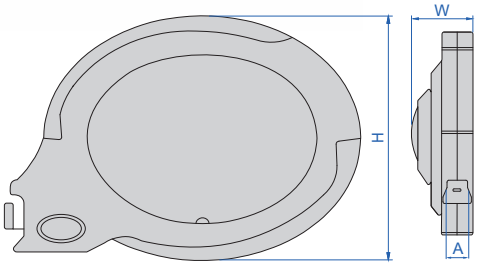
MEASURING TAPES

EG II



7149-30

- Steel tape, non-glare nylon surface for wear resistance
- Accuracy: ±(0.3+0.2L)mm (L is the measured length rounded up to the next whole meter), meet MI-008 of DIRECTIVE 2014/32/EU



Code	Range	Graduation	Width of tape (A)	W	H
7149-10	0-10m	1mm	9.5mm	41mm	107mm
7149-15	0-15m	1mm	9.5mm	41mm	107mm
7149-30	0-30m	1mm	9.5mm	41mm	107mm

SELF ADHESIVE MEASURING ROLLS

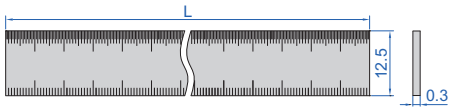


7139-50

self adhesive back

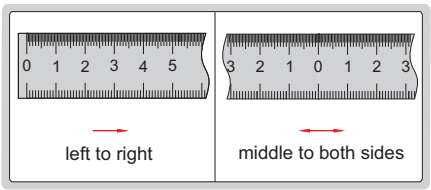


Unit: mm



- Self adhesive back
- Steel tape, non-glare coating, wear resistance

type of reading

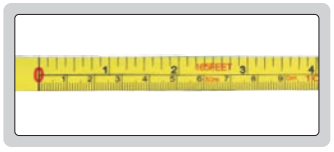


Code	Range (L)	Graduation	Accuracy	Type of reading
7139-50	50-0-50cm	1mm	±0.2mm	middle to both sides
7139-100	0-100cm	1mm	±0.4mm	left to right

EG II

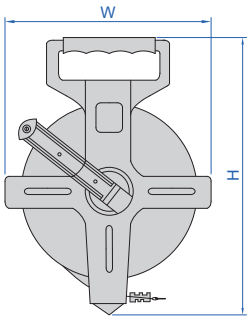
LONG MEASURING TAPE

graduation





7143-50



- High tensile strength fibreglass tape
- Nylon coating tape, wear resistance
- Accuracy: ±(0.3+0.2L)mm (L is the measured length rounded up to the next whole meter), meet MI-008 of DIRECTIVE 2014/32/EU

Code	Range	Graduation	Width of tape	W	H
7143-50	0-50m/0-165ft	1mm, 1/8"	13mm	220mm	320mm

AUTOMATIC MEASURING TAPE CALIBRATION SYSTEM
CODE ISC-T5001



- The calibration system uses digital image recognition technology to process the data, high accuracy, fast measuring speed, high measuring efficiency
- Intelligent detection, to avoid human error in measurement
- DC motor controls the weights for automatic loading and unloading, low noise and low jitter
- Aluminum frame, easy to install, beautiful shape, good horizontality, can be customized lengths according to customers demand
- The clamping device can be fine-tuned in the X-axis direction for fast and accurate zeroing, adjustment of the surface of the holding device is made with an articulated ball head, which improves contact and avoids side sliding of the tape measure
- 6 high-definition industrial cameras, any position can be measured as required, a key to automatic identification, automatic calculation
- Measuring system allows batch entry of calibration tape measure information, automatically read the scale of the tape after selecting the line pattern, automatically calculate the error, store the measurement data, and automatically generate the original records and reports
- Fiber tapes, measuring ropes, etc. can also be calibrated

SPECIFICATION

Measuring range		5m;*can be inspected up to (1~100)m in other sections
Standard steel tape measure accuracy		±(0.03mm+3×10^{-5}L)
Straightness of the bench calibration surface		≤0.1mm/m
Friction between the surface of the calibration bench and the calibrated steel tape measure		≤4N
Reading microscope	**resolution**	0.01mm
	magnification	20X
	view filed	6mm

*Customized lengths for test benches (5m~50m)

STANDARD DELIVERY

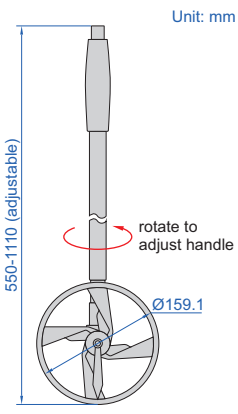
Main unit	1 pc
5m standard steel tape	1 pc
High definition industrial camera	6 pcs
5kg weight (8914-5KGM1)	2 pcs
Tape clip	2 pcs
Software	1 set
Computer	1 set
Printer	1 set
Zero point site	2 pcs
50mm standard glass scale	1 pc

MEASURING WHEEL (BASIC TYPE)

- ABS plastic frame, wear-resistant PU tire
- Three-section adjustable handle

Code	Range	Resolution
7144-1	0.1-9999.9m	0.1m





MEASURING WHEEL



after folding



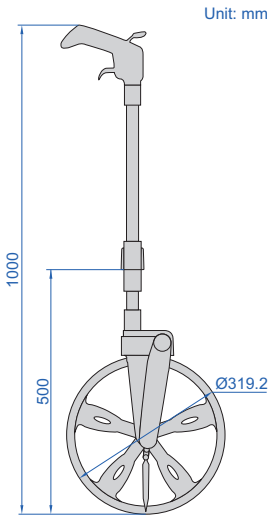
backpack (included)

- ABS plastic frame, wear-resistant PU tire
- Two-section foldable handle

Code	Range	Resolution
7145-1	0.1-9999.9m	0.1m



7145-1



BACKLIGHT

DIGITAL MEASURING WHEEL



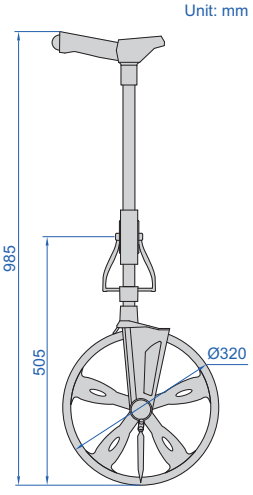
after folding



backpack (included)



7171-D1



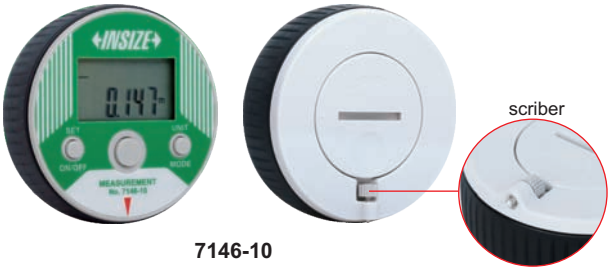
- Button function: on/off, m/ft, HOLD, reset, stake out, memory
- Nylon+glass fiber plastic frame, wear-resistant TPU tire
- Can store 99 groups of measurement data
- Three AAA batteries

Code	Range	Resolution	Accuracy
7171-D1	0-9999.99m/0-9999.99ft	0.01m/0.01ft	±0.3%L (L is the measured length)
	10000.0-99999.9m/10000.0-99999.9ft	0.1m/0.1ft	
	100000-999999m/100000-999999ft	1m/1ft	

DIGITAL MEASURING WHEEL

VIDEO

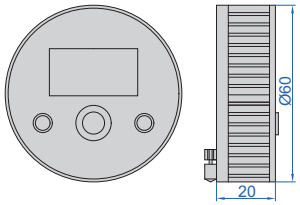
IP40 WATERPROOF



7146-10

- IP40 dust/waterproof
- Measuring length of curve
- Four measurement modes: length, rectangle area, diameter of circle, cube
- Resolution: 0.001m/0.01ft
- Button function: on/off, mm/inch, one or two sides set, measurement mode conversion, measurement
- Battery CR2032, automatic power off

Unit: mm



Code	Range	Accuracy
7146-10	0-10m/0-32.8ft	±0.3%L (L is the measured length)

RIGID RULERS

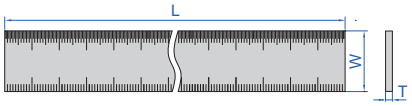
INSIZE PLUS



7122-300

- Rigid rulers
- Graduation on front and back sides
- Made of special steel
- Satin chrome plated

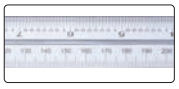
Code	Range (L)	Graduation	Accuracy	W	T
7122-150	150mm	0.5mm/1mm	+0.10/-0.09mm	18.50mm	1mm
7122-300	300mm	0.5mm/1mm	+0.13/-0.09mm	24.50mm	1mm
7122-600	600mm	0.5mm/1mm	+0.18/-0.09mm	29.50mm	1mm



RIGID RULER



7113-300A

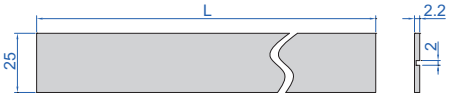


groove on the back

- Rigid ruler
- With groove on the back, suitable for combination square set (**2278** series)
- Satin chrome plated

Unit: mm

Code	Range	Graduation		Accuracy	L
		front	back		
7113-300A	300mm/12"	0.5mm and 1/32"	1mm and 1/64"	±0.15mm	300mm



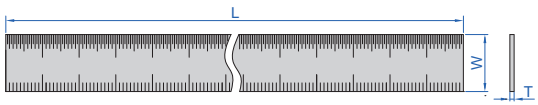
FLEXIBLE RULERS

INSIZE PLUS



7121-150

- Can be used in the way of bending
- Graduation on front and back sides
- Made of special steel
- Satin chrome plated



can be used in the way of bending



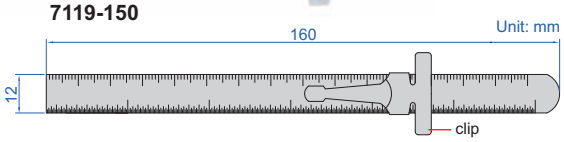
Code	Range (L)	Graduation	Accuracy	W	T
7121-150	150mm	0.5mm/1mm	+0.10/-0.09mm	12.50mm	0.40mm
7121-300	300mm	0.5mm/1mm	+0.13/-0.09mm	12.50mm	0.40mm
7121-600	600mm	0.5mm/1mm	+0.18/-0.09mm	19.50mm	0.50mm

POCKET RULER WITH SLIDING CLIP

- With sliding clip, clip can be inserted in the pocket, also can be used as depth gauge base
- Inch/metric conversion table on the back
- Made of stainless steel



7119-150

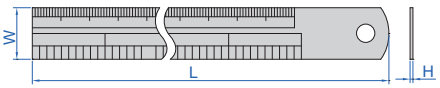


Code	Range	Graduation	Accuracy
7119-150	150mm/6"	1mm, 1/64"	±0.3mm

STEEL RULERS

POPULAR MODEL

- Graduation: 0.5mm, 1mm, 1/64", 1/32", 1/16"
- Rigid rulers
- Made of stainless steel
- Non-glare surface





7110-300

Individual (1 pc per package) **(mm)**

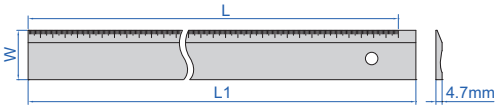
Code	Range	Accuracy	L	W	H	Remark
7110-150	150mm/6"	±0.18mm	170	18	1.0	metric graduation on front and inch graduation on back
7110-200	200mm/8"	±0.18mm	220	18	1.0	metric graduation on front and inch graduation on back
7110-300	300mm/12"	±0.27mm	330	25	1.0	metric graduation on front and inch graduation on back
7110-3001	300mm/12"	±0.27mm	325	30	1.0	metric graduation on front and inch graduation on back
7110-500	500mm/20"	±0.40mm	530	30	1.2	metric graduation on front and inch graduation on back
7110-600	600mm/24"	±0.50mm	630	30	1.2	metric graduation on front and inch graduation on back
7110-1000	1000mm/40"	±0.50mm	1040	32	1.5	metric graduation on front and inch graduation on back
7110-1200	1200mm/48"	±0.80mm	1240	35	1.8	metric and inch graduation on front
7110-1500	1500mm/60"	±1.00mm	1550	38	1.8	metric and inch graduation on front
7110-2000	2000mm/80"	±1.00mm	2065	40	2.0	metric and inch graduation on front

Set **(mm)**

Code	Range	Accuracy	L	W	H	Remark	Quantity per package
7110-150A	150mm/6"	±0.18mm	170	18	1.0	metric graduation on front and inch graduation on back	10 pcs
7110-200A	200mm/8"	±0.18mm	220	18	1.0	metric graduation on front and inch graduation on back	10 pcs
7110-300A	300mm/12"	±0.27mm	330	25	1.0	metric graduation on front and inch graduation on back	5 pcs
7110-3001A	300mm/12"	±0.27mm	325	30	1.0	metric graduation on front and inch graduation on back	5 pcs
7110-500A	500mm/20"	±0.40mm	530	30	1.2	metric graduation on front and inch graduation on back	5 pcs
7110-600A	600mm/24"	±0.50mm	630	30	1.2	metric graduation on front and inch graduation on back	5 pcs
7110-1000A	1000mm/40"	±0.50mm	1040	32	1.5	metric graduation on front and inch graduation on back	5 pcs
7110-1200A	1200mm/48"	±0.80mm	1240	35	1.8	metric and inch graduation on front	5 pcs
7110-1500A	1500mm/60"	±1.00mm	1550	38	1.8	metric and inch graduation on front	5 pcs
7110-2000A	2000mm/80"	±1.00mm	2065	40	2.0	metric and inch graduation on front	5 pcs

ALUMINUM RULERS

- Made of aluminum, oxidized surface





7123-300

Code	Range (L)	Graduation	Accuracy	L1	W
7123-300	300mm	1mm	±0.5mm	321mm	50mm
7123-600	600mm	1mm	±0.9mm	624mm	50mm
7123-1000	1000mm	1mm	±0.9mm	1024mm	50mm

AUTOMATIC STEEL RULER CALIBRATION SYSTEM CODE ISC-R1001



- Adoption high-precision optical encoder, precise motion control technology, machine vision and other advanced technologies to achieve fully automatic, high-precision measurement
- Test points can be customised according to customers
- Automatically analyzes line width, line pattern, end edge distance, etc.
- The measurement process is fast and accurate, the system automatically determines whether it is qualified or not, and automatically generates original records and reports
- Inspection records are accessible

SPECIFICATION

Measuring range	(0~1000)mm, can be inspected up to 2000mm in two setions
Accuracy	±0.01mm
Resolution	0.1μm
Loading method	automatic
Verification	2s/point
Dimension (L×W×H)	1540×360×430mm

STANDARD DELIVERY

Main unit	1 pc
Computer	1 set
Software	1 set
Printer	1 set

OPTIONAL ACCESSORY

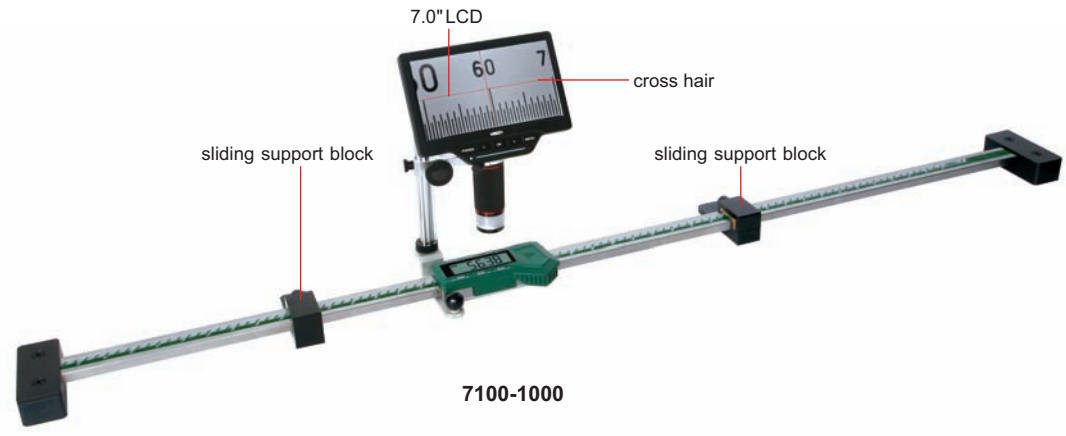
1m glass calibration ruler	**ISC-R-LR** (resolution: 1mm; accuracy: 8μm)

DATA OUTPUT

DIGITAL SCALES WITH MICROSCOPE



7100-500



7100-1000

- Including microscope
- Optional accessory:
  wireless transmitter code **7315-22** (receiver is needed) page 7

Code	Range	Accuracy	Total length	Remark
7100-400	350mm	±0.05mm	590mm	without sliding support blocks
7100-500	450mm	±0.05mm	690mm	
7100-600	500mm	±0.08mm	790mm	with sliding support blocks
7100-800	700mm	±0.10mm	990mm	
7100-1000	900mm	±0.10mm	1240mm	

SPECIFICATION OF DIGITAL SCALE

Resolution	0.01mm/0.0005"
Buttons	on/off, zero, mm/inch, ABS, data preset
Data output	Micro USB
Power supply	Battery CR2032

SPECIFICATION OF MICROSCOPE

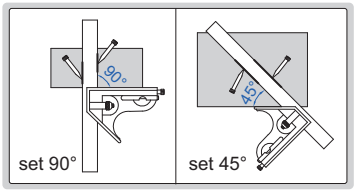
Display resolution	1024×600
Sensor	1/3" CMOS
Single pixel size	2μm×2μm
Magnification	1X~16X
Power supply	built-in lithium battery

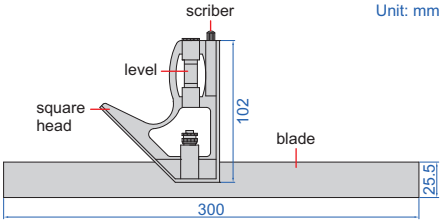
COMBINATION SQUARE (ECONOMIC TYPE)

- Square head (made of zinc):
  set the blade at 90° or 45° to
  an edge of a workpiece
  accuracy: ±0.5°
- Blade (made of stainless steel):
  range: 300mm/12",
  graduation: 1mm and 1/32" on front
  face,1mm and 1/16" on back face



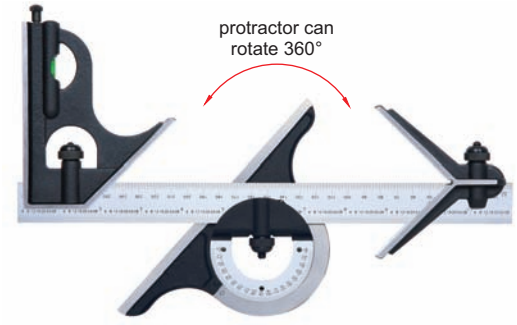
2276-300



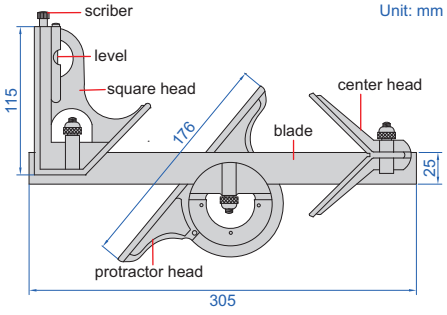


Code
2276-300

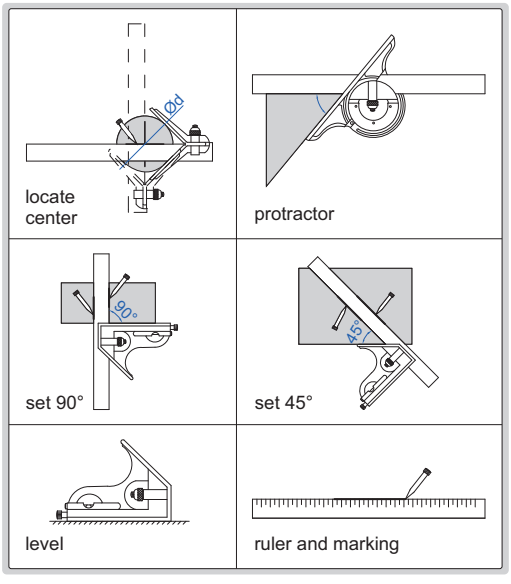
COMBINATION SQUARE SET (OPEN TYPE PROTRACTOR)



2274-4



- Center head (made of cast iron):
  to locate center of cylinders with diameter (Ød): 30-100mm
  accuracy: ±0.15mm
- Protractor head (made of cast iron):
  set the blade at desired angle to an edge of a
  workpiece, and can be used to measure angles
  range: 0-180°
  accuracy: ±20min
- Square head (made of cast iron):
  set the blade at 90° or 45° to an edge of a workpiece
  accuracy: ±8min for 90° square,
  ±10min for 45° square
- Blade (made of stainless steel):
  range: 300mm/12",
  graduation: 0.5mm and 1/32" on front face,
  1mm and 1/64" on back face
- Optional accessory: rigid ruler (code **7113**)



Code	Remark
2274-4	4-piece set

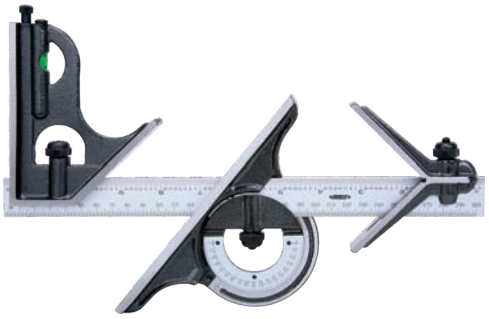
COMBINATION SQUARE SETS (CLOSE TYPE PROTRACTOR)



2278-2

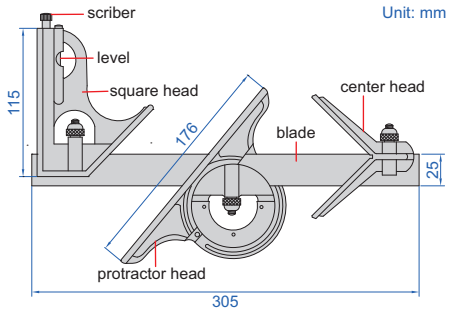


2278-3

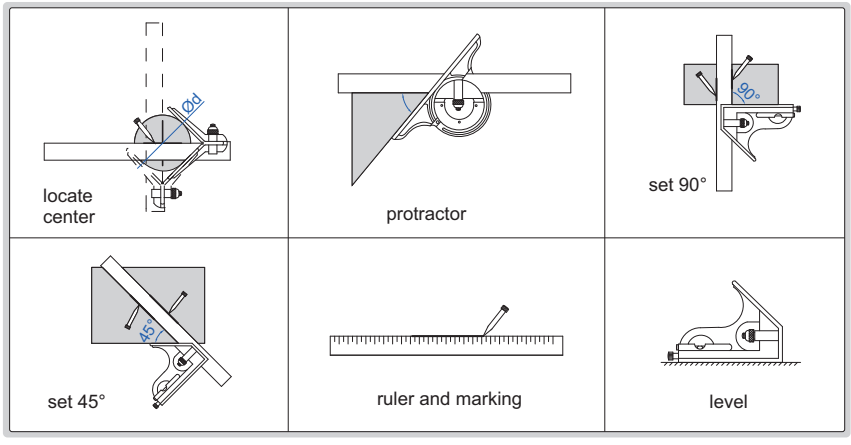


2278-180

- Center head (made of cast iron):
  to locate center of cylinders with diameter (Ød): 30-100mm
  accuracy: ±0.15mm
- Protractor head (made of cast iron):
  set the blade at desired angle to an edge of a workpiece, and can be used to measure angles
  range: 0-180°
  accuracy: ±20min.
- Square head (made of cast iron):
  set the blade at 90° or 45° to an edge of a workpiece
  accuracy: ±8min for 90° square,
  ±10min for 45° square
- Blade (made of stainless steel):
  range: 300mm/12",
  graduation: 0.5mm and 1/32" on front face,
  1mm and 1/64" on back face
- Optional accessory: rigid ruler (code **7113**)



Code	Remark
2278-2	2-piece set
2278-3	3-piece set
2278-180	4-piece set

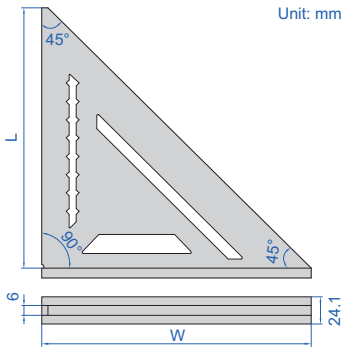


PLASTIC ANGLE SQUARE

- Length range: 0-7", graduation: 1/8"
- Angel range: 0-90°, graduation: 1°



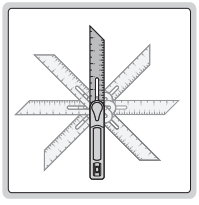
2282-180



Code	Size (L×W)	Accuracy of angle
2282-180	180×185mm	±0.3°

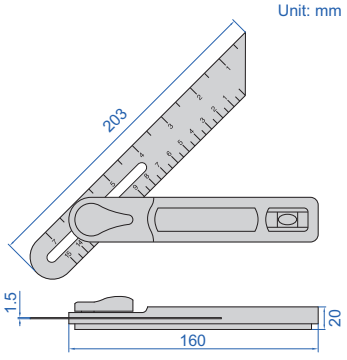
T-BEVEL

blade can rotate 360°

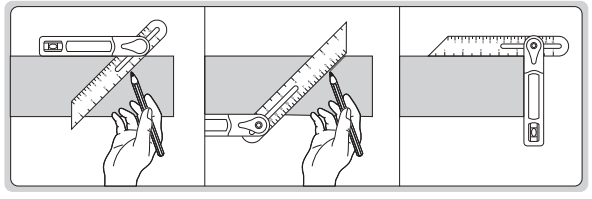




2281-360



- Easy-to-read vial
- The blade can move and can be locked by the clamping screw
- Stainless steel blade
- Tough rubber handle
- Centimeter/inch graduations

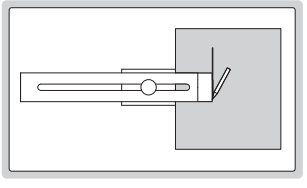


Code	Angle mark	Accuracy of angle
2281-360	15°, 30°, 45°, 60°, 90°	±1°

MARKING GAUGES

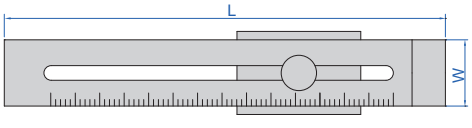


7120-200A

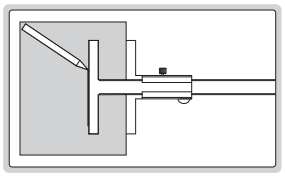


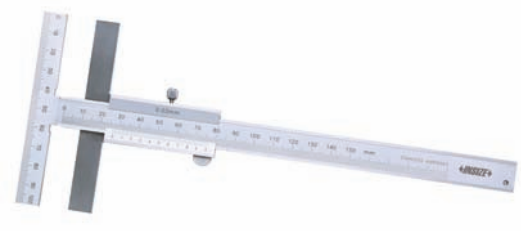
- Made of carbon steel
- Stainless steel chrome plated

Code	Range	Graduation	Accuracy	L	W
7120-200A	0-200mm	0.1mm	±0.1mm	250mm	40mm
7120-250A	0-250mm	0.1mm	±0.1mm	300mm	40mm
7120-300A	0-300mm	0.1mm	±0.1mm	350mm	40mm

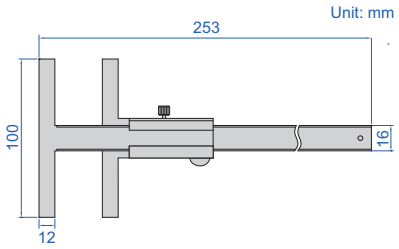


T-SHAPE MARKING GAUGE





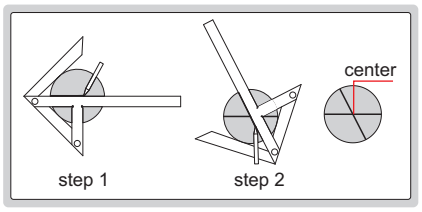
1275-150B



- Made of stainless steel
- Satin chrome plated reading surface

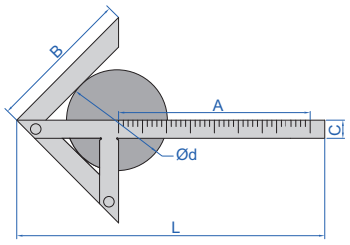
Code	Range	Graduation	Accuracy
1275-150B	0-150mm	0.02mm	±0.04mm

CENTER MARKING GAUGES





7205-100



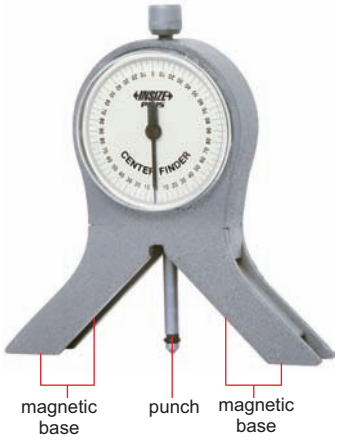
- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated

Code	Size (AxB)	Diameter of shafts (Ød)	Accuracy	C	L
7205-100	100x70mm	4-90mm	±0.15mm	12mm	153mm
7205-150	150x130mm	4-190mm	±0.15mm	15mm	245mm
7205-200	200x150mm	6-220mm	±0.15mm	15mm	310mm
7205-300	300×180mm	6-270mm	±0.15mm	20mm	435mm

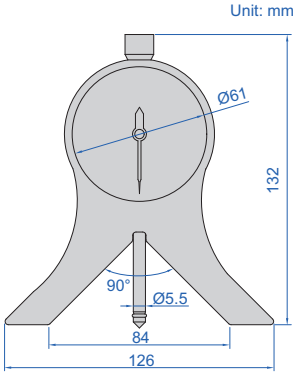
VIDEO

LOCATOR

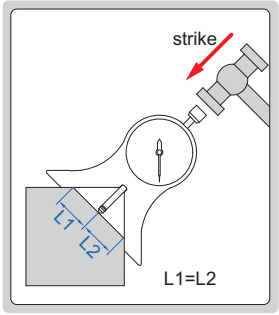
INSIZE PLUS



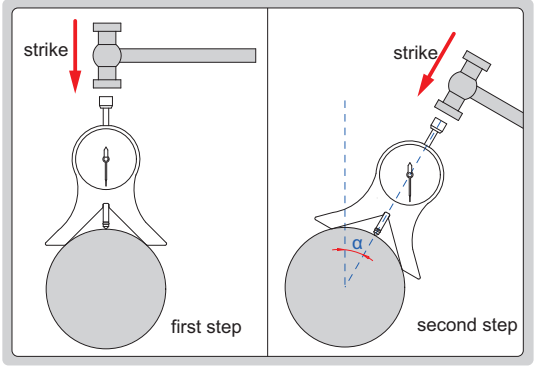
2849-90



mark the center position



mark the angle on cylindrical workpieces

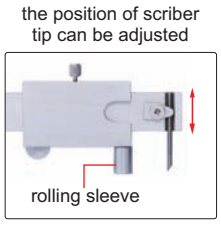


- Mark the position when drilling, milling or welding, suitable for cylindrical and rectangular workpieces
- The punch hardness is HRC59-63
- Optional accessory: punch (code **2849-P1**)

Code	Range	Graduation	Accuracy	Dial reading
2849-90	4×90°	1°	±1°	0-90-0-90-0

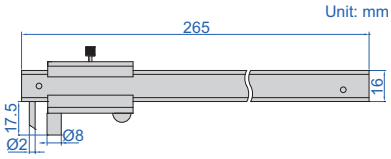
SCRIBING CALIPER

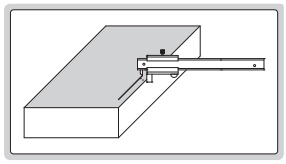
- Made of stainless steel
- Satin chrome plated reading surface
- Carbide scriber tip
- Optional accessory: carbide scriber tip (code **SP-SCRIBER-7202**)





7202-200A





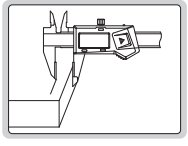
Code	Range	Graduation	Accuracy
7202-200A	0-200mm/0-8"	0.1mm, 1/128"	±0.1mm

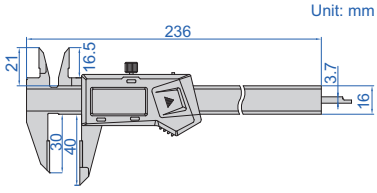
DIGITAL SCRIBING CALIPER

- Non waterproof
- The carbide-tipped jaws facilitate scribing on workpieces
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel



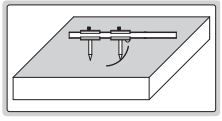
1166-150A





Code	Range	Accuracy
1166-150A	0-150mm/0-6"	±0.03mm

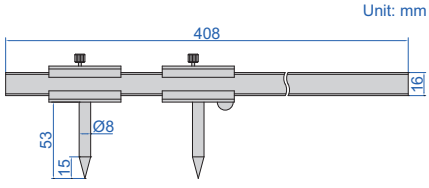
SCRIBING CALIPER





7203-300A

- Made of stainless steel
- Satin chrome plated reading surface
- Hardened scriber tips



Code	Range	Graduation	Accuracy
7203-300A	51-300mm	0.1mm	±0.1mm

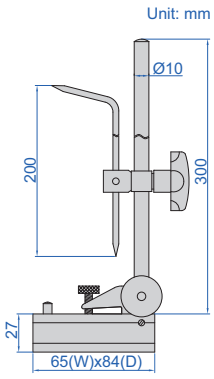
HEIGHT SCRIBER

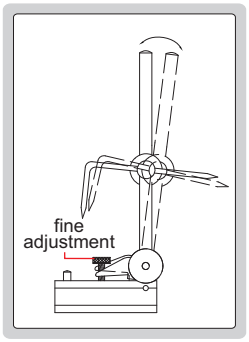
- Grooved bottom for cylinders
- Two pins to be set against the edge of surface plate

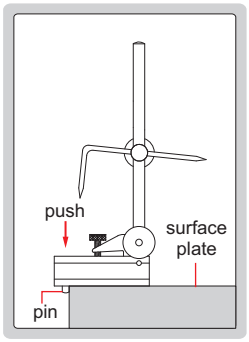
Code
6990-300A



6990-300A







SCRIBERS



7230



7231

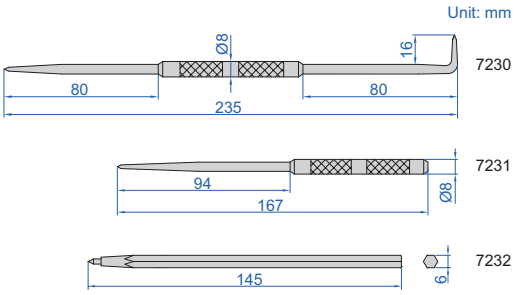


7232

clip

- **7230** and **7231** are nickel plated, **7232** is zinc-plated

Code	Tip
7230	hardened tips
7231	hardened tip
7232	carbide tip



PRECISION SCREWDRIVER SET CODE ISGF-0901

- Includes:
  4pcs "–": 1.4mm, 2.0mm, 2.4mm, 3.0mm
  2pcs "+": 0#, 1#
- Rotating cap
- Material: CRV, hardness: HRC52~56



ISGF-0901

packaging



LED FLASHLIGHT CODE ISGF-0501

- Toshiba high performance LED
- Powered by 3x AAA batteries (batteries are not included)
- Max output: 120 lumens
- Battery life: 4 hours
- Beam distance: 70 meters
- IP54 dust/waterproof

packaging





ISGF-0501

MEASURING TOOLS REPAIR TOOL SET

- For repairing of calipers, micrometers and indicators
- Including:
  1) Slotted screwdriver, 1.4×20mm
  2) Slotted screwdriver, 2.0×20mm
  3) Slotted screwdriver, 2.4×25mm
  4) Slotted screwdriver, 3.0×25mm
  5) Cross screwdriver, 0#×25mm
  6) Cross screwdriver, 1#×25mm
  7) Magnetizer and demagnetizer
  8) Pointed tweezer, 125mm
  9) Mini needle-nose pliers, 5"
  10) Extended flat head allen wrench, 1.5×80mm
  11) Extended flat head allen wrench, 2.5×94mm
  12) Extended flat head allen wrench, 3×92mm
  13) Needle puller, 3pcs
  14) Copper hammer, 126g
  15) Copper rod, Ø10×60mm
  16) Dial face suction cup, Ø30mm
  17) Oil stone, 100×20×10mm
  18) Cleaning brush
  19) Micrometer wrench
  20) Three point inside micrometer rod wrench, 2pcs
  21) Anti rust oil, 30ml
  22) Special anti rust oil for micrometers, 30ml
  23) Dust free cloth, 5pcs



7338-1

Code
7338-1

2-PIECE MEASURING TOOL SETS

- Includes:
  1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128" (code **1205-150S**) for **5021**, graduation 0.02mm/0.001" (code **1205-1502S**) for **5021-2**
  2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)

Code	Remark
5021	vernier caliper, graduation 0.05mm/1/128" (code **1205-150S**)
5021-2	vernier caliper, graduation 0.02mm/0.001" (code **1205-1502S**)



5021

2-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
  2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25A**)

Code
5022



5022

2-PIECE MEASURING TOOL SET



5023

- Includes:
  1) Dial test indicator, range 0.8mm, graduation 0.01mm (code **2380-08**)
  2) Magnetic stand

Code
5023

2-PIECE MEASURING TOOL SET



5024

- Includes:
  1) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
  2) Magnetic stand (code **6201-60**)

Code
5024

3-PIECE MEASURING TOOL SET



5031



- Includes:
  1) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
  2) Flex arm
  3) Locking pliers, adjustable jaw opening from 0 to 25mm

Code
5031

3-PIECE MEASURING TOOL SET



5032

dust free gloves and dust free cloth



- Includes:
  1) Vernier caliper, range 0-150mm graduation 0.02mm (code **1205-1501S**)
  2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
  3) Steel ruler, range 150mm/6", graduation 0.5mm, 1mm, 1/64", 1/32", 1/16" (code **7110-150**)
  4) Dust free gloves and dust free cloth

Code
5032

4-PIECE MEASURING TOOL SETS

- Includes:
  1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128" (code **1205-150S**) for **5041**, graduation 0.02mm/0.001" (code **1205-1502S**) for **5041-2**
  2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
  3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
  4) Steel ruler, 150mm/6" (code **7110-150**)

Code	Remark
5041	vernier caliper, graduation 0.05mm/1/128" (code **1205-150S**)
5041-2	vernier caliper, graduation 0.02mm/0.001" (code **1205-1502S**)



5041

4-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
  2) Outside micrometer, range 0-25mm, graduation 0.01mm, (code **3202-25A**)
  3) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
  4) Steel rule, 150mm/6" (code **7110-150**)

Code
5042



5042

5-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005", (code **1108-150**)
  2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
  3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
  4) Magnetic stand (code **6201-60**)
  5) Micrometer stand (code **6300**)

Code
5051



5051

5-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
  2) Digital outside micrometer, range 0-25mm/0-1", resolution 0.001mm/0.00005" (code **3109-25A**)
  3) Digital indicator, range 12.7mm/0.5", resolution 0.01mm/0.0005" (code **2112-10**)
  4) Magnetic stand (code **6201-60**)
  5) Micrometer stand (code **6300**)

Code
5052



5052

6-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
  2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
  3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10FA**)
  4) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
  5) Scriber (code **7230**)
  6) Steel rule, 150mm/6" (code **7110-150**)

Code
5061



5061

6-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-150mm/0-6" resolution 0.01mm/0.0005" (code **1108-150**)
  2) Outside micrometer, range 0-25mm graduation 0.01mm (code **3202-25A**)
  3) 90° beveled edge square, 100x70mm grade 00 (code **4790-0100**)
  4) Straight edge, 100mm (code **4700-100**)
  5) Spring divider, 150mm (code **7260-150**)
  6) Steel rule, 200mm/8" (code **7110-200**)

Code
5062



5062

6-PIECE MEASURING TOOL SETS

- Includes:
  1) Vernier caliper, range 0-150mm/0-6", graduation 0.05mm/1/128" (code **1205-150S**) for **5063**, graduation 0.02mm/0.001" (code **1205-1502S**) for **5063-2**
  2) Outside micrometer, range 0-25mm graduation 0.01mm (code **3202-25A**)
  3) 90° beveled edge square, 100x70mm grade 00 (code **4790-0100**)
  4) Straight edge, 100mm (code **4700-100**)
  5) Spring divider, 150mm (code **7260-150**)
  6) Steel ruler, 200mm/8" (code **7110-200**)

Code	Remark
5063	vernier caliper, graduation 0.05mm/1/128" (code **1205-150S**)
5063-2	vernier caliper, graduation 0.02mm/0.001" (code **1205-1502S**)



5063

8-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
  2) Digital outside micrometer, range 0-25mm/0-1", graduation 0.001mm/0.00005" (code **3109-25A**)
  3) Dial test indicator, range 0.8mm, graduation 0.01mm (code **2380-08**)
  4) Magnetic stand (code **6201-60**)
  5) Parallel/square set, 75x50x25mm (code **6531-25**)
  6) Steel rule, 150mm/6" (code **7110-150**)
  7) Depth base attachment (code **6140**)
  8) Zero setting bar for depth base attachment

Code
5081



5081

9-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
  2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
  3) Protractor, range 0-180°, graduation 1° (code **4799-180**)
  4) Pitch gauge, range 0.25-7mm, 24 pcs, metric 60° thread (code **4820-124**)
  5) Radius gauge, range 1-7mm (code **4801-17**)
  6) Feeler gauge, range 0.05-1.00mm, 20 pcs (code **4602-20**)
  7) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
  8) Scriber (code **7230**)
  9) Steel rule, 150mm/6" (code **7110-150**)

Code
5091



5091

13-PIECE MEASURING TOOL SET

- Includes:
  1) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.0005" (code **1108-150**)
  2) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3202-25A**)
  3) Dial indicator, range 10mm, graduation 0.01mm (code **2308-10A**)
  4) Magnetic stand (code **6201-60**)
  5) Protractor, range 0-180°, graduation 1° (code **4799-180**)
  6) Pitch gauge, range 0.25-7mm, 24 pcs, metric 60° thread (code **4820-124**)
  7) Radius gauge, range 1-7mm (code **4801-17**)
  8) Feeler gauge, range 0.05-1.00mm, 20 pcs (code **4602-20**)
  9) 90° beveled edge square, 100x70mm, grade 0 (code **4790-1000**)
  10) Scriber (code **7230**)
  11) Steel rule, 150mm/6" (code **7110-150**)
  12) Depth base attachment (code **6140**)
  13) Zero setting bar for depth base attachment

Code
5013



5013

SET-UP TOOLS 16



Granite Surface Plates
Page 545



Stands For Granite Surface Plates
Page 546



Jack Sets For Granite Surface Plates
Page 546



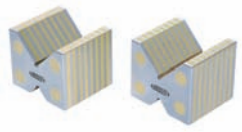
Magnetic Rectangular Blocks
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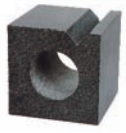
V-Blocks
Page 547-551



Magnetic V-Blocks
Page 551-552



Magnetic Induction V-Blocks
Page 553



Squares With V Groove
Page 554



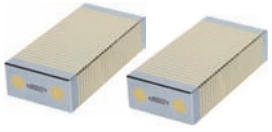
Permanent Magnetic Chucks
Page 555



Parallels
Page 555-558



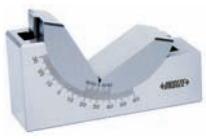
Parallel/Square Sets
Page 559



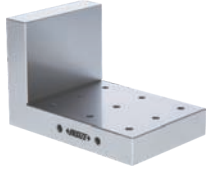
Magnetic Induction Parallel Sets
Page 559



Angle Plate Sets
Page 559-560



Adjustable Angle Blocks
Page 560



Right Angle Plates
Page 560-561



Sine Bars
Page 561-562

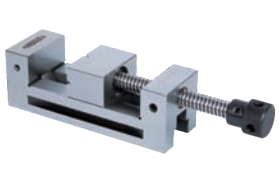
16 SET-UP TOOLS



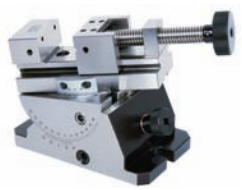
Sine Tables
Page 562-563



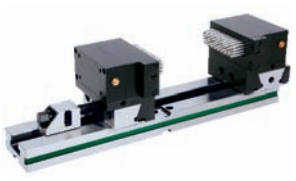
Precision Sine Vises
Page 563-564



Precision Vises
Page 564-565



Precision Universal Vises
Page 565-566



Anvil Vises
Page 566



Stages
Page 567-570

GRANITE SURFACE PLATES

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING TO CUSTOMER'S REQUEST

INSPECTION CERTIFICATE

- Made of Indian granite, high hardness, free from deterioration or dimensional change over time, minimal changes in dimension due to temperature changes
- Meet DIN876, grade 00 is for inspection room or lab, grade 0 is for workshop
- Optional accessory:
  stand for granite surface plate (code **6902**),
  jack for granite surface plate (code **6903-B**)



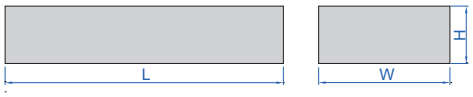
6900-132

Physical characteristics of granite

Shore hardness	94HS
Flexural strength	28MPa
Compressive strength	236MPa
Elastic modulus	9.88×10^{4}MPa
Poisson's ratio	0.33
Volume density	3000kg/m^3
Water absorption rate	0.05%
Linear expansion coefficient	6×10^{-6}/°C

Grade 00

Code	Size (L×W×H)	Flatness	Weight	Max. load
6900-132*	300×200×60mm	2.7μm	11kg	30kg
6900-142*	400×250×60mm	2.9μm	18kg	50kg
6900-144*	400×400×60mm	3.1μm	29kg	60kg
6900-153*	500×315×70mm	3.2μm	33kg	60kg
6900-164*	630×400×80mm	3.5μm	60kg	65kg
6900-166*	630×630×100mm	3.8μm	119kg	75kg
6900-185*	800×500×100mm	3.9μm	120kg	100kg
6900-1106*	1000×630×140mm	4.4μm	265kg	200kg
6900-1107*	1000×750×150mm	4.5μm	337kg	300kg
6900-1101*	1000×1000×150mm	4.8μm	450kg	400kg
6900-1128*	1200×800×160mm	4.9μm	461kg	500kg
6900-1161*	1600×1000×180mm	5.8μm	864kg	600kg
6900-1201*	2000×1000×220mm	6.5μm	1320kg	650kg
6900-1202*	2000×1500×250mm	7.0μm	2250kg	750kg

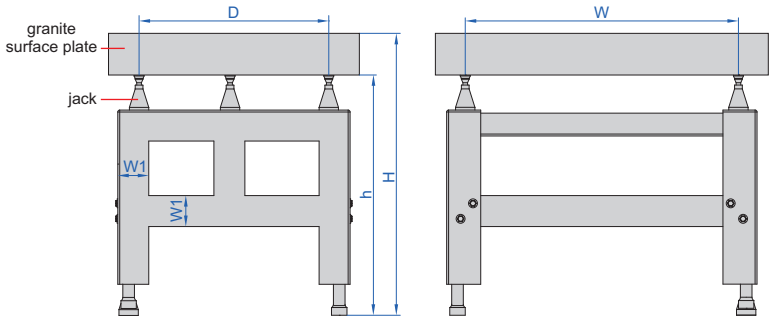


Grade 0

Code	Size (L×W×H)	Flatness	Weight	Max. load
6900-032*	300×200×60mm	5.4μm	11kg	60kg
6900-042*	400×250×60mm	5.9μm	18kg	100kg
6900-044*	400×400×60mm	6.3μm	29kg	120kg
6900-053*	500×315×70mm	6.4μm	33kg	120kg
6900-064*	630×400×80mm	7.0μm	60kg	130kg
6900-066*	630×630×100mm	7.6μm	119kg	150kg
6900-085*	800×500×100mm	7.8μm	120kg	200kg
6900-0106*	1000×630×140mm	8.7μm	265kg	400kg
6900-0107*	1000×750×150mm	9.0μm	337kg	600kg
6900-0101*	1000×1000×150mm	9.7μm	450kg	800kg
6900-0128*	1200×800×160mm	9.8μm	461kg	1000kg
6900-0161*	1600×1000×180mm	11.5μm	864kg	1200kg
6900-0201*	2000×1000×220mm	12.9μm	1320kg	1300kg
6900-0202*	2000×1500×250mm	14.0μm	2250kg	1500kg

*Supplied with manufacturer inspection certificate

STANDS FOR GRANITE SURFACE PLATES





6902-64A

- For medium size granite surface plates
- 5 jacks are included
- Adjusting range of jacks: 25mm
- One foot on the bottom is adjustable

Low stands **(mm)**

Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)	W1
6902-64A	630×400×80mm (code **6900-064** and **6900-164**)	352	224	775-800	695-720	80
6902-66A	630×630×100mm (code **6900-066** and **6900-166**)	352	352	775-800	675-700	80
6902-85A	800×500×100mm (code **6900-085** and **6900-185**)	448	280	775-800	675-700	80
6902-106A	1000×630×140mm (code **6900-0106** and **6900-1106**)	560	352	755-780	615-640	80
6902-107A	1000×750×150mm (code **6900-0107** and **6900-1107**)	560	420	755-780	605-630	80
6902-101A	1000×1000×150mm (code **6900-0101** and **6900-1101**)	560	560	755-780	605-630	80
6902-128A	1200×800×160mm (code **6900-0128** and **6900-1128**)	672	448	755-780	595-620	80
6902-161A	1600×1000×180mm (code **6900-0161** and **6900-1161**)	896	560	755-780	575-600	100
6902-201A	2000×1000×220mm (code **6900-0201** and **6900-1201**)	1120	560	755-780	535-560	100
6902-202A	2000×1500×250mm (code **6900-0202** and **6900-1202**)	1120	840	755-780	505-530	100

High stands **(mm)**

Code	For granite surface plate	W	D	H (with granite surface plate)	h (without granite surface plate)	W1
6902-64H	630×400×80mm (code **6900-064** and **6900-164**)	352	224	1000-1025	920-945	80
6902-66H	630×630×100mm (code **6900-066** and **6900-166**)	352	352	1000-1025	900-925	80
6902-85H	800×500×100mm (code **6900-085** and **6900-185**)	448	280	1000-1025	900-925	80
6902-106H	1000×630×140mm (code **6900-0106** and **6900-1106**)	560	352	1000-1025	860-885	80
6902-107H	1000×750×150mm (code **6900-0107** and **6900-1107**)	560	420	1000-1025	850-875	80
6902-101H	1000×1000×150mm (code **6900-0101** and **6900-1101**)	560	560	1000-1025	850-875	80
6902-128H	1200×800×160mm (code **6900-0128** and **6900-1128**)	672	448	1000-1025	840-865	80
6902-161H	1600×1000×180mm (code **6900-0161** and **6900-1161**)	896	560	1000-1025	820-845	100
6902-201H	2000×1000×220mm (code **6900-0201** and **6900-1201**)	1120	560	1000-1025	780-805	100
6902-202H	2000×1500×250mm (code **6900-0202** and **6900-1202**)	1120	840	1000-1025	750-775	100

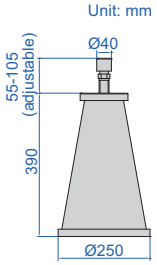
JACK SET FOR GRANITE SURFACE PLATES

- 5 jacks per set
- Adjustable height
- For large granite surface plates:
  2000×1000×220mm
  (code **6900-0201** and **6900-1201**)
  2000×1500×250mm
  (code **6900-0202** and **6900-1202**)

Code
6903-B

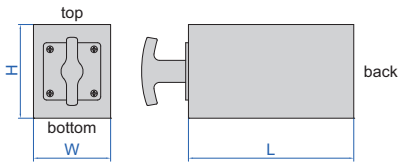


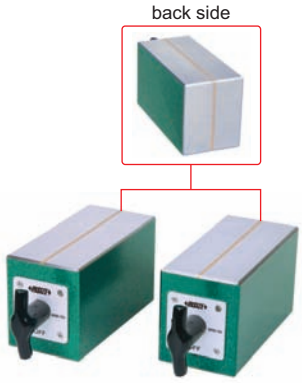
6903-B



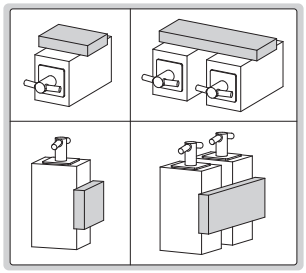
HARDENED SURFACES | HIGH PRECISION | STRONG MAGNETIC FORCE

MAGNETIC RECTANGULAR BLOCKS





6898-150



- For grinding, light milling, drilling and inspection of round and square jobs
- Hardened, high accuracy, strong magnetic force
- Working surfaces are hardened to HRC58-62
- Magnetic force on top, bottom and back sides
- Supplied in matched pair

Code	Size (L×W×H)	Magnetic force	Parallelism of top to bottom side	Squareness of top and bottom to back side	Height difference of a matched pair
6898-100	100×70×70mm	100kgf	5μm	5μm	5μm
6898-150	150×70×85mm	125kgf	5μm	5μm	5μm

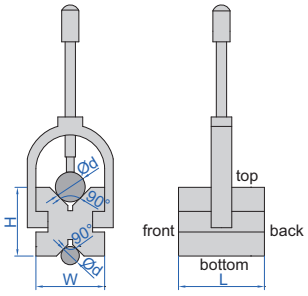
V-BLOCK SETS



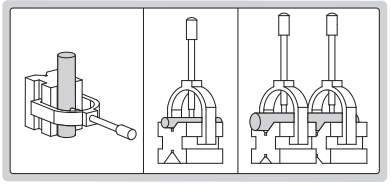
6896-10



6896-11



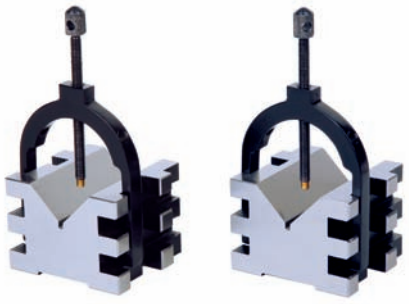
- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts (except **6896-10**)



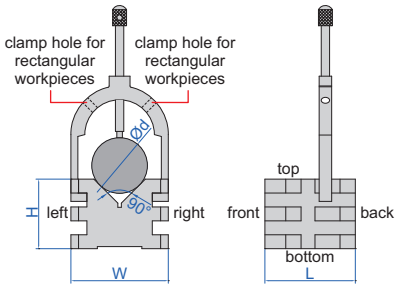
Code	Size (L×W×H)	Range of shafts (Ød)	Parallelism of both V grooves to top and bottom sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
6896-10	25x20×20mm	3-20mm	3μm	3μm	3μm
6896-11	50×40×40mm	5-30mm	5μm	5μm	5μm
6896-12	80×63×63mm	7-63mm	5μm	5μm	5μm
6896-13	100×80×80mm	7-80mm	5μm	5μm	5μm
6896-14	70×140×140mm	9-140mm	5μm	5μm	5μm

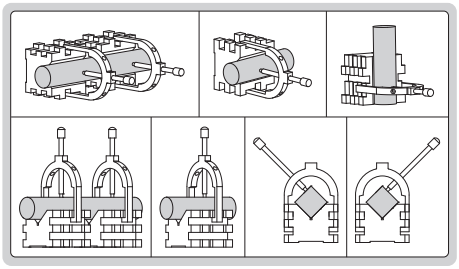
V-BLOCK SET

SIDE LIE-DOWN USE IS POSSIBLE



6802-1





- Hold cylindrical or rectangular workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- Applicable for rectangular workpieces with thickness: ≤35mm

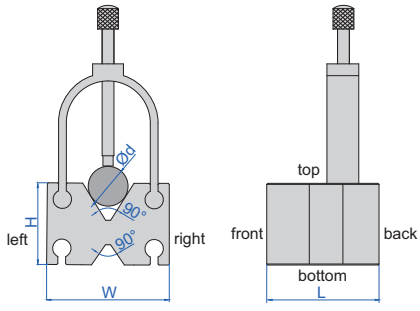
Code	Size (L×W×H)	Range of shafts (Ød)	Parallelism of V groove to top, bottom, left, right sides	Squareness of V groove to front and back sides	Height difference of a matched pair
6802-1	65×70×50mm	5-50mm	5μm	5μm	5μm

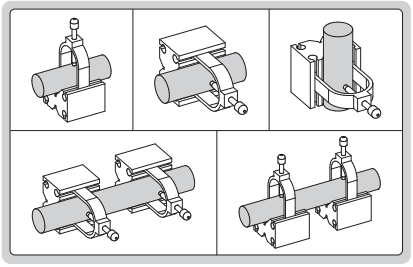
V-BLOCK SETS

SIDE LIE-DOWN USE IS POSSIBLE



6803-1



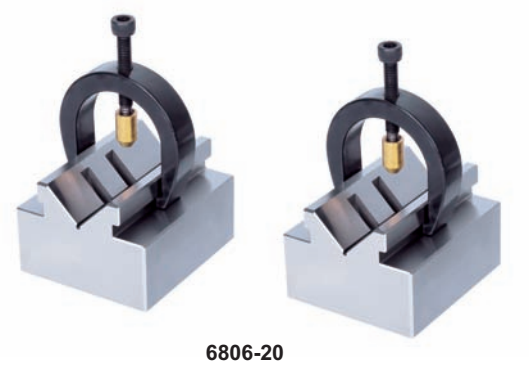


- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- V groove on the top for large shafts
- V groove on the bottom for small shafts

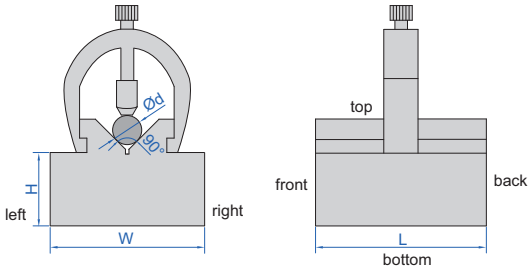
Code	Size (L×W×H)	Range of shafts (Ød)	Parallelism of both V grooves to top, bottom, left, right sides	Squareness of both V grooves to front and back sides	Height difference of a matched pair
6803-1	55×60×40mm	4-35mm	5μm	5μm	5μm
6803-2	65×70×45mm	4-47mm	5μm	5μm	5μm

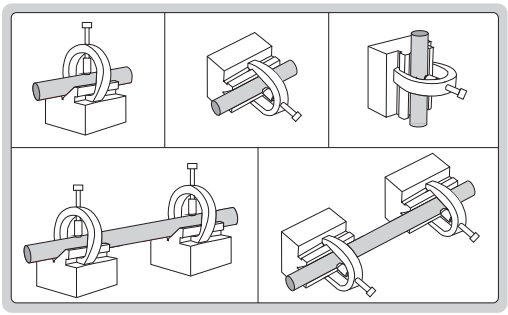
SIDE LIE-DOWN USE IS POSSIBLE

V-BLOCK SET



6806-20

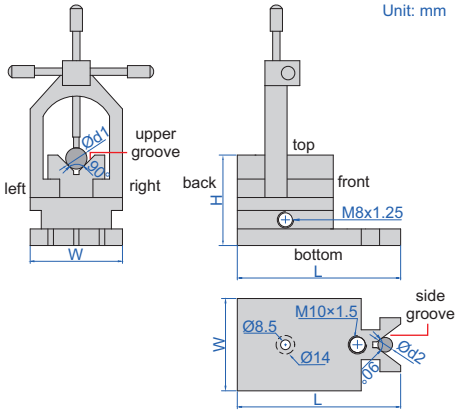




- Hold cylindrical workpieces for inspection and machining
- Two V-blocks per set
- Made of alloy steel
- Hardened to HRC60±2
- Applicable for cylinder with diameter (Ød): 3-20mm

Code	Size (L×W×H)	Parallelism of V groove to bottom, left, right sides	Squareness of V groove to front and back sides	Height difference of a matched pair
6806-20	70×63×31mm	5μm	5μm	5μm

V-BLOCK

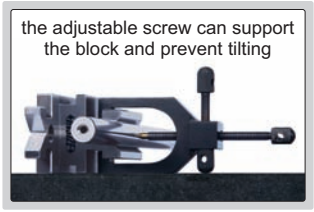




6804-M2



side groove is for shouldered studs and pins

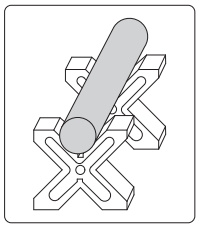


- Hold cylindrical workpieces for inspection and machining
- Made of alloy steel
- Hardened to HRC60±2

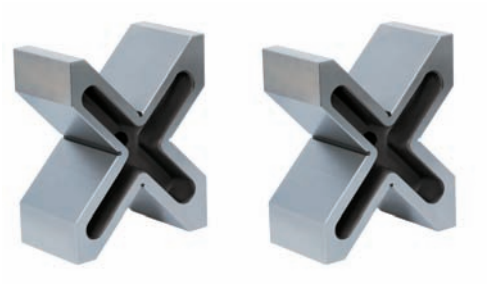
Code	Size (L×W×H)	Range of shafts (Ød1 and Ød2)	Parallelism of upper groove to bottom, left and right sides	Squareness of upper groove to back side	Parallelism of side groove to back side
6804-M2	90×48×48mm	5-33mm	5μm	5μm	5μm

16

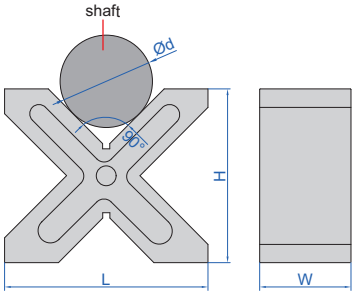
V-BLOCK SETS



- For positioning cylindrical workpieces
- Two V-blocks per set
- Each V-block has four 90° V-grooves
- Cast iron, hardness HB170-240

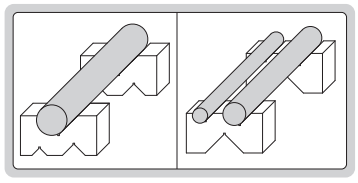


6805-2



Code	Size (L×H×W)	Range of shafts (Ød)	Parallelism of four V grooves to all sides	Height difference of a matched pair
6805-1	150×130×75mm	8-120mm	15μm	20μm
6805-2	200×170×90mm	12-180mm	15μm	20μm

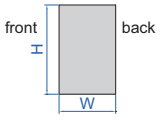
V-BLOCK SETS

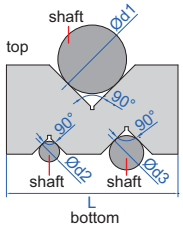


- Two V-blocks per set
- Made of hardened tool steel



6887-3

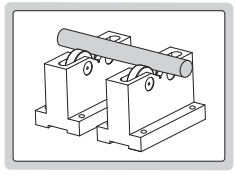




Code	Size (L×W×H)	Range of shafts (Ød1)	Range of shafts (Ød2)	Range of shafts (Ød3)
6887-1	50×19×24mm	3-32mm	3-16mm	3-22mm
6887-2	75×24×35mm	3-50mm	3-20mm	3-32mm
6887-3	100×33×52mm	3-68mm	3-26mm	3-40mm
6887-4	125×44×69mm	3-87mm	3-34mm	3-50mm

Code	Parallelism of three V grooves to top and bottom sides	Height difference of a matched pair
6887-1	5μm	5μm
6887-2	5μm	5μm
6887-3	5μm	5μm
6887-4	5μm	5μm

ROLLER BEARING V-BLOCK SETS

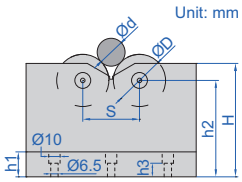


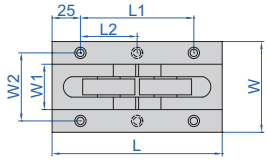
- Runout accuracy: 5μm
- Parallelism of bearings to bottom: 12μm
- Two V-blocks per set
- Workpieces don't get damaged due to bearings
- Suitable for heavy workpieces



6888-1

Unit: mm



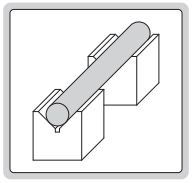


Code	Size (L×W×H)	Code of bearings	Diameter of bearings (ØD)	Range of shafts (Ød)	Load capacity
6888-1	150×60×100mm	16004 ZZ	42mm	25-70mm	500kg
6888-2	150×80×100mm	6303 ZZ	47mm	5-55mm	1000kg
6888-3	230×100×150mm	6306 ZZ	72mm	70-200mm	1000kg

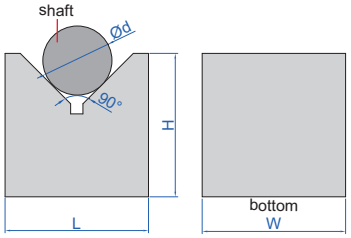
(mm)

Code	W1	W2	h1	h2	h3	L1	L2	S
6888-1	22	44	20	85	12	100	–	60
6888-2	40	60	22	85	12	100	–	50
6888-3	60	80	30	124	20	180	90	120

GRANITE V-BLOCK SETS







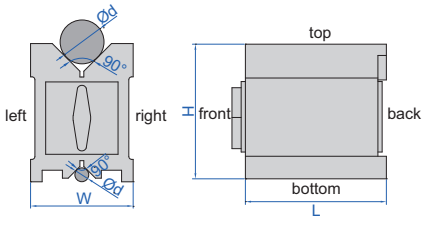
- Two V-blocks per set

6897-1

Code	Size (L×W×H)	Range of shafts (Ød)	Parallelism of V groove to bottom	Height difference of a matchet pair
6897-1	70×50×70mm	6-70mm	4μm	5μm
6897-2	100×50×70mm	6-84mm	4μm	5μm

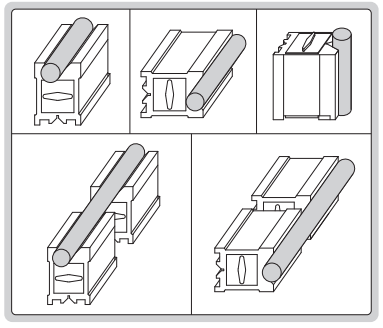
HARDENED SURFACES | HIGH PRECISION | STRONG MAGNETIC FORCE

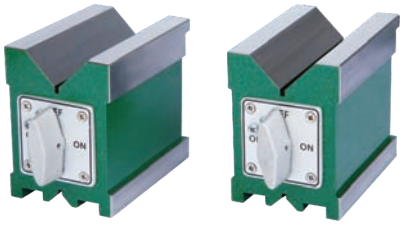
MAGNETIC V-BLOCKS (ADVANCED TYPE)





6889-11





6889-1

- Hardened, high accuracy, strong magnetic force, for grinding, light milling, drilling and inspection of round and square workpieces
- All working surfaces are hardened to HRC60±2
- Magnetic force on top, bottom and two V grooves
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Suitable for cast iron surface plates and granite surface plates

Individual

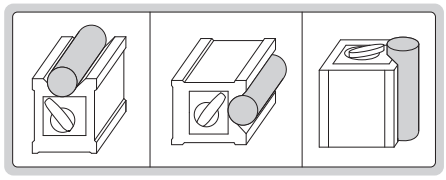
Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right sides	Squareness of V grooves to back side
6889-11	75×56×75mm	5-40mm	85kgf	5μm	5μm
6889-22	100×70×95mm	5-65mm	150kgf	5μm	5μm
6889-33	150×75×100mm	5-70mm	190kgf	6μm	6μm
6889-55	160×125×130mm	5-140mm	220kgf	12μm	12μm
6889-44	200×125×150mm	10-140mm	400kgf	12μm	12μm

Matched pair

Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right sides	Squareness of V grooves to back side	Height difference of a matched pair
6889-1	75×56×75mm	5-40mm	85kgf	5μm	5μm	5μm
6889-2	100×70×95mm	5-65mm	150kgf	5μm	5μm	5μm
6889-3	150×75×100mm	5-70mm	190kgf	6μm	6μm	6μm
6889-5	160×125×130mm	5-140mm	220kgf	12μm	12μm	12μm
6889-4	200×125×150mm	10-140mm	400kgf	12μm	12μm	12μm

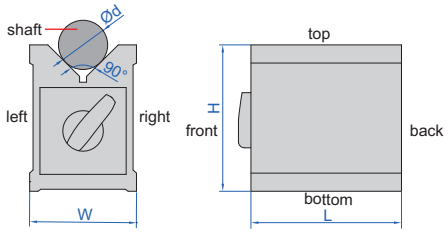
MAGNETIC V-BLOCKS

ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES, OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED





6890-702

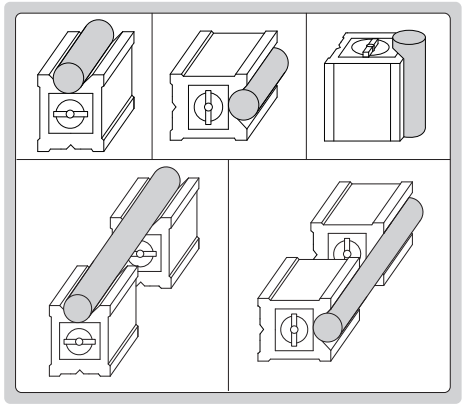


- Hold cylindrical workpieces for inspection and machining
- Supplied in single piece
- Not suitable for steel or iron surfaces, otherwise the magnetic force will be reduced

Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to top, bottom, left and right sides	Squareness of V groove to back side	Remark
6890-702	70×60×73mm	6-44mm	56kgf	10μm	10μm	not hardened
6890-702A	70×60×73mm	6-44mm	56kgf	10μm	10μm	hardened surfaces

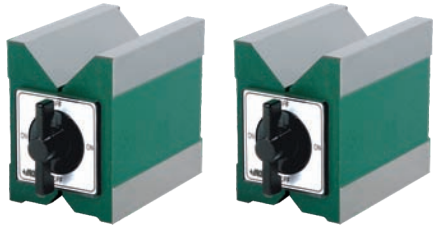
MAGNETIC V-BLOCKS

ATTENTION: NOT SUITABLE FOR STEEL OR IRON SURFACES, OTHERWISE THE MAGNETIC FORCE WILL BE REDUCED

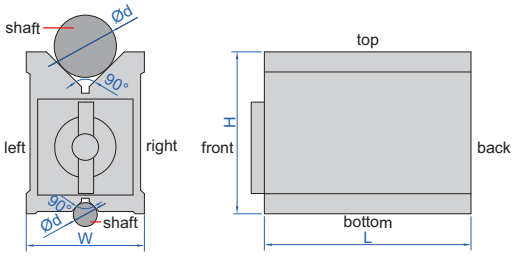




6801-1202



6801-2A



- Hold cylindrical workpieces for inspection and machining
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Not suitable for steel or iron surfaces, otherwise the magnetic force will be reduced

Individual

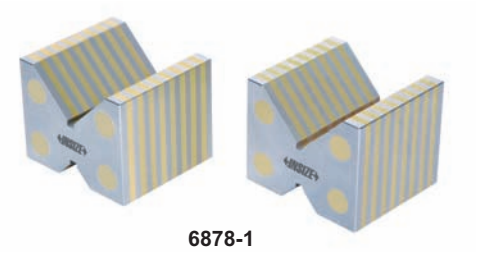
Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right side	Squareness of V grooves to back side	Remark
6801-1201	80×70×95mm	6-67mm	64kgf	10μm	10μm	not hardened
6801-1202	100×70×95mm	6-67mm	80kgf	10μm	10μm	
6801-1203	120×70×95mm	6-67mm	96kgf	10μm	10μm	
6801-1201A	80×70×95mm	6-67mm	64kgf	10μm	10μm	hardened surfaces
6801-1202A	100×70×95mm	6-67mm	80kgf	10μm	10μm	
6801-1203A	120×70×95mm	6-67mm	96kgf	10μm	10μm	

Matched pair

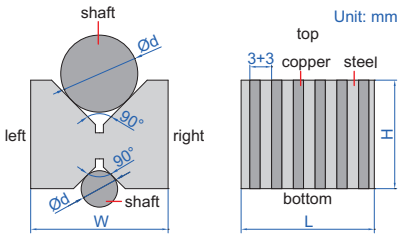
Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V grooves to top, bottom, left, right side	Squareness of V grooves to back side	Height difference of a matched pair	Remark
6801-1	80×70×95mm	6-67mm	64kgf	10μm	10μm	10μm	not hardened
6801-2	100×70×95mm	6-67mm	80kgf	10μm	10μm	10μm	
6801-3	120×70×95mm	6-67mm	96kgf	10μm	10μm	10μm	
6801-1A	80×70×95mm	6-67mm	64kgf	10μm	10μm	10μm	hardened surfaces
6801-2A	100×70×95mm	6-67mm	80kgf	10μm	10μm	10μm	
6801-3A	120×70×95mm	6-67mm	96kgf	10μm	10μm	10μm	

ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS

MAGNETIC INDUCTION V-BLOCK SET

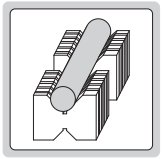


6878-1



- Hold cylindrical workpieces for inspection and machining
- To be used on magnetic chucks
- Two V-blocks per set
- V groove on the top for large shafts
- V groove on the bottom for small shafts
- Hardness HRB70
- Non-magnetic copper strips

Code	Size (L×W×H)	Range of shafts (Ød)	Pole pitch	Parallelism of both V grooves to top and bottom sides	Height difference of a matched pair
6878-1	52×58×46mm	6-56mm	3+3mm	10μm	10μm



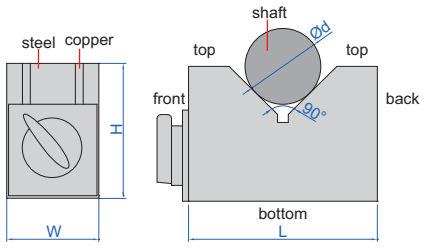
ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS

ATTENTION: LOW MAGNETIC FORCE

MAGNETIC V-BLOCK SETS

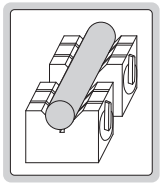


6891-1

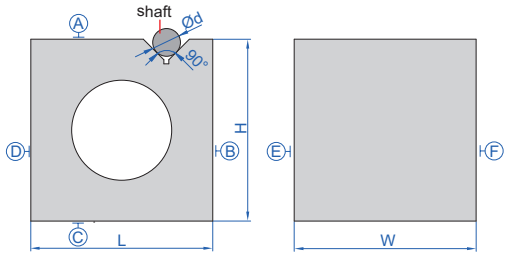


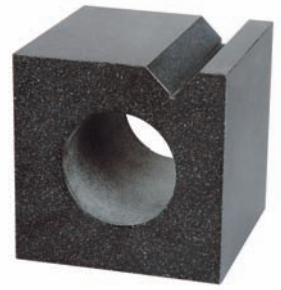
- Hold cylindrical workpieces for inspection, not suitable for machining due to low magnetic force
- Two V-blocks per set
- Hardness HRB70

Code	Size (L×W×H)	Range of shafts (Ød)	Magnetic force	Parallelism of V groove to bottom and back sides	Height difference of a matched pair
6891-1	70×40×50mm	6-46mm	15kgf	10μm	10μm
6891-3	150×50×100mm	6-125mm	21kgf	10μm	10μm



GRANITE SQUARE WITH V GROOVE



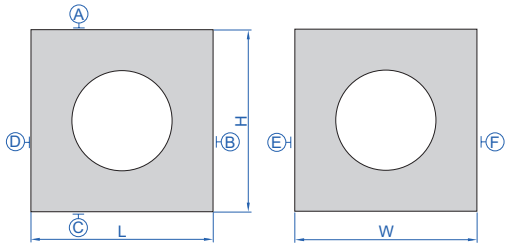


4142-200

- Parallelism and squareness of A, B, C, D, E and F: 6μm
- Parallelism and squareness of V groove to A, B, C, D, E and F: 6μm

Code	Size (L×W×H)	Range of shaft (Ød)
4142-200	200×200×200mm	9~70mm

GRANITE SQUARES





4145-200

- Made of Indian granite, high hardness, free from deterioration or dimensional change overtime, minimal changes in dimension due to temperature changes

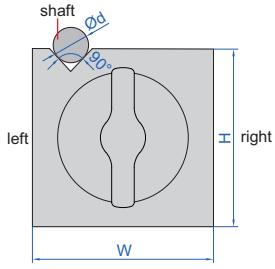
Code	Size (L×W×H)	Squareness of A, B, C, D, E and F	Parallelism and squareness of A, B, C, D, E and F
4145-200	200x200x200mm	1.5μm	2μm
4145-300	300×300×300mm	2μm	4μm

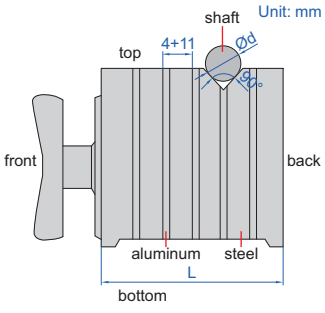
MAGNETIC SQUARE WITH V GROOVE

ATTENTION: NOT HARDENED, DO NOT ROTATE WORKPIECES ON V-BLOCKS



6539-100





- Hold flat and cylindrical workpieces for inspection and machining
- Magnetic force on top, left, right and V grooves
- Parallelism and squareness of top, bottom, left, right and back: 20μm
- Parallelism and squareness of V grooves to top, bottom, left, right and back: 20μm

Code	Size (L×W×H)	Magnetic force of V grooves		Magnetic force of top, left and right sides		Range of shafts (Ød)
		on granite surface plate	on cast iron plate	on granite surface plate	on cast iron plate	
6539-100	100×100×100mm	30kgf	25kgf	50kgf	30kgf	5-30mm

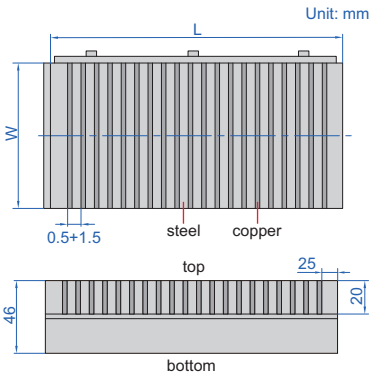
PERMANENT MAGNETIC CHUCKS

ATTENTION: NOT HARDENED



6537-400

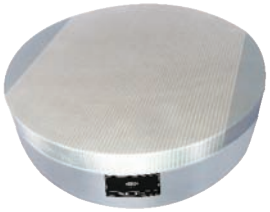
- The magnetic pole arrangement is dense and can hold thin and small workpieces



Code	Table size (L×W)	Magnetic force	Pole pitch	Parallelism of top to bottom
6537-175	175×100mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm
6537-250	250×125mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm
6537-150	150×150mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm
6537-300	300×150mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm
6537-350	350×150mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm
6537-401	400×150mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm
6537-451	450×150mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm
6537-400	400×200mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm
6537-450	450×200mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm
6537-500	500×200mm	8kgf/cm²	0.5+1.5mm	0.02mm/300mm

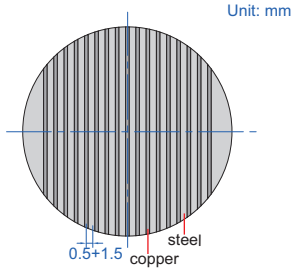
ROUND PERMANENT MAGNETIC CHUCKS

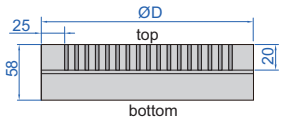
ATTENTION: NOT HARDENED



6542-300

- The magnetic pole arrangement is dense and can hold thin and small workpieces
- Parallelism of top to bottom: 0.02mm/300mm

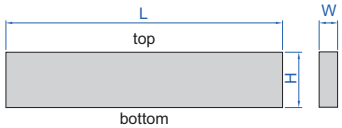




Code	Table size (ØD)	Magnetic force	Pole pitch
6542-125	125mm	8kgf/cm²	0.5+1.5mm
6542-160	160mm	8kgf/cm²	0.5+1.5mm
6542-200	200mm	8kgf/cm²	0.5+1.5mm
6542-250	250mm	8kgf/cm²	0.5+1.5mm
6542-300	300mm	8kgf/cm²	0.5+1.5mm

MAGNETIC PARALLEL SETS

- One side with magnets, can reduce clamping time
- Parallelism between top and bottom: 5μm
- Height difference of a matched pair: 5μm
- Made of alloy tool steel
- Hardened to HRC55-60





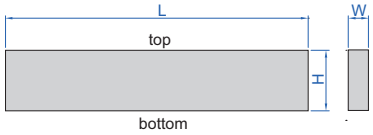
6509-125

Code	Parallels per set	Length (L)	Thickness (W)	Height (H)
6509-90	5 pairs	90mm	2.5mm	15, 22, 25, 30, 32mm
6509-125	5 pairs	125mm	2.5mm	15, 30, 35, 37,39mm
6509-150	5 pairs	150mm	2.5mm	25, 35, 40, 45, 47mm
6509-160	5 pairs	160mm	2.5mm	22, 30, 37, 42, 47mm
6509-200	5 pairs	200mm	2.5mm	25, 40, 47, 52, 57mm

PARALLEL SETS



6533-144



packaging

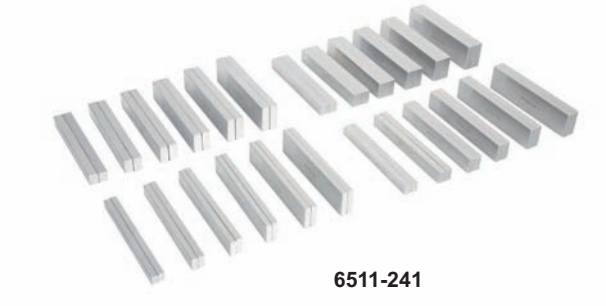


- Parallelism between top and bottom: 5μm
- Height difference of a matched pair: 5μm
- Made of alloy tool steel
- Hardened to HRC55-60

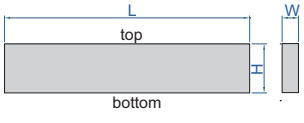
Code	Parallels per set	Length (L)	Thickness (W)	Height (H)
6533-6	6 pairs	200mm	9.5mm	35, 40, 45, 50, 55, 58mm
6533-8	8 pairs	160mm	8mm	12*, 17, 22, 25, 28, 32, 36, 38mm
6533-81	8 pairs	200mm	8mm	17, 22, 26, 28, 32, 36, 38, 42mm
6533-9	9 pairs	160mm	4mm	10*, 14*, 18, 22, 26, 30, 34, 38, 42mm
6533-10	10 pairs	150mm	3mm	13, 16, 19, 22, 25, 28, 31, 35, 38, 41mm
6533-144	14 pairs	150mm	10mm	14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 35, 40, 45, 50mm

*Parallelism between top and bottom and height difference of a matched pair of 12mm in **6533-8**, 10mm, 14mm in **6533-9** is 7μm

PARALLEL SETS



6511-241



packaging



- Parallelism between top and bottom: 5μm
- Height difference of a matched pair: 5μm
- Made of alloy tool steel
- Hardened to HRC55-60

Code	Parallels per set	Length (L)	Height (H)×Thickness (W)
6511-20	20 pairs	100mm	5×2*, 10×2, 15×2, 20×2, 6×3*, 11×3, 16×3, 21×3, 7×4*, 12×4, 17×4, 22×4, 8×5*, 13×5, 18×5, 23×5, 9×6*, 14×6, 19×6, 24×6mm
6511-24	24 pairs	125mm	11×8, 16×8, 21×8, 26×8, 31×8, 36×8, 13×10, 18×10, 23×10, 28×10, 33×10, 38×10, 15×12, 20×12, 25×12, 30×12, 35×12, 40×12, 17×14, 22×14, 27×14, 32×14, 37×14, 42×14mm
6511-241	24 pairs	150mm	11×8, 16×8, 21×8, 26×8, 31×8, 36×8, 13×10, 18×10, 23×10, 28×10, 33×10, 38×10, 15×12, 20×12, 25×12, 30×12, 35×12, 40×12, 17×14, 22×14, 27×14, 32×14, 37×14, 42×14mm

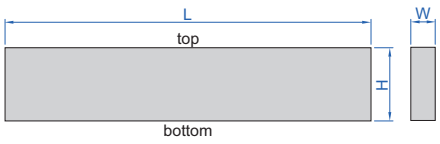
*Parallelism between top and bottom and height difference of a matched pair of 5×2mm, 6×3mm, 7×4mm, 8×5mm and 9×6mm in **6511-20** is 7μm

PARALLELS

- Made of alloy tool steel
- Hardened to HRC55-60
- Supplied in pair



6512-2210A



L=125mm	L=150mm	L=200mm			
Code	Code	Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-118	6512-1181	6512-1182	11×8mm	5μm	5μm
6512-168	6512-1681	6512-1682	16×8mm	5μm	5μm
6512-218	6512-2181	6512-2182	21×8mm	5μm	5μm
6512-268	6512-2681	6512-2682	26×8mm	5μm	5μm
6512-318	6512-3181	6512-3182	31×8mm	5μm	5μm
6512-368	6512-3681	6512-3682	36×8mm	5μm	5μm
6512-1310	6512-13101	6512-13102	13×10mm	5μm	5μm
6512-1810	6512-18101	6512-18102	18×10mm	5μm	5μm
6512-2310	6512-23101	6512-23102	23×10mm	5μm	5μm
6512-2810	6512-28101	6512-28102	28×10mm	5μm	5μm
6512-3310	6512-33101	6512-33102	33×10mm	5μm	5μm
6512-3810	6512-38101	6512-38102	38×10mm	5μm	5μm
6512-1512	6512-15121	6512-15122	15×12mm	5μm	5μm
6512-2012	6512-20121	6512-20122	20×12mm	5μm	5μm
6512-2512	6512-25121	6512-25122	25×12mm	5μm	5μm
6512-3012	6512-30121	6512-30122	30×12mm	5μm	5μm
6512-3512	6512-35121	6512-35122	35×12mm	5μm	5μm
6512-4012	6512-40121	6512-40122	40×12mm	5μm	5μm
6512-1714	6512-17141	6512-17142	17×14mm	5μm	5μm
6512-2214	6512-22141	6512-22142	22×14mm	5μm	5μm
6512-2714	6512-27141	6512-27142	27×14mm	5μm	5μm
6512-3214	6512-32141	6512-32142	32×14mm	5μm	5μm
6512-3714	6512-37141	6512-37142	37×14mm	5μm	5μm
6512-4214	6512-42141	6512-42142	42×14mm	5μm	5μm

L=100mm

Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-52	5×2mm	7μm	7μm
6512-102	10×2mm	5μm	5μm
6512-152	15×2mm	5μm	5μm
6512-202	20×2mm	5μm	5μm
6512-63	6×3mm	7μm	7μm
6512-113	11×3mm	5μm	5μm
6512-163	16×3mm	5μm	5μm
6512-213	21×3mm	5μm	5μm
6512-74	7×4mm	7μm	7μm
6512-124	12×4mm	5μm	5μm
6512-174	17×4mm	5μm	5μm
6512-224	22×4mm	5μm	5μm
6512-85	8×5mm	7μm	7μm
6512-135	13×5mm	5μm	5μm
6512-185	18×5mm	5μm	5μm
6512-235	23×5mm	5μm	5μm
6512-96	9×6mm	7μm	7μm
6512-146	14×6mm	5μm	5μm
6512-196	19×6mm	5μm	5μm
6512-246	24×6mm	5μm	5μm

L=150mm

Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-1410A	14×10mm	5μm	5μm
6512-1610A	16×10mm	5μm	5μm
6512-1810A	18×10mm	5μm	5μm
6512-2010A	20×10mm	5μm	5μm
6512-2210A	22×10mm	5μm	5μm
6512-2410A	24×10mm	5μm	5μm
6512-2610A	26×10mm	5μm	5μm
6512-2810A	28×10mm	5μm	5μm
6512-3010A	30×10mm	5μm	5μm
6512-3210A	32×10mm	5μm	5μm
6512-3510A	35×10mm	5μm	5μm
6512-4010A	40×10mm	5μm	5μm
6512-4510A	45×10mm	5μm	5μm
6512-5010A	50×10mm	5μm	5μm

To be continued

Continued from previous page

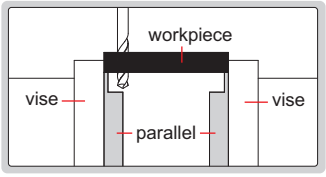
L=160mm

Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-104A	10×4mm	5μm	5μm
6512-144A	14×4mm	5μm	5μm
6512-184A	18×4mm	5μm	5μm
6512-224A	22×4mm	5μm	5μm
6512-264A	26×4mm	5μm	5μm
6512-304A	30×4mm	5μm	5μm
6512-344A	34×4mm	5μm	5μm
6512-384A	38×4mm	5μm	5μm
6512-424A	42×4mm	5μm	5μm
6512-128A	12×8mm	5μm	5μm
6512-178A	17×8mm	5μm	5μm
6512-228A	22×8mm	5μm	5μm
6512-258A	25×8mm	5μm	5μm
6512-288A	28×8mm	5μm	5μm
6512-328A	32×8mm	5μm	5μm
6512-368A	36×8mm	5μm	5μm
6512-388A	38×8mm	5μm	5μm

L=200mm

Code	H×W	Parallelism between top and bottom	Height difference of a matched pair
6512-178B	17×8mm	5μm	5μm
6512-228B	22×8mm	5μm	5μm
6512-268B	26×8mm	5μm	5μm
6512-288B	28×8mm	5μm	5μm
6512-328B	32×8mm	5μm	5μm
6512-368B	36×8mm	5μm	5μm
6512-388B	38×8mm	5μm	5μm
6512-428B	42×8mm	5μm	5μm

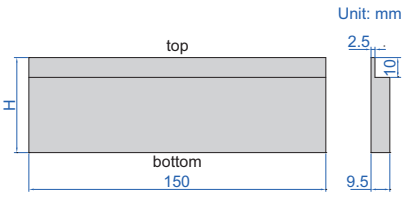
PARALLEL SET





6534-6

- Parallelism between top and bottom: 5μm
- Height difference of a matched pair: 5μm
- Made of alloy tool steel
- Hardened to HRC55-60

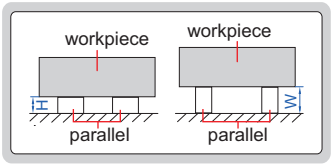


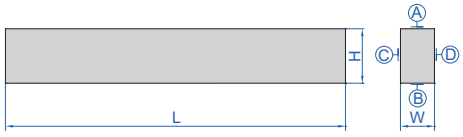
Code	Parallels per set	Height (H)
6534-6	6 pairs	25, 30, 35, 40, 45, 48mm

GRANITE PARALLEL SET



4143-250





- Made of granite, hard and no rusty, no dimensional change over time or temperature change
- Two parallels per set

Code	Size (L×W×H)	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
4143-250	250×25×40mm	3μm	3μm	3μm

PARALLEL/SQUARE SET

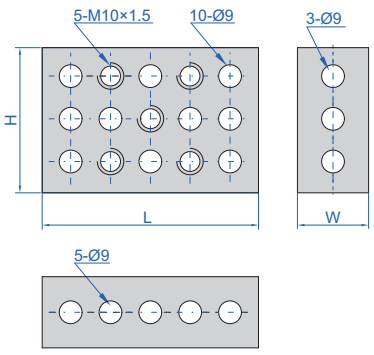
screws and wrench are included





6531-25

Unit: mm

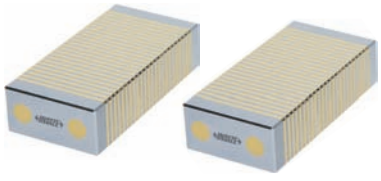


- Pairs of matched blocks for positioning and set-up
- Screws and wrench are included
- Hardness HRC60±2

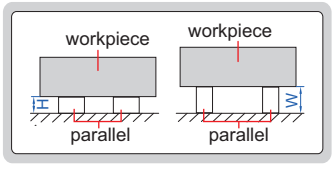
Code	Size (L×H×W)	Size accuracy	Squareness	Parallelism	Height difference of a matched pair
6531-25	75×50×25mm	5μm	5μm/25mm	5μm	5μm

MAGNETIC INDUCTION PARALLEL SET

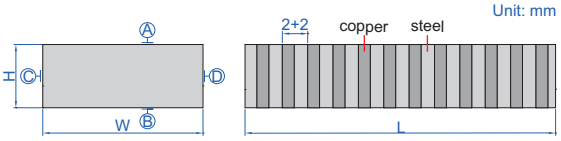
ATTENTION: NOT HARDENED



6879-1



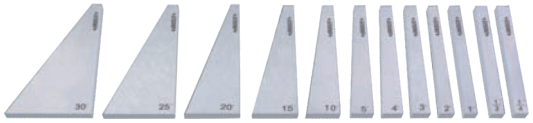
Unit: mm



- To be used on magnetic chucks
- Two parallels per set
- Hardness HRB70
- Non-magnetic copper strips

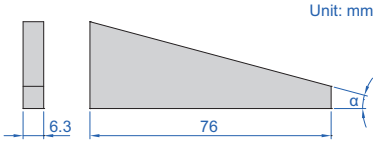
Code	Size (L×W×H)	Pole pitch	Parallelism between A and B	Parallelism between C and D	Height difference of a matched pair
6879-1	100×50×25mm	2+2mm	10μm	10μm	10μm

ANGLE PLATE SETS



4006-12

Unit: mm

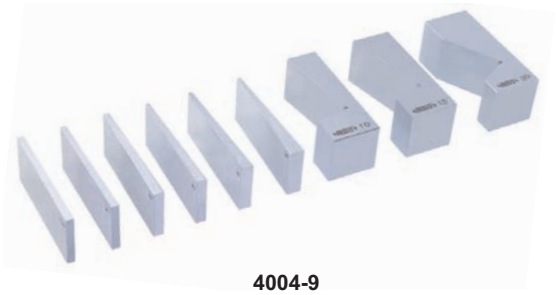


- For angle set-up in tooling, production and inspection
- Hardness HRC52

Code	Angle plates included	Angle α	Accuracy
4006-10	10 pcs	1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±20 seconds
4006-12	12 pcs	1/4°, 1/2°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°	±20 seconds

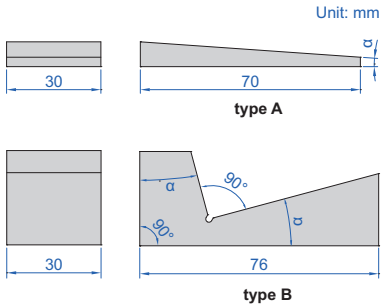
ANGLE PLATE SET

- For angle set-up in tooling, production and inspection
- Made of tool steel
- Hardness HRC55



4004-9

Unit: mm



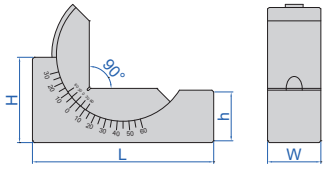
Code	Angle plates included	Angle α	Type	Accuracy
4004-9	9 pcs	1/2°, 1°, 2°, 3°, 4°, 5°	type A	±30 seconds
		10°, 15°, 30°	type B	±50 seconds

ADJUSTABLE ANGLE BLOCKS

- Made of hardened tool steel
- With locking screw
- Accuracy of angle: 15 minutes

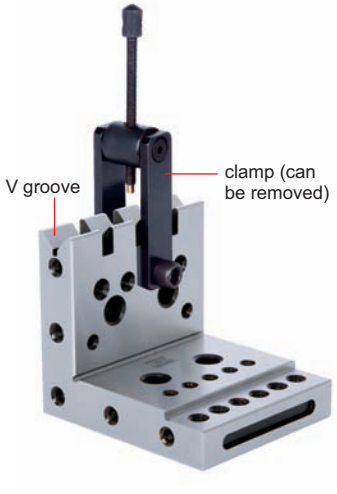


6535-30



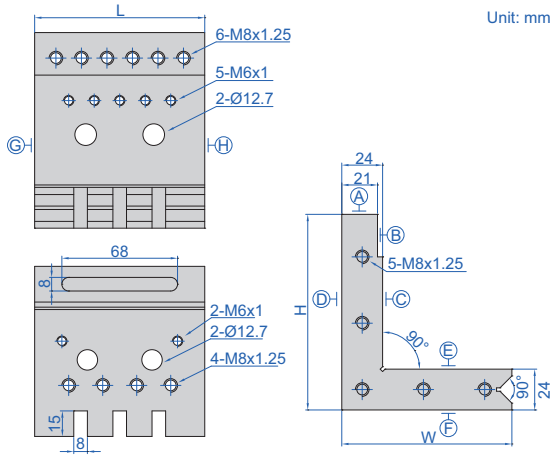
Code	Size (L×W×H)	h	Adjustable angle	Graduation of angle
6535-25	75×25×32mm	25mm	15°~0°~60°	10 minutes
6535-30	102×30×49mm	30mm	15°~0°~60°	10 minutes

RIGHT ANGLE PLATE



6547-1

Unit: mm

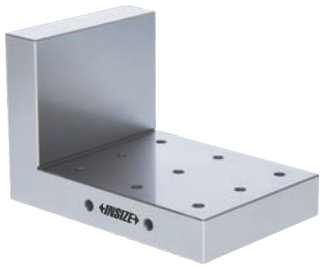


- Made of alloy steel
- Hardened to HRC60±2
- V groove for cylinders
- Parallelism and squareness between A, B, C, D, E, F, G and H: 10μm
- Parallelism and squareness of V groove to A, B, C, D, E, F, G and H: 10μm

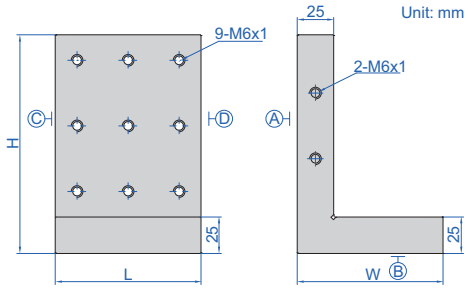
Code	Size (L×W×H)
6547-1	100×100×115mm

RIGHT ANGLE PLATE

- Made of tool steel
- Hardened to HRC60±2
- Squareness or parallelism between A, B, C and D: 5μm



6548-1



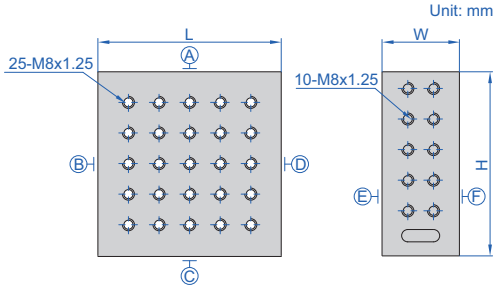
Code	Size (L×W×H)
6548-1	100×100×150mm

RIGHT ANGLE PLATE

- Made of tool steel
- Hardened to HRC56-58
- Parallelism between A, B, C, D, E and F: 3μm
- Squareness between A, B, C, D, E and F: 5μm



6549-1



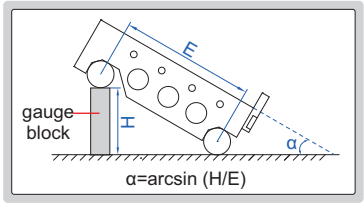
Code	Size (L×W×H)
6549-1	150×63×150mm

SINE BARS

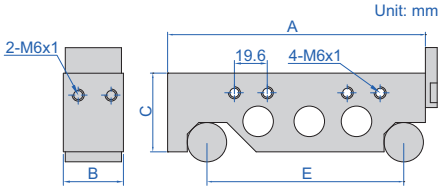
CAN BE CUSTOMIZED



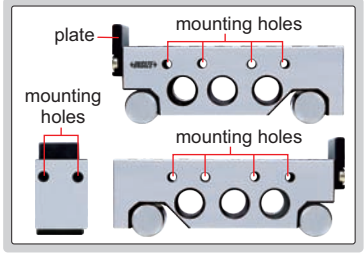
4155-100



- Made of alloy tool steel

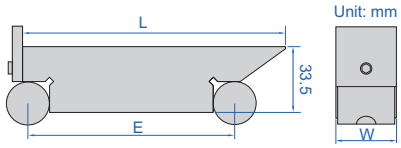


the front and back ends and two sides have mounting holes to install plate



Code	Roller distance (E)	Table size (A×B)	C	Accuracy of α at 30°
4155-100	100mm	130×30mm	40mm	±5 seconds
4155-200	200mm	230×30mm	40mm	±5 seconds
4155-300	300mm	345×40mm	50mm	±8 seconds

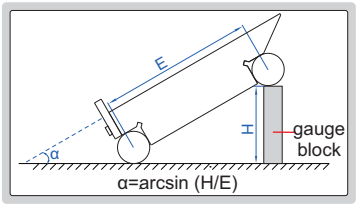
SINE BAR





4158-100

- Made of alloy tool steel



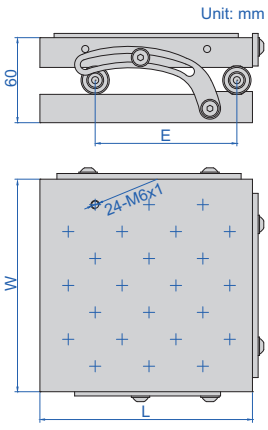
Code	Roller distance (E)	Table size (L×W)	Accuracy of α at 30°
4158-100	100mm	130×30mm	±5 seconds

SINE TABLE



6527-100

- Accuracy of angle: ±15 seconds
- Made of alloy tool steel
- Hardness HRC58-60



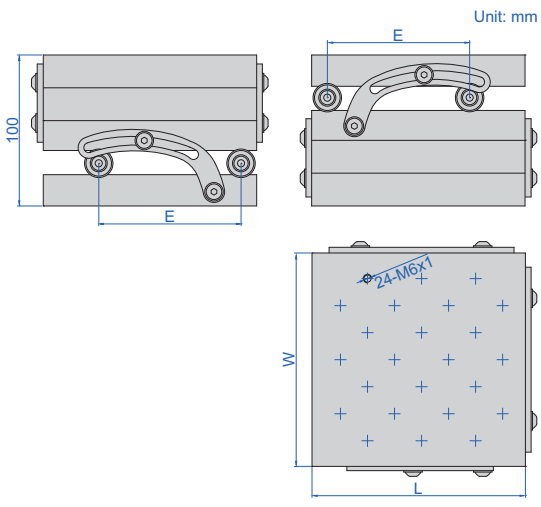
Code	Roller distance (E)	Table size (LxW)	Adjustable angle
6527-100	100mm	150×150mm	0-60°

COMPOUND SINE TABLE



6536-100

- Accuracy of angle: ±15 seconds
- Made of alloy tool steel
- Hardness HRC58-60



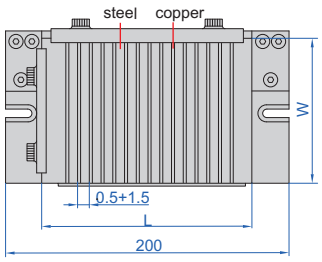
Code	Roller distance (E)	Table size (L×W)	Adjustable angle
6536-100	100mm	150×150mm	0-60°

MAGNETIC SINE TABLE

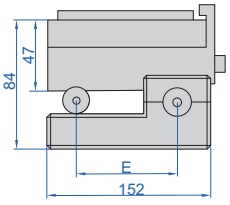
ATTENTION:
NOT HARDENED



6538-100



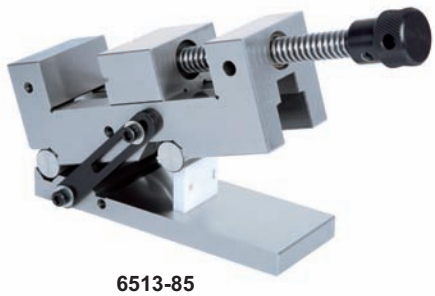
Unit: mm



Code	Table size (L×W)	Roller distance (E)	Adjustable angle	Accuracy of angle
6538-100	150×150mm	100mm	0-60°	±15 seconds

PRECISION SINE VISES

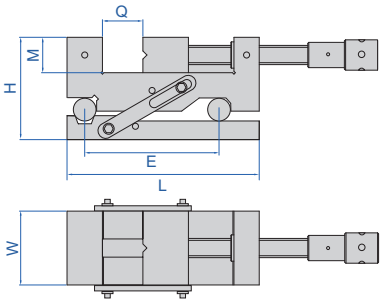
- Parallelism: 5μm/100mm
- Squareness: 5μm/100mm
- Adjustable angle: 0-55°
- Accuracy of angle: ±20 seconds
- Made of alloy steel
- Hardness HRC58-60



6513-85

(mm)

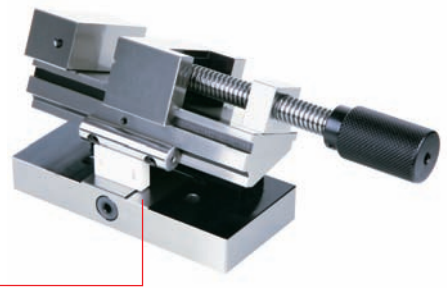
Code	Jaw opening (Q)	Jaw width (W)	Roller distance (E)	L	H	M
6513-65	0-65	50	100	150	85	25
6513-85	0-85	63	100	185	91.5	32
6513-100	0-100	73	150	205	105	35
6513-1001	0-100	80	150	215	108	40
6513-125	0-125	88	150	245	108	40
6513-1251	0-125	100	200	255	116	45
6513-160	0-160	125	200	295	125	50
6513-175	0-175	150	200	315	125	50



PRECISION SINE VISE

there is a 1mm step (accuracy +/-0.002mm). gauge blocks smaller than 0.5mm are not available. if small gauge blocks are needed (for example, 0.25mm), a gauge block 1.25mm can be used in order to make 1.25mm-1mm=0.25mm

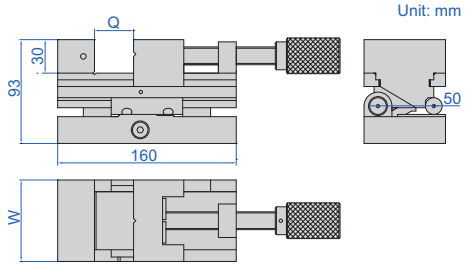




6523-80

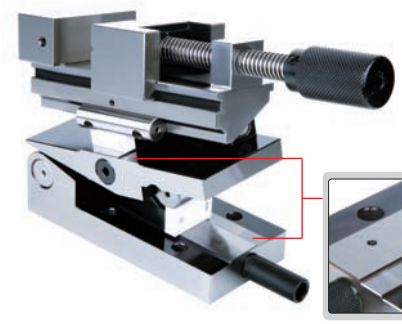
- Parallelism: 3μm/100mm
- Squareness: 5μm/100mm
- Accuracy of angle: ±15 seconds
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

Unit: mm



Code	Jaw opening (Q)	Jaw width (W)	Adjustable angle
6523-80	0-80mm	73mm	0-46°

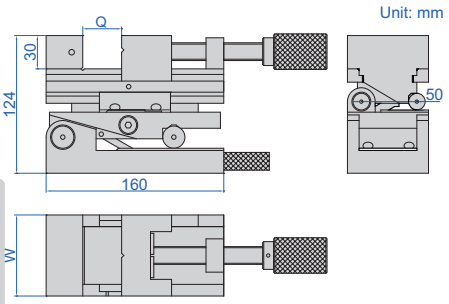
PRECISION COMPOUND SINE VISE



6524-80

there is a 1mm step (accuracy +/-0.002mm). gauge blocks smaller than 0.5mm are not available. if small gauge blocks are needed (for example, 0.25mm), a gauge block 1.25mm can be used in order to make 1.25mm-1mm=0.25mm



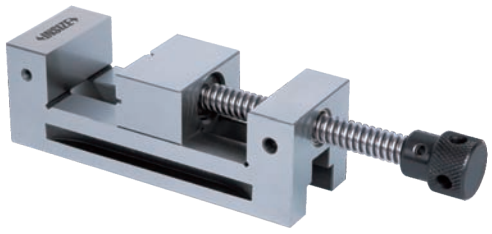


Code	Jaw opening (Q)	Jaw width (W)	Adjustable angle
6524-80	0-80mm	73mm	0-46°

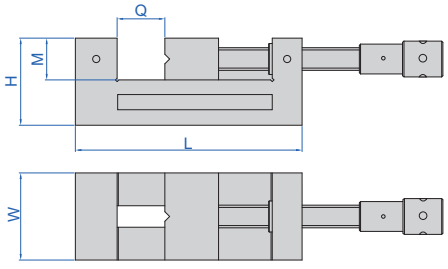
- Parallelism: 3μm/100mm
- Squareness: 5μm/100mm
- Accuracy of angle: ±15 seconds
- Made of SKS tool steel, subzero treatment
- Hardness HRC58-60

PRECISION VISES

- Parallelism: 5μm/100mm
- Squareness: 5μm/100mm
- Made of alloy steel
- Hardness HRC58-60



6520-87

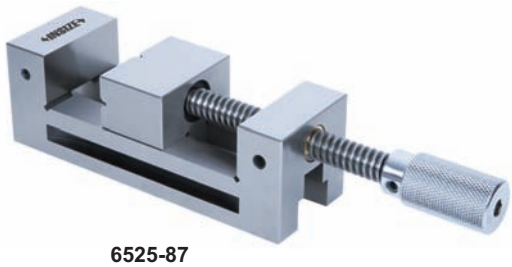


(mm)

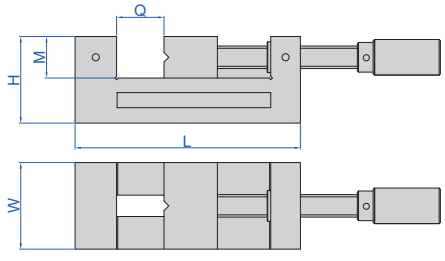
Code	Jaw opening (Q)	Jaw width (W)	L	H	M
6520-36	0-36	38	115	48	25
6520-67	0-67	50	150	50	25
6520-87	0-87	63	185	63	32
6520-102	0-102	73	205	70	35
6520-1021	0-102	80	215	80	40
6520-127	0-127	88	245	80	40
6520-1271	0-127	100	255	90	45
6520-162	0-162	125	295	100	50
6520-175	0-175	150	315	100	50
6520-200	0-200	200	350	110	55

PRECISION VISES (HIGH PRECISION)

- Parallelism: 3μm/100mm
- Squareness: 4μm/100mm
- Made of alloy steel
- Hardness HRC58-62



6525-87



(mm)

Code	Jaw opening (Q)	Jaw width (W)	L	H	M
6525-36	0-36	38	115	48	25
6525-67	0-67	50	150	50	25
6525-87	0-87	63	185	63	32
6525-102	0-102	73	205	70	35
6525-1021	0-102	80	215	80	40
6525-127	0-127	88	245	80	40
6525-1271	0-127	100	255	90	45
6525-162	0-162	125	295	100	50
6525-175	0-175	150	315	100	50

MINI QUICK MOVING PRECISION VISE (WITH STEPS)

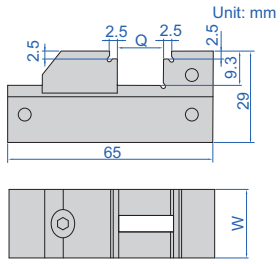
- Parallelism: 3μm
- Squareness: 3μm
- Made of alloy steel
- Hardness HRC58-62

(mm)

Code	Jaw opening (Q)	Jaw width (W)
6516-20	0-20	25



6516-20



QUICK MOVING PRECISION VISES

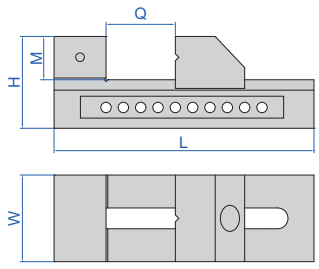
- Parallelism: 5μm/100mm
- Squareness: 5μm/100mm
- Made of alloy steel
- Hardness HRC58-60

(mm)

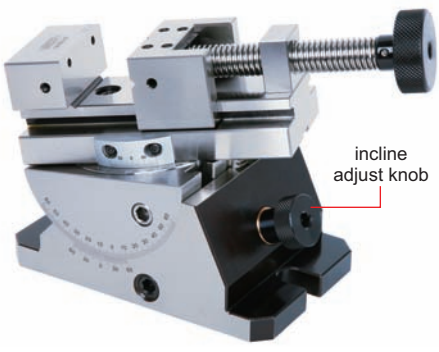
Code	Jaw opening (Q)	Jaw width (W)	L	H	M
6526-20	0-20	25	65	29	9.3
6526-40	0-40	38	100	48	23
6526-65	0-65	50	135	50	25
6526-85	0-85	63	170	63	32
6526-100	0-100	73	185	70	35
6526-1001	0-100	80	195	80	40
6526-125	0-125	88	230	80	40
6526-1251	0-125	100	240	90	45
6526-160	0-160	125	280	100	50
6526-175	0-175	150	300	100	50
6526-208	0-208	200	350	110	55



6526-85



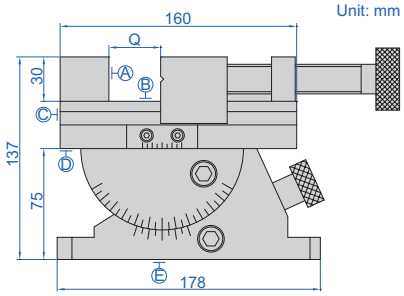
PRECISION UNIVERSAL VISE

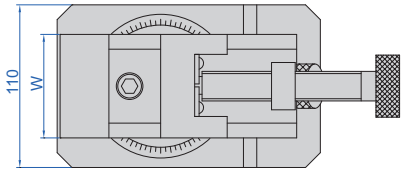


6521-80

- Horizontal rotary: range 360°, graduation 0.05°
- Vertical incline: range 45°, graduation 0.05°
- With incline adjust knob
- Parallelism and squareness between A, B, C and D: 5μm/100mm, parallelism between D and E at 0°: 10μm/100mm
- Made of tool steel
- Hardness HRC56-58

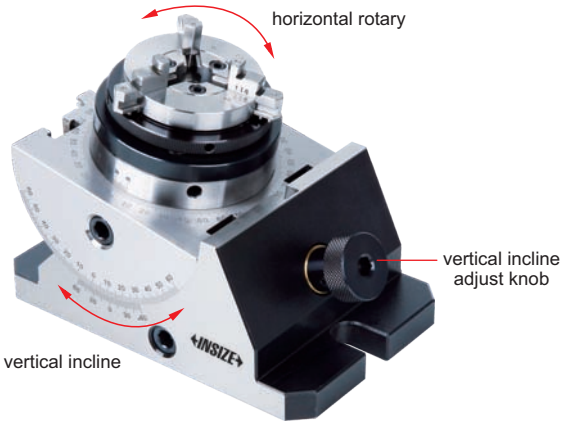
Code	Jaw opening (Q)	Jaw width (W)
6521-80	0-80mm	70mm



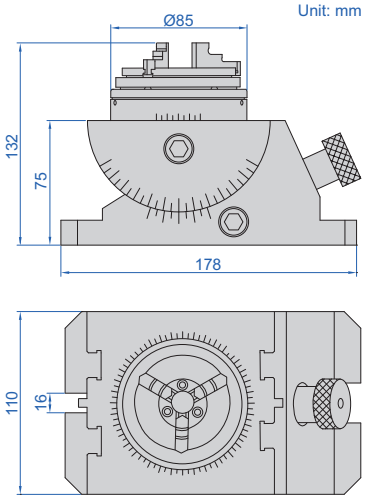


16

PRECISION UNIVERSAL VISE WITH CHUCK



6528-85

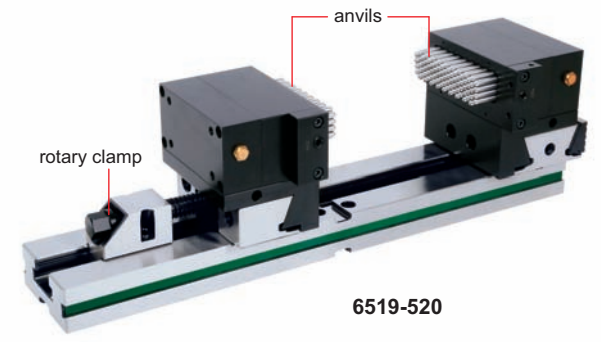


- Horizontal rotary: range 360°, graduation 0.05°
- Vertical incline: range 45°, graduation 0.05°
- With vertical incline adjust knob
- Runout of chuck is less than 0.05mm
  (test position is at less than 50mm from clamping jaws)
- The clamping jaws of chuck are reversible
- Made of tool steel
- Hardness HRC56-58

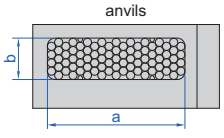
Code	Range of external clamping	Range of internal clamping
6528-85	Ø0.8~Ø63mm	Ø23~Ø58mm

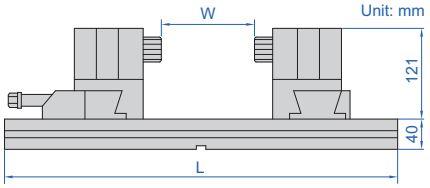
ANVIL VISES

VIDEO



6519-520





- The vise is used to fix workpieces during machining. The anvils are formed according the shape of workpieces to be fixed, so the vise can fix workpieces quickly.
- The anvils are made of stainless steel (HRC20), can be customized to carbon steel (HRC40-45)
- Diameter of anvil: 6mm, stroke of anvil: 24mm
- Movement range of rotary clamp: 0-50mm

application



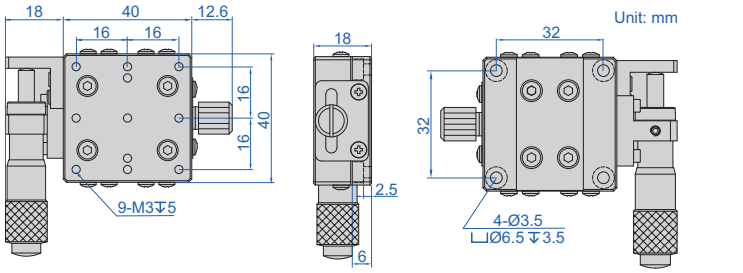
Code	Guide length (L)	Clamp range (W)	Clamp force*	Weight	a	b
6519-520	520mm	0-190mm	6500N	22.5kg	100mm	30mm
6519-680	680mm	0-320mm	8000N	39.5kg	120mm	36mm

* When all anvils contact the workpieces

X-AXIS STAGES

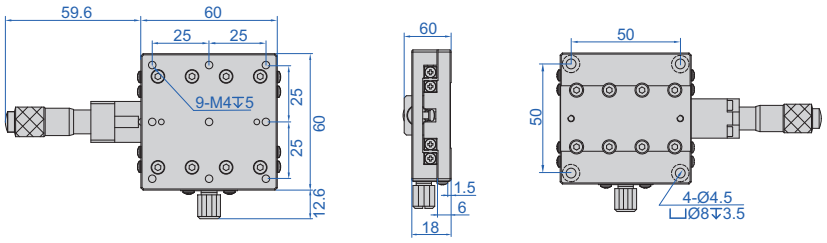


6582-401



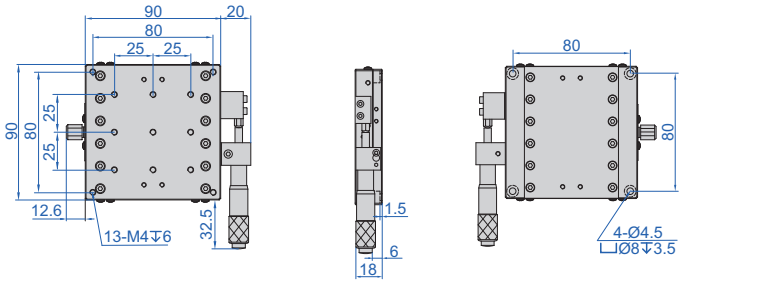


6582-602





6582-903



- Cross roller guides, achieve high precision and smooth movement
- Stages made of aluminum alloy

SPECIFICATION (micrometer on the left)

Code	X-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6582-401	±6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	left	40x40mm	0.14kg
6582-601	±6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	left	60x60mm	0.24kg
6582-901	±12.5mm	0.03mm	0.01mm	0.02mm	93.1N (9.5kgf)	left	90x90mm	0.47kg
6582-1251	±12.5mm	0.04mm	0.01mm	0.02mm	180N (18.4kgf)	left	125x125mm	1.40kg

SPECIFICATION (micrometer in the middle)

Code	X-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6582-402	±6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	middle	40x40mm	0.14kg
6582-602	±6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	middle	60x60mm	0.24kg
6582-902	±12.5mm	0.03mm	0.01mm	0.02mm	93.1N (9.5kgf)	middle	90x90mm	0.47kg
6582-1252	±12.5mm	0.04mm	0.01mm	0.02mm	180N (18.4kgf)	middle	125x125mm	1.40kg

SPECIFICATION (micrometer on the right)

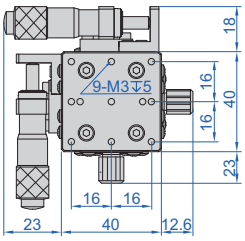
Code	X-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6582-403	±6.5mm	0.02mm	0.01mm	0.01mm	29.4N (3kgf)	right	40x40mm	0.14kg
6582-603	±6.5mm	0.03mm	0.01mm	0.01mm	49N (5kgf)	right	60x60mm	0.24kg
6582-903	±12.5mm	0.03mm	0.01mm	0.02mm	93.1N (9.5kgf)	right	90x90mm	0.47kg
6582-1253	±12.5mm	0.04mm	0.01mm	0.02mm	180N (18.4kgf)	right	125x125mm	1.40kg

XY-AXIS STAGES

Unit: mm

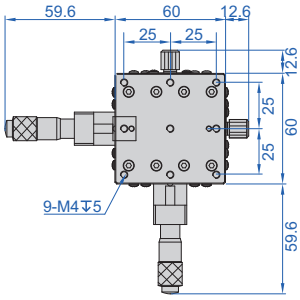


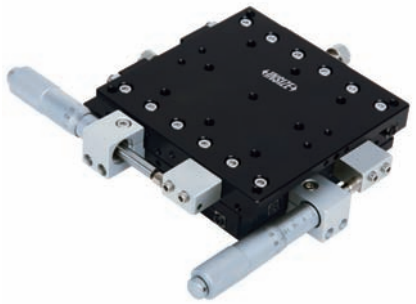
6584-401



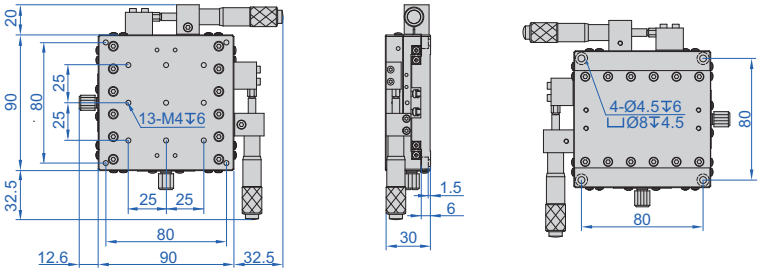


6584-602





6584-903



- Cross roller guides, achieve high precision and smooth movement
- Stages made of aluminum alloy

SPECIFICATION (micrometer on the left)

Code	XY-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6584-401	±6.5mm	0.04mm	0.01mm	0.01mm	29.4N (3kgf)	left	40x40mm	0.27kg
6584-601	±6.5mm	0.06mm	0.01mm	0.01mm	49N (5kgf)	left	60x60mm	0.48kg
6584-901	±12.5mm	0.06mm	0.01mm	0.02mm	93.1N (9.5kgf)	left	90x90mm	1kg
6584-1251	±12.5mm	0.08mm	0.01mm	0.02mm	180N (18.4kgf)	left	125x125mm	2.8kg

SPECIFICATION (micrometer in the middle)

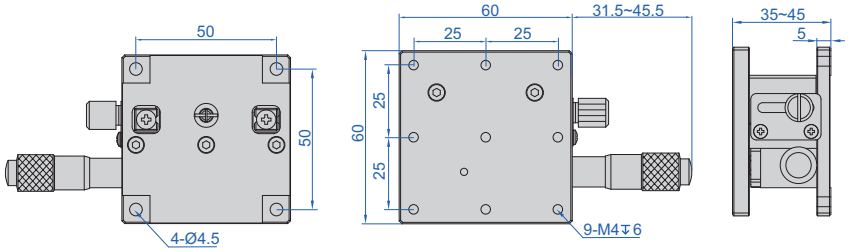
Code	XY-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6584-402	±6.5mm	0.04mm	0.01mm	0.01mm	29.4N (3kgf)	middle	40x40mm	0.27kg
6584-602	±6.5mm	0.06mm	0.01mm	0.01mm	49N (5kgf)	middle	60x60mm	0.48kg
6584-902	±12.5mm	0.06mm	0.01mm	0.02mm	93.1N (9.5kgf)	middle	90x90mm	1kg
6584-1252	±12.5mm	0.08mm	0.01mm	0.02mm	180N (18.4kgf)	middle	125x125mm	2.8kg

SPECIFICATION (micrometer on the right)

Code	XY-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Micrometer location	Stage size	Weight
6584-403	±6.5mm	0.04mm	0.01mm	0.01mm	29.4N (3kgf)	right	40x40mm	0.27kg
6584-603	±6.5mm	0.06mm	0.01mm	0.01mm	49N (5kgf)	right	60x60mm	0.48kg
6584-903	±12.5mm	0.06mm	0.01mm	0.02mm	93.1N (9.5kgf)	right	90x90mm	1kg
6584-1253	±12.5mm	0.08mm	0.01mm	0.02mm	180N (18.4kgf)	right	125x125mm	2.8kg

Z-AXIS STAGE
CODE 6586-60

Unit: mm





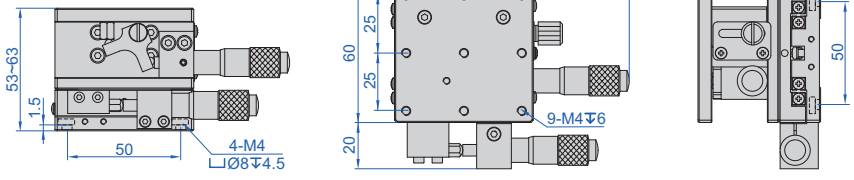
- Cross roller guides, achieve high precision and smooth movement
- Stage made of aluminum alloy

SPECIFICATION

Code	Z-axis displacement	Parallelism of top to bottom surface	Micrometer graduation	Micrometer accuracy	Maximum load	Stage size	Weight
6586-60	10mm	0.05mm	0.01mm	0.02mm	20.4N (3kgf)	60x60mm	0.27kg

XZ-AXIS STAGE
CODE 6587-60

Unit: mm





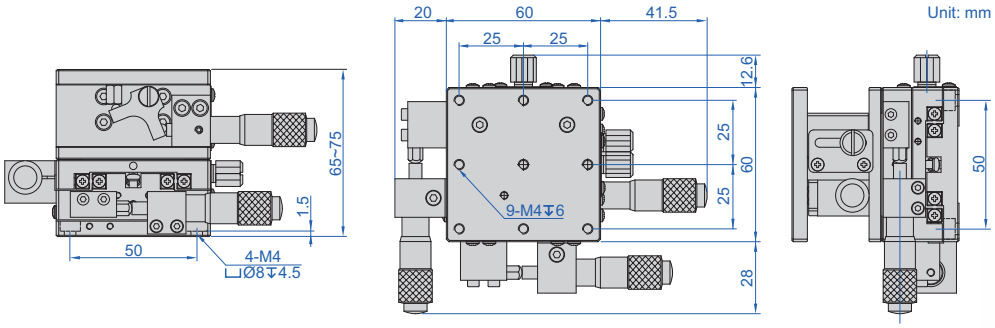
- Cross roller guides, achieve high precision and smooth movement
- Stage made of aluminum alloy

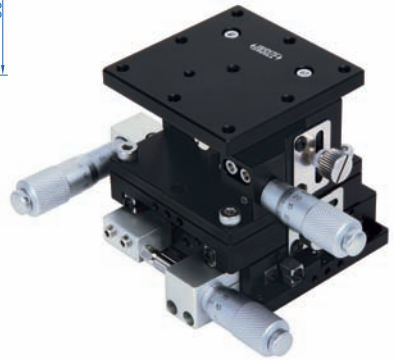
SPECIFICATION

Code	X-axis displacement	Z-axis displacement	Micrometer graduation	Maximum load	Stage size	Weight
6587-60	±6.5mm	10mm	0.01mm	29.4N (3kgf)	60x60mm	0.51kg

XYZ-AXIS STAGE
CODE 6585-60

Unit: mm





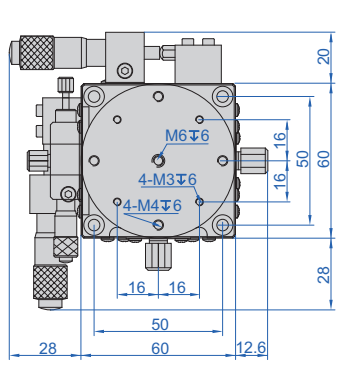
- Cross roller guides, achieve high precision and smooth movement
- Stage made of aluminum alloy

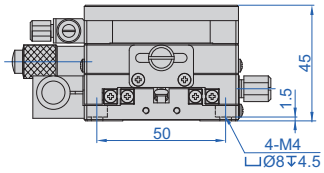
SPECIFICATION

Code	XY-axis displacement	Z-axis displacement	Micrometer graduation	Maximum load	Stage size	Weight
6585-60	±6.5mm	10mm	0.01mm	29.4N (3kgf)	60x60mm	0.75kg

XY-AXIS ROTARY STAGE
CODE 6588-60







- Cross roller guides, achieve high precision and smooth movement
- Coarse and fine adjustments
- Precise angle adjustment
- Stage made of aluminum alloy

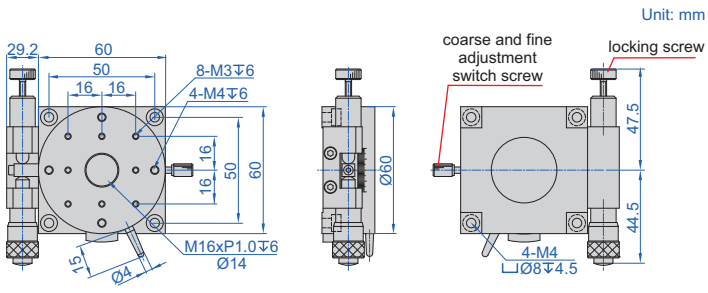
SPECIFICATION

Code	XY-axis displacement	Rotation range	Micrometer graduation	Rotation accuracy	Maximum load	Stage size	Weight
6588-60	±6.5mm	360° coarse, ±5° fine	0.01mm	10 seconds	29.4N (3kgf)	60x60mm	0.64kg

ROTARY STAGES

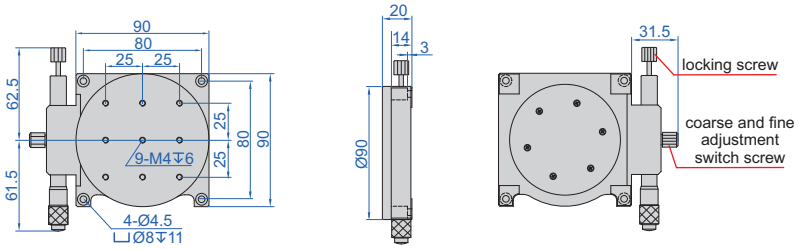


6583-60H





6583-90



- Precise angle adjustment
- Coarse and fine adjustments
- Stages made of aluminum alloy

SPECIFICATION

Code	Range	Parallelism of top to bottom surface	Concentricity	Rotation accuracy	Maximum load	Stage size	Weight
6583-60H	360° coarse, ±5° fine	0.03mm	0.03mm	12 seconds	29.4N (3kgf)	Ø60mm	0.30kg
6583-90	360° coarse, ±5° fine	0.04mm	0.03mm	5 seconds	29.4N (3kgf)	Ø90mm	0.50kg

LEVELS 17



Electronic Levels
Page 572-573



Digital Levels And Slope Meters
Page 574-579



Frame Levels
Page 579-580



Built-In Bluetooth Block Levels
Page 581



Block Levels
Page 581-582



Levels
Page 583-587



Cross-Line Laser Levels
Page 588



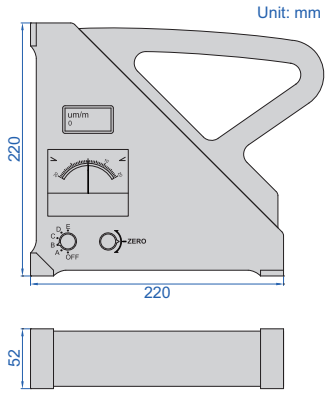
Self-Leveling Rotary Lasers
Page 589

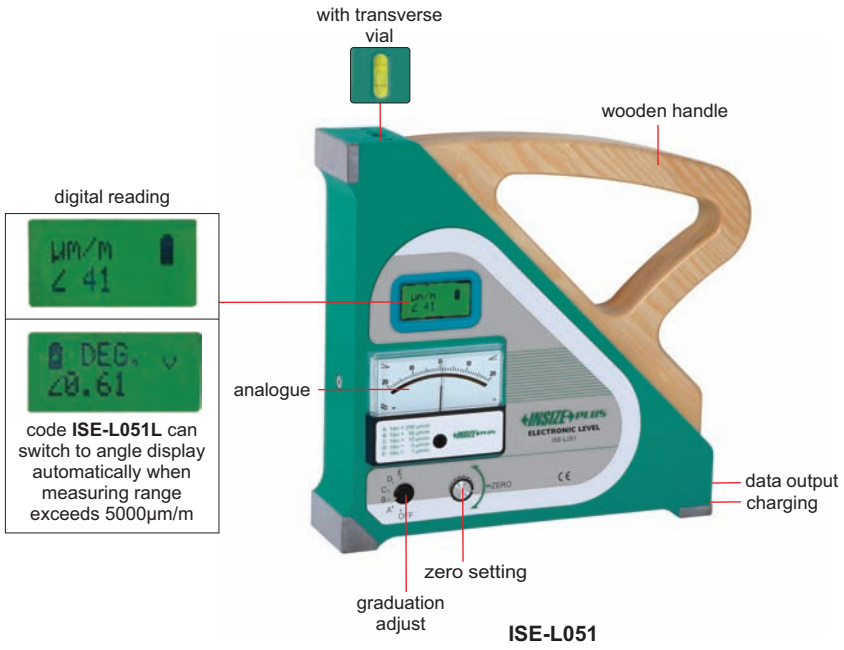
ELECTRONIC LEVELS

INSIZE PLUS

INSPECTION CERTIFICATE | DATA OUTPUT | SHOCK PROOF

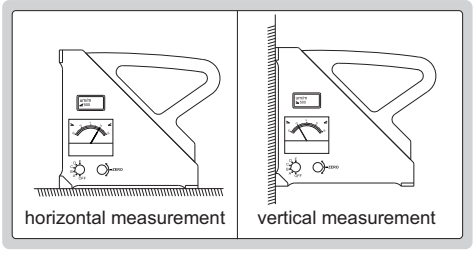
VIDEO

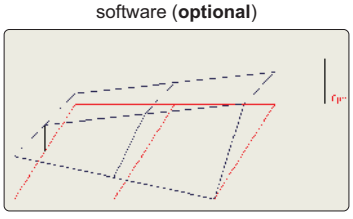




ISE-L051

- Shockproof
- Analogue and digital reading modes





SPECIFICATION

Code	ISE-L051		ISE-L051L		
Analogue graduation (adjustable)	250μm/m (=0.014°)	50μm/m (=10")	10μm/m (=2")	5μm/m (=1")	1μm/m (=0.2")
Analogue range	±5000μm/m	±1000μm/m	±200μm/m	±100μm/m	±20μm/m
Digital reading resolution	horizontal: 1μm/m (=0.2")		horizontal: 1μm/m (=0.2"), angle: 0.01°		
Digital reading range	horizontal: 5000μm/m		horizontal: 5000μm/m, angle: 0.3~85°		
Accuracy	horizontal: ±1%		horizontal: ±1%, angle: ±0.7%		
Zero setting range	±1500μm/m				
Response time	<3s				
Data output	RS232				
Power supply	rechargeable Li-ion battery, provides power for 10h continuous working				
Dimension	220×220×52mm				
Weight	4.4kg				

STANDARD DELIVERY

Main unit	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Software and data output cable	ISE-L050-SOFTWARE

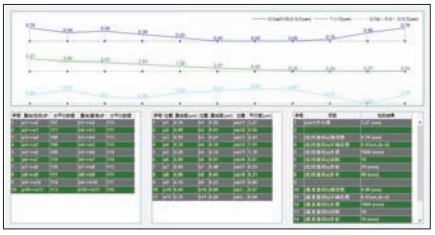
WIRELESS ELECTRONIC LEVELS

measuring and analysis software (included)

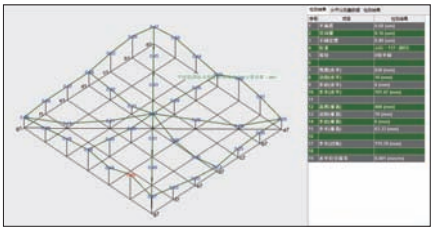
straightness measuring and analysis



parallelism measuring and analysis



flatness measuring and analysis



LCD



LCD can be rotated by 150°

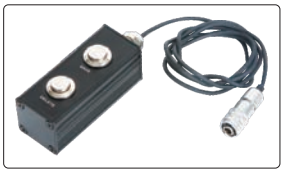


4952-150

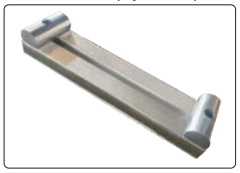
wireless receiver (included)



control box (included)

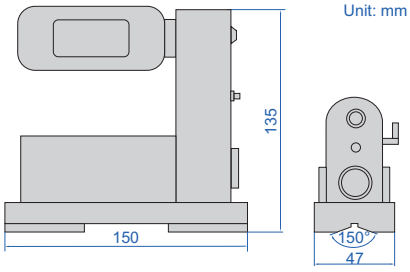


300mm bridge plate **4952-01** (**optional**)



- Measures flatness, parallelism and straightness
- Built-in wireless transmission module, 433MHz signal, wireless connection to computer, transmission distance 50m
- The LCD can be rotated for easy observation in different directions
- Designed with handle for easy access
- V-groove on bottom for shafts
- Supplied with measuring and analysis software
- Optional accessory: bridge plate (code **4952-01**)

Unit: mm



SPECIFICATION

Code	4952-150		4952-150L	
Resolution (adjustable)	0.001mm/m (0.2")	0.01mm/m (2")	0.005mm/m (1")	0.01mm/m (2")
Range	±0.5mm/m	±5mm/m	±2.5mm/m	±5mm/m
Repeatability	0.001mm/m	0.01mm/m	0.005mm/m	0.01mm/m
Response time	<10s	<3s	<5s	<3s
Accuracy	±(1+A×2%)Δ*			
Power supply	1×21700 Li-ion battery, for 50h continuous working			
Weight	1.8kg			

*A is the measured value, Δ is the resolution

STANDARD DELIVERY

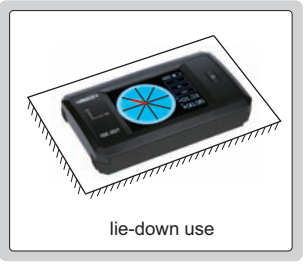
Main unit	1 pc
Wireless receiver	1 pc
Control box	1 pc
Measuring and analysis software (with dongle)	1 set
Charger	1 pc
21700 Li-ion battery	4 pcs

DIGITAL LEVEL
CODE ISE-2DT

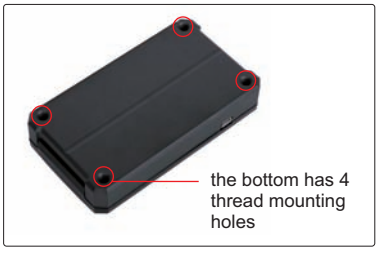
DATA OUTPUT

VIDEO

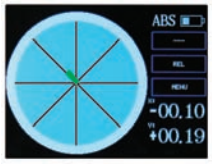



lie-down use


charging and
data output


the bottom has 4
thread mounting
holes

- Color LCD, touch panel
- X-Y axis measurement
- Set the tolerance and the display is shown in different colors



within the tolerance (green)



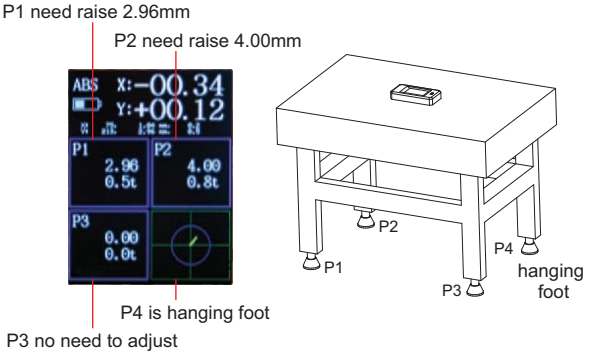
out of the tolerance (red)

- To show the incline with line or bubble





"FLAT" mode is used to adjust level for the 4-leg machines enter the size of table, the height to be adjusted for 3 feet is directly displayed



SPECIFICATION

Measuring range	±30°
Resolution	0.1°, 0.01°, 0.1mm/m
Accuracy	±0.03° (range 0~3°) ±0.05° (range >3°)
Power supply	rechargeable battery
Dimension	115×66×25mm
Weight	224g

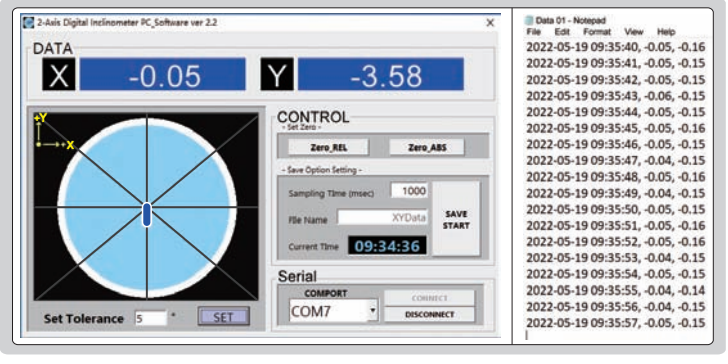
STANDARD DELIVERY

Main unit	1 pc
USB cable	1 pc

OPTIONAL ACCESSORY

Software	ISE-2DT-SOFTWARE

PC software (**optional**), send data to txt



DUAL AXIS DIGITAL LEVEL AND GYRO ANGLE METER

DATA OUTPUT

DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP

AUDIBLE ALARM WHEN OUT OF LIMIT

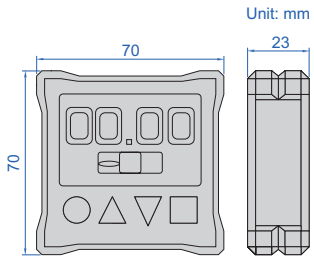
BACKLIGHT

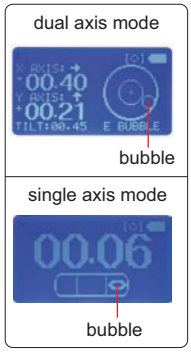
ATTENTION: HARD PLASTIC CASE

VIDEO



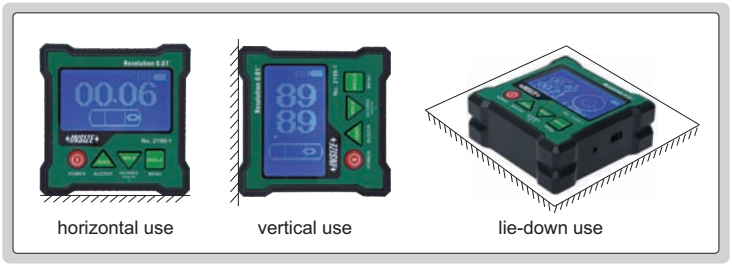
2199-1





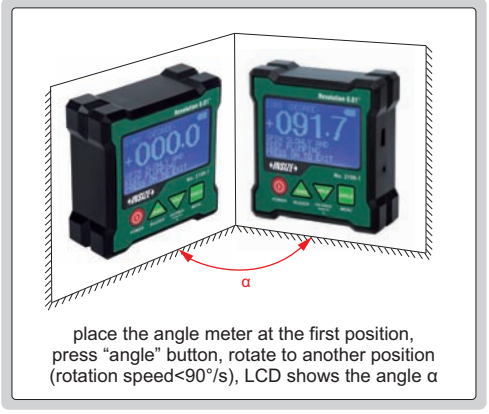
M4 threaded holes on the back for fixing





- Single axis/double axis level and slope meter, gyro technique can measure the angle between two planes in any direction
- Hard plastic case, with V-shaped grooves, four magnetic sides
- Display flips over when the bottom faces up
- Audible alarm when out of limit
- Buttons: POWER, ZERO, HOLD, display unit (°, mm/m, %), MENU
- Rechargeable Li-ion battery 3.7V, operation time is 40 hours
- Automatic power off in 30 minutes
- Data output
- Android and iPhone APP are included
- Optional accessory: wired data transmission (code **2199-A01**), bluetooth (code **2199-A02**), transmission distance is 10 meters (under the condition of no obstruction and no electromagnetic interference)

measurement of angle between two planes in any direction (gyro technique)



place the angle meter at the first position, press “angle” button, rotate to another position (rotation speed<90°/s), LCD shows the angle α

Code	Range	Resolution	Accuracy
2199-1	single axis level: 4×90° dual axis level: ±40°	0.01°	at 0° and 20°: ±0.08° at 20° and 70°: ±0.15° at 70° and 90°: ±0.08°
	gyro angle meter: 360°	0.1°	±0.5°

To be continued

Continued from previous page



bluetooth (**optional**)



wired data transmission
(**optional**)

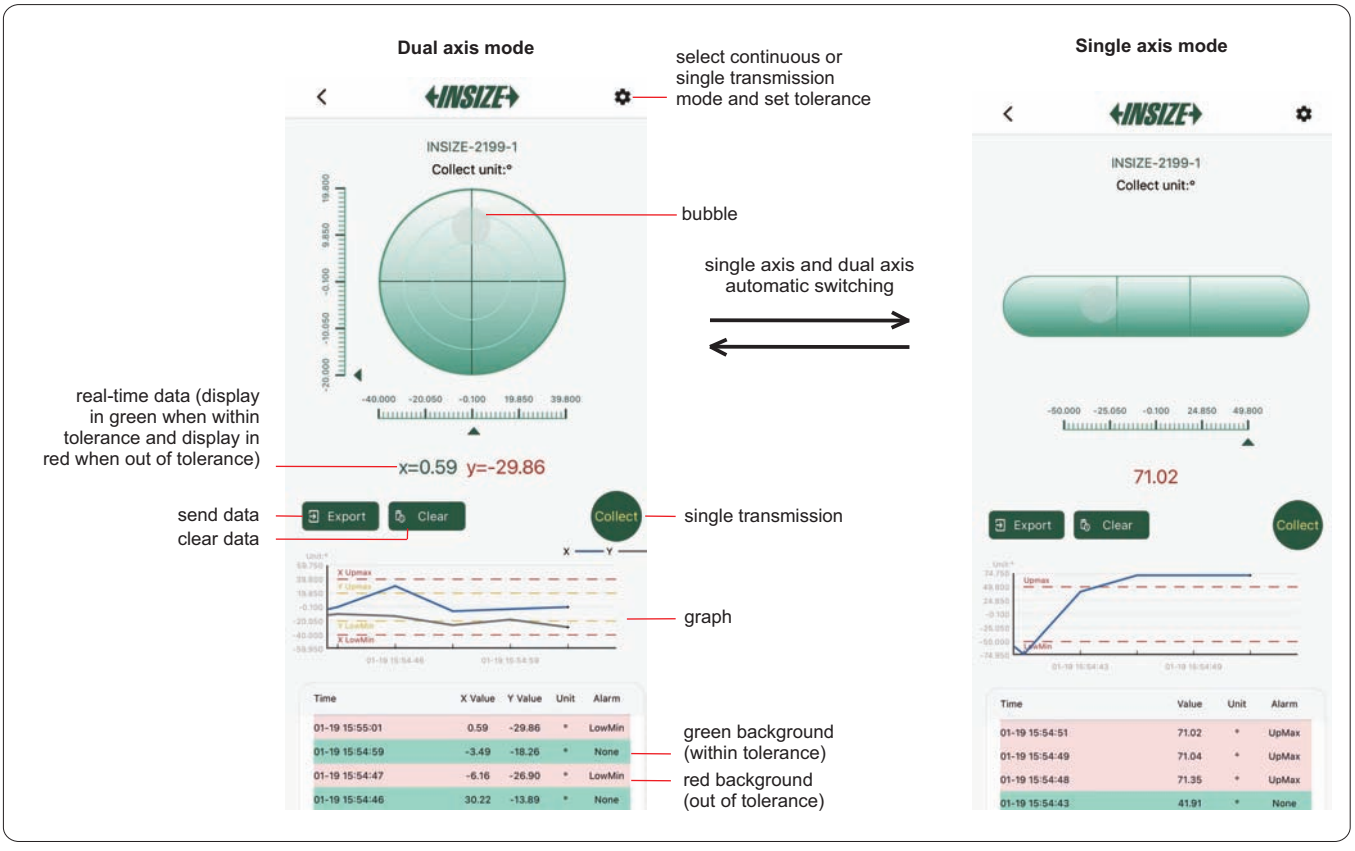


connect to computer via wired data transmission



connect to mobile phone via bluetooth

Android and iPhone APP (included), can choose real-time display (continuous transmission) or single transmission



DIGITAL LEVEL AND SLOPE METER

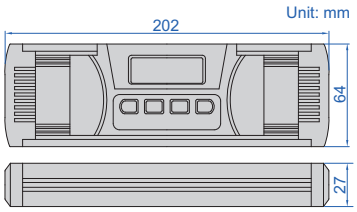
ABSOLUTE LEVEL | BACKLIGHT | BUZZER ALARM AT 0° AND 90° | WORKING TEMPERATURE -5°C~50°C

IP67 WATERPROOF

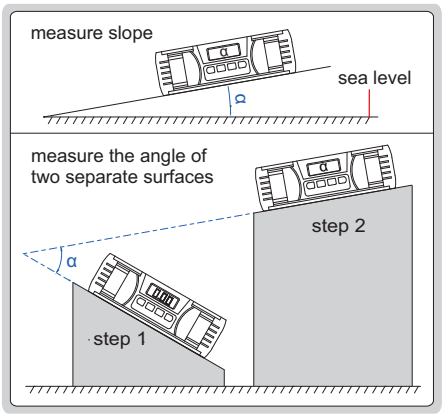
VIDEO



2175-360



- IP67 dust/waterproof
- Used as level and slope meter
- Aluminum frame, shock absorbing rubber end caps
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, backlight/buzzer alarm, absolute and incremental measurement, unit (mm/m, %, °), HOLD (keep the reading)
- Three AAA batteries, automatic power off



Code	Range	Resolution	Accuracy
2175-360	0-360° (90°×4)	0.05°; 1mm/m	at 0°: ±0.05°; at others: ±0.1°

DIGITAL LEVEL AND SLOPE METER

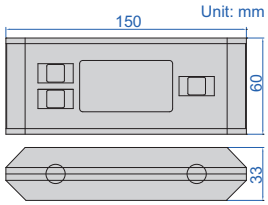
ABSOLUTE LEVEL | BACKLIGHT | BUZZER ALARM AT 0° AND 90° | WORKING TEMPERATURE -5°C~50°C

IP54 WATERPROOF

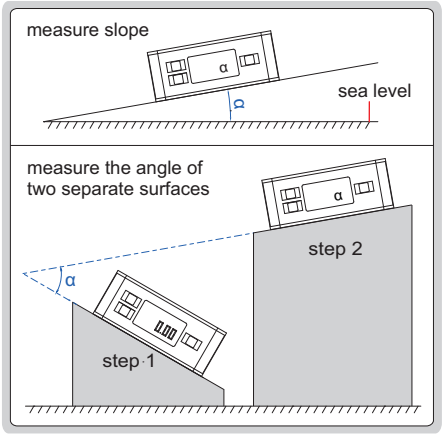
VIDEO



2179-360



- IP54 dust/waterproof
- Used as level and slope meter
- Aluminum frame
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm, unit (mm/m, %, in/ft), conversion, backlight
- Two AAA batteries, automatic power off



Code	Range	Resolution	Accuracy
2179-360	0-360° (90°×4)	0.05°; 1mm/m; 0.125in/ft	at 0° and 90°: ±0.1°; at others: ±0.2°

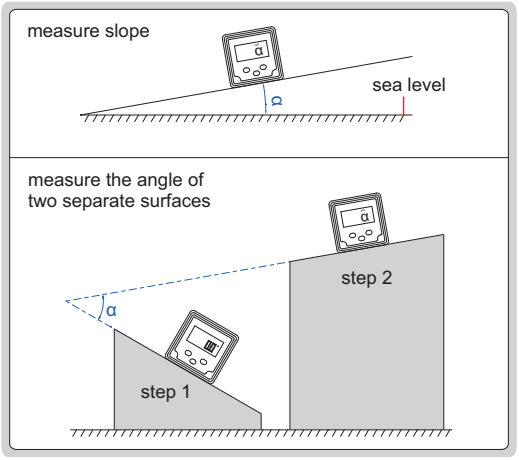
BLUETOOTH DIGITAL LEVEL AND SLOPE METER

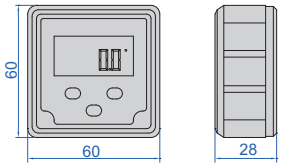
BACKLIGHT | MAGNETIC BOTTOM | DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP | WORKING TEMPERATURE -5°C~50°C | ABSOLUTE LEVEL

VIDEO

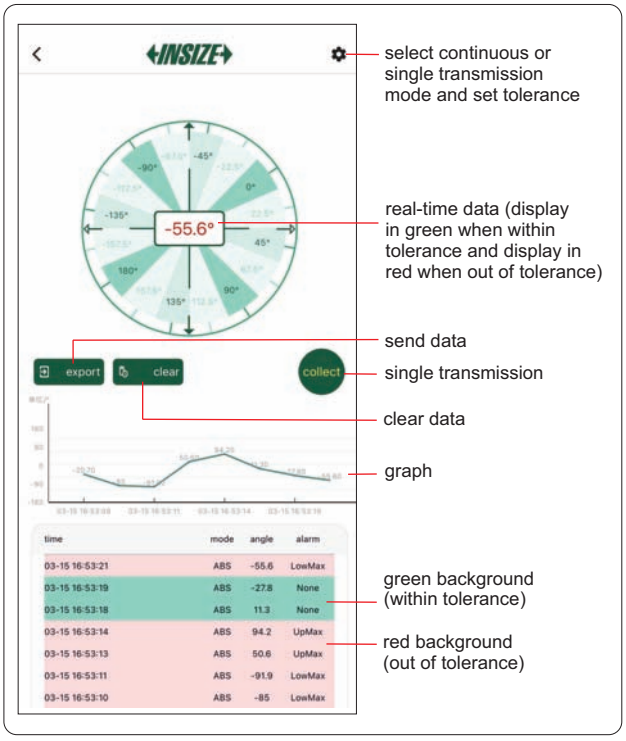


2198-2





Android and iPhone APP (included), can choose real-time display (continuous transmission) or single transmission



- Used as level and slope meter
- Aluminum frame
- Magnetic bottom
- The display flips over when the bottom faces up
- The backlight is on automatically when in use, and automatically off in 15 seconds after use
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, ZERO, HOLD, absolute and incremental measurement
- Built-in bluetooth, transmission distance is 15 meters (under the condition of no obstruction and no electromagnetic interference). Android and iPhone APP are included
- One AAA battery, automatic power off in 5 minutes

Code	Range	Resolution	Accuracy
2198-2	4x90°	0.1° (=1.745mm/m)	at 0°and 90°: ±0.1°; at others: ±0.2°

MAGNETIC BOTTOM

WORKING TEMPERATURE -5°C~50°C

BACKLIGHT

POPULAR MODEL

DISPLAY FLIPS OVER WHEN THE BOTTOM FACES UP

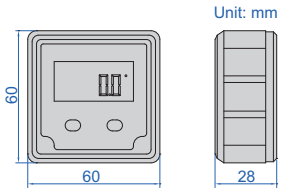
ABSOLUTE LEVEL

DIGITAL LEVEL AND SLOPE METER

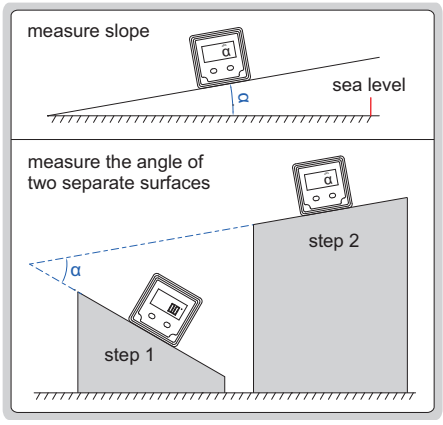
VIDEO



2170-1



- Used as level and slope meter
- Aluminum frame
- Magnetic bottom
- The display flips over when the bottom faces up
- The backlight is on automatically when in use, and automatically off in 15 seconds after use
- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Buttons: ON/OFF, ZERO, absolute and incremental measurement
- One AAA battery, automatic power off in 5 minutes



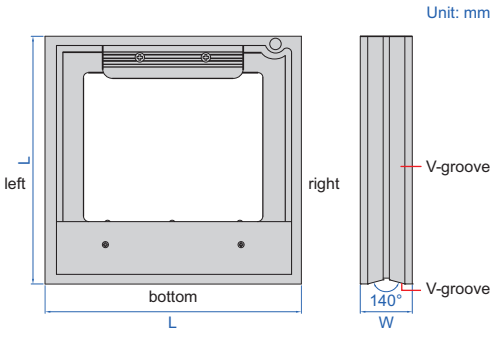
Code	Range	Resolution	Accuracy
2170-1	4x90°	0.1° (=1.745mm/m)	at 0° and 90°: ±0.1°; at others: ±0.2°

VIDEO

FRAME LEVELS



4902-200



- V-groove on bottom and left for shafts (shafts dia. 15~68mm)
- With transverse vial

Code		Size (L×L)	W
Sensitivity 0.02mm/m (=0.001°)	Sensitivity 0.05mm/m (=0.0029°)		
4902-150	**4902-C150**	150x150mm	40mm
4902-200	**4902-C200**	200x200mm	40mm
4902-300	**4902-C300**	300x300mm	45mm

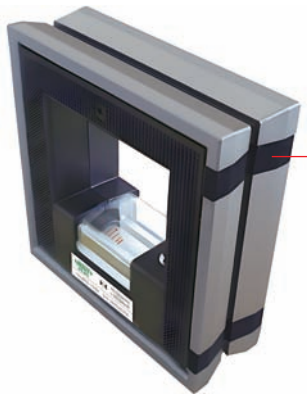
FRAME LEVELS

INSIZE PLUS

NO NEED TO SET ZERO BEFORE USE

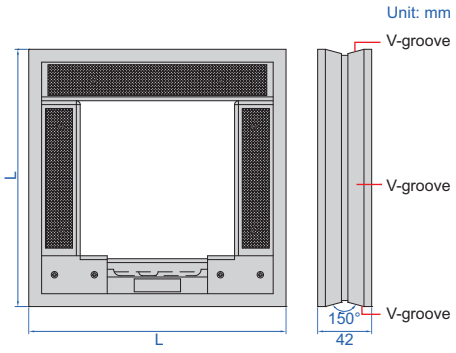


4906-150



4906-150M

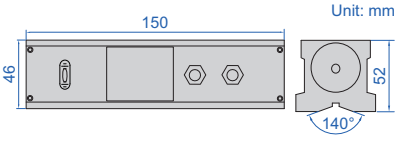
- No need to set zero before use
- Three V-grooves for shafts (shafts dia. 19.3~115.9mm)
- With longitudinal vial



Code		Size (L×L)	Remark
Sensitivity 0.02mm/m (=0.001°)	Sensitivity 0.1mm/m (=0.0057°)		
4906-150	4906-B150	150×150mm	–
4906-200	4906-B200	200×200mm	–
4906-300	4906-B300	300×300mm	–
4906-150M	4906-B150M	150×150mm	with magnet
4906-200M	4906-B200M	200×200mm	with magnet
4906-300M	4906-B300M	300×300mm	with magnet

ELECTRONIC BLOCK LEVEL

VIDEO





4950-1

- Button function: power switch, zero, data save, ABS/REF
- 8 sets of measuring data can be saved on the LCD
- V-groove on bottom for shafts (shafts dia.14~75mm)
- With transverse vial
- Li-ion battery power supply, for 30h continuous working
- Supplied with li-ion battery charger

Code	Range	Resolution	Accuracy	Repeatability	Response time	Weight
4950-1	±5mm/m (±0.286°)	0.01mm/m (0.001°)	±(1+A×2%)Δ*	0.01mm/m	<3s	1.1kg

*A is the measured value, Δ is the resolution

BUILT-IN BLUETOOTH BLOCK LEVEL

COLOR DISPLAY
LARGE CHARACTERS WITH BACKLIGHT

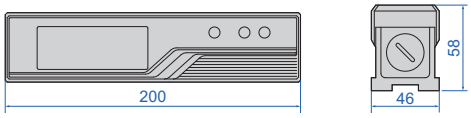
BUILT-IN
BLUETOOTH

VIDEO



4953-200

Unit: mm



- Button function: on/off, data hold, reading flips over, unit conversion (°, mm/m)
- Analog bubbles can show tilt trends in X-axis and Y-axis
- Built-in Bluetooth, transmission distance is 10 meters (under the condition of no obstruction and no electromagnetic interference)
- Android and iPhone APP are included
- Powered by 3×AAA batteries
- Automatic power off

Code	Range	Resolution	Accuracy	Repeatability	Response time	Weight
4953-200	±0.5mm/m (±0.028°)	0.01mm/m (0.001°)	±(1+A×2%) Δ*	0.01mm/m	<3s	1450g

*A is the measured value, Δ is the resolution

BLOCK LEVELS

INSIZE PLUS

NO NEED TO SET
ZERO BEFORE USE

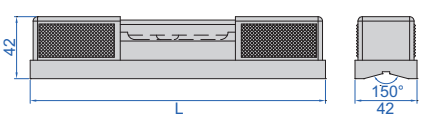


4905-200

- No need to set zero before use
- V-groove on bottom for shafts
  (shafts dia. 19.3~115.9mm)
- With longitudinal vial

Code		Size (L)
Sensitivity 0.02mm/m (=0.001°)	Sensitivity 0.1mm/m (=0.0057°)	
4905-160	**4905-B160**	160mm
4905-200	**4905-B200**	200mm
4905-300	**4905-B300**	300mm
4905-500	**4905-B500**	500mm

Unit: mm



BLOCK LEVELS

POPULAR MODEL

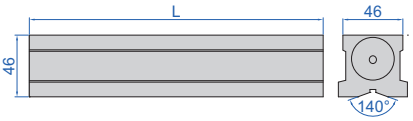
VIDEO

- V-groove on bottom for shafts (shafts dia. 15~68mm)
- With transverse vial



4903-200A

Unit: mm



Code		Length (L)
Sensitivity 0.02mm/m (=0.001°)	Sensitivity 0.05mm/m (=0.0029°)	
4903-150A	4903-C150	150mm
4903-200A	4903-C200	200mm
4903-300A	4903-C300	300mm

SHORT LEVEL

INSIZE PLUS

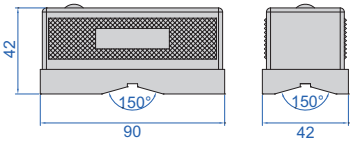
NO NEED TO SET ZERO BEFORE USE

- No need to set zero before use
- Suitable for small spaces like crankshaft
- Longitudinal and transverse V-grooves on bottom for shafts (shafts dia. 19.3~115.9mm)
- With transverse vial



4907-90

Unit: mm



Code	Length	Sensitivity
4907-90	90mm	0.1mm/m (=0.0057°)

MINI LEVEL

INSIZE PLUS

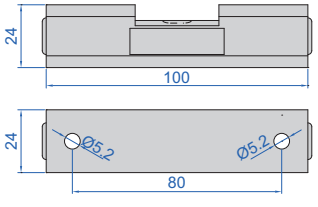
NO NEED TO SET ZERO BEFORE USE

- No need to set zero before use
- With mounting holes (for M5 screws)



4908-100

Unit: mm



Code	Length	Sensitivity
4908-100	100mm	0.1mm/m (=0.0057°)

ABSOLUTE LEVEL | BACKLIGHT | BUILT-IN BLUETOOTH

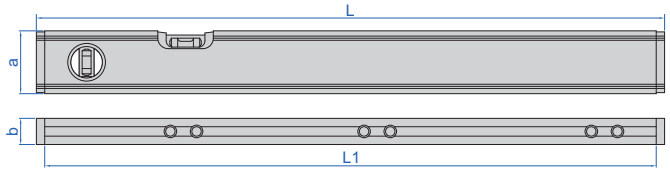
WORKING TEMPERATURE 0°C~50°C

BUILT-IN BLUETOOTH DIGITAL LEVELS AND SLOPE METERS

VIDEO



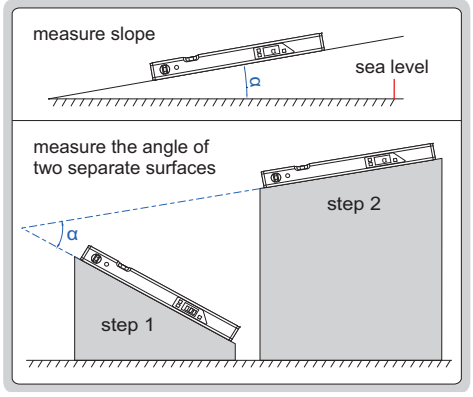
4910-400WL



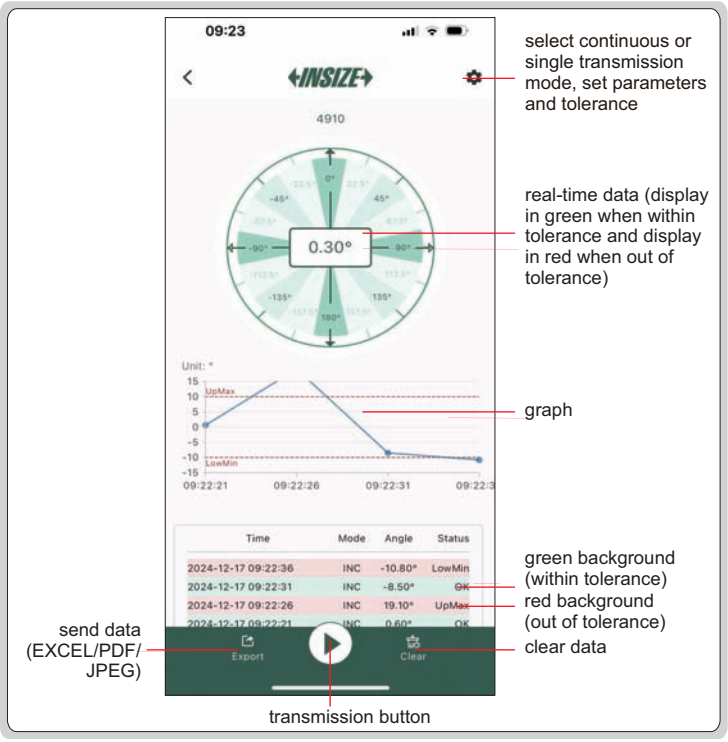


4910-600WL

- With transverse and longitudinal vials
- Used as level and slope meter
- Aluminum frame, magnetic bottom
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm (not for **4910-400WL**), unit (mm/m, %, in/ft), conversion (not for **4910-400WL**), backlight
- The display flips over when the bottom faces up
- Built-in Bluetooth, transmission distance is 10 meters (under the condition of no obstruction and no electromagnetic interference)
- Android and iPhone APP are included
- Two AAA batteries
- Automatic power off



Android and iPhone APP (included)
can choose real-time display (continuous transmission) or single transmission



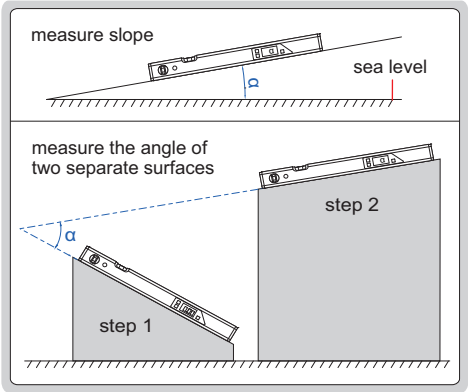
(mm)

Code	Range	Resolution	Accuracy	Remark*	L	L1	a	b
4910-400WL	0~360° (90°×4)	angle: 0.1°	±0.2°	both angle and slope are displayed (slope is calculated by angle)	416	400	50	21
4910-600WL	0~360° (90°×4)	at 0° and 90°: 0.05°; at others: 0.1°	at 0° and 90°: ±0.1°; at others: ±0.2°	at 0° and 90° buzzer alarm	600	585	60	25
4910-1000WL	0~360° (90°×4)	at 0° and 90°: 0.05°; at others: 0.1°	at 0° and 90°: ±0.1°; at others: ±0.2°	at 0° and 90° buzzer alarm	1000	984	60	25

* mm/m=tan(°)×1000, for example: 0.3°=tan(0.3)×1000=5mm/m

DIGITAL LEVELS AND SLOPE METERS

ABSOLUTE LEVEL | BACKLIGHT | WORKING TEMPERATURE 0°C~50°C | VIDEO



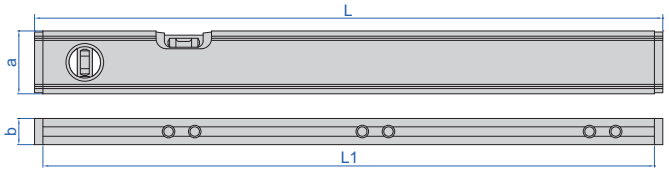


4910-400



4910-600

- With transverse and longitudinal vials
- Used as level and slope meter
- Aluminum frame, magnetic bottom
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/OFF, absolute and incremental measurement, keep the reading, buzzer alarm (not for **4910-400**), unit (mm/m, %, in/ft), conversion (not for **4910-400**), backlight
- The display flips over when the bottom faces up
- Two AAA batteries
- Automatic power off



(mm)

Code	Range	Resolution	Accuracy	Remark*	L	L1	a	b
4910-400	0~360° (90°×4)	angle: 0.1°	±0.2°	both angle and slope are displayed (slope is calculated by angle)	416	400	50	21
4910-600	0~360° (90°×4)	at 0° and 90°: 0.05°; at others: 0.1°	at 0° and 90°: ±0.1°; at others: ±0.2°	at 0° and 90° buzzer alarm	600	585	60	25
4910-1000	0~360° (90°×4)	at 0° and 90°: 0.05°; at others: 0.1°	at 0° and 90°: ±0.1°; at others: ±0.2°	at 0° and 90° buzzer alarm	1000	984	60	25

* mm/m=tan(°)×1000, for example: 0.3°=tan(0.3)×1000=5mm/m

HANDY LEVEL

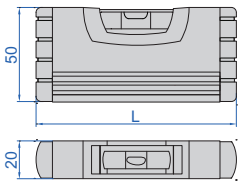
LIFETIME WARRANTY VIALS | MAGNETIC BASE



4912-100

- Shockproof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

Unit: mm



magnetic base surface



packaging



Code	Size (L)	Accuracy
4912-100	100mm	0.5mm/m

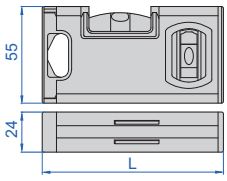
HANDY LEVELS

MAGNETIC BASE | LIFETIME WARRANTY VIALS



4922-100

Unit: mm

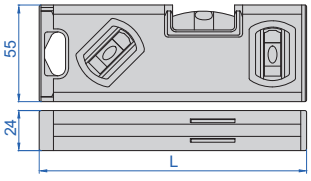


2 vials



4922-150

Unit: mm



3 vials

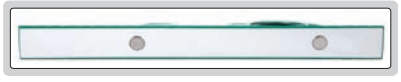
Code	Size (L)	Accuracy	Number of vials
4922-100	100mm	0.5mm/m	2
4922-150	150mm	0.5mm/m	3
4922-200	200mm	0.5mm/m	3

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

CASTING ALUMINUM LEVEL

MAGNETIC BASE | LIFETIME WARRANTY VIALS

magnetic bottom surface (milled)





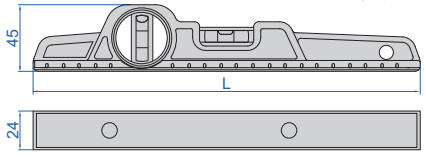
4913-250

packaging



- Shockproof horizontal and vertical vials
- Magnetic base
- Working temperature: -15°C~55°C
- Casting aluminum body

Unit: mm



Code	Size (L)	Accuracy
4913-250	250mm	0.5mm/m

17

ALUMINUM LEVEL

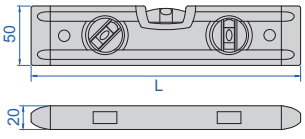
MAGNETIC BASE | LIFETIME WARRANTY VIALS



4921-230

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

Unit: mm



Code	Size (L)	Accuracy
4921-230	230mm	0.5mm/m

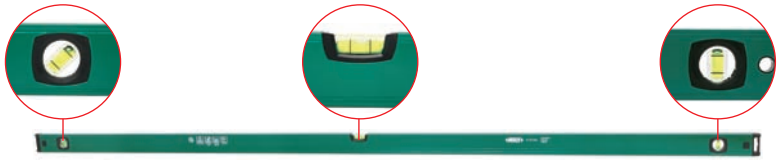
ALUMINUM LEVELS

LIFETIME WARRANTY VIALS

MAGNETIC BASE



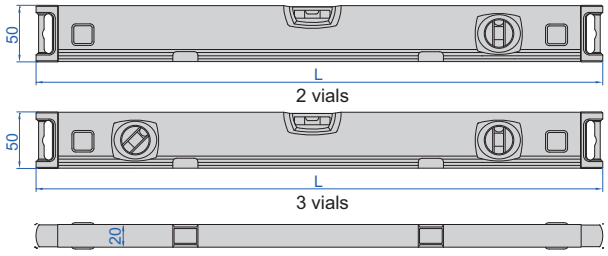
4914-600



4914-2000

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C

Unit: mm



magnetic bottom surface (milled)



Code	Size (L)	Accuracy	Number of vials
4914-300	300mm	0.5mm/m	2
4914-600	600mm	0.5mm/m	2
4914-800	800mm	0.5mm/m	2
4914-1000	1000mm	0.5mm/m	2
4914-1200	1200mm	0.5mm/m	2
4914-2000	2000mm	0.5mm/m	3

ALUMINUM LEVELS

LIFETIME WARRANTY VIALS

- Top and bottom working surfaces
- Shock-proof and UV-proof vials
- Die casting aluminum alloy frame
- Zero position of horizontal vial can be set
- One graduation of horizontal vial is 2% slope
- Working temperature: -15°C~55°C

working surface (milled)



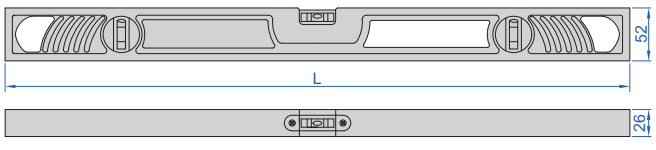
working surface (milled)

4911-600

bottom surface (non-magnetic, milled)



Unit: mm



Code	Size (L)	Accuracy
4911-600	600mm	0.5mm/m
4911-800	800mm	0.5mm/m

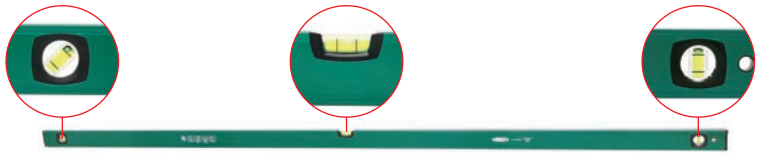
MAGNETIC BASE

LIFETIME WARRANTY VIALS

ALUMINUM LEVELS (BASIC TYPE)

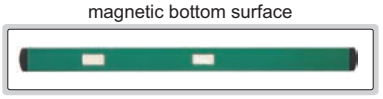


4918-300



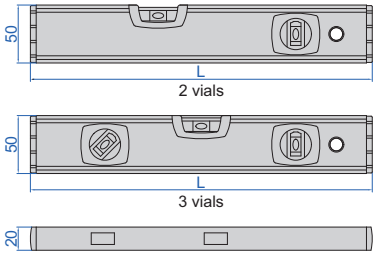
4918-2000

- Shock-proof and UV-proof vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C



Code	Size (L)	Accuracy	Number of vials
4918-300	300mm	1mm/m	2
4918-600	600mm	1mm/m	2
4918-800	800mm	1mm/m	2
4918-1000	1000mm	1mm/m	2
4918-1200	1200mm	1mm/m	2
4918-2000	2000mm	1mm/m	3

Unit: mm



LIFETIME WARRANTY VIALS

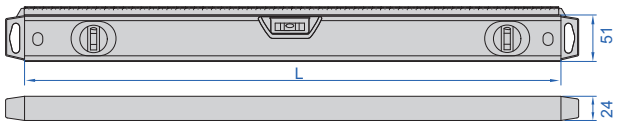
ALUMINUM LEVEL WITH RULER



4923-600

- Shockproof horizontal and vertical vials
- Non-magnetic milled base
- Shock absorbing rubber end caps
- Range of ruler: 0-60cm, graduation: 1mm
- Working temperature: -15°C~55°C

Unit: mm



Code	Size (L)	Accuracy
4923-600	600mm	0.5mm/m

CROSS-LINE LASER LEVEL
CODE 4917-30

IP54 WATERPROOF

AUDIBLE AND VISUAL ALARM WHEN OUT OF ±3°

VIDEO

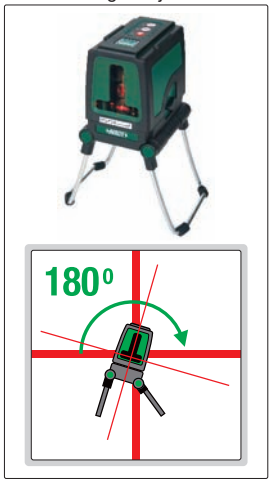
- Red horizontal and vertical cross laser lines
- Self-leveling within ±3°, self-leveling time within 4s, audible and visual alarm when out of ±3°
- Folding legs for angle and height adjustment
- Outdoor use with the detector (code: **4917-DETECTOR**)



application examples

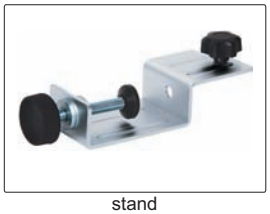


folding legs for angle and height adjustment



SPECIFICATION

Laser line width	2±0.5mm (within 5m)
Laser type	630~660nm, class II, <1mW
Beam angle	120±0.5°
Self-leveling range	±3°
Working distance	indoor: 30m, outdoor: 50m with detector (**optional**)
Accuracy	0.2mm/m
Operation temperature	-10~40°C
Power supply	3×AA batteries, for 3 hours working
Dimension	100×82×104mm
Weight	620g



stand
(included with outdoor detector)

OUTDOOR DETECTOR (OPTIONAL)

Detecting distance	horizontal 1~50m, vertical 1~30m
Detecting accuracy *	high accuracy ±1.5mm, low accuracy ±2. 5mm
Power supply	9V battery
Dimension	168×58×30mm
Weight	140g (battery included)

* Use high accuracy detection mode within 15m, use low accuracy detection mode over 15m



outdoor detector (**optional**)

STANDARD DELIVERY

Main unit	1 pc
1/4" to 5/8" tripod adaptor	1 pc
Battery (AA)	3 pcs

OPTIONAL ACCESSORY

Outdoor detector	**4917-DETECTOR**

VIDEO

INDICATOR FLASHING WHEN OUT OF ±5°

IP65 WATERPROOF

SELF-LEVELING ROTARY LASER
CODE GRL-L340





detector (included)



remote controller (included)

- Applicable fields: construction, decoration, pipeline and equipment installation
- Green laser beam rotates 360° horizontally or vertically
- Self-leveling range ±5° on both X and Y planes
- Alarm when inclination is out of ±5°
- ±5° leveling range for manual mode on both X and Y planes
- 5 variable speeds 0-600rpm
- 6 scan modes
- Plumb up and plumb down dots
- Remote control for long distance
- Power supply: AC or DC

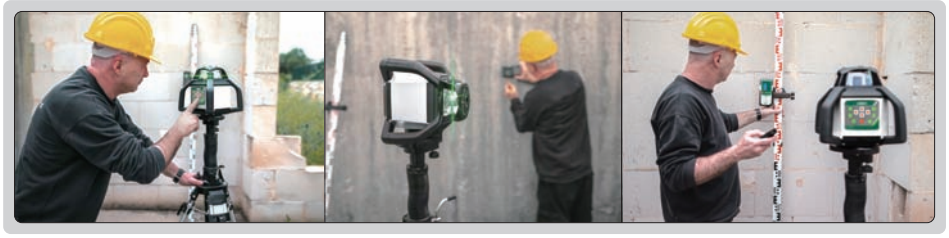


bracket for C battery (included)



beam finder glasses (included)

application examples



horizontal leveling | vertical leveling | working with detector



tripod (included)

SPECIFICATION

Working range		indoor 50m, outdoor 300m (with detector)
Self leveling range		±5°
Horizontal/vertical beam accuracy		±0.1mm/m
Main laser type		520~540nm, class 2, <1mW
Auxiliary laser type		645~655nm, class 2, <1mW
Rotating speed		0/60/120/300/600rpm
Scanning range		0/10/45/90/180/360°
Setting slope		X axis: ±5°, Y axis: ±5°
Operation temperature		-20~50°C
Maximum remote control distance		20m
Power supply	remote controller	2×1.5V AAA batteries
	main unit	NI-MH batteries or 4×1.5V C batteries
	detector	1×9V battery
Dimension		210×210×213mm
Weight		2.5kg

STANDARD DELIVERY

Main unit (including NI-MH batteries)	1 pc
C battery and bracket	1 set
Detector	1 pc
Remote controller	1 pc
Beam finder glasses	1 pc
Laser target	1 pc
Power adapter	1 pc
AAA battery	2 pcs
9V battery	1 pc
Tripod	1 pc

18 ON-MACHINE MEASUREMENT



Video Measuring Instrument For Machine Tools
Page 591-592



Centering Indicators
Page 593-595



Edge Finders
Page 596-598



Edge Finders For EDM
Page 599



3D Testers
Page 600-601



Trigger-Type 3D Probes
Page 602



Transmission Probes For CNC Machine Tools
Page 603-608



Zero Setters With Cable
Page 609-612

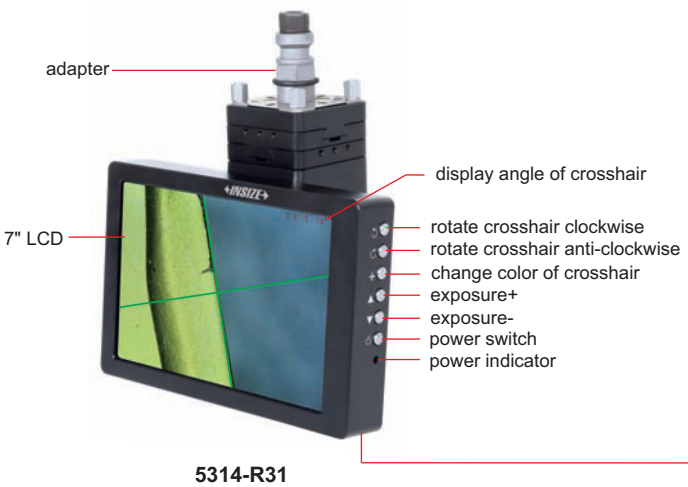


Zero Setters
Page 613-614

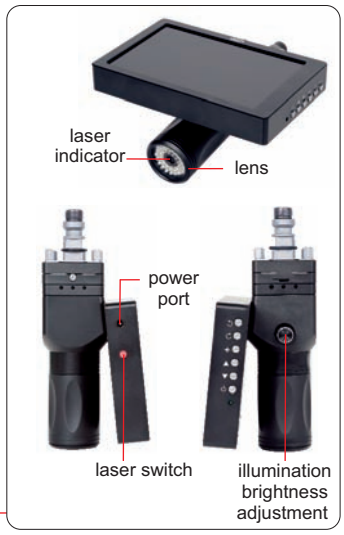


Vertical Milling Machine Perpendicularity Measuring Gauges
Page 615

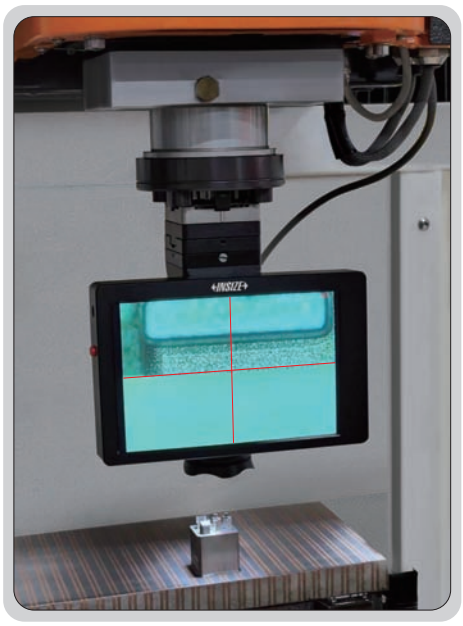
VIDEO MEASURING INSTRUMENT FOR MACHINE TOOLS



5314-R31

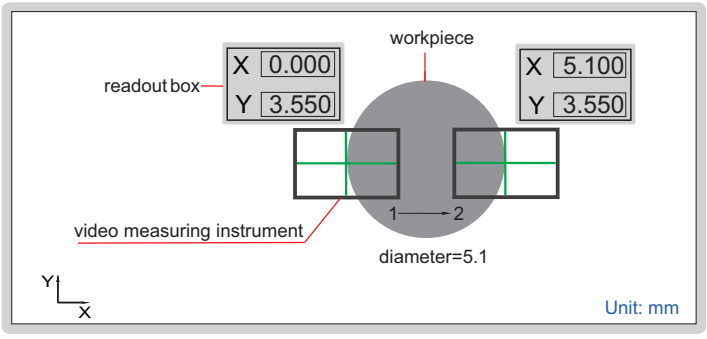


application

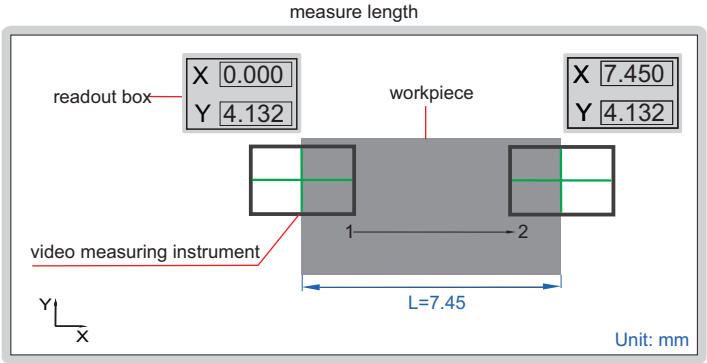


- Used in machine tools such as EDM and CNC
- Working together with linear scale and readout box of machine tools to make 2D measurement, especially suitable for small or thin parts
- Can rotate crosshair and change its color
- With laser indicator to locate position

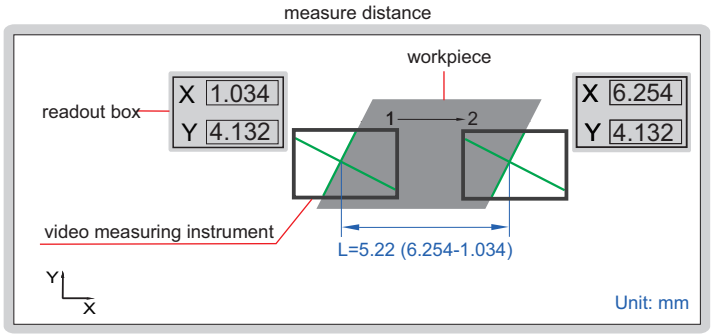
measure diameter



measure length



measure distance

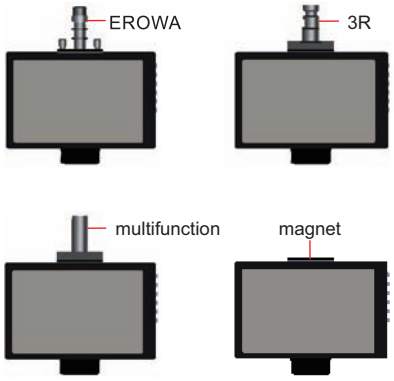


To be continued

Continued from previous page

SPECIFICATION

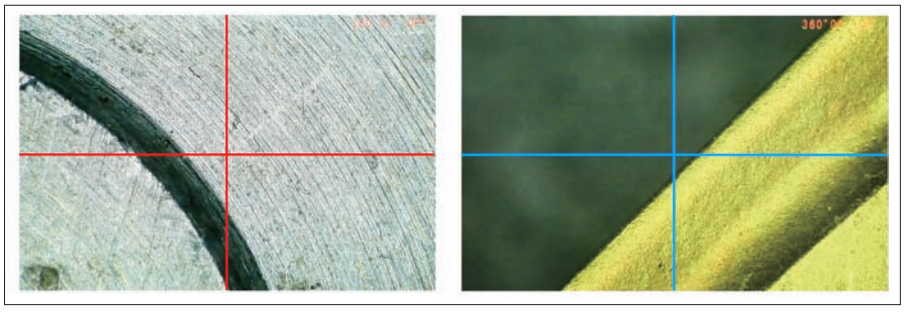
Code	5314-R31	5314-R32	5314-R33	5314-R34
Adapter	EROWA	3R	multifunction	magnet
Screen size/pixel	7"/1080P			
Visual accuracy	±0.003mm			
Magnification	50X			
Angle resolution	15'			
Automatic edge-find	after finding the edge, the crosshair changes to green color and prompts			
Color of crosshair	red, blue			
Rotation of crosshair	manual			
Focus distance	50mm			
Light source	LED (adjustable brightness)			
Lithium battery	4800mA (for 4 hours working)			
Power supply	power adapter			
Dimension (L×W×H)	178×90×215mm			
Weight	2kg			



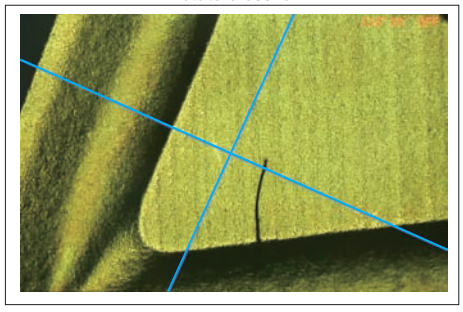
STANDARD DELIVERY

Main unit	1 pc
Power adapter	1 pc

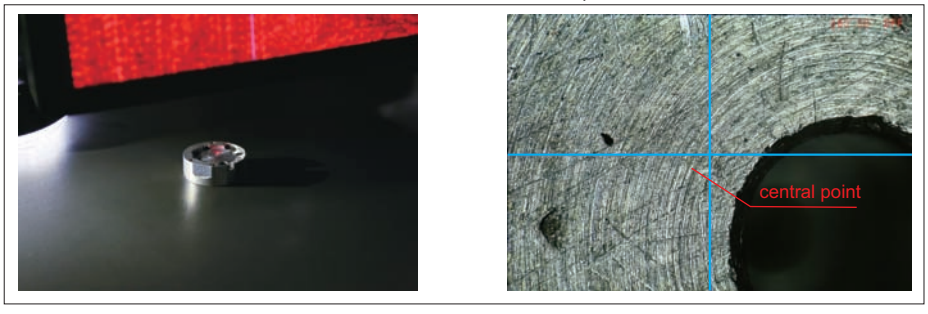
select crosshair color



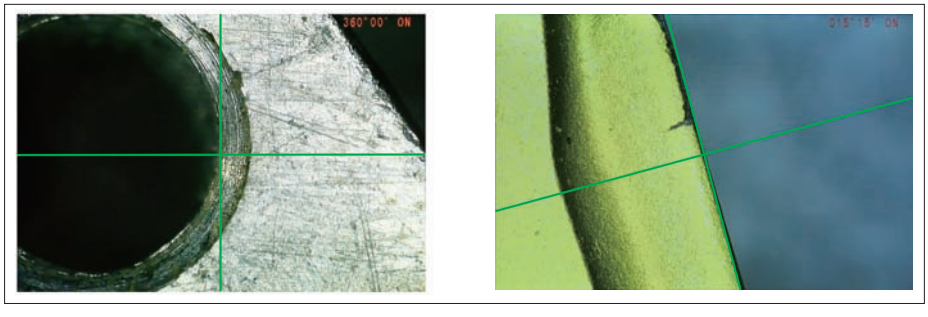
rotate crosshair



laser indicator locates the central point



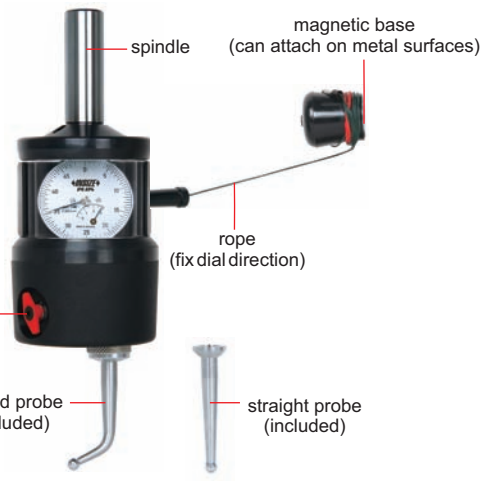
after finding the edge, the crosshair changes to green color and prompts



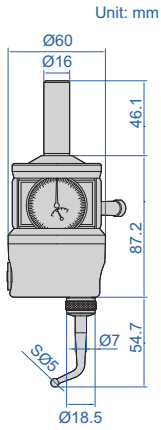
READING SHOWS MOVEMENT VALUE OF PROBE

CENTERING INDICATOR

INSIZE PLUS



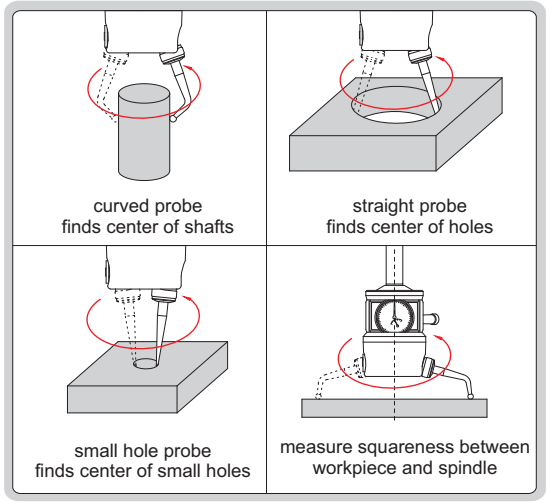
Unit: mm



VIDEO

2847-3

application



- Provides quick and accurate shaft/hole centering in boring and milling set-up, can also measure squareness between workpiece and spindle
- Dial indicator can rotate 360°
- Reading show movement value of probe, for example, if probe moves 0.01mm, reading changes 0.01mm (2 graduations)
- Optional accessory: probes

Code	Graduation	Travel
2847-3	0.005mm	2.5mm

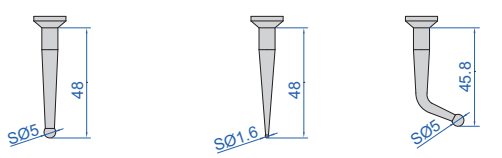
SPECIFICATION OF PROBE

Description	Measurement type	Diameter measurement	Depth measurement	Accuracy
straight probe (included)	hole center	Ø6-125mm	55mm	0.005mm
	squareness	Ø120-160mm	40mm	
small hole probe (**optional**)	small hole center	Ø2-125mm	55mm	0.005mm
	squareness	Ø120-160mm	40mm	
curved probe (included)	shaft center	Ø0-125mm	55mm	0.005mm
	squareness	Ø120-160mm	40mm	

PROBE (optional)

Code	Description
2847-P1	straight probe
2847-P2	small hole probe
2847-P3	curved probe

Unit: mm



2847-P1
straight probe

2847-P2
small hole probe

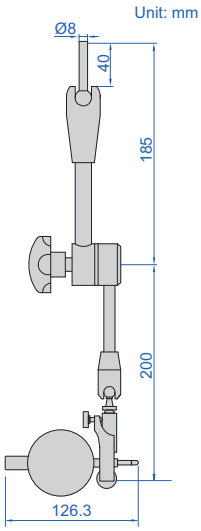
2847-P3
curved probe

BLUETOOTH DIGITAL CENTERING INDICATOR

BUILT-IN BLUETOOTH

VIDEO

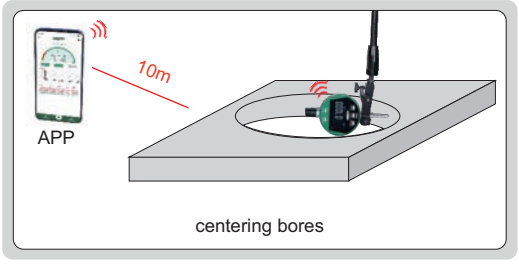




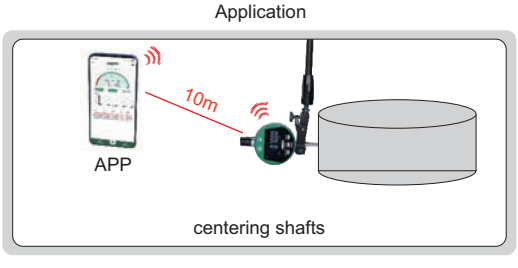
- Centering bores and shafts when installed on machine tools
- The APP features real-time data display and zero setting for digital indicator
- Android and iPhone APP are included
- Built-in bluetooth, transmission distance is 10 meters (under the condition of no obstruction and no electromagnetic interference)
- Button function: on/off, zero setting, data preset, tolerance Go and No-Go display, data hold, mm/inch, measuring direction change, bluetooth, max./min./TIR, adjust resolution, absolute/incremental measurement, data output
- Power: rechargeable Li-battery

Code	Digital indicator stroke	Digital indicator resolution	Accuracy
2851-10	12.7mm/0.5"	0.0005mm/0.00002" (can switch to: 0.001mm/0.00005")	2μm

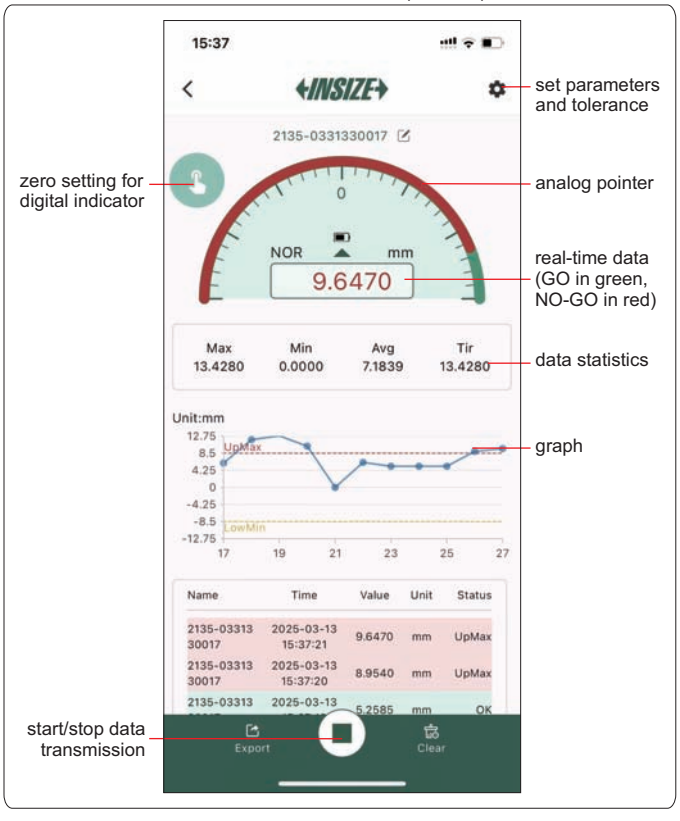
Application



Application



Android and iPhone APP (included)



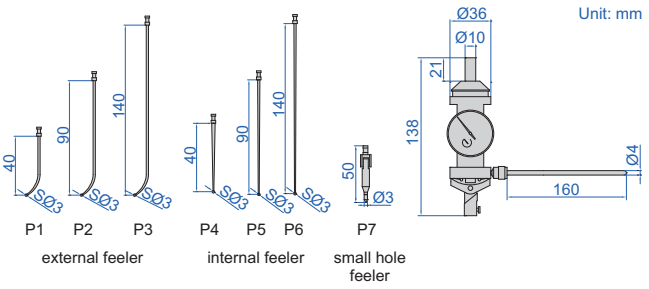
POPULAR MODEL

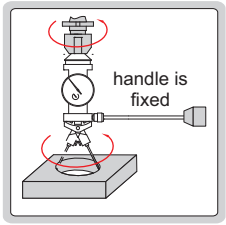
VIDEO

CENTERING INDICATOR



2385-3

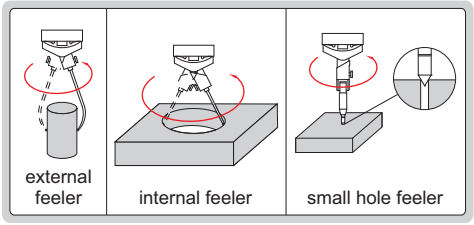




- Provides quick and accurate centering in boring and milling set-up
- Maximum speed is recommended not to exceed 800rpm

Code
2385-3

Feeler	Measuring diameter	Accuracy
P1	Ø0-60mm	0.015mm
P2	Ø0-160mm	0.02mm
P3	Ø0-250mm	0.03mm
P4	Ø3.2-80mm	0.015mm
P5	Ø3.2-180mm	0.02mm
P6	Ø3.2-280mm	0.03mm
P7	Ø0-2.8mm	0.015mm



REFER TO PAGE 318~319 FOR DETAILS

DIAL INDICATOR HOLDERS



6296-1



6291-1



6297-1



6294-1A

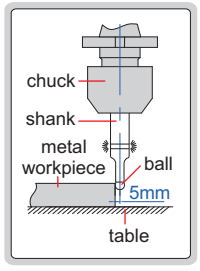


6295-1A

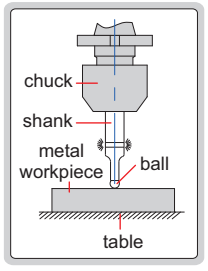
3D ELECTRONIC EDGE FINDERS

INSIZE PLUS

X-Y edge finder



Z axial setting

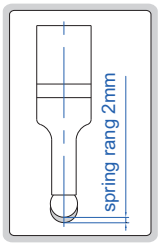




6571-1



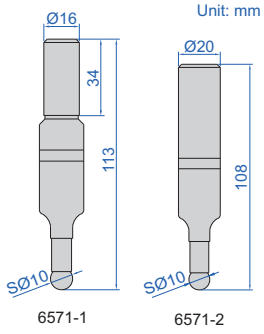
6571-2



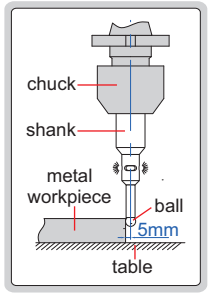
- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up, when the ball touches the workpiece
- Not suitable for rotary use
- Hardened contact ball

Code	Shank	Contact ball	Accuracy	Battery
6571-1	Ø16mm	SØ10mm	10μm	23A, 12V×1 pc
6571-2	Ø20mm	SØ10mm	10μm	23A, 12V×1 pc

Unit: mm

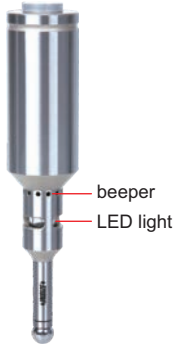


LARGE SHANK ELECTRONIC EDGE FINDERS



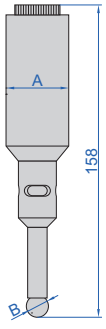


6572-1



6572-2

Unit: mm



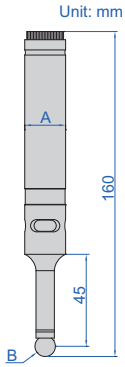
- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up and the beeper sounds (only for **6572-2**), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball

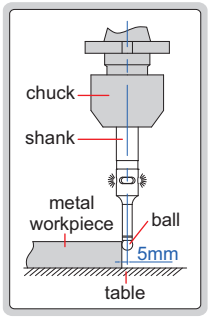
Code	Shank (A)	Contact ball (B)	Accuracy	Beeper	Battery
6572-1	Ø32mm	SØ10mm	5μm	without	23A, 12V×1 pc
6572-2	Ø32mm	SØ10mm	5μm	with	23A, 12V×1 pc

ELECTRONIC EDGE FINDERS



6566-2 **6566-3**





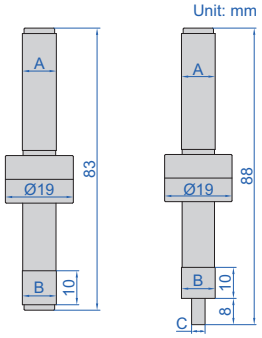
- The shank is electrically conducted to the metal workpiece through the chuck and table. The LED lights up and the beeper sounds (only for **6566-3**), when the ball touches the workpiece
- Not suitable for rotary use
- Hardened shank and contact ball

Code	Shank (A)	Contact ball (B)	Accuracy	Beeper	Battery
6566-2	Ø20mm	SØ10mm	5μm	without	23A, 12V×1 pc
6566-3	Ø20mm	SØ10mm	5μm	with	23A, 12V×1 pc

NON-MAGNETIC EDGE FINDERS

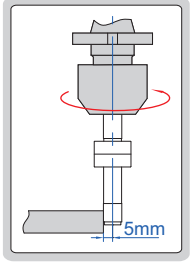


6573-1 **6573-2**

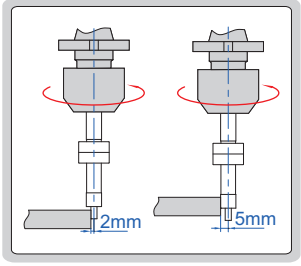


6573-1 6573-2

- TiAlN coating, non-magnetic, hardness HV2500, extremely wear resistance
- Suitable for machine speed 400~600rpm



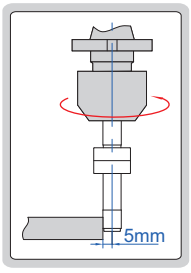
6573-1



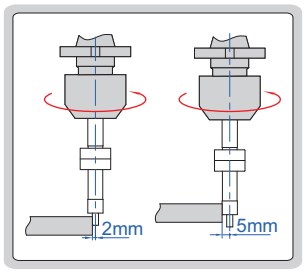
6573-2

Code	Shank (A)	Contact point (B)	Contact point (C)	Accuracy
6573-1	Ø10mm	Ø10mm	—	5μm
6573-2	Ø10mm	Ø10mm	Ø4mm	5μm

EDGE FINDERS



6562-3



6562-4

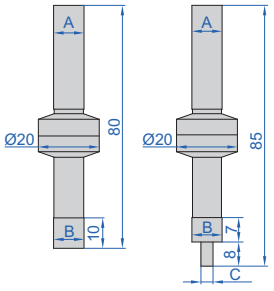


6562-3 **6562-4**

- Hardened shank and contact point
- Suitable for machine speed 400~600rpm

Code	Shank (A)	Contact point (B)	Contact point (C)	Accuracy
6562-3	Ø10mm	Ø10mm	—	5μm
6562-4	Ø10mm	Ø10mm	Ø4mm	5μm

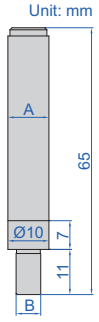
Unit: mm



6562-3 6562-4

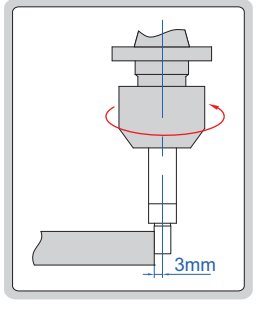
EDGE FINDER

- Hardened shank and contact point
- Suitable for machine speed 400~600rpm





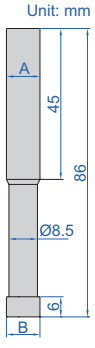
6567-1



Code	Shank (A)	Contact point (B)	Accuracy
6567-1	Ø10mm	Ø6mm	8μm

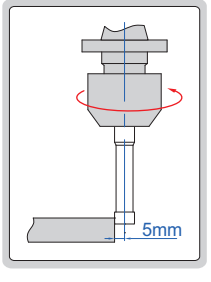
CERAMIC EDGE FINDER

- Ceramic contact point, non magnetic
- Suitable for machine speed 400~600rpm





6568-1



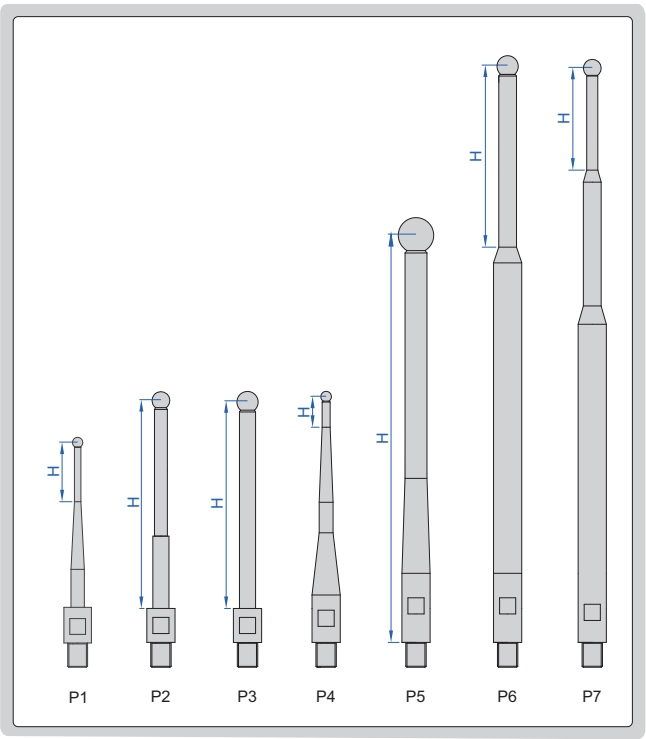
Code	Shank (A)	Contact point (B)	Accuracy
6568-1	Ø10mm	Ø10mm	8μm

EDGE FINDERS FOR EDM

CAN BE CUSTOM-MADE

VIDEO

spindle type





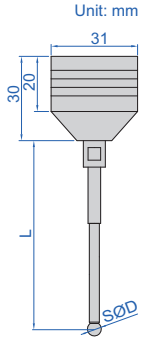
6558-52

- To locate workpieces
- Buzzer in EDM sounds when the ball touches the workpiece
- Tungsten steel ball, diameter accuracy: ±0.003mm
- Non magnetic stainless steel spindle
- Magnetic base

(mm)

Code	Ball dia. (SØD)	Spindle length (L)	Measuring depth (H)	Spindle type
6558-11	SØ1	69	5	P4
6558-21	SØ2	49	6	P1
6558-22	SØ2	69	6	P4
6558-23	SØ2	119	8	P4
6558-31	SØ3	48	6	P1
6558-32	SØ3	68	7	P4
6558-33	SØ3	118	10	P4
6558-41	SØ4	48	37	P3
6558-42	SØ4	68	57	P2
6558-43	SØ4	118	16	P4
6558-44	SØ4	168	28	P7
6558-51	SØ5	47	36	P3
6558-52	SØ5	67	56	P2
6558-53	SØ5	117	106	P2
6558-54	SØ5	167	46	P6
6558-61	SØ6	47	35	P3
6558-62	SØ6	67	56	P3
6558-63	SØ6	87	76	P3
6558-64	SØ6	117	107	P2
6558-65	SØ6	167	51	P6
6558-81	SØ8	46	46	P5
6558-82	SØ8	66	54	P3
6558-83	SØ8	116	105	P3
6558-84	SØ8	166	51	P6
6558-101	SØ10	45	34	P3
6558-102	SØ10	65	53	P3
6558-103	SØ10	115	114	P5
6558-104	SØ10	165	53	P6

Unit: mm



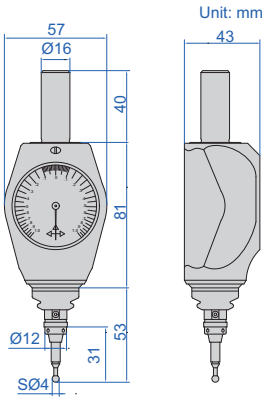
3D TESTER

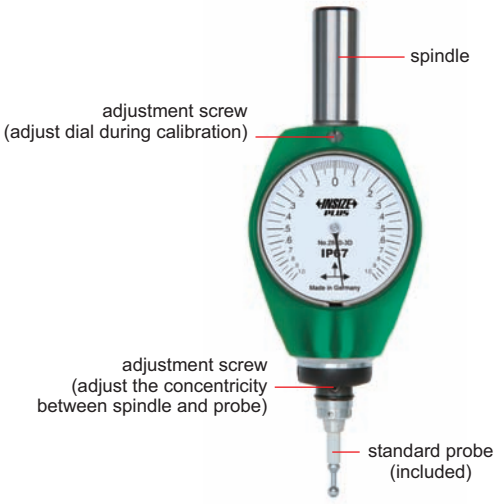
INSIZE PLUS

ATTENTION: WHEN USING STANDARD PROBE, READING SHOWS MOVEMENT VALUE OF PROBE. WHEN USING EXTENDED PROBE, READING DOES NOT SHOW MOVEMENT VALUE OF PROBE

IP67 WATERPROOF

SHOCK PROOF

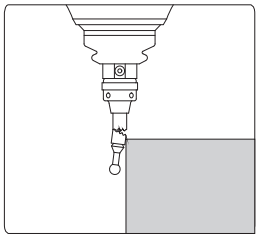




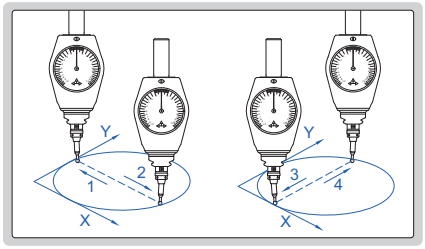
2840-3D

VIDEO

if the probe is pressed too much,
the probe breaks at the breaking point,
in order to prevent damage of the main body



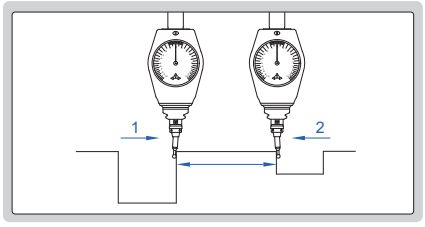
find center of holes



- Shockproof, IP67 dust/waterproof
- Mainly used for milling machines and CNC machine tools
  1. determine coordinate point on workpieces
  2. find center of holes
  3. adjust and position workpieces
- Can be used to measure length and depth
- When using standard probe, reading shows movement value of probe, for example, if probe moves 0.05mm, reading changes 0.05mm (5 graduations).
  When using extended probe, reading does not show movement value of probe
- Large working range on three axes (X, Y, Z), which avoids damage of probes due to collision by mistake

Code	Range	Graduation	Repeatability at zero (one direction)	X, Y, Z range
2840-3D	±1.0mm	0.01mm	±0.01mm	6mm

length measurement

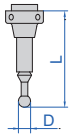




2840-N1



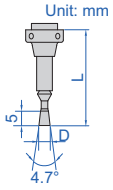
2840-N2



2840-N1/2840-N2

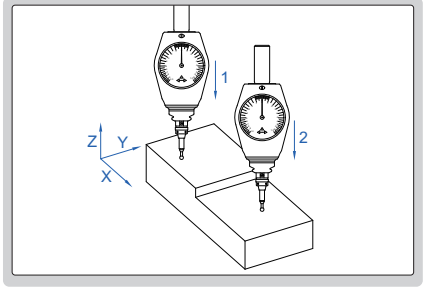


2840-N3



2840-N3

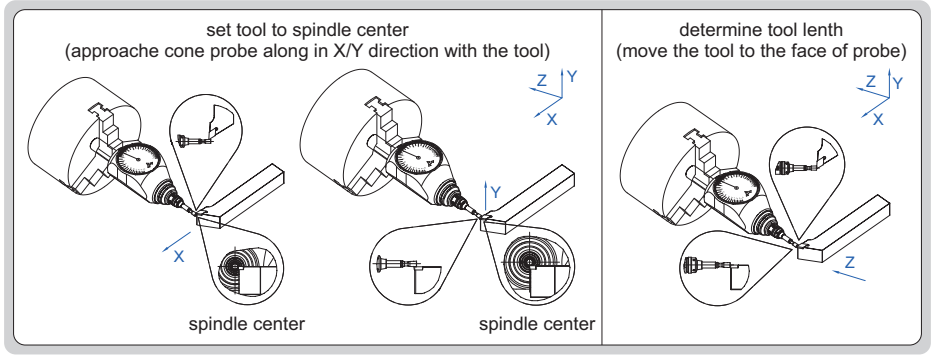
depth measurement



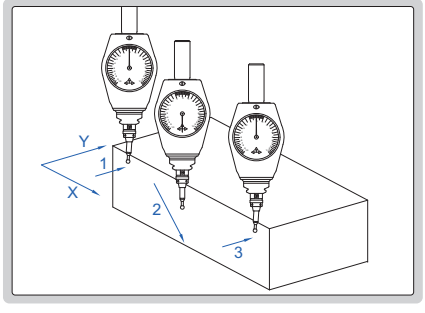
PROBE (optional) **(mm)**

Code	Description	L	D	Remark
2840-N1	standard probe	31	SØ4	reading shows movement value of probe
2840-N2	extended probe	56.6	SØ6	reading does not show movement value of probe
2840-N3	cone probe	31	SØ4.2	position turning tools in the lathe

position turning tools **(cone probe is optional)**



position workpieces



VIDEO

IP65 WATERPROOF

SHOCK PROOF

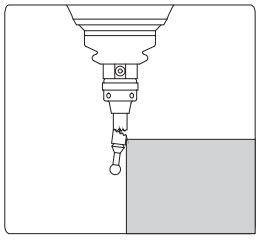
DIGITAL 3D TESTER

INSIZE PLUS

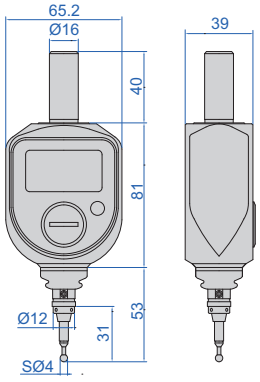


2846-3D

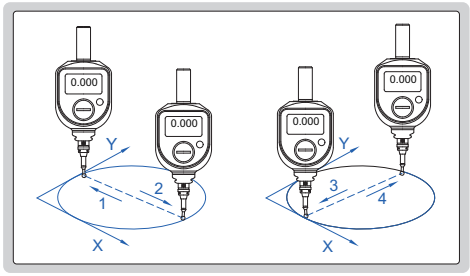
if the probe is pressed too much, the probe breaks at the breaking point, in order to prevent damage of the main body



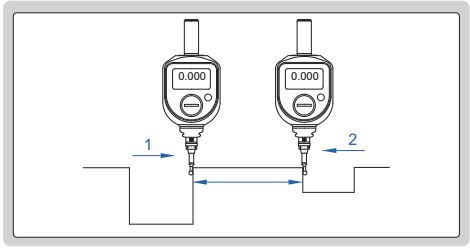
Unit: mm



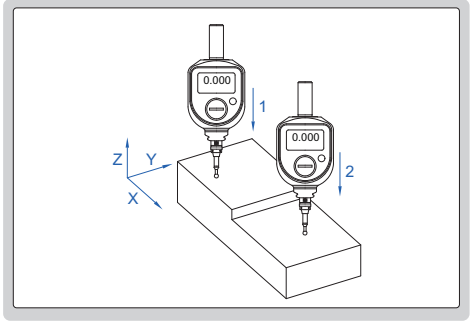
find center of holes



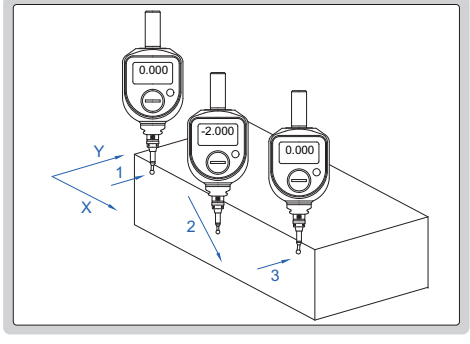
length measurement



depth measurement



position workpieces



- Shockproof, IP65 dust/waterproof
- Mainly used for milling machines and CNC machine tools
  1. determine coordinate point on workpieces
  2. find center of holes
  3. adjust and position workpieces
- Can be used to measure length and depth
- Reading shows movement value of probe.
  for example, if probe moves 0.01mm, reading changes 0.01mm
- Large working range on three axes (X, Y, Z),
  which avoids damage of probes due to collision by mistake
- Optional accessory: probe (code **2840-N1**, **2840-N2**, **2840-N3**)

Code	Range	Resolution	Repeatability at zero (one direction)	X, Y, Z range
2846-3D	±2mm	0.005mm	±0.005mm	6mm

TRIGGER-TYPE 3D PROBE (AUDIBLE AND VISUAL ALARM)
CODE 9410

IP67 WATERPROOF

VIDEO

type-C charging cable (included)



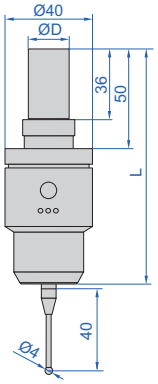
signal extension cord (included)





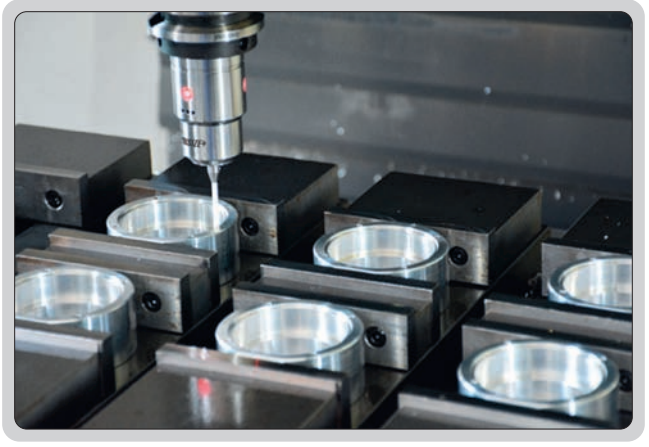
styli (code **9410-P9**, included)

Unit: mm



- Suitable for all kinds of machining centers, CNC boring machines, milling machines, drilling and tapping centers
- Suitable for workpiece detection of various solid materials
- Manually set the workpiece coordinates and machining reference points before CNC machining process
- In the process of CNC machining, manually detect and control key dimensions and position coordinates and their accuracy
- Detect the accuracy of the key size, shape and position of the workpiece after completion of CNC machining
- Standard Ø20mm shank diameter, held by CNC
- LED indicator and buzzer indicate the trigger state of the probe
- Using lithium battery charging technology, no need to replace the battery
- The battery (5% utilization rate per shift) can be used continuously for 90 days
- Type-C interface
- Optional accessory: styli and extension bar

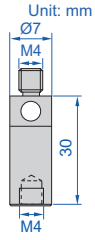
application



SPECIFICATION

Probe length (L)	115.5mm
Shank diameter (ØD)	20mm
Trigger direction	±X, ±Y, +Z
Directional trigger protection stroke	X-Y: ±12°, Z: +5mm
Arbitrary one-way repeated trigger accuracy	≤1μm
Trigger force in X-Y direction (with standard styli)	0.3-0.6N
Trigger force in Z direction	4N
Dust/waterproof	IP67
Type-C charging cable	1.5m
Signal extension cord (provide signals to CNC)	1m

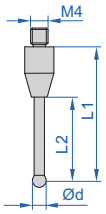
Unit: mm



EXTENSION ROD (OPTIONAL)

Code	Material
9410-R1	ceramic

Unit: mm



STYLI (OPTIONAL) (mm)

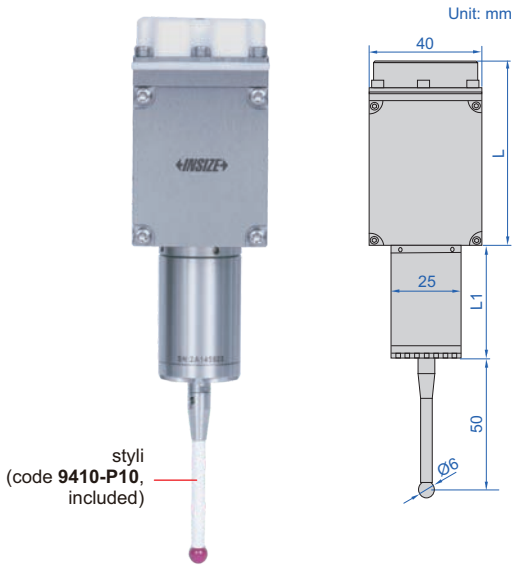
Code	L1	L2	Ød	Material of rod *	Material of ball
9410-P1	18	13	4	stainless steel	ruby
9410-P2	18	13.5	5	stainless steel	ruby
9410-P3	18.5	13	3	stainless steel	ruby
9410-P4	19	8	2	carbide	ruby
9410-P5	19.5	4	1	carbide	ruby
9410-P6	50	40	2	carbide	ruby
9410-P7	50	34	5	ceramic	ruby
9410-P8	100	86	6	ceramic	ruby
9410-P9	40	30	4	ceramic	ruby
9410-P10	50	36	6	ceramic	ruby

* For stainless steel or carbide rods, it is recommended to use extension rods to protect spindles in case of break

IP68
WATERPROOF

RADIO TRANSMISSION PROBES FOR CNC MACHINE TOOLS

VIDEO



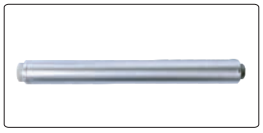
9426-1



9426-A

- On-machine measurement of all kinds of lathes, turning centers and mill-turn CNC machines tools
- Automatically set the workpiece coordinate and machining reference point before CNC machining process
- Automatically measure dimension and position coordinate during CNC machining
- Measure dimension, shape and position after CNC machining is completed
- Four kinds of SSR signals such as probe status, error, low voltage and pulse are transmitted to CNC machine tools
- M code is used to control on or off of probes
- Radio transmission, transmission/reception range: 14m
- Supplied with measurement software
- Optional accessory: styli
- Mounting plate can be customized

probe extension rod
(included)



PROBE SPECIFICATION

Code	9426-1	9426-2	9426-3	9426-4
Signal transmitter length (L)	67mm	67mm	67mm	67mm
Probe length (L1)	42mm	42mm	42mm	42mm
Probe extension rod (included)	—	50mm	100mm	150mm
Trigger accuracy of styli in any direction	1μm			
Protection stroke triggered by styli in all directions	X and Y axis stroke: ±12°, Z axis stroke: 5mm			
Trigger force of styli in all directions	X and Y axis: <1.6N, Z axis: <9.8N			
Dust/waterproof	IP68			
Power supply	2×LS14250 lithium battery			

RECEIVER SPECIFICATION

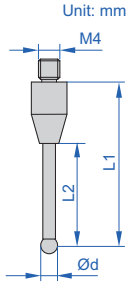
Code	9426-A
Protection function	low battery voltage or probe transmitting signal all the time *
Applicable probe	code **9426-1**, **9426-2**, **9426-3**, **9426-4**
Cable length **	8m
Dust/waterproof	IP68
Power supply	input voltage: 24V±10%(DC), load current: 50mA

*When battery voltage is low or probe is in wrong state, receiver sends a signal to CNC machine to stop working

**Cable length can be customized

To be continued

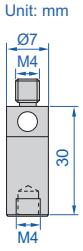
Continued from previous page



STYLI (OPTIONAL) **(mm)**

Code	L1	L2	Ød	Material of rod ***	Material of ball
9410-P1	18	13	4	stainless steel	ruby
9410-P2	18	13.5	5	stainless steel	ruby
9410-P3	18.5	13	3	stainless steel	ruby
9410-P4	19	8	2	carbide	ruby
9410-P5	19.5	4	1	carbide	ruby
9410-P6	50	40	2	carbide	ruby
9410-P7	50	34	5	ceramic	ruby
9410-P8	100	86	6	ceramic	ruby
9410-P9	40	30	4	ceramic	ruby
9410-P10	50	36	6	ceramic	ruby

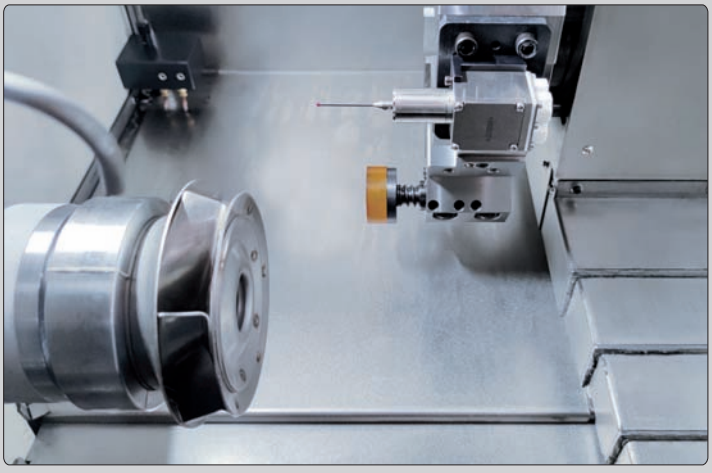
*** For stainless steel or carbide rods, it is recommended to use extension rods to protect spindles in case of break



EXTENSION ROD (OPTIONAL)

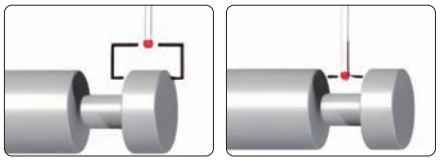
Code	Material
9410-R1	ceramic

application

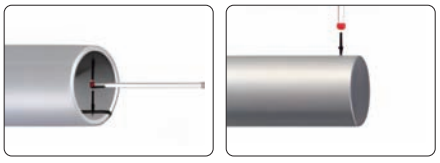


MEASUREMENT SOFTWARE (INCLUDED)

1. Styli automatic calibration
2. Protection of stylus during probe movement (avoid collision)
3. Groove and boss measurement



4. Bore and axis measurement



5. Measurement of X and Y axis step plane
6. Measurement of X and Y plane angle
7. Measurement of internal arc in X and Y plane

INFRARED TRANSMISSION PROBES FOR CNC MACHINE TOOLS

VIDEO

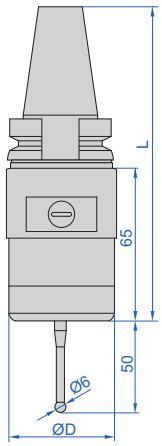
IP68 WATERPROOF



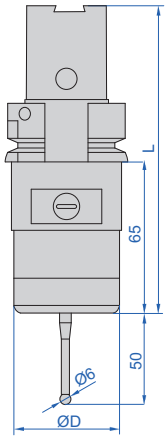
styli (code **9410-P10**, included)

9413-1

Unit: mm



BT30, BT40, BT50, CAT40 spindles

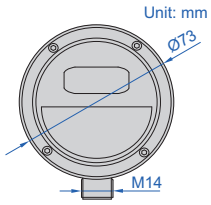


HSK63A spindle



9413-A

Unit: mm



BT30, BT40, BT50, CAT40	HSK63A
	

- On-machine measurement of all kinds of small and medium-sized machining centers, CNC boring, milling machines and five-axis CNC machine tools
- Automatically set the workpiece coordinate and machining reference point before CNC machining process
- Automatically measure dimension and position coordinate during CNC machining
- Measure dimension, shape and position after CNC machining is completed
- Four kinds of SSR signals such as probe status, error, low voltage and pulse are transmitted to CNC machine tools
- M code is used to control on or off of probes
- Infrared transmission, strong anti-interference
- Infrared transmission/reception range: 5m
- Supplied with automatic measurement software
- Optional accessory: styli

PROBE SPECIFICATION

Code	9413-1	9413-2	9413-3	9413-4	9413-5
Probe length (L)	140mm	166mm	216mm	168mm	136mm
Probe diameter (ØD)	48mm	48mm	48mm	48mm	48mm
Applicable spindle *	BT30	BT40	BT50	CAT40	HSK63A
Trigger accuracy of styli in any direction	1μm				
Protection stroke triggered by styli in all directions	X and Y axis stroke: ±12.5°, Z axis stroke: 5mm				
Trigger force of styli in all directions	X and Y axis: 1-1.6N, Z axis: 5-10N				
Dust/waterproof	IP68				
Power supply	2×LS14250 lithium battery				

* SK and ISO spindle probes also can be customized

RECEIVER SPECIFICATION

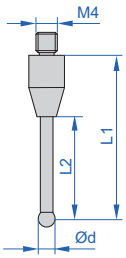
Code	9413-A
Protection function	low battery voltage or probe transmitting signal all the time**
Applicable probe	code **9413-1**, **9413-2**, **9413-3**, **9413-4**, **9413-5**
Cable length	8m
Dust/waterproof	IP68
Power supply	input voltage: 24V±10% (DC), load current: 50mA

** When battery voltage is low or probe is in wrong state, receiver sends a signal to CNC machine to stop working

To be continued

Continued from previous page

Unit: mm

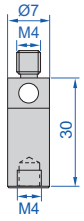


STYLI (OPTIONAL) **(mm)**

Code	L1	L2	Ød	Material of rod ***	Material of ball
9410-P1	18	13	4	stainless steel	ruby
9410-P2	18	13.5	5	stainless steel	ruby
9410-P3	18.5	13	3	stainless steel	ruby
9410-P4	19	8	2	carbide	ruby
9410-P5	19.5	4	1	carbide	ruby
9410-P6	50	40	2	carbide	ruby
9410-P7	50	34	5	ceramic	ruby
9410-P8	100	86	6	ceramic	ruby
9410-P9	40	30	4	ceramic	ruby
9410-P10	50	36	6	ceramic	ruby

*** For stainless steel or carbide rods, it is recommended to use extension rods to protect spindles in case of break

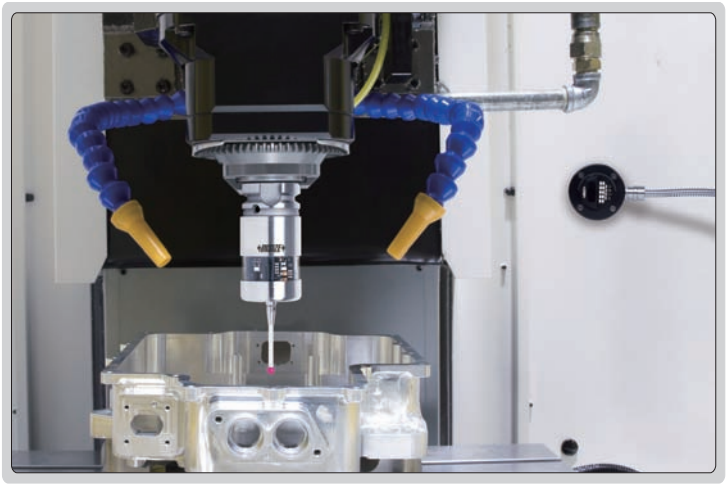
Unit: mm



EXTENSION ROD (OPTIONAL)

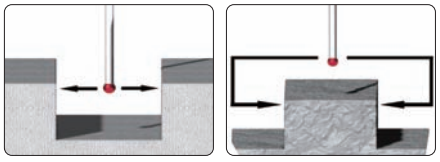
Code	Material
9410-R1	ceramic

application

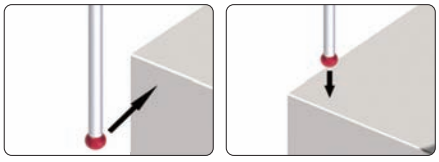


AUTOMATIC MEASUREMENT SOFTWARE (INCLUDED)

1. Stylus automatic calibration
2. Protection of stylus during probe movement (avoid collision)
3. Groove and boss measurement

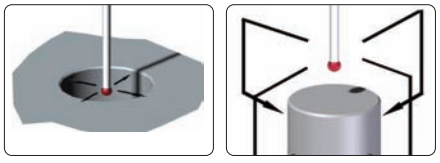


5. X or Y single-surface measurement

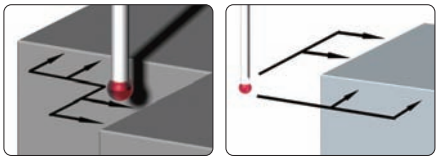


7. 4th axis measurement
8. Angle on X and Y plane measurement
9. Three points measurement of arc

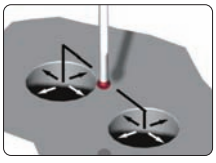
4. Bore and axis measurement



6. Internal and external corner measurement



10. Measure the distance between two holes

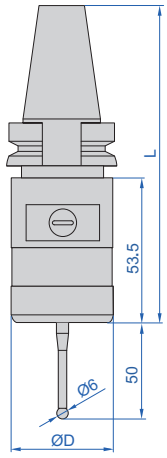


INFRARED TRANSMISSION PROBES FOR CNC MACHINE TOOLS (CAN BE USED IN COMBINATION WITH ZERO SETTER WITH INFRARED TRANSMISSION)

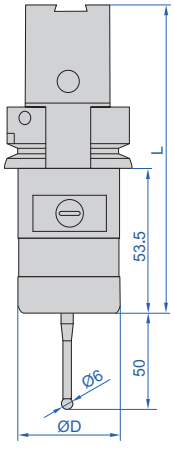


9414-1

Unit: mm



BT30, BT40, BT50, CAT40 spindles



HSK63A spindle

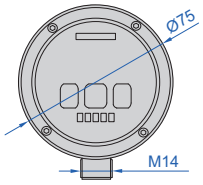
IP68 WATERPROOF

VIDEO



9414-A

Unit: mm



BT30, BT40, BT50, CAT40	HSK63A
	

- On-machine measurement of all kinds of small and medium-sized machining centers, CNC boring, milling machines and five-axis CNC machine tools
- Automatically set the workpiece coordinate and machining reference point before CNC machining process
- Automatically measure dimension and position coordinate during CNC machining
- Measure dimension, shape and position after CNC machining is completed
- Four kinds of SSR signals such as probe status, error, low voltage and pulse are transmitted to CNC machine tools
- Working status can be displayed on receiver LED indicator
- Signal transmitting range of probe can be set
- Infrared transmission, fast response, high reliability
- The battery (5% utilization rate per shift) can be used continuously for 90 days
- Supplied with measurement software package
- Can be used in combination with zero setter with infrared transmission (code **9415-1**, **9415-2**)
- Optional accessory: styli

PROBE SPECIFICATION

Code	9414-1	9414-2	9414-3	9414-4	9414-5
Probe length (L)	130mm	151.5mm	208.3mm	156mm	126.5mm
Probe diameter (ØD)	40mm	40mm	40mm	40mm	40mm
Applicable spindle*	BT30	BT40	BT50	CAT40	HSK63A
Trigger accuracy of styli in any direction	1μm				
Protection stroke triggered by styli in all directions	X and Y axis stroke: ±12°, Z axis stroke: 5mm				
Trigger force of styli in all directions	X and Y axis: 0.5-1N, Z axis: 7.5N				
Dust/waterproof	IP68				
Power supply	2×LS14250 lithium battery				

*SK and ISO spindle probes also can be customized

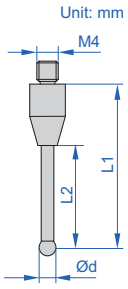
RECEIVER SPECIFICATION

Code	9414-A
Protection function	low battery voltage, overstroke and signal interrupt protection**
Applicable	probe code **9414-1**, **9414-2**, **9414-3**, **9414-4**, **9414-5**; zero setter code **9415-1**, **9415-2**
Infrared transmission/reception range	3m
Cable length	8m
Dust/waterproof	IP68
Power supply	input voltage: 24V±10% (DC), load current (max): 50mA

**When battery voltage is low or zero setter is in wrong state, receiver sends a signal to CNC machine to stop working

To be continued

Continued from previous page

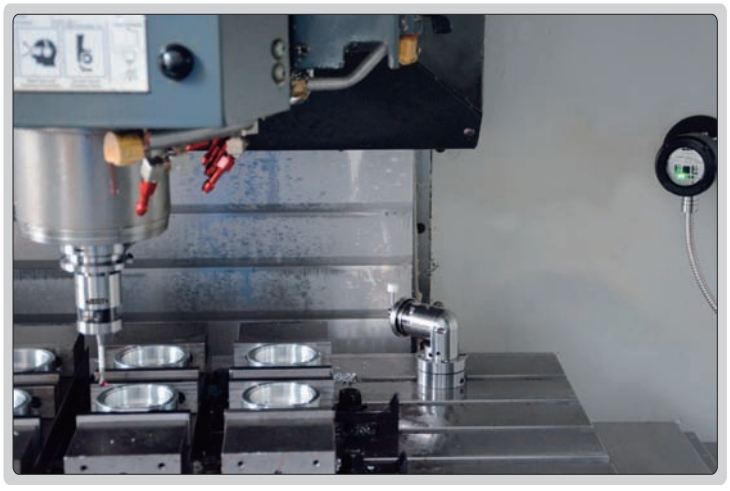


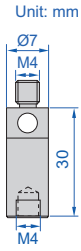
STYLI (OPTIONAL) **(mm)**

Code	L1	L2	Ød	Material of rod ***	Material of ball
9410-P1	18	13	4	stainless steel	ruby
9410-P2	18	13.5	5	stainless steel	ruby
9410-P3	18.5	13	3	stainless steel	ruby
9410-P4	19	8	2	carbide	ruby
9410-P5	19.5	4	1	carbide	ruby
9410-P6	50	40	2	carbide	ruby
9410-P7	50	34	5	ceramic	ruby
9410-P8	100	86	6	ceramic	ruby
9410-P9	40	30	4	ceramic	ruby
9410-P10	50	36	6	ceramic	ruby

*** For stainless steel or carbide rods, it is recommended to use extension rods to protect spindles in case of break

application



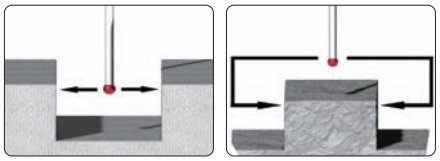


EXTENSION ROD (OPTIONAL)

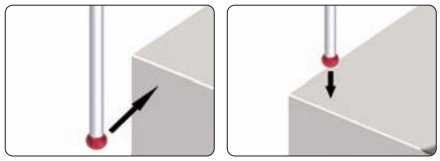
Code	Material
9410-R1	ceramic

AUTOMATIC MEASUREMENT SOFTWARE (INCLUDED)

1. Stylus automatic calibration
2. Protection of stylus during probe movement (avoid collision)
3. Groove and boss measurement

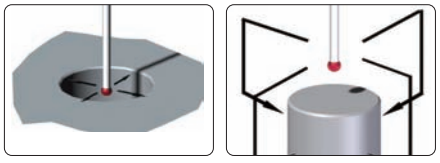


5. X or Y single-surface measurement

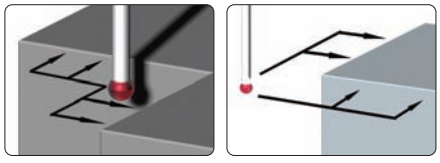


7. 4th axis measurement
8. Angle on X and Y plane measurement
9. Three points measurement of arc

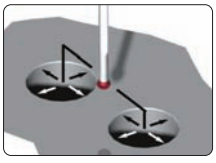
4. Bore and axis measurement



6. Internal and external corner measurement



10. Measure the distance between two holes



IP68 WATERPROOF

ZERO SETTERS WITH INFRARED TRANSMISSION (FIVE-SIDE)

VIDEO

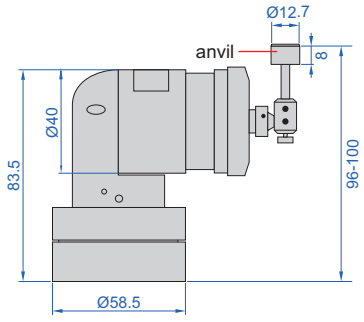


9415-1

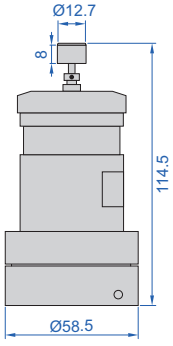


9414-A

Unit: mm

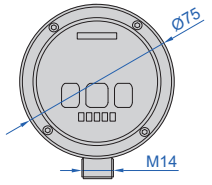


9415-1



9415-2

Unit: mm



- Suitable for all kinds of small and medium-sized machining centers, CNC boring, milling machines and five-axis CNC machine tools, etc.
- Automatically set the tool length parameters before CNC machining process
- Automatic detection of tool wear or damage during CNC machining
- Automatic detection of tool wear or damage after CNC machining is completed
- The working surface of anvil is ceramic and has chamfer, which can greatly improve the service life
- Infrared transmission, fast response, high reliability
- The battery (5% utilization rate per shift) can be used continuously for 90 days
- Supplied with automatic zero setter software package
- Can be used in combination with infrared transmission probes for CNC machine tools (code **9414-1**, **9414-2**, **9414-3**, **9414-4**, **9414-5**)
- Optional accessory: square anvil (code **9412-B1**)

ZERO SETTER SPECIFICATION

Code	9415-1	9415-2
Height (factory setting)	96-100mm	114.5mm
Diameter of zero setter	Ø12.7mm	
Trigger direction	±X, ±Y, +Z	
Trigger protection stroke	X-Y: ±5mm, Z: 8mm	
Trigger force of zero setter all directions	X and Y axis: 0.5-1N, Z axis: 1.5N	X and Y axis: 0.5-1N, Z axis: 5N
Repeated trigger accuracy	≤1μm	
Start/stop mode	M code control *	
Hardness of the zero setter	HM8.5	
Dust/waterproof	IP68	
Power supply	2×LS14250 lithium battery	

*Before purchasing, please confirm whether CNC still has enough M code to be used

To be continued

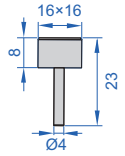
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RECEIVER SPECIFICATION

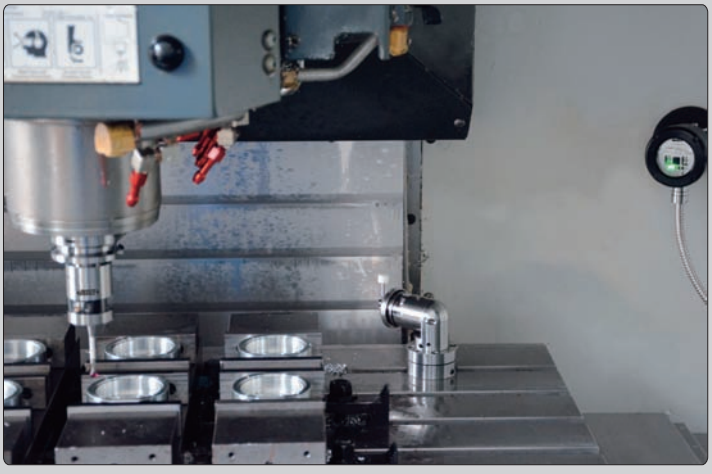
Code	**9414-A**
Protection function	low battery voltage, overstroke and signal interrupt protection**
Applicable	probe code **9414-1**, **9414-2**, **9414-3**, **9414-4**, **9414-5**; zero setter code **9415-1**, **9415-2**
Infrared transmission/reception range	3m
Cable length	8m
Dust/waterproof	IP68
Power supply	input voltage: 24V±10% (DC), load current (max): 50mA

** When battery voltage is low or zero setter is in wrong state, receiver sends a signal to CNC machine to stop working

Unit: mm



application



SQUARE ANVIL (OPTIONAL)

Code	Shape	Dimension	Material
9412-B1	square	16×16mm	ceramic

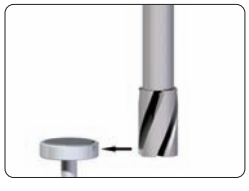
Automatic zero setter software (included)

1. Automatic calibration of the center position of the anvil
2. Standard knife length setting
3. Semi-automatic and fully automatic tool setting for tool length





4. Semi-automatic and fully automatic tool diameter settings



5. Automatic detection of tool wear and breakage



VIDEO

IP68 WATERPROOF

ZERO SETTER WITH CABLE (FIVE-SIDE) CODE 9412



- Suitable for various machining centers, CNC boring and milling machines, etc.
- Automatically set the tool length parameters before CNC machining process
- Automatic detection of tool wear or damage during CNC machining
- Automatic detection of tool wear or damage after CNC machining is completed
- The working surface adopts ceramic material and chamfering process, which can greatly improve the service life
- The plug, cable part and output signal of the host are protected, so that the zero setter can work in the splash environment for a long time
- Signal transmission through the cable, the reverse connection of the power line can change the state of the signal output
- The working status is displayed by the indicator light
- Supplied with automatic zero setter software package
- Optional accessory: square feeler block (code **9412-B1**)

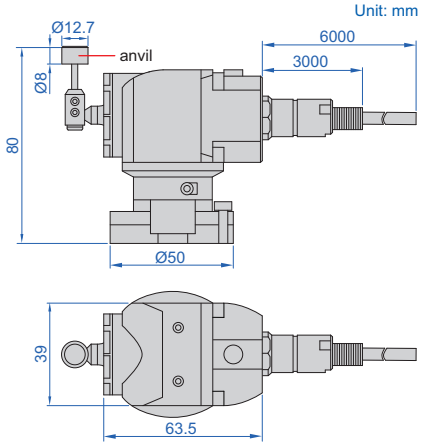
SPECIFICATION

Height (factory setting)	80±0.5mm
Diameter of zero setter	Ø12.7mm
Trigger direction	±X, ±Y, +Z
Trigger protection stroke	X-Y: ±5mm, Z: 8mm
Axial reset force	3.4N-3.6N
Repeated trigger accuracy	≤1μm
Hardness of the zero setter	HM8.5
Class of protection	IP68
Cable length *	6m (stainless steel sheath 3m)
Input voltage	24V±10% (DC)
Load current	max: 50mA
Signal type and logic **	SSR (NC/NO)

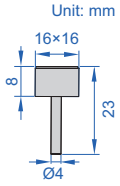
*The length of the cable can be customized

**Before purchasing, it is necessary to confirm whether the working logic of the tool setter output signal matches CNC control system

Unit: mm



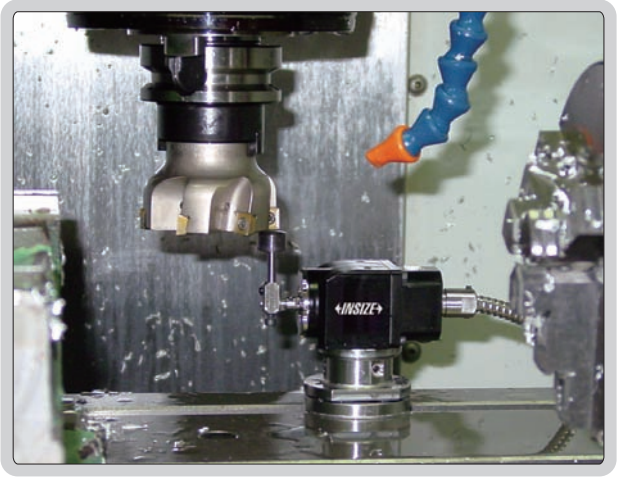
Unit: mm



SQUARE ANVIL (OPTIONAL)

Code	Shape	Dimension	Material
9412-B1	square	16×16mm	ceramic

application



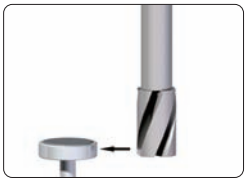
Automatic zero setter software (included)

1. Automatic calibration of the center position of the anvil
2. Standard knife length setting
3. Semi-automatic and fully automatic tool setting for tool length





4. Semi-automatic and fully automatic tool diameter settings



5. Automatic detection of tool wear and breakage



ZERO SETTER (WITH CABLE)
CODE 9411

IP68 WATERPROOF

VIDEO

- Suitable for various machining centers, CNC boring and milling machines, etc.
- Automatically set the tool length parameters before CNC machining process
- Automatic detection of tool wear or damage during CNC machining
- Automatic detection of tool wear or damage after CNC machining is completed
- The working surface is made of hard alloy material, which can greatly improve the scratch resistance
- Signal transmission through the cable, the reverse connection of the power line can change the state of the signal output
- The working status is displayed by the indicator light
- Supplied with 20mm mounting base
- Supplied with automatic zero setter software package
- Optional accessory: blow-cleaning device (code **9411-C1**)

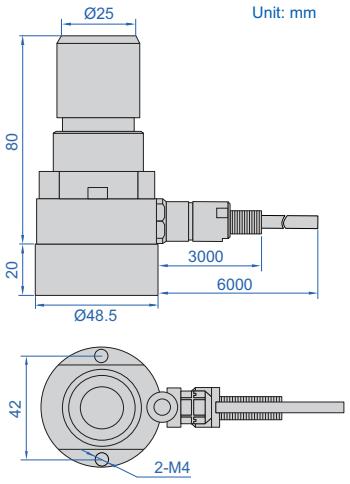


SPECIFICATION

Height	80mm (the height is 100mm after adding the mounting base)
Diameter of zero setter	Ø25mm
Downward travel	5mm
Axial reset force	6N±0.3N
Repeated trigger accuracy	≤1μm
Hardness of the zero setter	HRA90-93
Class of protection	IP68
Cable length *	6m (stainless steel sheath 3m)
Input voltage	24V±10% (DC)
Load current	max: 50mA
Signal type and logic **	SSR (NC/NO)

*The length of the cable can be customized

**Before purchasing, it is necessary to confirm whether the working logic of the tool setter output signal matches CNC control system

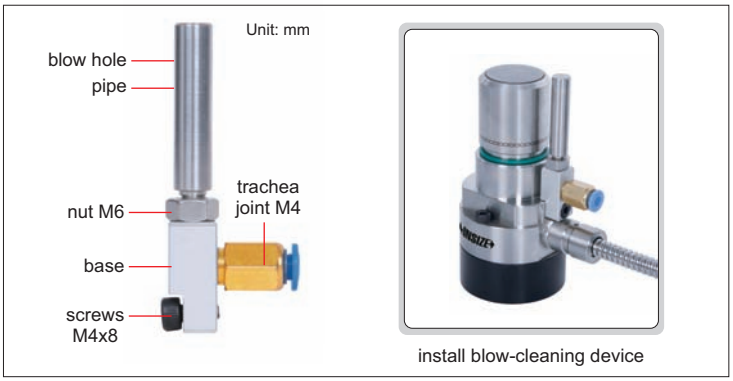


BLOW-CLEANING DEVICE (OPTIONAL)

Code	Material
9411-C1	stainless steel

Before purchasing a blow-cleaning device, it is necessary to confirm whether CNC machine has the M-code to control the cleaning

blow-cleaning device **(optional)**



application



Automatic zero setter software package (included)

1. Automatic calibration of the center position of the cutter block
2. Standard knife length setting
3. Semi-automatic and fully automatic tool setting for tool length
4. Automatic detection of tool wear and breakage



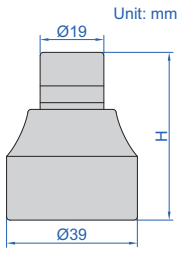




ELECTRONIC ZERO SETTER

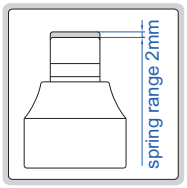
LOW TEST FORCE

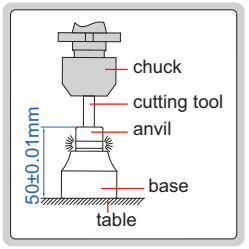
- The base is electrically conducted to the cutting tools through the table and chuck. The LED lights up when the cutting tool touches the anvil
- Magnetic base
- Two batteries LR44





6553-50

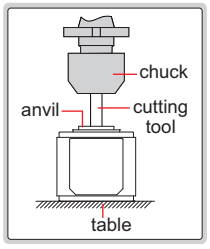




Code	Height (H)	Accuracy	Test force
6553-50	50mm	±10μm	7N (at 49mm)

DIGITAL ZERO SETTER

IP65 WATERPROOF

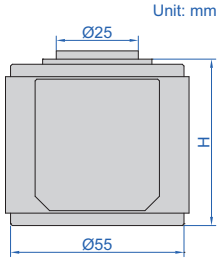




6557-50





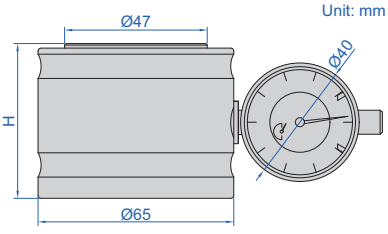


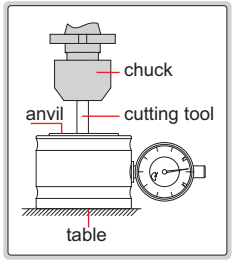
Code	Height (H)	Anvil stroke	Accuracy*	Test force	Repeatability
6557-50	50mm	2.5mm	±10μm/±0.0004"	10N (at 50mm)	2μm

* The accuracy is ensured within Ø10mm of the center

- Resolution: 0.001mm/0.00005"
- IP65 dust/waterproof
- Buttons: on/off, mm/inch, zero
- CR2032 battery
- Automatic power off
- Magnetic base
- Automatic backlight at zero

ZERO SETTER



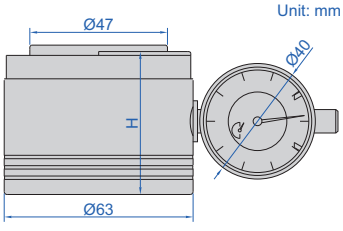


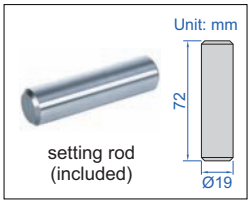


6554-50

Code	Height (H)	Graduation	Accuracy	Test force
6554-50	50mm	0.01mm	±0.02mm	9N (at 50mm)

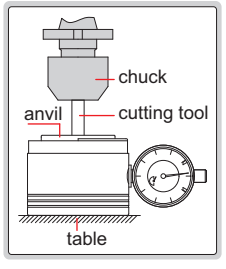
ZERO SETTER





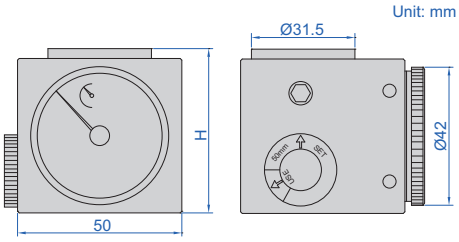


6556-50

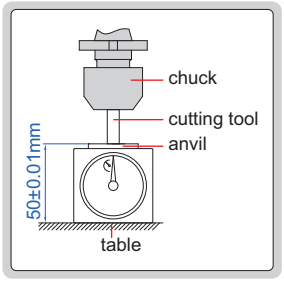


Code	Height (H)	Graduation	Accuracy	Test force
6556-50	50mm	0.01mm	±0.01mm	10N (at 50mm)

ZERO SETTER







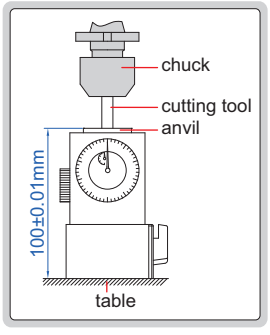
- Magnetic base

2397-502A

Code	Height (H)	Graduation	Accuracy	Test force
2397-502A	50mm	0.01mm	±0.01mm	9N (at 50mm)

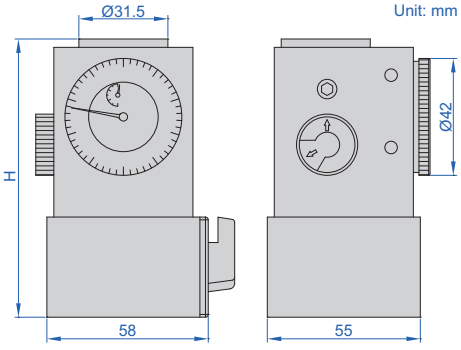
ZERO SETTER

- Magnetic base with on-off switch





2394-100A



Code	Height (H)	Graduation	Accuracy	Test force
2394-100A	100mm	0.01mm	±0.01mm	9N (at 100mm)

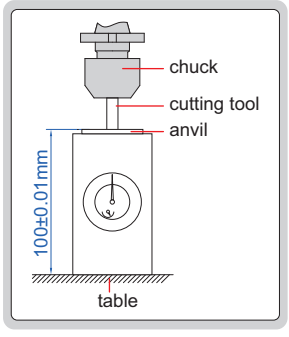
18

LOW TEST FORCE ZERO SETTER

INSIZE PLUS

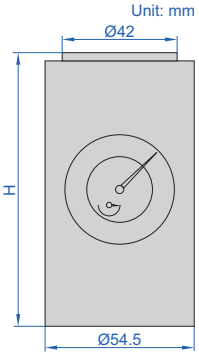
LOW TEST FORCE

- Magnetic base
- Low test force, suitable for micro tools with minimum diameter Ø0.1mm



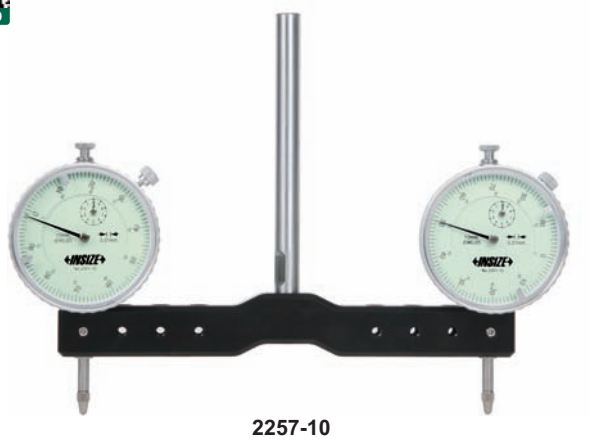


6555-100B

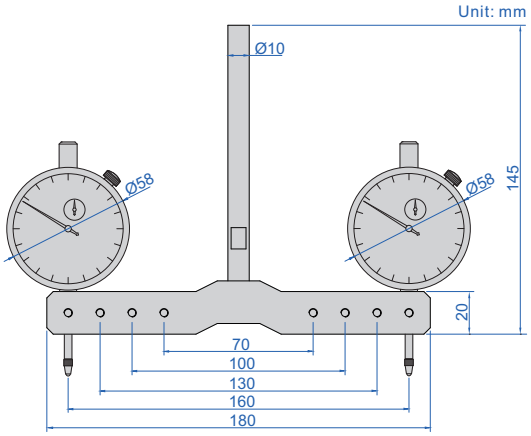


Code	Height (H)	Graduation	Accuracy	Test force
6555-100B	100mm	0.01mm	±0.01mm	1N (at 100mm)

VERTICAL MILLING MACHINE PERPENDICULARITY MEASURING GAUGE



2257-10



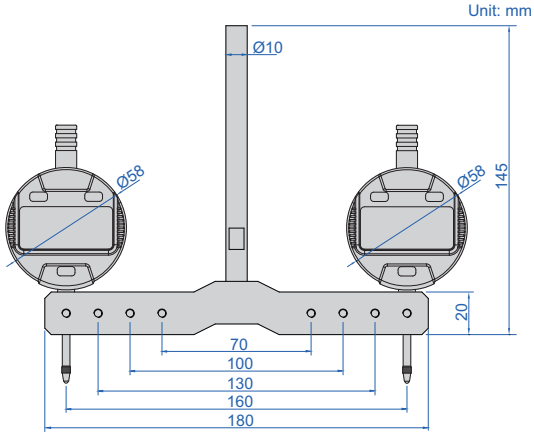
- Used to detect and adjust the perpendicularity between the spindle and worktable of a vertical milling machine

Code	Indicator	Accuracy
2257-10	dial indicator, code **2301-10F**, range: 10mm, graduation: 0.01mm	5μm

VERTICAL MILLING MACHINE PERPENDICULARITY MEASURING GAUGE



2258-101



- Used to detect and adjust the perpendicularity between the spindle and worktable of a vertical milling machine

Code	Indicator	Accuracy
2258-101	digital indicator, code **2112-101F**, range: 12.7mm/0.5", resolution: 0.001mm/0.00005"	3μm

19 LINEAR PROBES AND SCALES



Linear Probes
Page 617



Inductance Probe Displays
Page 618-619



Digital Linear Gauges
Page 620-625



Capacitance Type Linear Gauges And Display Units
Page 626-630



Laser Displacement Sensors
Page 634



Linear Scales And Digital Readouts
Page 635-642



Magnetic Linear Scales
Page 643-644



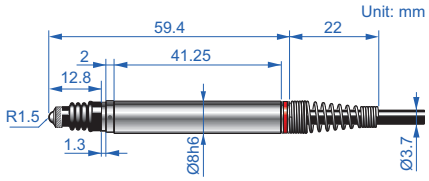
Scales
Page 645-646

IP65
WATERPROOF

VIDEO

INDUCTANCE TYPE PROBE
CODE 9420-AP02





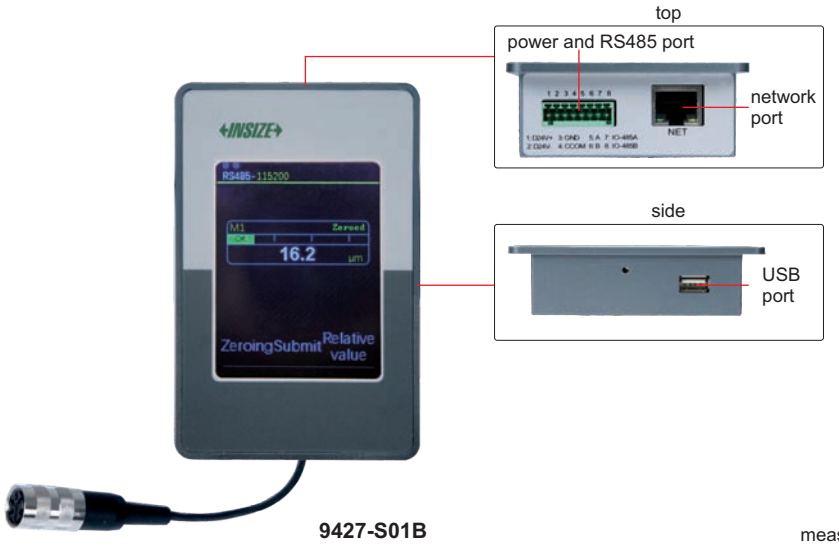
- Ultra-short length, built-in precision linear ball bearings
- For highly accurate and repeatable displacement measurements of displacement, deformation, dimension, vibration, thickness, expansion, etc. in quality control and metrology applications

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SPECIFICATION

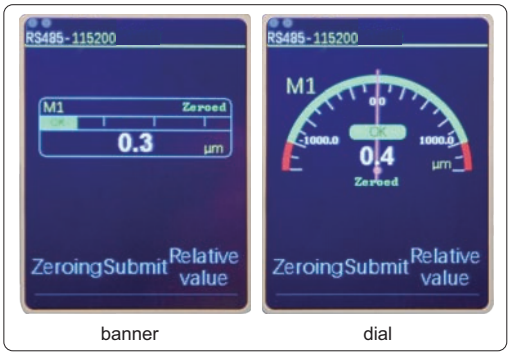
Range		±0.9mm
Resolution		0.1μm
Accuracy		±0.3+3×|L|³μm, (L is measuring length in mm)
Repeatability		0.15μm
Thermal drift		0.25μm/°C
Mechanical stroke		2.2mm
Sensor type		LVDT
Measuring force		0.75N (measuring rod vertical down at 0±25% potential)
Protective cover		fluorinated elastomer
Contact type		carbide
Insert thread		M2.5
Sampling frequency		≥80ms
Operation environment	**work**	-10~60ºC;
	storage	-20~100ºC
Cable length		2m (customized from 2~5m)
Output interface		5-wire aviation interface
Weight		16g

INDUCTANCE PROBE DISPLAYS (STANDARD TYPE)



9427-S01B

measurement interface



banner dial

- Built-in high-performance AD chip, supporting multi-channel sensor display, computing, data storage, feedback output
- Up to 10 measurement programmes can be stored, with simultaneous setting of several workpiece parameters, configurable tolerances, linearity, measurement modes, etc.
- Measured values can be freely edited, stored automatically or manually, and transferred to external devices for PLC control or access to SPC analysis system
- Optional: inductance type probe **9420-AP02**

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SPECIFICATION

Code	9427-S01A	9427-S02A	9427-S03A	9427-S04A	9427-S01B	9427-S02B	9427-S03B	9427-S04B
Channel number	1	2	3	4	1	2	3	4
Sensor type*	full bridge				half bridge			
Display	3.5" touchable LCD screen							
Display mode	banner display, dial display							
Unit	μm, mm							
Range (mm)	±1, ±2, ±5, ±10 (adjustable)							
Resolution (μm)	0.1, 1							
Communication port**	RS485 (Modbus RTU)							
Sampling time (ms)	2, 4, 8, 16, 32 (adjustable)							
Operation environment	0~40°C, <80% (non-condensing)							
Storage environment	-20~50°C, <80% (non-condensing)							
Power supply	DC 24V							
Dimension (L×W×H)	113×73×30mm							
Weight	252g							

*Applicable inductance probes: INSIZE **9420** series, Mahr, Marposs, Solartron, TESA, DONG-DO, ACCRETECH, etc.

**Optional RS232 (Modbus RTU), network port (Modbus TCP and EtherNet/IP), WIFI (Modbus TCP and EtherNet/IP) or I/O

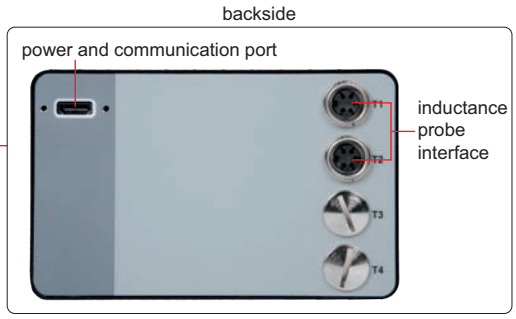
STANDARD DELIVERY

Main unit	1 pc
Power and RS485 cable	1 pc

MULTICHANNEL INDUCTANCE PROBE DISPLAYS
CODE 9428-B□□□□



9428-B2T1P3



- Built-in high-performance chip, supporting multichannel sensor display and feedback output function
- Measured values can be cached and transferred to external devices for PLC control or access to SPC analysis system
- Up to 16 displays can be connected for 256 simultaneous measurements
- Optional: inductance type probe **9420-AP02**

SPECIFICATION

Channel number *	1~16 (**optional**)
Display mode	banner display
Unit	μm, mm
Range (mm)	±0.5, ±1, ±2, ±5, ±10 (adjustable)
Resolution	0.1μm
Sampling time	2ms
Operation environment	0~60°C, 20~85% (non-condensing)
Storage environment	-20~70°C, 20~85% (non-condensing)
Power supply	DC 24V
Dimension (L×W×H)	161×101×45mm
Weight	502g

* Applicable inductance probes: INSIZE **9420** series, Mahr, Marposs, Solartron, TESA, DONG-DO, ACCRETECH, etc.

Code explanation:

9428-B□T□P□

- number of probe interfaces
- sensor type
- communication interface

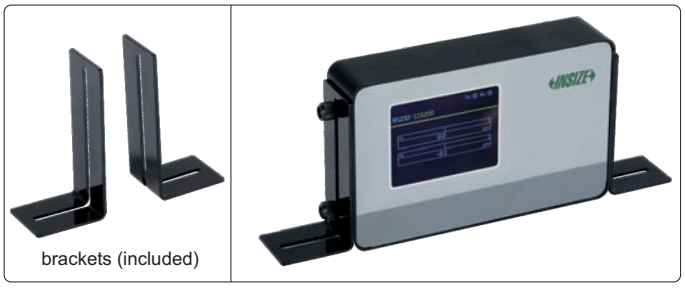
Code example:

9428-B2T1P3	B2-number of probe interfaces: 2 (1~16 selectable)
	T1-sensor type: full bridg
	P3-communication interface: RS485

SENSOR TYPE

T1	full bridge
T2	half bridge

mounting brackets application



COMMUNICATION PORT

P1	network port (Modbus TCP and EtherNet/IP)
P2	RS232 (Modbus RTU)
P3	RS485 (Modbus RTU)

STANDARD DELIVERY

Main unit	1 pc
Power and RS485 cable	1 pc
Brackets	2 pcs

DIGITAL LINEAR GAUGES

INSPECTION CERTIFICATE

VIDEO

ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

DUSTPROOF WATERPROOF



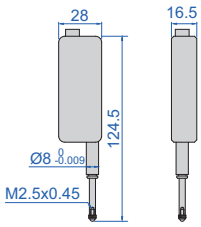
7130-10



7130-10L

- Scale type: optical grating
- Absolute encoder, the original data remains after power off
- Digital signal output, amplifier is not required
- Measuring force: ≤1.5N
- Dust/waterproof: IP43/IP66
- Baud rate: 9600 (can be customized)
- Cable length: 3m (can be customized)
- Optional accessory: software of linear gauge (code: **7130-SOFTWARE**, 8 probes can be connected at the same time, need to purchase the corresponding hubs)

Unit: mm



Dust/waterproof IP43, resolution 0.1μm

Code	Range	Repeatability	Accuracy	Outgoing cable direction	Output signal	Output interface
7130-10	0-12.5mm	0.5μm	1μm	horizontal	RS232, TTL level	
7130-10L	0-12.5mm	0.5μm	1μm	vertical	RS232, TTL level	
7130-11	0-12.5mm	0.5μm	1μm	horizontal	RS232, 232 level	
7130-11L	0-12.5mm	0.5μm	1μm	vertical	RS232, 232 level	
7130-12	0-12.5mm	0.5μm	1μm	horizontal	RS485 (VCC+5~12V)	
7130-12L	0-12.5mm	0.5μm	1μm	vertical	RS485 (VCC+5~12V)	
7130-13	0-12.5mm	0.5μm	1μm	horizontal	RS232, TTL level	
7130-13L	0-12.5mm	0.5μm	1μm	vertical	RS232, TTL level	
7130-14	0-12.5mm	0.5μm	1μm	horizontal	RS232, 232 level	
7130-14L	0-12.5mm	0.5μm	1μm	vertical	RS232, 232 level	

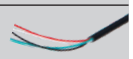
Dust/waterproof IP43, resolution 0.5μm

Code	Range	Repeatability	Accuracy	Outgoing cable direction	Output signal	Output interface
7130-20	0-12.5mm	1.5μm	3μm	horizontal	RS232, TTL level	
7130-20L	0-12.5mm	1.5μm	3μm	vertical	RS232, TTL level	
7130-21	0-12.5mm	1.5μm	3μm	horizontal	RS232, 232 level	
7130-21L	0-12.5mm	1.5μm	3μm	vertical	RS232, 232 level	
7130-22	0-12.5mm	1.5μm	3μm	horizontal	RS485 (VCC+5~12V)	
7130-22L	0-12.5mm	1.5μm	3μm	vertical	RS485 (VCC+5~12V)	
7130-23	0-12.5mm	1.5μm	3μm	horizontal	RS232, TTL level	
7130-23L	0-12.5mm	1.5μm	3μm	vertical	RS232, TTL level	
7130-24	0-12.5mm	1.5μm	3μm	horizontal	RS232, 232 level	
7130-24L	0-12.5mm	1.5μm	3μm	vertical	RS232, 232 level	

To be continued

Continued from previous page

Dust/waterproof IP66, resolution 0.1μm

Code	Range	Repeatability	Accuracy	Outgoing cable direction	Output signal	Output interface
7130-30	0-12.5mm	0.5μm	1μm	horizontal	RS232, TTL level	
7130-30L	0-12.5mm	0.5μm	1μm	vertical	RS232, TTL level	
7130-31	0-12.5mm	0.5μm	1μm	horizontal	RS232, 232 level	
7130-31L	0-12.5mm	0.5μm	1μm	vertical	RS232, 232 level	
7130-32	0-12.5mm	0.5μm	1μm	horizontal	RS485 (VCC+5~12V)	
7130-32L	0-12.5mm	0.5μm	1μm	vertical	RS485 (VCC+5~12V)	
7130-33	0-12.5mm	0.5μm	1μm	horizontal	RS232, TTL level	
7130-33L	0-12.5mm	0.5μm	1μm	vertical	RS232, TTL level	
7130-34	0-12.5mm	0.5μm	1μm	horizontal	RS232, 232 level	
7130-34L	0-12.5mm	0.5μm	1μm	vertical	RS232, 232 level	

Dust/waterproof IP66, resolution 0.5μm

Code	Range	Repeatability	Accuracy	Outgoing cable direction	Output signal	Output interface
7130-40	0-12.5mm	1.5μm	3μm	horizontal	RS232, TTL level	
7130-40L	0-12.5mm	1.5μm	3μm	vertical	RS232, TTL level	
7130-41	0-12.5mm	1.5μm	3μm	horizontal	RS232, 232 level	
7130-41L	0-12.5mm	1.5μm	3μm	vertical	RS232, 232 level	
7130-42	0-12.5mm	1.5μm	3μm	horizontal	RS485 (VCC+5~12V)	
7130-42L	0-12.5mm	1.5μm	3μm	vertical	RS485 (VCC+5~12V)	
7130-43	0-12.5mm	1.5μm	3μm	horizontal	RS232, TTL level	
7130-43L	0-12.5mm	1.5μm	3μm	vertical	RS232, TTL level	
7130-44	0-12.5mm	1.5μm	3μm	horizontal	RS232, 232 level	
7130-44L	0-12.5mm	1.5μm	3μm	vertical	RS232, 232 level	

software of linear gauge (**optional**)



the software can set tolerance and make real-time judgment (red when out of tolerance, green when within tolerance), set zero, data collection interval time, color, type and line width of trend lines, can view and export data to Excel report or BMP image

PNEUMATIC DIGITAL LINEAR GAUGES

DUSTPROOF WATERPROOF

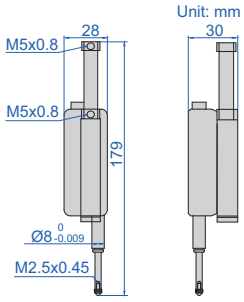
ABSOLUTE ENCODER, THE ORIGINAL DATA REMAINS AFTER POWER OFF

INSPECTION CERTIFICATE



7134-10L

- Scale type: optical grating
- Absolute encoder, the original data remains after power off
- Digital signal output, amplifier is not required
- Air pressure: 0.2-0.5MPa
- Measuring force: ≤1.5N
- Dust/waterproof: IP43/IP66
- Baud rate: 9600 (can be customized)
- Cable length: 3m (can be customized)
- Optional accessory: software of linear gauge (code: **7130-SOFTWARE**, 8 probes can be connected at the same time, need to purchase the corresponding hubs)



Dust/waterproof IP43, resolution 0.1μm

Code	Range	Repeatability	Accuracy	Outgoing cable direction	Output signal	Output interface
7134-10	0-12.5mm	0.5μm	1μm	horizontal	RS232, TTL level	
7134-10L	0-12.5mm	0.5μm	1μm	vertical	RS232, TTL level	
7134-11	0-12.5mm	0.5μm	1μm	horizontal	RS232, 232 level	
7134-11L	0-12.5mm	0.5μm	1μm	vertical	RS232, 232 level	
7134-12	0-12.5mm	0.5μm	1μm	horizontal	RS485 (VCC+5~12V)	
7134-12L	0-12.5mm	0.5μm	1μm	vertical	RS485 (VCC+5~12V)	
7134-13	0-12.5mm	0.5μm	1μm	horizontal	RS232, TTL level	
7134-13L	0-12.5mm	0.5μm	1μm	vertical	RS232, TTL level	
7134-14	0-12.5mm	0.5μm	1μm	horizontal	RS232, 232 level	
7134-14L	0-12.5mm	0.5μm	1μm	vertical	RS232, 232 level	

Dust/waterproof IP43, resolution 0.5μm

Code	Range	Repeatability	Accuracy	Outgoing cable direction	Output signal	Output interface
7134-20	0-12.5mm	1.5μm	3μm	horizontal	RS232, TTL level	
7134-20L	0-12.5mm	1.5μm	3μm	vertical	RS232, TTL level	
7134-21	0-12.5mm	1.5μm	3μm	horizontal	RS232, 232 level	
7134-21L	0-12.5mm	1.5μm	3μm	vertical	RS232, 232 level	
7134-22	0-12.5mm	1.5μm	3μm	horizontal	RS485 (VCC+5~12V)	
7134-22L	0-12.5mm	1.5μm	3μm	vertical	RS485 (VCC+5~12V)	
7134-23	0-12.5mm	1.5μm	3μm	horizontal	RS232, TTL level	
7134-23L	0-12.5mm	1.5μm	3μm	vertical	RS232, TTL level	
7134-24	0-12.5mm	1.5μm	3μm	horizontal	RS232, 232 level	
7134-24L	0-12.5mm	1.5μm	3μm	vertical	RS232, 232 level	

To be continued

Continued from previous page

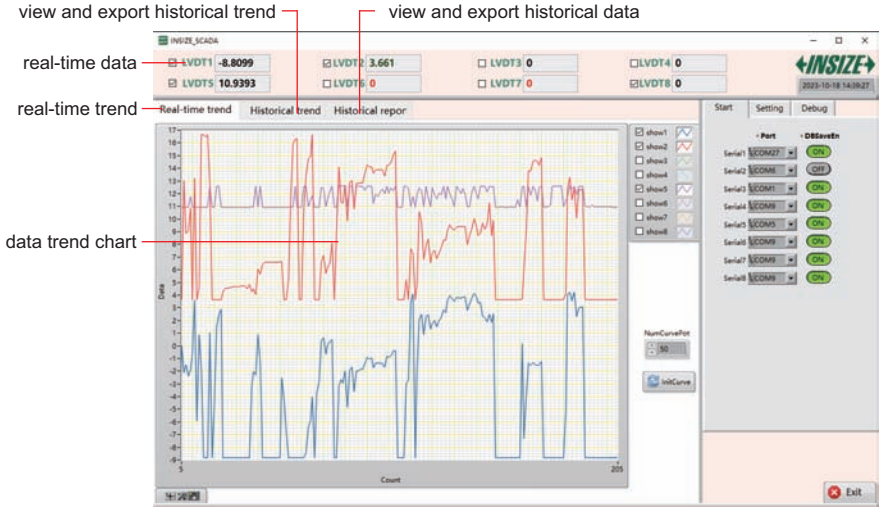
Dust/waterproof IP66, resolution 0.1μm

Code	Range	Repeatability	Accuracy	Outgoing cable direction	Output signal	Output interface
7134-30	0-12.5mm	0.5μm	1μm	horizontal	RS232, TTL level	
7134-30L	0-12.5mm	0.5μm	1μm	vertical	RS232, TTL level	
7134-31	0-12.5mm	0.5μm	1μm	horizontal	RS232, 232 level	
7134-31L	0-12.5mm	0.5μm	1μm	vertical	RS232, 232 level	
7134-32	0-12.5mm	0.5μm	1μm	horizontal	RS485 (VCC+5~12V)	
7134-32L	0-12.5mm	0.5μm	1μm	vertical	RS485 (VCC+5~12V)	
7134-33	0-12.5mm	0.5μm	1μm	horizontal	RS232, TTL level	
7134-33L	0-12.5mm	0.5μm	1μm	vertical	RS232, TTL level	
7134-34	0-12.5mm	0.5μm	1μm	horizontal	RS232, 232 level	
7134-34L	0-12.5mm	0.5μm	1μm	vertical	RS232, 232 level	

Dust/waterproof IP66, resolution 0.5μm

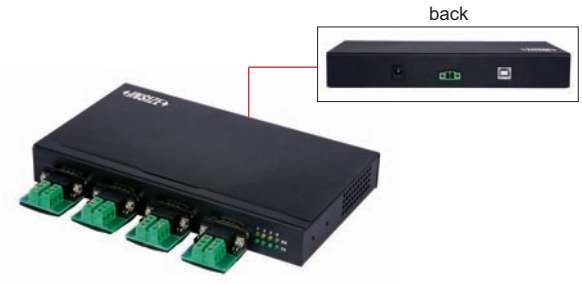
Code	Range	Repeatability	Accuracy	Outgoing cable direction	Output signal	Output interface
7134-40	0-12.5mm	1.5μm	3μm	horizontal	RS232, TTL level	
7134-40L	0-12.5mm	1.5μm	3μm	vertical	RS232, TTL level	
7134-41	0-12.5mm	1.5μm	3μm	horizontal	RS232, 232 level	
7134-41L	0-12.5mm	1.5μm	3μm	vertical	RS232, 232 level	
7134-42	0-12.5mm	1.5μm	3μm	horizontal	RS485 (VCC+5~12V)	
7134-42L	0-12.5mm	1.5μm	3μm	vertical	RS485 (VCC+5~12V)	
7134-43	0-12.5mm	1.5μm	3μm	horizontal	RS232, TTL level	
7134-43L	0-12.5mm	1.5μm	3μm	vertical	RS232, TTL level	
7134-44	0-12.5mm	1.5μm	3μm	horizontal	RS232, 232 level	
7134-44L	0-12.5mm	1.5μm	3μm	vertical	RS232, 232 level	

software of linear gauge (**optional**)



the software can set tolerance and make real-time judgment (red when out of tolerance, green when within tolerance), set zero, data collection interval time, color, type and line width of trend lines, can view and export data to Excel report or BMP image

MULTICHANNEL INTERFACE BOXES OF LINEAR GAUGES



7212-4A



7212-8A



7324-HUB4



7324-HUB7



7324-HUB16

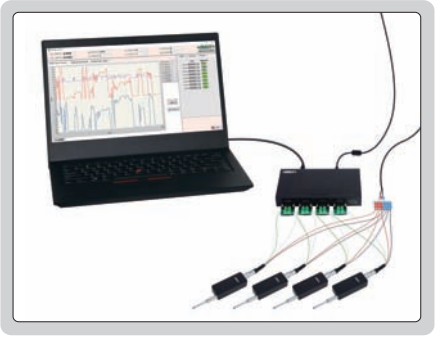
- Can be connected with **7130** or **7134** series linear gauges
- Optional accessory: software of linear gauge (code:**7130-SOFTWARE**, 8 linear gauges can be connected simultaneously)

software of linear gauge (**optional**)

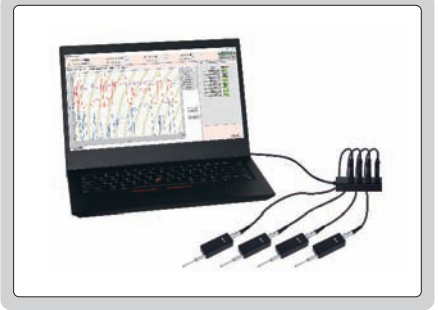


the software can set tolerance and make real-time judgment (red when out of tolerance, green when within tolerance), set zero, data collection interval time, color, type and line width of trend lines, can view and export data to Excel report or BMP image

7212-4A application



7324-HUB4 application



SPECIFICATION

Code	7212-4A	7212-8A	7324-HUB4	7324-HUB7	7324-HUB16
Quantity of linear gauges	4	8	4	7	16
Applicable linear gauges	7130-12, 7130-12L, 7130-22, 7130-22L, 7130-32, 7130-32L, 7130-42, 7130-42L, 7134-12, 7134-12L, 7134-22, 7134-22L, 7134-32, 7134-32L, 7134-42, 7134-42L		7130-10, 7130-10L, 7130-20, 7130-20L, 7130-30, 7130-30L, 7130-40, 7130-40L, 7134-10, 7134-10L, 7134-20, 7134-20L, 7134-30, 7134-30L, 7134-40, 7134-40L		
Type of linear gauge	RS485 protocol		RS232 protocol		
Type of output	USB		USB		

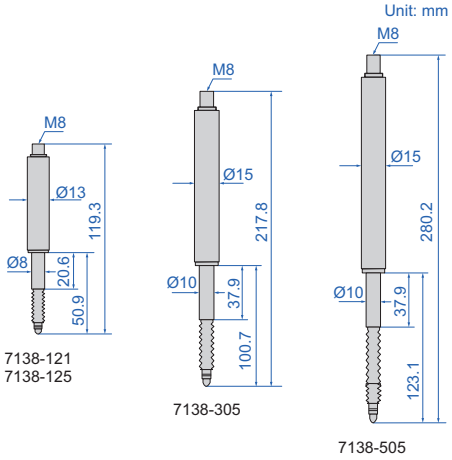
IP67
WATERPROOF

VIDEO



7138-121

Unit: mm



- Linear gauge type: optical grating
- Dust/waterproof: IP67
- Optional accessory: display unit (code **7131-1A**, can output keyboard signal, transmit data to excel, word, txt etc., also can output serial signal and transmit data to serial communication software)

L-connection cable
(**optional**)



straight connection cable
(**optional**)



application



19

SPECIFICATION

Code	7138-121	7138-125	7138-305	7138-505
Range	12mm	12mm	30mm	50mm
Resolution	0.1μm	0.5μm	0.5μm	0.5μm
Accuracy	±1μm	±2μm	±3μm	±3.5μm
Power supply	DC 5V, 300mA			
Output signal *	TTL signal			
Operation environment	0~40°C, 20~80% (non-condensing)			
Storage environment	-10~60°C, 20~80% (non-condensing)			
Dimension	Ø13×120mm		Ø15×218mm	Ø15×281mm
Weight	60g		130g	170g

* Output signal 485 or 232 is optional

OPTIONAL ACCESSORY

Dispaly unit	7131-1A
L-connection cable	7138-L
Straight connection cable	7138-Z

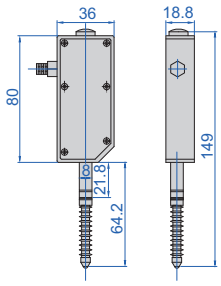
CAPACITANCE LINEAR GAUGES

IP65
WATERPROOF



7107-12

Unit: mm

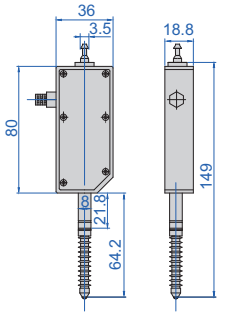


7107-11
7107-12



7107-12V

Unit: mm



7107-11V
7107-12V

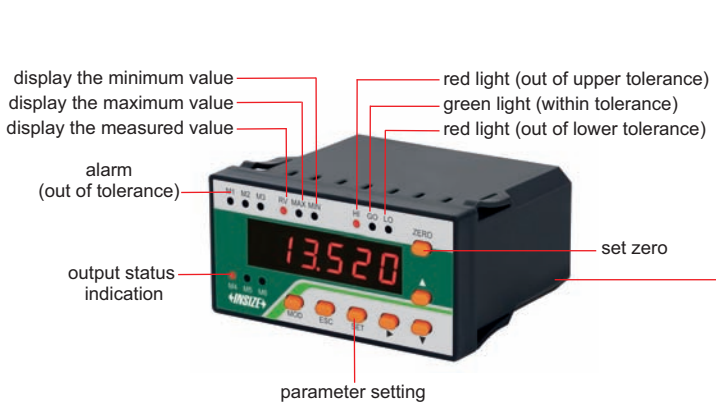
19

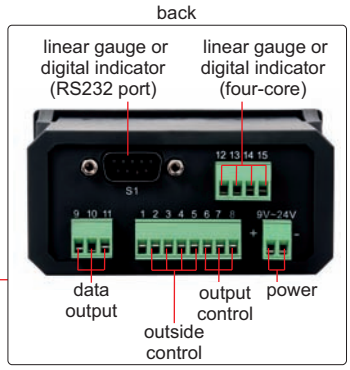
- Capacitance type linear encoder
- Shock-proof, water proof, dust proof, suitable for high speed movement, long working life
- Optional: display unit **7106-1A**, multichannel interface box **7107-1** or **7107-2**

SPECIFICATION

Code	7107-11	7107-12	7107-11V	7107-12V
Measuring range	12mm/0.47"	12mm/0.47"	12mm/0.47"	12mm/0.47"
Resolution	0.01mm/0.0004"	0.001mm/0.00004"	0.01mm/0.0004"	0.001mm/0.00004"
Accuracy	20μm	5μm	20μm	5μm
Hysteresis	10μm	2μm	10μm	2μm
Driving type	spring		pneumatic	
Measuring force	1.5N		adjusted by air pressure	
Measuring principle	capacitance type linear encoder			
Voltage	5V			
Sampling frequency	100 times/sec			
Working life	ten million times			
Dust/waterproof	IP65			
Cable length	2m			
Data output	RS232			

DISPLAY UNIT FOR CAPACITANCE LINEAR GAUGES
CODE 7106-1A

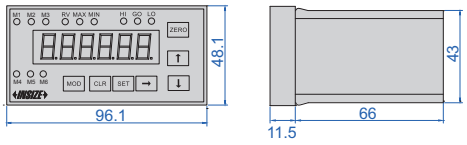




7106-1A

- Can be connected with **7107-11**, **7107-12**, **7107-11V** or **7107-12V** linear gauge, can also be connected with digital indicator (data cable **7309-C01M** is needed)
- Set tolerance and make judgment (out of upper tolerance, within tolerance, out of lower tolerance), output the judgment to control outside devices, control from outside (set zero, hold reading and collect data)
- Software of display unit (included): in the software, it is possible to set tolerance and show judgment (red when out of tolerance, green when within tolerance), set zero, collect data manually or automatically (time is adjustable), output data to Excel, print report

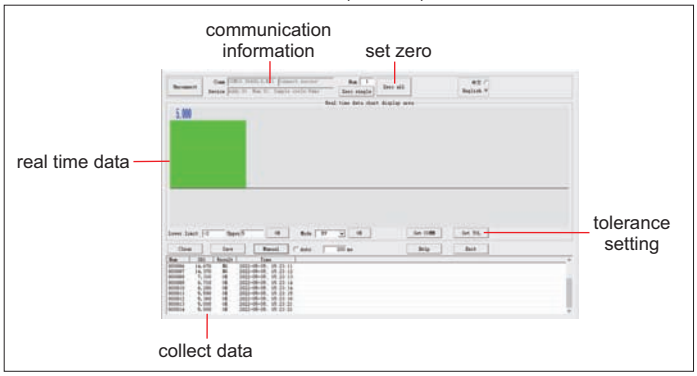
Unit: mm



connected with **7107-11**, **7107-12**, **7107-11V** or **7107-12V** linear gauge



software (included)



connected with digital indicator (data cable **7309-C01M** is needed)



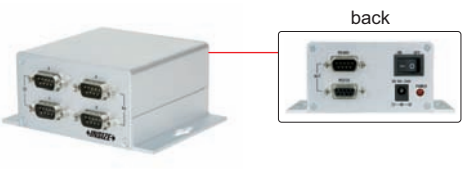
suitable for **2112, 2114, 2115, 2116, 2501, 2103** and **2104** series digital indicators

19

SPECIFICATION

Display	6 digits
Quantity of linear gauge or digital indicator to be connected	1 pc
Tolerance	set tolerance and make judgment with alarm and lights (out of upper tolerance, within tolerance, out of lower tolerance)
Output control	output the tolerance judgment (out of upper tolerance, within tolerance, out of lower tolerance) to control outside devices
Outside control	control the display units from outside (set zero, hold reading and collect data)
Data output	connect to computer software and serial communication
Power supply	DC 9~24V

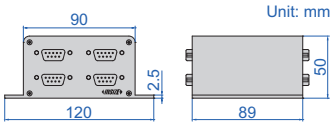
MULTICHANNEL INTERFACE BOXES FOR CAPACITANCE LINEAR GAUGES



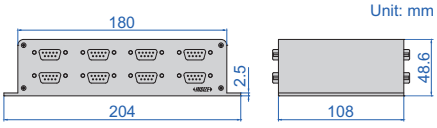
7107-1



7107-2



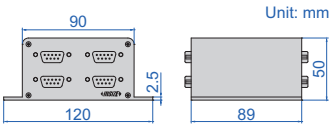
7107-1



7107-2



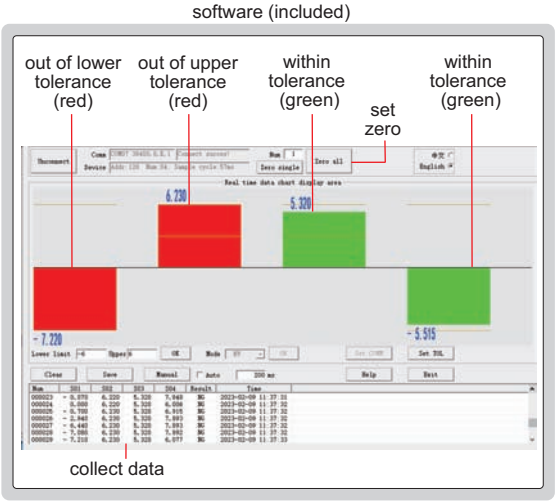
7107-3



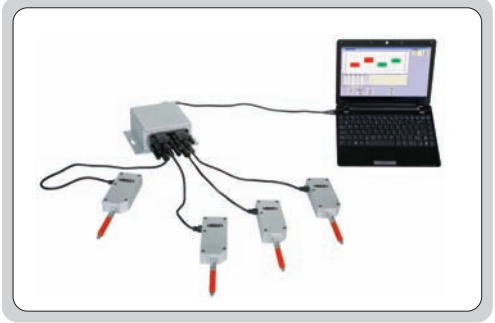
7107-3

- Can be connected with **7107-11**, **7107-12**, **7107-11V** or **7107-12V** linear gauges, can also be connected with digital indicators (data cable **7309-C01M** is needed)
- Connection box (code: **7107-3**) is needed to connect interface boxes, when two or more interface boxes are used. Maximum 4 interface boxes can be connected.
- Software of interface boxes (included): in the software, it is possible to set tolerance of each channel and show judgment (red when out of tolerance, green when within tolerance), set zero, collect data manually or automatically (time is adjustable), output data to Excel, print report.

software (included)



connected with **7107-11**, **7107-12**, **7107-11V** or **7107-12V** linear gauges



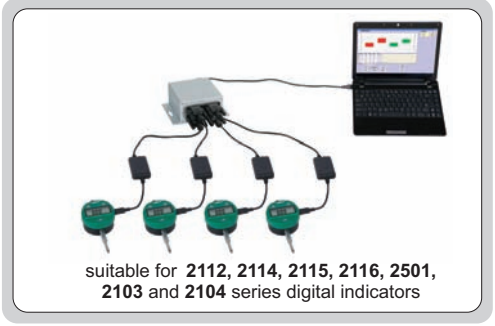
INTERFACE BOX SPECIFICATION

Code	7107-1	7107-2
Quantity of linear gauges or digital indicators to be connected	4 pcs	8 pcs
Data output	RS232 and RS485	
Power supply	DC 9~24V	

CONNECTION BOX (OPTIONAL) SPECIFICATION

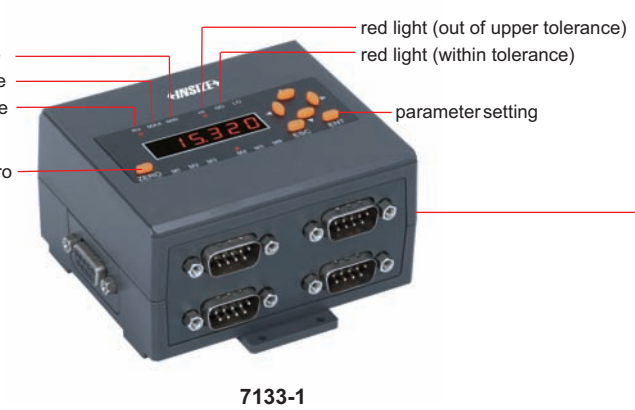
Code	7107-3
Quantity of interface boxes to be connected	4 pcs (maximum 4 interface boxes can be connected)
Data output	RS232 and RS485
Power supply	DC 9~24V

connected with digital indicators (data cable **7309-C01M** is needed)



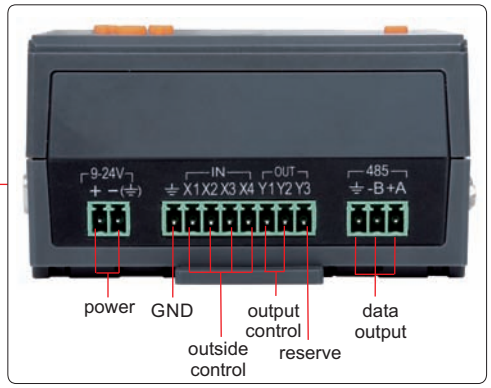
suitable for **2112, 2114, 2115, 2116, 2501, 2103** and **2104** series digital indicators

MULTICHANNEL DISPLAY UNITS



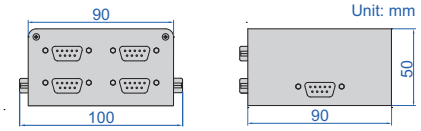
7133-1

back

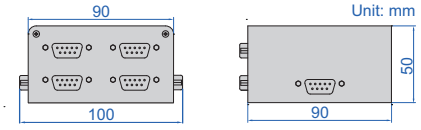




7133-2



7133-1



7133-2

- Can be connected with **7107-11**, **7107-12**, **7107-11V** or **7107-12V** linear gauges, can also be connected with digital indicators (data cable **7309-C01M** is needed)
- To connect more than 4 linear gauges or digital indicators, need to purchase the connection box (code: **7133-2**), and one display unit can be connected with up to 14 connection boxes
- Set tolerance and make judgment (out of tolerance, within tolerance), output the judgment to control outside devices, control from outside (set zero, hold reading and collect data)
- Software of display unit (included): in the software, it is possible to set tolerance and show judgment (red when out of tolerance, green when within tolerance), set zero, collect data manually or automatically (time is adjustable), output data to Excel, print report

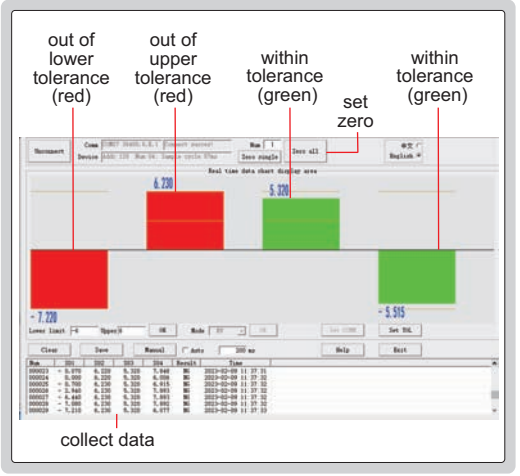
DISPLAY UNIT SPECIFICATION

Code	7133-1
Display	6 digits
Quantity of linear gauges or digital indicators to be connected	4 pcs
Tolerance	set tolerance and make judgment with lights (out of tolerance, within tolerance)
Output control	output the tolerance judgment (out of tolerance, within tolerance) to control outside devices
Outside control	control the display units from outside (set zero, hold reading and collect data)
Data output	connect to computer software and serial communication
Power supply	DC 9~24V

CONNECTION BOX (OPTIONAL) SPECIFICATION

Code	7133-2
Quantity of linear gauges or digital indicators to be connected	4 pcs

software (included)



To be continued

Continued from previous page

use without computer
(measurement data of each channel can be switched to display on the display unit)

display unit is connected with linear gauges
(code **7107-11**, **7107-12**, **7107-11V** or **7107-12V**)



display unit is connected with digital indicators
(data cable **7309-C01M** is needed)



suitable for **2112, 2114, 2115, 2116, 2501, 2103** and **2104** series digital indicators

display unit and connection box are connected with linear gauges
(code **7107-11**, **7107-12**, **7107-11V** or **7107-12V**)



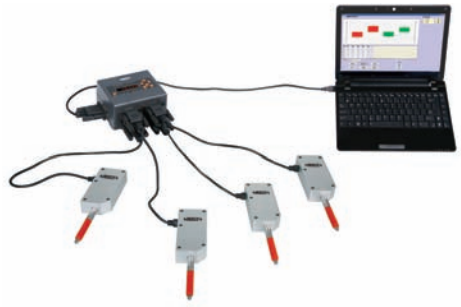
display unit and connection box are connected with digital indicators
(data cable **7309-C01M** is needed)



suitable for **2112, 2114, 2115, 2116, 2501, 2103** and **2104** series digital indicators

use with computer
(measurement data of all channel can be displayed in the software)

display unit is connected with linear gauges
(code **7107-11**, **7107-12**, **7107-11V** or **7107-12V**)

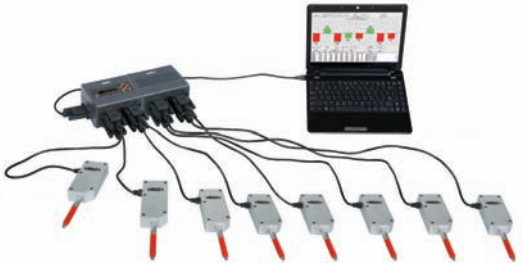


display unit is connected with digital indicators
(data cable **7309-C01M** is needed)



suitable for **2112, 2114, 2115, 2116, 2501, 2103** and **2104** series digital indicators

display unit and connection box are connected with linear gauges
(code **7107-11**, **7107-12**, **7107-11V** or **7107-12V**)



display unit and connection box are connected with digital indicators
(data cable **7309-C01M** is needed)



suitable for **2112, 2114, 2115, 2116, 2501, 2103** and **2104** series digital indicators

IP40 WATERPROOF

HIGH RESISTANT TO ENVIRONMENT INTERFERENCE

LINEAR GAUGES (RESISTANCE TYPE)

VIDEO



7152-A04



7152-D04

Linear gauges:

- For harsh environments
- With return spring
- Flexible bearings at both ends for high shock and vibration resistance
- Output resistance

LINEAR GAUGE SPECIFICATION (STANDARD ACCURACY)

Code	7152-A01	7152-A02	7152-A03	7152-A04	7152-A05	7152-B01	7152-B02	7152-B03	7152-B04
Outlet	3-core PVC shielded cable, 2m					5-pin M16×0.75 circular connector			
Range	10mm	25mm	50mm	75mm	100mm	25mm	50mm	75mm	100mm
Accuracy	±0.3%FS								
Repeatability	0.01mm								
Operation current	≤1μA								
Max. fault current	10mA								
Max. operation voltage	42V								
Temperature coefficient	5ppm/k (the resistance changes 5 parts per million of the original value for every 1°C change in temperature)								
Forward force (horizontal)	≤3.5N								
Backward force (horizontal)	≤5.0N	≤5.0N	≤5.0N	≤7.0N	≤7.0N	≤5.0N	≤5.0N	≤7.0N	≤7.0N
Max. operation frequency (probe face up)	20Hz	18Hz	14Hz	10Hz	10Hz	18Hz	14Hz	10Hz	10Hz
Operation environment	-30~100°C, <95% (non-condensing)					-30~85°C, <95% (non-condensing)			
Dust/waterproof	IP40								

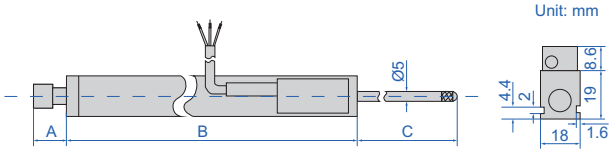
LINEAR GAUGE SPECIFICATION (HIGH ACCURACY)

Code	7152-C01	7152-C02	7152-C03	7152-C04	7152-C05	7152-D01	7152-D02	7152-D03	7152-D04
Outlet	3-core PVC shielded cable, 2m					5-pin M16×0.75 circular connector			
Range	10mm	25mm	50mm	75mm	100mm	25mm	50mm	75mm	100mm
Accuracy	±0.25%FS	±0.2%FS	±0.15%FS	±0.1%FS	±0.075%FS	±0.2%FS	±0.15%FS	±0.1%FS	±0.075%FS
Repeatability	0.01mm								
Operation current	≤1μA								
Max. fault current	10mA								
Max. operation voltage	24V	42V							
Temperature coefficient	5ppm/k (the resistance changes 5 parts per million of the original value for every 1°C change in temperature)								
Forward force (horizontal)	≤3.5N								
Backward force (horizontal)	≤5.0N	≤5.0N	≤5.0N	≤7.0N	≤7.0N	≤5.0N	≤5.0N	≤7.0N	≤7.0N
Max. operation frequency (probe face up)	20Hz	18Hz	14Hz	11Hz	10Hz	18Hz	14Hz	11Hz	10Hz
Operation environment	-30~100°C, <95% (non-condensing)					-30~85°C, <95% (non-condensing)			
Dust/waterproof	IP40								

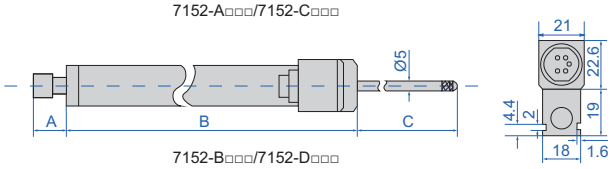
To be continued

Continued from previous page

Unit: mm



7152-A□□□/7152-C□□□



7152-B□□□/7152-D□□□

LINEAR GAUGE DIMENSION **(mm)**

Code	7152-A01	7152-A02	7152-A03	7152-A04	7152-A05	7152-B01	7152-B02	7152-B03	7152-B04
	7152-C01	7152-C02	7152-C03	7152-C04	7152-C05	7152-D01	7152-D02	7152-D03	7152-D04
A	7	12							
B	48	63	94.4	134.4	166	63	94.4	134.4	166
C	21	62	87	112	137	62	87	112	137



7152-E06

Displays:

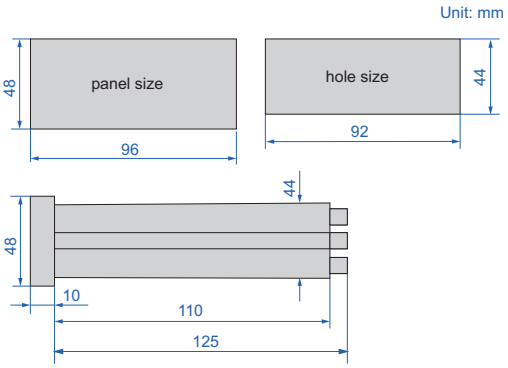
- 5-digit LCD, display range (-19999~32654)
- Built-in isolation module for power supply
- Switchable between full and zero position

DISPLAY SPECIFICATION (OPTIONAL)

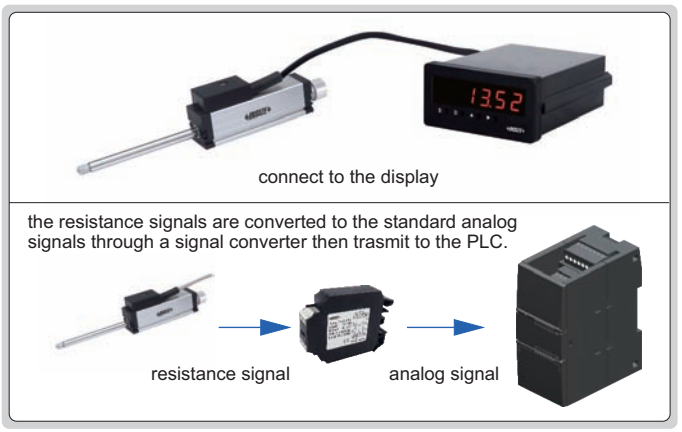
Code	7152-E01	7152-E02	7152-E03	7152-E04	7152-E05	7152-E06	7152-E07
Operation voltage	220V AC (24V is optional)						
Communication interface	RS485 (RS232 is optional)						
Operation mode	modbus RTU						
Output signal	0~10V	0~5V	4~20mA	0~20mA	RS232	RS485	N/A
Input signal	(0~20)kΩ						
Refresh time	50ms						
Alarm	with 2 relay outputs (4 relay outputs is optional)						
Operation environment	-10~55°C, <65% (non-condensing)						
Dust/waterproof	IP55 (front panel)						
Dimension	135×96×48mm						
Weight	400g						

To be continued

Continued from previous page



application



Signal converters:

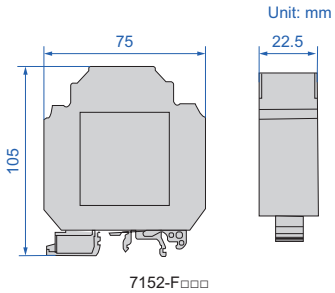
- Provide regulated power supply for linear gauges
- Built-in isolation module for power supply
- Switchable between full and zero position



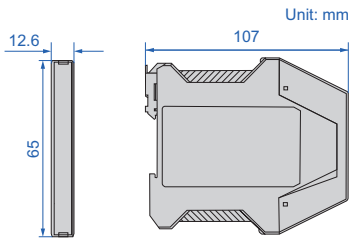
7152-F04



7152-G02



7152-F□□□



7152-G□□□

SIGNAL CONVERTER SPECIFICATION (STANDARD ACCURACY, OPTIONAL)

Code	7152-F01	7152-F02	7152-F03	7152-F04
Operation voltage	DC 18~36V, built-in reverse power protection			
Power consumption	Max. 24V/25mA			
Input signal	0~1kΩ, 0~5kΩ, 0~10kΩ, 0~20kΩ			
Output signal	0~10V	0~5V	4~20mA	0~20mA
Accuracy	0.02%			
Operation environment	-30~85°C			
Temperature coefficient	25ppm/K			
Dust/waterproof	IP20			
Dimension	105×75×22.5mm			
Weight	100g			

SIGNAL CONVERTER SPECIFICATION (HIGH ACCURACY, OPTIONAL)

Code	7152-G01	7152-G02	7152-G03
Operation voltage	DC 24V±20%, built-in reverse power protection		
Power consumption	70mA (unloaded)		
Input signal	0~1kΩ, 0~5kΩ, 0~10kΩ, 0~20kΩ		
Output signal	0~10V	4-20mA	0~20mA
Accuracy	0.01%		
Operation environment	5~70°C		
Temperature coefficient	20ppm/K		
Dust/waterproof	IP50 (without terminal clips)		
Dimension	107×65×12.6mm		
Weight	110g		

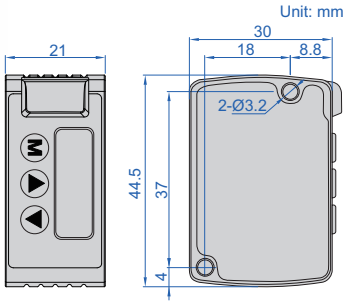
LASER DISPLACEMENT SENSORS

IP67 WATERPROOF

- High accuracy, non-contact measurement, high speed response, multiple measurement modes, environmental adaptability, programmable control, rich data output interface and easy maintenance
- Can be used in automated production lines, robotic arms, packaging equipment, printing equipment, medical equipment etc.



LDS-N30-RS



STANDARD DELIVERY

Main unit	1 pc
Mounting bracket	1 pc
Cable	1 pc

SPECIFICATION

Code	NPN	LDS-N30	LDS-N50	LDS-N100	LDS-N200	LDS-N400
	NPN+Analog	LDS-N30-MC	LDS-N50-MC	LDS-N100-MC	LDS-N200-MC	LDS-N400-MC
	NPN+RS485	LDS-N30-RS	LDS-N50-RS	LDS-N100-RS	LDS-N200-RS	LDS-N400-RS
Detection method		diffuse reflection				
Basis (center) distance		30mm	50mm	100mm	200mm	400mm
Detection range (FS)		25~35mm	35~65mm	65~135mm	120~280mm	200~600mm
Full scale		10mm	30mm	70mm	160mm	400mm
Repeat accuracy		10μm	30μm	70μm	200μm	200~400mm: 600μm 400~600mm: 1500μm
Linear accuracy		±0.2% FS				200~400mm: ±0.2% FS 400~600mm: ±0.3% FS
Temperature drift characteristics		±0.03% FS/°C				
Light source	medium	red diode laser, wavelength 655nm				
	output power	<1mW				
	laser class	IEC class 2				
Light spot diameter		Ø50μm	Ø70μm	Ø120μm	Ø300μm	Ø500μm
Output	switch mode	NPN open collector, ≤50mA/DC 24V, residual voltage<1.5V				
	analog	analogue voltage: 0~5V (alarm: 5.2V), analogue current: 4~20mA (alarm: 0mA), Chinese display switchable				
	operation	Light.on/Dark.on selectable				
Response time		1.5ms/5ms/10ms, switchable				
Power supply		DC12~24V				
No-load current		<30mA (at supply voltage 24V DC), <60mA (at supply voltage 12V DC)				
Indicator light		output indicator: yellow, power indicator: green				
Protection circuit		reverse polarity protection/surge protection/short circuit protection				
Protection level		IP67				
Withstand voltage		AC1000V, 50/60Hz, 1min				
Vibration resistance		10~55Hz (period 1min), double amplitude 1.5mm, 2H in each X/Y/Z direction				
Impact resistance		500m/S² (approx. 50G), 3 times each in X/Y/Z direction				
Insulation impedance		50MΩ or more (DC500V megohmmeter)				
Material	cover case	aluminium alloy				
	lens	PMMA				
	guidewire	PVC (polyvinyl chloride)				
Connection		switching: lead-in type (4-pole, standard cable length 2m), analogue: lead-in type (5-pole, standard cable length 2m)				
Ambient illumination		incandescent lamp ≤ 3000lux, sunlight ≤ 20000lux				
Ambient temperature		operation: -10~45°C, storage: -20~60°C(non-freezing)				
Ambient humidity		operation: 35~85%, storage: 35~85% (non-condensing)				
Weight		85g (include cable)				

LINEAR SCALES (TTL SIGNAL)

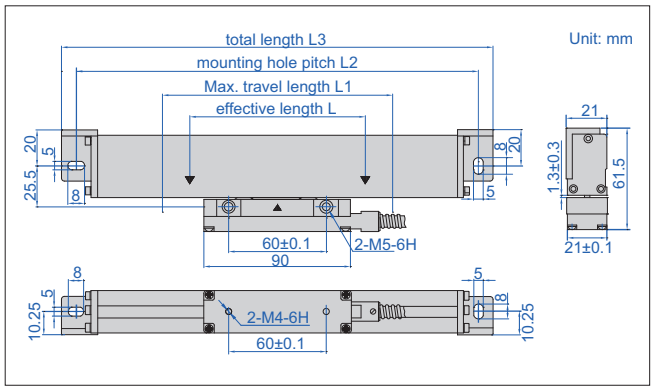
IP54
WATERPROOF



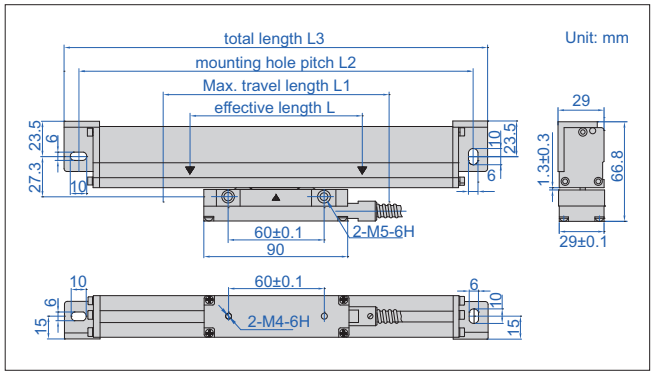
ISL-A1-300

- Optical TTL (Through-The-Lens) detection.
  These optical TTL linear scales use an transistor logic to transmit and record high-resolution distance measurements. They are the most accurate type of encoder and are paired with **ISL-DR2/DR3** and **ISL-LCD7** (digital readout)

Series ISL-A1 and ISL-A5



Series ISL-B5



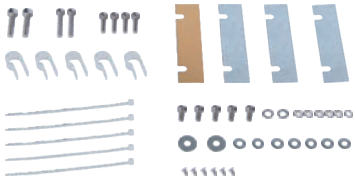
Effective length (L)	Code		
	Thin type		Thick type
	Series ISL-A1	Series ISL-A5	Series ISL-B5
50mm	ISL-A1-50	ISL-A5-50	ISL-B5-50
100mm	ISL-A1-100	ISL-A5-100	ISL-B5-100
150mm	ISL-A1-150	ISL-A5-150	ISL-B5-150
200mm	ISL-A1-200	ISL-A5-200	ISL-B5-200
250mm	ISL-A1-250	ISL-A5-250	ISL-B5-250
300mm	ISL-A1-300	ISL-A5-300	ISL-B5-300
350mm	ISL-A1-350	ISL-A5-350	ISL-B5-350
400mm	ISL-A1-400	ISL-A5-400	ISL-B5-400
450mm	ISL-A1-450	ISL-A5-450	ISL-B5-450
500mm	ISL-A1-500	ISL-A5-500	ISL-B5-500
550mm	ISL-A1-550	ISL-A5-550	ISL-B5-550
600mm	ISL-A1-600	ISL-A5-600	ISL-B5-600
650mm	ISL-A1-650	ISL-A5-650	ISL-B5-650
700mm	ISL-A1-700	ISL-A5-700	ISL-B5-700
750mm	ISL-A1-750	ISL-A5-750	ISL-B5-750
800mm	ISL-A1-800	ISL-A5-800	ISL-B5-800
850mm	ISL-A1-850	ISL-A5-850	ISL-B5-850
900mm	ISL-A1-900	ISL-A5-900	ISL-B5-900
950mm	ISL-A1-950	ISL-A5-950	ISL-B5-950
1000mm	ISL-A1-1000	ISL-A5-1000	ISL-B5-1000
1100mm			ISL-B5-1100
1200mm			ISL-B5-1200
1300mm			ISL-B5-1300
1400mm			ISL-B5-1400
1500mm			ISL-B5-1500
1600mm			ISL-B5-1600
1700mm			ISL-B5-1700
1800mm			ISL-B5-1800
1900mm			ISL-B5-1900
2000mm			ISL-B5-2000
2100mm			ISL-B5-2100
2200mm			ISL-B5-2200
2300mm			ISL-B5-2300
2400mm			ISL-B5-2400
2500mm			ISL-B5-2500
2600mm			ISL-B5-2600
2700mm			ISL-B5-2700
2800mm			ISL-B5-2800
2900mm			ISL-B5-2900
3000mm			ISL-B5-3000
3100mm			ISL-B5-3100
3200mm			ISL-B5-3200

STANDARD DELIVERY

Main unit	1 pc
'L' shape support	1 pc
Anti-dust cover	1 pc
Plain base	1 pc (for L≥1500mm)
Mounting accessories	1 package



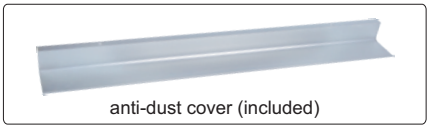
'L' shape support (included)

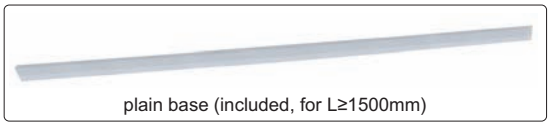


mounting accessories (included)

To be continued

Continued from previous page


anti-dust cover (included)


plain base (included, for L≥1500mm)

SPECIFICATION

Code	Series ISL-A1		Series ISL-A5		Series ISL-B5	
L1 (mm)	L+30 (L≤900)	L+50 (L>900)	L+30 (L≤900)	L+50 (L>900)	L+30 (L≤900)	L+50 (L>900)
L2 (mm)	L+132 (L≤900)	L+152 (L>900)	L+132 (L≤900)	L+152 (L>900)	L+136 (L≤900)	L+156 (L>900)
L3 (mm)	L+148 (L≤900)	L+168 (L>900)	L+148 (L≤900)	L+168 (L>900)	L+154 (L≤900)	L+174 (L>900)
Resolution	1μm		5μm		5μm	
Max. response speed	50m/min		90m/min		60m/min	
Scale grating pitch	20μm					
Scale reference point pitch	50mm					
Accuracy	±(5+5L/1000)μm L is the effective length in mm					
Cable length	3.5m (L: 50-950mm), 5m (L: 1000-1500mm), 10m (L: 1600-3200mm)					
Output signal	TTL					
Socket	9PD					
Power supply	5±0.5V					

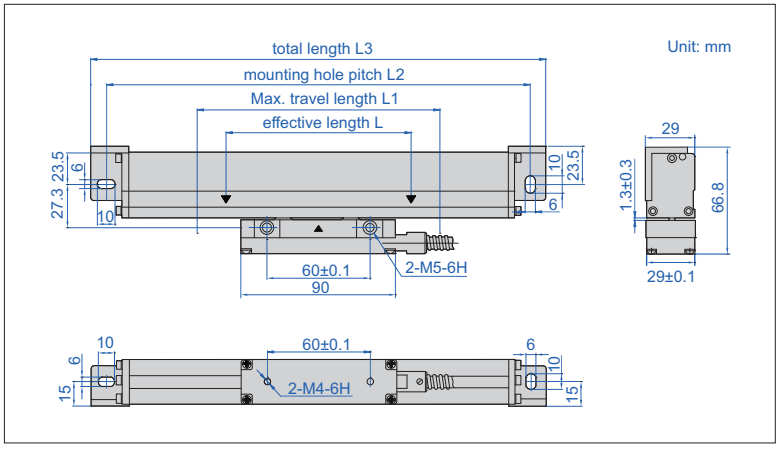
LINEAR SCALES (RS422 SIGNAL)

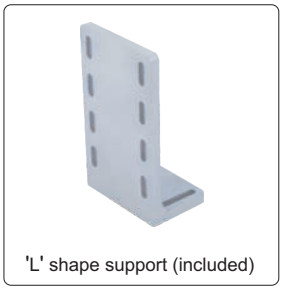
IP54 WATERPROOF

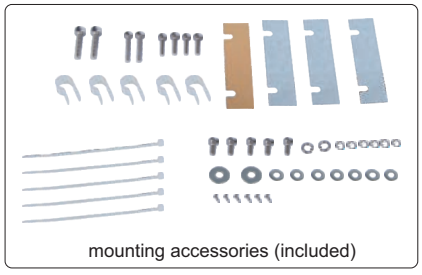


ISL-C5-450

- Connected to digital display box or PLC

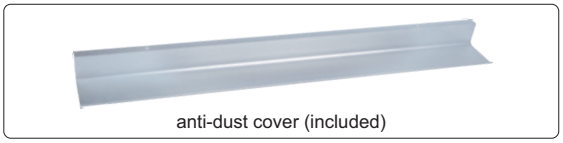



'L' shape support (included)

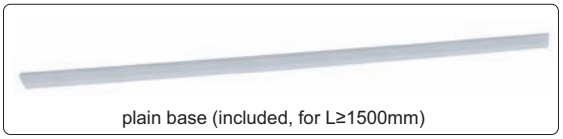

mounting accessories (included)

To be continued

Continued from previous page



anti-dust cover (included)



plain base (included, for L≥1500mm)

Effective length (L)	Code	
	Series ISL-C1	Series ISL-C5
50mm	ISL-C1-50	ISL-C5-50
100mm	ISL-C1-100	ISL-C5-100
150mm	ISL-C1-150	ISL-C5-150
200mm	ISL-C1-200	ISL-C5-200
250mm	ISL-C1-250	ISL-C5-250
300mm	ISL-C1-300	ISL-C5-300
350mm	ISL-C1-350	ISL-C5-350
400mm	ISL-C1-400	ISL-C5-400
450mm	ISL-C1-450	ISL-C5-450
500mm	ISL-C1-500	ISL-C5-500
550mm	ISL-C1-550	ISL-C5-550
600mm	ISL-C1-600	ISL-C5-600
650mm	ISL-C1-650	ISL-C5-650
700mm	ISL-C1-700	ISL-C5-700
750mm	ISL-C1-750	ISL-C5-750
800mm	ISL-C1-800	ISL-C5-800
850mm	ISL-C1-850	ISL-C5-850
900mm	ISL-C1-900	ISL-C5-900
950mm	ISL-C1-950	ISL-C5-950
1000mm	ISL-C1-1000	ISL-C5-1000

Effective length (L)	Code	
	Series ISL-C1	Series ISL-C5
1100mm	ISL-C1-1100	ISL-C5-1100
1200mm	ISL-C1-1200	ISL-C5-1200
1300mm	ISL-C1-1300	ISL-C5-1300
1400mm	ISL-C1-1400	ISL-C5-1400
1500mm	ISL-C1-1500	ISL-C5-1500
1600mm	ISL-C1-1600	ISL-C5-1600
1700mm	ISL-C1-1700	ISL-C5-1700
1800mm	ISL-C1-1800	ISL-C5-1800
1900mm	ISL-C1-1900	ISL-C5-1900
2000mm	ISL-C1-2000	ISL-C5-2000
2100mm	ISL-C1-2100	ISL-C5-2100
2200mm	ISL-C1-2200	ISL-C5-2200
2300mm	ISL-C1-2300	ISL-C5-2300
2400mm	ISL-C1-2400	ISL-C5-2400
2500mm	ISL-C1-2500	ISL-C5-2500
2600mm	ISL-C1-2600	ISL-C5-2600
2700mm	ISL-C1-2700	ISL-C5-2700
2800mm	ISL-C1-2800	ISL-C5-2800
2900mm	ISL-C1-2900	ISL-C5-2900
3000mm	ISL-C1-3000	ISL-C5-3000

SPECIFICATION

Code	Series ISL-C1	Series ISL-C5
L1 (mm)	L+30 (L≤900), L+50 (L>900)	L+30 (L≤900), L+50 (L>900)
L2 (mm)	L+136 (L≤900), L+156 (L>900)	L+136 (L≤900), L+156 (L>900)
L3 (mm)	L+154 (L≤900), L+174 (L>900)	L+154 (L≤900), L+174 (L>900)
Resolution	1μm	5μm
Thickness	29mm	
Max. response speed	60m/min	
Scale grating pitch	20μm	
Scale reference point pitch	50mm	
Accuracy	±(5+5L/1000)μm, L is the effective length in mm	
Cable length	3.5m (L: 50-950mm), 5m (L: 1000-1900mm), 10m (L: 2000-3000mm)	
Output signal	RS422	
Socket	9PD	
Power supply	5±0.25V	

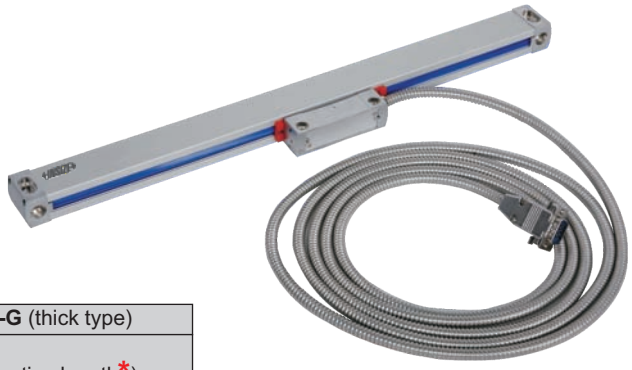
STANDARD DELIVERY

Main unit	1 pc
'L' shape support	1 pc
Anti-dust cover	1 pc
Plain base	1 pc (for L≥1500mm)
Mounting accessories	1 package

LINEAR SCALES

IP53
WATERPROOF

- Connected to digital display box or PLC



ISL-F400-5T

SPECIFICATION

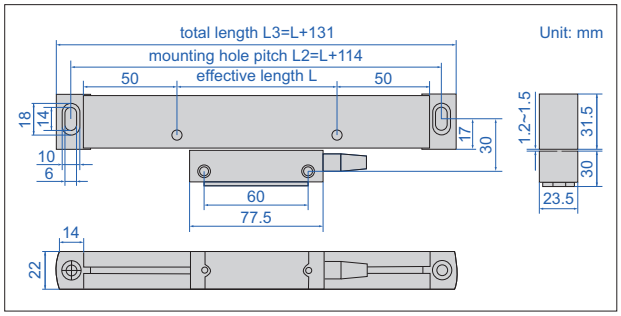
Code	**Series ISL-F** (thin type)	**Series ISL-G** (thick type)
Max. travel length L1	L+100mm (L is the effective length*)	L+110mm (L is the effective length*)
Mounting hole pitch L2	L+114mm	L+142mm
Total length L3	L+131mm	L+162mm
Thickness	22mm	35mm
Max. response speed	60m/min	
Scale grating pitch	20μm	
Scale reference point pitch	50mm	
Accuracy	±0.008mm (L≤200mm), ±0.010mm (200<L≤500mm), ±0.015mm (500<L≤1000mm), ±0.050mm (1000<L≤1500mm), ±0.080mm (1500<L≤2000mm), ±0.120mm (2000<L≤3000mm), L is the effective length	
Cable length	3.5m (L: 50-950mm), 5m (L: 1000-1500mm), 10m (L: 1600-3200mm)	
Power supply	5V±5% (when the output signal is HTL, the power supply can be customized to 12V±5%, 15V±5%, 18V±5% and 24V±5%)	
Socket **	DB9	
Operation environment	0~50°C	
Storage environment	-20~70°C	
Dust/waterproof	IP53	

*The effective length of series **ISL-G** can be customized up to 6000mm
**Sockets can be customized to 7-pin round plug, DB15 and 9-pin round M23 plug
***Output signals can be customized to 1Vpp and 11μApp

Series ISL-F (thin type)

Effective length (L)	Code		
	Output signal TTL***		
	Resolution 0.5μm	Resolution 1μm	Resolution 5μm
50mm	ISL-F50-05T	ISL-F50-1T	ISL-F50-5T
100mm	ISL-F100-05T	ISL-F100-1T	ISL-F100-5T
150mm	ISL-F150-05T	ISL-F150-1T	ISL-F150-5T
200mm	ISL-F200-05T	ISL-F200-1T	ISL-F200-5T
250mm	ISL-F250-05T	ISL-F250-1T	ISL-F250-5T
300mm	ISL-F300-05T	ISL-F300-1T	ISL-F300-5T
350mm	ISL-F350-05T	ISL-F350-1T	ISL-F350-5T
400mm	ISL-F400-05T	ISL-F400-1T	ISL-F400-5T
450mm	ISL-F450-05T	ISL-F450-1T	ISL-F450-5T
500mm	ISL-F500-05T	ISL-F500-1T	ISL-F500-5T
550mm	ISL-F550-05T	ISL-F550-1T	ISL-F550-5T
600mm	ISL-F600-05T	ISL-F600-1T	ISL-F600-5T
650mm	ISL-F650-05T	ISL-F650-1T	ISL-F650-5T
700mm	ISL-F700-05T	ISL-F700-1T	ISL-F700-5T
750mm	ISL-F750-05T	ISL-F750-1T	ISL-F750-5T
800mm	ISL-F800-05T	ISL-F800-1T	ISL-F800-5T
850mm	ISL-F850-05T	ISL-F850-1T	ISL-F850-5T
900mm	ISL-F900-05T	ISL-F900-1T	ISL-F900-5T
950mm	ISL-F950-05T	ISL-F950-1T	ISL-F950-5T
1000mm	ISL-F1000-05T	ISL-F1000-1T	ISL-F1000-5T

Series ISL-F (thin type)



To be continued

Continued from previous page

Series ISL-F (thin type)

Effective length (L)	Code		
	Output signal HTL***		
	Resolution 0.5μm	Resolution 1μm	Resolution 5μm
50mm	ISL-F50-05H	ISL-F50-1H	ISL-F50-5H
100mm	ISL-F100-05H	ISL-F100-1H	ISL-F100-5H
150mm	ISL-F150-05H	ISL-F150-1H	ISL-F150-5H
200mm	ISL-F200-05H	ISL-F200-1H	ISL-F200-5H
250mm	ISL-F250-05H	ISL-F250-1H	ISL-F250-5H
300mm	ISL-F300-05H	ISL-F300-1H	ISL-F300-5H
350mm	ISL-F350-05H	ISL-F350-1H	ISL-F350-5H
400mm	ISL-F400-05H	ISL-F400-1H	ISL-F400-5H
450mm	ISL-F450-05H	ISL-F450-1H	ISL-F450-5H
500mm	ISL-F500-05H	ISL-F500-1H	ISL-F500-5H
550mm	ISL-F550-05H	ISL-F550-1H	ISL-F550-5H
600mm	ISL-F600-05H	ISL-F600-1H	ISL-F600-5H
650mm	ISL-F650-05H	ISL-F650-1H	ISL-F650-5H
700mm	ISL-F700-05H	ISL-F700-1H	ISL-F700-5H
750mm	ISL-F750-05H	ISL-F750-1H	ISL-F750-5H
800mm	ISL-F800-05H	ISL-F800-1H	ISL-F800-5H
850mm	ISL-F850-05H	ISL-F850-1H	ISL-F850-5H
900mm	ISL-F900-05H	ISL-F900-1H	ISL-F900-5H
950mm	ISL-F950-05H	ISL-F950-1H	ISL-F950-5H
1000mm	ISL-F1000-05H	ISL-F1000-1H	ISL-F1000-5H

Series ISL-F (thin type)

Effective length (L)	Code		
	Output signal RS422***		
	Resolution 0.5μm	Resolution 1μm	Resolution 5μm
50mm	ISL-F50-05R	ISL-F50-1R	ISL-F50-5R
100mm	ISL-F100-05R	ISL-F100-1R	ISL-F100-5R
150mm	ISL-F150-05R	ISL-F150-1R	ISL-F150-5R
200mm	ISL-F200-05R	ISL-F200-1R	ISL-F200-5R
250mm	ISL-F250-05R	ISL-F250-1R	ISL-F250-5R
300mm	ISL-F300-05R	ISL-F300-1R	ISL-F300-5R
350mm	ISL-F350-05R	ISL-F350-1R	ISL-F350-5R
400mm	ISL-F400-05R	ISL-F400-1R	ISL-F400-5R
450mm	ISL-F450-05R	ISL-F450-1R	ISL-F450-5R
500mm	ISL-F500-05R	ISL-F500-1R	ISL-F500-5R
550mm	ISL-F550-05R	ISL-F550-1R	ISL-F550-5R
600mm	ISL-F600-05R	ISL-F600-1R	ISL-F600-5R
650mm	ISL-F650-05R	ISL-F650-1R	ISL-F650-5R
700mm	ISL-F700-05R	ISL-F700-1R	ISL-F700-5R
750mm	ISL-F750-05R	ISL-F750-1R	ISL-F750-5R
800mm	ISL-F800-05R	ISL-F800-1R	ISL-F800-5R
850mm	ISL-F850-05R	ISL-F850-1R	ISL-F850-5R
900mm	ISL-F900-05R	ISL-F900-1R	ISL-F900-5R
950mm	ISL-F950-05R	ISL-F950-1R	ISL-F950-5R
1000mm	ISL-F1000-05R	ISL-F1000-1R	ISL-F1000-5R

Series ISL-G (thick type)

Effective length (L)	Code		
	Output signal TTL***		
	Resolution 0.5μm	Resolution 1μm	Resolution 5μm
50mm	ISL-G50-05T	ISL-G50-1T	ISL-G50-5T
100mm	ISL-G100-05T	ISL-G100-1T	ISL-G100-5T
150mm	ISL-G150-05T	ISL-G150-1T	ISL-G150-5T
200mm	ISL-G200-05T	ISL-G200-1T	ISL-G200-5T
250mm	ISL-G250-05T	ISL-G250-1T	ISL-G250-5T
300mm	ISL-G300-05T	ISL-G300-1T	ISL-G300-5T
350mm	ISL-G350-05T	ISL-G350-1T	ISL-G350-5T
400mm	ISL-G400-05T	ISL-G400-1T	ISL-G400-5T
450mm	ISL-G450-05T	ISL-G450-1T	ISL-G450-5T
500mm	ISL-G500-05T	ISL-G500-1T	ISL-G500-5T
550mm	ISL-G550-05T	ISL-G550-1T	ISL-G550-5T
600mm	ISL-G600-05T	ISL-G600-1T	ISL-G600-5T
650mm	ISL-G650-05T	ISL-G650-1T	ISL-G650-5T
700mm	ISL-G700-05T	ISL-G700-1T	ISL-G700-5T
750mm	ISL-G750-05T	ISL-G750-1T	ISL-G750-5T
800mm	ISL-G800-05T	ISL-G800-1T	ISL-G800-5T
850mm	ISL-G850-05T	ISL-G850-1T	ISL-G850-5T
900mm	ISL-G900-05T	ISL-G900-1T	ISL-G900-5T
950mm	ISL-G950-05T	ISL-G950-1T	ISL-G950-5T
1000mm	ISL-G1000-05T	ISL-G1000-1T	ISL-G1000-5T

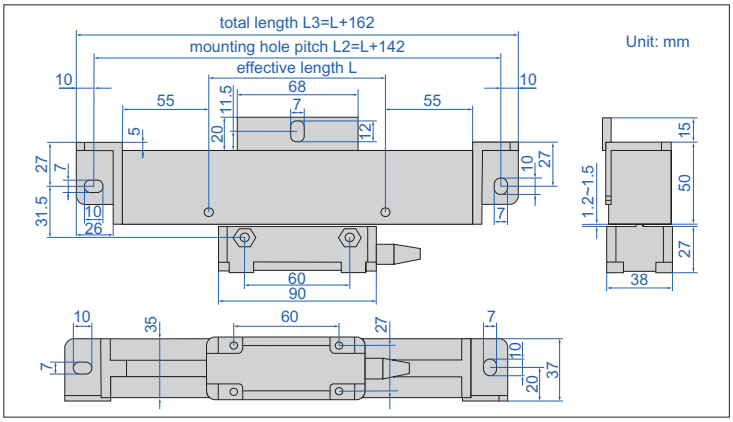
Series ISL-G (thick type)

Effective length (L)	Code		
	Output signal TTL***		
	Resolution 0.5μm	Resolution 1μm	Resolution 5μm
1100mm	ISL-G1100-05T	ISL-G1100-1T	ISL-G1100-5T
1200mm	ISL-G1200-05T	ISL-G1200-1T	ISL-G1200-5T
1300mm	ISL-G1300-05T	ISL-G1300-1T	ISL-G1300-5T
1400mm	ISL-G1400-05T	ISL-G1400-1T	ISL-G1400-5T
1500mm	ISL-G1500-05T	ISL-G1500-1T	ISL-G1500-5T
1600mm	ISL-G1600-05T	ISL-G1600-1T	ISL-G1600-5T
1700mm	ISL-G1700-05T	ISL-G1700-1T	ISL-G1700-5T
1800mm	ISL-G1800-05T	ISL-G1800-1T	ISL-G1800-5T
1900mm	ISL-G1900-05T	ISL-G1900-1T	ISL-G1900-5T
2000mm	ISL-G2000-05T	ISL-G2000-1T	ISL-G2000-5T
2100mm	ISL-G2100-05T	ISL-G2100-1T	ISL-G2100-5T
2200mm	ISL-G2200-05T	ISL-G2200-1T	ISL-G2200-5T
2300mm	ISL-G2300-05T	ISL-G2300-1T	ISL-G2300-5T
2400mm	ISL-G2400-05T	ISL-G2400-1T	ISL-G2400-5T
2500mm	ISL-G2500-05T	ISL-G2500-1T	ISL-G2500-5T
2600mm	ISL-G2600-05T	ISL-G2600-1T	ISL-G2600-5T
2700mm	ISL-G2700-05T	ISL-G2700-1T	ISL-G2700-5T
2800mm	ISL-G2800-05T	ISL-G2800-1T	ISL-G2800-5T
2900mm	ISL-G2900-05T	ISL-G2900-1T	ISL-G2900-5T
3000mm	ISL-G3000-05T	ISL-G3000-1T	ISL-G3000-5T

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Series ISL-G (thick type)

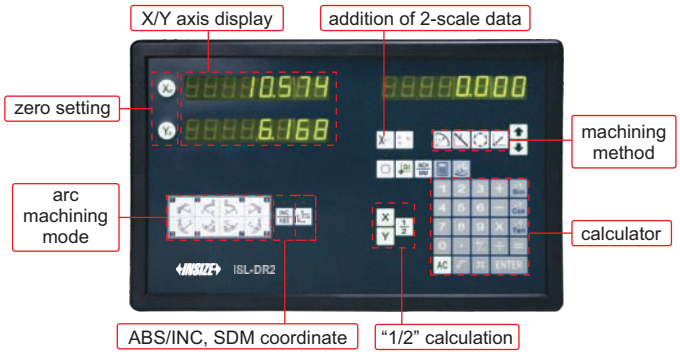


Series ISL-G (thick type)

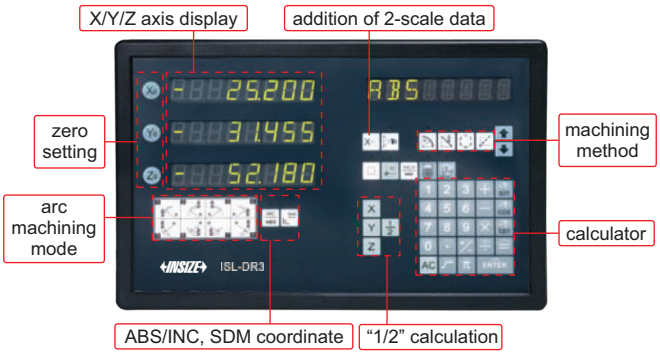
Effective length (L)	Code		
	Output signal HTL***		
	Resolution 0.5μm	Resolution 1μm	Resolution 5μm
50mm	ISL-G50-05H	ISL-G50-1H	ISL-G50-5H
100mm	ISL-G100-05H	ISL-G100-1H	ISL-G100-5H
150mm	ISL-G150-05H	ISL-G150-1H	ISL-G150-5H
200mm	ISL-G200-05H	ISL-G200-1H	ISL-G200-5H
250mm	ISL-G250-05H	ISL-G250-1H	ISL-G250-5H
300mm	ISL-G300-05H	ISL-G300-1H	ISL-G300-5H
350mm	ISL-G350-05H	ISL-G350-1H	ISL-G350-5H
400mm	ISL-G400-05H	ISL-G400-1H	ISL-G400-5H
450mm	ISL-G450-05H	ISL-G450-1H	ISL-G450-5H
500mm	ISL-G500-05H	ISL-G500-1H	ISL-G500-5H
550mm	ISL-G550-05H	ISL-G550-1H	ISL-G550-5H
600mm	ISL-G600-05H	ISL-G600-1H	ISL-G600-5H
650mm	ISL-G650-05H	ISL-G650-1H	ISL-G650-5H
700mm	ISL-G700-05H	ISL-G700-1H	ISL-G700-5H
750mm	ISL-G750-05H	ISL-G750-1H	ISL-G750-5H
800mm	ISL-G800-05H	ISL-G800-1H	ISL-G800-5H
850mm	ISL-G850-05H	ISL-G850-1H	ISL-G850-5H
900mm	ISL-G900-05H	ISL-G900-1H	ISL-G900-5H
950mm	ISL-G950-05H	ISL-G950-1H	ISL-G950-5H
1000mm	ISL-G1000-05H	ISL-G1000-1H	ISL-G1000-5H
1100mm	ISL-G1100-05H	ISL-G1100-1H	ISL-G1100-5H
1200mm	ISL-G1200-05H	ISL-G1200-1H	ISL-G1200-5H
1300mm	ISL-G1300-05H	ISL-G1300-1H	ISL-G1300-5H
1400mm	ISL-G1400-05H	ISL-G1400-1H	ISL-G1400-5H
1500mm	ISL-G1500-05H	ISL-G1500-1H	ISL-G1500-5H
1600mm	ISL-G1600-05H	ISL-G1600-1H	ISL-G1600-5H
1700mm	ISL-G1700-05H	ISL-G1700-1H	ISL-G1700-5H
1800mm	ISL-G1800-05H	ISL-G1800-1H	ISL-G1800-5H
1900mm	ISL-G1900-05H	ISL-G1900-1H	ISL-G1900-5H
2000mm	ISL-G2000-05H	ISL-G2000-1H	ISL-G2000-5H
2100mm	ISL-G2100-05H	ISL-G2100-1H	ISL-G2100-5H
2200mm	ISL-G2200-05H	ISL-G2200-1H	ISL-G2200-5H
2300mm	ISL-G2300-05H	ISL-G2300-1H	ISL-G2300-5H
2400mm	ISL-G2400-05H	ISL-G2400-1H	ISL-G2400-5H
2500mm	ISL-G2500-05H	ISL-G2500-1H	ISL-G2500-5H
2600mm	ISL-G2600-05H	ISL-G2600-1H	ISL-G2600-5H
2700mm	ISL-G2700-05H	ISL-G2700-1H	ISL-G2700-5H
2800mm	ISL-G2800-05H	ISL-G2800-1H	ISL-G2800-5H
2900mm	ISL-G2900-05H	ISL-G2900-1H	ISL-G2900-5H
3000mm	ISL-G3000-05H	ISL-G3000-1H	ISL-G3000-5H

Series ISL-G (thick type)

Effective length (L)	Code		
	Output signal RS422***		
	Resolution 0.5μm	Resolution 1μm	Resolution 5μm
50mm	ISL-G50-05R	ISL-G50-1R	ISL-G50-5R
100mm	ISL-G100-05R	ISL-G100-1R	ISL-G100-5R
150mm	ISL-G150-05R	ISL-G150-1R	ISL-G150-5R
200mm	ISL-G200-05R	ISL-G200-1R	ISL-G200-5R
250mm	ISL-G250-05R	ISL-G250-1R	ISL-G250-5R
300mm	ISL-G300-05R	ISL-G300-1R	ISL-G300-5R
350mm	ISL-G350-05R	ISL-G350-1R	ISL-G350-5R
400mm	ISL-G400-05R	ISL-G400-1R	ISL-G400-5R
450mm	ISL-G450-05R	ISL-G450-1R	ISL-G450-5R
500mm	ISL-G500-05R	ISL-G500-1R	ISL-G500-5R
550mm	ISL-G550-05R	ISL-G550-1R	ISL-F550-5R
600mm	ISL-G600-05R	ISL-G600-1R	ISL-G600-5R
650mm	ISL-G650-05R	ISL-G650-1R	ISL-G650-5R
700mm	ISL-G700-05R	ISL-G700-1R	ISL-G700-5R
750mm	ISL-G750-05R	ISL-G750-1R	ISL-G750-5R
800mm	ISL-G800-05R	ISL-G800-1R	ISL-G800-5R
850mm	ISL-G850-05R	ISL-G850-1R	ISL-G850-5R
900mm	ISL-G900-05R	ISL-G900-1R	ISL-G900-5R
950mm	ISL-G950-05R	ISL-G950-1R	ISL-G950-5R
1000mm	ISL-G1000-05R	ISL-G1000-1R	ISL-G1000-5R
1100mm	ISL-G1100-05R	ISL-G1100-1R	ISL-G1100-5R
1200mm	ISL-G1200-05R	ISL-G1200-1R	ISL-G1200-5R
1300mm	ISL-G1300-05R	ISL-G1300-1R	ISL-G1300-5R
1400mm	ISL-G1400-05R	ISL-G1400-1R	ISL-G1400-5R
1500mm	ISL-G1500-05R	ISL-G1500-1R	ISL-G1500-5R
1600mm	ISL-G1600-05R	ISL-G1600-1R	ISL-G1600-5R
1700mm	ISL-G1700-05R	ISL-G1700-1R	ISL-G1700-5R
1800mm	ISL-G1800-05R	ISL-G1800-1R	ISL-G1800-5R
1900mm	ISL-G1900-05R	ISL-G1900-1R	ISL-G1900-5R
2000mm	ISL-G2000-05R	ISL-G2000-1R	ISL-G2000-5R
2100mm	ISL-G2100-05R	ISL-G2100-1R	ISL-G2100-5R
2200mm	ISL-G2200-05R	ISL-G2200-1R	ISL-G2200-5R
2300mm	ISL-G2300-05R	ISL-G2300-1R	ISL-G2300-5R
2400mm	ISL-G2400-05R	ISL-G2400-1R	ISL-G2400-5R
2500mm	ISL-G2500-05R	ISL-G2500-1R	ISL-G2500-5R
2600mm	ISL-G2600-05R	ISL-G2600-1R	ISL-G2600-5R
2700mm	ISL-G2700-05R	ISL-G2700-1R	ISL-G2700-5R
2800mm	ISL-G2800-05R	ISL-G2800-1R	ISL-G2800-5R
2900mm	ISL-G2900-05R	ISL-G2900-1R	ISL-G2900-5R
3000mm	ISL-G3000-05R	ISL-G3000-1R	ISL-G3000-5R



ISL-DR2



ISL-DR3



software flash disk (included)

- For **ISL-A1**, **ISL-A5**, **ISL-B5**, **ISL-C1**, **ISL-C5** series linear scales

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SPECIFICATION

Code	ISL-DR2	ISL-DR3
Application	two-axis	three-axis
Scale input ports	2	3
Resolution	0.05μm, 0.1μm, 0.2μm, 0.5μm, 1μm, 2μm, 5μm, 10μm, 20μm, 50μm	
Functions	addition of 2-scale data, linearity error compensation, smoothing, RS232C interface unit, BCD code out, zero setting, preset, resolution setting, counting direction setting, inch/mm conversion,ABS/INC conversion, expansion/contraction coefficient setting, "½" calculation, detecting RI, bolt-hole circle machining, ramp circle machining	
Power supply	110/220V, 50/60Hz	
Dimension	295×185×45mm	
Weight	1.45kg	

STANDARD DELIVERY

Main unit	1 pc
Mounting bracket	1 pc
Ground cable	1 pc
RS232C cable	1 pc
Software flash disk for RS232C	1 pc



mounting bracket (included)



DIGITAL READOUT
CODE ISL-LCD7

VIDEO



- 7.57 inch LCD display
- Language: English, Simplified Chinese, Traditional Chinese
- Can be connected with **ISL-A1**, **ISL-A5**, **ISL-B5**, **ISL-C1**, **ISL-C5** series linear scales



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SPECIFICATION

Application	three-axis: X/Y/Z
Scale input ports	3
Resolution	0.05μm, 0.1μm, 0.2μm, 0.5μm, 1μm, 2μm, 5μm, 10μm, 20μm, 50μm
Function	X/Y/Z addition of 3-scale data, linearity error compensation, smoothing, RS232C interface unit, BCD code out, zero setting, preset, resolution setting, counting direction setting, inch/mm conversion, ABS/INC conversion, expansion/sontraction coefficient setting, "½" calculation, detecting RI, bolt-hole circle machining, ramp circle machining, circular arc machining, oblique surface machining, automatic edge finding, discharge machining
Dimension	200×88×260mm
Weight	1.26kg

STANDARD DELIVERY

Main unit	1 pc
Mounting bracket	1 pc
Ground cable	1 pc
RS232C cable	1 pc
Software flash disk for RS232C	1 pc

MAGNETIC LINEAR SCALES (ABSOLUTE TYPE)

VIDEO

IP65
WATERPROOF



reader
LSK-A12



magnetic linear scale

application



- Absolute encoder, the original data remains after power off
- Support multiple communication protocols
- Cable length: 0.5m (can be customized up to 15m)
- Dust/waterproof: IP65

READER SPECIFICATION

Code	Resolution	Repeatability	Max. response speed	Power supply	Current	Output protocol *	Output interface
LSK-A10	0.1μm	±0.5μm	5m/s	5V±5%	<200mA	BISS-C	
LSK-A11	0.5μm	±1μm					
LSK-A12	1μm	±2μm					
LSK-A20	0.1μm	±0.5μm					
LSK-A21	0.5μm	±1μm					
LSK-A22	1μm	±2μm					
LSK-A30	0.1μm	±0.5μm					
LSK-A31	0.5μm	±1μm					
LSK-A32	1μm	±2μm					

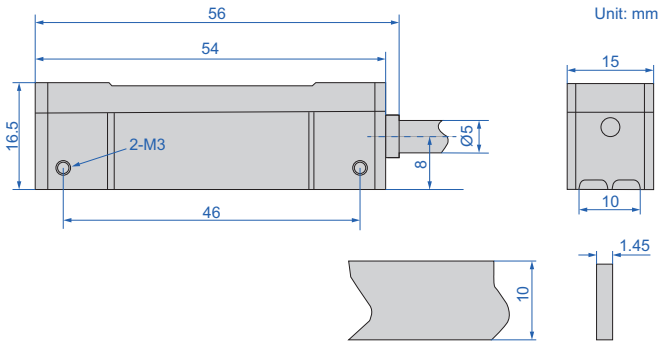
*The communication protocol can be customized to SSI, Panasonic, Tamagawa and RS485

MAGNETIC LINEAR SCALE

Code	Length**
LSK-E1	1m
LSK-E2	2m
LSK-E3	3m
LSK-E4	4m
LSK-E5	5m
LSK-E6	6m
LSK-E7	7m
LSK-E8	8m

Code	Length**
LSK-E9	9m
LSK-E10	10m
LSK-E11	11m
LSK-E12	12m
LSK-E13	13m
LSK-E14	14m
LSK-E15	15m
LSK-E16	16m

**Customized length according to customer requirements

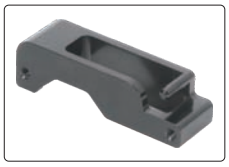


MAGNETIC LINEAR SCALE SPECIFICATION

Pitch	2+2mm
Accuracy	±40μm
Max. length	16.3m

OPTIONAL ACCESSORY

Code	Name	Description
LSK-B01	assistant tool	mounting magnetic linear scales



assistant tool (**optional**)

MAGNETIC LINEAR SCALES (INCREMENTAL TYPE)

IP65 WATERPROOF

VIDEO



reader
LSK-B12



magnetic linear scale

application



- Magnetic grating scale, incremental type
- Output frequency: 1000Hz (can be customized up to 8000Hz)
- Cable length: 0.5m (can be customized up to 15m)
- Dust/waterproof: IP65

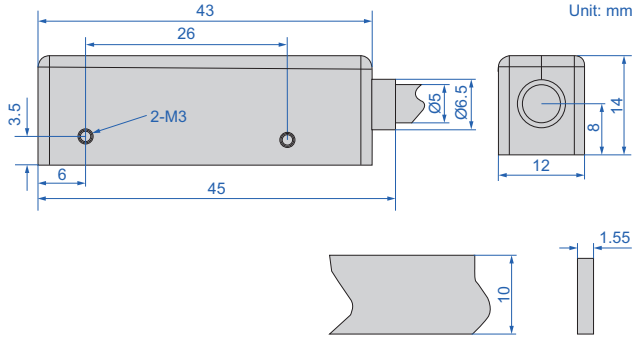
READER SPECIFICATION

Code	Resolution	Repeatability	Max. response speed	Power supply	Current	Output protocol	Output interface
LSK-B10	0.1μm	±0.5μm	5m/s	5V±5%	<50mA	RS422	
LSK-B11	0.5μm	±1μm					
LSK-B12	1μm	±2μm					
LSK-B20	0.1μm	±0.5μm					
LSK-B21	0.5μm	±1μm					
LSK-B22	1μm	±2μm					
LSK-B30	0.1μm	±0.5μm					
LSK-B31	0.5μm	±1μm					
LSK-B32	1μm	±2μm					

MAGNETIC LINEAR SCALE

Code	Length*	Code	Length*	Code	Length*
LSK-C1	1m	LSK-C10	10m	LSK-C19	10m
LSK-C2	2m	LSK-C11	11m	LSK-C20	19m
LSK-C3	3m	LSK-C12	12m	LSK-C25	25m
LSK-C4	4m	LSK-C13	13m	LSK-C30	30m
LSK-C5	5m	LSK-C14	14m	LSK-C35	35m
LSK-C6	6m	LSK-C15	15m	LSK-C40	40m
LSK-C7	7m	LSK-C16	16m	LSK-C45	45m
LSK-C8	8m	LSK-C17	17m	LSK-C50	50m
LSK-C9	9m	LSK-C18	18m		

*Customized length according to customer requirements

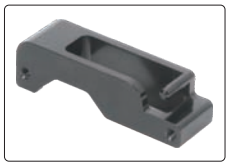


MAGNETIC LINEAR SCALE SPECIFICATION

Pitch	2+2mm
Accuracy	±40μm
Max. length	50m

OPTIONAL ACCESSORY

Code	Name	Description
LSK-B01	assistant tool	mounting magnetic linear scales



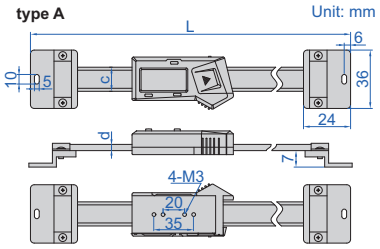
assistant tool (**optional**)

DATA OUTPUT

DIGITAL HORIZONTAL SCALES

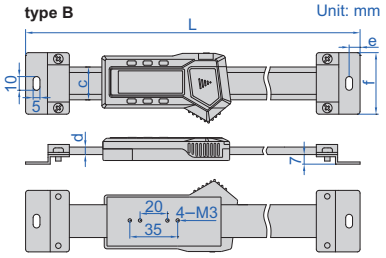


7101-300A

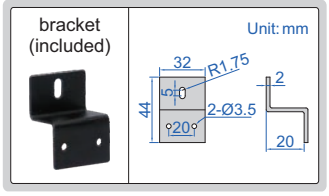




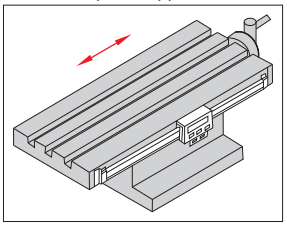
7101-400A



- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, zero, mm/inch,
  type B: on/off, zero, mm/inch, ABS, data preset
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back



example of application



19

With data interface
(optional wireless transmitter code 7315-25, receiver is needed page 7) **(mm)**

Code	Range	Type	Accuracy	L	c	d
7101-100A	100mm	A	±0.02mm	215	16	4
7101-150A	150mm	A	±0.03mm	265	16	4
7101-200A	200mm	A	±0.03mm	315	16	4
7101-300A	300mm	A	±0.04mm	445	16	4

With data interface
(optional wireless transmitter code 7315-22, receiver is needed page 7) **(mm)**

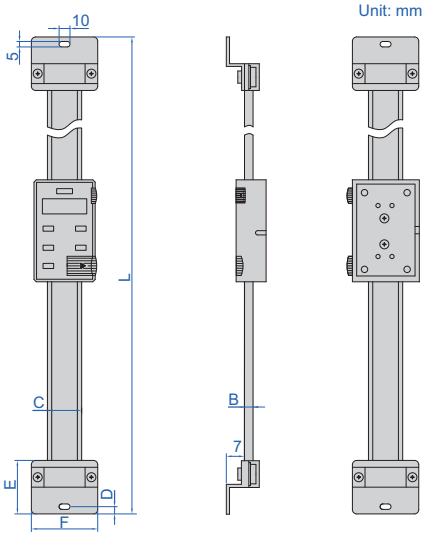
Code	Range	Type	Accuracy	L	c	d	e	f
7101-400A	400mm	B	±0.05mm	590	24	5.5	8	45
7101-500A	500mm	B	±0.05mm	690	24	5.5	8	45
7101-600A	600mm	B	±0.08mm	790	24	5.5	8	45
7101-800A	800mm	B	±0.10mm	990	24	5.5	8	45
7101-1000A	1000mm	B	±0.10mm	1240	31	10.5	10	60

DIGITAL VERTICAL SCALES

DATA OUTPUT

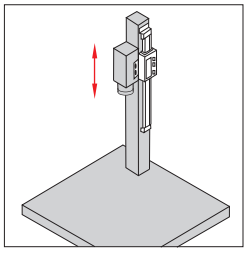


7102-300



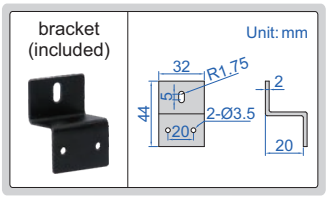
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch, ABS/INC, data hold, TOL, set
- Battery LR44, data output
- Made of stainless steel
- Supplied with bracket to be mounted on the back
- Optional accessory: wireless transmitter code **7315-1150** (receiver is needed) page 10

example of application



(mm)

Code	Range	Accuracy	B	C	D	E	F	L
7102-100	100mm/4"	±0.02mm	4	20	6	24	40	245
7102-150	150mm/6"	±0.03mm	4	20	6	24	40	296
7102-200	200mm/8"	±0.03mm	4	20	6	24	40	345
7102-300	300mm/12"	±0.04mm	4	20	6	24	40	445
7102-400	400mm/16"	±0.05mm	4	20	6	24	40	545
7102-500	500mm/20"	±0.05mm	5.5	24	8	32	45	685
7102-600	600mm/24"	±0.08mm	5.5	24	8	32	45	785
7102-800	800mm/32"	±0.10mm	5.5	24	8	32	45	985
7102-1000	1000mm/40"	±0.10mm	10.5	31	9.5	40	60	1245



ROUNDNESS, PROFILE AND ROUGHNESS TESTERS

20



Roundness/Cylindricity Testers
Page 648-649



Roundness Measuring Machines
Page 650-651



Precision Air Floating Rotary Tables
Page 652-653



Surface Profile Measuring Machines
Page 654-663



Roughness Measuring Machines
Page 663-664



Roughness Testers
Page 665-678

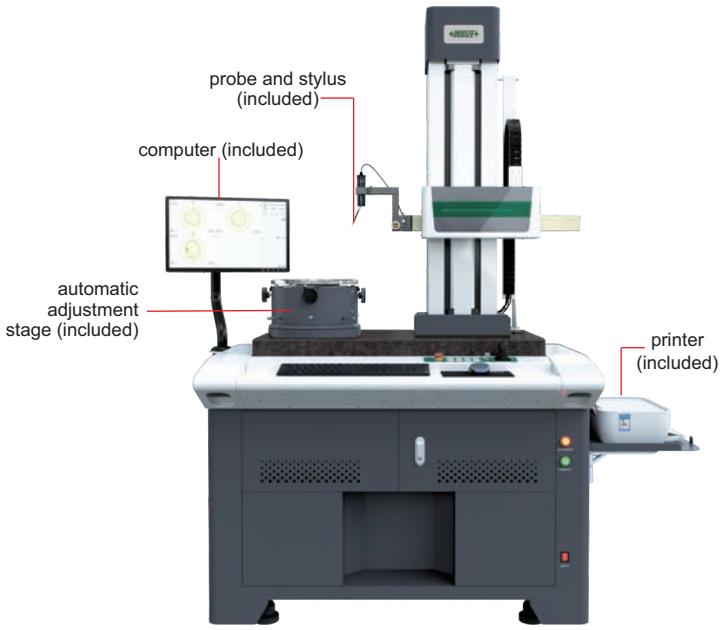


Surface Roughness Specimens
Page 678-680



Surface Roughness Reference Specimens
Page 680

ROUNDNESS/CYLINDRICITY TESTER
CODE RCT-300



- Automatic centering and leveling
- Evaluation items
  -Cylindricity module: cylindricity, radial full run, coaxiality, taper, radius
  -Roundness module: roundness, concentricity, radial single jump, wall thickness difference
  -Straightness module: straightness, parallelism, squareness
  -Single section flatness module: single section flatness, axial single hop, perpendicularity, parallelism
  -Multi-section flatness module: multi-section flatness, parallelism, axial full runout, perpendicularity
  -Commutator module: monolithic bounce, immediate bounce, interval difference
- Analytical ability
  -Cylindricity function: 2-10 sections, 3 evaluation methods
  -Reference benchmarks for cylindricity evaluation: LSCY, MZCY, MICY, MCCY, OSCY
  -Reference circle for roundness evaluation: LSC, MZC, MIC, MCC
  -Measurement band: 1-15upr, 1-50upr, 1-150upr, 1-250upr, 1-500upr, 15-100upr, 15-500upr, 2-15upr, 1-1500upr, custom
  -Notched measurement

SPECIFICATION

Probe	**measuring range**	±500μm
	resolution	1:262144
	linear accuracy	0.1%
Ruby stylus	**size**	Ø2×10mm
	direction	two directions
	adjustable angle	±45°
X axis	**travel**	165mm
	excess range	25mm
	drive mode	motor
	moving speed	(0.1~50)mm/s
Z axis	**measuring range**	480mm
	straightness	0.3μm/100mm
	movement speed	(0.1~10)mm/s
	movement mode	motor
Detector	**acquisition device**	circular grating
	circumferential sampling points	14400
Granite stage		900×500mm
Rotary stage	**rotation accuracy**	(0.025+6H/10000)μm, H is the measuring height in mm
	rotation speed	6rpm
	max. measuring diameter	300mm
	max. workpiece diameter (rotation diameter)	450mm
Automatic adjustment stage	**workbench diameter**	280mm
	adjustment range of center	±3mm
	adjustment range of level	±1°
	weight capacity	30kg
Precision chuck	**external grip diameter**	Ø1~Ø81mm
	internal grip diameter	Ø31~Ø70mm
Air filter	**pressure range**	0~0.8MPa
	oil mist removal accuracy	0.01μm
	export oil mist concentration	0.5mg/m³
Dimension (L×W×H)		1680×862×1685mm
Power supply		220±10%V, 50Hz
Power		500W
Weight		350kg

To be continued

Continued from previous page


air filter (included)

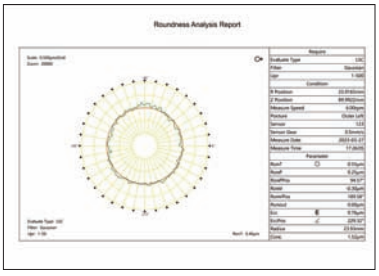

standard block (included)


column adjusting rod (included)

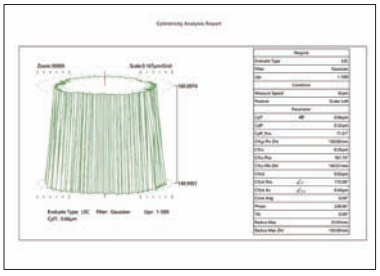

precision chuck (included)

STANDARD DELIVERY

Main unit	1 pc
Probe (with ruby stylus)	1 pc each
Standard block	1 pc
Column adjusting rod	1 set
Precision chuck	1 pc
Automatic adjustment stage	1 pc
Roundness cylindricity acquisition and analysis system	1 set
Air filter	1 set
Computer	1 pc
Printer	1 pc
Installation tools	1 set

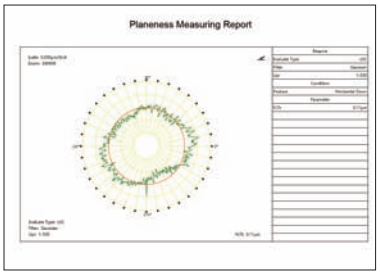


roundness analysis


cylindricity analysis



straightness analysis

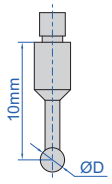


planeness analysis

OPTIONAL ACCESSORY

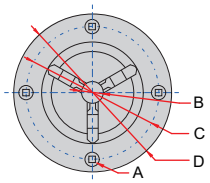
Probes	see below details
Precision chucks	see below details
Dryer	ISC-DRY

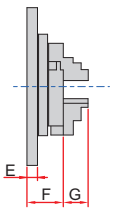
SPECIFICATION OF PROBES



Code	Diameter (ØD)	Remark
RCT-RA260-T1	2mm	included
RCT-RA260-T2	0.5mm	optional
RCT-RA260-T3	1mm	optional
RCT-RA260-T4	4mm	optional
RCT-RA260-T5	8mm	optional

SPECIFICATION OF PRECISION CHUCKS





(mm)

Code	A	B	C	D	E	F	G	Clamping range		Remark
								external grip dia.	internal grip dia.	
RCT-RA260-C1	M5×0.8	16	100	118	8	28	13	Ø0.8~63	Ø23~58	optional
RCT-RA260-C2	M6×1.0	20	116	143	10.5	37	15	Ø1~81	Ø31~70	included
RCT-RA260-C3	M6×1.0	26	140	168	10	39	19	Ø1~100	Ø36~90	optional

ROUNDNESS MEASURING MACHINE
CODE RCT-RA260



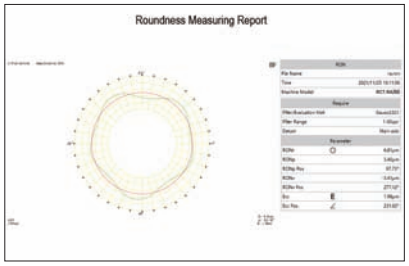
- Air-floating spindle
- Can measure roundness, coaxiality, concentricity, flatness, radial runout, axial runout, parallelism and perpendicularity
- Spectrum analysis, automatic gap/burr removal, waveform analysis
- 4 roundness evaluation methods: smallest area method, least square method, smallest circumscribed circle method, largest inscribed circle method
- Measuring filer: 1-15upr, 1-50upr, 1-150upr, 1-250upr, 1-500upr, 15-100upr, 15-500upr, 2-15upr
- Filter form: gauss (ISO standard)
- Software is included, for measurement, analysis, data output, etc.

SPECIFICATION

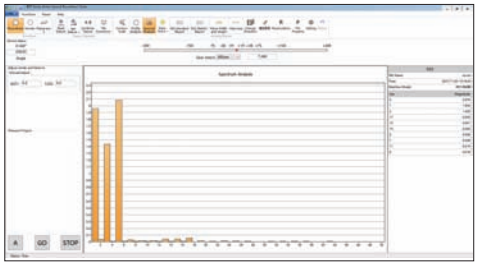
Probe	measuring range	±300μm
	resolution	0.001μm
	linear accuracy	0.25%
Ruby stylus	size	Ø2×10mm
	direction	two directions
	adjustable angle	±45°
X axis	travel	165mm
	excess range	25mm
	drive mode	by hand
Z axis	drive mode	motor
	travel	320mm
	movement speed	0.5~10mm/s
Rotary stage	rotation accuracy	(0.025+6H/10000)μm for H≤20mm, H is the measuring height in mm
	rotation speed	6rpm
	max. measuring diameter	260mm
	max. workpiece diameter (rotation diameter)	400mm
Rotary axis	radial rotation accuracy	±0.0125μm
	axial runout accuracy	±0.05μm
Adjustable 3D stage	diameter	180mm
	adjustment range of center	±3mm
	adjustment range of level	±2°
	weight capacity	20kg
Granite stage		700×500mm
Precision chuck	external grip diameter	Ø1~Ø81mm
	internal grip diameter	Ø31~Ø70mm
Air filter	pressure range	0~0.8MPa
	oil mist removal accuracy	0.01μm
	export oil mist concentration	0.5mg/m³
Dimension (L×W×H)		1300×795×1715mm
Power supply		220±10%V, 50Hz
Power		500W
Weight		320kg

To be continued

Continued from previous page



measurement


spectrum analysis

STANDARD DELIVERY

Main unit	1 pc
Probe (with ruby stylus)	1 pc each
Standard block	1 pc
Precision chuck	1 pc
Adjustable 3D stage	1 pc
Rotary stage	1 pc
Computer	1 pc
Software	1 set
Printer	1 pc
Air filter	1 set
Installation tools	1 set

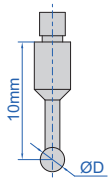

standard block (included)

OPTIONAL ACCESSORY

Probes	refer to details
Precision chucks	refer to details
Dryer	**ISC-DRY**

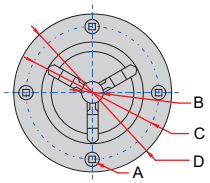
20

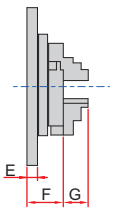
SPECIFICATION OF PROBES



Code	Diameter (ØD)	Remark
RCT-RA260-T1	2mm	included
RCT-RA260-T2	0.5mm	**optional**
RCT-RA260-T3	1mm	**optional**
RCT-RA260-T4	4mm	**optional**
RCT-RA260-T5	8mm	**optional**

SPECIFICATION OF PRECISION CHUCKS





(mm)

Code	A	B	C	D	E	F	G	Clamping range		Remark
								external grip dia.	internal grip dia.	
RCT-RA260-C1	M5×0.8	16	100	118	8	28	13	Ø0.8~63	Ø23~58	**optional**
RCT-RA260-C2	M6×1.0	20	116	143	10.5	37	15	Ø1~81	Ø31~70	included
RCT-RA260-C3	M6×1.0	26	140	168	10	39	19	Ø1~100	Ø36~90	**optional**

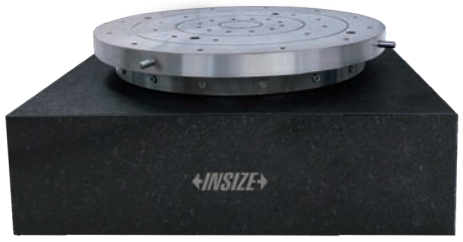
PRECISION AIR FLOATING ROTARY TABLES

CUSTOM-MADE
SUPPLY SPECIAL SIZES ACCORDING TO CUSTOMER'S REQUEST

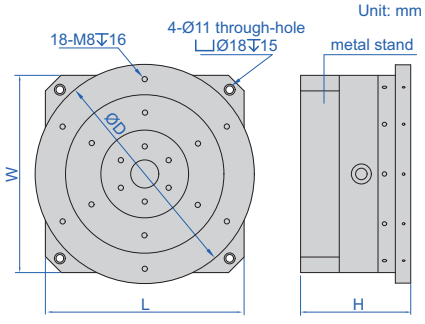
VIDEO



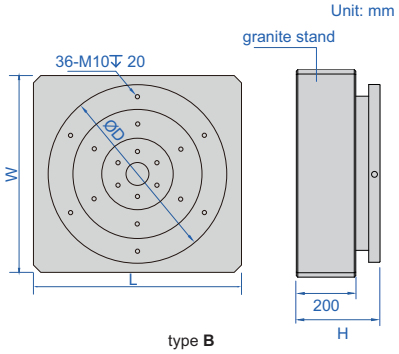
6875-320



6875-600



type **A**



type **B**

- Manual drive
- Floating by air pressure, the rotary table can rotate smoothly and be free from wear
- Air filter is included

(mm)

Code	Stage size ØD	Type	Max. load	Air supply pressure	Max. RPM	Rotation accuracy in radial/axial	L×W×H
6875-320	320mm	A	100kg	0.4-0.6Mpa	500RPM	<0.3μm	272×272×161
6875-400	400mm	A	100kg	0.4-0.6Mpa	500RPM	<0.3μm	272×272×161
6875-500	500mm	A	100kg	0.4-0.6Mpa	500RPM	<0.3μm	272×272×191
6875-600	600mm	B	500kg	0.4-0.6Mpa	500RPM	<0.3μm	700×700×262

Glass hemisphere for calibration (optional)

Code	Roundness
6875-BALL*	0.05μm

*To check the accuracy of rotary table



6875-BALL

Code	Remark
6875-STAND-□□□□	stand for type B, **optional***
6875-HOLDER-□□□□	indicator holder for type B, **optional***

*Custom-made according to requirements

Clamps for glass hemisphere (optional)

Code	Remark
6875-CLAMP	for type A
6875-CLAMP-B	for type B



6875-CLAMP

Software for runout measuring (optional)

Code
6875-SOFTWARE

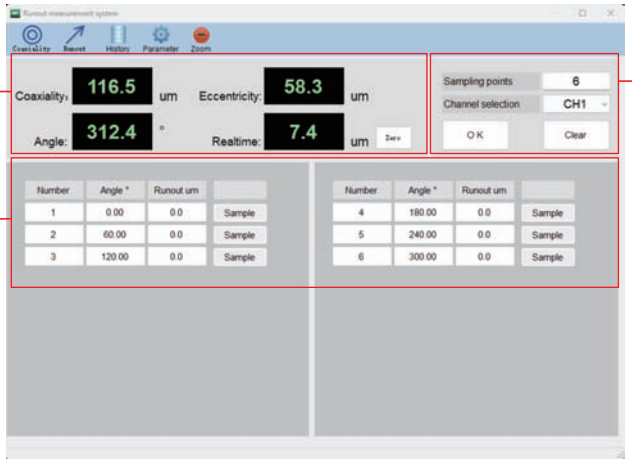
- Measuring the coaxiality and runout of shaft workpieces
- Measuring the runout at the blade tips
- Real-time measurement waveform diagram
- The measurement data is saved automatically, and can be checked at any time and exported to EXCEL



To be continued

Continued from previous page

6875-SOFTWARE (digital indicator code **2133** and data output cable code **7305-G60** are needed)



coaxiality measurement



shaft runout measurement



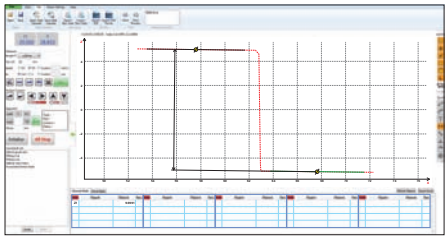
blade tips runout measurement

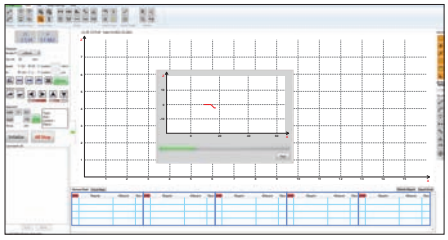
SURFACE PROFILE MEASURING MACHINE
CODE SPM-1000

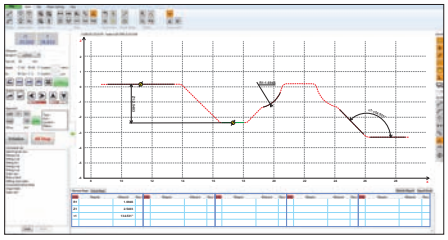
VIDEO

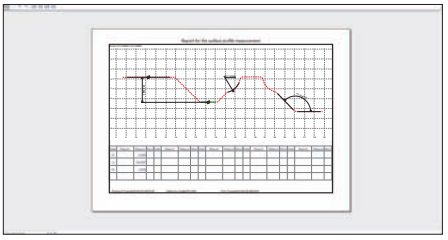
- Software is included, for surface profile measurement and data output
- Probe compensation
- Output as format txt, csv, etc.
- Large range design, the leverage ratio is 1:2.2, maintain the original accuracy of the sensor
- The overall structure of the Z-axis sensor does not have any elastic components, ensuring the measuring force is constant regardless the position of probe




calibration


contour scanning

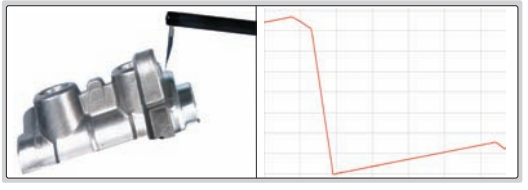

dimension measurement


data output

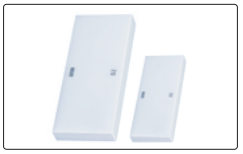
20

SPECIFICATION

X axis measuring range	140mm
X axis resolution	0.2μm
X axis straightness	0.8μm/100mm
X axis moving speed	0.1~10mm/s
Z axis measuring range	±20mm
Z axis resolution	0.05μm
Z axis moving speed	0.5~10mm/s
Linear accuracy	±(1.5+|0.2H|)μm, H is measuring height in mm
Angular measuring accuracy	±2′
Arc measuring accuracy	±(2+R/8)μm, R is 2~10mm standard ball
Radius of probe tip	25μm
Moving direction	backward
Measuring force	6.86~9.8mN
Measuring unit	mm/inch
Traceable angle	72° (upward), 87° (downward)
Drive mode	motor
Travel of Z axis	430mm
Dimension (L×W×H)	1200×700×1780mm
Power supply	220±5%V, 50Hz
Weight	320kg




standard balls (included)


standard blocks (included)

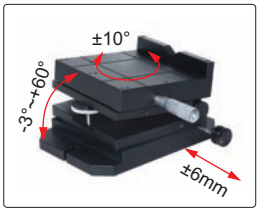

standard shaft (included)

To be continued

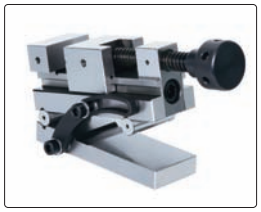
Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
Standard probe and arm	1 pc of each
Standard block	2 pcs
Standard ball	2 pcs
Standard shaft	1 pc
Stage	1 pc
Vise	1 pc
Measuring arm	1 pc
Computer	1 pc
Measurement software	1 pc
Printer	1 pc
Installation tools	1 set



stage (included)


vise (included)

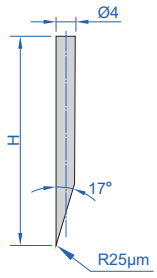
OPTIONAL ACCESSORY

Probe	refer to details

SPECIFICATION OF PROFILE PROBES

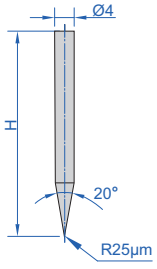
Unit: mm

chisel stylus



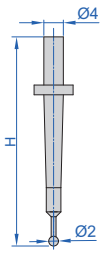
code **SPM-1000-T01** (H=32mm, included)
code **SPM-1000-T02** (H=48mm, **optional**)
code **SPM-1000-T03** (H=68mm, **optional**)

cone stylus



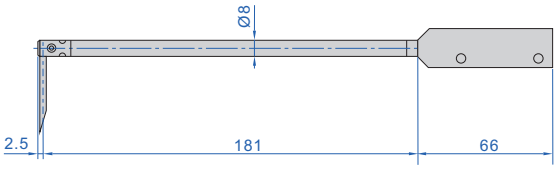
code **SPM-1000-Z01** (H=32mm, **optional**)
code **SPM-1000-Z02** (H=48mm, **optional**)
code **SPM-1000-Z03** (H=68mm, **optional**)

ball stylus

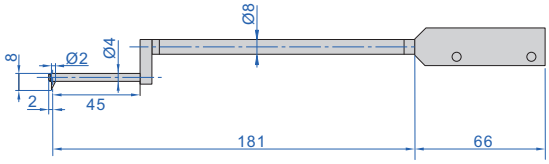


code **SPM-1000-R01** (H=32mm, **optional**)
code **SPM-1000-R02** (H=48mm, **optional**)
code **SPM-1000-R03** (H=68mm, **optional**)

standard arm, code SPM-1000-SP (included), stylus is not included

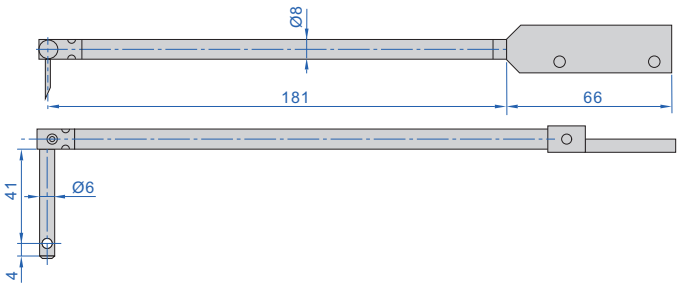


probe for small holes, code SPM-1000-SBP (optional), stylus is included



measure the contour of holes with diameter>Ø8mm

transverse probe, code SPM-1000-LP (optional), stylus is included

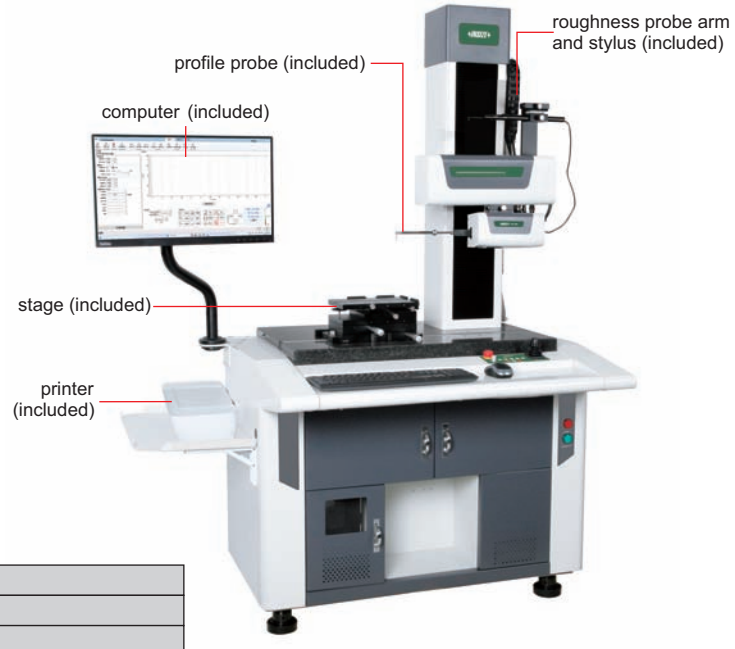


measure the contour of holes in radial direction

ROUGHNESS AND PROFILE MEASURING MACHINE (TWO PROBES TYPE) CODE SPM-2000

VIDEO

ATTENTION: PROFILE AND ROUGHNESS PROBES ARE USED SEPARATELY



- High precision grating sensor, large measuring range, strong stability
- Three point magnetic suction positioning module, switch measuring rod only need one second
- Wide range roughness sensor without skid
- Intelligent measurement analysis system, automatic programming measurement
- CAD profile comparison

PROFILE MEASUREMENT SPECIFICATION

X axis measuring range	150mm
X axis resolution	0.1μm
X axis traverse speed	(0.1~20)mm/s
Z axis measuring range	40mm
Z axis resolution	0.02μm
Z axis traverse speed	(0.5~30)mm/s
Straightness	0.5μm/100mm
Linear accuracy	±(0.6+|0.02H|)μm, H is measuring height in mm
Angular measuring accuracy	±1′
Arc measuring accuracy	±(1.5+R/12)μm, R is 2~10mm standard ball
Measuring unit	μm/μin
Measuring speed	(0.1~1)mm/s
Traceable angle	72° (upward), 88° (downward)
Travel of Z axis	420mm
Power supply	220±5%V, 50Hz
Dimension (L×W×H)	1329×930×1805mm
Weight	350kg

ROUGHNESS MEASUREMENT SPECIFICATION

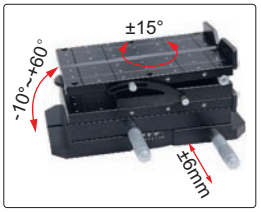
Roughness parameters	Ra, Ramax, Ramin, Rasd, Rp, Rpmax, Rpmin, Rpsd, Rv, Rvmax, Rvmin, Rvsd, Rz, Rzmax, Rzmin, Rzsd, R3z, Rc, Rcmax, Rcmin, Rcsd, Rt, Rq, Rqmax, Rqmin, Rdsd, Rsk, Rskmax, Rskmin, Rsksd, Rku, Rkumax, Rkumin, Rkusd, Rsm, Rsmmax, Rsmmin, Rsmsd, Rs, RΔa, RΔamax, RΔamin, RΔasd, RΔq, RΔqmax, RΔqmin, RΔqsd, RK, Rpk, Rvk, Mr1, Mr2, Rλa, Rλamax, Rλamin, Rλasd, Rλq, Rλqmax, Rλqmin, Rλqsd, Rδc, Rpc, Rmr
Waviness parameters	Wa, Wamax, Wamin, Wasd, Wsa, Wca, Wa08, Wc, Wcmax, Wcmin, Wcsd, Wt, Wz, Wzmax, Wzmin, Wzsd, Wp, Wpmax, Wpmin, Wpsd, Wv, Wvmax, Wvmin, Wcsd, Wq, Wqmax, Wqmin, Wqsd, Wsm, Wsmmax, Wsmmin, Wsmsd, Wsk, Wskmax, Wskmin, Wsksd, Wku, Wkumax, Wkumin, Wkusd, WΔq, WΔqmax, WΔqmin, WΔqsd, Wδc, Wmr
Original profile parameters	Pa, Pt, Pp, Pc, Pv, Pz, Pq, Psm, Psk, Pku, RzJ, Rpq, Rvq, Rmq, Pmr, PΔq, Avh, Hmax, Hmin, Area, Pδc, Tilta
Motif parameters	Ncrx, R, Rx, AR, Nr, Cpm, Sr, Sar, W, Wx, Aw, Wte, Nw, Sw, Saw
Measuring range	±420μm
Resolution	0.0001μm
Linear accuracy	≤±(8nm+3.5%)
Probe radius/angle	5μm/90°
Cut off	0.025/0.08/0.25/0.8/2.5/8mm
Measuring unit	μm
Measuring speed	(0.1~1)mm/s

To be continued

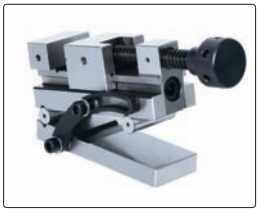
Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 set
Roughness probe arm	1 pc
Roughness stylus	1 pc
Profile probe arm	1 pc
Profile chisel stylus	1 pc
Stage	1 set
Vise	1 set
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set



stage (included)


vise (included)

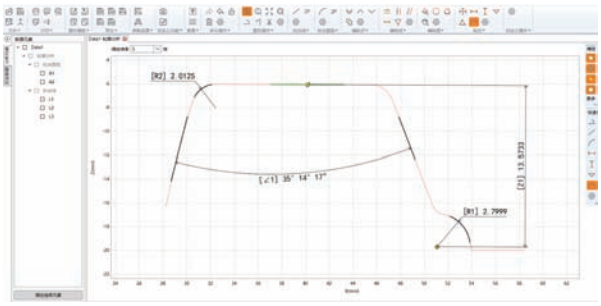

roughness standard block (included)

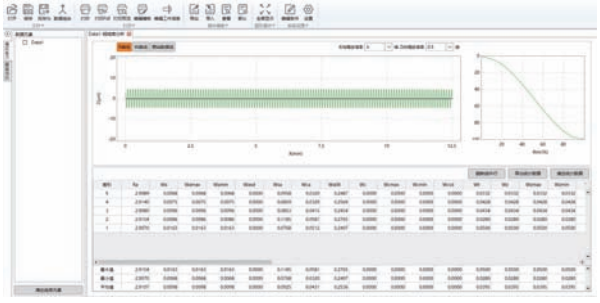

profile standard block (included)

OPTIONAL ACCESSORY

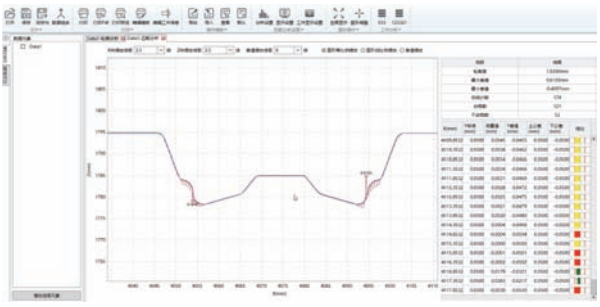
Probe	refer to details

SOFTWARE (included)


profile measurement


roughness measurement


automatic measurement

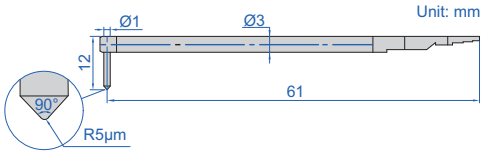

CAD profile comparison

To be continued

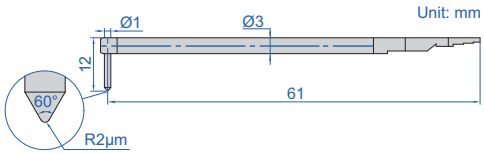
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SPECIFICATION OF ROUGHNESS PROBE

standard probe, code **SPM-2000-P** (included), stylus is included



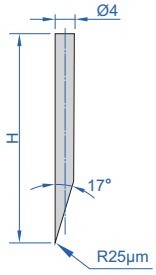
small roughness probe, code **SPM-2000-P1** (**optional**), stylus is included



SPECIFICATION OF PROFILE PROBES

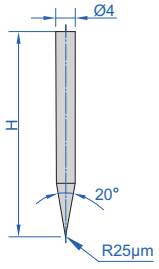
Unit: mm

chisel stylus



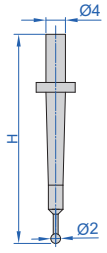
code **SPM-1000-T01** (H=32mm, included)
code **SPM-1000-T02** (H=48mm, **optional**)
code **SPM-1000-T03** (H=68mm, **optional**)

cone stylus



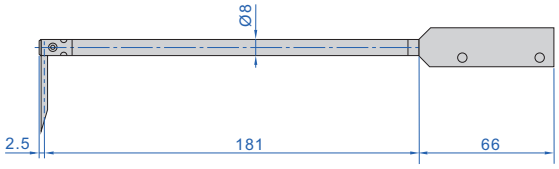
code **SPM-1000-Z01** (H=32mm, **optional**)
code **SPM-1000-Z02** (H=48mm, **optional**)
code **SPM-1000-Z03** (H=68mm, **optional**)

ball stylus

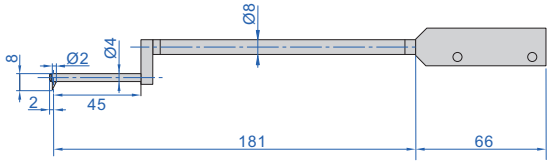


code **SPM-1000-R01** (H=32mm, **optional**)
code **SPM-1000-R02** (H=48mm, **optional**)
code **SPM-1000-R03** (H=68mm, **optional**)

standard arm, code **SPM-1000-SP** (included), stylus is not included

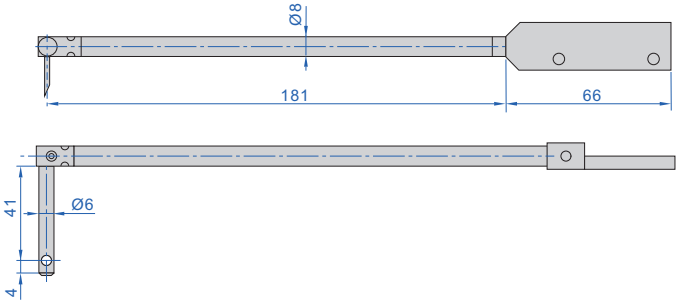


probe for small holes, code **SPM-1000-SBP** (**optional**), stylus is included



measure the contour of holes with diameter >Ø8mm

transverse probe, code **SPM-1000-LP** (**optional**), stylus is included



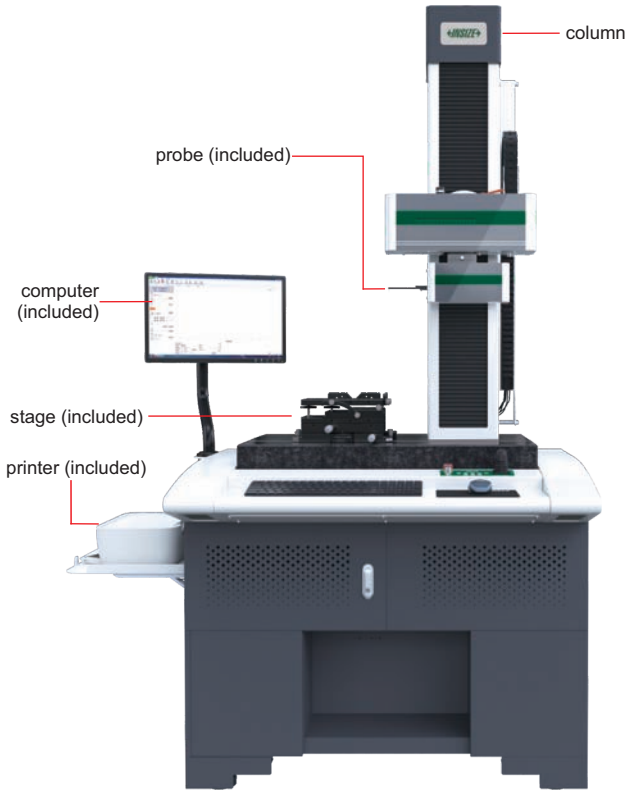
measure the contour of holes in radial direction

ROUGHNESS AND PROFILE MEASURING MACHINE (ONE PROBE TYPE)
CODE SPM-5000

VIDEO

PROFILE AND ROUGHNESS MEASUREMENT AT THE SAME TIME

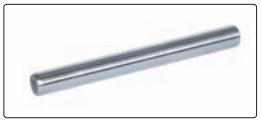
- Roughness, waviness, and profile analysis can be achieved with just one measurement
- Can measure all roughness and waviness parameters
- Can be used for automatic measurement system
- Air flotation and shockproof system to reduce measurement deviation
- Free to edit measurement reports

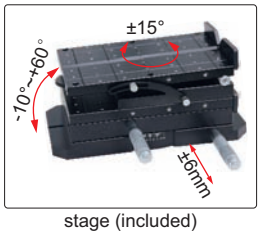


PROFILE MEASUREMENT SPECIFICATION

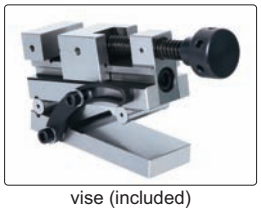
X axis measuring range	150mm
X axis resolution	0.0012μm
X axis traverse speed	(0.05~50)mm/s
X axis linear accuracy	±(0.8+|0.015L|)μm, L is measuring length in mm
Z axis measuring range	±10mm
Z axis resolution	0.0012μm
Z axis traverse speed	(0.2~40)mm/s
Z axis linear accuracy	±(0.5+|0.02H|)μm, H is measuring height in mm
Angular measuring accuracy	±1′
Arc measuring accuracy	±(1+R/12)μm, R is 2~10mm standard ball
Straightness	0.3μm/100mm
Measuring unit	mm/inch
Travel of Z axis	420mm
Power supply	220±10%V, 50Hz
Dimension (L×W×H)	1700×820×1900mm
Weight	500kg

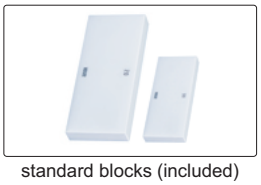

standard balls (included)


standard shaft (included)



stage (included)


vise (included)


standard blocks (included)

ROUGHNESS MEASUREMENT SPECIFICATION

Roughness parameters	Ra, Ramax, Ramin, Rasd, Rp, Rpmax, Rpmin, Rpsd, Rv, Rvmax, Rvmin, Rvsd, Rz, Rzmax, Rzmin, Rzsd, R3z, Rc, Rcmax, Rcmin, Rcsd, Rt, Rq, Rqmax, Rqmin, Rdsd, Rsk, Rskmax, Rskmin, Rsksd, Rku, Rkumax, Rkumin, Rkusd, Rsm, Rsmmax, Rsmmin, Rsmsd, Rs, RΔa, RΔamax, RΔamin, RΔasd, RΔq, RΔqmax, RΔqmin, RΔqsd, Rk, Rpk, Rvk, Mr1, Mr2, Rλa, Rλamax, Rλamin, Rλasd, Rλq, Rλqmax, Rλqmin, Rλqsd, Rδc, Rpc, Rmr
Waviness parameters	Wa, Wamax, Wamin, Wasd, Wsa, Wca, Wa08, Wc, Wcmax, Wcmin, Wcsd, Wt, Wz, Wzmax, Wzmin, Wzsd, Wp, Wpmax, Wpmin, Wpsd, Wv, Wvmax, Wvmin, Wvsd, Wq, Wqmax, Wqmin, Wqsd, Wsm, Wsmmax, Wsmmin, Wsmsd, Wsk, Wskmax, Wskmin, Wsksd, Wku, Wkumax, Wkumin, Wkusd, WΔq, WΔqmax, WΔqmin, WΔqsd, Wδc, Wmr
Original profile parameters	Pa, Pt, Pp, Pc, Pv, Pz, Pq, Psm, Psk, Pku, RzJ, Rpq, Rvq, Rmq, Pmr, PΔq, Avh, Hmax, Hmin, Area, Pδc, Tilta
Motif parameters	Ncrx, R, Rx, AR, Nr, Cpm, Sr, Sar, W, Wx, Aw, Wte, Nw, Sw, Saw
Measuring range	±10mm
Resolution	0.0012μm
Linear accuracy	≤±(6nm+2.5%)
Probe radius/angle	5μm/90°
Cut off	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	μm
Measuring speed	(0.1~2)mm/s

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit (including workbench, controller, driver, sensor)	1 pc
Calibration block	1 set
Probe arm	1 pc
Stylus	1 pc
Air flotation and shockproof system	1 set
Stage	1 set
Vise	1 set
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set

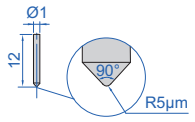
OPTIONAL ACCESSORY

Probe	refer to details

SPECIFICATION OF STANDARD PROBE

Unit: mm

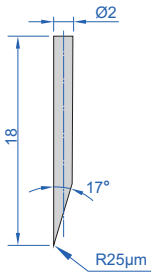
standard stylus , code SPM-5000-R1 (included)



SPECIFICATION OF PROFILE PROBES

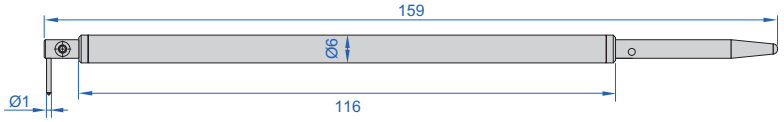
Unit: mm

chisel stylus

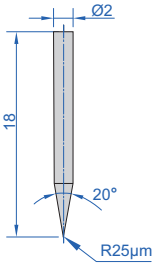


code **SPM-5000-T01** (**optional**)

standard arm, code SPM-5000-P1 (included), **stylus is not included**

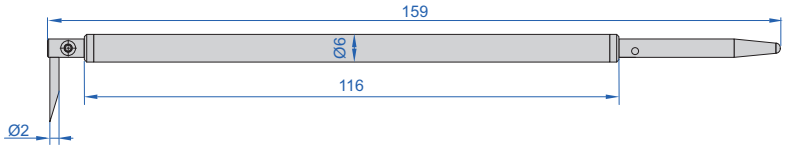


cone stylus

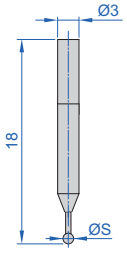


code **SPM-5000-Z01** (**optional**)

profile arm, code SPM-5000-P2 (**optional**), **stylus is not included**

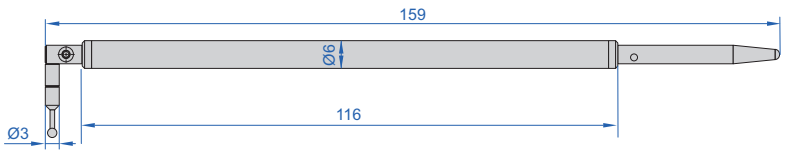


ball stylus



code **SPM-5000-S01** (ØS=1mm, **optional**)
code **SPM-5000-S02** (ØS=2mm, **optional**)

profile arm, code SPM-5000-P3 (**optional**), **stylus is not included**



BIDIRECTIONAL ROUGHNESS AND PROFILE MEASURING MACHINE
CODE SPM-6000

VIDEO

- Intelligent tracking control system, real-time scanning measurement
- Bidirectional probe measurement
- Constant measuring force
- Can be used to measure absolute diameters
- Real time variable speed measurement, high-speed measurement can also ensure accuracy
- The trajectory of the probe is vertical, with more realistic Z-axis coordinate point and large range
- The profile data point cloud spacing is consisten, enabling high accuracy measurement



PROFILE MEASUREMENT SPECIFICATION

X axis measuring range	325mm
X axis resolution	0.01μm
X axis traverse speed	5~10mm/s
X axis straightness	0.45μm/100mm
X axis linear accuracy	±(0.8+L/100)μm, L is measuring length in mm
X axis measuring speed	0.2~0.7mm/s
Z axis measuring range	325mm
Z axis resolution	0.01μm
Z axis traverse speed	5~10mm/s
Z axis straightness	0.45μm/100mm
Z axis linear accuracy	±(0.8+H/100)μm, H is measuring height in mm
Z axis measuring speed	0.2~0.7mm/s
Angular measuring accuracy	±2'
Arc measuring accuracy	±(0.8+R/15)μm
Measuring unit	mm/inch
Traceable angle	72° (upward), 89° (downward)
Power supply	220±5%V, 50Hz
Dimension (L×W×H)	1700×820×1900mm
Weight	500kg

ROUGHNESS MEASUREMENT SPECIFICATION

Roughness parameters	Ra, Ramax, Ramin, Rasd, Rp, Rpmax, Rpmin, Rpsd, Rv, Rvmax, Rvmin, Rvsd, Rz, Rzmax, Rzmin, Rzsd, R3z, Rc, Rcmax, Rcmin, Rcsd, Rt, Rq, Rqmax, Rqmin, Rdsd, Rsk, Rskmax, Rskmin, Rsksd, Rku, Rkumax, Rkumin, Rkusd, Rsm, Rsmmax,Rsmmin, Rsmsd, Rs, RΔa, RΔamax, RΔamin, RΔasd, RΔq, RΔqmax, RΔqmin, RΔqsd, Rk, Rpk, Rvk, Mr1, Mr2, Rλa,Rλamax, Rλamin, Rλasd, Rλq, Rλqmax, Rλqmin, Rλqsd, Rδc, Rpc, Rmr
Waviness parameters	Wa, Wamax, Wamin, Wasd, Wsa, Wca, Wa08, Wc, Wcmax, Wcmin, Wcsd, Wt, Wz, Wzmax, Wzmin, Wzsd, Wp, Wpmax, Wv, Wvmax, Wvmin, Wvsd, Wq, Wqmax, Wqmin, Wqsd, Wsm, Wsmmax, Wsmmin, Wsmsd, Wsk, Wskmax, Wskmin, Wsksd, Wku, Wkumax, Wkumin, Wkusd, WΔq, WΔqmax, WΔqmin, WΔqsd, Wδc, Wmr, Wpsd, Wpmin
Original profile parameters	Pa, Pt, Pp, Pc, Pv, Pz, Pq, Psm, Psk, Pku, RzJ, Rpq, Rvq, Rmq, Pmr, PΔq, Avh, Hmax, Hmin, Area, Pδc, Tilta
Motif parameters	Ncrx, R, Rx, AR, Nr, Cpm, Sr, Sar, W, Wx, Aw, Wte, Nw, Sw, Saw
Resolution	0.01μm
Linear accuracy	≤±(20nm+5%)
Probe radius/angle	5μm/90°
Cut off	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	μm
Measuring speed	0.1~2mm/s

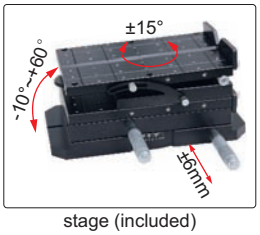
To be continued

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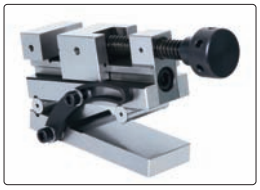
STANDARD DELIVERY

Main unit (including workbench, controller, driver, sensor)	1 set
Calibration block	1 set
Profile arm	1 pc
Bidirectional profile stylus	1 pc
Roughness arm	1 pc
Unidirectional roughness stylus	1 pc
Stage	1 pc
Vise	1 pc
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set


calibration blocks (included)

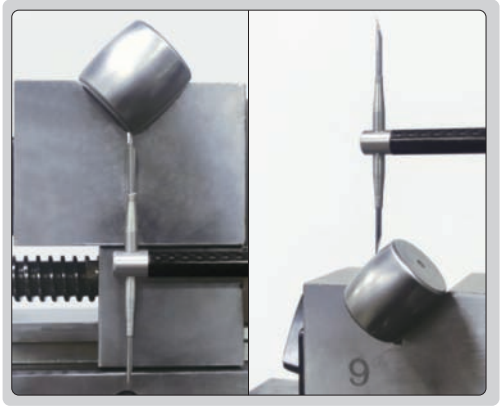


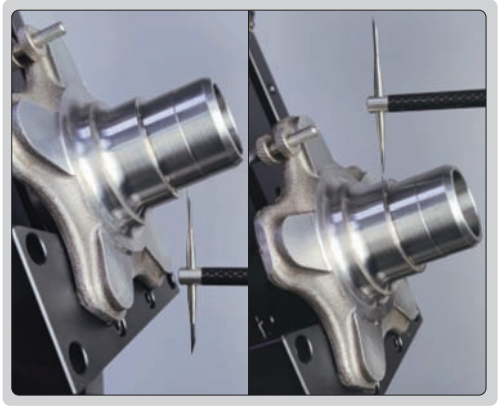
stage (included)

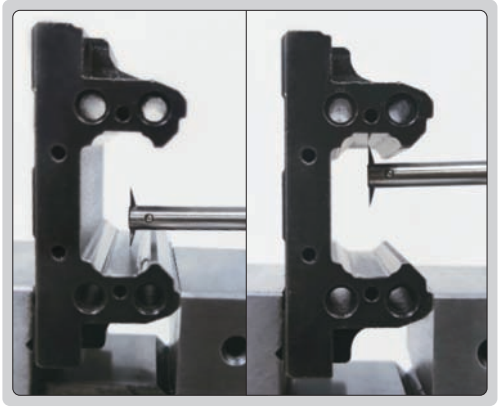

vise (included)

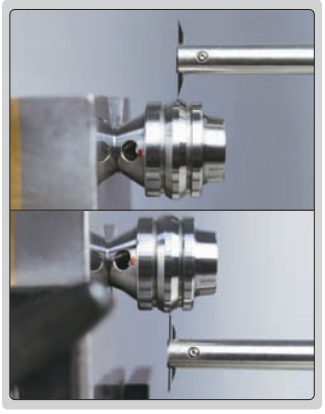

standard shaft (included)

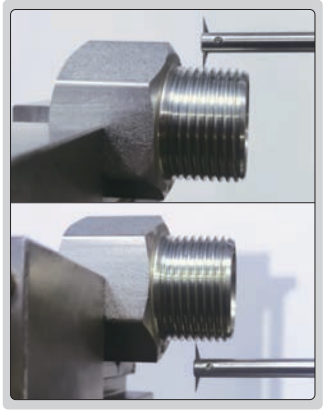
APPLICATION EXAMPLES


roller bearing


hub bearing


slider


valve spool


thread

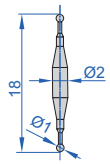
To be continued

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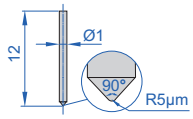
SPECIFICATION OF PROBES

Unit: mm

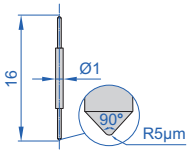
bidirectional spherical stylus
code **SPM-6000-R01 (optional)**



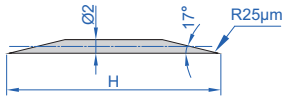
unidirectional roughness stylus
code **SPM-6000-S01** (included)



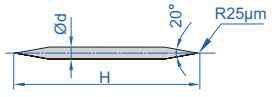
bidirectional roughness stylus
code **SPM-6000-S02 (optional)**



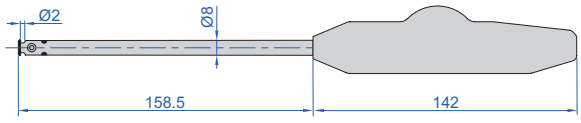
bidirectional chisel stylus
code **SPM-6000-T01** (H=16mm, included)
code **SPM-6000-T02** (H=24mm, **optional**)
code **SPM-6000-T03** (H=30mm, **optional**)



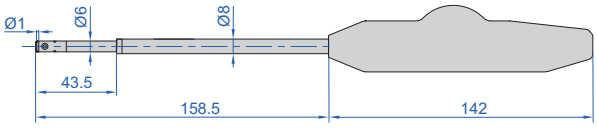
bidirectional cone stylus
code **SPM-6000-Z01** (H=12mm, Ød=2mm, **optional**)
code **SPM-6000-Z02** (H=24mm, Ød=2mm, **optional**)
code **SPM-6000-Z03** (H=10mm, Ød=1mm, **optional**)



profile arm,
code **SPM-6000-ARM1**
(included)



roughness arm,
code **SPM-6000-ARM2**
(included)

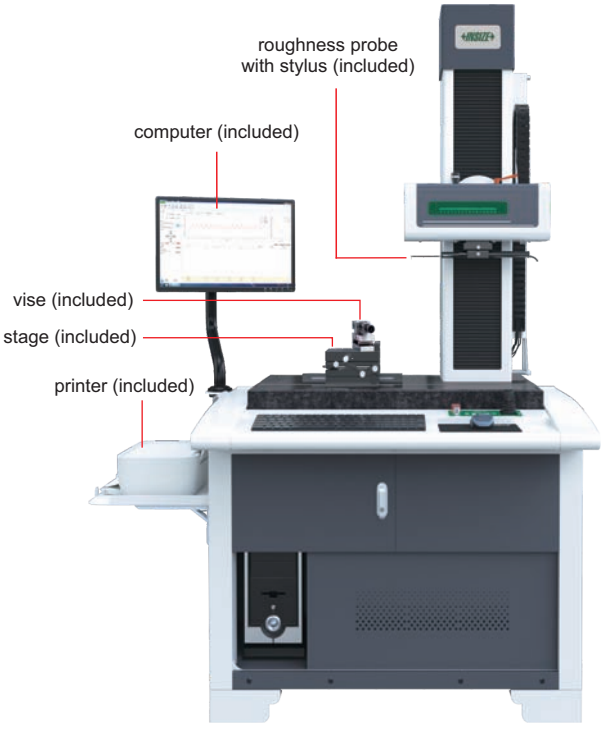


VIDEO

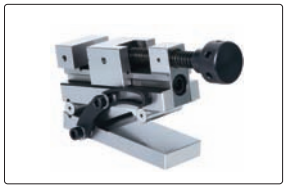
ROUGHNESS MEASURING MACHINE CODE SPM-4000

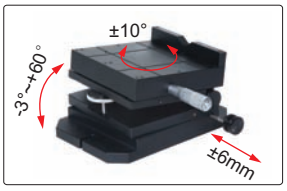
20

- Skidless probe
- Hundreds of parameters can be evaluated, such as roughness profile, waviness profile, primary profile, etc.
- Software is included, for measurement and data output




calibration block (included)


vise (included)



stage (included)

STANDARD DELIVERY

Main unit	1 pc
Roughness probe (with stylus)	1 pc each
Calibration block	1 pc
Stage	1 pc
Vise	1 pc
Computer	1 pc
Software	1 set
Printer	1 pc
Installation tools	1 set

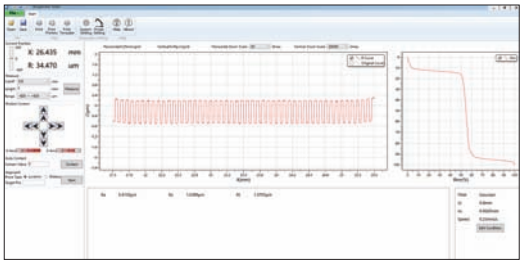
To be continued

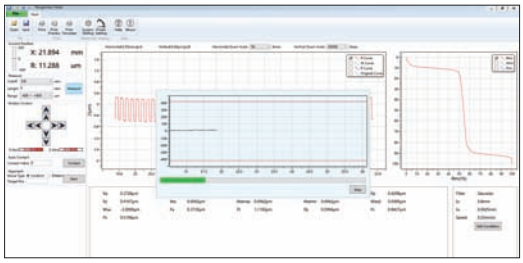
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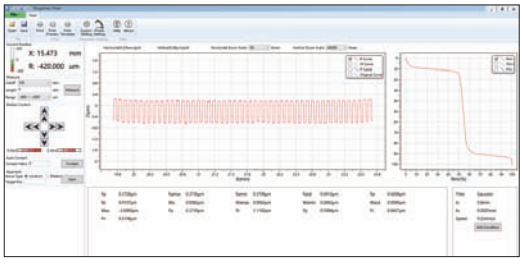
SPECIFICATION

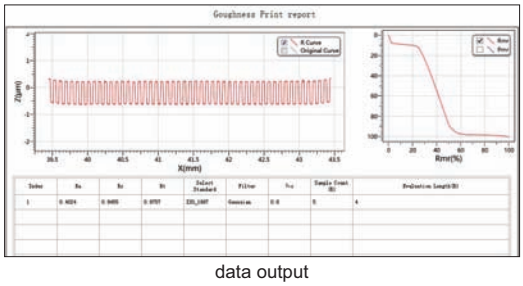
Roughness parameters	Ra, Ramax, Ramin, Rasd, Rp, Rpmax, Rpmin, Rpsd, Rv, Rvmax, Rvmin, Rxsd, Rz, Rzmax, Rzmin, Rzsd, R3z, Rc, Rcmax, Rcmin, Rcsd, Rt, Rq, Rqmax, Rqmin, Rdsd, Rsk, Rskmax, Rskmin, Rsksd, Rku, Rkumax, Rkumin, Rkusd, Rsm, Rsmmax, Rsmmin, Rsmsd, Rs ,RΔa, RΔamax , RΔamin, RΔasd, RΔq, RΔqmax, RΔqmin, RΔqsd, Rk, Rpk, Rvk, Mr1, Mr2, Rλa, Rλamax, Rλamin, Rλasd, Rλq, Rλqmax, Rλqmin, Rλqsd, Rδc, Rpc, Rmrr
Waviness parameters	Wa, Wamax, Wamin, Wasd, Wsa, Wca, Wa08, Wc, Wcmax, Wcmin, Wcsd, Wt, Wz, Wzmax, Wzmin, Wzsd, Wp, Wpmax, Wpmin, Wpsd, Wv, Wvmax, Wvmin, Wvsd, Wq, Wqmax, Wqmin, Wqsd, Wsm, Wsmmax, Wsmmin, Wsmsd,Wsk, Wskmax, Wskmin, Wsksd, Wku, Wkumax, Wkumin, Wkusd, WΔq, WΔqmax, WΔqmin, WΔqsd, Wδc, Wmr
Primary profile parameters	Pa, Pt, Pp, Pc, Pv, Pz, Pq, Psm, Psk, Pku, RzJ, Rpq, Rvq, Rmq, Pmr, PΔq, Avh, Hmax, Hmin, Area, Pδc, Tilta
Motif parameter	Ncrx, R, Rx, AR, Nr, Cpm, Sr, Sar, W, Wx, Aw, Wte, Nw, Sw, Saw
X axis measuring range	120mm
X axis resolution	0.1μm
X axis straightness	0.5μm/100mm
X axis traverse speed	(0.1~10)mm/s
Z axis measuring range	±420μm
Z axis resolution	1: 65536
Z axis linear accuracy	≤±(10nm+3.5%)
Z axis traverse speed	(0.5~20)mm/s
Z axis repeatability	1δ≤2nm
Radius/angle of stylus	5μm/90°
Cut off length	0.025/0.08/0.25/0.8/2.5/8mm
Number of cut-offs	2~7
Measuring unit	μm
Drive mode	motor
Travel of Z axis	420mm
Dimension (L×W×H)	1200×700×1780mm
Power supply	220V±10%, 50Hz
Weight	320kg

SOFTWARE (included)


calibration


measurement


parameter measurement



data output

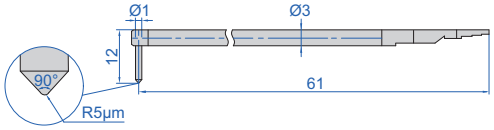
OPTIONAL ACCESSORY

Small roughness probe	refer to details

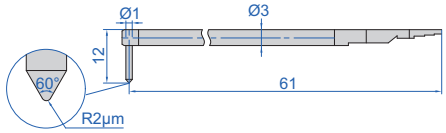
SPECIFICATION OF ROUGHNESS PROBE

Unit: mm

standard probe, code SPM-4000-P (included)



small roughness probe, code SPM-4000-P1 (optional)



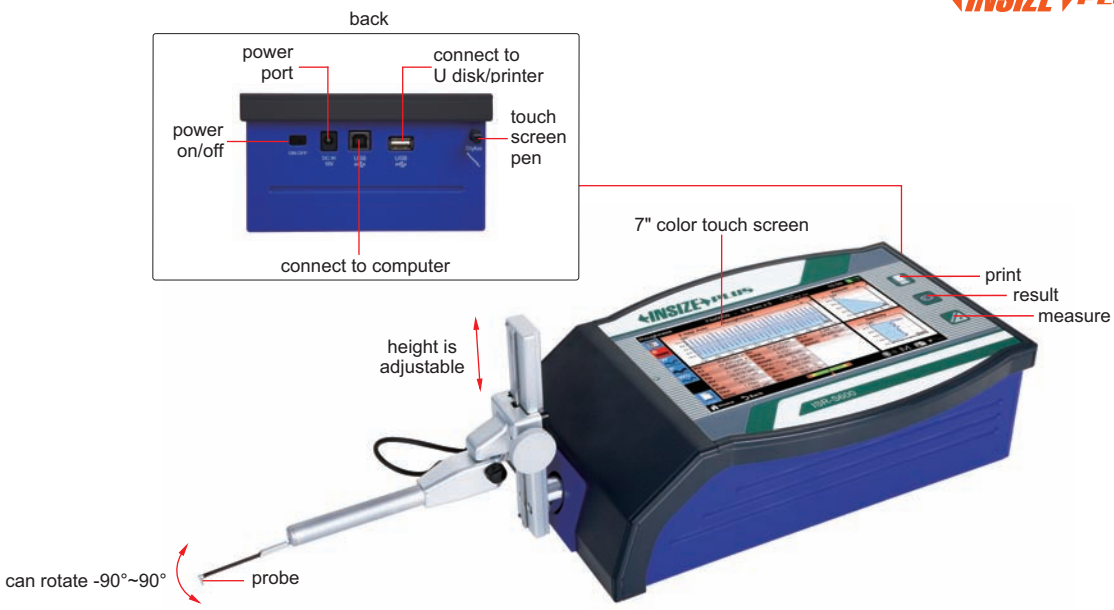
CAN MEASURE WAVINESS AND CURVED SURFACE WITH RADIUS>5mm

PROBES WITHOUT SKID

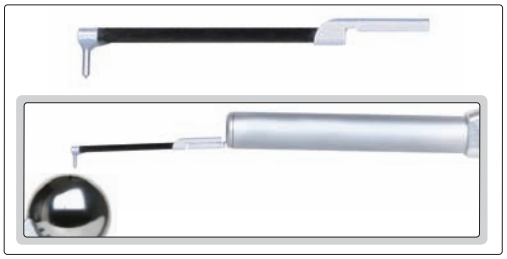
VIDEO

SURFACE ROUGHNESS AND PROFILE TESTER
CODE ISR-S600

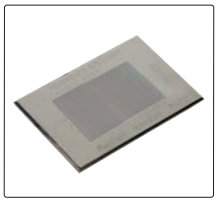
INSIZE PLUS



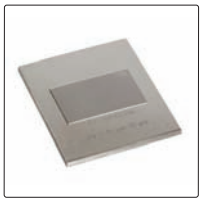
- 75 roughness parameters according to ISO-4287, ISO-13565, DIN-4768, VDA-2007, JIS-B0671, JIS-B0601, ASME-B46.1, ISO-12085, JIS-B0631
- Automatic probe leveling
- Can measure grit and shot blasting
- Traverse length up to 59mm
- Color touch screen, display roughness values, profile and curves
- Allow to connect U disk to save measurement results in Excel, PDF, DXF and image
- Connect ordinary printer or bluetooth printer to print measurement results and graphic curves
- Memory of maximum 4000 in roughness or 1000 in profile
- Can set tolerance



standard roughness probe (included), for measuring plane and curved surfaces



roughness calibration block Ra0.1μm (included)



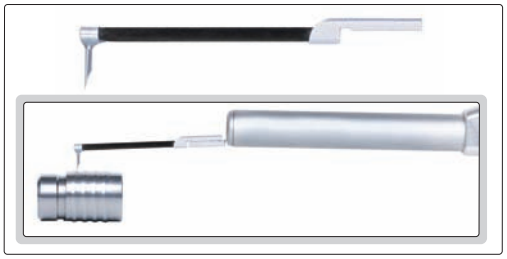
roughness calibration block Ra2.97μm (included)



profile calibration (**optional**)



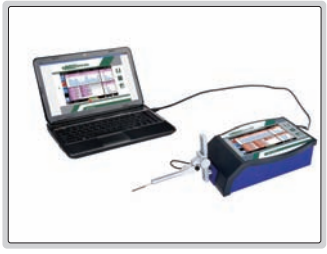
bluetooth printer (**optional**)



standard profile probe (included), for measuring profile and dimension



connect the printer with USB cable, print the measurement results



measuring software (**optional**), can control the roughness and profile tester



test stand (**optional**)



heavy duty test stand (**optional**)

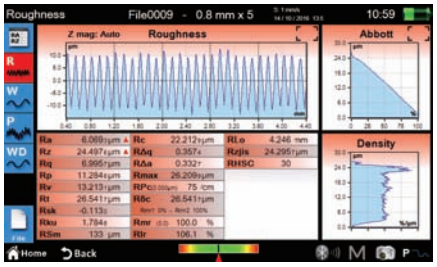
To be continued

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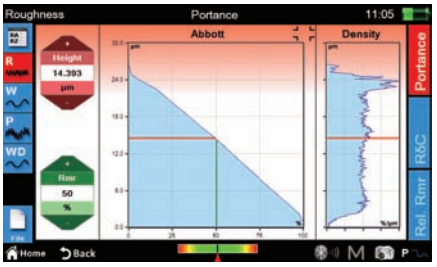
roughness



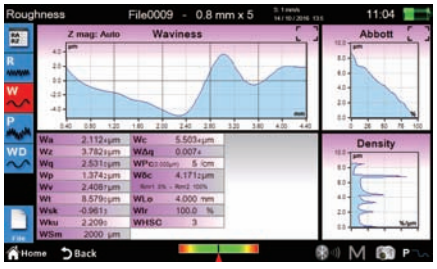
all results



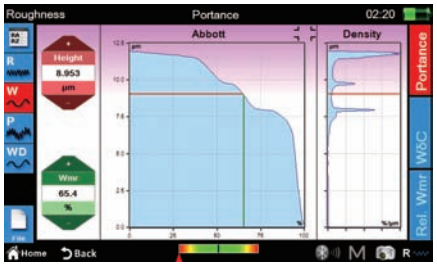
R results



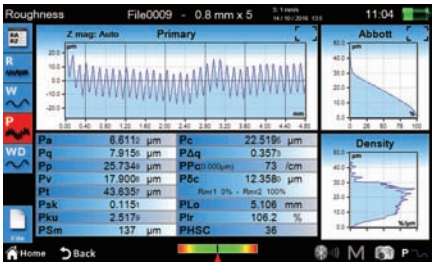
Rel. Rmr, Rδc analysis



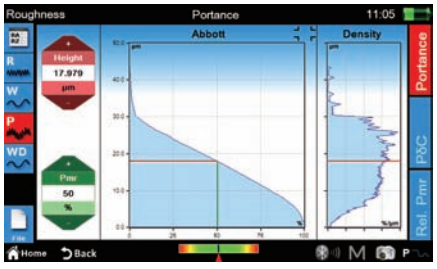
W results



Rel. Wmr, Wδc analysis



P results

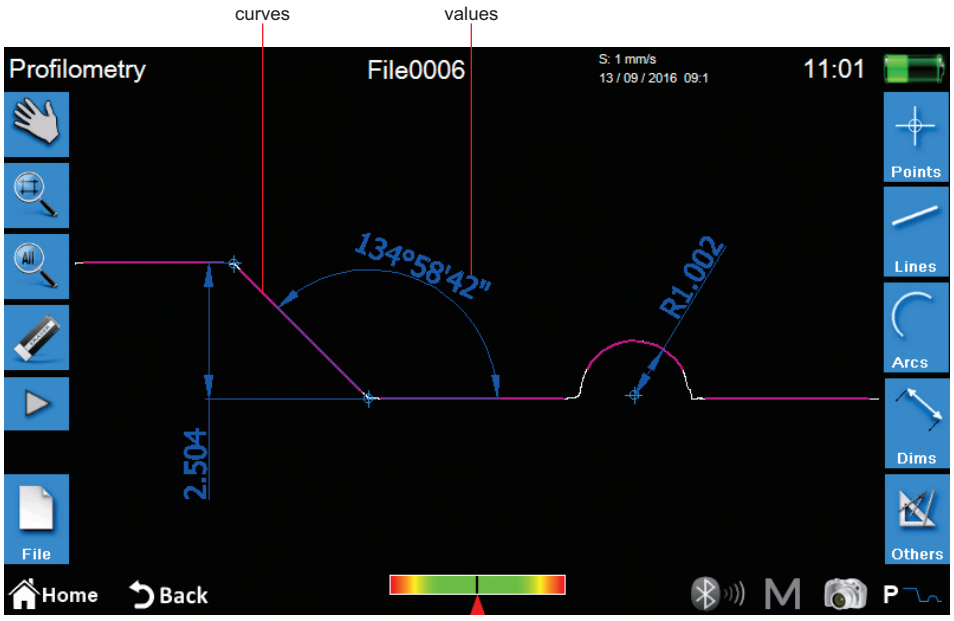


Rel. Pmr, Pδc analysis



Wdt, WDc, WDSm results

profile



To be continued

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ROUGHNESS MEASUREMENT SPECIFICATION

Parameters		Ra, Rz, Rq, Rp, Rv, Rt, Rsk, Rku, Rsm, Rc, RΔq, RΔa, Rmax, RPc, Rδc, Rmr, Rlr, RLo, Rzjis, RHSC, Rk, Rpk, Rvk, Pa, Pq, Pp, Pv, Pt, Pc,Psk, Pku, PSm, PΔq, Pδc, PPc, PLo, Plr, PHSC, Wa, Wz, Wq, Wp, Wv, Wt, Wsk, Wku, Wsm, Wc, WΔq, WPc, Wδc, WPc, WLo, Wlr, Wdt, WHSC, WDc, WDSm, Mr1, Mr2, A1, A2, R, AR, Rx, W, Aw, Wx, Wte, Rke, Rpke, Rvke, A1e, A2e, Mr1e, Mr2e
Range		1500μm
Resolution (Ra)		0.0001μm
Probe	**type**	inductive
	stylus radius/angle	2μm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		μin/μm
Cut off		0.08/0.25/0.8/2.5/8mm
Number of cut-offs		1-20 (cut off 0.08/0.25/0.8/2.5mm) 1-6 (cut off 8mm)
Measuring speed		0.25mm/s, 0.5mm/s or 1mm/s

PROFILE MEASUREMENT SPECIFICATION

X axis measuring range	59mm
X axis resolution	1μm
X axis measuring accuracy	±(3.5+L/10)μm, L is measuring length in mm
Z axis measuring range	3mm
Z axis resolution	1μm
Z axis measuring accuracy	±(4+H)μm, H is measuring height in mm
Traverse speed	10mm/s
Probe radius	20μm
Measuring force	4mN
Traceable angle	80° (upward), 70° (downward)
Measuring unit	μm/μin
Measuring speed	0.25mm/s, 0.5mm/s or 1mm/s
Output	USB, bluetooth
Power	built-in rechargeable battery
Dimension (L×W×H)	320×210×80mm
Weight	2.2kg

STANDARD DELIVERY

Main unit	1 pc
Roughness standard probe	1 pc
Profile standard probe	1 pc
Roughness calibration block (Ra0.1μm and Ra2.97μm)	2 pcs
Power adapter	1 pc

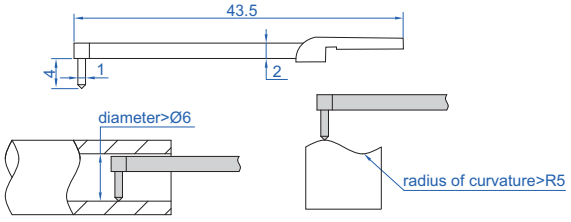
OPTIONAL ACCESSORY

Profile calibration block	**ISR-S600-CLB**
USB cable and software	**ISR-S600-REMOTE**
Bluetooth printer	**ISR-S600-PRINTER**
Heavy duty test stand	**ISR-S600-STAND**
Test stand	**ISR-S1000B-STAND**
Probe	see details

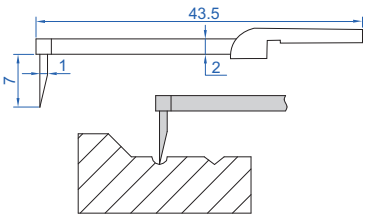
specification of probes

Unit: mm

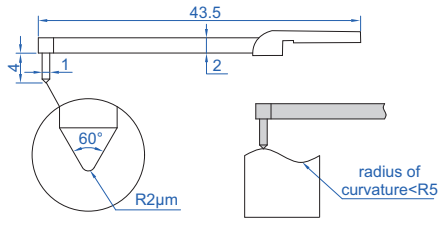
standard roughness probe (included), code **ISR-S600-P1A**



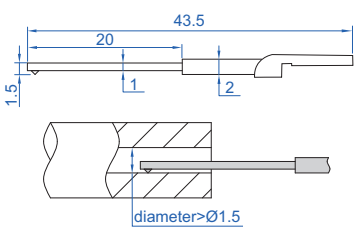
standard profile probe (included), code **ISR-S600-P2A**



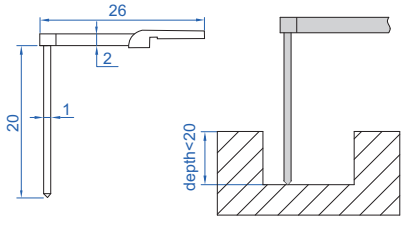
roughness 2μm/60° probe (**optional**), code **ISR-S600-P3A**



roughness small hole probe (**optional**), code **ISR-S600-P4A**



roughness deep groove probe (**optional**), code **ISR-S600-P5A**



ROUGHNESS TESTER (COMPACT TYPE)
CODE ISR-C200

INSIZE PLUS

BLUETOOTH | DATA OUTPUT | PROBE CAN BE CHANGED

VIDEO



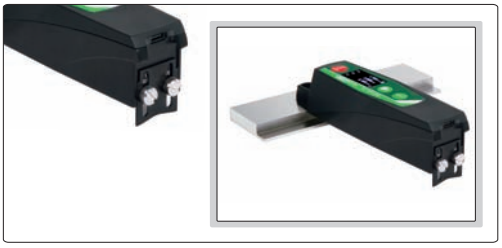
- The product is light, reliable and durable
- 13 roughness parameters
- Can be operated by mobile phones (only Android system) or computers
- Measurement results can be exported in Excel and PDF format
- Memory of 18000 measurements with only parameters or 30 measurements with graph
- Automatic power off



probe can be set at 90°,
for transverse measurement



probe cover (included)



adjustable stand (included)

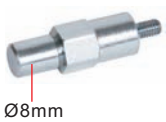


measuring software (included), connect to mobile phones via bluetooth (only Android system) to control roughness tester, or connect to computers via USB cable or bluetooth to control roughness tester, display roughness values and curve, results can be exported in Excel and PDF format

To be continued

Continued from previous page

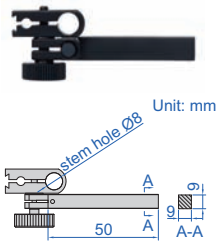
magnetic stand adapter (included)





can be installed on magnetic stands

dial test indicator holder (**optional**)





can be installed on height gauges

SPECIFICATION

Parameters		Ra, Rq, Rt, Rz, Rc, Rmax, RSm, Rpc, Pt, R, AR, Rx, Ppc
Range	**X axis**	17.5mm
	Z axis	250μm
Accuracy		±(5%+0.025)μm
Resolution (Ra)		0.001μm
Probe	**type**	inductive
	stylus radius/angle	2μm/90°
	stylus material	diamond
Measuring unit		μm/μin
Cut off		0.25/0.8/2.5mm
Number of cut-off		1~5
Moving speed		0.5mm/s, 1mm/s
Memory		18000 measurements with only parameters, 30 measurements with graph
Power supply		built-in rechargeable battery
Dimension (L×W×H)		160×34×33.5mm
Weight		200g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block	1 pc
Adjustable stand	1 pc
Probe cover	1 pc
Magnetic stand adapter	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

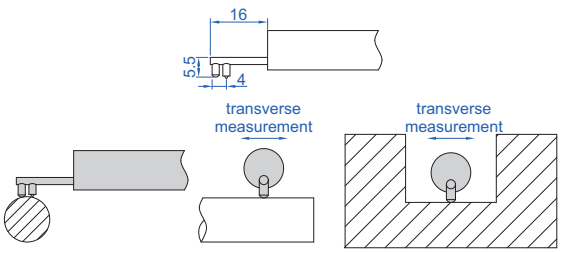
OPTIONAL ACCESSORY

Dial test indicator holder	**6293-6**
Groove probe	**ISR-C200-SB21**
Small hole probe	**ISR-C200-SB31**
Deep groove probe	**ISR-C200-SB121**
Extension rod	**ISR-C200-ER50**
Extension rod	**ISR-C200-ER100**

specification of probes

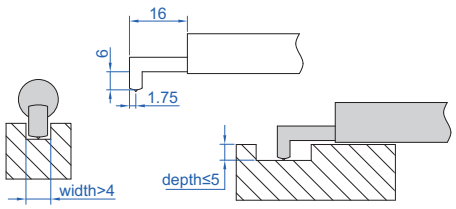
Unit: mm

standard probe (included)



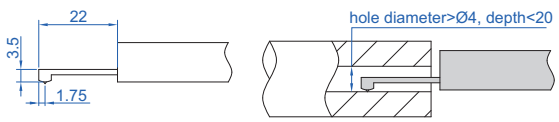
measurement for plane surfaces, also transverse measurement for plane surfaces, cylinders and grooves

groove probe (**optional**), code **ISR-C200-SB21**



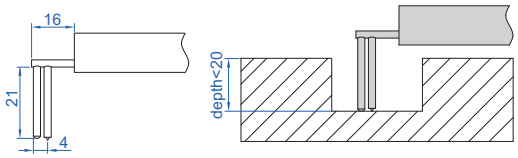
measure plane surfaces and grooves

small hole probe (**optional**), code **ISR-C200-SB31**



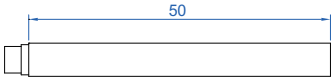
measure holes with diameter>Ø4mm and depth<20mm

deep groove probe (**optional**), code **ISR-C200-SB121**



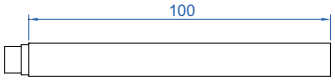
measure grooves with depth<20mm

extension rod (**optional**), code **ISR-C200-ER50**



for long holes

extension rod (**optional**), code **ISR-C200-ER100**



for long holes

ROUGHNESS TESTER
CODE ISR-C002

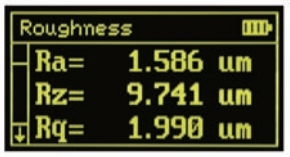
BLUETOOTH | DATA OUTPUT | CAN BE OPERATED BY MOBILE PHONES OR COMPUTERS

VIDEO

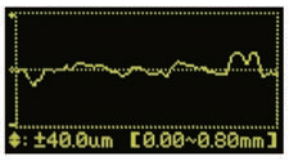


- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 21 roughness parameters
- Display roughness value, profile and curve
- Memory of maximum 100 results
- Automatic power off

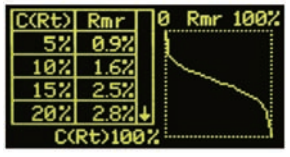
screen display



measurement result



roughness profile



Rmr analysis

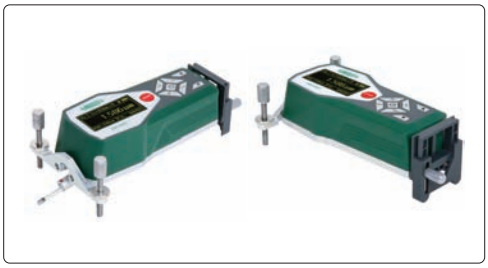
probe cover (included)



put the small workpieces directly under the probe for measurement



adjustable stand (included)



operate roughness tester by mobile phones



connect to mobile phones via bluetooth (only Android system), display roughness values, profile and curve

operate roughness tester by computers



connect to computers via USB cable (software is included), display roughness values, profile and curve

data can be sent to Excel by connecting to computer via bluetooth or SPC cable

via bluetooth

receiver (**optional**)



via SPC cable

SPC cable (**optional**)



receiver (**optional**)





software flash disk (included)



bluetooth printer (**optional**)



To be continued

Continued from previous page

light duty test stand (**optional**)



the maximum workpiece height is 220mm

heavy duty test stand (**optional**)

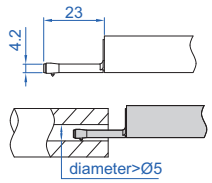


the maximum workpiece height is 310mm

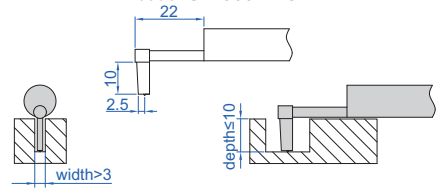
optional probes

Unit: mm

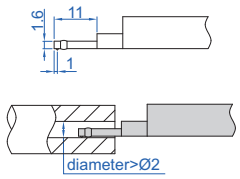
standard probe, 5μm/90° (included), code **ISR-C002-PROBE**



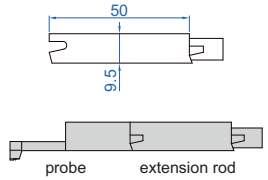
deep groove probe, 5μm/90° (**optional**), code **ISR-C002-DGP**



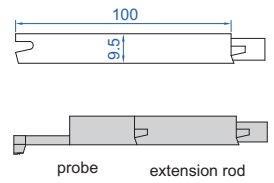
tiny hole probe, 5μm/90° (**optional**), code **ISR-C002-SBP**



extension rod (**optional**), code **ISR-C002-ER**



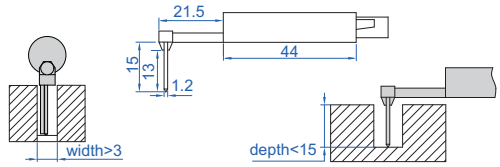
extension rod (**optional**), code **ISR-C002-ER100**



transverse rod (**optional**), code **ISR-C002-TR**



deep groove probe, 5μm/90° (**optional**), code **ISR-C002-DGP1**



need to be delivered with roughness tester **ISR-C002**, recommended for use above Ra0.1μm

SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, RS, R3z, R3y, Rt, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry (JIS), Rmax
Range		320μm (-160μm~160μm)
Accuracy		±10%
Resolution (Ra)		0.001μm
Standard probe (ISR-C002-PROBE)	**type**	inductive
	stylus radius/angle	5μm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		μm/μin
Cut off		0.25/0.8/2.5mm
Number of cut-off		1 to 5
Moving speed		0.5mm/s, 1mm/s
Memory		100 measurement results
Output		bluetooth and USB
Power supply		built-in rechargeable battery
Dimension (L×W×H)		141×55×40mm
Weight		400g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Adjustable stand	1 pc
Probe cover	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Tiny hole probe	**ISR-C002-SBP**
Deep groove probe	**ISR-C002-DGP**
Deep groove probe	**ISR-C002-DGP1**
Extension rod	**ISR-C002-ER**
Extension rod	**ISR-C002-ER100**
Transverse rod	**ISR-C002-TR**
Light duty test stand	**ISR-C002-STAND1**
Heavy duty test stand	**ISR-C002-STAND**
Bluetooth printer	**ISR-C002-PRINTER**
Receiver	**ISR-C300-RECEIVER**
SPC cable	**ISR-C300-SPC**

ROUGHNESS TESTERS (SEPARABLE TYPE)

BLUETOOTH | TOUCH SCREEN | CAN BE OPERATED BY COMPUTERS OR MOBILE PHONES

VIDEO

POPULAR MODEL

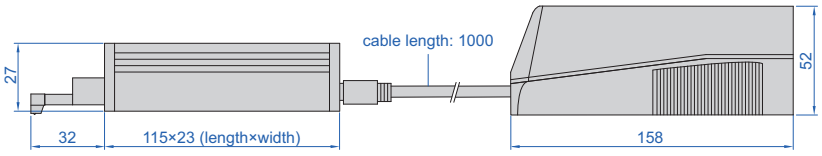
DATA OUTPUT



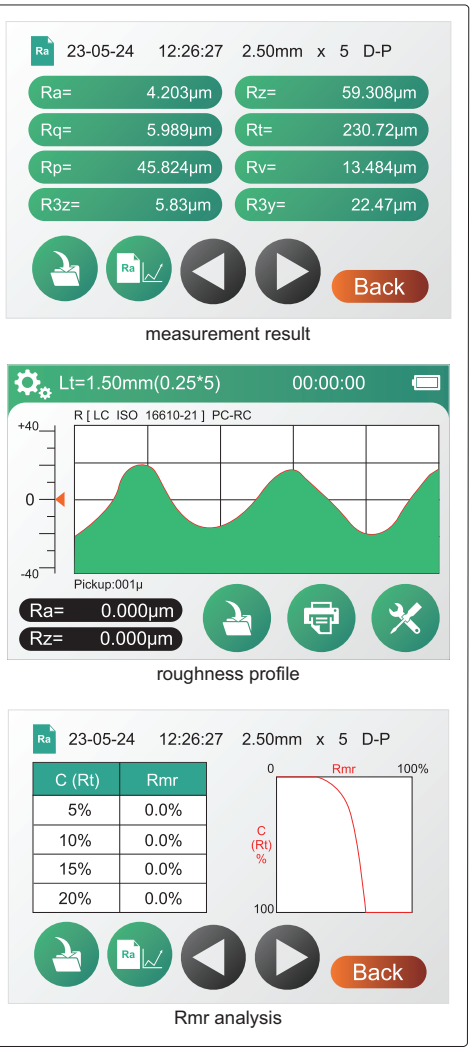
ISR-C300

- Roughness tester can be operated by mobile phones or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Touch screen
- Automatic power off

Unit: mm



roughness tester screen display





probe and main unit
can be combined together

operate roughness tester by mobile phones

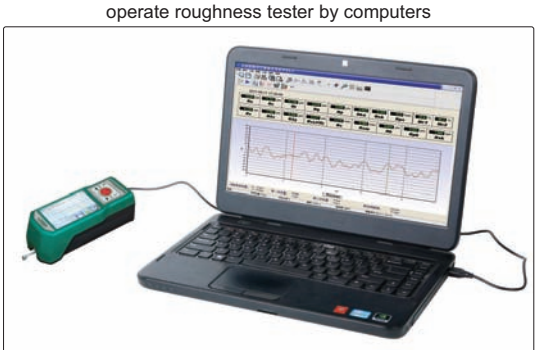


connect to mobile phones via bluetooth
display roughness values, profile and curve



software flash disk
(included)

operate roughness tester by computers



connect to computers via USB cable (software is included),
display roughness values, profile and curve



bluetooth printer
(**optional**)

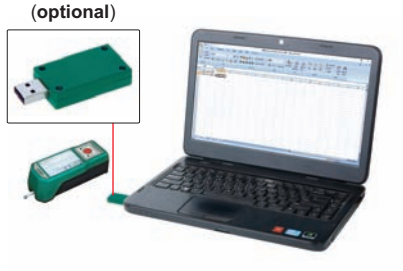
To be continued

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data can be sent to Excel by connecting to computer via bluetooth or SPC cable

via bluetooth

receiver (**optional**)



via SPC cable

SPC cable (**optional**)



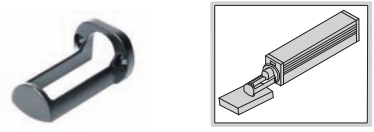
receiver (**optional**)



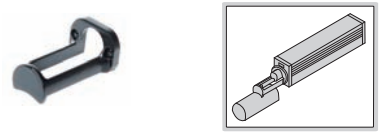


probe support (**optional**)

support for flat surfaces



support for cylindrical surfaces



adjustable stand (included)

height is adjustable (40mm)



magnetic stand adapter (included)





can be installed on magnetic stands

height gauge adapter (**optional**)





can be installed on height gauges

NOTE: Please check whether the adapter can fit your height gauges. When using **INSIZE** height gauges, please use the dial test indicator holder of height gauges

light duty test stand (**optional**)



the maximum workpiece height is 220mm

heavy duty test stand (**optional**)



the maximum workpiece height is 310mm

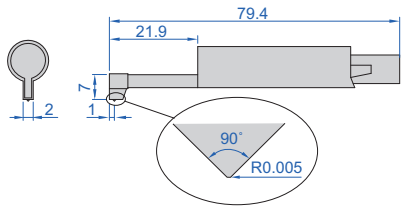
To be continued

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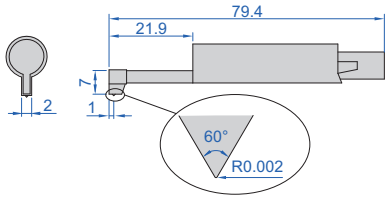
optional probes

Unit: mm

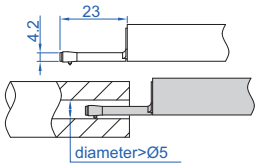
standard probe, 5μm/90° (included in **ISR-C300**)
code **ISR-C300-PROBE**



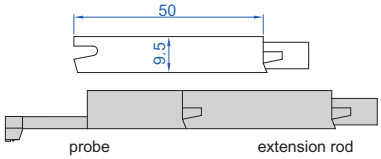
standard probe, 2μm/60° (included in **ISR-C301**)
code **ISR-C301-PROBE**
(when Ra<0.5μm, the measurement accuracy with this probe is better)



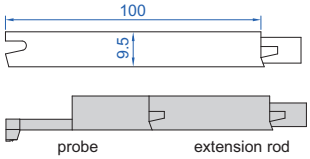
small hole probe, 5μm/90° (**optional**),
code **ISR-C002-PROBE**



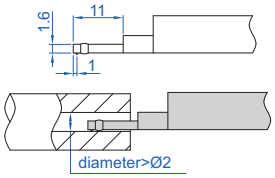
extension rod (**optional**),
code **ISR-C002-ER**



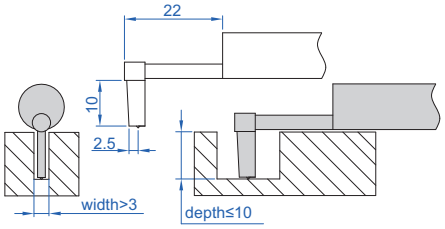
extension rod (**optional**),
code **ISR-C002-ER100**



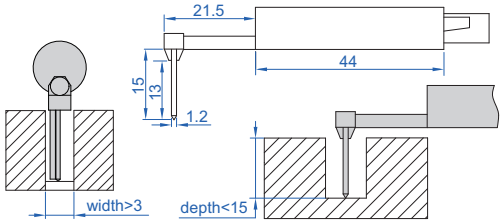
tiny hole probe, 5μm/90° (**optional**),
code **ISR-C002-SBP**



deep groove probe, 5μm/90° (**optional**),
code **ISR-C002-DGP**



deep groove probe, 5μm/90° (**optional**),
code **ISR-C002-DGP1**



need to be delivered with roughness tester **ISR-C300/ISR-C301**, recommended for use above Ra0.1μm

SPECIFICATION

Code		ISR-C300	ISR-C301
Measuring force		4mN	0.75mN
Stylus radius/angle		5μm/90°	2μm/60°
Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz(JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax, R5p, R5v, R10z, Rpt, Rvt, Ry5, tp1, tp2, Rmrc1, Rmrc2, Rpkx, Rvkx, Ramax, Rzmax	
Probe type		inductive	
Stylus material		diamond	
Range	X axis	17.5mm	
	Z axis	400μm (-200μm~200μm)	
Accuracy		±10%	
Resolution (Ra)		0.001μm	
Measuring unit		μm/μin	
Cut off		0.25/0.8/2.5mm	
Number of cut-offs		1~5	
Moving speed		0.135mm/s, 0.5mm/s, 1mm/s	
Memory		100 measurement results	
Output		USB and bluetooth	
Power supply		built-in rechargeable battery	
Dimension (L×W×H)		158×64×52mm	
Weight		400g	

STANDARD DELIVERY

Main unit	1 pc
Standard probe (included in ISR-C300)	1 pc
Standard probe (included in ISR-C301)	1 pc
Calibration block and support	1 pc of each
Connecting cable (long and short)	1 pc of each
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Touch pen	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Standard probe	ISR-C300-PROBE
Standard probe	ISR-C301-PROBE
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
Extension rod	ISR-C002-ER
Extension rod	ISR-C002-ER100
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1
Bluetooth printer	ISR-C002-PRINTER
Height gage adapter	ISR-C300-LB1
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC
Support for flat surface	ISR-C300-COVER1
Support for cylindrical surface	ISR-C300-COVER2
Light duty test stand	ISR-C002-STAND1
Heavy duty test stand	ISR-C002-STAND

DATA OUTPUT | BLUETOOTH | TOUCH SCREEN | CAN BE OPERATED BY MOBILE PHONES OR COMPUTERS

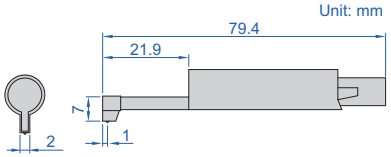
ROUGHNESS TESTER
CODE ISR-T120

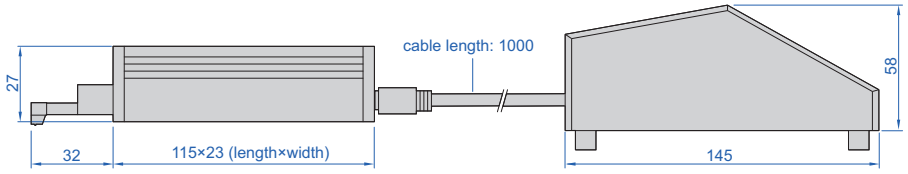
VIDEO



- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Built-in printer can print measurement results and graphics
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Automatic power off

Unit: mm

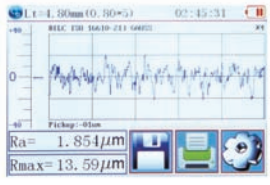




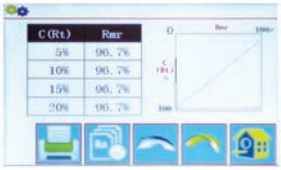
roughness tester screen display



measurement result



roughness profile



Rmr analysis

operate roughness tester by mobile phones



connect to mobile phones via bluetooth (only Android system), display roughness values, profile and curve

operate roughness tester by computers



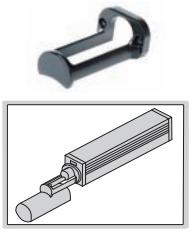
connect to computers via USB cable (software is included), display roughness values, profile and curve

To be continued

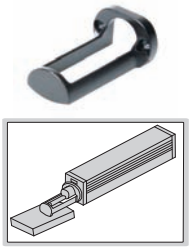
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probe support (**optional**)

support for cylindrical surface



support for flat surface



data can be sent to Excel by connecting to computer via bluetooth or SPC cable

via bluetooth

receiver (**optional**)



via SPC cable

SPC cable (**optional**)



receiver (**optional**)





height gauge adapter (**optional**)





can be installed on height gauges

magnetic stand adapter (included)





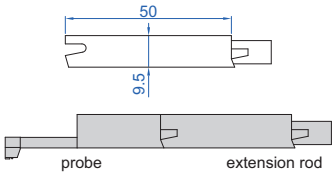
can be installed on magnetic stands

NOTE: Please check whether the adapter can fit your height gauges. When using **INSIZE** height gauges, please use the dial test indicator holder of height gauges

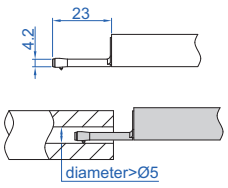
optional probes

Unit: mm

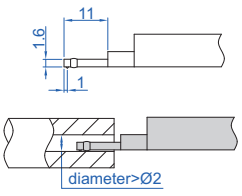
extension rod (**optional**), code **ISR-C002-ER**



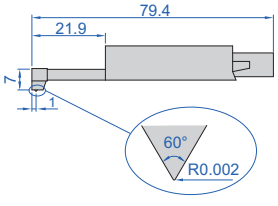
small hole probe (**optional**), code **ISR-C002-PROBE**



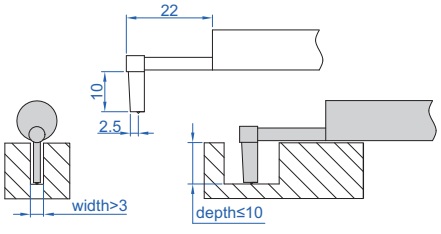
tiny hole probe (**optional**), code **ISR-C002-SBP**



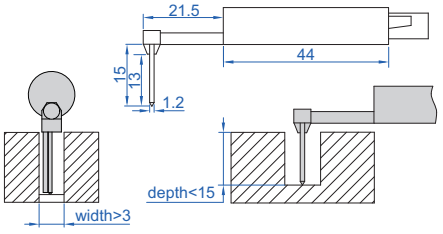
2μm/60° probe (**optional**), code **ISR-C300-P2UM** (when Ra<0.5μm, the accuracy with this probe is better)



deep groove probe (**optional**), code **ISR-C002-DGP**



deep groove probe (**optional**), code **ISR-C002-DGP1**



To be continued

Continued from previous page

light duty test stand (**optional**)



the maximum workpiece height is 220mm

heavy duty test stand (**optional**)



the maximum workpiece height is 310mm

SPECIFICATION

Parameters		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
Range	**X axis**	17.5mm
	Z axis	640μm (-320μm~320μm)
Accuracy		±10%
Resolution (Ra)		0.001μm
Probe	**type**	inductive
	stylus radius/angle	5μm/90°
	stylus material	diamond
Measuring force		4mN
Measuring unit		μm/μin
Cut off		0.25/0.8/2.5mm
Number of cut-offs		1~5
Traverse speed		0.135mm/s, 0.5mm/s, 1mm/s
Memory		100 measurement results
Output		bluetooth and USB
Power supply		built-in rechargeable battery
Dimension (L×W×H)		155×145×58mm
Weight		1000g

STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Touch pen	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Extension rod	**ISR-C002-ER**
Small hole probe	**ISR-C002-PROBE**
Tiny hole probe	**ISR-C002-SBP**
2μm/60° probe	**ISR-C300-P2UM**
Deep groove probe	**ISR-C002-DGP**
Deep groove probe	**ISR-C002-DGP1***
Height gauge adapter	**ISR-C300-LB1**
Receiver	**ISR-C300-RECEIVER**
SPC cable	**ISR-C300-SPC**
Support for flat surface	**ISR-C300-COVER1**
Support for cylindrical surface	**ISR-C300-COVER2**
Light duty test stand	**ISR-C002-STAND1**
Heavy duty test stand	**ISR-C002-STAND**

*Need to be delivered with roughness tester **ISR-T120**

ROUGHNESS TESTER (BASIC TYPE)
CODE ISR-C003

ATTENTION: THIS ROUGHNESS TESTER IS NOT SUITABLE FOR ROUGH TURNING, MILLING AND PLANING WORKPIECES

- Unit: μm, μin
- Automatic power off



VIDEO

SPECIFICATION

Parameters*		Ra, Rz, Rq, Rt
Range		Ra, Rq: 0.05~15μm Rz, Rt: 0.1~50μm
Accuracy		±10%
Resolution (Ra)		0.01μm
Probe	**type**	piezoelectric
	stylus radius/angle	10μm/90°
	stylus material	diamond
Measuring force		5mN
Measuring unit		μm/μin
Cut off		0.25/0.8/2.5mm
Evaluation length		1.25mm for cut off 0.25mm 4mm for cut off 0.8mm 5mm for cut off 2.5mm
Moving speed		0.75mm/s
Power supply		built-in rechargeable battery
Dimension (L×W×H)		106×70×24mm
Weight		200g

* Rmax parameter can be customized

fixture for small shafts (**optional**)



clamping range:
Ø3~20mm



application



calibration block (included)

STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Fixture for small shafts	**ISR-C003-FIXTURE**

SURFACE ROUGHNESS SPECIMEN SET
CODE ISR-CS130-W

INSIZE PLUS



- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel

Machining method	Roughness (Ra)*	Roughness (Rz)*	Quantity
Flat lapping	0.05, 0.1, 0.2μm 2, 4, 8μin	0.55, 1, 1.6μm	3 pcs
Reaming	0.4, 0.8, 1.6μm 16, 32, 63μin	3, 6, 10μm	3 pcs
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6μm 2, 4, 8, 16, 32, 63μin	0.55, 1, 1.6, 3, 6, 10μm	6 pcs
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5μm 16, 32, 63, 125, 250, 500μin	2.5, 4, 8, 16, 32, 50μm	6 pcs
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5μm 16, 32, 63, 125, 250, 500μin	2.5, 4, 8, 16, 32, 50μm	6 pcs
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5μm 16, 32, 63, 125, 250, 500μin	2.5, 4, 8, 16, 32, 50μm	6 pcs

* The actual value is the value to be calibrated

ATTENTION: PLEASE APPLY ANTI-RUST OIL AFTER USE

SURFACE ROUGHNESS SPECIMEN SET CODE ISR-CS2

- For checking, identifying and specifying he roughness by symbol
- Made of carbon steel



Maching method	Roughness (Ra)*	Roughness (Rz)*	Quantity
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5μm	1.6, 3.2, 6.3, 12.5, 25, 50μm	6 pcs
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5μm	1.6, 3.2, 6.3, 12.5, 25, 50μm	6 pcs
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5μm	1.6, 3.2, 6.3, 12.5, 25, 50μm	6 pcs
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6μm	0.2, 0.4, 0.8, 1.6, 3.2, 6.3μm	6 pcs
Flat lapping	0.05, 0.1μm	0.2, 0.4μm	2 pcs
External grinding	0.2, 0.4, 0.8, 1.6μm	0.8, 1.6, 3.2, 6.3μm	4 pcs

* The actual value is the value to be calibrated

SURFACE ROUGHNESS SPECIMENS

INSIZE PLUS

- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel



ISR-CS315

Code	Machining method		Roughness (Ra)*	Roughness (Rz)*	Quantity
ISR-CS315	surface grinding		0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2μm	0.29, 0.55, 0.91, 1.74, 2.6, 4.65, 7.87, 15.6μm	8 pcs
ISR-CS316	cylindrical grinding		0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2μm	0.3, 0.53, 0.88, 1.56, 2.64, 4.4, 7.71, 15.3μm	8 pcs
ISR-CS317	flat lapping	criss-cross	0.025, 0.05, 0.1, 0.2μm	0.4, 0.6, 0.74, 1.26μm	4 pcs
		parallel	0.025, 0.05, 0.1, 0.2μm	0.34, 0.56, 1.12, 1.5μm	4 pcs
ISR-CS318	cylindrical lapping		0.025, 0.05, 0.1, 0.2μm	0.46, 0.54, 0.63, 1.23μm	4 pcs
	superfinishing		0.025, 0.05, 0.1, 0.2μm	0.36, 0.7, 1, 1.4μm	4 pcs
ISR-CS319	face turning		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50μm	1.92, 3.2, 6.15, 12.5, 23.7, 48.7, 102, 185μm	8 pcs
ISR-CS320	cylindrical turning		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50μm	1.7, 3.2, 6.1, 12.2, 23.7, 47.5, 95, 190μm	8 pcs
ISR-CS321	end milling		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50μm	1.92, 3.82, 6.45, 12.2, 25.2, 49.8, 92.6, 191μm	8 pcs
ISR-CS322	reaming		0.4, 0.8, 1.6, 3.2μm	1.7, 3.2, 6.4, 12.8μm	4 pcs
	drilling		1.6, 3.2, 6.3, 12.5μm	7.5, 15.5, 31, 60μm	4 pcs
ISR-CS323	horizontal milling		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50μm	1.8, 3.68, 6.63, 12.8, 25.6, 53, 97.5, 197μm	8 pcs
ISR-CS325	shaping (planing)		0.8, 1.6, 3.2, 6.3, 12.5, 25, 50, 100μm	3.84, 6.7, 12.2, 25.2, 48.7, 99.9, 190, 361μm	8 pcs
ISR-CS326	linishing (belt sanding)		0.1, 0.2, 0.4, 0.8, 1.6, 3.2μm	0.9, 1.55, 3.37, 7.42, 18.5, 31μm	6 pcs
ISR-CS328	vertical grinding		0.2, 0.4, 0.8, 1.6, 3.2, 6.3μm	1.1, 3.5, 6.15, 8.78, 22.19, 40.8μm	6 pcs
ISR-CS329	grit blasting		3.2, 10.5, 18, 25μm	19.2, 63, 108, 150μm	4 pcs
	shot blasting		3.2, 8, 13, 18μm	19.2, 48, 78, 108μm	4 pcs
ISR-CS331	spark erosion (EDM)		0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50μm	2.5, 4.5, 7.2, 14.2, 24.7, 51.2, 105, 196μm	8 pcs
ISR-CS333	hand filing		0.4, 0.8, 1.6, 3.2, 6.3μm	3, 5.6, 12.4, 22.5, 61μm	5 pcs
ISR-CS334	castings		0.8, 1.6, 3.2, 6.3, 12.5, 25, 50μm	3.2, 8, 16, 32, 56, 112, 225μm	7 pcs
ISR-CS335	honing		0.05, 0.1, 0.2, 0.4, 0.8, 1.6μm	0.31, 0.56, 1, 2, 4.2, 9μm	6 pcs
ISR-CS336	polishing		0.0125, 0.025, 0.05, 0.1, 0.2μm	0.29, 0.35, 0.67, 0.72, 1.52μm	5 pcs

* The actual value is the value to be calibrated

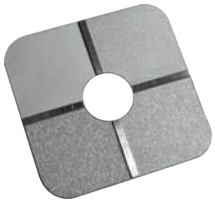
SHOT AND GRIT BLASTING SURFACE ROUGHNESS SPECIMENS

INSIZE PLUS

- To check the roughness of steel surfaces which have been blast cleaned before painting
- Meets ISO 8503/1
- Rust-proof, made of pure Nickel
- Each piece contains 4 parts

Code	Machining method	Roughness (Ra)*	Roughness (Rz)*
ISR-CS017	shot blasting	3.2, 8, 13, 18μm	19.2, 48, 78, 108μm
ISR-CS018	grit blasting	3.2, 10.5, 18, 25μm	19.2, 63, 108, 150μm

* The actual value is the value to be calibrated



ISR-CS017

SURFACE ROUGHNESS REFERENCE SPECIMENS

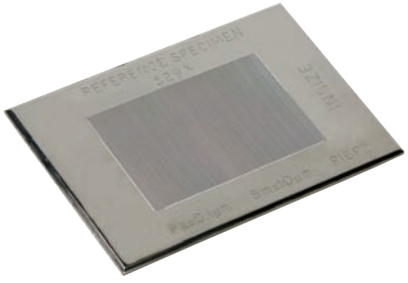
INSIZE PLUS

MEASURING ACCURACY OF ROUGHNESS TESTERS CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED

- To calibrate roughness testers
- Meets ISO 5436-1: 2000
- Rust proof, made of pure Nickel

Code	Roughness (Ra)
ISR-RS525X	6.25μm*
ISR-RS526X	3.15μm*
ISR-RS527X	3.0μm *
ISR-RS528X	0.5μm *
ISR-RS529X	0.1μm *
ISR-RS530X	1.0μm *
ISR-RS531X	0.3μm *

*The actual value may be slightly different



ISR-RS529X

SURFACE ROUGHNESS REFERENCE SPECIMENS

MEASURING ACCURACY OF ROUGHNESS TESTERS CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED

- To calibrate roughness testers
- Made of glass

Code	Shape*	Roughness (Ra)	Deviation**	Uniformity
ISR-LS601	square wave	0.1μm	-20%~+10%	3%
ISR-LS602	square wave	0.2μm	±10%	3%
ISR-LS603	square wave	0.4μm	±10%	3%
ISR-LS604	square wave	0.8μm	±10%	3%
ISR-LS605	square wave	1.6μm	±10%	3%
ISR-LS606	square wave	3.2μm	±10%	2%
ISR-LS607	square wave	6.4μm	±10%	2%
ISR-LS601S	sine wave	0.1μm	-20%~+10%	3%
ISR-LS602S	sine wave	0.2μm	±10%	3%
ISR-LS603S	sine wave	0.4μm	±10%	3%
ISR-LS604S	sine wave	0.8μm	±10%	3%
ISR-LS605S	sine wave	1.6μm	±10%	3%
ISR-LS606S	sine wave	3.2μm	±10%	2%
ISR-LS607S	sine wave	6.4μm	±10%	2%

*Surface roughness reference specimens with sine wave can be labeled with Rz parameter (customized)

**Deviation between the actual value when supply and the nominal value



ISR-LS603



CMM
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Measuring Arms
Page 688-690



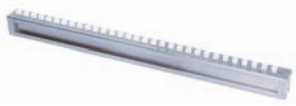
Styli For CMM
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Ceramic Ball Gauges
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Gauge Block Stands For CMM
Page 693-694



CMM Check Masters
Page 695-697



Jigs For CMM
Page 698-704

COORDINATE MEASURING MACHINES (LARGE RANGE)

VIDEO



CMM-PM10128A

FEATURES

- Classic bridge structure, integrated workbench
- High precision air bearing
- Special non-linear spring system to minimize guide way error

RENISHAW SYSTEMS

- Precision grating system, including grating and data acquisition device
- UCC control system, including control box and manual operator
- Probe system, including probe head, probe body and styli

Visusal DMIS CNC CAD+ SOFTWARE

- The software is designed and developed based on the DMIS standard, with excellent compatibility and versatility
- Geometric element measurement, evaluation of shape and position
- Bidirectional data transfer with mainstream CAD systems, complete graphical display
- Optional specialized modules, such as gear module, worm module, pipeline module, blade module, SPC data analysis module, etc.

STANDARD ACCURACY (PM SERIES)

Code	Range (X×Y×Z)	Probe system		Accuracy		Max. load	Overall dimension (mm)	Weight (kg)
		Head	Body	MPEE (μm)	MPEP			
CMM-PM686A	600×800×600mm	PH10T	TP20	±(2.1+L/300)	2.4μm	800kg	1485×1800×2730	1650
CMM-PM686B		PH10M	SP25M	±(1.5+L/300)	1.5μm			
CMM-PM8127A	800×1200×700mm	PH10T	TP20	±(2.3+L/300)	2.6μm	1000kg	1685×2200×2900	2600
CMM-PM8127B		PH10M	SP25M	±(1.7+L/300)	1.7μm			
CMM-PM8157A	800×1500×700mm	PH10T	TP20	±(2.3+L/300)	2.6μm	1000kg	1685×2500×2930	3000
CMM-PM8157B		PH10M	SP25M	±(1.7+L/300)	1.7μm			
CMM-PM10128A	1000×1200×800mm	PH10T	TP20	±(2.7+L/300)	3.0μm	1500kg	1885×2200×3130	2900
CMM-PM10128B		PH10M	SP25M	±(2.1+L/300)	2.1μm			
CMM-PM10158A	1000×1500×800mm	PH10T	TP20	±(2.7+L/300)	3.0μm	1500kg	1885×2500×3130	3300
CMM-PM10158B		PH10M	SP25M	±(2.1+L/300)	2.1μm			
CMM-PM10228A	1000×2200×800mm	PH10T	TP20	±(2.7+L/300)	3.0μm	1800kg	1885×3580×3130	4200
CMM-PM10228B		PH10M	SP25M	±(2.1+L/300)	2.1μm			
CMM-PM10258A	1000×2500×800mm	PH10T	TP20	±(2.7+L/300)	3.0μm	1800kg	1885×3880×3070	5200
CMM-PM10258B		PH10M	SP25M	±(2.1+L/300)	2.1μm			
CMM-PM10308A	1000×3000×800mm	PH10T	TP20	±(2.7+L/300)	3.0μm	1800kg	1885×4380×3070	5900
CMM-PM10308B		PH10M	SP25M	±(2.1+L/300)	2.1μm			
CMM-PM121510A	1200×1500×1000mm	PH10T	TP20	±(3.1+L/300)	3.4μm	2000kg	2085×2500×3530	3600
CMM-PM121510B		PH10M	SP25M	±(2.5+L/300)	2.5μm			

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STANDARD ACCURACY (PM SERIES)

Code	Range (X×Y×Z)	Probe system		Accuracy		Max. load	Overall dimension (mm)	Weight (kg)
		Head	Body	MPEE (μm)	MPEP			
CMM-PM122210A	1200×2200×1000mm	PH10T	TP20	±(3.1+L/300)	3.4μm	2000kg	2085×3580×3530	4600
CMM-PM122210B		PH10M	SP25M	±(2.5+L/300)	2.5μm			
CMM-PM122510A	1200×2500×1000mm	PH10T	TP20	±(3.1+L/300)	3.4μm	2000kg	2085×3880×3470	5500
CMM-PM122510B		PH10M	SP25M	±(2.5+L/300)	2.5μm			
CMM-PM123010A	1200×3000×1000mm	PH10T	TP20	±(3.1+L/300)	3.4μm	2000kg	2085×4380×3470	6500
CMM-PM123010B		PH10M	SP25M	±(2.5+L/300)	2.5μm			
CMM-PM152210A	1500×2200×1000mm	PH10T	TP20	±(3.5+L/300)	3.8μm	2200kg	2385×3580×3470	5900
CMM-PM152210B		PH10M	SP25M	±(2.9+L/300)	2.9μm			
CMM-PM152510A	1500×2500×1000mm	PH10T	TP20	±(3.5+L/300)	3.8μm	2200kg	2385×3880×3470	6500
CMM-PM152510B		PH10M	SP25M	±(2.9+L/300)	2.9μm			
CMM-PM153010A	1500×3000×1000mm	PH10T	TP20	±(3.5+L/300)	3.8μm	2200kg	2385×4380×3470	7500
CMM-PM153010B		PH10M	SP25M	±(2.9+L/300)	2.9μm			
CMM-PM182510A	1800×2500×1000mm	PH10T	TP20	±(3.9+L/300)	4.2μm	2500kg	2685×3880×3470	7300
CMM-PM182510B		PH10M	SP25M	±(3.3+L/300)	3.3μm			
CMM-PM183010A	1800×3000×1000mm	PH10T	TP20	±(3.9+L/300)	4.2μm	2500kg	2685×4380×3470	8500
CMM-PM183010B		PH10M	SP25M	±(3.3+L/300)	3.3μm			
CMM-PM183510A	1800×3500×1000mm	PH10T	TP20	±(3.9+L/300)	4.2μm	2500kg	2685×4880×3470	9700
CMM-PM183510B		PH10M	SP25M	±(3.3+L/300)	3.3μm			
CMM-PM184010A	1800×4000×1000mm	PH10T	TP20	±(3.9+L/300)	4.2μm	2500kg	2685×5380×3470	10800
CMM-PM184010B		PH10M	SP25M	±(3.3+L/300)	3.3μm			

HIGH ACCURACY (PE SERIES)

Code	Range (X×Y×Z)	Probe system		Accuracy		Max. load	Overall dimension (mm)	Weight (kg)
		Head	Body	MPEE (μm)	MPEP			
CMM-PE686A	600×800×600mm	PH10T	TP20	±(1.8+L/350)	2.0μm	800kg	1485×1800×2730	1650
CMM-PE686B		PH10M	SP25M	±(1.2+L/350)	1.2μm			
CMM-PE8127A	800×1200×700mm	PH10T	TP20	±(2.0+L/350)	2.2μm	1000kg	1685×2200×2900	2600
CMM-PE8127B		PH10M	SP25M	±(1.4+L/350)	1.4μm			
CMM-PE8157A	800×1500×700mm	PH10T	TP20	±(2.0+L/350)	2.2μm	1000kg	1685×2500×2930	3000
CMM-PE8157B		PH10M	SP25M	±(1.4+L/350)	1.4μm			
CMM-PE10128A	1000×1200×800mm	PH10T	TP20	±(2.3+L/350)	2.5μm	1500kg	1885×2200×3130	2900
CMM-PE10128B		PH10M	SP25M	±(1.7+L/350)	1.7μm			
CMM-PE10158A	1000×1500×800mm	PH10T	TP20	±(2.3+L/350)	2.5μm	1500kg	1885×2500×3130	3300
CMM-PE10158B		PH10M	SP25M	±(1.7+L/350)	1.7μm			
CMM-PE10228A	1000×2200×800mm	PH10T	TP20	±(2.3+L/350)	2.5μm	1800kg	1885×3580×3130	4200
CMM-PE10228B		PH10M	SP25M	±(1.7+L/350)	1.7μm			
CMM-PE10258A	1000×2500×800mm	PH10T	TP20	±(2.3+L/350)	2.5μm	1800kg	1885×3880×3070	5200
CMM-PE10258B		PH10M	SP25M	±(1.7+L/350)	1.7μm			
CMM-PE10308A	1000×3000×800mm	PH10T	TP20	±(2.3+L/350)	2.5μm	1800kg	1885×4380×3070	5900
CMM-PE10308B		PH10M	SP25M	±(1.7+L/350)	1.7μm			
CMM-PE121510A	1200×1500×1000mm	PH10T	TP20	±(2.7+L/350)	2.9μm	2000kg	2085×2500×3530	3600
CMM-PE121510B		PH10M	SP25M	±(2.1+L/350)	2.1μm			

To be continued

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HIGH ACCURACY (PE SERIES)

Code	Range (X×Y×Z)	Probe system		Accuracy		Max. load	Overall dimension (mm)	Weight (kg)
		Head	Body	MPEE (μm)	MPEP			
CMM-PE122210A	1200×2200×1000mm	PH10T	TP20	±(2.7+L/350)	2.9μm	2000kg	2085×3580×3530	4600
CMM-PE122210B		PH10M	SP25M	±(2.1+L/350)	2.1μm			
CMM-PE122510A	1200×2500×1000mm	PH10T	TP20	±(2.7+L/350)	2.9μm	2000kg	2085×3880×3470	5500
CMM-PE122510B		PH10M	SP25M	±(2.1+L/350)	2.1μm			
CMM-PE123010A	1200×3000×1000mm	PH10T	TP20	±(2.7+L/350)	2.9μm	2000kg	2085×4380×3470	6500
CMM-PE123010B		PH10M	SP25M	±(2.1+L/350)	2.1μm			
CMM-PE152210A	1500×2200×1000mm	PH10T	TP20	±(3.1+L/350)	3.3μm	2200kg	2385×3580×3470	5900
CMM-PE152210B		PH10M	SP25M	±(2.5+L/350)	2.5μm			
CMM-PE152510A	1500×2500×1000mm	PH10T	TP20	±(3.1+L/350)	3.3μm	2200kg	2385×3880×3470	6500
CMM-PE152510B		PH10M	SP25M	±(2.5+L/350)	2.5μm			
CMM-PE153010A	1500×3000×1000mm	PH10T	TP20	±(3.1+L/350)	3.3μm	2200kg	2385×4380×3470	7500
CMM-PE153010B		PH10M	SP25M	±(2.5+L/350)	2.5μm			
CMM-PE182510A	1800×2500×1000mm	PH10T	TP20	±(3.5+L/350)	3.7μm	2500kg	2685×3880×3470	7300
CMM-PE182510B		PH10M	SP25M	±(2.9+L/350)	2.9μm			
CMM-PE183010A	1800×3000×1000mm	PH10T	TP20	±(3.5+L/350)	3.7μm	2500kg	2685×4380×3470	8500
CMM-PE183010B		PH10M	SP25M	±(2.9+L/350)	2.9μm			
CMM-PE183510A	1800×3500×1000mm	PH10T	TP20	±(3.5+L/350)	3.7μm	2500kg	2685×4880×3470	9700
CMM-PE183510B		PH10M	SP25M	±(2.9+L/350)	2.9μm			
CMM-PE184010A	1800×4000×1000mm	PH10T	TP20	±(3.5+L/350)	3.7μm	2500kg	2685×5380×3470	10800
CMM-PE184010B		PH10M	SP25M	±(2.9+L/350)	2.9μm			

STANDARD DELIVERY

Main unit		1 pc
Probe system	probe head	1 pc
	probe body	1 pc
	styli	1 set
Control system		1 set
Calibration sphere		1 pc
Universal sphere seat		1 pc
Computer		1 pc
Printer		1 pc
Software		1 set
Table and chair		1 set

OPERATION ENVIRONMENT

Air pressure	0.6-0.8MPa
Air supply	200L/min
Temperature	20±2°C; <0.5°C/h, <1°C/24h
Humidity	30%~70%
Max. power	1000W
Power supply	220V±5%, 50Hz

To be continued

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PH10T AND PH10M SPECIFICATION

Angular movement with horizontal axis	0°~105° in 7.5 steps
Angular movement with vertical axis	±180° in 7.5 steps
Number of positions	720
Steering mode	motorized
Max. output torque	0.45N.m
Max. extension length	300mm
Weight	649g

STYLI SET INCLUDED IN TP20

Type	Material	Ball diameter	Length	Stem diameter	Effective working length	Quantity
Styli	ruby ball / stainless steel stem	SØ2.5mm	20mm	Ø1.4mm	14mm	4 pcs
		SØ4mm		Ø1.5mm	20mm	1 pc
		SØ3mm	10mm	Ø1.5mm	7.5mm	1 pc

Type	Material	Diameter	Length	Quantity
Extension	stainless steel	Ø3mm	20mm	1 pc
		Ø3mm	30mm	1 pc

Type	Material	Diameter	Length	Quantity
Center base	stainless steel	7mm	7.5mm	1 pc

STYLI SET INCLUDED IN SP25M

Type	Material	Ball diameter	Length	Stem diameter	Effective working length	Quantity
Styli	ruby ball/ stainless steel stem	SØ1.5mm	21mm	Ø1mm	14mm	1 pc
		SØ2mm		Ø1.4mm	8mm	1 pc
		SØ3mm		Ø1.5mm	12mm	4 pcs
		SØ4mm	31mm	Ø2.5mm	27mm	1 pc
	ruby ball/ carbon fiber stem	SØ5mm	50mm	Ø3mm	42.5mm	1 pc
		SØ6mm	75mm	Ø4mm	75mm	1 pc

Type	Material	Diameter	Length	Quantity
Extension	stainless steel	Ø5mm	10mm	1 pc
		Ø4mm	20mm	1 pc

Type	Material	Diameter	Length	Quantity
Center base	stainless steel	10mm	13mm	1 pc

COORDINATE MEASURING MACHINES (SMALL RANGE)

VIDEO

FEATURES

- Classic bridge structure, integrated workbench
- High precision air bearing
- Unique Z-axis anti torque design to reduce rotation error

RENISHAW SYSTEMS

- Precision grating system, including grating and data acquisition device
- UCC control system, including control box and manual operator
- Probe system, including probe head, probe body and styli

VISUSAL DMIS CNC CAD+SOFTWARE

- The software is designed and developed based on the DMIS standard, with excellent compatibility and versatility
- Geometric element measurement, evaluation of shape and position
- Bidirectional data transmission with mainstream CAD systems, complete graphical display
- Optional specialized modules, such as gear module, worm module, pipeline module, blade module, SPC data analysis module, etc.



CMM-LM564A

STANDARD DELIVERY

Main unit		1 pc
Probe system	probe head	1 pc
	probe body	1 pc
	styli	1 set
Control system		1 set
Calibration sphere		1 pc
Universal sphere seat		1 pc
Computer		1 pc
Printer		1 pc
Software		1 set
Table and chair		1 set

OPERATION ENVIRONMENT

Air pressure	0.6-0.8MPa
Air supply	200L/min
Temperature	20°C±2°C; <0.5°C/h, <1°C/24h
Humidity	30%~70%
Max. power	1000W
Power supply	220V±5%, 50Hz

STANDARD ACCURACY (LM SERIES)

Code	Range (X×Y×Z)	Probe system		Accuracy		Max. load	Overall dimension (mm)	Weight (kg)
		Head	Body	MPEE (μm)	MPEP			
CMM-LM564A	500×600×400mm	MH20i	TP20	±(2.3+L/250)	2.4μm	500kg	1135×1420×2350	900
CMM-LM564B		PH10T						
CMM-LM686A	600×800×600mm	MH20i	TP20	±(2.6+L/250)	2.7μm	800kg	1420×1740×2760	1300
CMM-LM686B		PH10T						
CMM-LM686C		PH10M	SP25M	±(2.1+L/250)	2.1μm			
CMM-LM8106A	800×1000×600mm	MH20i	TP20	±(2.7+L/250)	2.8μm	1000kg	1620×1940×2760	1700
CMM-LM8106B		PH10T						
CMM-LM8106C		PH10M	SP25M	±(2.2+L/250)	2.2μm			
CMM-LM8126A	800×1200×600mm	MH20i	TP20	±(2.7+L/250)	2.8μm		1620×2140×2760	1900
CMM-LM8126B		PH10T						
CMM-LM8126C		PH10M	SP25M	±(2.2+L/250)	2.2μm			
CMM-LM8156A	800×1500×600mm	MH20i	TP20	±(2.7+L/250)	2.8μm		1620×2440×2760	2200
CMM-LM8156B		PH10T						
CMM-LM8156C		PH10M	SP25M	±(2.2+L/250)	2.2μm			

To be continued

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HIGH ACCURACY (LE SERIES)

Code	Range (X×Y×Z)	Probe system		Accuracy		Max. load	Overall dimension (mm)	Weight (kg)
		Head	Body	MPEE (μm)	MPEP			
CMM-LE564A	500×600×400mm	MH20i	TP20	±(1.9+L/330)	2.1μm	500kg	1135×1420×2350	900
CMM-LE564B		PH10T						
CMM-LE686A	600×800×600mm	MH20i	TP20	±(2.0+L/330)	2.2μm	800kg	1420×1740×2760	1300
CMM-LE686B		PH10T						
CMM-LE686C		PH10M	SP25M	±(1.6+L/330)	1.6μm			
CMM-LE8106A	800×1000×600mm	MH20i	TP20	±(2.1+L/330)	2.3μm	1000kg	1620×1940×2760	1700
CMM-LE8106B		PH10T						
CMM-LE8106C		PH10M	SP25M	±(1.7+L/330)	1.7μm			
CMM-LE8126A	800×1200×600mm	MH20i	TP20	±(2.1+L/330)	2.3μm		1620×2140×2760	1900
CMM-LE8126B		PH10T						
CMM-LE8126C		PH10M	SP25M	±(1.7+L/330)	1.7μm			
CMM-LE8156A	800×1500×600mm	MH20i	TP20	±(2.1+L/330)	2.3μm		1620×2440×2760	2200
CMM-LE8156B		PH10T						
CMM-LE8156C		PH10M	SP25M	±(1.7+L/330)	1.7μm			

MH20i SPECIFICATION

Angular movement with horizontal axis	0°~90° in 15 steps
Angular movement with vertical axis	±180° in 15 steps
Number of positions	168
Steering mode	manual
Max. extension length	75mm
Weight	210g

PH10T AND PH10M SPECIFICATION

Angular movement with horizontal axis	0°~105° in 7.5 steps
Angular movement with vertical axis	±180° in 7.5 steps
Number of positions	720
Steering mode	motorized
Max. output torque	0.45N.m
Max. extension length	300mm
Weight	649g

STYLI SET INCLUDED IN TP20

Type	Material	Ball diameter	Length	Stem diameter	Effective working length	Quantity
Styli	ruby ball/ stainless steel stem	SØ2.5mm	20mm	Ø1.4mm	14mm	4 pcs
		SØ4mm		Ø1.5mm	20mm	1 pc
		SØ3mm	10mm		7.5mm	1 pc

Type	Material	Diameter	Length	Quantity
Extension	stainless steel	Ø3mm	20mm	1 pc
			30mm	1 pc
Center base		7mm	7.5mm	1 pc

STYLI SET INCLUDED IN SP25M

Type	Material	Ball diameter	Length	Stem diameter	Effective working length	Quantity
Styli	ruby ball/ stainless steel stem	SØ1.5mm	21mm	Ø1mm	14mm	1 pc
		SØ2mm		Ø1.4mm	8mm	1 pc
		SØ3mm		Ø1.5mm	12mm	4 pcs
		SØ4mm	31mm	Ø2.5mm	27mm	1 pc
	ruby ball/ carbon fiber stem	SØ5mm	50mm	Ø3mm	42.5mm	1 pc
		SØ6mm	75mm	Ø4mm	75mm	1 pc

Type	Material	Diameter	Length	Quantity
Extension	stainless steel	Ø5mm	10mm	1 pc
		Ø4mm	20mm	1 pc
Center base		10mm	13mm	1 pc

MEASURING ARMS

VIDEO

- In accordance with ISO 10360-12
- Internal balance
- Dual high performance batteries
- Equivalent-arm design
- High-speed WiFi performance
- Aerospace grade carbon-fiber material
- Automatic power off
- U-shaped anti-collision design of the base



CMM-CM30

STANDARD PRECISION, BE SERIES, 6-AXIS (mm)

Code	Measuring range	Maximum permissible error				
		SPAT	E_{UNI}	P_{SIZE}	P_{FORM}	L_{DIA}
CMM-BE15	1500	0.028	0.036	0.015	0.029	0.038
CMM-BE20	2000	0.030	0.040	0.018	0.035	0.041
CMM-BE25	2500	0.035	0.045	0.020	0.038	0.050
CMM-BE30	3000	0.055	0.065	0.028	0.045	0.080
CMM-BE35	3500	0.075	0.080	0.035	0.058	0.098
CMM-BE40	4000	0.090	0.100	0.044	0.068	0.116
CMM-BE45	4500	0.112	0.120	0.048	0.086	0.128

HIGH PRECISION, CM SERIES, 6-AXIS (mm)

Code	Measuring range	Maximum permissible error				
		SPAT	E_{UNI}	P_{SIZE}	P_{FORM}	L_{DIA}
CMM-CM15	1500	0.018	0.025	0.009	0.016	0.026
CMM-CM20	2000	0.020	0.028	0.010	0.018	0.032
CMM-CM25	2500	0.023	0.030	0.012	0.022	0.038
CMM-CM30	3000	0.034	0.042	0.016	0.032	0.052
CMM-CM35	3500	0.043	0.056	0.020	0.038	0.066
CMM-CM40	4000	0.052	0.066	0.024	0.044	0.083
CMM-CM45	4500	0.061	0.089	0.038	0.078	0.108

HIGH PRECISION, CM SERIES, 7-AXIS (mm)

Code	Measuring range	Maximum permissible error				
		SPAT	E_{UNI}	P_{SIZE}	P_{FORM}	L_{DIA}
CMM-CM20S	2000	0.022	0.030	0.012	0.022	0.040
CMM-CM25S	2500	0.027	0.032	0.013	0.025	0.048
CMM-CM30S	3000	0.042	0.053	0.020	0.035	0.078
CMM-CM35S	3500	0.055	0.066	0.024	0.043	0.092
CMM-CM40S	4000	0.065	0.082	0.029	0.048	0.102
CMM-CM45S	4500	0.073	0.099	0.043	0.082	0.132

To be continued

Continued from previous page

ULTRA HIGH PRECISE, HP SERIES, 6-AXIS (mm)

Code	Measuring range	Maximum permissible error				
		SPAT	E_{UNI}	P_{SIZE}	P_{FORM}	L_{DIA}
CMM-HP15	1500	0.012	0.022	0.007	0.012	0.024
CMM-HP20	2000	0.016	0.024	0.008	0.015	0.030
CMM-HP25	2500	0.018	0.026	0.009	0.018	0.032
CMM-HP30	3000	0.026	0.038	0.012	0.025	0.045
CMM-HP35	3500	0.036	0.052	0.016	0.034	0.060
CMM-HP40	4000	0.045	0.063	0.020	0.038	0.077
CMM-HP45	4500	0.055	0.080	0.028	0.050	0.101

ULTRA HIGH PRECISE, HP SERIES, 7-AXIS (mm)

Code	Measuring range	Maximum permissible error				
		SPAT	E_{UNI}	P_{SIZE}	P_{FORM}	L_{DIA}
CMM-HP20S	2000	0.018	0.026	0.010	0.019	0.038
CMM-HP25S	2500	0.020	0.028	0.011	0.022	0.042
CMM-HP30S	3000	0.032	0.048	0.016	0.032	0.072
CMM-HP35S	3500	0.045	0.061	0.020	0.039	0.088
CMM-HP40S	4000	0.055	0.076	0.026	0.044	0.098
CMM-HP45S	4500	0.065	0.095	0.036	0.065	0.122

SPAT Single-point articulation test

E_{UNI} Distance measurement error between two points

P_{FORM} Sphere form measurement error

P_{SIZE} Sphere size measurement error

L_{DIA} Sphere diameter obtained from performing the articulated location test (diameter of the spherical zone containing the centers of a sphere measured from multiple orientations)

SPECIFICATION

Temperature rate	3°C/5min
Battery life	5h for one battery; 10h for two batteries
Output	USB, WIFI
Operation temperature	5°C~45°C
Operation humidity	0~95%, non-condensing
Power supply	100~240VAC, 50/60Hz
Weight	8.8kg~10.6kg

STANDARD DELIVERY

Main unit	1 pc
3mm zircon ball probe	1 pc
6mm zircon ball probe	1 pc
Calibration cone	1 pc
Lithium batteries	2 pcs
USB cable	1 pc
Power adapter	1 pc
Dust cover	1 pc



3mm zircon ball probe (included)



6mm zircon ball probe (included)



calibration cone (included)

To be continued

Continued from previous page



laser line probe
(**optional**)



electric vacuum base
(**optional**)



DELL laptop
(**optional**)

LASER LINE PROBE SPECIFICATION

Code	CMM-CEM-SD	CMM-CEM-HD
Accuracy	±28μm (2σ)	±15μm (2σ)
Working distance	115mm	
Effective scan width	near field 80mm, far field 150mm	
Points per line	maximum 4000 points per line	
Scan rate	1200000 points per second	
Laser	class 2	
Weight	536g	



magnetic base
(**optional**)

SYSTEM ACCURACY WITH LASER LINE PROBE

Code	CMM-CEM-SD	CMM-CEM-HD
CMM-CM20S	0.050mm	0.040mm
CMM-CM25S	0.055mm	0.045mm
CMM-CM30S	0.062mm	0.052mm
CMM-CM35S	0.076mm	0.065mm
CMM-CM40S	0.090mm	0.081mm
CMM-CM45S	0.139mm	0.131mm
CMM-HP20S	0.043mm	0.038mm
CMM-HP25S	0.048mm	0.042mm
CMM-HP30S	0.055mm	0.047mm
CMM-HP35S	0.068mm	0.060mm
CMM-HP40S	0.080mm	0.074mm
CMM-HP45S	0.125mm	0.120mm

OPTIONAL ACCESSORY

DELL laptop	CMM-CEM-PCE
Polyworks software	CMM-CEM-PW
Adjustable tripod	CMM-CEM-FAT
Electric vacuum base	CMM-CEM-EVCP
Magnetic base	CMM-CEM-IMM
Magnetic cones	CMM-CEM-MC
Magnetic spheres	CMM-CEM-MS
Point probe	CMM-CEM-PP
2mm ruby ball probe	CMM-CEM-RP2
5mm zircon ball probe	CMM-CEM-ZP5
10mm zircon ball probe	CMM-CEM-ZP10
3" straight probe extension	CMM-CEM-SPE3
4" straight probe extension	CMM-CEM-SPE4
60° probe adapter	CMM-CEM-DP60
90° probe adapter	CMM-CEM-DP90
3mm extended ball probe	CMM-CEM-EPB3
6mm extended ball probe	CMM-CEM-EPB6
Probe adapter	CMM-CEM-PA
High accuracy laser line probe	CMM-CEM-HD*
Standard accuracy laser line probe	CMM-CEM-SD*

*Laser line probes are suitable for 7-axis measuring arms only



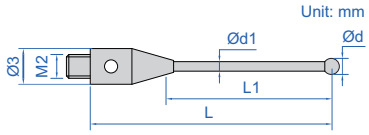
adjustable tripod (**optional**)

STYLI FOR CMM

- Roundness: 0.25μm



ISQ-20-071



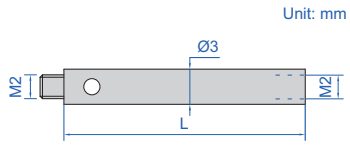


ISQ-25-125

M2 styli (mm)

Code	Ød	Ød1	L	L1*	Material of rod	Material of tip
ISQ-20-002	1	0.7	10	4.5	stainless steel	ruby
ISQ-20-006	2	1	10	6		
ISQ-20-010	3	1.5	10	10		
ISQ-20-021	2	1.4	20	14		
ISQ-20-025	3	1.5	20	17.5		
ISQ-20-027	4	2	20	20		
ISQ-20-052	0.5	0.3	10	3	carbide	
ISQ-20-071	1	0.7	20	12.5		
ISQ-20-105	2	1.5	30	22.5		
ISQ-20-120	3	2	30	27.5	ceramic	
ISQ-20-201	4	3	50	50	carbon fibre	

*L1 is the effective working length, which is the distance from the center of the tip to the section of the stem with the same diameter as the tip

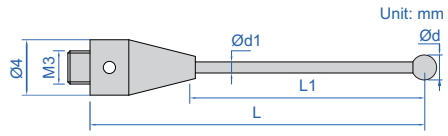


M2 extension rods of styli (mm)

Code	L	Material
ISQ-25-105	10	stainless steel
ISQ-25-110	20	
ISQ-25-125	30	ceramic



ISQ-30-066



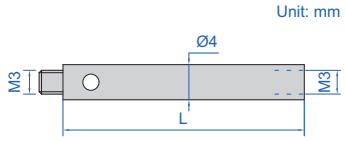
M3 styli (mm)

Code	Ød	Ød1	L	L1*	Material of rod	Material of tip
ISQ-30-001	1	0.7	21	4	carbide	ruby
ISQ-30-003	2	1	21	8		
ISQ-30-005	3	1.5	21	12		
ISQ-30-031	2	1.5	30	22.5		
ISQ-30-066	3	2	50	42.5	ceramic	
ISQ-30-080	6	4	75	75	carbon fibre	

*L1 is the effective working length, which is the distance from the center of the tip to the section of the stem with the same diameter as the tip



ISQ-35-110



M3 extension rods of styli (mm)

Code	L	Material
ISQ-35-101	10	stainless steel
ISQ-35-105	20	
ISQ-35-110	35	
ISQ-35-115	50	ceramic

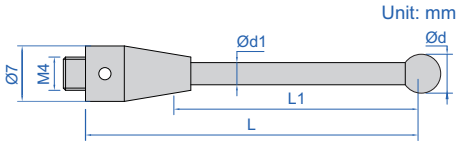
M4 styli (mm)

Code	Ød	Ød1	L	L1*	Material of rod	Material of tip
ISQ-40-113	3	2	18.5	13	stainless steel	ruby
ISQ-40-208	6	4	50	36		
ISQ-40-106	1	0.7	19.5	4	carbide	
ISQ-40-109	2	1.4	19	8		
ISQ-40-141	1	0.7	20	10		
ISQ-40-195	2	1.5	50	40		
ISQ-40-202	4	2	50	38		
ISQ-40-173	5	4	50	34	ceramic	
ISQ-40-179	6	4	50	36		
ISQ-40-222	6	4	75	63		
ISQ-40-240	5	4	100	84		
ISQ-40-245	6	4	100	86		

*L1 is the effective working length, which is the distance from the center of the tip to the section of the stem with the same diameter as the tip



ISQ-40-195

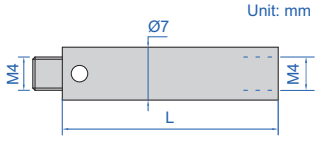


To be continued

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ISQ-45-025

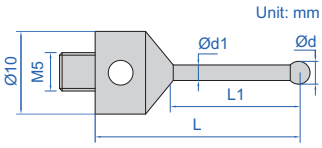


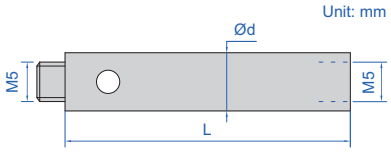
M4 extension rods of styli (mm)

Code	L	Material
ISQ-45-025	30	ceramic
ISQ-45-028	50	



ISQ-50-059





M5 styli (mm)

Code	Ød	Ød1	L	L1*	Material of rod	Material of tip
ISQ-50-051	1	0.7	20	5	carbide	ruby
ISQ-50-059	2	1.5	20	11		
ISQ-50-067	3	2	20	11		
ISQ-50-071	4	2	20	11		
ISQ-50-075	5	3	20	11		

*L1 is the effective working length, which is the distance from the center of the tip to the section of the stem with the same diameter as the tip

M5 extension rods of styli (mm)

Code	L	Ød	Material
ISQ-55-012	20	10	stainless steel
ISQ-55-014	30	10	
ISQ-55-016	50	10	
ISQ-55-018	100	10	
ISQ-55-031	50	20	aluminum
ISQ-55-035	100	20	
ISQ-55-039	200	20	

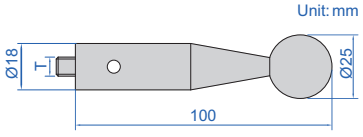
STANDARD BALLS FOR CMM

INSIZE PLUS

INSPECTION CERTIFICATE

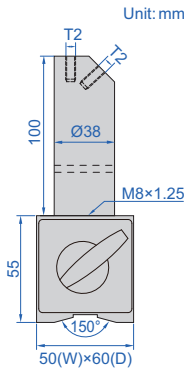
- Diameter accuracy of ceramic ball: +1.25μm/-1μm, roundness: 0.13μm
- Mirror surface
- Stainless steel measuring rod
- Supplied with manufacturer inspection certificate





ISQ-16-025CE-M8





ISQ-16-BASE-M8

(mm)

Code	T	Remark
ISQ-16-025CE-M6	M6	including measuring rod
ISQ-16-025CE-M8	M8	
ISQ-16-025CE-M10	M10	
ISQ-16-025CE-M12	M12	

MAGNETIC BASE (mm)

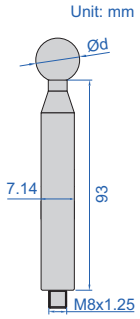
Code	T2	Magnetic force
ISQ-16-BASE-M6	M6	80kgf
ISQ-16-BASE-M8	M8	80kgf
ISQ-16-BASE-M10	M10	80kgf
ISQ-16-BASE-M12	M12	80kgf

CERAMIC BALL GAUGES

INSPECTION CERTIFICATE

- To calibrate CMM probes
- Zirconia material, high strength and hardness, extremly wear resistance and corrosion resistance good insulation, antistatic and magnetic resistance
- Mirror surface, with pole
- Supplied with manufacturer inspection certificate





4198-20

High accuracy

Code	Diameter (Ød)	Accuracy	Roundness
4198-8	8mm	±5μm	0.5μm
4198-10	10mm	±5μm	0.5μm
4198-12D7	12.7mm	±5μm	0.5μm
4198-13	13mm	±5μm	0.5μm
4198-14	14mm	±5μm	0.5μm
4198-15	15mm	±5μm	0.5μm
4198-16	16mm	±5μm	0.5μm
4198-17	17mm	±5μm	0.5μm
4198-20	20mm	±5μm	0.5μm
4198-25D4	25.4mm	±5μm	0.5μm

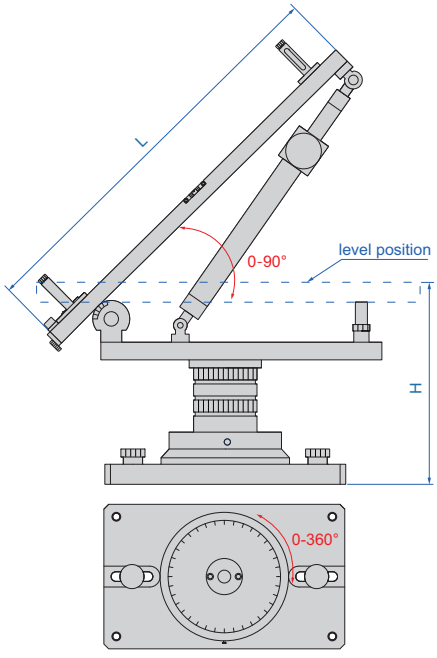
Standard accuracy

Code	Diameter (Ød)	Accuracy	Roundness
4198-8A	8mm	±5μm	1μm
4198-10A	10mm	±5μm	1μm
4198-12D7A	12.7mm	±5μm	1μm
4198-13A	13mm	±5μm	1μm
4198-14A	14mm	±5μm	1μm
4198-15A	15mm	±5μm	1μm
4198-16A	16mm	±5μm	1μm
4198-17A	17mm	±5μm	1μm
4198-20A	20mm	±5μm	1μm
4198-25D4A	25.4mm	±5μm	1μm

GAUGE BLOCK STAND FOR CMM

VIDEO





6885-1000

- Made of aluminum
- Used with gauge blocks to calibrate CMM
- Optional accessory: gauge blocks (**4101**, **4103** and **4104** series)

(mm)

Code	Length (L)	Height (H)
6885-1000	500, 600, 650, 700, 750, 800, 850, 900, 1000	235, 355, 475



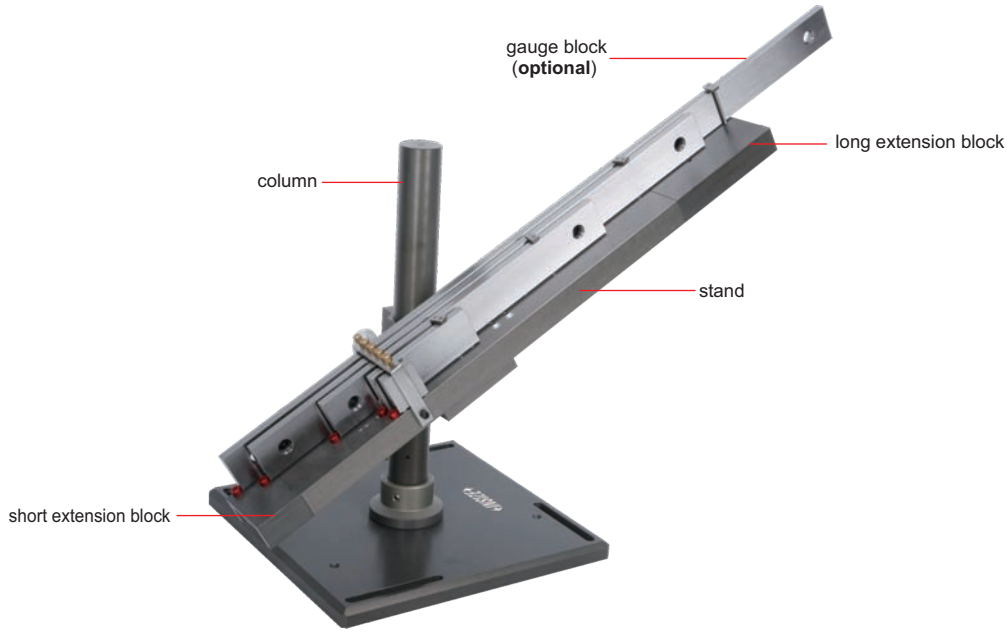
height column (included, 2pcs)



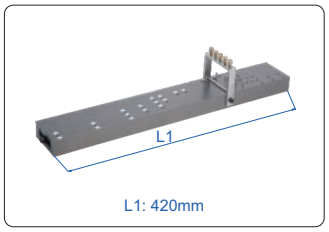
extension plate (included, 4pcs)

GAUGE BLOCK STAND FOR CMM (BASIC TYPE)
CODE 7398-1000

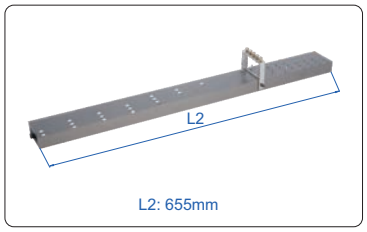
VIDEO



- Made of aluminum
- Used in conjunction with a gauge block to calibrate and compensate for CMM errors
- Minimum height for CMM: 400mm
- Angle adjustment range (0~90)°
- Optional accessory: gauge blocks (**4101**, **4103** and **4104** series)



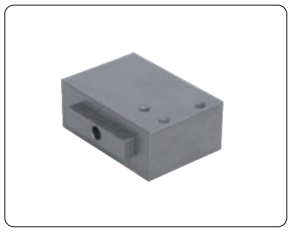
short stand (included)



long stand (included)



long extension block (included)



short extension block (included)

(mm)

Code	Applicable block length	Column height
7398-1000	30, 100, 125, 150, 175, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000	450

INSPECTION CERTIFICATE

CMM CHECK MASTERS

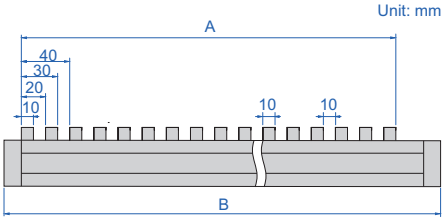


horizontal use



6882-600A

Unit: mm



- To check the accuracy of table movements of machine tools and calibrate CMM, digital height gauge, height gauge, caliper
- Horizontal use and vertical use
- Constructed with ceramic gauge blocks
- Optional accessory: stand

21

STANDARD ACCURACY

Code	Size	Step	A (mm)	B (mm)	Range of inside measurement (mm)	Range of outside measurement (mm)	Range of height measurement (mm)
6882-300A*	0-300mm	10mm	310	350	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330
6882-400A*	0-400mm	10mm	410	450	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430
6882-500A*	0-500mm	10mm	510	550	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530
6882-600A*	0-600mm	10mm	610	650	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610, 630
6882-1000A*	0-1000mm	10mm	1010	1050	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610, 630, 650, 670, 690, 710, 730, 750, 770, 790, 810, 830, 850, 870, 890, 910, 930, 950, 970, 990	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610, 630, 650, 670, 690, 710, 730, 750, 770, 790, 810, 830, 850, 870, 890, 910, 930, 950, 970, 990, 1010	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610, 630, 650, 670, 690, 710, 730, 750, 770, 790, 810, 830, 850, 870, 890, 910, 930, 950, 970, 990, 1010, 1030

To be continued

Continued from previous page

HIGH ACCURACY

Code	Size	Step	A (mm)	B (mm)	Range of inside measurement (mm)	Range of outside measurement (mm)	Range of height measurement (mm)
6882-300H*	0-300mm	10mm	310	350	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330
6882-400H*	0-400mm	10mm	410	450	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430
6882-500H*	0-500mm	10mm	510	550	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530
6882-600H*	0-600mm	10mm	610	650	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610, 630
6882-1000H*	0-1000mm	10mm	1010	1050	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610, 630, 650, 670, 690, 710, 730, 750, 770, 790, 810, 830, 850, 870, 890, 910, 930, 950, 970, 990	10, 30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610, 630, 650, 670, 690, 710, 730, 750, 770, 790, 810, 830, 850, 870, 890, 910, 930, 950, 970, 990, 1010	30, 50, 70, 90, 110, 130, 150, 170, 190, 210, 230, 250, 270, 290, 310, 330, 350, 370, 390, 410, 430, 450, 470, 490, 510, 530, 550, 570, 590, 610, 630, 650, 670, 690, 710, 730, 750, 770, 790, 810, 830, 850, 870, 890, 910, 930, 950, 970, 990, 1010, 1030

*Supplied with manufacturer inspection certificate

Accuracy

Range (mm)	Standard accuracy	High accuracy
≤300	±1.3μm	±0.8μm
>300, ≤400	±1.6μm	±1.0μm
>400, ≤500	±2.0μm	±1.0μm
>500, ≤600	±2.5μm	±1.0μm
>600, ≤800	±3.0μm	±2.5μm
>800, ≤1000	±4.0μm	±2.5μm

Stand (optional)

Code	Applicable check masters
6882-S1	6882-300A, 6882-300H
6882-S2	6882-400A, 6882-400H
6882-S3	6882-500A, 6882-500H
6882-S4	6882-600A, 6882-600H
6882-S5	6882-1000A, 6882-1000H

stand (**optional**)

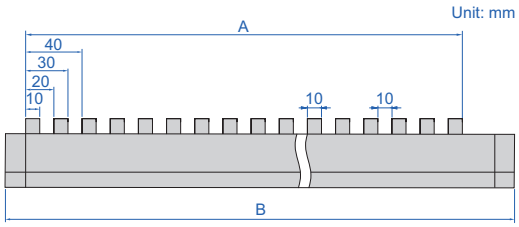


INSPECTION CERTIFICATE

CMM CHECK MASTERS (ADVANCED TYPE)



6874-1000



- To check the accuracy of table movements of machine tools and calibrate CMM
- Horizontal use and vertical use
- Constructed with ceramic gauge blocks
- Optional accessory: stand

Code	Size	Step	A	B
6874-300 *	0-300mm	10mm	310mm	345mm
6874-450 *	0-450mm	10mm	460mm	495mm
6874-600 *	0-600mm	10mm	610mm	645mm
6874-1000 *	0-1000mm	10mm	1010mm	1045mm

*Supplied with ISO17025 calibration cartificate of Shenzhen Institute of Metrology&Quality Inspection (SMQ)



ISO17025 calibration certificate

Accuracy

Range (mm)	Accuracy	Work face size variation
≤100	±1.0μm	0.5μm
>100, ≤200	±1.1μm	0.5μm
>200, ≤300	±1.3μm	0.6μm
>300, ≤400	±1.6μm	0.7μm
>400, ≤500	±2.0μm	0.8μm
>500, ≤600	±2.5μm	1.0μm
>600, ≤800	±3.0μm	1.4μm
>800, ≤1000	±4.0μm	1.8μm



stand (**optional**)

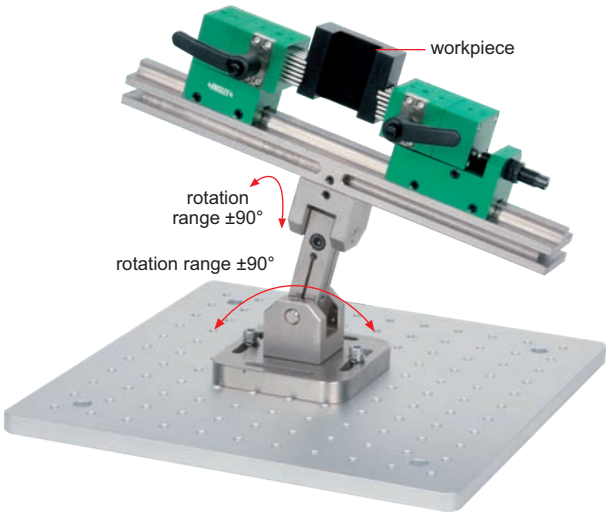
Stand (optional)

Code	Applicable check masters
6874-A	6874-300, 6874-450, 6874-600
6874-B	6874-1000

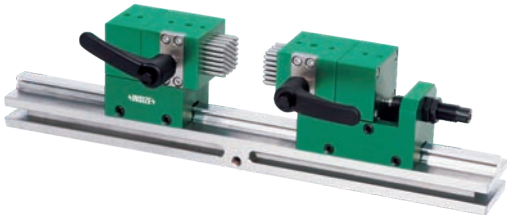
JIGS FOR CMM (ANVIL Ø2.5mm)

CAN BE CUSTOMIZED

VIDEO



ISY-200



ISY-200-A



ISY-200-3



ISY-200-5

Code	Product	Remark
ISY-200	3-piece jig set	including 1 pc **ISY-200-A**, 1 pc **ISY-200-3**, 1 pc **ISY-200-5**

(mm)

Code	Product	Clamping range	Anvil area	Anvil stroke
ISY-200-A	jigs for cmm	0~170	20.5×23.3	12

(mm)

Code	Product	Size	Hole size
ISY-200-3	base plate	300×300×12	M8

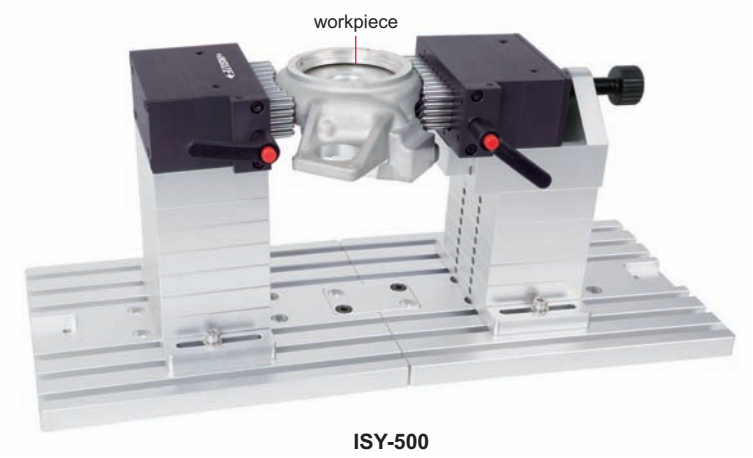
(mm)

Code	Product	Size
ISY-200-5	two-way adjustable stand	95×95×134.5

VIDEO

CAN BE CUSTOMIZED

JIGS FOR CMM (ANVIL Ø6mm)



ISY-500



ISY-500-1



ISY-500-2



ISY-500-3



ISY-500-4



ISY-500-5



ISY-500-6



ISY-500-7

Code	Product	Remark
ISY-500	19-piece jig set	including 1 pc **ISY-500-1**, 1 pc **ISY-500-2**, 2 pcs **ISY-500-3**, 10 pcs **ISY-500-4**, 2 pcs **ISY-500-5**, 1 pc **ISY-500-6**, 2 pcs **ISY-500-7**

(mm)

Code	Product	Size	Anvil area	Anvil stroke
ISY-500-1	spring anvil	134×90×90	36×100	24
ISY-500-2	adjustable spring anvil (range 0-40mm)	134×120×130	36×100	24

(mm)

Code	Product	Size
ISY-500-3	base plate	300×240×20
ISY-500-4	block	120×90×20
ISY-500-5	connecting plate	170×90×15
ISY-500-6	connecting block of base plate	80×50×10
ISY-500-7	clamp handle	—

JIGS FOR CMM (ANVIL Ø2.5mm)

CAN BE CUSTOMIZED

VIDEO



ISY-300-1



ISY-300



ISY-300-2



ISY-300-3



ISY-300-4



ISY-300-5



ISY-300-6



ISY-300-7



ISY-300-8



ISY-300-9



ISY-300-10



ISY-300-11



ISY-300-12



ISY-300-13

Code	Product	Remark
ISY-300	46-piece jig set	including 1 pc **ISY-300-1**, 2 pcs **ISY-300-2**, 1 pc **ISY-300-3**, 2 pcs **ISY-300-4**, 14 pcs **ISY-300-5**, 2 pcs **ISY-300-6**, 8 pcs **ISY-300-7**, 6 pcs **ISY-300-8**, 2 pcs **ISY-300-9**, 2 pcs **ISY-300-10**, 2 pcs **ISY-300-11**, 2 pcs **ISY-300-12**, 2 pcs **ISY-300-13**

Code	Product	Size	Hole size
ISY-300-1	base plate	300×300×12mm	M8

(mm)

Code	Product	Size	Anvil area	Anvil stroke
ISY-300-2	spring anvil	60×40×75	20.5×23	14
ISY-300-3	spring anvil	Ø26×73	3.1cm² (hexagon)	14

(mm)

Code	Product	Size
ISY-300-4	block	50×50×50
ISY-300-5	block	50×50×20
ISY-300-6	connecting plate	110×50×10
ISY-300-7	block	Ø26×20
ISY-300-8	block	Ø26×30
ISY-300-9	connecting plate	150×26×10
ISY-300-10	clip	65×11
ISY-300-11	clip	100×11
ISY-300-12	connecting block of clip stand	Ø26×20
ISY-300-13	clip stand	Ø8×75

VIDEO

CAN BE CUSTOMIZED

JIGS FOR CMM (ANVIL Ø6mm)



ISY-400



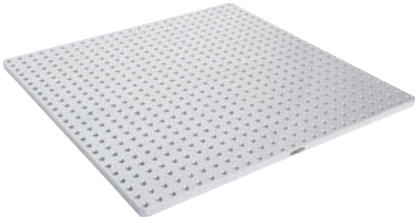
ISY-400-1



ISY-400-2



ISY-400-3



ISY-400-4



ISY-400-5



ISY-400-6

Code	Product	Remark
ISY-400	28-piece jig set	including 3 pcs **ISY-400-1**, 9 pcs **ISY-400-2**, 9 pcs **ISY-400-3**, 1 pc **ISY-400-4**, 3 pcs **ISY-400-5**, 3 pcs **ISY-400-6**

(mm)

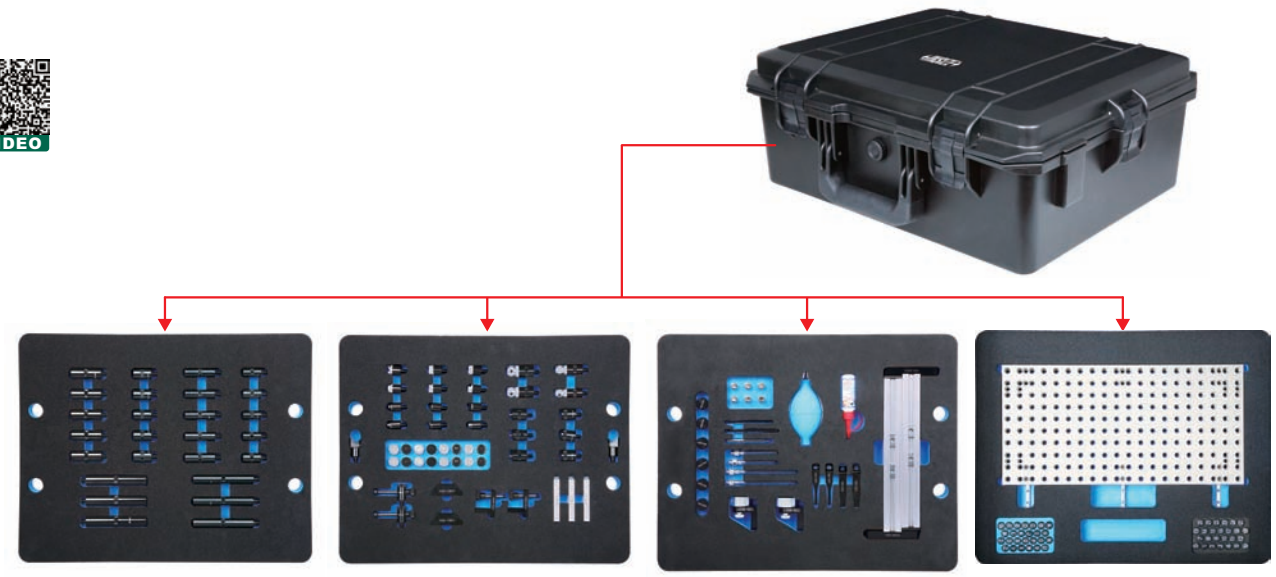
Code	Product	Size	Anvil area	Anvil stroke
ISY-400-1	spring anvil	135×60×90	36×100	24

(mm)

Code	Product	Size
ISY-400-2	block	120×60×20
ISY-400-3	block	120×60×30
ISY-400-4	base plate	500×500×12
ISY-400-5	connecting plate	125×120×10
ISY-400-6	clamp handle	—

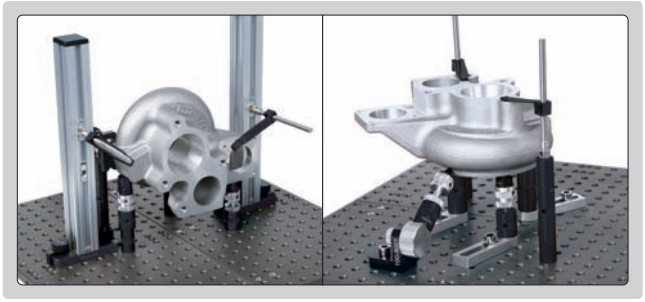
158-PIECE JIG SET FOR CMM
CODE ISY-100

VIDEO

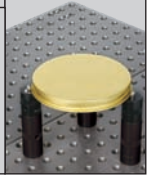


ISY-100

application examples

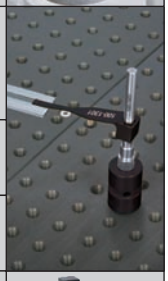
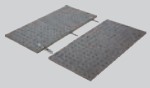
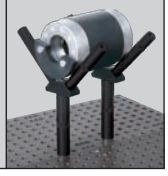


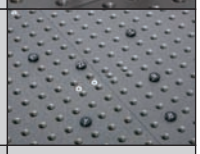
Product	Code	Size (mm)	Quantity	Application
stand 	**ISY-100-1001**	Ø16×30	5	
	ISY-100-1002	Ø16×50	5	
	ISY-100-1003	Ø16×100	3	
stand 	**ISY-100-1004**	Ø20×30	5	
	ISY-100-1005	Ø20×50	5	
	ISY-100-1006	Ø20×100	3	
stand with fine adjustment 	**ISY-100-2001**	Ø16×45~60	2	height adjustment: 45~60mm 
stand with fine adjustment 	**ISY-100-2003**	Ø20×45~60	2	
horizontal spring stand 	**ISY-100-4001**	—	2	

Product	Code	Size (mm)	Quantity	Application
horizontal screw stand 	**ISY-100-5001**	—	2	
magnetic stand (magnetic top surface) 	**ISY-100-7001**	Ø20×25	3	
stand for slice parts 	**ISY-100-8001**	Ø20×25	2	**ISY-100-8001** and **ISY-100-8002** use cooperatively 
clamping stand for slice parts 	**ISY-100-8002**		1	

To be continued

Continued from previous page

Product	Code	Size (mm)	Quantity	Application
clip 	ISY-100-1201	—	2	
clip 	ISY-100-1301	—	2	
clip stand 	ISY-100-1401	Ø6×60	2	
	ISY-100-1402	Ø6×100	2	
vertical square column 	ISY-100-3003	30×30×250	2	
sliding support plate 	ISY-100-1801	78×20×10	3	
clamping screw 	ISY-100-2301	Ø8×20	6	
screw 	ISY-100-2302	Ø8×20	6	
base plate 	ISY-600-400200	400×400×12 hole size: M8×1.25 hole center distance: 20	2 pieces	—
wrench 	ISY-100-3701	Ø3.8×70	1	—
wrench 	ISY-100-3801	M2.5	1	—
	ISY-100-3802	M5	1	—
	ISY-100-3803	M6	1	—
45° stand 	ISY-100-9001	—	2	
V shaped support 	ISY-100-1901	—	2	

Product	Code	Quantity	Application
V shaped support 	ISY-100-1902	2	
marker 	ISY-6100-1501	52*	
dust cleaner 	ISY-100-3501	1	—
lubricating oil 	ISY-100-3601	1	—

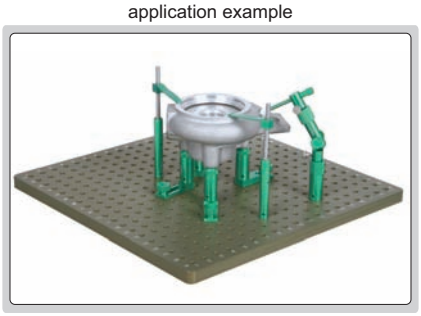
*Letter A~Z, number 0~25

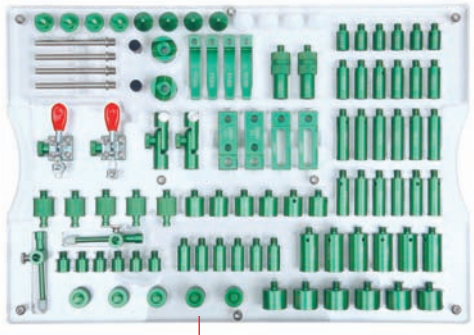
Product	Code	Quantity	Material	Application
support head 	ISY-100-27016	2	aluminum	
	ISY-100-27018	2	nylon	
support head 	ISY-100-27026	2	aluminum	
	ISY-100-27028	2	nylon	
support head 	ISY-100-27036	2	aluminum	
	ISY-100-27038	2	nylon	
support head 	ISY-100-27046	2	aluminum	
	ISY-100-27048	2	nylon	
support head 	ISY-100-27056	2	aluminum	
	ISY-100-27058	2	nylon	
support head 	ISY-100-27066	2	aluminum	
	ISY-100-27068	2	nylon	
support head 	ISY-100-27076	2	aluminum	
	ISY-100-27078	2	nylon	

99-PIECE JIG SET FOR CMM
CODE ISY-600

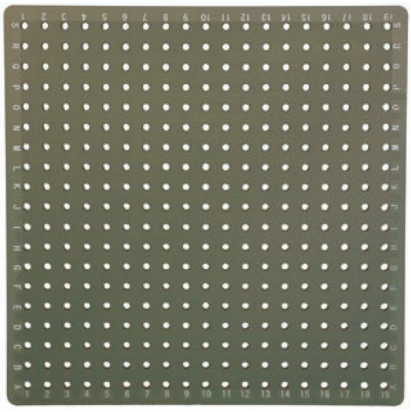
VIDEO

application example





acrylic tray (included)



ISY-600

Product	Code	Size (mm)	Quantity
stand	ISY-600-P1301	Ø13×13	6
	ISY-600-P1302	Ø13×20	6
	ISY-600-P1303	Ø13×26	6
stand	ISY-600-P1304	Ø13×32	6
	ISY-600-P1305	Ø13×40	6
	ISY-600-P1306	Ø13×45	6
stand	ISY-600-P1902	Ø20×20	6
	ISY-600-P1905	Ø20×38	6
	ISY-600-P2602	Ø26×20	6
spring stand	ISY-600-P1522	—	2
universal support	ISY-600-J1560	—	2
stand with fine adjustment	ISY-600-J1501	48~60	2
magnetic stand (magnetic top surface)	ISY-600-J2020	Ø20×20	5
adaptor	ISY-600-J2021	Ø20×19	5
V shaped support	ISY-600-J2520	Ø25×20	2
clamping screw	ISY-600-P2003	M8x1.25	4

Product	Code	Size (mm)	Quantity
sliding support plate	ISY-600-J2060	60×20×10	2
sliding support plate	ISY-600-J2060-2	60×20×10	2
clip	ISY-600-P1266	12×66	4
chuck support	ISY-600-JS201	—	2
clip stand	ISY-600-P0684	Ø6×74	4
aluminum support head	ISY-600-P2002	—	4
nylon support head	ISY-600-P2001	—	4
base plate	ISY-600-400	400×400×18 hole size: M8X1.25	1

PROFILE PROJECTORS, QUICK MEASUREMENT SYSTEMS, VISION MEASURING SYSTEMS

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Profile Projectors
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Horizontal Profile Projectors
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Quick Measurement Systems
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Online/Offline Quick Measurement Systems
Page 732



2D+3D Composite CNC Vision Measuring Systems
Page 734-735



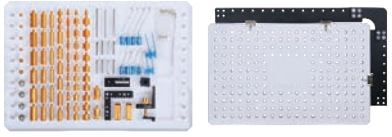
CNC Vision Measuring Systems
Page 734-740/745-748



Manual Vision Measuring Systems
Page 741-744



Vision Measuring Softwares
Page 749-750



Jig Set For Vision Measuring Systems
Page 751



Standard Glass Scales
Page 752

PROFILE PROJECTORS (BASIC TYPE)

INSPECTION CERTIFICATE

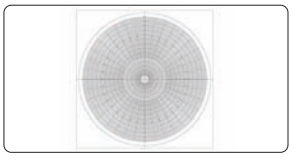
VIDEO



ISP-D150A

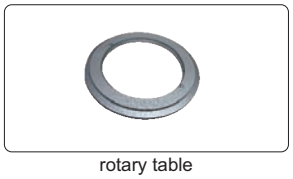
OPTIONAL ACCESSORY

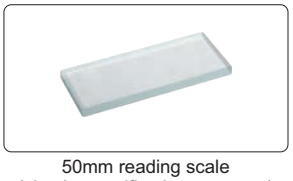

lens

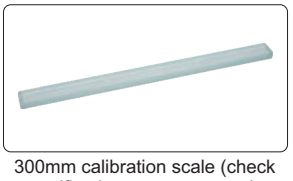

overlay chart (protractor with 1° graduation, radius with 1mm increment)

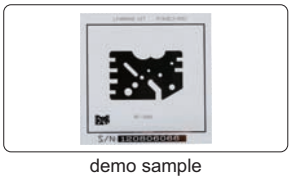

swivel center support


V-block


rotary table


50mm reading scale (check magnification accuracy)


300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)


demo sample


printer

To be continued

Continued from previous page

SPECIFICATION

Code		ISP-D150A	ISP-D150B	ISP-D200A	ISP-D200B	ISP-D250A	ISP-D250B
Projector screen		diameter: Ø300mm					
		rotation range: 0°~360°, resolution: 1" or 0.05°					
		reference lines: cross-hairs					
Lens	magnification	10X (included)		20X (**optional**)		50X (**optional**)	100X (**optional**)
	view field	Ø30mm		Ø15mm		Ø6mm	Ø3mm
	working distance	77.7mm		44.3mm		38.4mm	25.3mm
Max. workpiece height		90mm		90mm		90mm	90mm
Magnification accuracy		±0.08%					
Image		erect image	inverted image	erect image	inverted image	erect image	inverted image
Stage	metal stage size	340×152mm		404×228mm		405×280mm	
	glass stage size	196×96mm		260×160mm		306×196mm	
	X-Y stage travel	range: 150×50mm		range: 200×100mm		range: 250×150mm	
		resolution: 0.5μm					
		accuracy: (4+L/75)μm L is the measuring length in mm					
	Z (focus) travel range	90mm					
	max. load capacity	4kg					
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable					
		surface illumination: 24V/150W halogen lamp					
Data processing unit	display	X-Y stage travel, screen rotation					
	output	RS232C					
	function	measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines coordinate adjustment and compensation for some special measurments					
	advanced function	programming for batch measurements					
Power supply		110/220V, 50/60Hz					
Dimension (L×W×H)		770×550×1100mm		770×550×1100mm		780×780×1100mm	
Weight		125kg		135kg		145kg	

STANDARD DELIVERY

Main unit	1 pc
10X lens with half-reflection mirror and oblique illuminator mirror	1 pc
Foot-switch	1 pc
Overlay chart clip	4 pcs
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

20X lens with half-reflection mirror and oblique illuminator mirror	ISP-D150-LENS20X
50X lens with half-reflection mirror	ISP-D150-LENS50X
100X lens with half-reflection mirror	ISP-D150-LENS100X
Overlay chart	ISP-D150-CHART
Swivel center support	ISP-D150-SUPPORT

V-block with clamp	ISP-D150-VBLOCK
Rotary table	ISP-D150-TABLE
50mm reading scale	ISP-D150-SCALE50
300mm calibration scale	ISP-D150-RULE
Demo sample	ISP-D150-DEMO
Printer	ISP-D150-PRINTER

PROFILE PROJECTORS

INSPECTION CERTIFICATE

VIDEO



ISP-Z3015



ISP-A1000E

digital readout of **ISP-A1000E**

- touch buttons
- USB data output to Excel and CAD
- show diagram





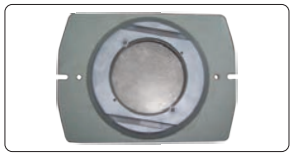


software flash disk (included, only for **ISP-A1000E**)

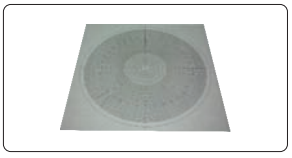
OPTIONAL ACCESSORY



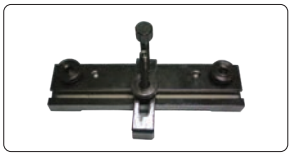
lens



rotary table (glass plate diameter 100mm)



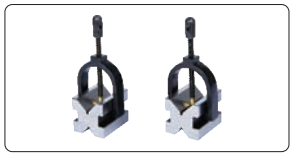
overlay chart (protractor with 1° graduation, radius with 1mm increment)



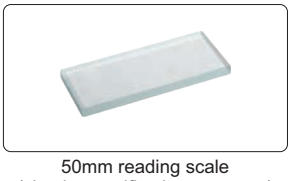
holder with clamp



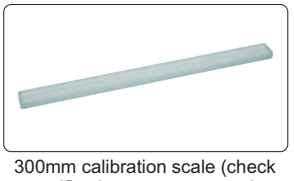
swivel center support



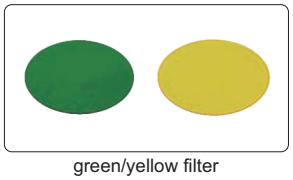
V-block with clamp



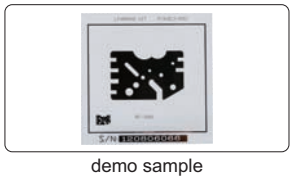
50mm reading scale (check magnification accuracy)



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



green/yellow filter



demo sample



printer (only for **ISP-A1000E**)

To be continued

Continued from previous page

SPECIFICATION

Code		**ISP-Z3015**		**ISP-A1000E**	
Edge detector		not included		included	
Lens	**magnification**	10X (included)	20X (**optional**)	50X (**optional**)	100X (**optional**)
	view field	Ø30mm	Ø15mm	Ø6mm	Ø3mm
	working distance	77.7mm	44.3mm	38.4mm	25.3mm
Max. workpiece height		90mm	90mm	90mm	90mm
Magnification accuracy		±0.08%			
Image		erect image			
Projector screen		diameter: Ø300mm			
		rotation range: 0°~360°, resolution: 1" or 0.01°			
		reference lines: cross-hairs			
Stage	**metal stage size**	340×152mm			
	glass stage size	196×96mm			
	X-Y stage travel	range: 150×50mm			
		resolution: 0.5μm			
		accuracy: (4+L/25)μm L is the measuring length in mm			
	Z (focus) travel range	90mm			
	max. load capacity	4kg			
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable			
		surface illumination: 24V/150W halogen lamp			
Data processing unit	**display**	X-Y stage travel, screen rotation			
	output	RS232C		RS232C, USB (data output to Excel and CAD)	
	function	measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines set origin of coordinate coordinate transform set midpoint of coordinate		measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines coordinate transform choose measurement object automatically according to the selective point and display the result	
	advanced function	—		programming for batch measurements	
Power supply		110/220V, 50/60Hz			
Dimension (L×W×H)		550×770×1100mm			
Weight		135kg			

STANDARD DELIVERY

Main unit	1 pc
10X lens with half-reflection mirror and oblique illuminator mirror	1 pc
Overlay chart clip	4 pcs

Foot-switch	1 pc
Anti-dust cover	1 pc
Blue filter	1 pc
Software (only for ISP-A1000E) and USB cable	1 pc

OPTIONAL ACCESSORY

20X lens with half-reflection mirror and oblique illuminator mirror	**ISP-Z3015-LENS20X**
50X lens with half-reflection mirror	**ISP-Z3015-LENS50X**
100X lens with half-reflection mirror	**ISP-Z3015-LENS100X**
Rotary table	**ISP-Z3015-TABLE**
Overlay chart	**ISP-Z3015-CHART**
Holder with clamp	**ISP-Z3015-HOLDER**

Swivel center support	**ISP-Z3015-SUPPORT**
V-block with clamp	**ISP-Z3015-VBLOCK**
50mm reading scale	**ISP-Z3015-SCALE50**
300mm calibration scale	**ISP-Z3015-RULE**
Green filter	**ISP-A1000-GR-FILTER**
Yellow filter	**ISP-A1000-YE-FILTER**
Demo sample	**ISP-Z3015-DEMO**
Printer (only for ISP-A1000E)	**ISP-A1000-PRINTER**

HIGH PRECISION PROFILE PROJECTORS (WITH EDGE DETECTOR)

THE STAGE DOESN'T MOVE UP AND DOWN

INSPECTION CERTIFICATE

VIDEO



software flash disk (included)



ISP-A5000E

- Adjust the focus by ascending and descending the projector head, the stage doesn't move up and down
- Maximum workpiece weight 30kg

digital readout

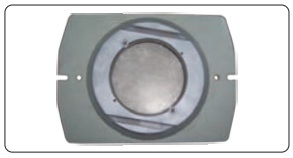


- touch buttons
- USB data output to Excel and CAD
- show diagram

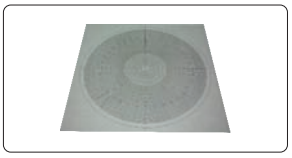
OPTIONAL ACCESSORY



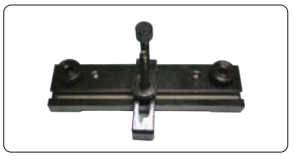
lens



rotary table (glass plate diameter 100mm)



overlay chart (protractor with 1° graduation, radius with 1mm increment)



holder with clamp



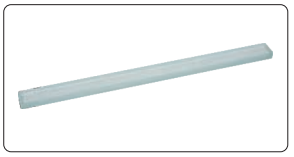
swivel center support



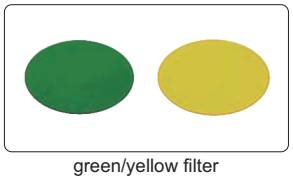
V-block with clamp



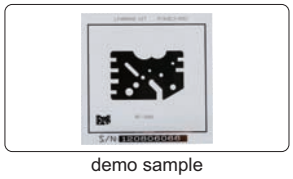
50mm reading scale (check magnification accuracy)



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



green/yellow filter



demo sample



printer

To be continued

Continued from previous page

SPECIFICATION

Code		ISP-A4500E	ISP-A5000E	ISP-A5001E	ISP-A5002E	ISP-A5003E
Edge detector		included				
Lens	magnification	10X (included)	20X (**optional**)	50X (**optional**)	100X (**optional**)	
	view field	Ø30mm	Ø15mm	Ø6mm	Ø3mm	
	working distance	77.7mm	44.3mm	38.4mm	25.3mm	
Max. workpiece height		90mm	90mm	90mm	90mm	
Magnification accuracy		±0.08%				
Image		erect image				
Projector screen		diameter: Ø300mm				
		rotation range: 0°~360°, resolution: 1" or 0.01°				
		reference lines: cross-hairs				
Stage	metal stage size	354×228mm	404×228mm	450×280mm	500×330mm	606×466mm
	glass stage size	210×160mm	260×160mm	306×196mm	321×221mm	450×350mm
	X-Y stage travel range	150×100mm	200×100mm	250×150mm	295×195mm	400×300mm
	resolution	0.5μm				
	accuracy	(3+L/75)μm L is the measuring length in mm				
	Z (focus) travel range	100mm				
	max. load capacity	30kg				
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable				
		surface illumination: 24V/150W halogen lamp				
Data processing unit	display	X-Y stage travel, screen rotation				
	output	RS232C, USB (data output to Excel and CAD)				
	function	measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines coordinate transform choose measurement object automatically according to the selective point and display the result				
	advanced function	programming for batch measurements				
Power supply		110/220V, 50/60Hz				
Dimension (L×W×H)		780×780×1100mm	780×780×1100mm	810×780×1120mm	900×780×1120mm	1040×780×1120mm
Weight		160kg	160kg	180kg	180kg	250kg

STANDARD DELIVERY

Main unit	1 pc
10X lens with half-reflection mirror and oblique illuminator mirror	1 pc
Overlay chart clip	4 pcs
Foot-switch	1 pc
Blue filter	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

20X lens with half-reflection mirror and oblique illuminator mirror	ISP-A5000-LENS20X
50X lens with half-reflection mirror	ISP-A5000-LENS50X
100X lens with half-reflection mirror	ISP-A5000-LENS100X
Rotary table (for ISP-A4500E/A5000E)	ISP-A5000-TABLE
Rotary table (for ISP-A5001E/A5002E)	ISP-A5001-TABLE
Rotary table (for ISP-A5003E)	ISP-A5003-TABLE
Printer	ISP-A5000-PRINTER
Swivel center support (for ISP-A4500E)	ISP-A4500-SUPPORT
Swivel center support (for ISP-A5000E/A5001E)	ISP-A5000-SUPPORT
Overlay chart	ISP-A5000-CHART
Holder with clamp	ISP-A5000-HOLDER
V-block with clamp	ISP-A5000-VBLOCK
50mm reading scale	ISP-A5000-SCALE50
300mm calibration scale	ISP-A5000-RULE
Green filter	ISP-A5000-GR-FILTER
Yellow filter	ISP-A5000-YE-FILTER
Demo sample	ISP-A5000-DEMO

HIGH PRECISION PROFILE PROJECTORS (WITHOUT EDGE DETECTOR)

THE STAGE DOESN'T MOVE UP AND DOWN

INSPECTION CERTIFICATE

VIDEO



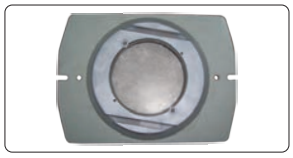
ISP-AZ3020

- Adjust the focus by ascending and descending the projector head, the stage doesn't move up and down
- Maximum workpiece weight 30kg

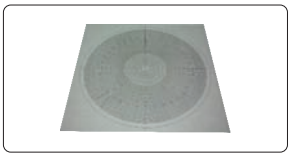
OPTIONAL ACCESSORY



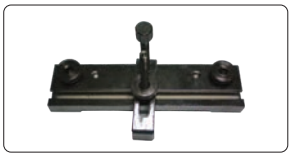
lens



rotary table
(glass plate diameter 100mm)



overlay chart (protractor with 1° graduation, radius with 1mm increment)



holder with clamp



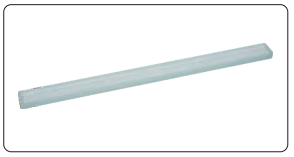
swivel center support



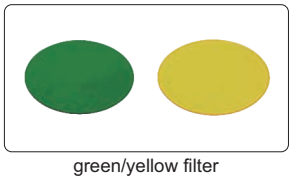
V-block with clamp



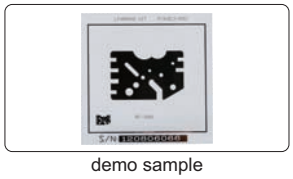
50mm reading scale
(check magnification accuracy)



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



green/yellow filter



demo sample

To be continued

Continued from previous page

SPECIFICATION

Code		ISP-AZ3010	ISP-AZ3020	ISP-AZ3025	ISP-AZ3030	ISP-AZ3040
Edge detector		not included				
Lens	magnification	10X (included)	20X (**optional**)	50X (**optional**)	100X (**optional**)	
	view field	Ø30mm	Ø15mm	Ø6mm	Ø3mm	
	working distance	77.7mm	44.3mm	38.4mm	25.3mm	
Max. workpiece height		90mm	90mm	90mm	90mm	
Magnification accuracy		±0.08%				
Image		erect image				
Projector screen		diameter: Ø300mm				
		rotation range: 0°~360°, resolution: 1" or 0.01°				
		reference lines: cross-hairs				
Stage	metal stage size	354×228mm	404×228mm	450×280mm	500×330mm	606×466mm
	glass stage size	210×160mm	260×160mm	306×196mm	321×221mm	450×350mm
	X-Y stage travel range	150×100mm	200×100mm	250×150mm	295×195mm	400×300mm
	resolution	0.5μm				
	accuracy	(3+L/75)μm L is the measuring length in mm				
	Z (focus) travel range	100mm				
	max. load capacity	30kg				
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable				
		surface illumination: 24V/150W halogen lamp				
Data processing unit	display	X-Y stage travel, screen rotation				
	output	RS232C				
	function	measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines set origin of coordinate coordinate transform set midpoint of coordinate				
Power supply		110/220V, 50/60Hz				
Dimension (L×W×H)		780×780×1100mm	780×780×1100mm	810×780×1120mm	900×780×1120mm	1040×780×1120mm
Weight		160kg	160kg	180kg	180kg	250kg

STANDARD DELIVERY

Main unit	1 pc
10X lens with half-reflection mirror and oblique illuminator mirror	1 pc
Overlay chart clip	4 pcs
Foot-switch	1 pc
Blue filter	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

20X lens with half-reflection mirror and oblique illuminator mirror	ISP-A5000-LENS20X
50X lens with half-reflection mirror	ISP-A5000-LENS50X
100X lens with half-reflection mirror	ISP-A5000-LENS100X
Rotary table (for ISP-AZ3010/3020)	ISP-A5000-TABLE
Rotary table (for ISP-AZ3025/3030)	ISP-A5001-TABLE
Rotary table (for ISP-AZ3040)	ISP-A5003-TABLE
Swivel center support (for ISP-AZ3020/3025)	ISP-A5000-SUPPORT

Swivel center support (for ISP-AZ3010)	ISP-A4500-SUPPORT
Overlay chart	ISP-A5000-CHART
Holder with clamp	ISP-A5000-HOLDER
V-block with clamp	ISP-A5000-VBLOCK
50mm reading scale	ISP-A5000-SCALE50
300mm calibration scale	ISP-A5000-RULE
Green filter	ISP-A5000-GR-FILTER
Yellow filter	ISP-A5000-YE-FILTER
Demo sample	ISP-A5000-DEMO

HORIZONTAL PROFILE PROJECTORS

INSPECTION CERTIFICATE

VIDEO



ISP-W3020



ISP-A3000E

digital readout of **ISP-A3000E**

- touch buttons
- USB data output to Excel and CAD
- show diagram





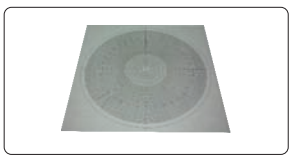


software flash disk (included, only for **ISP-A3000E**)

OPTIONAL ACCESSORY



lens



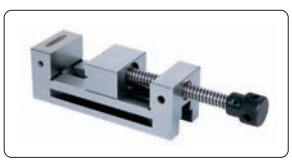
overlay chart (protractor with 1° graduation, radius with 1mm increment)



50mm reading scale (check magnification accuracy)



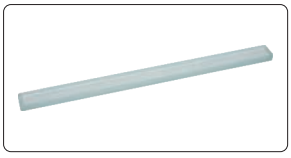
demo sample



vise



rotary table



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



printer (only for **ISP-A3000E**)

To be continued

Continued from previous page

SPECIFICATION

Code		ISP-W3020		ISP-A3000E	
Edge detector		not included		included	
Lens	magnification	10X (included)	20X (**optional**)	50X (**optional**)	100X (**optional**)
	view field	Ø30mm	Ø15mm	Ø6mm	Ø3mm
	working distance	77.7mm	44.3mm	38.4mm	25.3mm
Magnification accuracy		±0.08%			
Projector screen		diameter: Ø300mm			
		rotation range: 0°~360°, resolution: 1" or 0.01°			
		reference lines: cross-hairs			
Stage	metal stage size	400×150mm			
	turning range	±15°			
	X-Z stage travel	range: 200×100mm			
		resolution: 0.5μm			
		accuracy: (4+L/25)μm L is the measuring length in mm			
	Y (focus) travel range	75mm			
	max. load capacity	50kg			
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable			
		surface illumination: 12V/150W halogen lamp (with 2 fibers), position is adjustable			
Data processing unit	display	X-Z stage travel, screen rotation			
	output	RS232C		RS232C, USB (data output to Excel and CAD)	
	function	measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines set origin of coordinate coordinate transform set midpoint of coordinate		measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines coordinate transform choose measurement object automatically according to the selective point and display the result	
	advanced function	—		programming for batch measurements	
Power supply		110/220V, 50/60Hz			
Dimension (L×W×H)		830×1090×1010mm			
Weight		160kg			

STANDARD DELIVERY

Main unit	1 pc
10X lens	1 pc
Overlay chart clip	4 pcs
Foot-switch	1 pc
Anti-dust cover	1 pc
Software (only for ISP-A3000E) and USB cable	1 pc

OPTIONAL ACCESSORY

20X lens	ISP-A3000-LENS20X
50X lens	ISP-A3000-LENS50X
100X lens	ISP-A3000-LENS100X
Overlay chart	ISP-A3000-CHART
50mm reading scale	ISP-A3000-SCALE50
300mm calibration scale	ISP-A3000-RULE

Demo sample	ISP-A3000-DEMO
V-block with clamp	ISP-A3000-VBLOCK
Rotary table	ISP-A3000-RTABLE
Vise	ISP-A3000-VISE
Printer (only for ISP-A3000E)	ISP-A3000-PRINTER

HORIZONTAL PROFILE PROJECTORS

INSPECTION CERTIFICATE

VIDEO



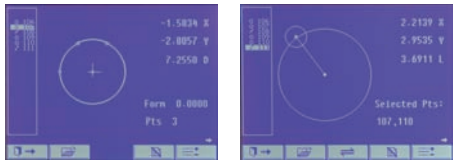
ISP-W4025



ISP-A7000E

digital readout of **ISP-A7000E**

- touch buttons
- USB data output to Excel and CAD
- show diagram



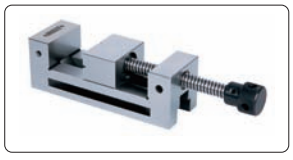


software flash disk (included, only for **ISP-A7000E**)

OPTIONAL ACCESSORY



lens



vise



rotary table



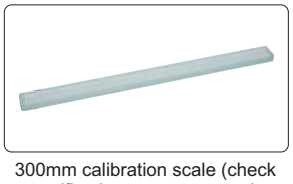
demo sample (need rotary table)



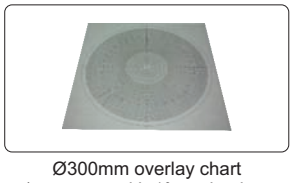
printer (only for **ISP-A7000E**)



50mm reading scale (check magnification accuracy)



300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



Ø300mm overlay chart (protractor with 1° graduation, radius with 1mm increment)

To be continued

Continued from previous page

SPECIFICATION

Code		**ISP-W4025**			**ISP-A7000E**	
Edge detector		not included			included	
Lens	**magnification**	5X (**optional**)	10X (standard)	20X (**optional**)	50X (**optional**)	100X (**optional**)
	view field	Ø80mm	Ø40mm	Ø20mm	Ø8mm	Ø4mm
	working distance	93.7mm	103.9mm	95.1mm	65.7mm	35mm
Magnification accuracy		±0.08%				
Image		erect image				
Projector screen		diameter: Ø400mm				
		rotation range: 0°~360°, resolution: 1" or 0.01°				
		reference lines: cross-hairs				
Stage	**metal stage size**	450×200mm				
	turning range	±15°				
	X-Z stage travel	range: 250×150mm				
		resolution: 0.5μm				
		accuracy: (4+L/25)μm L is the measuring length in mm				
	Y (focus) travel range	100mm				
	max. load capacity	50kg				
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable				
		surface illumination: 12V/150W halogen lamp (with 2 fibers), position is adjustable				
Data processing unit	**display**	X-Z stage travel, screen rotation				
	output	RS232C			RS232C, USB (data output to Excel and CAD)	
	function	measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines set origin of coordinate coordinate transform set midpoint of coordinate			measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines coordinate transform choose measurement object automatically according to the selective point and display the result	
	advanced function	—			programming for batch measurements	
Power supply		110/220V, 50/60Hz				
Dimension (L×W×H)		646×1215×1210mm				
Weight		240kg				

STANDARD DELIVERY

Main unit	1 pc
10X lens	1 pc
Overlay chart clip	4 pcs
Foot-switch	1 pc
Anti-dust cover	1 pc
Software (only for ISP-A7000E) and USB cable	1 pc

OPTIONAL ACCESSORY

5X lens	**ISP-W4025-LENS5X**	**300mm calibration scale**	**ISP-A3000-RULE**
20X lens	**ISP-W4025-LENS20X**	**Demo sample**	**ISP-A3000-DEMO**
50X lens	**ISP-W4025-LENS50X**	**V-block with clamp**	**ISP-A3000-VBLOCK**
100X lens	**ISP-W4025-LENS100X**	**Rotary table**	**ISP-A3000-RTABLE**
Ø300mm overlay chart	**ISP-A3000-CHART**	**Vise**	**ISP-A3000-VISE**
50mm reading scale	**ISP-A3000-SCALE50**	**Printer (only for ISP-A7000E)**	**ISP-A3000-PRINTER**

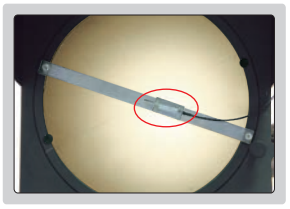
PROFILE PROJECTORS

INSPECTION CERTIFICATE

VIDEO



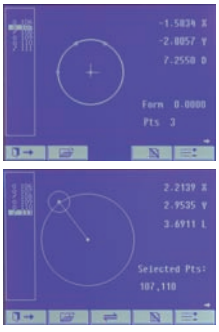
ISP-A6000 (without edge detector)



edge detector (for **ISP-A6000E**)

digital readout

- touch buttons
- USB data output to Excel and CAD
- show diagram



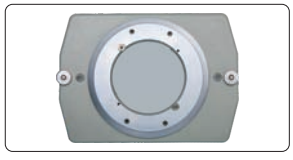


software flash disk (included)

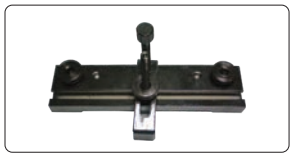
OPTIONAL ACCESSORY



lens



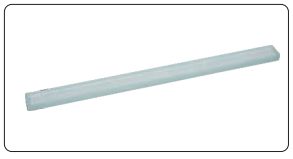
rotary table (glass plate diameter 100mm)



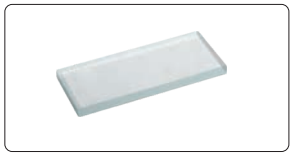
holder with clamp



printer



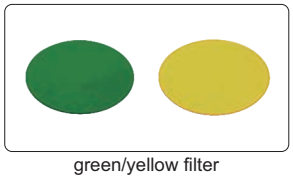
300mm calibration scale (check magnification accuracy together with 50mm reading scale or calibrate measuring accuracy)



50mm reading scale (check magnification accuracy)



demo sample



green/yellow filter

To be continued

Continued from previous page

SPECIFICATION

Code		ISP-A6000				ISP-A6000E
Edge detector		not included				included
Projector screen		diameter: Ø600mm				
		rotation range: 0°~360°, resolution: 1" or 0.01°				
		reference lines: cross-hairs				
Lens	magnification	5X (**optional**)	10X (included)	20X (**optional**)	50X (**optional**)	100X (**optional**)
	view field	Ø120mm	Ø60mm	Ø30mm	Ø12mm	Ø6mm
	working distance	242.8mm	143.2mm	85.5mm	92mm	48.5mm
Magnification accuracy		±0.08%				
Image		erect image				
Stage	metal stage size	404×265mm				
	glass stage size	270×170mm				
	X-Y stage travel	range: 200×100mm				
		resolution: 0.5μm				
		accuracy: (3+L/50)μm L is the measuring length in mm				
	Z (focus) travel range	50mm				
	max. load capacity	5kg				
Illumination		contour illumination: 24V/150W halogen lamp, brightness is adjustable				
		surface illumination: 12V/150W halogen lamp (with 2 fibers), position is adjustable				
Data processing unit	display	X-Y stage travel, screen rotation				
	output	RS232C, USB (data output to Excel and CAD)				
	function	measure coordinate of point measure coordinate of line measure center coordinate, radius of circle with three points measure distance between two objects measure angle with four points or two lines coordinate transform choose measurement object automatically according to the selective point and display the result				
	advanced function	programming for batch measurements				
Power supply		110/220V, 50/60Hz				
Dimension (L×W×H)		1200×1140×1940mm				
Weight		360kg				

STANDARD DELIVERY

Main unit	1 pc
10X lens	1 pc
Foot-switch	1 pc
Software and USB cable	1 pc
Overlay chart clip	4 pcs
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

5X lens	ISP-A6000-LENS5X
20X lens	ISP-A6000-LENS20X
50X lens	ISP-A6000-LENS50X
100X lens	ISP-A6000-LENS100X
Holder with clamp	ISP-A6000-HOLDER
300mm calibration scale	ISP-A6000-RULE

50mm reading scale	ISP-A6000-SCALE50
Rotary table	ISP-A6000-TABLE
Demo sample	ISP-A6000-DEMO
Printer	ISP-A6000-PRINTER
Green filter	ISP-A6000-GR-FILTER
Yellow filter	ISP-A6000-YE-FILTER

LARGE SIZE QUICK MEASUREMENT SYSTEM
CODE QMS-A450

VIDEO



22

SPECIFICATION

Optical lens		dual-field dual-telecentric low-distortion lens	
Measurement range		wide view field	small view field
		500×400mm	430×350mm
Measurement accuracy *	**without stitching**	±3μm①	±1μm②
	with stitching	±(5+0.02L)μm③	±(3+0.02L)μm④
Repeatability	**without stitching**	±1μm	±0.5μm
	with stitching	±2μm	±1.5μm
Illumination system	**transmission light**	telecentric illuminator, green light	
	surface light	vertical illuminator, high angle ring white light vertical illuminator, 4-zone low and medium angle ring white light (eletric) vertical illuminator, circular (directional) green light (eletric)	
	coaxial light (optional)	vertical illuminator, white light	
Max. weight of workpiece		25kg	
Measurement time		<2s	
Measurement data		2D measurement	
Environmental requirement		temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz	
Power supply		220V, 50Hz, 1200W	
Dimension (L×W×H)		1060×860×1890mm	
Weight		650kg	

* The optimum temperature is 20°C±1°C
①Within 73×49mm, on focal position and environment temperature at 20°C±1°C
②Within 16×12mm, on focal position and environment temperature at 20°C±1°C
③Within 450×360mm, on focal position and environment temperature at 20°C±1°C
④Within 387×315mm, on focal position and environment temperature at 20°C±1°C

To be continued

Continued from previous page

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically
- Measurement of 999+dimensions and 200+workpieces
- Suitable for parts with high precision requirements for large, medium, and small sizes

STANDARD DELIVERY

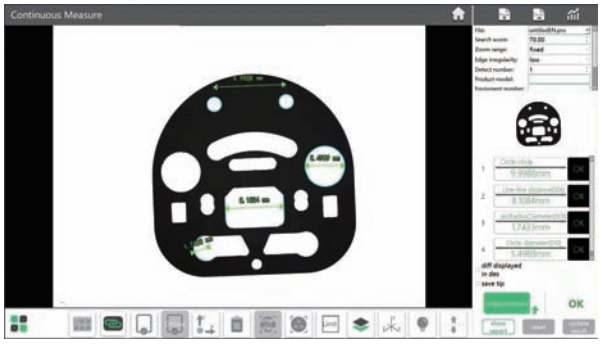
Main unit	1 pc
Computer	1 pc
Software	1 pc

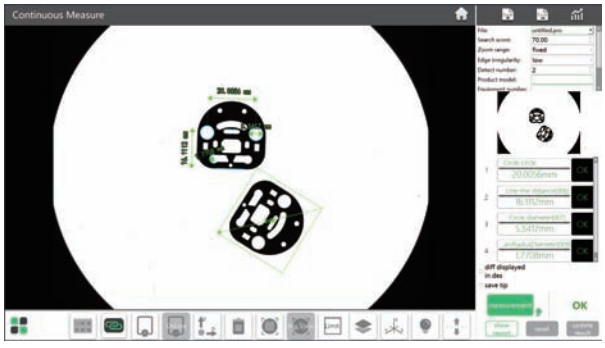
OPTIONAL ACCESSORY

Coaxial light illumination	**QMS-43-A1**
Data transmission function of software	**QMS-23-D1**
CAD import function of software	**QMS-23-C1**
Laser sensor	**QMS-43-SJ1**
Foot-switch	**QMS-43-FS1**

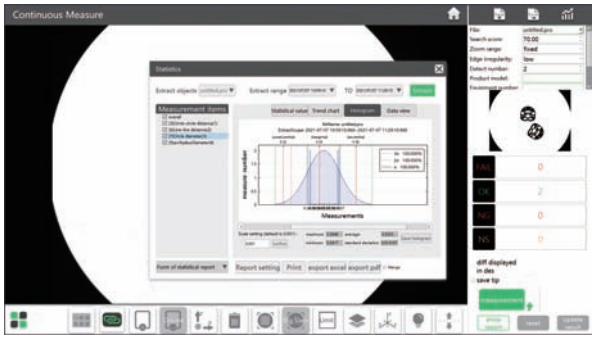
Software (included)

- Automatically measure widths, holes, rings, angles at the same time, simple and efficient





- Measuring result can be stored automatically. OK items and NG items can be counted automatically





HIGH PRECISION QUICK MEASUREMENT SYSTEM
CODE QMS-H210

SMALL VIEW FIELD SUITABLE FOR MEASURING SMALL SIZES SUCH AS THREADS AND CHAMFERS

VIDEO



SPECIFICATION

Optical lens		dual-field dual-telecentric low-distortion lens	
Measurement range		wide view field	small view field
		210×130mm	200×100mm
Measurement accuracy*	**without stitching**	±2μm①	±0.7μm②
	with stitching	±(4+0.02L)μm③	±(2.7+0.02L)μm④
Repeatability	**without stitching**	±1μm	±0.25μm
	with stitching	±2μm	±1.25μm
Illumination system	**transmission light**	telecentric illuminator, green light	
	surface light	vertical illuminator, high angle ring white light vertical illuminator, 4-zone low and medium angle ring white light (eletric) vertical illuminator, circular (directional) green light (eletric)	
	coaxial light	vertical illuminator, white light	
Max. weight of workpiece		5kg	
Measurement time		<2s	
Measurement data		2D measurement	
Environmental requirement		temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz	
Power supply		220V, 50Hz, 600W	
Dimension (L×W×H)		460×515×740mm	
Weight		45kg	

* The optimum temperature is 20°C±1°C
① Within 20×20mm, on focal position and environment temperature at 20°C±1°C
② Within 8×5mm, on focal position and environment temperature at 20°C±1°C
③ Within 189×117mm, on focal position and environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
④ Within 180×90mm, on focal position and environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage

To be continued

Continued from previous page

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically
- Measurement of 999+dimensions and 300+workpieces
- Suitable for parts with high precision for medium and small sizes



rotary table (**optional**)



11.6" LCD (**optional**)

STANDARD DELIVERY

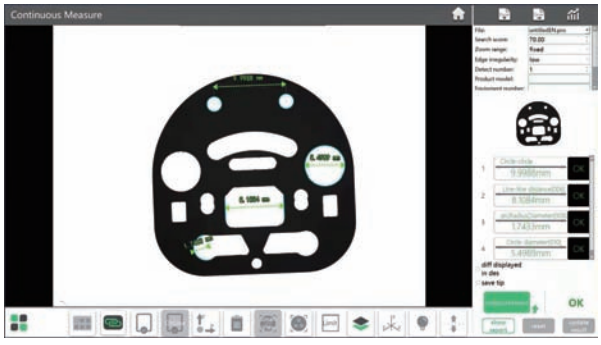
Main unit	1 pc
Computer	1 pc
Software	1 pc

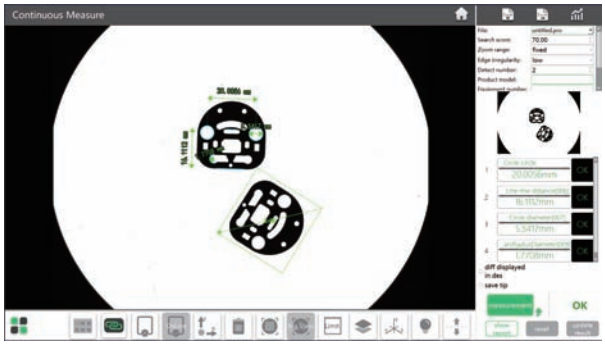
OPTIONAL ACCESSORY

Data transmission function of software	**QMS-23-D1**
CAD import function of software	**QMS-23-C1**
Laser sensor	**QMS-43-SJ1** (must be installed in factory)
Foot-switch	**QMS-43-FS1**
11.6" LCD	**QMS-23-B1** (must be installed in factory)
MES transmission function of software	**QMS-23-E1**
Rotary table	**QMS-43-RT1** (must be installed in factory)

Software (included)

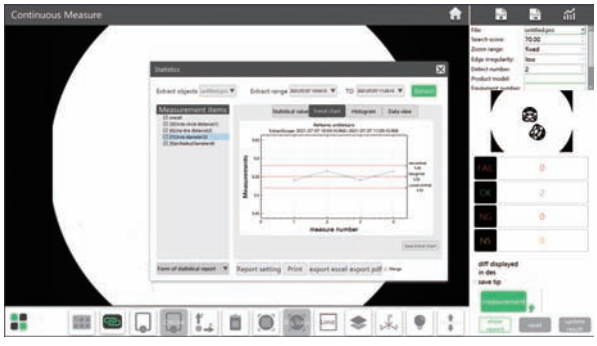
- Automatically measure widths, holes, rings, angles at the same time, simple and efficient





- Measuring result can be stored automatically. OK items and NG items can be counted automatically





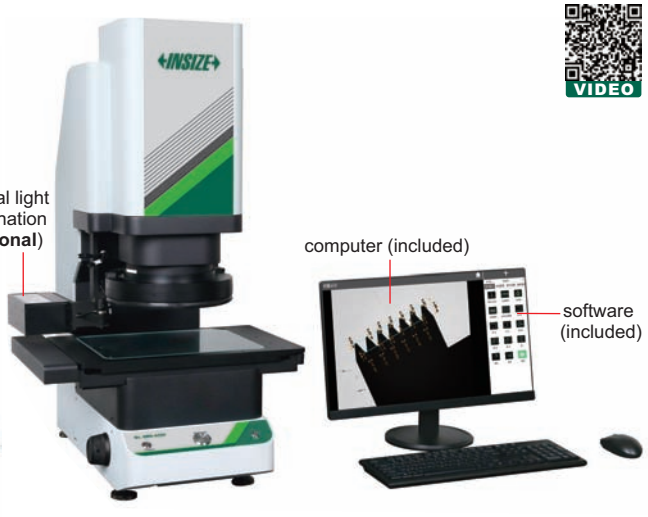
QUICK MEASUREMENT SYSTEMS (WITH STITCHING)

SMALL VIEW FIELD OF QMS-A220 AND QMS-A315 SUITABLE FOR MEASURING SMALL SIZES SUCH AS THREADS AND CHAMFERS

VIDEO



QMS-A220



QMS-A320

SPECIFICATION

Code		QMS-A220		QMS-A315		QMS-A320	
Optical lens		dual-field dual-telecentric low-distortion lens					
		wide view field: Ø100mm small view field: Ø25mm		wide view field: Ø100mm small view field: Ø25mm		wide view field: Ø150mm small view field: Ø50mm	
View field range		wide view field	small view field	wide view field	small view field	wide view field	small view field
		100×80mm	20×16mm	100×80mm	25×20mm	150×110mm	50×35mm
Measurement range		200×200mm	130×130mm	300×200mm	230×130mm	300×210mm	200×135mm
Measurement accuracy *	without stitching	±3μm①	±1μm②	±3μm①	±1μm②	±5μm③	±2μm④
	with stitching	±(5+0.02L)μm⑤	±(3+0.02L)μm⑥	±(5+0.02L)μm⑦	±(3+0.02L)μm⑧	±(7+0.02L)μm⑨	±(4+0.02L)μm⑩
Repeatability	without stitching	±1μm	±0.5μm	±1μm	±0.5μm	±1μm	±0.5μm
	with stitching	±2μm	±1.5μm	±2μm	±1.5μm	±2μm	±1.5μm
Max. weight of workpiece		5kg					
Measurement time		<2s					
Measurement data		2D measurement					
Power supply		220V, 50Hz, 600W					
Illumination system	back light	telecentric illuminator, green light					
	ring light	4-zone circular white high light circular (directional) low-angle green light (eletric)					
	coaxial light (optional)	vertical illuminator, white light					
Environmental requirement		temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz					
Dimension (L×W×H)		532×480×766mm		532×497×766mm		669×510×883mm	
Weight		50kg		60kg		68kg	

* The optimum temperature is 20°C±1°C
① Within 80×64mm, on focal position and environment temperature at 20°C±1°C
② Within 20×16mm, on focal position and environment temperature at 20°C±1°C
③ Within 120×88mm, on focal position and environment temperature at 20°C±1°C
④ Within 40×28mm, on focal position and environment temperature at 20°C±1°C
⑤ Within 180×180mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
⑥ Within 117×117mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
⑦ Within 270×180mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
⑧ Within 207×117mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
⑨ Within 270×189mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage
⑩ Within 180×121mm, on focal position, environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the travel of stage

To be continued

Continued from previous page

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically
- Measurement of 999+dimensions and 200+workpieces
- **QMS-A220** and **QMS-A315** are suitable for small and medium-size parts with high precision requirements
- **QMS-A320** is suitable for medium-size parts with low accuracy requirements and fast efficiency requirements



rotary table (**optional**)



11.6" LCD (**optional**)

STANDARD DELIVERY

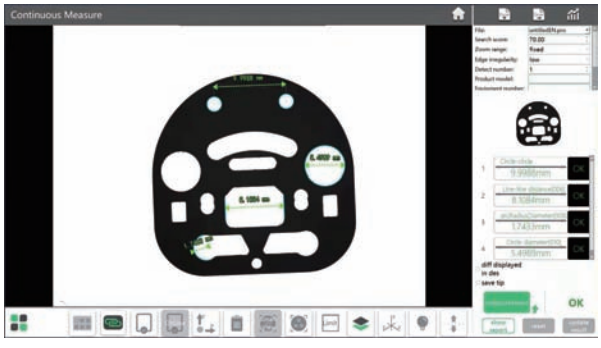
Main unit	1 pc
Computer	1 pc
Software	1 pc

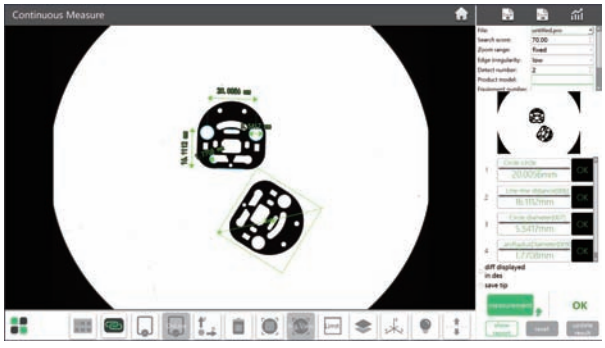
OPTIONAL ACCESSORY

Coaxial light illumination	**QMS-23-A3** (for **QMS-A220, QMS-A315**)
	QMS-23-A4 (for **QMS-A320**)
Data transmission function of software	**QMS-23-D1**
CAD import function of software	**QMS-23-C1**
Laser sensor	**QMS-43-SJ1** (for **QMS-A315**)
Foot-switch	**QMS-43-FS1**
11.6" LCD	**QMS-23-B1** (must be installed in factory)
Rotary table	**QMS-43-RT1** (must be installed in factory)

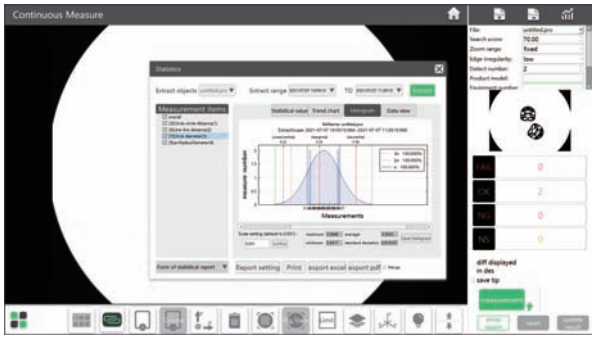
Software (included)

- Automatically measure widths, holes, rings, angles at the same time, simple and efficient





- Measuring result can be stored automatically. OK items and NG items can be counted automatically





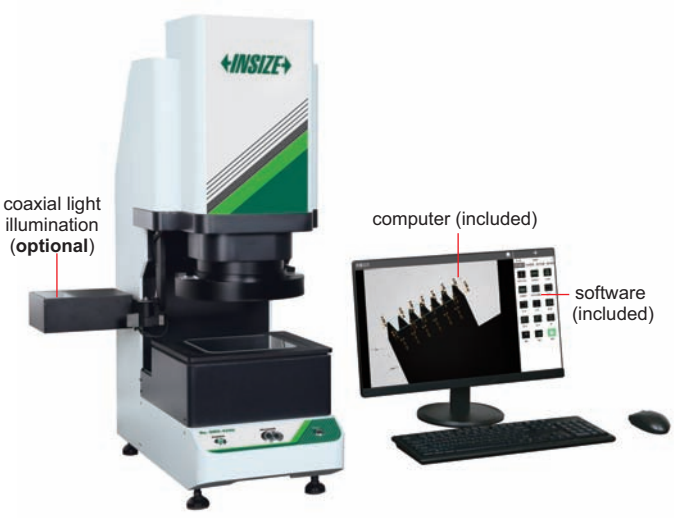
QUICK MEASUREMENT SYSTEMS (WITHOUT STITCHING)

NOTE: NOT SUITABLE FOR SMALL SIZES SUCH AS THREADS, CHAMFERS, ETC.

VIDEO



QMS-A110



QMS-A200

SPECIFICATION

Code		QMS-A110	QMS-A200	
Optical lens		low-distortion lens, single-field telecentric Ø100mm	dual-field dual-telecentric low-distortion lens wide view field: Ø150mm small view field: Ø50mm	
View field range		100×80mm	wide view field	small view field
			150×110mm	50×35mm
Measurement range (X×Y)		98×78mm	148×108mm	48×33mm
Measurement accuracy *		±3μm ①	±5μm ②	±2μm ③
Repeatability		±1μm	±1μm	±0.5μm
Max. weight of workpiece		5kg		
Measurement time		<2s		
Measurement data		2D measurement		
Power supply		220V, 50Hz, 600W		
Illumination system	back light	telecentric illuminator, green light		
	ring light	4-zone circular white high light circular (directional) low-angle green light (eletric)		
	coaxial light (optional)	vertical illuminator, white light		
Environmental requirement		temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz		
Dimension (L×W×H)		580×235×790mm	638×336×885mm	
Weight		40kg	60kg	

* The optimum temperature is 20°C±1°C
① Within 80×64mm, on focal position and environment temperature at 20°C±1°C
② Within 120×88mm, on focal position and environment temperature at 20°C±1°C
③ Within 40×28mm, on focal position and environment temperature at 20°C±1°C

To be continued

Continued from previous page

- One or more workpieces can be measured by one step operation
- Place workpieces at any position
- Focus and measure automatically
- Measurement of 999+dimensions and 200+workpieces
- **QMS-A110** is suitable for measuring small flat parts
- **QMS-A200** is suitable for measuring flat parts with low precision requirements and small surface sizes



11.6" LCD (**optional**)

STANDARD DELIVERY

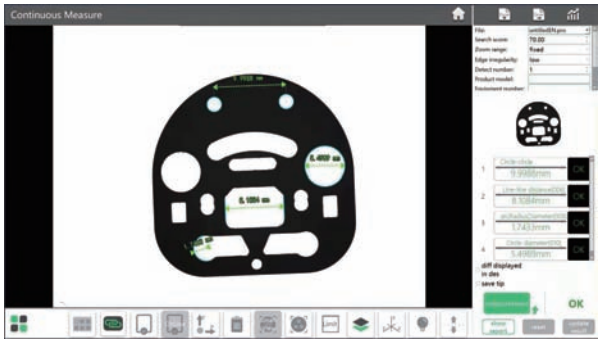
Main unit	1 pc
Computer	1 pc
Software	1 pc

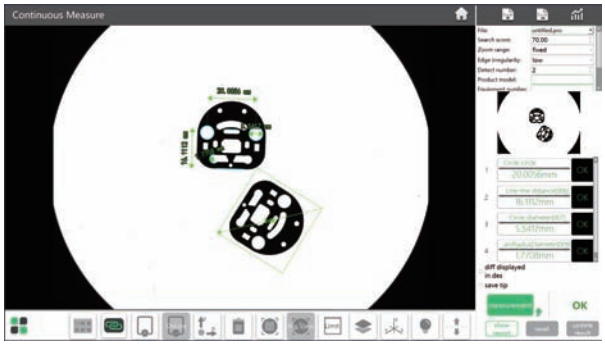
OPTIONAL ACCESSORY

Coaxial light illumination	**QMS-23-A3** (for **QMS-A110**)
	QMS-23-A4 (for **QMS-A200**)
Data transmission function of software	**QMS-23-D1**
CAD import function of software	**QMS-23-C1**
Foot-switch	**QMS-43-FS1**
11.6" LCD	**QMS-23-B1** (must be installed in factory)

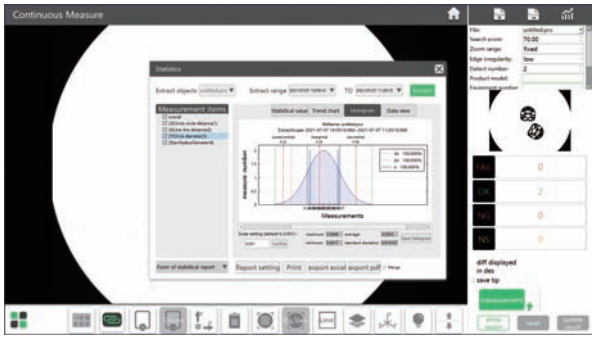
Software (included)

- Automatically measure widths, holes, rings, angles at the same time, simple and efficient





- Measuring result can be stored automatically. OK items and NG items can be counted automatically



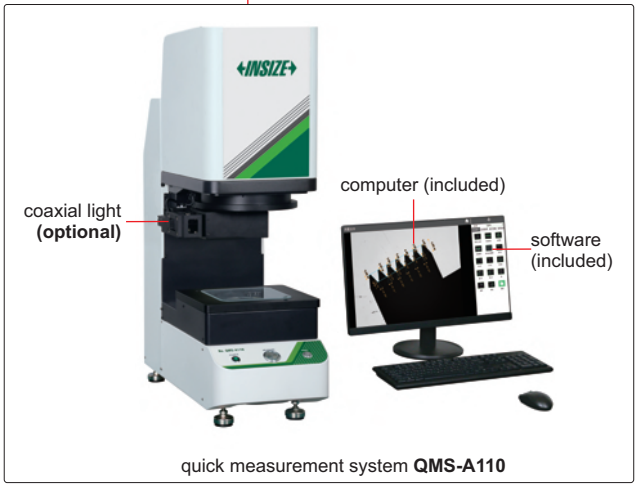


QUICK AUTOMATIC MEASUREMENT SYSTEM
CODE RBT-QM01

CUSTOM-MADE

VIDEO





quick measurement system **QMS-A110**

operation process

step 1: place the workpiece manually on the positioning block in the loading area and position it on the right side against the edge
step 2: press the reset button to return the robot and cylinder to the initial position
step 3: press the start button, the system prompts whether the workpiece is correctly placed and click OK
step 4: the robot grabs the workpiece and places it in the transplanting station
step 5: the transplanting station moves to the QMS test position
step 6: the QMS initiates a measurement and outputs the results
step 7: the transplanting station moves to the outer handling station and the robot removes the workpiece
step 8: the robot places the workpiece in the OK or NG station according to the measurement results

To be continued

Continued from previous page

- 6-axis industrial robot for high speed and precision, IP67, triple protection
- Quick measurement system automatically measures the dimensions of the workpiece and provides real-time feedback to the control system
- Control system Modbus Tcp via bus communication, high speed, high efficiency and easy to extend

SPECIFICATION

Robot	**robot arm spreading**	727mm
	max. working speed	4000mm/s
	max. weight of workpiece	8kg
	repeat positioning accuracy	±0.02mm
	number of control axis	6
	communication protocols	Ethernet Modbus Tcp
Quick* measurement system	**view field**	100×80mm
	measurement range	98×78mm
	measurement accuracy	±3μm
	repeatabilitiy	1μm
	measurement time	<2s
Power supply		220V, 50Hz, 3000W
Supply pressure		0.5~0.6MPa
Environmental requirement		temperature: 20°C±2°C, relative humidity: 30%~80%
Weight		300kg

*The quick measurement system is available in different models depending on the workpiece

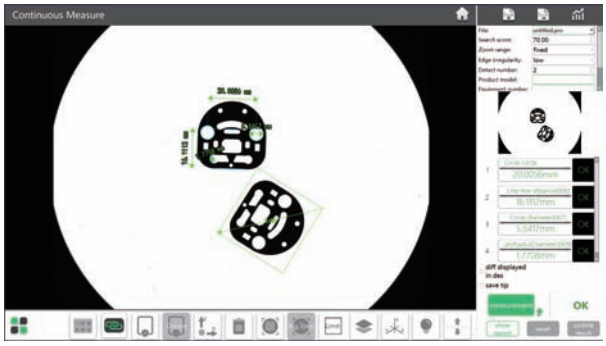
STANDARD DELIVERY

Robotic system	robot body
	robot control cabinet
	programming guide
Quick measurement system	main unit
	computer
	software and dongle
Control touch screen	1 pc
Control box	1 pc

Quick measurement system software (included)

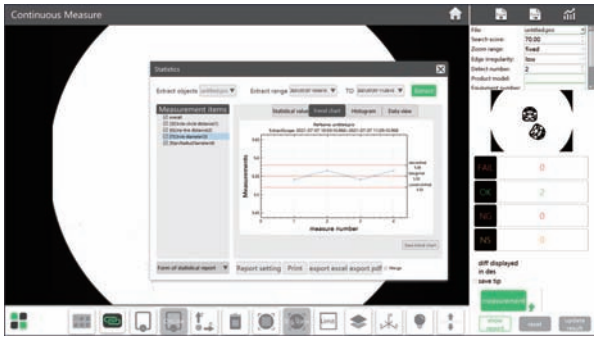
- Automatically measure widths, holes, rings, angles at the same time, simple and efficient





- Measuring result can be stored automatically. OK items and NG items can be counted automatically

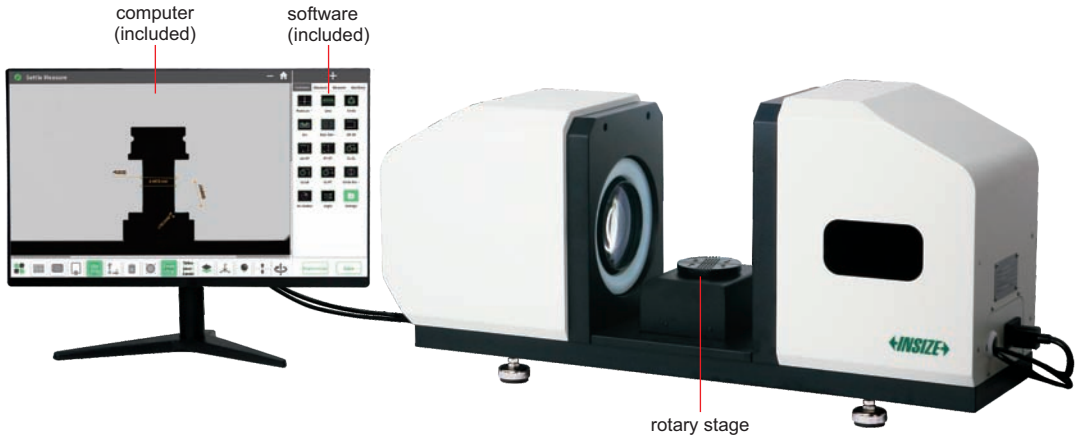




HORIZONTAL QUICK MEASUREMENT SYSTEM
CODE QMS-B530

SUITABLE FOR MEASURING SHAFT WORKPIECES

VIDEO



22

- One or more workpieces can be measured by one step operation
- Focus and measure automatically
- Suitable for measuring shaft workpieces

SPECIFICATION

Optical lens		Ø100mm dual-telecentric lens
Measurement range		100×80mm
Measurement accuracy*	**axial**	±(5+L/20)μm①
	radial	±(3+D/20)μm②
Repeatability	**axial**	±2μm
	radial	±1μm
Illumination system	**transmission light**	telecentric illuminator, green light
	surface light (optional)	high angle ring, white light
Max. weight of workpiece		3kg
Measurement time		<2s
Measurement data		2D measurement
Environmental requirement		temperature: 20°C±2°C, relative humidity: 30%~80%, vibration: <0.002g, less than 15Hz
Power supply		220V, 50Hz, 600W
Dimension (L×W×H)		790×230×385mm
Weight		27kg

* The optimum temperature is 20°C±1°C
① on focal position and environment temperature at 20°C±1°C, and workpiece is less than 2kg, L is the workpiece length in mm
②on focal position and environment temperature at 20°C±1°C, and workpiece is less than 2kg, D is the workpiece diameter in mm

To be continued

Continued from previous page

STANDARD DELIVERY

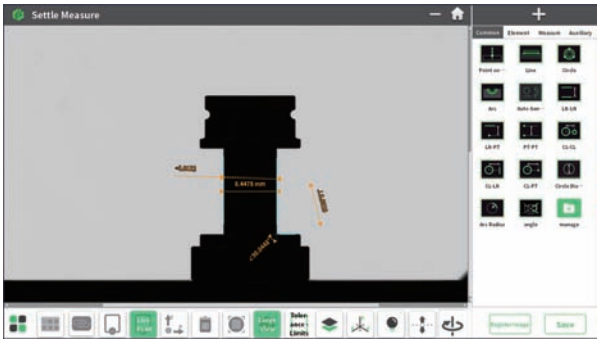
Main unit	1 pc
Computer	1 pc
Software	1 pc

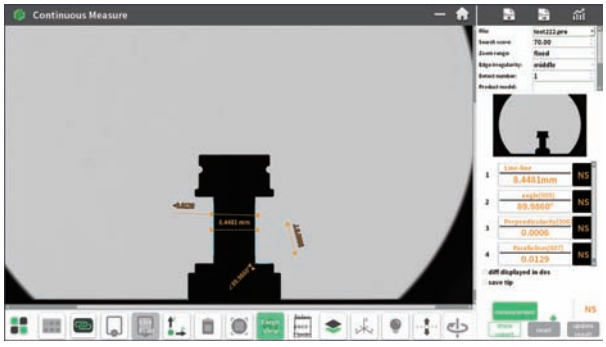
OPTIONAL ACCESSORY

Data transmission software	**QMS-23-D1**
CAD import software	**QMS-23-C1**
Foot-switch	**QMS-43-FS1**
MES transmission software	**QMS-23-E1**
Surface light	**QMS-23-F1** (must be installed in factory)

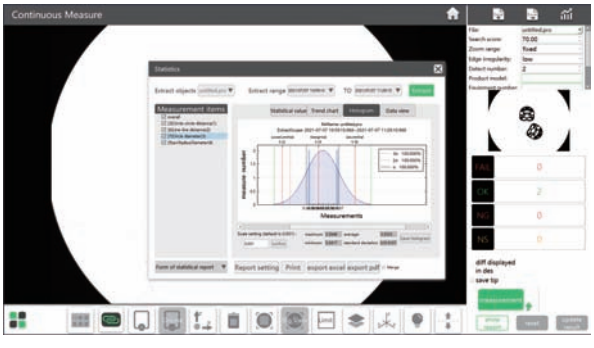
Software (included)

- Automatically measure heights, diameters, perpendicularity, angles at the same time, simple and efficient





- Measuring result can be stored automatically. OK items and NG items can be counted automatically





ONLINE/OFFLINE QUICK MEASUREMENT SYSTEM
CODE VIM-L40

TELECENTRIC SYSTEM WITH LARGE DEPTH OF FIELD

ONLINE/OFFLINE DIMENSION MEASUREMENT

VIDEO





- Low-distortion system assures the accuracy throughout the field of view
- The dual telecentric optical system ensures sharp edges without losing accuracy even for misaligned targets
- Easy to use measurement tools for simplifi setup

SPECIFICATION

Distance between transmitter and receiver			180mm
Measurement range	view field	high precision measurement area	Ø26mm
		full measurement area	Ø40mm
	depth of field	high precision measurement area	10mm
		full measurement area	20mm
Illumination			InGaN green LED
Measurement accuracy*		high precision measurement area	±2μm
		full measurement area	±3μm
Repeatability			±1μm
Dust/waterproof			IP64
Environment requirement			temperature: 0~45℃, relative humidity: less than 85%
Shell material			aluminium
Weight			2180g

*The optimum temperature is 20°C±1°C

STANDARD DELIVERY

Main unit	1 pc
Industrial computer	1 pc
Dongle	1 pc

OPTIONAL ACCESSORY

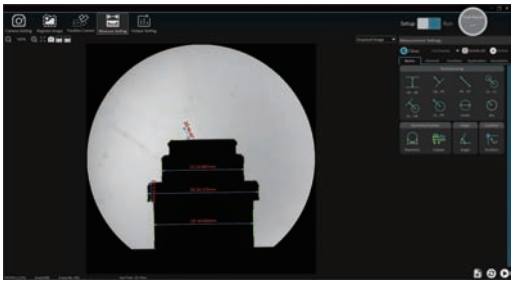
Monitor	VIM-L-SCREEN
Rotary table	VIM-L-RT

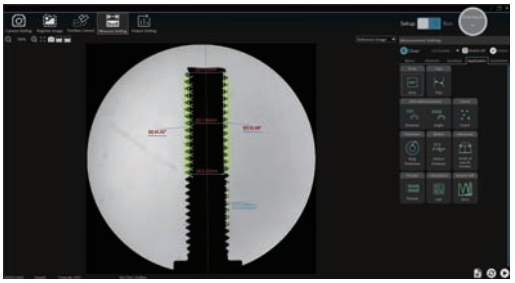
SOFTWARE (INCLUDED)



APPLICATION

- Automatically measure widths, pitch, arc, angles at the same time, simple and efficient





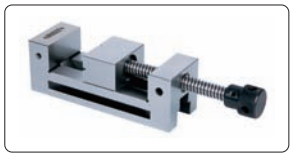
VIDEO

INSPECTION CERTIFICATE

HORIZONTAL VISION MEASURING SYSTEM
CODE ISD-W3150



demo sample (**optional**)



vise (**optional**)



computer is included

SPECIFICATION

Measuring range (X×Z)		300×150mm
Accuracy		≤(4+L/25)μm L is the measuring length in mm
Resolution		0.5μm
Y travel range (focus)		125mm
Stage	**metal stage size**	455×126mm
	turning range	±15°
	max. load capacity	30kg
Objective		0.7X~4.5X (zoom)
Working distance		96mm
View field (diagonal length)		1.3~8.2mm
Magnification		34X~213X
Display		19"
Camera		1/3" CMOS, 0.8M pixel
Illumination		surface and contour with adjustable LED
Operation system		Windows 10
Drive method		manual
Power supply		220V, 50Hz
Dimension (L×W×H)		1164×634×1048mm
Weight		200kg



table (**optional**)

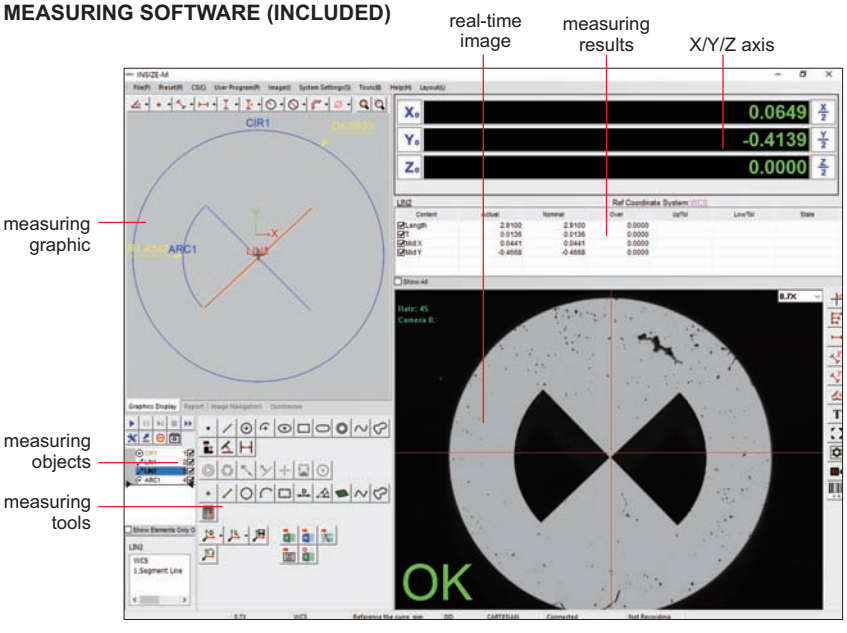
STANDARD DELIVERY

Main unit (including computer)	1 pc
Software	1 pc
Calibration glass chart	1 pc
Clay	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: **ISD-W-OB05X** working distance: 175mm magnification: 17~106.5X
2X auxiliary objective	code: **ISD-W-OB2X** working distance: 32mm magnification: 68~426X
Office software	code: **7313-OFFICE**
Table	code: **ISD-W-TABLE**
Vise	code: **ISP-A3000-VISE**
Demo sample	code: **ISP-A3000-DEMO**

MEASURING SOFTWARE (INCLUDED)



2D+3D COMPOSITE CNC VISION MEASURING SYSTEMS

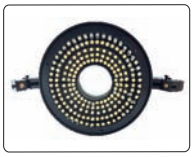
3D PROBE WITH 3D SOFTWARE FOR 3D MEASUREMENT

VIDEO

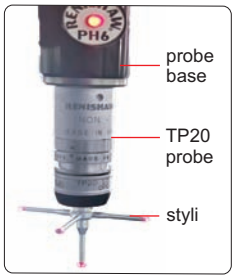
INSPECTION CERTIFICATE



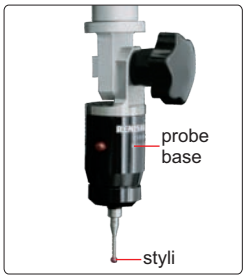
lens with coaxial light (included)



programmable segmented ring light (included)



advanced probe set **(optional)**



standard probe set **(optional)**

computer is included



ISD-U322

- Motorized zoom objective
- Can import 3D drawings
- Vision measurement and probe measurement can be used in the same program
- Granite platform, column and stage, more stable
- Double close-loop motion control, with precise positioning performance in high-speed movement
- Panasonic servo control motor
- 40 independent surface light source, 200-step adjustment
- Servo motors for X, Y, Z axis

SPECIFICATION

Code		ISD-U322	ISD-U432	ISD-U532	ISD-U542
Measuring range (X×Y×Z)		300×200×200mm	400×300×200mm	500×300×200mm	500×400×200mm
Stage size		600×390mm	700×490mm	800×490mm	800×590mm
Glass stage size		350×250mm	450×350mm	550×350mm	550×450mm
Resolution of X/Y/Z axis		0.5μm			
Accuracy (vision)		≤(2+L/200)μm (L is the measuring length in mm)			
Accuracy (probe)		≤(3+L/200)μm (L is the measuring length in mm)			
Repeatability		1.5μm			
Objective		0.7X~4.5X (zoom)			
Working distance		55mm			
View field (diagonal length)		1.3~7.9mm			
Magnification		36X~210X (on 21.5" monitor)			
Camera		1/2"color CCD, 2M pixel			
Illumination	surface	coaxial light, programmable segmented ring light			
	contour	adjustable LED light			
Max. height of workpiece		195mm			
Max. weight of workpiece		20kg	30kg	35kg	35kg
Operation system		Windows 10/11			
Drive method		automatic			
Power supply		220V, 50/60Hz			
Dimension (L×W×H)		1400×900×1780mm	1600×1120×1780mm	1650×1120×1780mm	1650×1220×1780mm
Weight		440kg	560kg	580kg	620kg

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
Dongle	1 pc
Software	1 pc
Lens with coaxial light	1 pc
Controller	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc

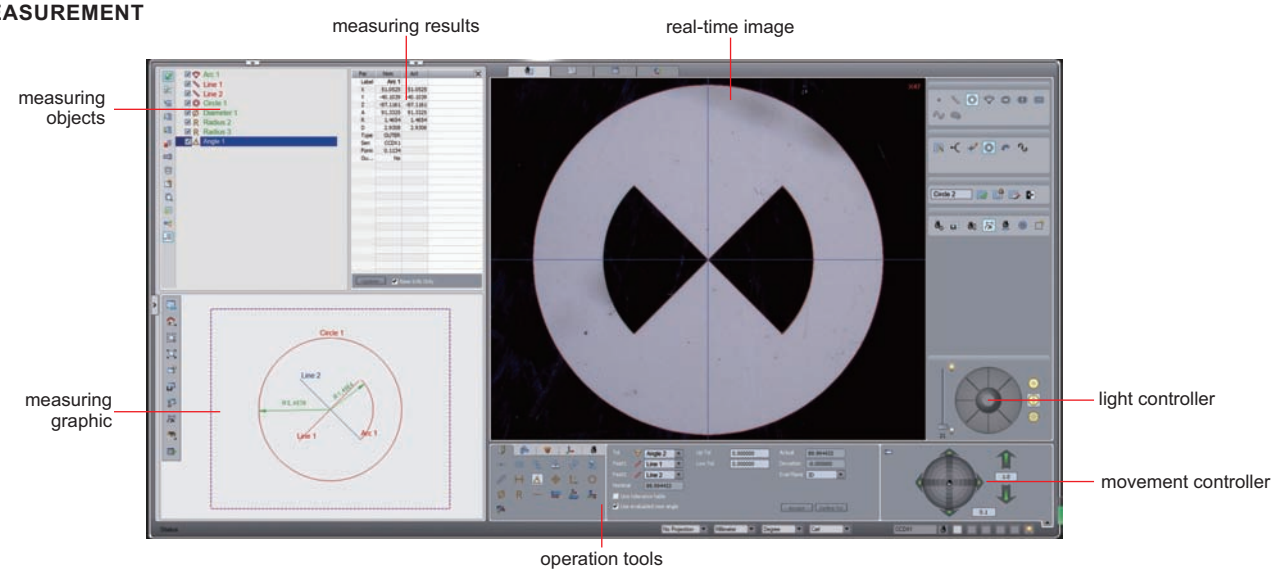
OPTIONAL ACCESSORY

0.5X auxiliary objective		code: **ISD-U-OB05X**, working distance: 175mm magnification: 18~105X (on 21.5" monitor)
2X auxiliary objective		code: **ISD-U-OB2X**, working distance: 36mm magnification: 72~420X (on 21.5" monitor)
Standard probe set * (RENISHAW)		code: **ISD-U-MCP** (must be installed in factory) includes MCP probe base, Ø2mm and Ø3mm styli, Ø25mm calibration ball
Advanced probe set * (RENISHAW)	probe base	code: **ISD-U-BASE** (must be installed in factory)
	probe	code: **ISD-U-TP20**, includes Ø2mm styli
	styli	**ISQ-20** series (M2) **optional**, refer to page 691
Probe replacement rack		code: **ISD-U-MCR20**
Office software		code: **7313-OFFICE**

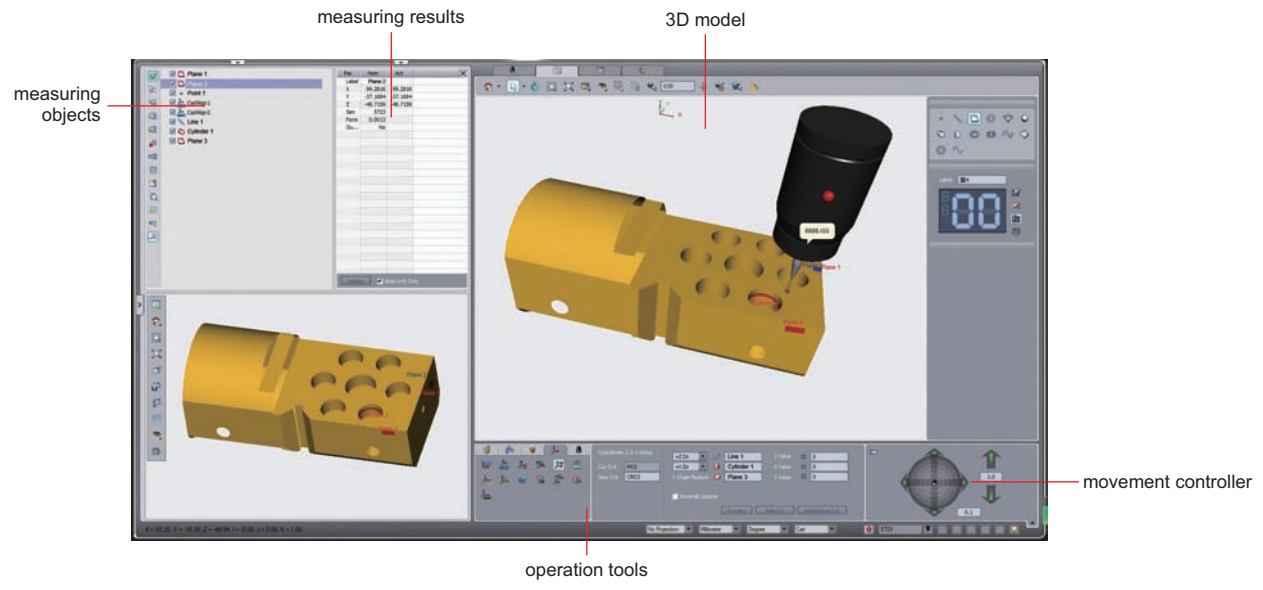
* Must purchase standard probe set or advanced probe set

SOFTWARE (INCLUDED)

2D MEASUREMENT



3D MEASUREMENT

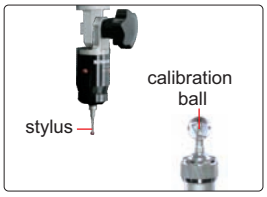


CNC VISION MEASURING SYSTEMS (BASIC TYPE)

MOTORIZED ZOOM OBJECTIVE IS OPTIONAL

VIDEO

INSPECTION CERTIFICATE



probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm



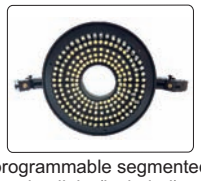
ISD-R320

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Double close-loop motion control, with precise positioning performance in high-speed movement
- Granite body, more stable
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement

22

STANDARD DELIVERY

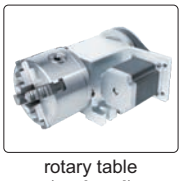
Main unit	1 pc
Software	1 pc
Dongle	1 pc
Controller	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Clay	1 pc
Anti-dust cover	1 pc



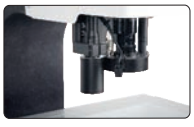
programmable segmented ring light (included)



lens with coaxial light (**optional**)



rotary table (**optional**)



spectral confocal sensor (**optional**), thickness of glass or plastic film can be measured according to the refractive index, measuring accuracy is 5μm

SPECIFICATION

Code		**ISD-R320**	**ISD-R430**	**ISD-R540**
Measuring range (X×Y×Z)		300×200×200mm	400×300×200mm	500×400×200mm
Stage size		500×330mm	606×466mm	706×566mm
Glass stage size		350×280mm	450×350mm	550×450mm
Resolution of X/Y/Z axis		0.5μm		
Accuracy of X/Y axis		≤(3+L/200)μm (L is the measuring length in mm)		
Repeatability of X/Y axis		2μm		
Objective		0.7X~4.5X (zoom)		
Working distance		92mm		
View field (diagonal length)		1.0~6.6mm		
Magnification		37.2X~236.0X (on 21.5" monitor)		
Camera		1/2" color CCD, 1.3M pixel		
Illumination	**contour**	programmable segmented ring light		
	surface	adjustable LED light		
Max. height of workpiece		200mm		
Max. weight of workpiece		20kg		
Operation system		Windows 10/11		
Drive method		automatic		
Power supply		220V, 50/60Hz		
Dimension (L×W×H)		720×770×1780mm	700×1000×1780mm	800×1040×1780mm
Weight		270kg	325kg	500kg

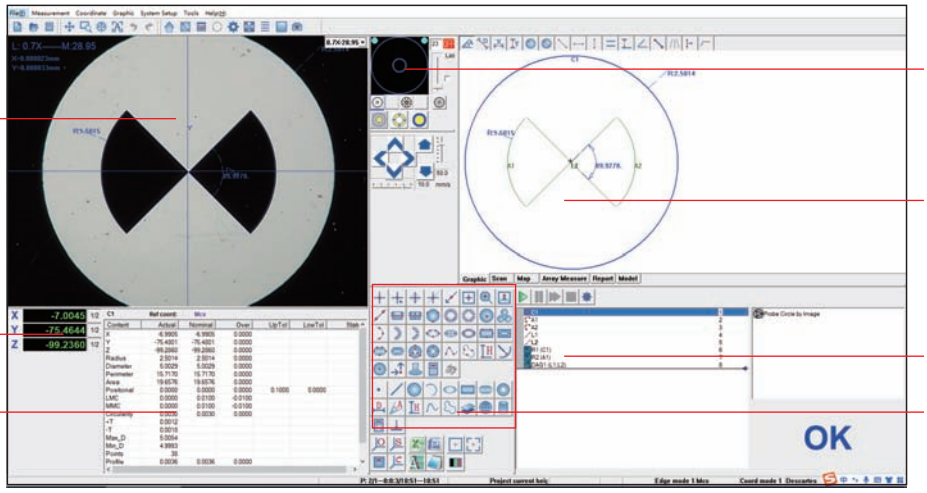
To be continued

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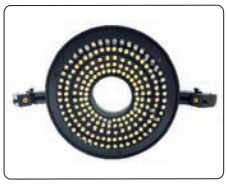
OPTIONAL ACCESSORY

0.5X auxiliary objective	code: **ISD-Y-OB05X**, working distance: 175mm; magnification: 18.6~118.0X (on 21.5" monitor)
2X auxiliary objective	code: **ISD-Y-OB2X**, working distance: 36mm; magnification: 74.5~472.0X (on 21.5" monitor)
Probe	code: **ISD-Y-PROBE**, includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Spectral confocal sensor	code: **ISD-R-SCS** (must be installed in factory)
Rotary table	code: **ISD-R-RT** (must be installed in factory)
Vision measuring system with coaxial light lens	code: **ISD-R320L**, **ISD-R430L**, **ISD-R540L**
Office software	code: **7313-OFFICE**

SOFTWARE (INCLUDED)




lens with coaxial light (included)


programmable segmented ring light (included)


software flash disk (included)

CNC VISION MEASURING SYSTEMS (WITH STAND)

MOTORIZED ZOOM OBJECTIVE IS OPTIONAL

VIDEO

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- Granite body, more stable
- SPC function for large quantity measurement
- Measuring software is included (page 749~750)

STANDARD DELIVERY

Main unit	1 pc
Dongle	1 pc
Software	1 pc
Computer	1 pc
Dispaly	1 pc
Lens with coaxial light	1 pc
Controller	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc



ISD-E320

To be continued

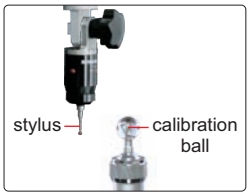
Continued from previous page

SPECIFICATION

Code		ISD-E320	ISD-E430
Measuring range (X×Y×Z)		300×200×200mm	400×300×200mm
Stage size		556×406mm	561×556mm
Glass stage size		350×250mm	450×350mm
Resolution of X/Y/Z axis		0.5μm	
Accuracy of X/Y axis		≤(2.5+L/200)μm (L is measuring length in mm)	≤(3.5+L/200)μm (L is measuring length in mm)
Repeatability of X/Y axis		2μm	
Objective (manual zoom)		0.7X~4.5X (zoom)	
Working distance		92mm	
View field (diagonal length)		1.7~11.1mm	
Magnification		33X~208.6X (on 24" monitor)	
Camera		giga-bit network camera	
Illumination	surface	coaxial light, programmable segmented ring light	
	contour	adjustable LED light	
Max. height of workpieces		200mm	
Max. weight of workpieces		30kg	
Operation system		Windows 7/8/10	
Drive method		automatic	
Power supply		220V, 50/60Hz	
Dimension (L×W×H)		1420×915×1830mm	1650×1170×1900mm
Weight		500kg	700kg

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: **ISD-V-OB05X** working distance: 175mm magnification: 16.5~104.3X (on 24" monitor)
2X auxiliary objective	code: **ISD-V-OB2X** working distance: 36mm magnification: 66~417.2X (on 24" monitor)
Probe	code: **ISD-V-PROBE** includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Office software	code: **7313-OFFICE**
Laser probe	code: **ISD-V-LASER**



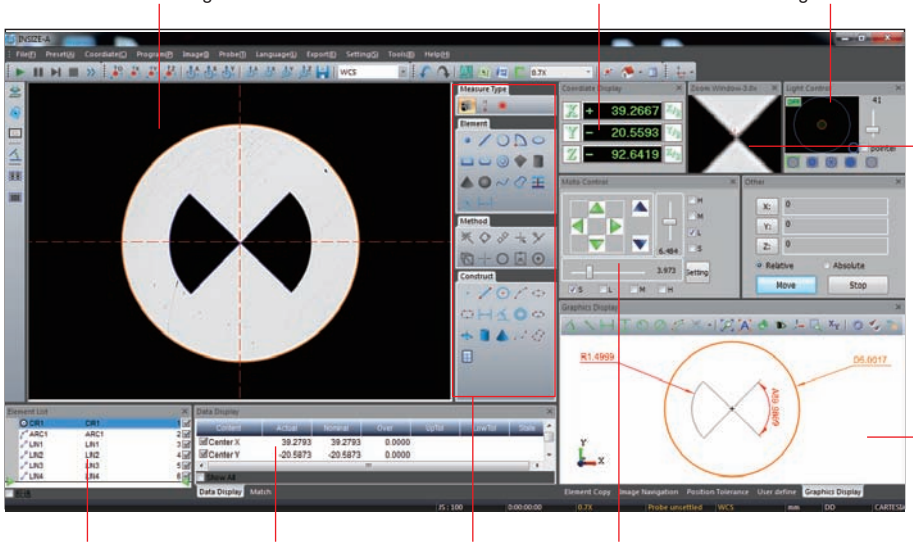
probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm



laser probe (**optional**) measuring accuracy is 5μm

SOFTWARE (INCLUDED)

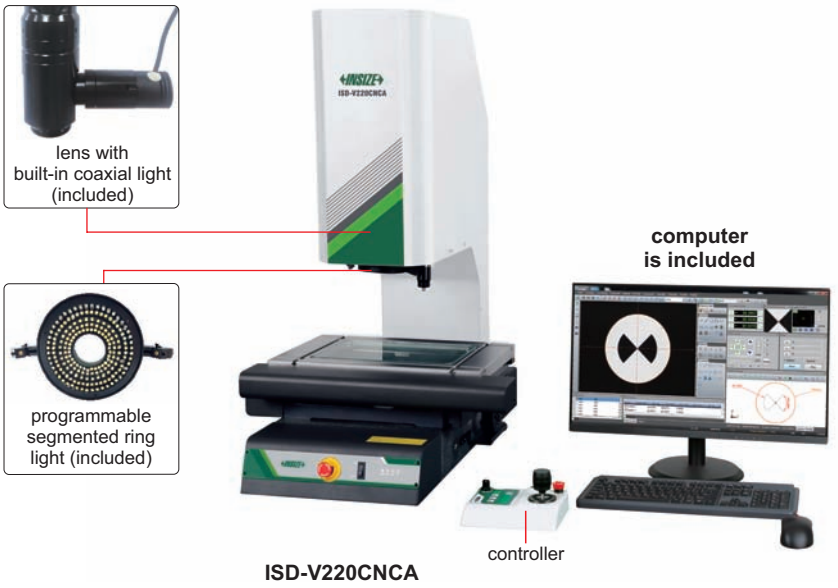
- Refer to page 749~750 for details



CNC VISION MEASURING SYSTEMS (STANDARD TYPE)

INSPECTION CERTIFICATE

VIDEO



ISD-V220CNCA

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement
- Measuring software is included (page 749~750)

SPECIFICATION

Code	motorized zoom lens	ISD-V220ZA	ISD-V220ZHN	ISD-V270ZA	ISD-V270ZHN	ISD-V370ZA	ISD-V370ZHN
	manual zoom lens	ISD-V220CNCA	ISD-V220HN	ISD-V270CNCA	ISD-V270HN	ISD-V370CNCA	ISD-V370HN
Measuring range (X×Y×Z)		220×120 ×150mm	220×120 ×300mm	270×170 ×150mm	270×170 ×300mm	370×270 ×150mm	370×270 ×300mm
Stage size		450×280mm	450×280mm	500×330mm	500×330mm	606×466mm	606×466mm
Glass stage size		306×196mm	306×196mm	350×250mm	350×250mm	450×350mm	450×350mm
Resolution of X/Y/Z axis		0.5μm					
Accuracy of X/Y axis		≤(2.5+L/100)μm (L is the measuring length in mm)				≤(3.5+L/100)μm (L is the measuring length in mm)	
Repeatability of X/Y axis		2μm					
Objective		0.7X~4.5X (zoom)					
Working distance		92mm					
Magnification		33.0X~208.6X (with manual zoom lens, on 24" monitor)					
		31.9X~188.7X (with motorized zoom lens, on 24" monitor)					
Camera		giga-bit network camera					
Illumination	surface	coaxial light, programmable segmented ring light					
	contour	adjustable LED light					
View field (diagonal length)		1.5~10.8mm					
Max. height of workpiece		150mm	300mm	150mm	300mm	150mm	300mm
Max. weight of workpiece		30kg					
Operation system		Windows 7/8/10					
Drive method		automatic					
Power supply		220V, 50/60Hz					
Dimension (L×W×H)		760×600 ×900mm	760×600 ×1050mm	760×600 ×900mm	760×600 ×1050mm	970×670 ×940mm	970×670 ×1090mm
Weight		146kg	156kg	168kg	178kg	266kg	276kg

To be continued

Continued from previous page

STANDARD DELIVERY

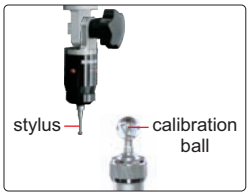
Main unit	1 pc
Software	1 pc
Computer	1 pc
24" display	1 pc
Len with coaxial light	1 pc
Controller	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc



software flash disk (included)



laser probe (**optional**) measuring accuracy is 5μm



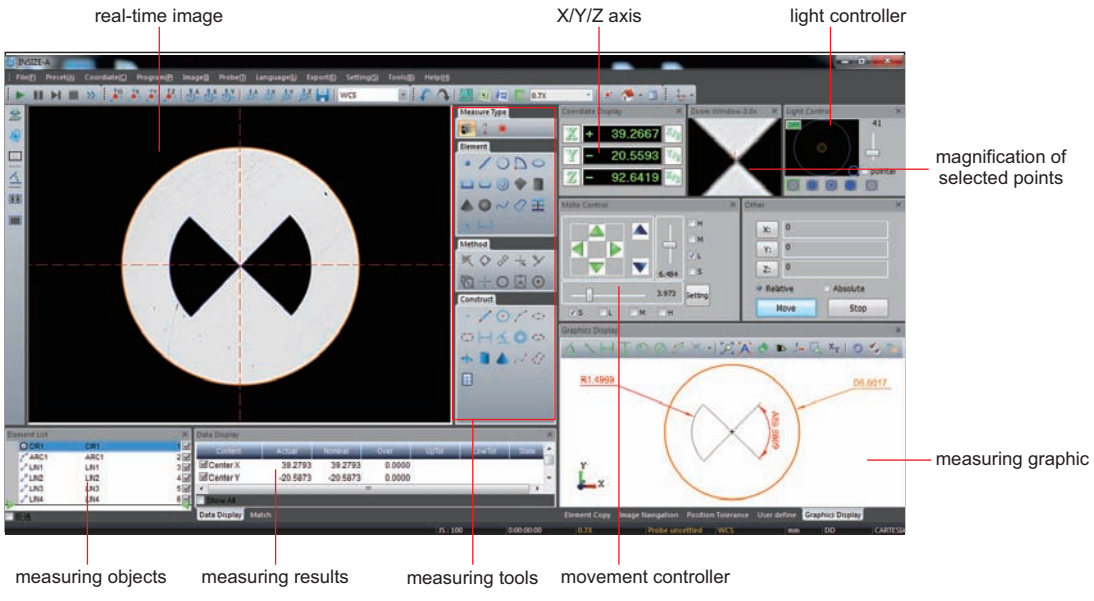
probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: **ISD-V-OB05X**, working distance: 175mm magnification: 16.5~104.3X (with manual zoom lens, on 24" monitor), 16.0~94.4X (with motorized zoom lens, on 24" monitor)
2X auxiliary objective	code: **ISD-V-OB2X**, working distance: 36mm magnification: 66~417.2X (with manual zoom lens, on 24" monitor), 63.8~377.4X (with motorized zoom lens, on 24" monitor)
Probe	code: **ISD-V-PROBE**, includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Laser probe	code: **ISD-V-LASER**
Office software	code: **7313-OFFICE**

SOFTWARE (INCLUDED)

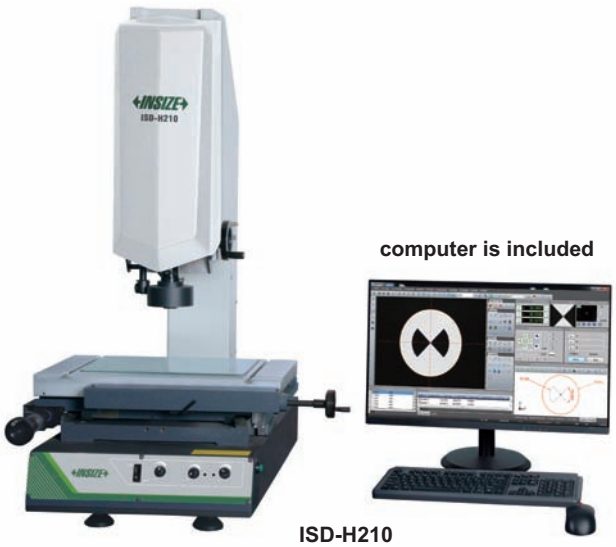
- Refer to page 749~750 for details



HIGH-DEFINITION MANUAL VISION MEASURING SYSTEMS

INSPECTION CERTIFICATE

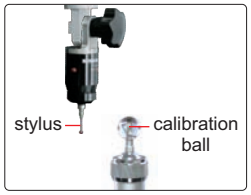
VIDEO



ISD-H210



lens with coaxial light (**optional**, must be installed in factory)



probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm

- High-definition image
- Large view field
- Electronic magnification feedback lens: when the objective lens magnification is changed manually, the software automatically selects the corresponding pre-calibration data and calibration is not needed

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Clay	1 pc
Foot switch	1 pc
Anti-dust cover	1 pc

SPECIFICATION

Code	**ISD-H210**	**ISD-H320**	**ISD-H430**
Measuring range (X×Y×Z)	200×100×150mm	300×200×150mm	400×300×150mm
Stage size	404×228mm	500×330mm	606×466mm
Glass stage size	260×160mm	350×250mm	450×350mm
Resolution of X/Y/Z axis	0.5μm		
Accuracy of X/Y axis	≤(2.5+L/100)μm (L is the measuring length in mm)		
Repeatability of X/Y axis	2μm		
Objective	0.58X~7.5X (zoom)		
View field (diagonal length)	1.4mm~14mm		
Working distance	82mm		
Magnification	27.4X~351X (on 24" monitor)		
Camera	giga-bit network camera		
Illumination	surface and contour with adjustable LED		
Max. height of workpiece	150mm		
Max. weight of workpiece	20kg		
Operation system	Windows 7/8/10		
Drive method	manual		
Power supply	110~240V, 50/60Hz		
Dimension (L×W×H)	540×560×850mm	760×600×900mm	970×670×940mm
Weight	110kg	140kg	240kg

OPTIONAL ACCESSORY

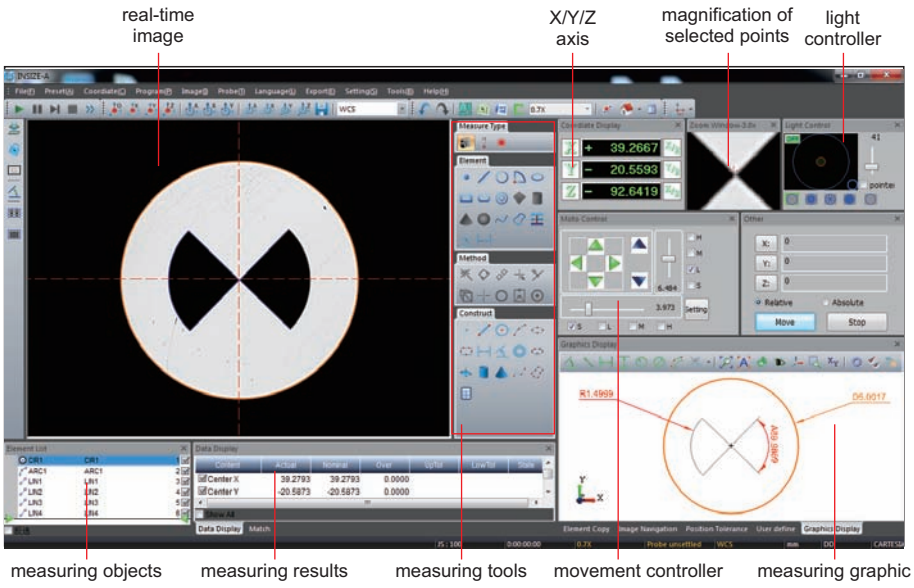
0.5X auxiliary objective	code: **ISD-H-OB05X** working distance: 155mm magnification: 13.7~175.5X (on 24" monitor)
2X auxiliary objective	code: **ISD-H-OB2X** working distance: 34.5mm magnification: 54.8~702X (on 24" monitor)
Probe	code: **ISD-V-PROBE** includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Vision measuring system with coaxial light lens	code: **ISD-H210CL, ISD-H320CL, ISD-H430CL**
Office software	code: **7313-OFFICE**

To be continued

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SOFTWARE (INCLUDED)

- Refer to page 749~750 for details

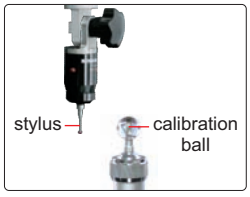


22

MANUAL VISION MEASURING SYSTEMS (STANDARD TYPE)

INSPECTION CERTIFICATE

VIDEO



probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm



lens with coaxial light (**optional**, must be installed in factory)



computer is included

ISD-V250A

SPECIFICATION

Code	ISD-V150A	ISD-V250A	ISD-V300A	ISD-V400A
Measuring range (X×Y×Z)	150×100×150mm	250×150×150mm	300×200×150mm	400×300×150mm
Stage size	354×228mm	450×280mm	500×330mm	606×466mm
Glass stage size	210×160mm	306×196mm	350×250mm	450×350mm
Resolution of X/Y/Z axis	0.5μm			
Accuracy of X/Y axis	≤(2.5+L/100)μm (L is the measuring length in mm)			
Repeatability of X/Y axis	2μm			
Objective	0.7X~4.5X (zoom)			
Working distance	92mm			
Magnification	29X~184X (on 21.5" monitor)			
Camera	1/3" color CCD, 0.3M pixel			
Illumination	surface and contour with adjustable LED			
Max. height of workpiece	150mm			
Max. weight of workpiece	20kg			
Operation system	Windows 7/8/10			
Drive method	manual			
Power supply	110/220V, 50/60Hz			
Dimension (L×W×H)	560×540×850mm	760×600×900mm	760×600×900mm	970×670×940mm
Weight	100kg	120kg	140kg	240kg

To be continued

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STANDARD DELIVERY

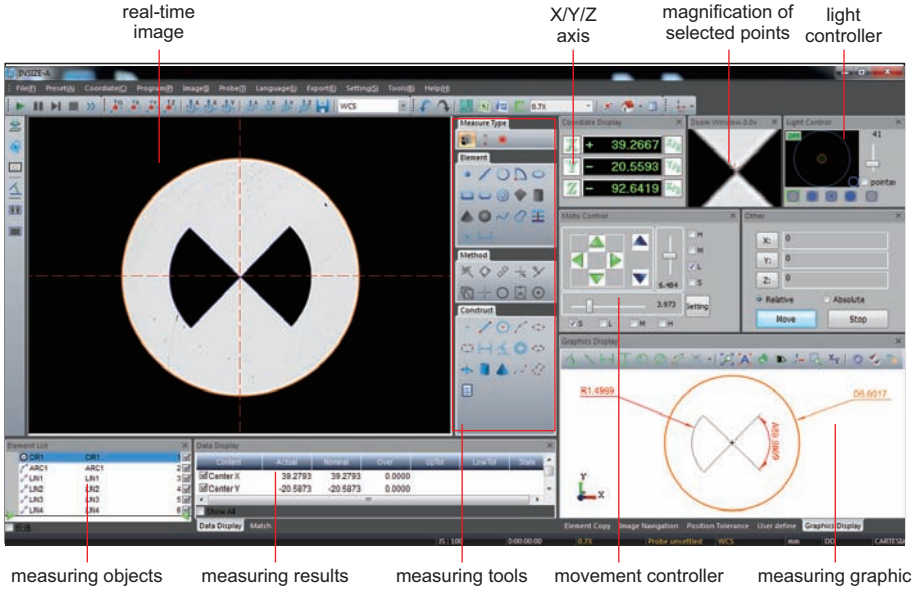
Main unit	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Clay	1 pc
Foot switch	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: **ISD-V-OB05X** working distance: 175mm magnification: 14.5~92X (on 21.5" monitor)
2X auxiliary objective	code: **ISD-V-OB2X** working distance: 36mm magnification: 58~368X (on 21.5" monitor)
Probe	code: **ISD-V-PROBE** includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Vision measuring system with coaxial light lens (with computer)	code: **ISD-V150ACL**, **ISD-V250ACL**, **ISD-V300ACL**, **ISD-V400ACL**
Office software	code: **7313-OFFICE**

SOFTWARE (INCLUDED)

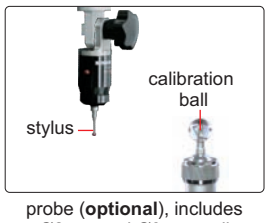
- Refer to page 749~750 for details



VIDEO

INSPECTION CERTIFICATE

MANUAL VISION MEASURING SYSTEMS (BASIC TYPE)



probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm



lens with coaxial light (**optional**, must be installed in factory)



computer is included

ISD-Y320

To be continued

Continued from previous page

SPECIFICATION

Code	Motorized focus	ISD-Y210D	ISD-Y320D	ISD-Y430D	ISD-Y530D
	Manual focus	ISD-Y210	ISD-Y320	ISD-Y430	ISD-Y530
Measuring range (X×Y×Z)		200×100×200mm	300×200×200mm	400×300×200mm	500×300×200mm
Stage size		404×228mm	500×330mm	606×466mm	706×466mm
Glass stage size		260×160mm	350×280mm	450×350mm	550×350mm
Resolution of X/Y/Z axis		1μm			
Accuracy of X/Y axis		≤(3+L/200)μm (L is the measuring length in mm)			
Repeatability of X/Y axis		2μm			
Objective		0.7X~4.5X (zoom)			
View field (diagonal length)		1.0~6.6mm			
Working distance		92mm			
Magnification		37.2X~236.0X (on 21.5" monitor)			
Camera		1/2" color CCD, 1.3M pixel			
Illumination		surface and contour with adjustable LED			
Max. height of workpiece		200mm			
Max. weight of workpiece		20kg			
Operation system		Windows 10/11			
Drive method		manual			
Power supply		110/220V, 50/60Hz			
Dimension (L×W×H)		556×540×860mm	670×660×950mm	720×950×1020mm	800×1040×1020mm
Weight		180kg	260kg	315kg	500kg

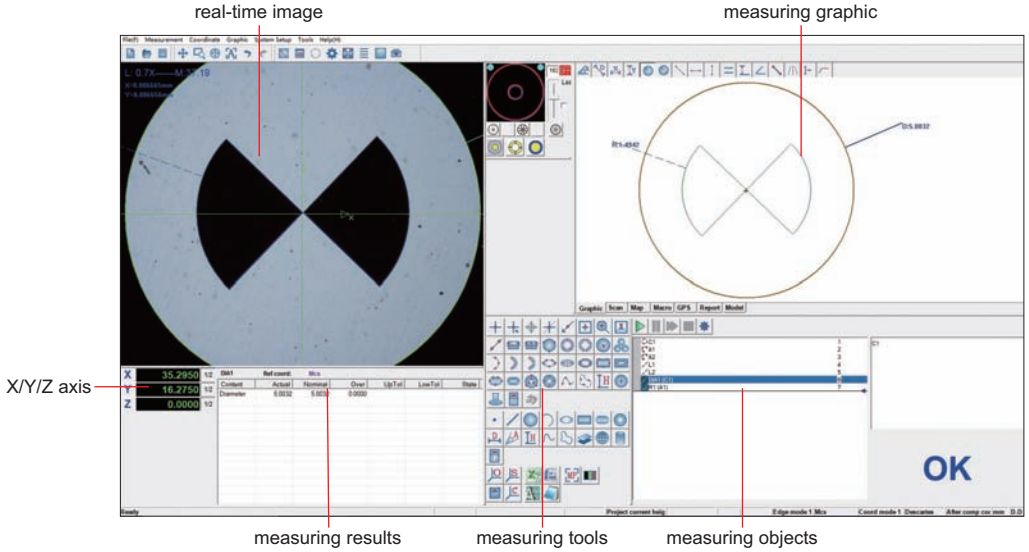
STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Clay	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: **ISD-Y-OB05X** working distance: 175mm magnification: 18.6~118.0X (on 21.5" monitor)
2X auxiliary objective	code: **ISD-Y-OB2X** working distance: 36mm magnification: 74.5~472.0X (on 21.5" monitor)
Probe	code: **ISD-Y-PROBE** includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Vision measuring system with coaxial light lens	code: **ISD-Y210CL** (manual focus), **ISD-Y210DCL** (motorized focus) **ISD-Y320CL** (manual focus), **ISD-Y320DCL** (motorized focus) **ISD-Y430CL** (manual focus), **ISD-Y430DCL** (motorized focus) **ISD-Y530CL** (manual focus), **ISD-Y530DCL** (motorized focus)
Office software	code: **7313-OFFICE**

SOFTWARE (INCLUDED)



CNC VISION MEASURING SYSTEMS

VIDEO



computer is included



ISD-V500N

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis
- SPC function for large quantity measurement

SPECIFICATION

Code		ISD-V500N	ISD-V501N	ISD-V500HN	ISD-V501HN
Measuring range (X×Y×Z)		470×370×200mm	500×400×200mm	470×370×400mm	500×400×400mm
Stage size		786×636mm	846×696mm	786×636mm	846×696mm
Glass stage size		570×470mm			
Resolution of X/Y/Z axis		0.5μm			
Accuracy of X/Y axis		≤(2.5+L/200)μm (L is measuring length in mm)			
Repeatability of X/Y axis		2μm			
Objective		0.7X~4.5X (zoom)			
Working distance		92mm			
View field (diagonal length)		1.5~10.8mm			
Magnification		33.0X~208.6X (on 24" monitor)			
Camera		giga-bit network camera			
Illumination	surface	coaxial light, programmable segmented ring light			
	contour	adjustable LED light			
Max. height of workpieces		200mm		400mm	
Max. weight of workpieces		30kg			
Operation system		Windows 7/10			
Drive method		automatic			
Power supply		220V, 50/60Hz			
Dimension (L×W×H)		1270×1200×1870mm	1405×1260×1870mm	1270×1200×2070mm	1405×1260×2070mm
Weight		870kg	1000kg	900kg	1030kg

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
Video card with dongle	1 pc
Software disc	1 pc
Lens with coaxial light	1 pc
Controller	1 pc
Computer	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc



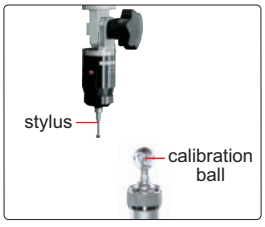
lens with coaxial light (included)



programmable segmented ring light (included)

OPTIONAL ACCESSORY

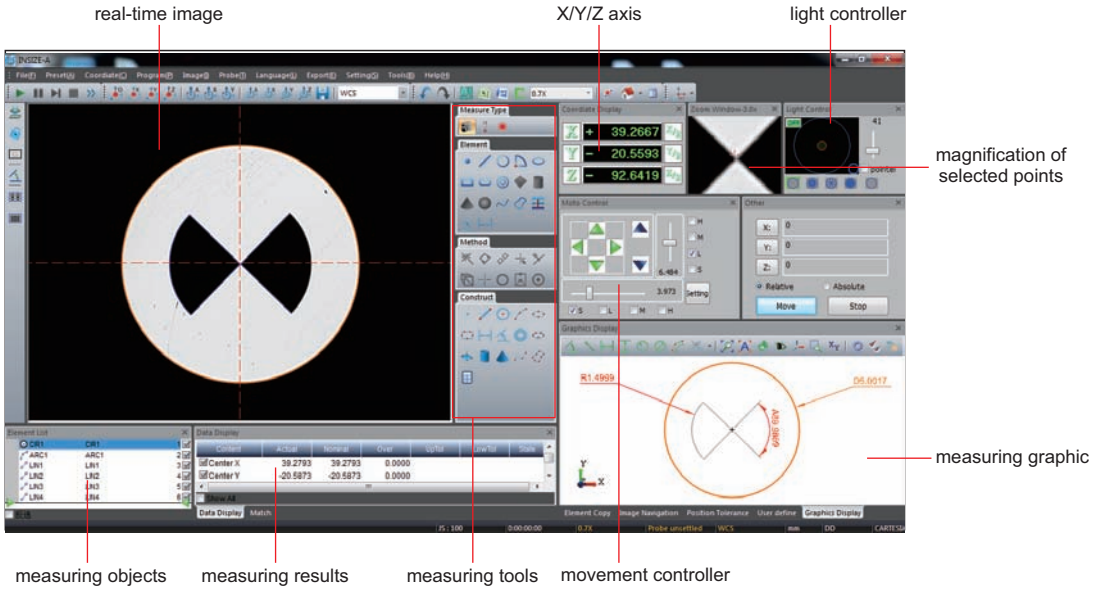
0.5X auxiliary objective	code: **ISD-V-OB05X** working distance: 175mm magnification: 16.5~104.3X (on 24" monitor)
2X auxiliary objective	code: **ISD-V-OB2X** working distance: 36mm magnification: 66~417.2X (on 24" monitor)
Probe	code: **ISD-V-PROBE** includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Office software	code: **7313-OFFICE**



probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm

SOFTWARE (INCLUDED)

- Refer to page 749~750 for details



MOTORIZED ZOOM OBJECTIVE IS OPTIONAL

CNC VISION MEASURING SYSTEMS

VIDEO



VMM-L1001CN

- Automatic edge-detection, focus, measuring, contour scanning, calibration, etc.
- Servo motors for X, Y, Z axis, X, Y axis adopt linear guide rail structure, without air supply
- Fixed glass table and granite platform base, good stability
- SPC function for large quantity measurement
- Measuring software is included (page 749~750)

SPECIFICATION

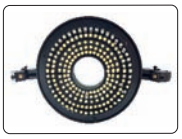
Code		VMM-L600CN	VMM-L601CN	VMM-L800CN
Measuring range (X×Y×Z)		600×600×200mm	600×900×200mm	800×1000×200mm
Glass stage size		765×1238mm	702×1543mm	902×1643mm
Resolution of X/Y/Z axis		0.5μm		
Accuracy of X/Y axis		≤(3.5+L/200)μm (L is measuring length in mm)		
Repeatability of X/Y axis		2μm		
Objective (manual zoom)		0.7X~4.5X (zoom)		
Working distance		92mm		
View field (diagonal length)		1.7~11.1mm		
Magnification		33.0X~208.6X (on 24" monitor)		
Camera		giga-bit network camera		
Illumination	surface	coaxial light, programmable segmented ring light		
	contour	adjustable LED light		
Max. height of workpiece		200mm		
Max. weight of workpiece		35kg		
Operation system		Windows 7/8/10		
Drive method		automatic		
Power supply		AC 220V, 50/60Hz		
Dimension (L×W×H)		1445×1185×1560mm	1745×1220×1720mm	1850×1420×1720mm
Weight		1000kg	1400kg	2200kg

To be continued

Continued from previous page

SPECIFICATION

Code		VMM-L1000CN	VMM-L1001CN	VMM-L1200CN
Measuring range (X×Y×Z)		1000×1200×200mm	1000×1500×200mm	1200×1500×200mm
Glass stage size		1100×1831mm	1100×2113mm	1300×2113mm
Resolution of X/Y/Z axis		0.5μm		
Accuracy of X/Y axis		≤(3.5+L/200)μm (L is measuring length in mm)		
Repeatability of X/Y axis		2μm		
Objective(manual zoom)		0.7X~4.5X (zoom)		
Working distance		92mm		
View field (diagonal length)		1.7~11.1mm		
Magnification		33.0X~208.6X (on 24" monitor)		
Camera		giga-bit network camera		
Illumination	surface	coaxial light, programmable segmented ring light		
	contour	adjustable LED light		
Max. height of workpiece		200mm		
Max. weight of workpiece		30kg		
Operation system		Windows 7/8/10		
Drive method		automatic		
Power supply		AC 220V, 50/60Hz		
Dimension (L×W×H)		2035×1590×1720mm	2315×1590×1720mm	2315×1790×1720mm
Weight		2900kg	3200kg	4000kg



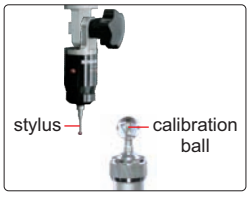
programmable segmented ring light (included)



lens with coaxial light (included)

STANDARD DELIVERY

Main unit	1 pc
Dongle	1 pc
Computer	1 pc
Software	1 pc
Dispaly	1 pc
Lens with coaxial light	1 pc
Controller	1 pc
Calibration glass chart	1 pc
Laser positioner	1 pc
Clay	1 pc
Anti-dust cover	1 pc



probe (**optional**), includes Ø2mm and Ø3mm styli, Ø25mm calibration ball, measuring accuracy is 10μm



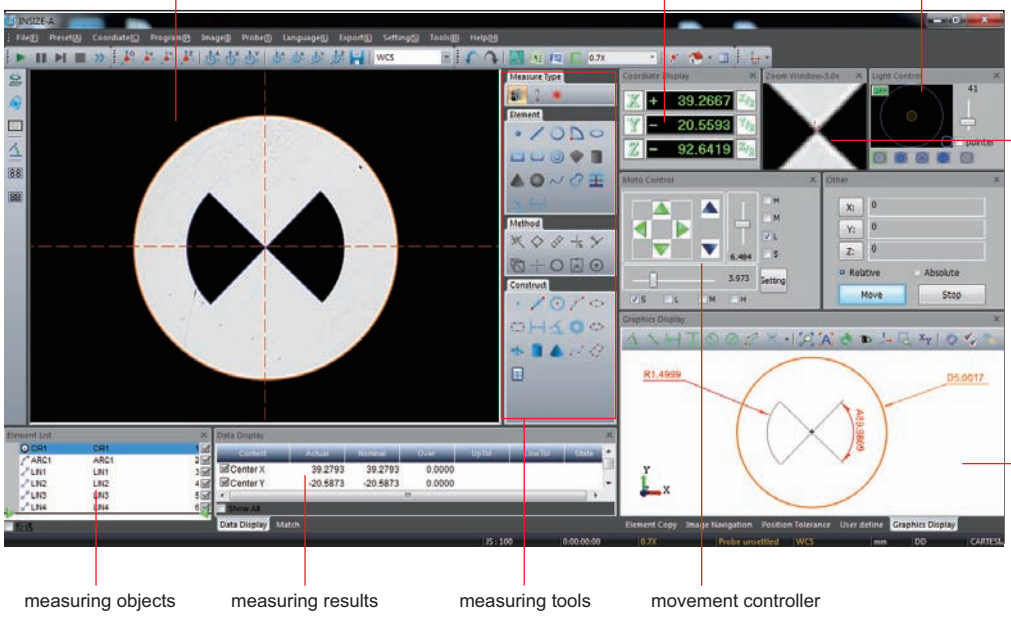
laser probe (**optional**) measuring accuracy is 5μm

OPTIONAL ACCESSORY

0.5X auxiliary objective	code: **ISD-V-OB05X** working distance: 175mm magnification: 16.5~104.3X (on 24" monitor)
2X auxiliary objective	code: **ISD-V-OB2X** working distance: 36mm magnification: 66~417.2X (on 24" monitor)
Probe	code: **ISD-V-PROBE** includes Ø2mm and Ø3mm styli, Ø25mm calibration ball
Laser probe	code: **ISD-V-LASER**
Office software	code: **7313-OFFICE**

SOFTWARE FOR VISION MEASURING SYSTEMS
ISD-V SERIES, ISD-H SERIES, ISD-VMM SERIES,
ISD-E SERIES AND VMM-L SERIES

VISION MEASURING SOFTWARE



- Operation system: Windows 7/10
- Language: English
- Control features: assistant focus (manual machines), auto focus (CNC machines), auxiliary light control, motion controlled by mouse (CNC machines), auto zoom lens (CNC machines)
- Image measuring methods: intelligent automatic edge detect, select points of an area, select points from multiple parts, select points via mouse, select adjacent points, select points via cross line, magnify to select points, comparatively select points, select points via probe, edge point, contour point
- Constructable elements: point, line, circle, arc, ellipse, rectangle, distance, angle, ring, slot, plane, cone, open curve, closed curve
- Support fixture (CNC machines), scanning, image navigation, user define, pixel calibration
- Measuring by image and probe, image and probe can be synchronized
- Measuring data can be sent to Excel, Word, SPC, measuring elements can be sent to dxf

- Dimension measuring tools:

point, line, circle, arc, ring, ellipse, rectangle, open curve, closed curve, distance, angle, focus plane (image), slot, plane (probe), sphere (probe), cone (probe), cylinder (probe)

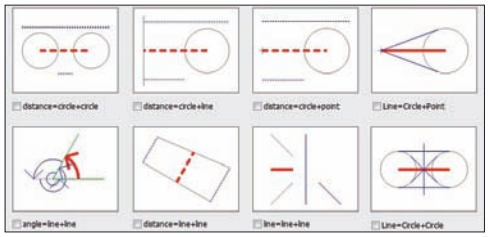
- Geometric measuring tools:

position, parallelism, squareness, angularity, symmetry, concentricity, coaxiality (probe)

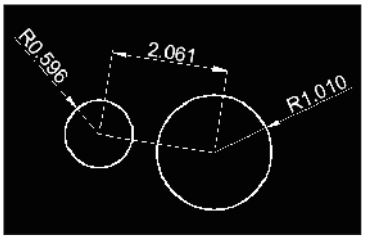
To be continued

Continued from previous page

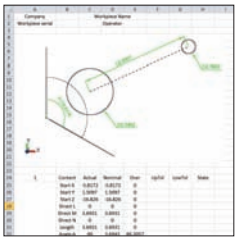
- Measuring and element construct methods:



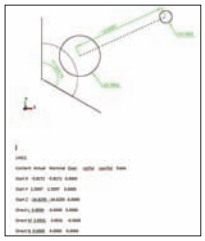
- Sent to CAD, EXCEL, WORD



CAD



EXCEL



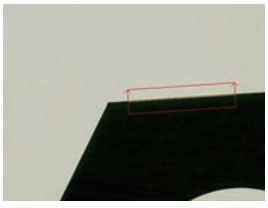
WORD

- Edge-detection:

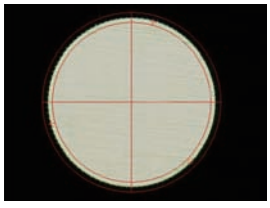
point tool



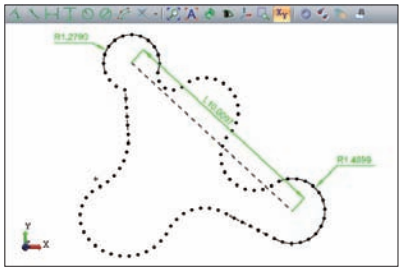
box tool



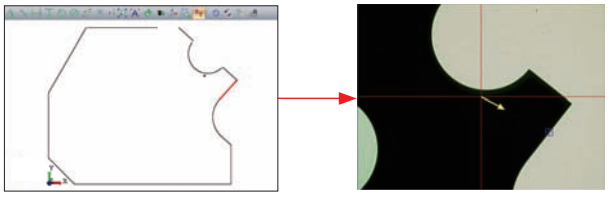
circle tool



- Contour scanning:

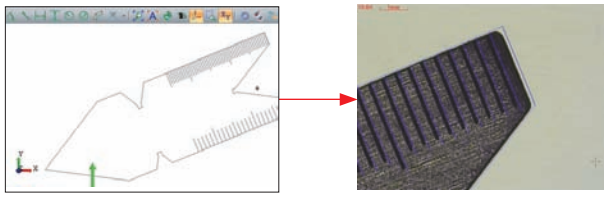


- CAD measuring:



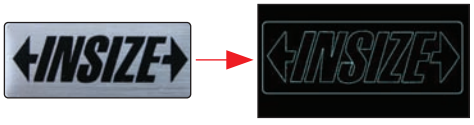
import CAD drawing, set the datum, establish coordinate system, then the software will automatically measure

- CAD comparison:

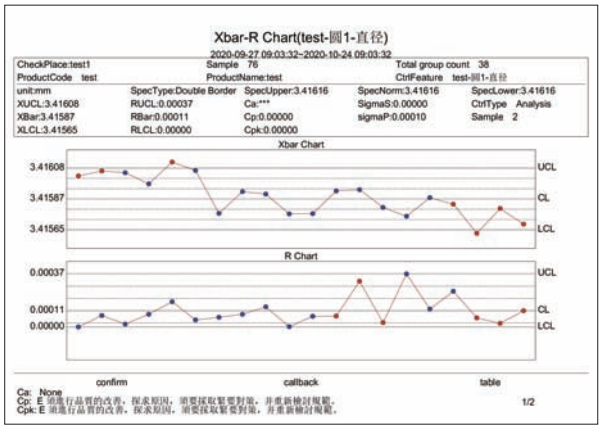


import CAD drawing, then compare with real-time image

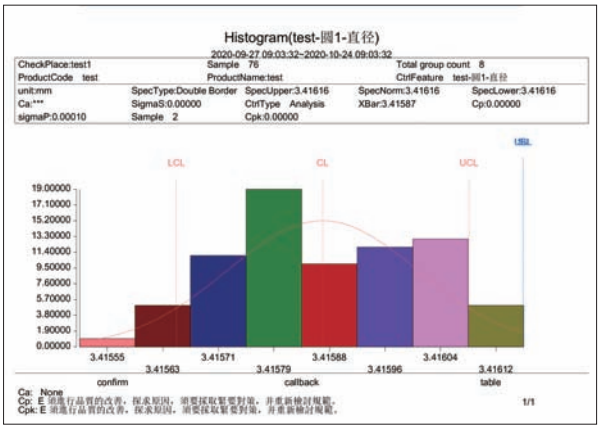
- Profile scanning:



- SPC analysis, import the measuring data to SPC module, generate Xbar-R chart, Xbar-S chart, Mid-R chart, X-Rs chart, Histogram, Sigma A and Sigma S chart, Cpk process chart, Process state analyse chart, Single proscess advice analyse chart



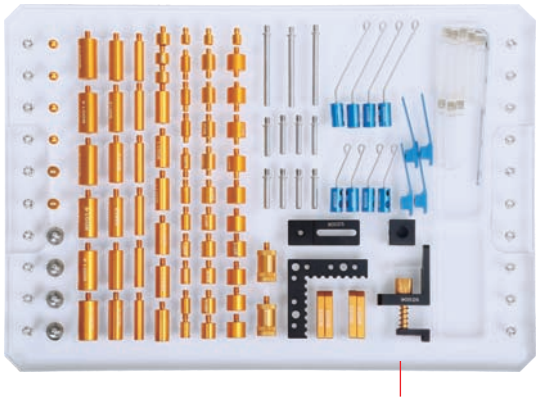
Xbar-R chart



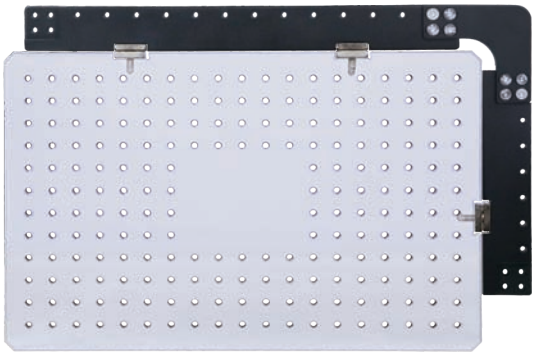
Histogram

113-PIECE JIG SET FOR VISION MEASURING SYSTEMS
CODE ISY-700

VIDEO

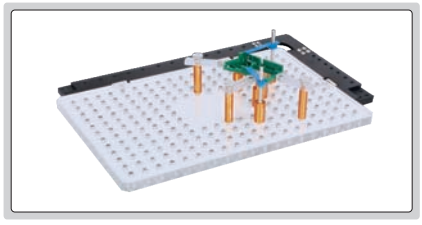


acrylic tray (included)



ISY-700

application example



Product	Code	Size (mm)	Quantity
clip	ISY-700-90001	7×34	4
clip	ISY-700-90002	Ø1.5×24	4
	ISY-700-90003	Ø1.5×50	4
clip stand	ISY-700-90004	Ø4×20	8
	ISY-700-90005	Ø4×46	3
spherical support head	ISY-700-90006	—	4
stand	ISY-700-90007	Ø6×10	6
	ISY-700-90008	Ø6×25	6
	ISY-700-90019	Ø6×5	3
stand	ISY-700-90009	Ø9×7	3
	ISY-700-90010	Ø9×10	6
	ISY-700-90011	Ø9×20	6
	ISY-700-90012	Ø9×25	6
stand	ISY-700-90013	Ø12×10	6
	ISY-700-90014	Ø12×25	6
stand for slice parts	ISY-700-90015	Ø6×10	4
	ISY-700-90016	Ø9×10	4
	ISY-700-90017	Ø12×10	4
stand with fine adjustment	ISY-700-90018	Ø12×20~25	2

Product	Code	Size (mm)	Quantity
adapter for square support	ISY-700-90020	—	2
clamping screw	ISY-700-90021	—	4
L-shaped positioning plate	ISY-700-90022	50×50×6	1
sliding support plate	ISY-700-90023	30×12×5	4
square support	ISY-700-90024	20×16×16	1
base for square support	ISY-700-90025	45×16×6	1
spring stand	ISY-700-90026	—	1
acrylic sliding support plate	ISY-700-90028	45×12×5	8
wrench	ISY-700-90029	M3	1
acrylic base plate	ISY-700-90030	300×200×12 Hole size: M4X0.7	1

STANDARD GLASS SCALES



ISD-CL300A

- To calibrate optical measuring instruments, also can be used as optical positioning elements in precision machine tools

STANDARD TYPE

Code	Measuring range	Graduation	Length	Width	Thickness	Accuracy
ISD-CL100A	100mm	1mm	130mm	30mm	5mm	1μm
ISD-CL200A	200mm	1mm	230mm	30mm	5mm	1μm
ISD-CL300A	300mm	1mm	330mm	30mm	5mm	1μm
ISD-CL400A	400mm	1mm	430mm	30mm	5mm	1μm
ISD-CL500A	500mm	1mm	530mm	30mm	5mm	2μm

ECONOMIC TYPE

Code	Measuring range	Graduation	Length	Width	Thickness	Accuracy
ISD-CL100B	100mm	1mm	130mm	30mm	5mm	3μm
ISD-CL200B	200mm	1mm	230mm	30mm	5mm	3μm
ISD-CL300B	300mm	1mm	330mm	30mm	5mm	3μm
ISD-CL400B	400mm	1mm	430mm	30mm	5mm	3μm
ISD-CL500B	500mm	1mm	530mm	30mm	5mm	3μm

ADVANCED TYPE (The scale is between two layers of glass and will not be worn off)

Code	Measuring range	Graduation	Length	Width	Thickness	Accuracy
ISD-CL100S	100mm	1mm	130mm	30mm	10mm	1μm
ISD-CL200S	200mm	1mm	230mm	30mm	10mm	1.5μm
ISD-CL300S	300mm	1mm	330mm	30mm	15mm	2.5μm
ISD-CL400S	400mm	1mm	430mm	30mm	15mm	3μm
ISD-CL500S	500mm	1mm	530mm	30mm	15-25mm	3.5μm

CUTTING TOOLS INSPECTION 23



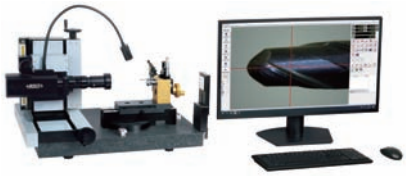
Tool Presetters
Page 754-761



Tool Presetters (Projector Type)
Page 759



Cutting Tools Microscopes
Page 762



Cutting Tools Vision Measuring Systems
Page 763-764



Shank Runout Testers
Page 765

TOOL PRESETTERS

INSIZE PLUS

CHECK, PRESET AND MEASURE CUTTING TOOLS

AUTOMATIC RECOGNITION OF CUTTING EDGE SHAPES

DATA OUTPUT

VIDEO



ISP-B420

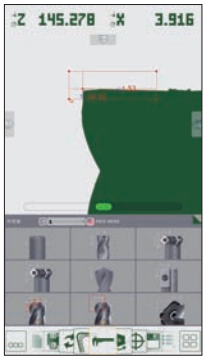
- Windows 10 operation system
- Check, preset and measure cutting tools
- Telecentric lens CCD camera system
- Use Bosch or Festo pneumatic components, THK guideways and HEIDENHAIN scales
- Built-in 113 cutting edge shapes, automatic recognition
- Measuring modes: absolute, relative and incremental measurement
- Measuring radius, angle, concentricity, axial runout, etc.
- Storage of 3000 tool parameters
- View, print and export measurement results



attach the printed label on the tool

To be continued

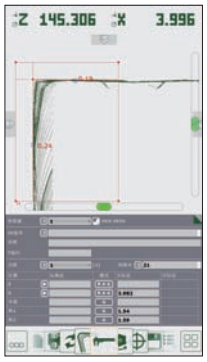
Continued from previous page



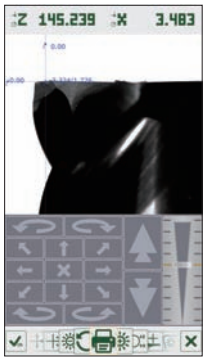
fast measurement, automatic recognition of cutting edge shapes



can store 99 sets of converter parameters and automatically prompt to check the zero position at fixed time



scan and measure the maximum profile of the tool



check cutting edge wear

SPECIFICATION

Code		ISP-B420	ISP-B420H
Maximum tool diameter (X axis)		420mm	420mm
Maximum tool height (Z axis)		420mm	600mm
Range of snap gauge (X axis)		100mm	
Repeatability	X axis	2μm	
	Z axis	2μm	
X/Z axis resolution		1μm	
Camera		color CCD	
Image processing accuracy		1μm	
Magnification		20X	
View field		7×7mm	
Illumination		adjustable LED light	
Spindle		ISO/SK/BT50 (concentricity 2μm)	
Data output		USB, RS232	
Working air pressure		0.6~0.8MPa	
Environmental requirement		temperature: 5~35°C	
		relative humidity:10%~95%	
Power supply		110/220V, 50/60Hz	
Dimension (L×W×H)		1900×750×1750mm	1900×750×1950mm
Weight		274kg	289kg



ISO/SK/BT50 to HSK63 A/C/E, HSK80 B/D/F converter (**optional**)

STANDARD DELIVERY

Main unit	1 pc
Controller	1 pc
Bracket for tools and converters	1 pc
ISO/SK/BT50 spindle (including 360° clamping and 4×90° clamping	1 pc
Printer	1 pc
Printer label paper	1 pc



ISO/SK/BT50 to ISO/SK/BT40 converter (**optional**)

OPTIONAL ACCESSORY

ISO/SK/BT50 to ISO/SK/BT40 converter	ISP-A350-C1
ISO/SK/BT50 to ISO/SK/BT30 converter	ISP-A350-C5
ISO/SK/BT50 to HSK100 A/C/E, HSK120 B/D/F converter	ISP-A350-C8
ISO/SK/BT50 to HSK80 A/C/E, HSK100 B/D/F converter	ISP-A350-C7
ISO/SK/BT50 to HSK63 A/C/E, HSK80 B/D/F converter	ISP-A350-C2
ISO/SK/BT50 to HSK50 A/C/E, HSK63 B/D/F converter	ISP-A350-C3
ISO/SK/BT50 to HSK40 A/C/E, HSK50 B/D/F converter	ISP-A350-C4
ISO/SK/BT50 to HSK32 A/C/E, HSK40 B/D/F converter	ISP-A350-C6
Spindle vacuum clamping	ISP-A350-VC
Printer label paper	ISP-A350-TAB

TOOL PRESETTER
CODE ISP-A350

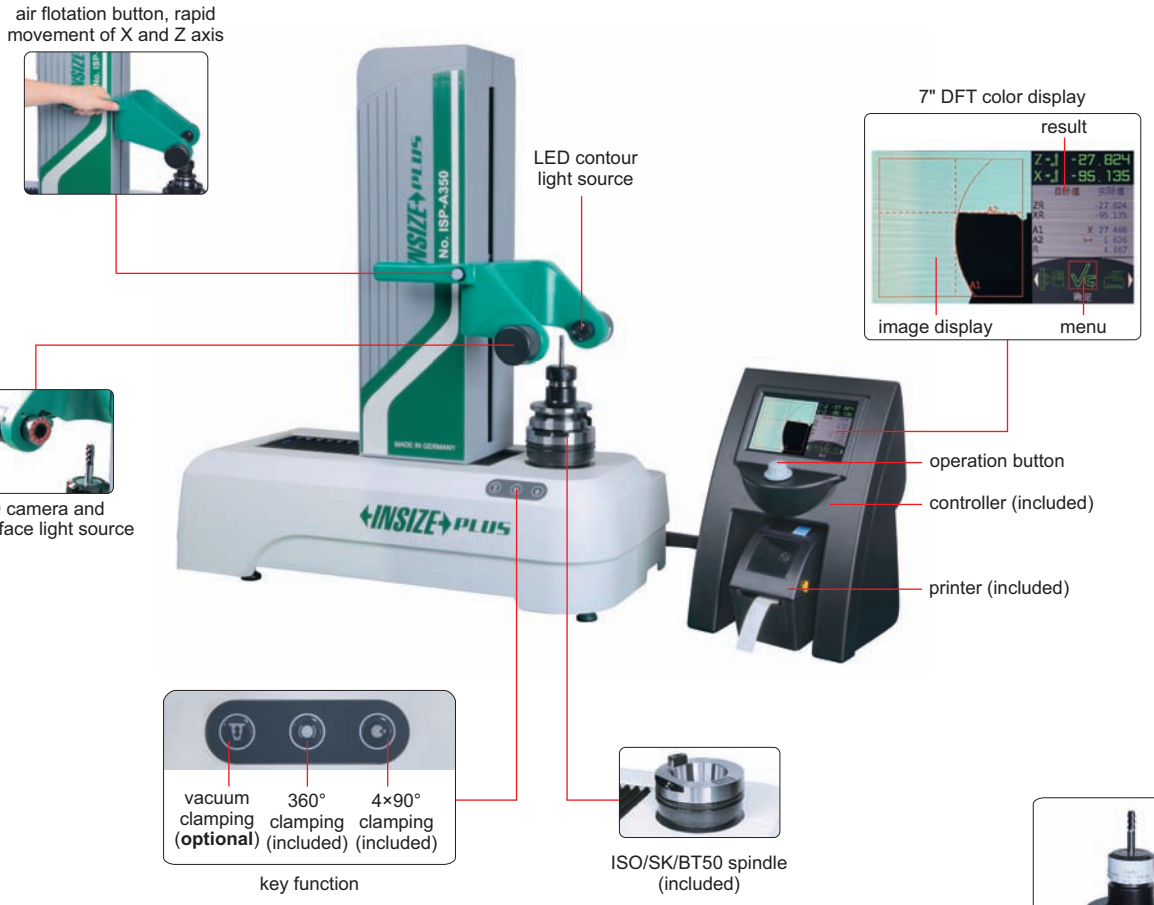
INSIZE PLUS

VIDEO

CHECK, PRESET AND MEASURE CUTTING TOOLS

AUTOMATIC RECOGNITION OF CUTTING EDGE SHAPES

DATA OUTPUT





attach the printed label on the tool

- Check, preset and measure cutting tools
- Telecentric lens CCD camera system
- Use Bosch or Festo pneumatic components, THK guide ways and HEIDENHAIN scales
- Built-in 104 cutting edge shapes, automatic recognition
- Measuring modes: absolute, relative and incremental measurement
- Measuring radius, angle, concentricity, axial runout, etc.
- Storage of 1000 tool parameters
- View, print and export measurement results



ISO/SK/BT50 to HSK63 A/C/E, HSK80 B/D/F converter (**optional**)



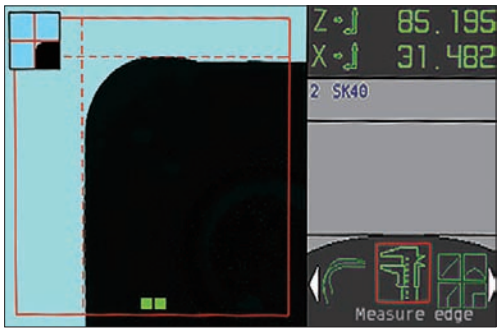
ISO/SK/BT50 to ISO/SK/BT40 converter (**optional**)

STANDARD DELIVERY

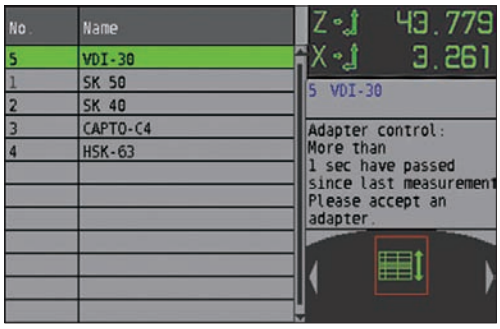
Main unit	1 pc
Controller	1 pc
ISO/SK/BT50 spindle (including 360° clamping and 4×90° clamping	1 pc
Printer	1 pc
Printer label paper	1 pc

To be continued

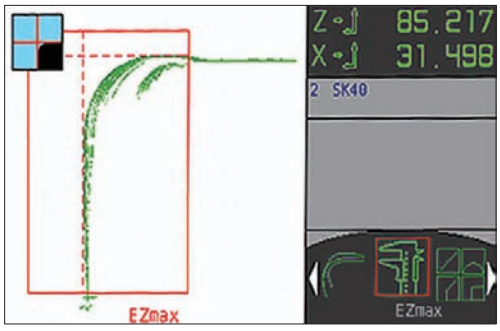
Continued from previous page



automatic recognition of cutting edge shapes



can store 99 sets of converter parameters and automatically prompt to check the zero position at fixed time



scan and measure the maximum profile of the cutting tool



check cutting edge wear

SPECIFICATION

Maximum tool diameter (X axis)		320mm
Maximum tool height (Z axis)		350mm
Repeatability	X axis	2μm
	Z axis	2μm
X/Z axis resolution		1μm
Camera		color CCD
Image processing accuracy		1μm
Magnification		12X
View field		7×7mm
Illumination		adjustable LED light
Spindle		ISO/SK/BT50 (concentricity 2μm)
Data output		USB, RS232
Working air pressure		0.6~0.8MPa
Environmental requirement		temperature: 5~35°C
		relative humidity: 10%~95%
Power supply		100~240V, 50/60Hz
Dimension (L×W×H)		1200×400×870mm
Weight		80kg

OPTIONAL ACCESSORY

ISO/SK/BT50 to ISO/SK/BT40 converter	ISP-A350-C1
ISO/SK/BT50 to ISO/SK/BT30 converter	ISP-A350-C5
ISO/SK/BT50 to HSK63 A/C/E, HSK80 B/D/F converter	ISP-A350-C2
ISO/SK/BT50 to HSK50 A/C/E, HSK63 B/D/F converter	ISP-A350-C3
ISO/SK/BT50 to HSK40 A/C/E, HSK50 B/D/F converter	ISP-A350-C4
ISO/SK/BT50 to HSK32 A/C/E, HSK40 B/D/F converter	ISP-A350-C6
Spindle vacuum clamping	ISP-A350-VC
Printer label paper	ISP-A350-TAB

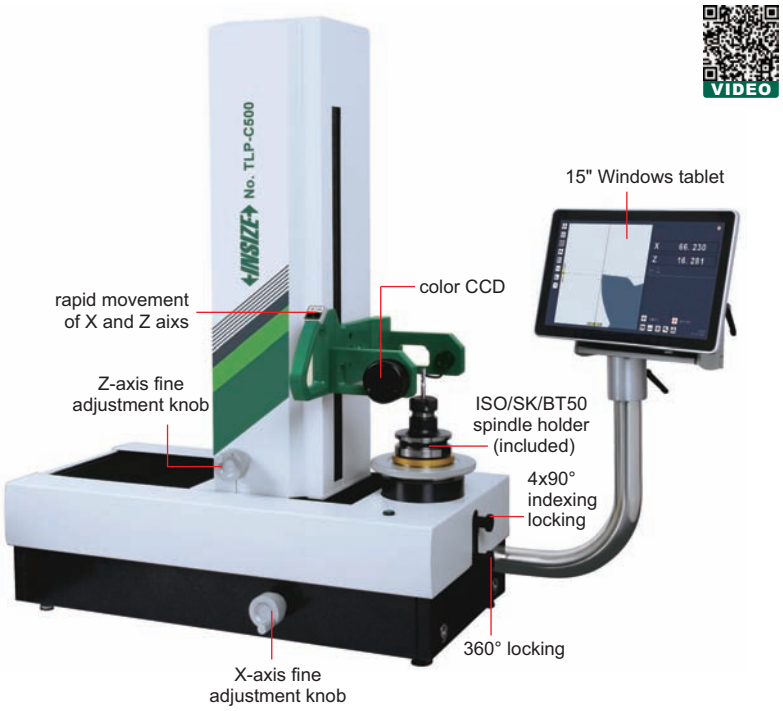
TOOL PRESETTER
CODE TLP-C500

CHECK, PRESET AND MEASURE CUTTING TOOLS

ASSISTED BLADE ALIGNMENT

DATA OUTPUT

- Check, preset and measure cutting tools
- CCD camera system with telecentric lens
- Touch screen, shortcut icons for easy operation
- Granite platform, more stable
- Measuring lines, arcs, angles and other elements quickly
- Pictures can be saved
- Measuring modes: absolute, relative and incremental measurement
- Measuring reports can be printed
- Supporting system scanning for direct retrieval and communication with tools machine
- Automatic cutting tools recognition by scanner



SPECIFICATION

Maximum tool diameter (X axis)		400mm
Maximum tool height (Z axis)		500mm
Repeatability	X axis	2μm
	Z axis	2μm
Resolution of X/Z axis		1μm
Radial runout of spindle		≤2μm at 100mm, ≤5μm at 300mm
Camera		color CCD, 1.3M pixel
Magnification		26X
View field		6.5x6.5mm
Illumination		LED transmitted light source
Spindle		ISO/SK/BT50
Output		USB
Air pressure		0.4~0.6MPa
Environment requirement		temperature:10~45°C,relative humidity: 30%~75%
Power supply		220V
Dimension (L×W×H)		860×590×1060mm
Weight		120kg

STANDARD DELIVERY

Main unit	1 pc
Tablet computer	1 pc
ISO/SK/BT50 spindle (including 4×90° indexing and 360°locking)	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

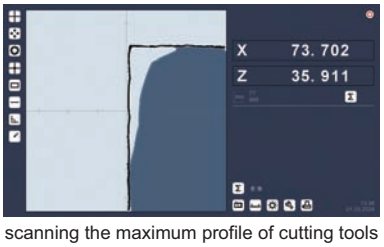
ISO/SK/BT50 to ISO/SK/BT30 converter	TLP-C500-C1
ISO/SK/BT50 to ISO/SK/BT40 converter	TLP-C500-C2
ISO/SK/BT50 to HSK32 A/C/E, HSK40 B/D/F converter	TLP-C500-C3
ISO/SK/BT50 to HSK40 A/C/E, HSK50 B/D/F converter	TLP-C500-C4
ISO/SK/BT50 to HSK50 A/C/E, HSK63 B/D/F converter	TLP-C500-C5
ISO/SK/BT50 to HSK63 A/C/E, HSK80 B/D/F converter	TLP-C500-C6
Spindle vacuum clamping function	TLP-C500-VB
Printer	TLP-C500-PRINTER
Standard rod	TLP-C500-ROD
Scanner	TLP-C500-SCANNER
Tool table	TLP-C500-TABLE
Ring LED light	TLP-C500-LED



checking blade geometry quickly



multiple measurement methods can be choosed

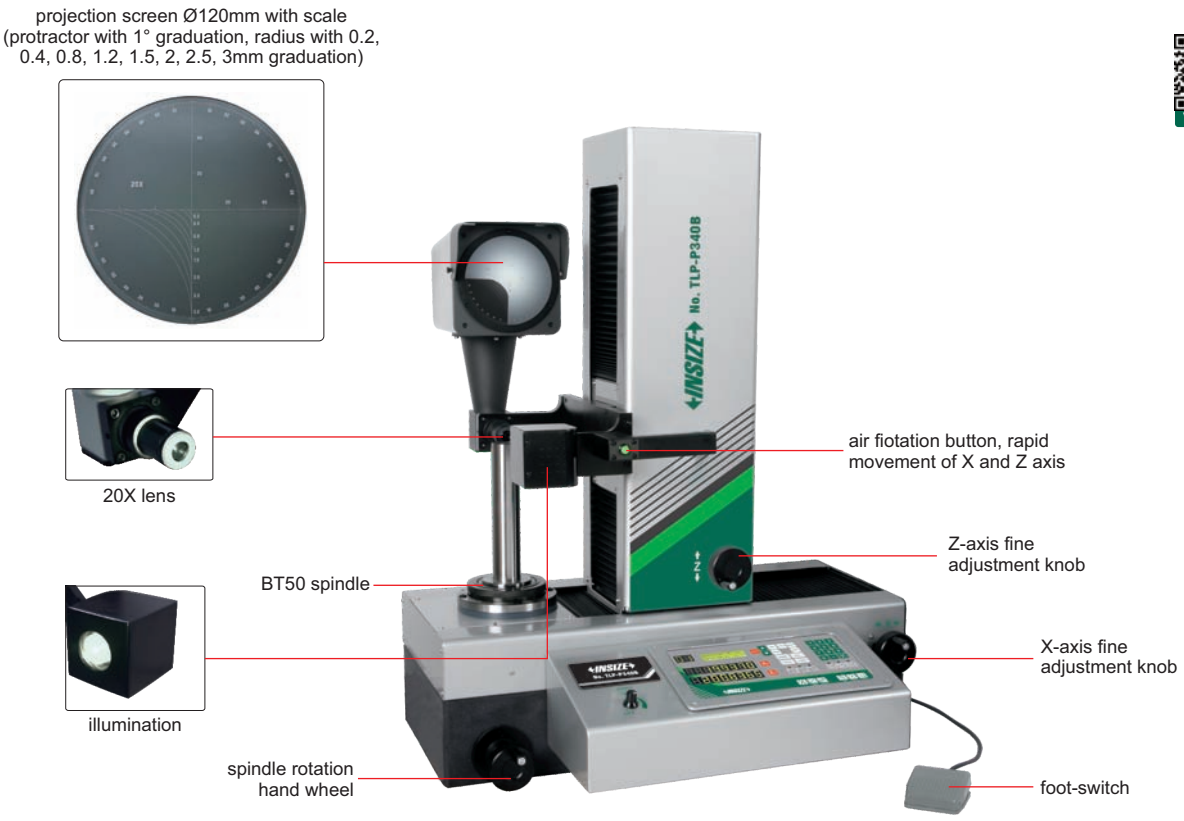


scanning the maximum profile of cutting tools



dynamic crosshair automatically adjusting as X and Z aixs move, and the cutting tools can be quickly measured through the dynamic crosshair

TOOL PRESETTER (PROJECTOR TYPE)
CODE TLP-P340B




standard rod (included)


BT50/BT40 converter (**optional**)


BT50/BT30 converter (**optional**)

SPECIFICATION

Maximum tool diameter (X axis)		Ø300mm
Height measuring range (Z axis)		45~450mm
Accuracy	**X axis**	±6μm
	Z axis	±13μm
Resolution		0.5μm
Diameter of projection screen		Ø120mm
Lens	**magnification**	20X
	view filed	Ø6mm
Illumination		3W LED
Spindle holder		BT50
Working air pressure		0.6MPa
Power supply		110/220V, 50/60Hz
Dimension (L×W×H)		690×620×922mm
Weight		160kg

STANDARD DELIVERY

Main unit	1 pc
BT50 spindle holder	1 pc
Standard rod	1 pc
Foot-switch	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

BT50/BT30 converter	**TLP-P340B-C1**
BT30 rod	**TLP-P340B-R1**
BT50/BT40 converter	**TLP-P340B-C2**
BT40 rod	**TLP-P340B-R2**
Printer	**TLP-P340B-PRINTER**

TOOL PRESETTERS

VIDEO



rotate the handwheel to rotate tools



TLP-400E



standard rod (included)



BT50/BT40 converter (**optional**)



BT50/BT30 converter (**optional**)

- Absolute linear scales, zero setting is not needed after power on and off

SPECIFICATION

Code	TLP-400E	TLP-400EP
Printer	not included	included
Maximum tool diameter (X axis)	Ø300mm	
Height measuring range	60~400mm	
Repeatability	0.005mm	
Measuring accuracy	0.01mm	
Linear scale resolution	0.001mm	
Dial indicator graduation	0.001mm	
Spindle holder	BT50	
Power supply	110/220V, 50/60Hz	
Dimension (L×W×H)	720×480×930mm	
Weight	150kg	

STANDARD DELIVERY

Main unit	1 pc
BT50 spindle holder	1 pc
Standard rod	1 pc
Dial indicator	2 pcs
Wrench	1 set
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

BT50/BT30 converter	TLP-300H-C1
BT50/BT40 converter	TLP-300H-C2



TLP-300H





standard rod (included)



BT50/BT40 converter (**optional**)



BT50/BT30 converter (**optional**)

- Absolute linear scales, zero setting is not needed after power on and off

SPECIFICATION

Code	TLP-300H	TLP-300HP
Printer	not included	included
Maximum tool diameter (X axis)	Ø300mm	
Height measuring range	60~300mm	
Repeatability	0.005mm	
Measuring accuracy	0.02mm	
Linear scale resolution	0.005mm	
Dial indicator graduation	0.01mm	
Spindle holder	BT50	
Power supply	110/220V, 50/60Hz	
Dimension (L×W×H)	600×365×690mm	
Weight	68kg	

STANDARD DELIVERY

Main unit	1 pc
BT50 spindle holder	1 pc
Standard rod	1 pc
Dial indicator	2 pcs
Wrench	1 set
Anti-dust cover	1 pc

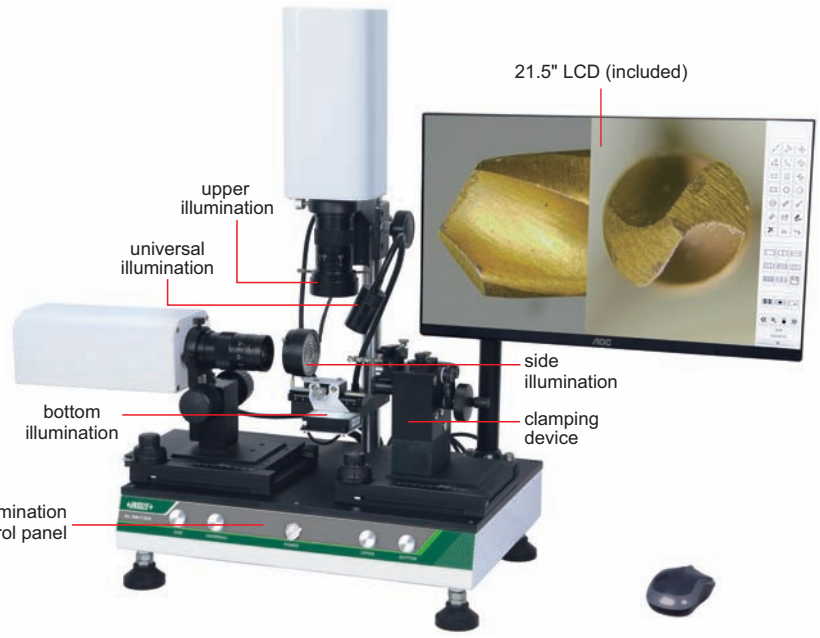
OPTIONAL ACCESSORY

BT50/BT30 converter	TLP-300H-C1
BT50/BT40 converter	TLP-300H-C2

CUTTING TOOLS MICROSCOPE
CODE ISM-CT820

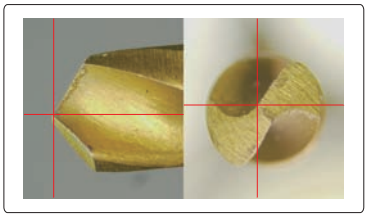
TAKE PICTURES AND VIDEOS | BUILT-IN SOFTWARE WITHOUT COMPUTER | SPLIT SCREEN DESIGN

VIDEO

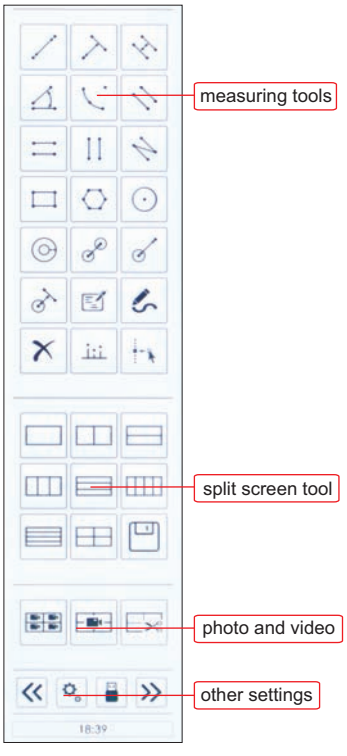


- Split screen design, zoom in and out independently
- One mouse can operate two cameras
- Display cross hairs
- Brightness, contrast ratio, white balance are adjustable
- Basic measuring tools including point to point, point to line, line to line, angle, three-point circle, etc.

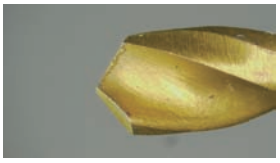

glass calibration plate (included)

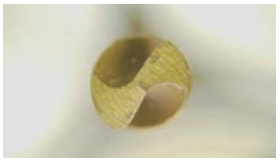

display cross hairs separately (movable)

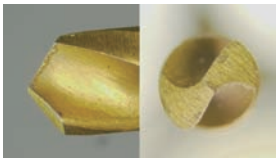
SOFTWARE (INCLUDED)



screen display


single screen display


single screen display


split screen display

SPECIFICATION

Cutting tools range	Ø4~12mm, length 30-75mm
Lens	step-zoom lens
Output	HDMI
Resolution	1920×1080
Frame rate	60fps
Focus distance	85mm
View field	2×3.5~13.2×23.9mm
Magnification	20-132X
Power supply	AC 100-240V
Dimension (L×W×H)	450×300×700mm
Weight	20kg

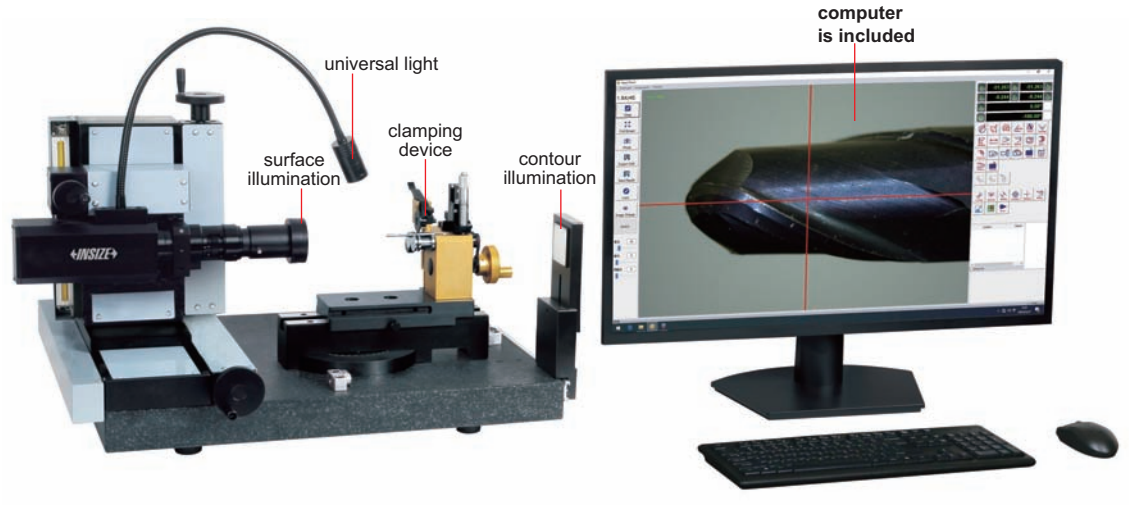
STANDARD DELIVERY

Main unit	1 pc
Display	1 pc
32G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
Glass calibration plate	1 pc
Anti-dust cover	1 pc

CAD COMPARISON | SCAN MAXIMUM PROFILE | CUTTING TOOLS MEASUREMENT

CUTTING TOOLS VISION MEASURING SYSTEM
CODE TLP-D150

VIDEO



23

measurement items

Drill bit:
helical angle bandwidth, back of blade, angle of main cutting edge in front, in back, back angle, top angle, cross angle, cross width, feed angle of internal edgeretreat angle height difference, cross-edge runout, rear blade width, B value, C value, tip chamfer angle, tip width, feed radius, chipformer parameters, overall comparison of dxf on end face.
Milling cutter:
groove front angle, back angle, groove depth, core thickness, spiral angle, belt width, blade width, end edge 1st 2nd back angle, front angle of the end blade, long tooth overcenter, parameters of the end tooth chipformer, taper, radius, chamfer size, etc.
Tap:
measurement of chamfer, groove shape, leading and trailing angles, tooth angle, pitch, pitch diameter.
Blade:
using V-shaped fixtures for cross clamping or install on cylindrical tool holders to measure chamfers, back angles, and fillet sizes.
Reamer:
anterior angle, helix angle, core thickness, groove depth, belt width, chamfer, etc.
Gun drill inspection
Cutting edge wear inspection
Step length
Cutting edge end runout and trail runout
Tool profile comparison

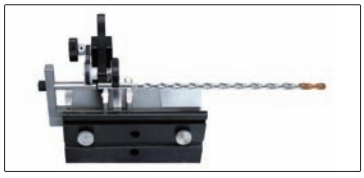


concentric clamp (included)



V-clamp (included)

- Measurement and inspection of milling cutters, drill bits, non-standard molding tools under surface light
- Profile measurement, automatic profile capture for straight and helical fluted tools
- Import and export CAD file
- High magnification for clear observation of tool chipping and grinding wheel pattern on the back face
- Granite platform, more stable
- Ergonomically designed structure, easy and quick to operate
- The crosshairs of the cutting edge can be automatically recognized and captured
- Automatic and manual measurements
- Data storage, analysis, management, photography, image storage and management



V-concentric clamp (**optional**)

To be continued

Continued from previous page

SPECIFICATION

Measuring range (X×Y)	150×60mm
Applicable range	0~40mm
Resolution of X/Y axis	1μm
Accuracy of X/Y axis	5μm
Repeatability of X/Y axis	2μm
Objective	0.58X~8X (zoom)
View field (diagonal length)	2.0~29mm
Working distance	68mm
Magnification	20X~240X (on 27" monitor)
Camera	color CCD, 0.5M pixel
Illumination	surface and contour with adjustable LED, with universal light
Operation system	Windows 10
Drive method	manual
Power supply	110~220V, 50/60Hz
Dimension (L×W×H)	600×450×500mm
Weight	60kg

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Dongle	1 pc
Concentric clamp	1 pc
V-clamp	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Cutter handle clamp	TLP-D150-C1
V-concentric clamp	TLP-D150-C2

SOFTWARE (INCLUDED)



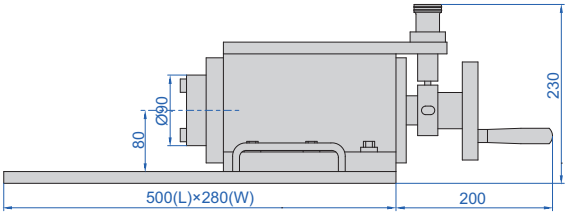
SHANK RUNOUT TESTERS

VIDEO



4771-30

Unit: mm



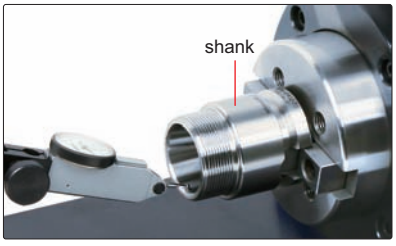
- Measure the radial runout of shanks, collets and cutting tools
- Optional accessory: dial test indicator, magnetic stand

standard shank (included)

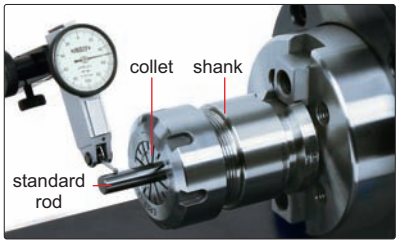


Code	Taper	Accuracy
4771-30	BT30	1μm
4771-40	BT40	1μm
4771-50	BT50	1μm

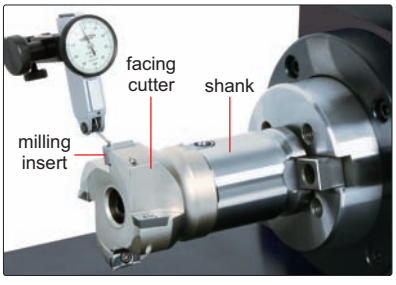
measure radial runout of shank



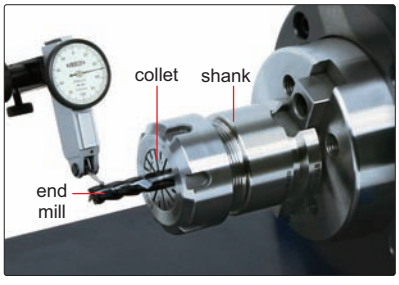
measure radial runout of collet



measure radial runout of cutter



measure radial runout of end mill



24 MICROSCOPES, MAGNIFIERS



Large Depth Of Field 3D Measuring Microscopes
Page 768-771



Toolmaker Microscopes
Page 772-775



Digital Microscopes
Page 776-815



Flexible Arm Auto Focus Digital Microscopes
Page 796-797



Digital Measuring Microscopes
Page 800-803



Metallurgical Microscopes
Page 817-822



Industrial Microscopes
Page 823-824



Zoom Stereo Microscopes
Page 816/825-830



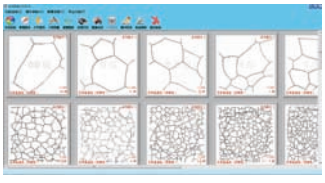
Biological Microscopes
Page 832-833



Polarizing Microscopes
Page 834



Digital Cameras For Microscopes
Page 835-850



Metallurgical Analysis Softwares
Page 845-850

MICROSCOPES, MAGNIFIERS 24



Portable Measuring Microscopes
Page 851



Table Magnifiers With Illumination
Page 852



Digital Magnifiers
Page 853-854



Magnifiers
Page 855-859



Telescoping Inspection Mirrors
Page 859



Telescoping Pick-Up
Page 860

LARGE DEPTH OF FIELD 3D MEASURING MICROSCOPE (ADVANCED TYPE)
CODE ISM-H5000

STEREOSCOPIC 3D IMAGING | IMAGE STITCHING | MOTORIZED XYZ AXIS | 2D/3D MEASUREMENT | MAGNIFICATION 30~6000X | MOTORIZED ZOOM LENS | MAP NAVIGATION

VIDEO

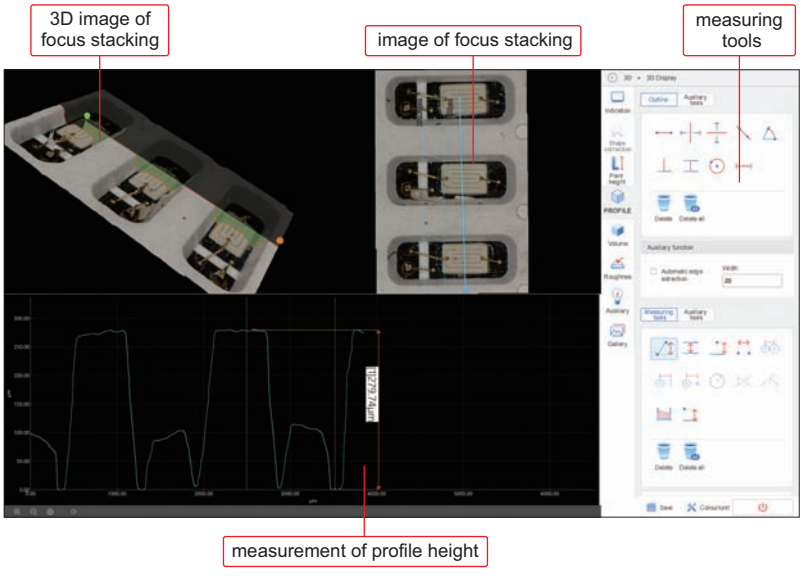


- High definition telecentric imaging lens
- Auto focus
- 4 motorized switching objectives
- Split-screen display
- Rotatable stage
- Take picture and video
- Multiple illumination options for different products and scenarios
- Elimination of reflections and dark field halos, HDR, optical shadows
- Automatic stitching for large field view and measurement after stitching
- Measurements can be saved in reports and exported

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Glass calibration plate	1 pc
Anti-dust cover	1 pc
16G USB flash disk	1 pc

COMPUTER SOFTWARE (INCLUDED)



tiltable observation



To be continued

Continued from previous page

SPECIFICATION

Magnification		30X~6000X (30X, 40X, 50X, 80X, 100X, 150X, 200X, 300X, 300X, 400X, 500X, 700X, 1000X, 1500X, 2000X, 2500X, 4000X, 5000X, 6000X) 5000X and 6000X are digital magnification
Objective		1.5X, 5X, 20X, 50X
Horizontal resolution		0.42μm
Maximum depth of field		30mm
Working distance		2~30mm
Max. height of workpieces		90mm
View field		50.60×38.00μm~9977.30×7483.00μm
Accuracy		±(0.5+0.005L)μm (L is measuring length or height in μm)
Illumination		bright field (full/zoned), dark field (full/zoned), hybrid lighting, projected lighting
Light source life		LED, life span about 40,000 hours
Maximum viewable pixel size		2D: 5 billion pixels, 3D: 2.5 billion pixels
Tilting angle range		-89°~+89°
Camera	**sensor**	1/1.7"CMOS
	pixel	12.22M (4168×3062)
	frame rate	30fps
	resolution	quick: 2048×1536, standard: 2880×2160, high resolution: 4000×3000, high definition: 8000×6000/12000×9000
Display	**size**	27"
	screen size	596.736×335.664mm
	pixel pitching	0.1554×0.1554mm
	resolution	3840×2160
Motorized stage	**movement axis**	X/Y/θ axis
	range	40mm×40mm
	size	228mm×204mm
	moving speed	10mm/s
	resolution	1μm
	θ angle of rotation	-90°~+90
	max. weight of workpiece	5kg
Upper Z-axis	**control mode**	motorized
	moving speed	16.5mm/s
	resolution	0.1μm
	range	50mm
Lower Z-axis	**control mode**	motorized
	resolution	1μm
	moving speed	6mm/s
	range	50mm
Power supply		220V
Dimension (L×W×H)		600×320×710mm
Weight		70kg

SOFTWARE FUNCTION

Imaging	2D imaging, 3D imaging
	adjustable elimination of reflection
	adjustable elimination of ring halos
	HDR, adjustable brightness/contrast/color difference
	optical shadow
	jitter correction
	2D stitching, 3D stitching
	fast 3D synthesis, high precision 3D synthesis
	chromatogram height
Measuring	stitching measurement
	plane measurement (distance/angle/radius/area, automatic edge detection, scale display)
	3D measurement (point height/profile etc.)
File	take and save pictures, videos
	export report to Excel

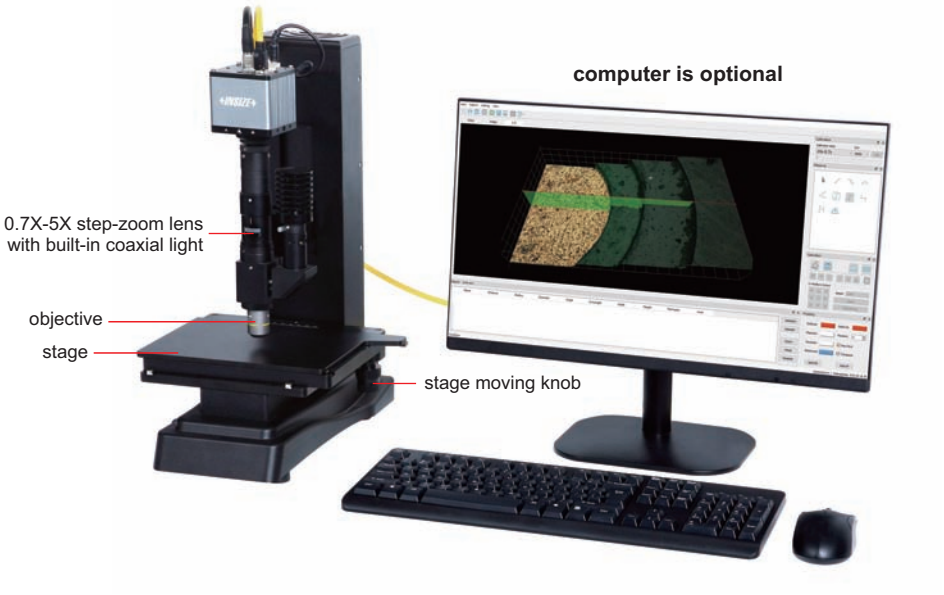
LARGE DEPTH OF FIELD 3D MEASURING MICROSCOPE
CODE 5323-D215

STEREOSCOPIC 3D IMAGING

ROTATABLE OBSERVATION

PROFILE HEIGHT MEASUREMENT

VIDEO



- The Z-axis is driven by high precision stepping motor
- Can be connected to display and computer at the same time
- Fast generation of large depth of field images
- Plane measurement and profile height measurement

SPECIFICATION

Sensor	1/1.2" CMOS
Pixel	2M
Resolution	1920×1080
Magnification (10X objective)	142~970X (on 21.5" monitor)
Z-axis measurement range	30μm~6mm
View field (10X objective)	0.29×0.16~2.0×1.2mm
Working distance	11mm
Frame rate	30fps
Stage	size: 200×180mm
	travel: 200×180mm
Plane measuring accuracy	±5μm
Profile measuring accuracy*	±10μm
Output	HDMI/LAN
Power supply	power adapter
Dimension (L×W×H)	230×330×500mm
Weight	12.7kg

* During 3D synthesis, the number of photos should be not less than 150pcs in order to achieve this accuracy

STANDARD DELIVERY

Main unit	1 pc
10X objective	1 pc
1X objective	1 pc
Power adapter	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc

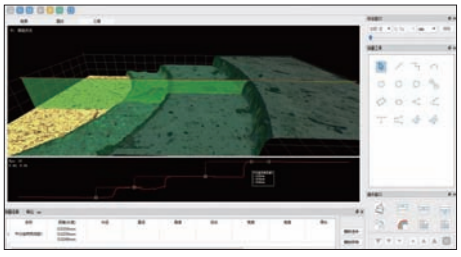
COMPUTER

Operation system	Win 10/11 (64 bits)
CPU	Intel Core 2 2.8GHz
Memory	16GB
LAN port	Gigabit Ethernet port

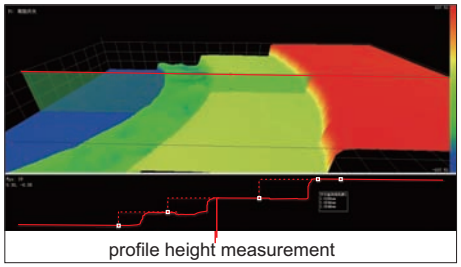
OPTIONAL ACCESSORY

5X objective	**5323-D215-5X** (working distance: 15mm)
20X objective	**5323-D215-20X** (working distance: 12mm)
50X objective	**5323-D215-50X** (working distance: 4mm)

SOFTWARE FOR COMPUTER (INCLUDED)

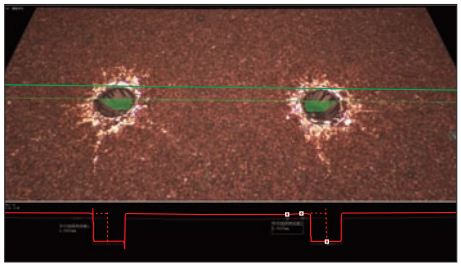


constructing stereoscopic 3D imaging that can be dragged and rotated for viewing, the cutting line can be dragged at any angle



profile height measurement

the chromatogram height clearly shows the difference in three-dimensional height

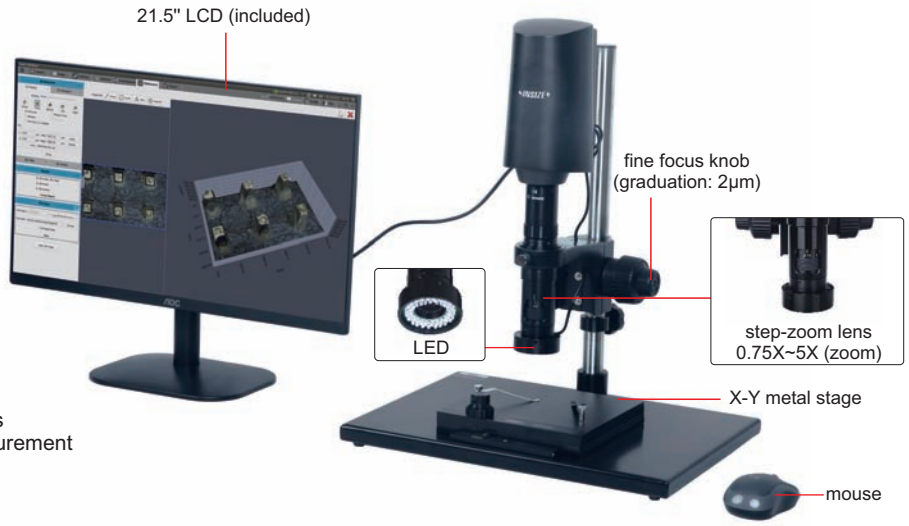


fast generation of large depth of field images

AUTO FOCUS | BUILT-IN SOFTWARE WITHOUT COMPUTER | STEREOSCOPIC 3D IMAGING | ROTATABLE OBSERVATION | PLANE MEASUREMENT AND PROFILE HEIGHT MEASUREMENT

VIDEO

LARGE DEPTH OF FIELD 3D MEASURING MICROSCOPE
CODE 5324-K210



- Auto focus camera
- Built-in motor, automatic focus stacking
- PDF report can be exported
- Fast generation of large depth of field images
- Plane measurement and profile height measurement

SPECIFICATION

Sensor	1/2" CMOS
Pixel	2M
Resolution	1920x1080
Magnification	100~750X
Z-axis measurement range	2mm
View field	0.6x0.32~4.5x2.5mm
Working distance	30~40mm
Frame rate	60fps
Plane measuring accuracy	±8μm
Output	HDMI/LAN
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	10kg

STANDARD DELIVERY

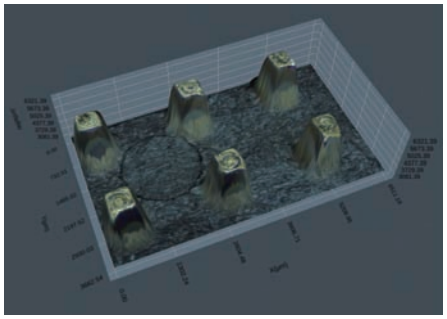
Main unit	1 pc
X-Y metal stage	1 pc
Mouse	1 pc
Keyboard	1 pc
Power adapter	3 pcs
Glass calibration ruler	1 pc
Calibration block	1 set
16G USB flash disk	1 pc

PROFILE HEIGHT MEASUREMENT ACCURACY

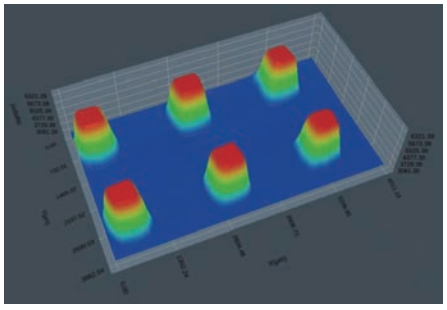
Objective magnification	Measuring range	Measuring accuracy
1.5X	2000μm	±20μm
2X	1200μm	±10μm
2.5X	800μm	±10μm
3X	600μm	±6μm
3.5X	400μm	±5μm
4X	320μm	±5μm
4.5X	250μm	±5μm
5X	200μm	±3μm

* Measurement of profile height at 0.75X and 1X is not recommended

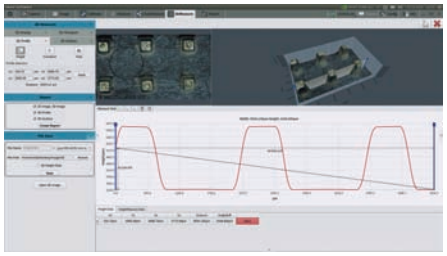
SOFTWARE (INCLUDED)



constructing stereoscopic 3D imaging that can be dragged and rotated for viewing



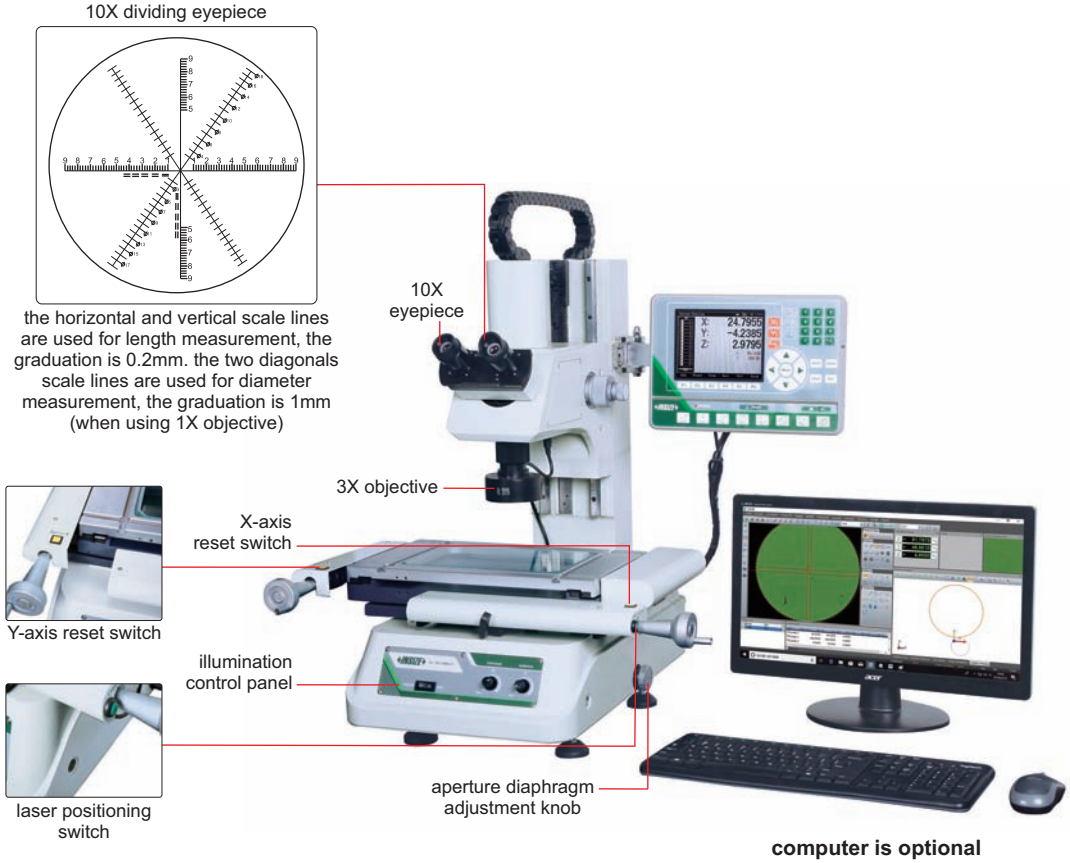
the chromatogram height clearly shows the difference in three-dimensional height



fast measurement of profile height difference

TOOLMAKER MICROSCOPES

INSPECTION CERTIFICATE



ISD-VMM215

SPECIFICATION

Code	binocular	ISD-VMM205	ISD-VMM215	ISD-VMM225	ISD-VMM235
	monocular	ISD-VMM205D	ISD-VMM215D	ISD-VMM225D	ISD-VMM235D
X/Y axis travel		150×100mm	200×100mm	250×150mm	300×200mm
Z axis travel		150mm	150mm	200mm	200mm
Metal stage size		354×228mm	404×228mm	450×280mm	500×330mm
Glass stage size		210×160mm	260×160mm	306×196mm	350×250mm
Resolution of X/Y/Z axis		0.5μm			
Accuracy of X/Y axis		≤(3.5+L/100)μm (L is the measuring length in mm)			
Repeatability		2μm			
Camera		1/3" color CCD, 0.3M pixel			
Optical magnification		30X (with 3X objective)			
Image magnification		114X (on 19" monitor)			
Illumination		surface and contour with adjustable LED			
Max. weight of workpiece		25kg			
Power supply		100V~240V, 50/60Hz			
Operation system		Windows 7/8/10			
Drive method		manual			
Dimension (L×W×H)		540×667×850mm	540×667×850mm	800×675×920mm	800×675×920mm
Weight		100kg	110kg	135kg	140kg

To be continued

Continued from previous page

DATA PROCESSING UNIT

Output	RS232
Function	simple measuring tools measure coordinate of points measure lines measure center coordinate, radius of circle with three points measure distances betwen two objects measure angles set origin of coordinate skew and calibrate the workpiece measure rectangle (including length, width, perimeter and center coordinate) measure thread (including thread diameter, screw pitch, screw angle) measure slot (including center coordinate, length, width)

STANDARD DELIVERY

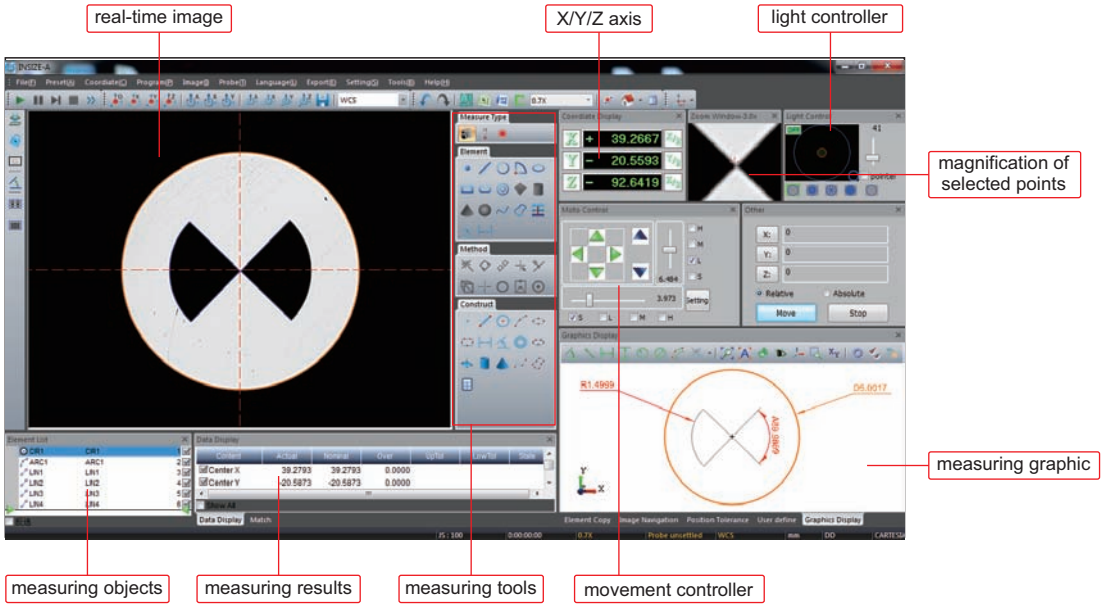
Main unit	1 pc
Video card with dongle	1 pc
Software disc	1 pc
Calibration glass chart	1 pc
Demo sample	1 pc
Foot switch	1 pc
3X objective	1 pc

OPTIONAL ACCESSORY

1X objective	**ISD-VMM-LENS1X**
5X objective	**ISD-VMM-LENS5X**
10X objective	**ISD-VMM-LENS10X**
Toolmaker microscopes (with computer)	code: **ISD-VMM205A** (binocular) **ISD-VMM215A** (binocular) **ISD-VMM225A** (binocular) **ISD-VMM235A** (binocular) code: **ISD-VMM205DA** (monocular) **ISD-VMM215DA** (monocular) **ISD-VMM225DA** (monocular) **ISD-VMM235DA** (monocular)

SOFTWARE (INCLUDED)

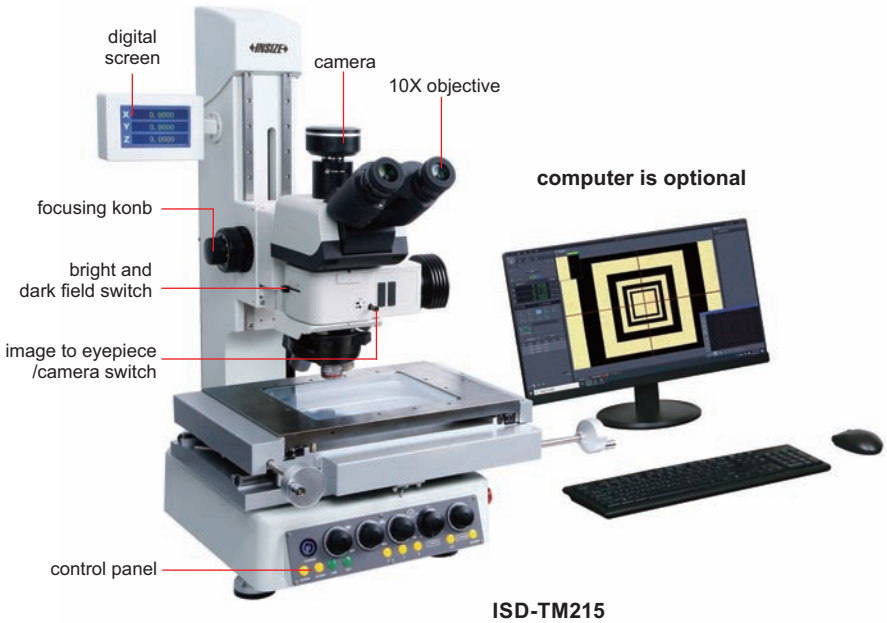
- Refer to page 749~750 for details



HIGH MAGNIFICATION TOOLMAKER MEASURING MICROSCOPES (ADVANCED TYPE)

INSPECTION CERTIFICATE

VIDEO



ISD-TM215

- For precision measurement and observation of industrial devices
- ECGO infinite chromatic aberration correction optical system
- High-density super power white LED chip array, high color rendering index, long life
- High precision linear scales
- Adopting motorized objective lens switching and supporting light intensity management
- Motorized Z-axis and focusing assist are included
- Measuring software is included, in-field image direct measurement, quick reading, out of image measurement for large workpieces, accurate measurement through image point selection, vectorlayer construction

SPECIFICATION

Code	ISD-TM215	ISD-TM320	ISD-TM330	ISD-TM430
X/Y axis travel	200×150mm	300×200mm	300×300mm	400×300mm
Metal stage size	400×280mm	500×350mm	500×450mm	600×450mm
Glass stage size	245×192mm	350×250mm	350×300mm	450×300mm
Z axis travel	210mm			
Z axis drive method	manual coarse and fine adjustment, motorized coarse and fine adjustment			
Resolution of X/Y/Z axis	0.1μm			
Accuracy of X/Y axis	≤(2.5+L/50)μm (L is the measuring length in mm)			
Repeatability of X/Y axis	2μm			
Optical magnification	50X~500X (up to 1000X with optional 100X objective)			
Digital magnification	150X~1500X (on 23.8" monitor), up to 3000X with optional 100X objective			
Eyepiece	large field SWH10X-H (view field: 25mm, adjustable visibility), with crossline			
Illumination	critical/kohler Illumination, supporting bright field, polarized light, dark field and other lighting methods			
Observation tube	15~45° adjustable, inverse image, distance adjustable: 45~78mm, 0/100, 100/0 binocular			
Diopter adjustment	±5 diopter (two eyepieces)			
Max. weight of workpiece	30kg			
Power supply	110~220V, 50/60Hz			
Dimension (L×W×H)	675×645×785mm	680×645×785mm	680×645×785mm	780×750×820mm
Weight	125kg	150kg	185kg	215kg

To be continued

Continued from previous page

OBJECTIVES SPECIFICATION

Objective (flat field semi apochromatic)	5X (included)	10X (included)	20X (included)	50X (included)	100X (**optional**)
Illumination	coaxial vertical light, bright and dark field				
Working distance	15.0mm	8.5mm	11.9mm	8mm	3.0mm
Depth of field range	12.27μm	3.06μm	1.72μm	1.00μm	0.43μm
Visible range	5.3mm	2.65mm	1.32mm	0.53mm	0.26mm
Numerical aperture	0.15	0.3	0.4	0.55	0.8

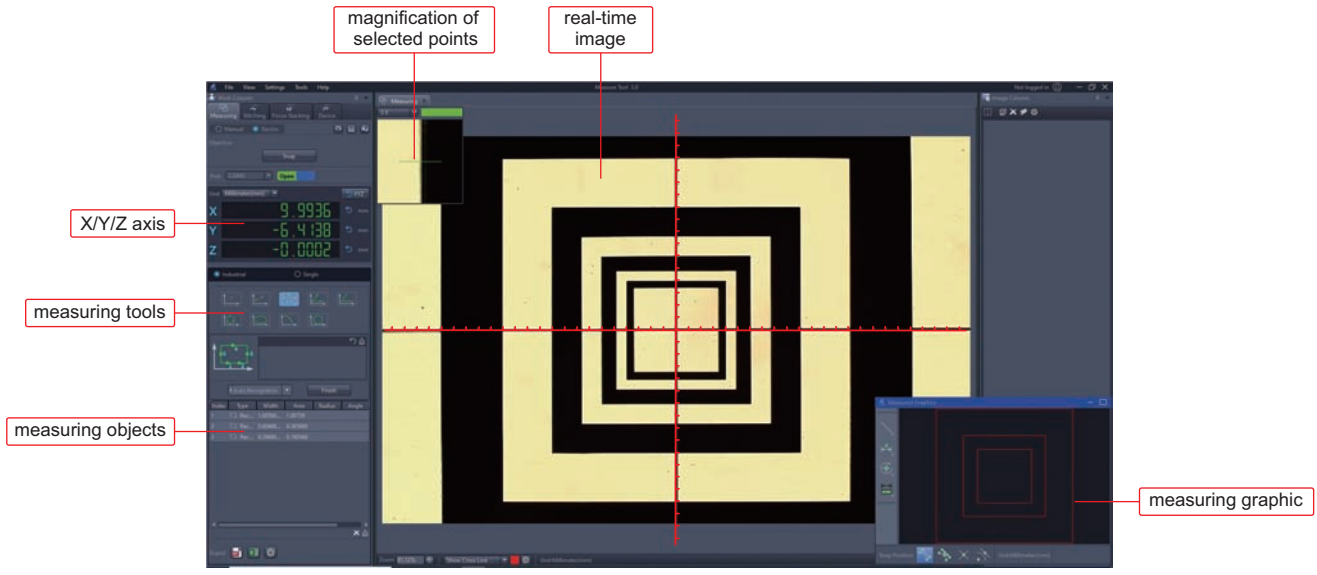
STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc
0.63X camera adapter (adjustable focus)	1 pc
Camera (20M pixels)	1 pc

OPTIONAL ACCESSORY

Glass calibration ruler	ISM-MAS-SCALE
100X objective	ISD-TM-100X
Polarizer	ISD-TM-PO
Analyzer	ISD-TM-AN
Differential interference module (DIC)	ISD-TM-DIC
Computer	ISD-TM-COMPUTER-E

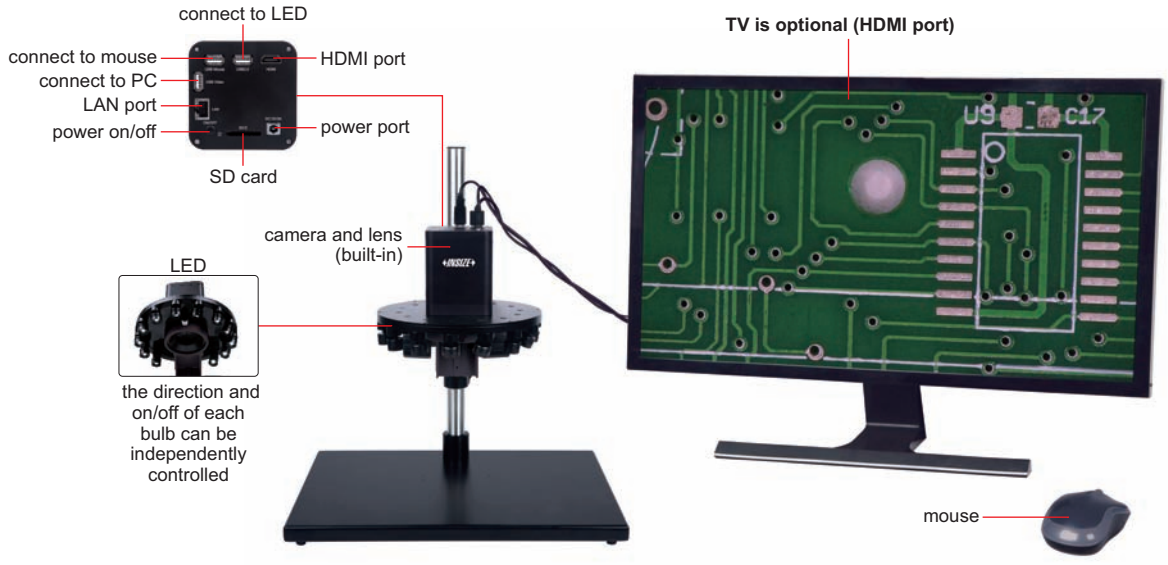
MEASURING SOFTWARE (INCLUDED)



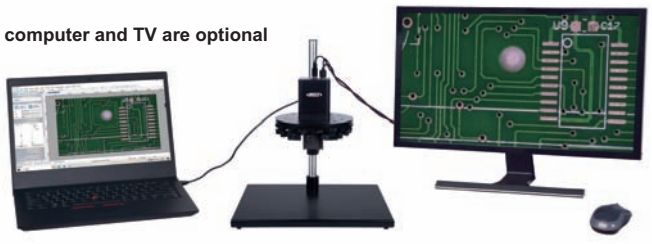
HIGH-DEFINITION AUTO FOCUS DIGITAL MICROSCOPE (LARGE VIEW FIELD)
CODE 5320-AF410

VIDEO

AUTO FOCUS | MEASUREMENT | TAKE PICTURES AND VIDEOS | LED INDEPENDENT ADJUSTMENT | CAN BE CONNECTED TO PC AND TV AT THE SAME TIME



- Auto focus camera
- Take pictures and videos
- Built-in measuring software
- Automatic exposure, sharpening, denoising and white balance
- 4K/1080P automatically switched by display resolution
- Display actual magnification
- Digital magnification
- Motorized light control
- Display cross hair and gridline



can be connected to PC and TV at the same time

SPECIFICATION

Magnification (on 28" TV)	2.4X~43.7X
View field	14.2×8~255×145mm
Auto focus distance	200~255mm
Sensor	1/2.8" CMOS
Pixel	8M
Resolution	3840×2160
Frame rate	30fps
Output	HDMI/USB/LAN
Power supply	power adapter
Dimension (L×W×H)	400×300×450mm
Weight	5.8kg

MEASURING ACCURACY (ON 28" TV)

Optical magnification	Measuring accuracy
2X	±0.1mm
4X	±0.1mm
6X	±0.04mm
10X	±0.02mm
14X	±0.02mm
18X	±0.01mm

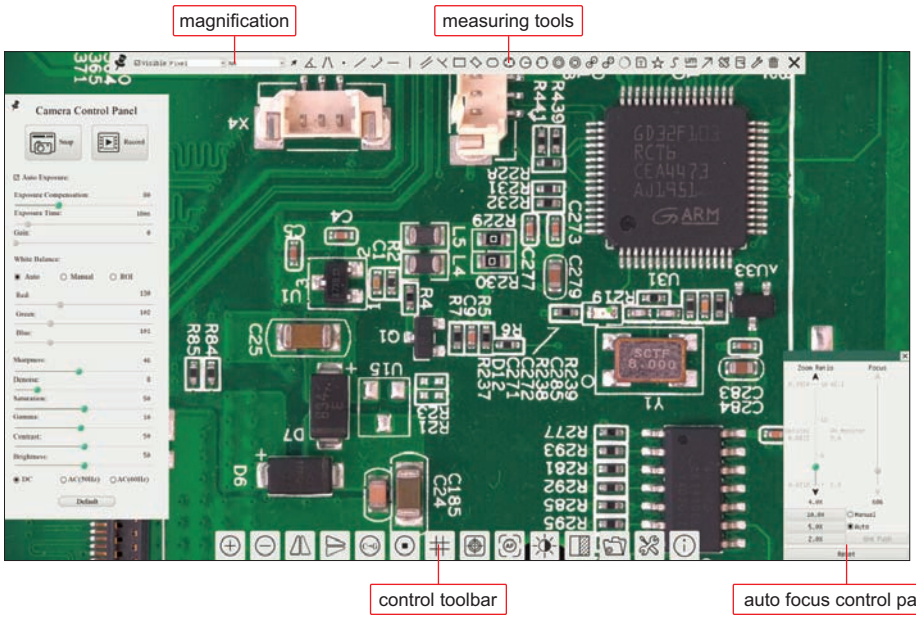
STANDARD DELIVERY

Main unit (with stand)	1 pc
LED illumination	1 pc
32G memory card and holder	1 pc
Mouse	1 pc
HDMI cable	1 pc
USB 2.0 cable	1 pc
Power adapter	1 pc

To be continued

Continued from previous page

SOFTWARE FOR TV (INCLUDED)



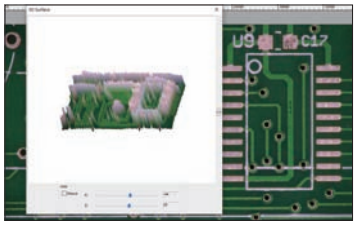
PROFESSIONAL SOFTWARE (INCLUDED, FOR COMPUTER)

binary



separate target and background

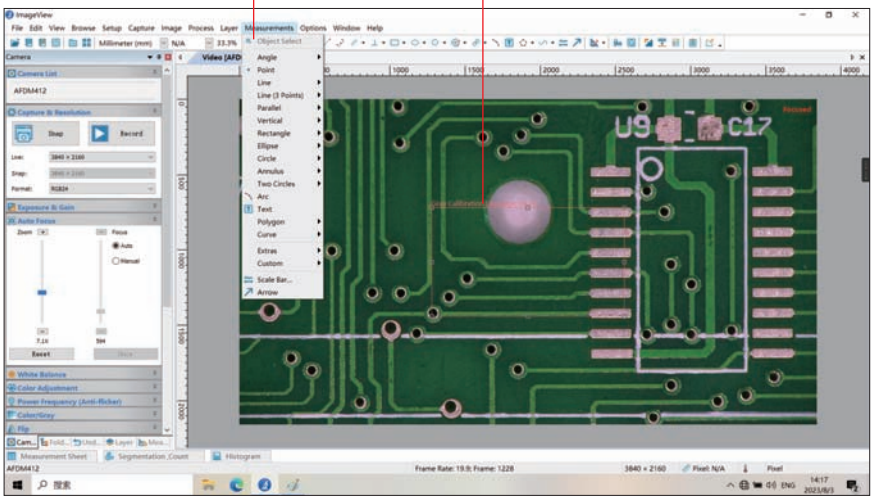
3D plot



visualize the distribution of image brightness and color

measuring items

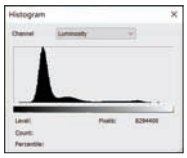
real-time gray calibration



selectable resolution



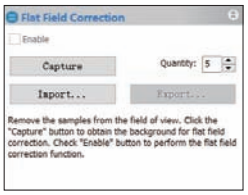
histogram (quantify the distribution of color and brightness)



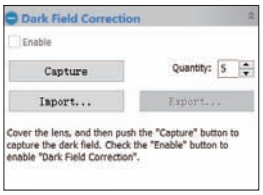
white balance (reduce color difference)



flat field balance (reduce brightness difference)



dark field balance (reduce thermal noise)



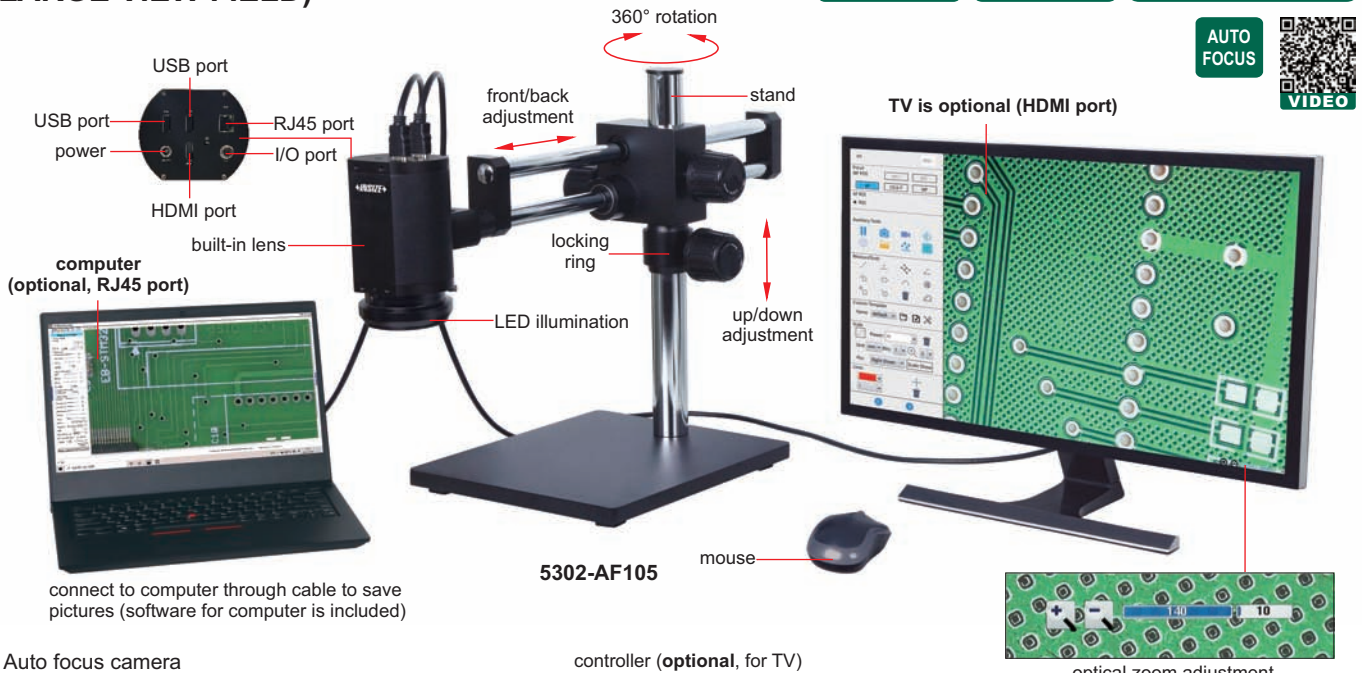
the software can control image completely, including measurement, image stitching, image gray processing, RGB histogram observation, image color sampling, 3D plot (3D representation of image intensity), image exposure, white balance, image bit depth, flat field correction and dark field correction, etc.

AUTO FOCUS DIGITAL MICROSCOPES (LARGE VIEW FIELD)

TAKE PICTURES AND VIDEOS | MEASUREMENT | CAN BE CONNECTED TO PC AND TV AT THE SAME TIME

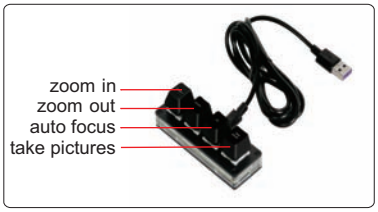
AUTO FOCUS

VIDEO

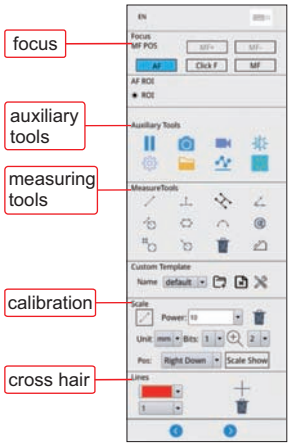


- Auto focus camera
- Take pictures and videos
- Can be connected to TV (HDMI port) and computer (RJ45 port) at the same time
- Built-in measuring software for TV
- Measuring software for computers is included
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red /yellow/black/brown colors)

controller (**optional**, for TV)



TV SOFTWARE (INCLUDED)



SPECIFICATION

Code	5302-AF105 (standard type)	5302-AF108 (high-definition type)
Pixel	2M	8M
Resolution	1920×1080	3840×2160
Magnification	1.4X~25.8X (on 28" TV)	1.4X~51.6X (on 28" TV)
Sensor	1/2.8" CMOS	
Auto focus distance	100mm~∞	
Output	HDMI, RJ45	
Frame rate	HDMI: 60fps, RJ45: 50fps	
Power supply	power adapter	
Dimension (L×W×H)	500×280×410mm	
Weight	17kg	

VIEW FIELD

Focus distance	Adjustable magnification (on 28" TV)	View field
100mm	3.9~25.8X	24×14~168×91mm
150mm	2.6~20X	30×17~240×128mm
200mm	2.1~17X	37×20~315×170mm
250mm	1.7~14.7X	42×24~385×210mm
270mm	1.4~14X	43×25~415×225mm

MEASURING ACCURACY

Optical magnification (5302-AF105)	Optical magnification (5302-AF108)	Measuring accuracy
2X	2X	±0.1mm
4X	4X	±0.1mm
6X	6X	±0.04mm
8X	8X	±0.02mm
14X	14X	±0.02mm
/	28X	±0.02mm

STANDARD DELIVERY

Main unit (with stand)	1 pc
LED illumination	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable (for TV)	1 pc
Network cable (for computer)	1 pc
Switch	1 pc
Software for computer	1 pc
Power adapter	2 pcs

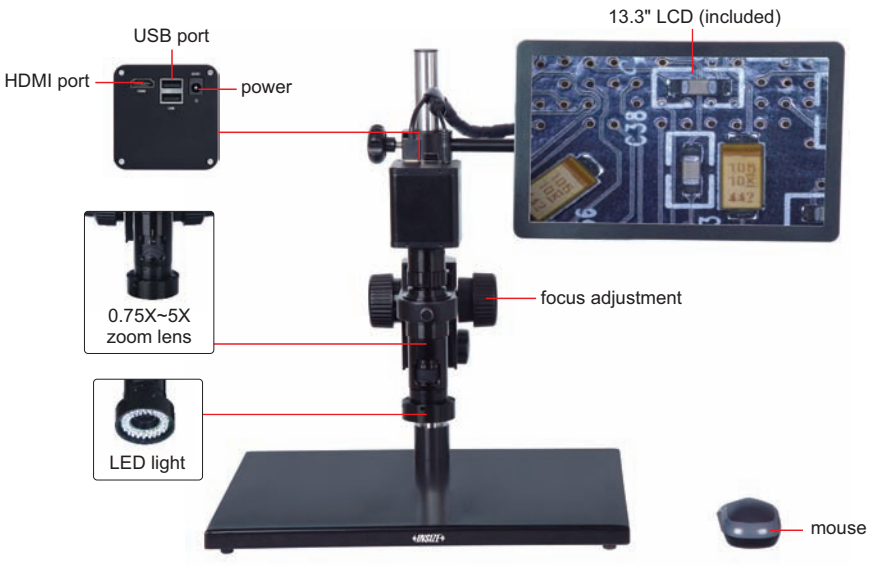
OPTIONAL ACCESSORY

28" 4K TV	5302-AF-TV28
32" 4K TV	5302-AF-TV32
Computer	5302-AF-COMPUTER
Controller	5302-AF-CONTROLLER

AUTO FOCUS | TAKE PICTURES AND VIDEOS | MEASUREMENT

AUTO FOCUS DIGITAL MICROSCOPE
CODE 5303-AF103

VIDEO

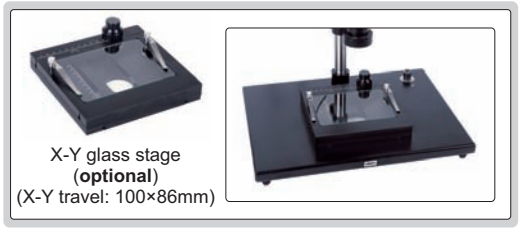


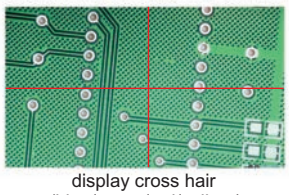

16G USB flash disk (included)


0.5X camera adapter (included)


1X auxiliary objective (included)

- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to USB flash disk
- Picture review, picture compare
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/ brown colors)
- Built-in software without computer, operation by mouse


X-Y glass stage (**optional**) (X-Y travel: 100×86mm)


display cross hair (blue/green/red/yellow/ black/brown colors)


1X camera adapter (**optional**)


2X auxiliary objective (**optional**)

SPECIFICATION

Magnification	20X~123X
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	2 pcs

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	20~123X	40~246X
	focus distance	48~84mm	48~84mm
	view field	13×7~2.2×1mm	6.3×3.5~1.1×0.5mm
	measuring accuracy	±0.02mm	±0.02mm
2X (optional)	magnification	40~246X	80~492X
	focus distance	24~42mm	24~42mm
	view field	6.5×3.5~1.1×0.5mm	3.3×1.8~0.6×0.3mm
	measuring accuracy	±0.02mm	±0.02mm

AUTO FOCUS DISTANCE

Zoom objective scale	0.75X	1X	1.5X	2X	2.5X
Auto focus distance (mm)	48~84	50~78	55~73	62~71	65~70

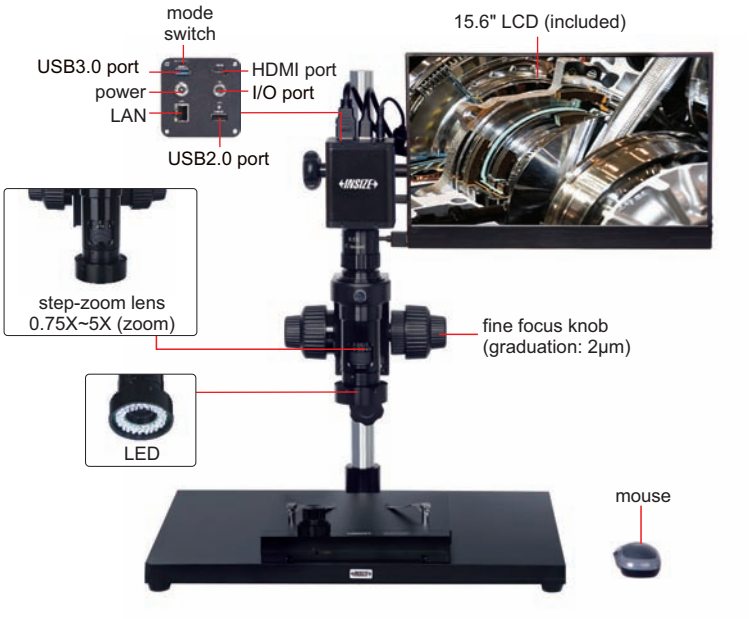
Zoom objective scale	3X	3.5X	4X	4.5X	5X
Auto focus distance (mm)	66~70	67~70	68~70	68~70	68~70

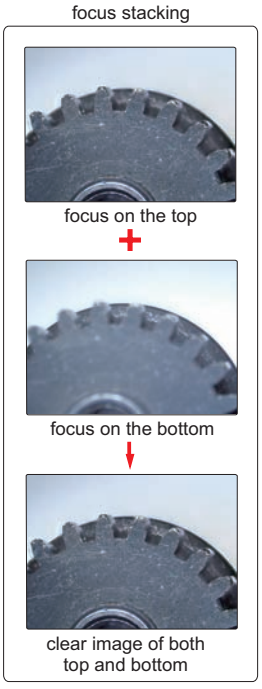
OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 100×86mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED light	page 808~809
Auxiliary objective	page 810

4K AUTO FOCUS MEASURING MICROSCOPE
CODE 5315-S710

IMAGE STITCHING | DUAL SCREEN OPERATION | FOCUS STACKING | VIDEO



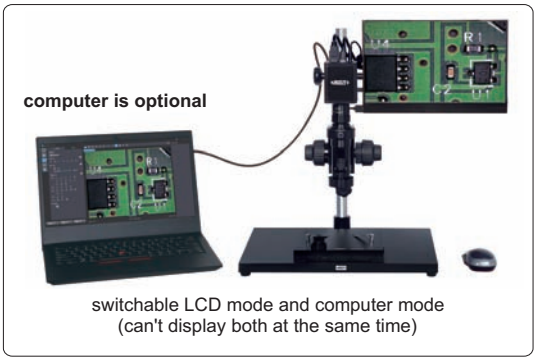


- 4K high-definition image
- Switchable LCD mode and computer mode
- Take pictures or videos, save to memory card
- Measurement results can be sent to Excel
- Auto focus
- Automatic white balance and exposure


calibration plate
(included)


1X camera adapter
(**optional**)


2X auxiliary objective
(**optional**)

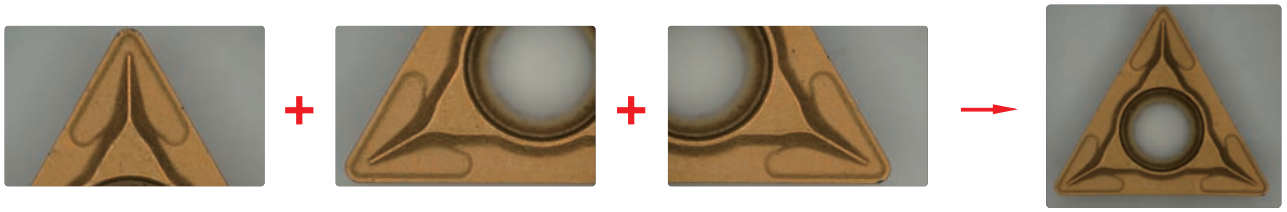


switchable LCD mode and computer mode
(can't display both at the same time)



X-Y metal stage
(included)
(X-Y travel: 100×86mm)

image stitching


adjust the X-Y metal stage to move the workpiece slowly to generate a stitched image automatically

To be continued

Continued from previous page

SPECIFICATION

Magnification	17.5X~109X (on 15.6" LCD)
Sensor	1/1.7" CMOS
Pixel	12M
Resolution	4000×3000
Frame rate	30fps
Output	HDMI/USB/LAN
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	15kg

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash drive	1 pc
Mouse	1 pc
X-Y metal stage	1 pc

MAGNIFICATION AND MEASURING ACCURACY (on 15.6" LCD)

Objective magnification	Image magnification	Measuring accuracy
0.75X	17.5X	±20μm
1X	23X	±20μm
1.5X	33X	±20μm
2X	45X	±20μm
2.5X	55X	±20μm
3X	65X	±20μm
3.5X	75X	±20μm
4X	85X	±10μm
4.5X	100X	±10μm
5X	109X	±10μm

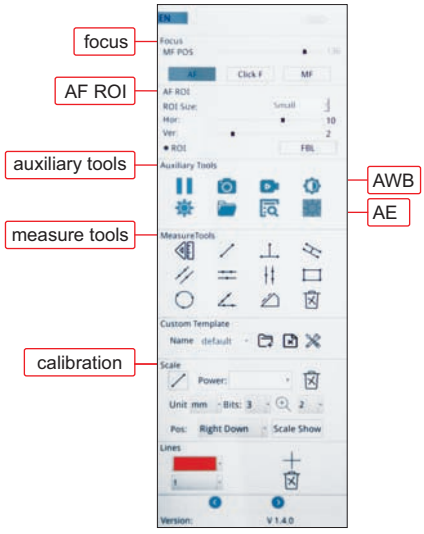
MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (on 15.6" LCD)

Specification	Camera adapter	
	0.5X (included)	**1X (optional)**
Magnification	17.5~109X	35~218X
Focus distance	73±2mm	73±2mm
View filed	19.2×11.0~3.2×1.9mm	9.6×5.5~1.6×0.9mm

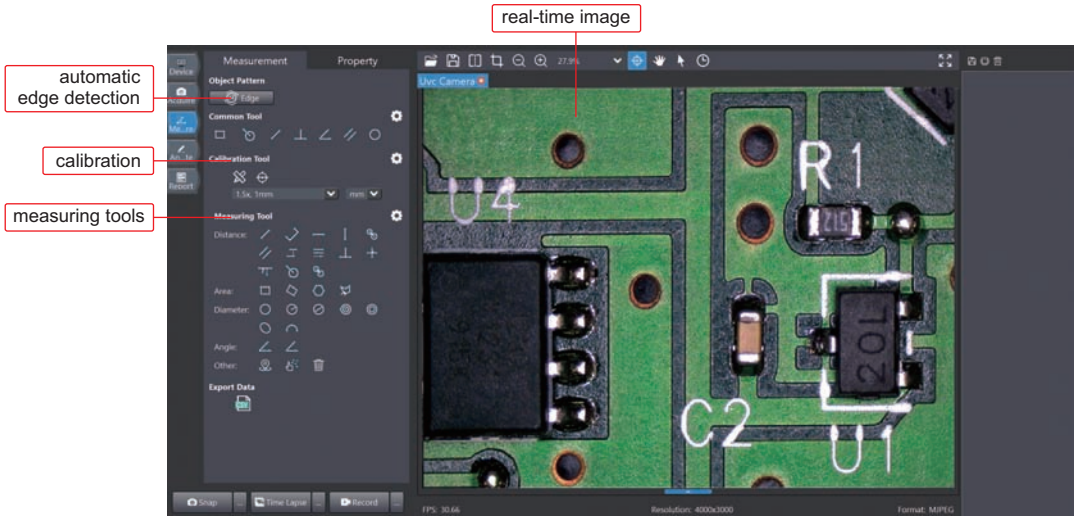
OPTIONAL ACCESSORY

1X camera adapter	**ISM-DL-CA1X**
2X auxiliary objective	**ISM-DL-OB2X**
Computer	**ISM-DL-COMPUTER**
LED light	page 808~809
Auxiliary objective	page 810

SOFTWARE FOR LCD (INCLUDED)



SOFTWARE FOR COMPUTER (INCLUDED)

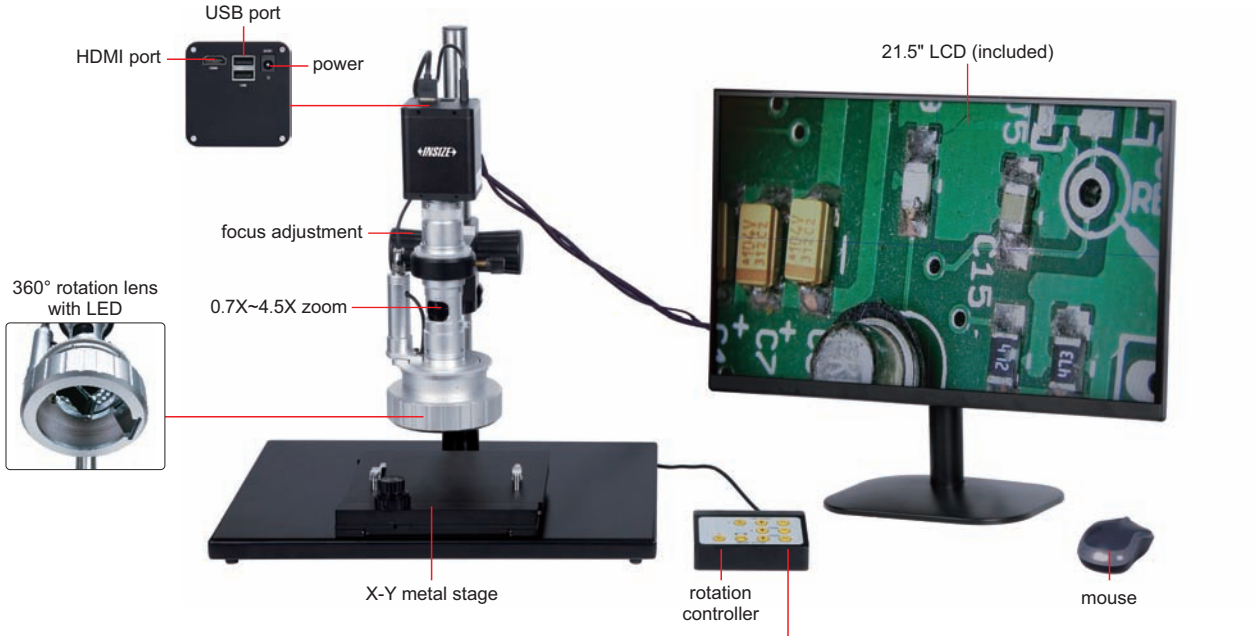


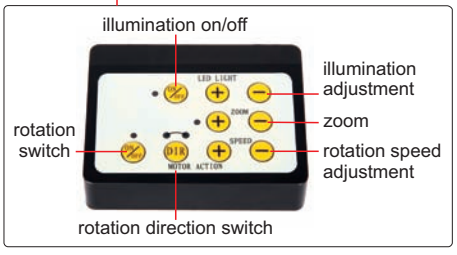
MOTORIZED 3D ROTATION MICROSCOPE
CODE 5301-D400

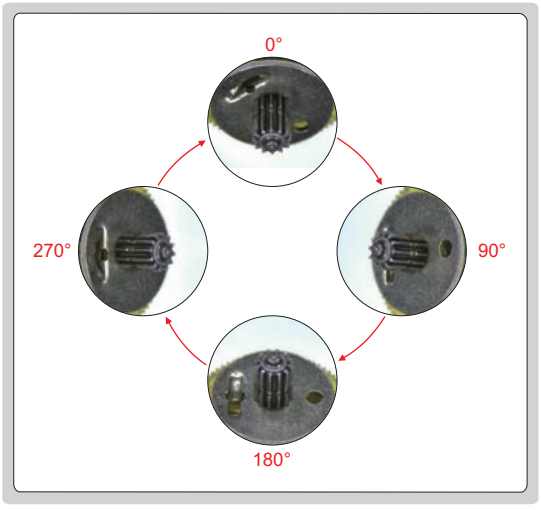
TAKE PICTURES AND VIDEOS

SUITABLE TO CHECK CONVEX OBJECTS AND WALL OF HOLE

VIDEO

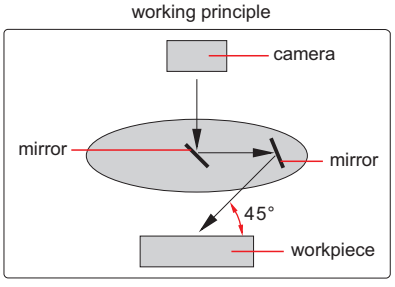






360° rotation observation

working principle



SPECIFICATION

Magnification	15X~100X
View field	4.2×2.7mm~28×18mm
Focus distance	40mm
View angle	45°
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Rotation speed	2~4RPM
Power supply	110/220V, 50/60Hz
Dimension (L×W×H)	570×300×430mm
Weight	10kg

- 1080P high-definition 3D image
- Take pictures and videos, save to USB flash disk
- Automatic white balance and exposure
- Brightness, contrast ratio and gain are adjustable

STANDARD DELIVERY

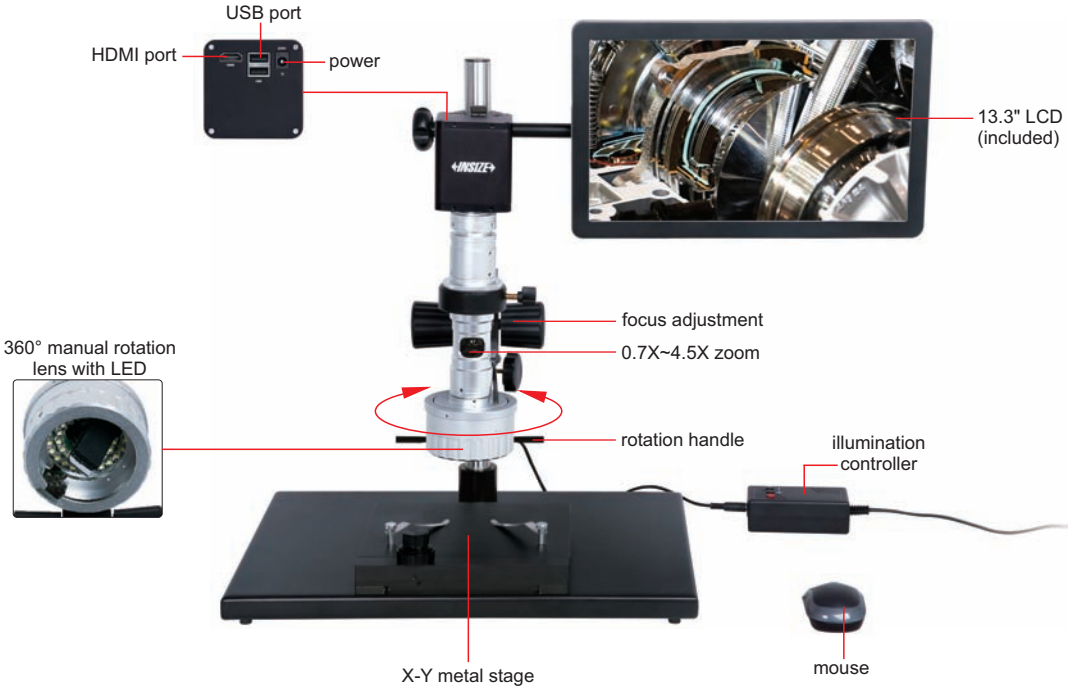
Main unit	1 pc
Rotation controller	1 pc
X-Y metal stage	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs

TAKE PICTURES AND VIDEOS

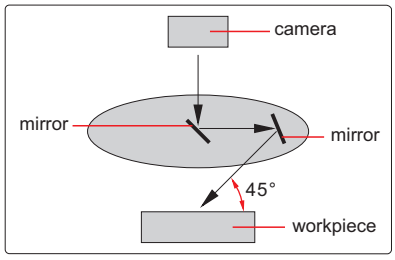
SUITABLE TO CHECK CONVEX OBJECTS AND WALL OF HOLES

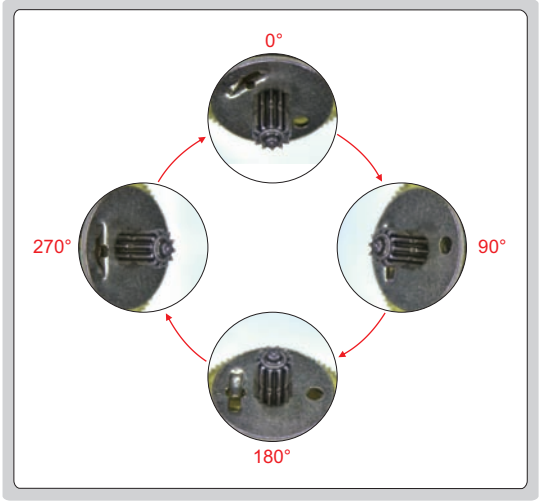
MANUAL 3D ROTATION MICROSCOPE
CODE 5313-S407

VIDEO



working principle





360° rotation observation

SPECIFICATION

Magnification	18X~120X
View field	2.4×1.5mm~16×9mm
Focus distance	20mm
View angle	45°
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	10kg

STANDARD DELIVERY

Main unit	1 pc
X-Y metal stage	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs

DIGITAL MEASURING MICROSCOPES

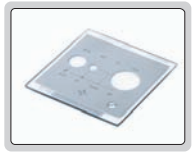
BUILT-IN SOFTWARE WITHOUT COMPUTER | MEASUREMENT | TAKE PICTURES | VIDEO



0.5X camera adapter (included)



1X auxiliary objective (included)



calibration plate (included)



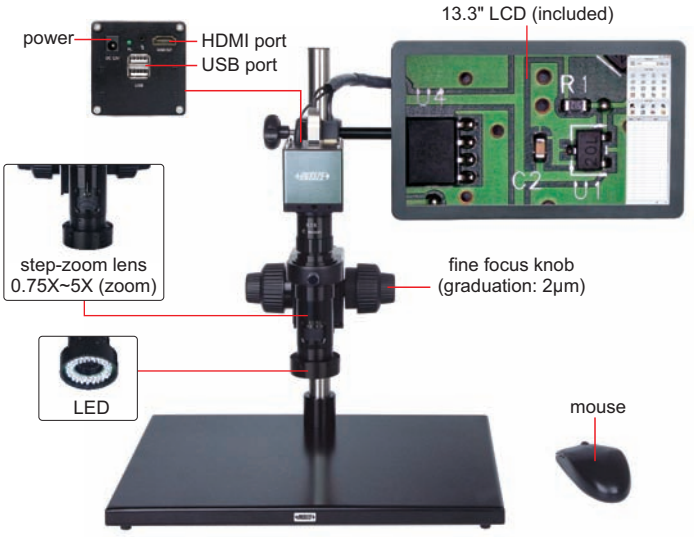
16G USB flash disk (included)



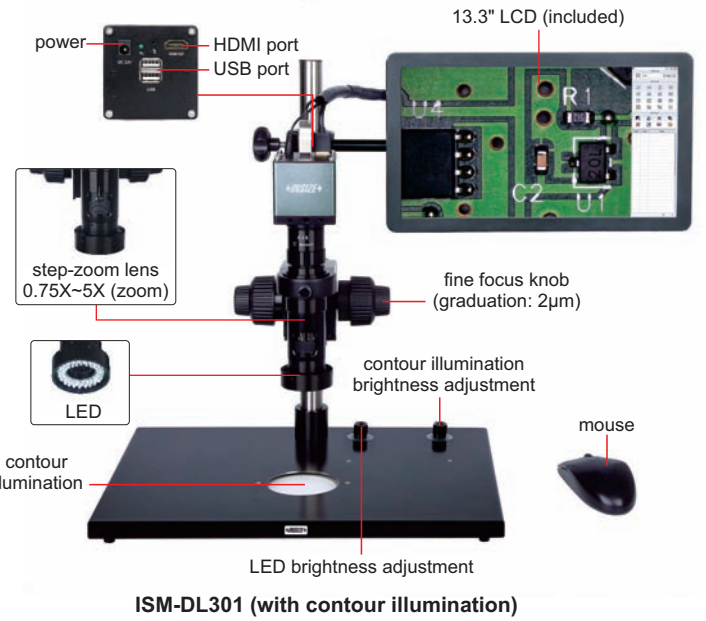
1X camera adapter (**optional**)



2X auxiliary objective (**optional**)



ISM-DL300 (without contour illumination)



ISM-DL301 (with contour illumination)

- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable

SPECIFICATION

Code	ISM-DL300 (without contour illumination)	ISM-DL301 (with contour illumination)
Magnification	15X~100X	
Sensor	1/2" CMOS	
Pixel	2M	
Resolution	1920×1080	
Frame rate	60fps	
Output	HDMI	
Power supply	power adapter	
Dimension (L×W×H)	570×300×430mm	
Weight	6.5kg	

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	2 pcs

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 100×86mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED light	page 808~809
Auxiliary objective	page 810

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy*
0.75X	15X	±8μm
1X	20X	±7μm
1.5X	30X	±6μm
2X	40X	±6μm
2.5X	50X	±6μm
3X	60X	±5μm
3.5X	70X	±5μm
4X	80X	±4μm
4.5X	90X	±4μm
5X	100X	±4μm

* When measuring the contour of workpieces, please use **ISM-DL301** to ensure accuracy.



X-Y glass stage
(**optional**)
(X-Y travel: 100×86mm)

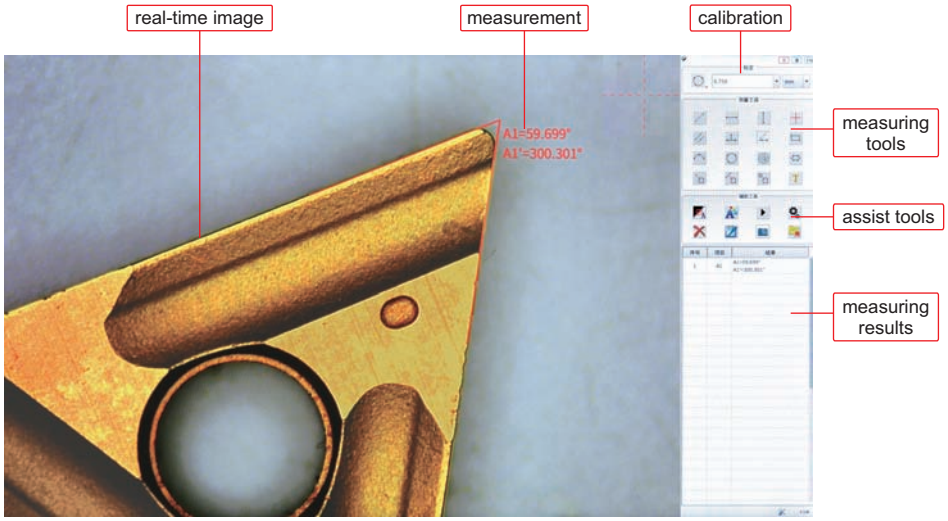


MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	15~100X	30~200X
	focus distance	70±2mm	70±2mm
	view filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	magnification	30~200X	60~400X
	focus distance	29±2mm	29±2mm
	view filed	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

SOFTWARE (INCLUDED)

- Refer to page 807 for details



DIGITAL MEASURING MICROSCOPES (BASIC TYPE)

VIDEO

MEASUREMENT | TAKE PICTURES | BUILT-IN SOFTWARE WITHOUT COMPUTER

POPULAR MODEL



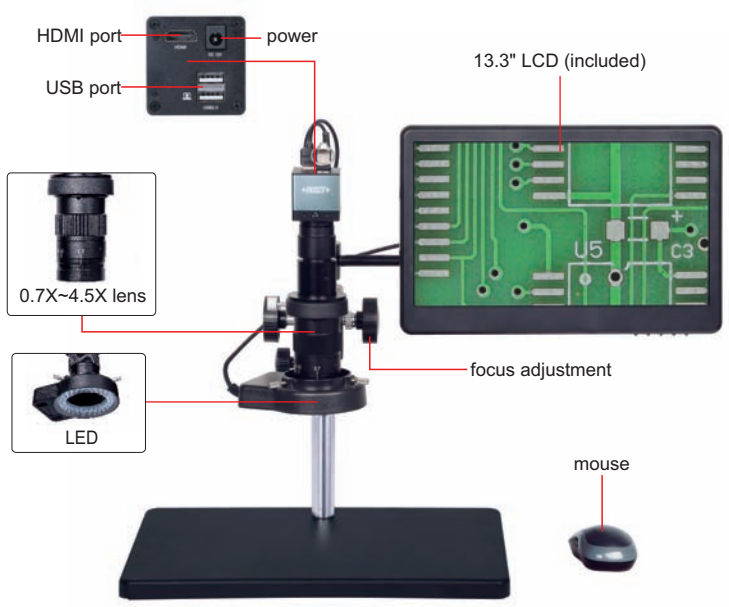
16G USB flash disk (included)



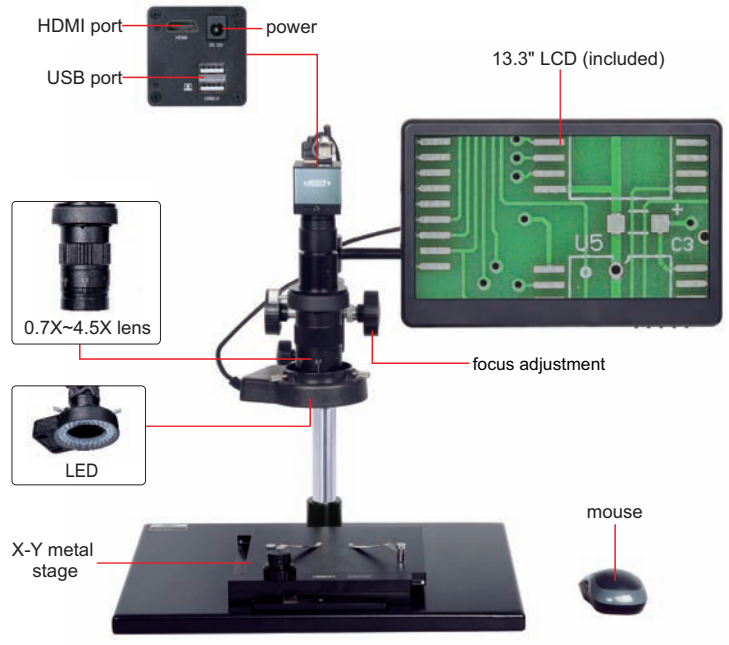
white/black plate (included)



glass calibration ruler (graduation 0.1mm, included)



5318-MD60 (without stage)



5318-MD60-XY (with stage)

- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Brightness, contrast ratio, gain are adjustable

To be continued

Continued from previous page

SPECIFICATION

Code	**5318-MD60** (without stage)	**5318-MD60-XY** (with stage)
Magnification	12.5X~80X	12.5X~80X
Sensor	1/2.8" CMOS	1/2.8" CMOS
Pixel	2M	2M
Resolution	1920×1080	1920×1080
Frame rate	60fps	60fps
Measuring accuracy	±0.02mm	±0.02mm
Lines	cross lines, scale lines (number, color and position of lines are adjustable)	cross lines, scale lines (number, color and position of lines are adjustable)
Output	HDMI	HDMI
Power supply	power adapter	power adapter
Dimension (L×W×H)	380×260×350mm	570×300×430mm
Weight	4.5kg	10kg

STANDARD DELIVERY

Code	**5318-MD60** (without stage)	**5318-MD60-XY** (with stage)
Main unit	1 pc	1 pc
0.5X camera adapter	1 pc	1 pc
1X auxiliary objective	1 pc	1 pc
White/black plate	1 pc	1 pc
Glass calibration ruler	1 pc	1 pc
16G USB flash disk	1 pc	1 pc
Mouse	1 pc	1 pc
HDMI cable	1 pc	1 pc
Power adapter	3 pcs	3 pcs
X-Y metal stage	/	1 pc

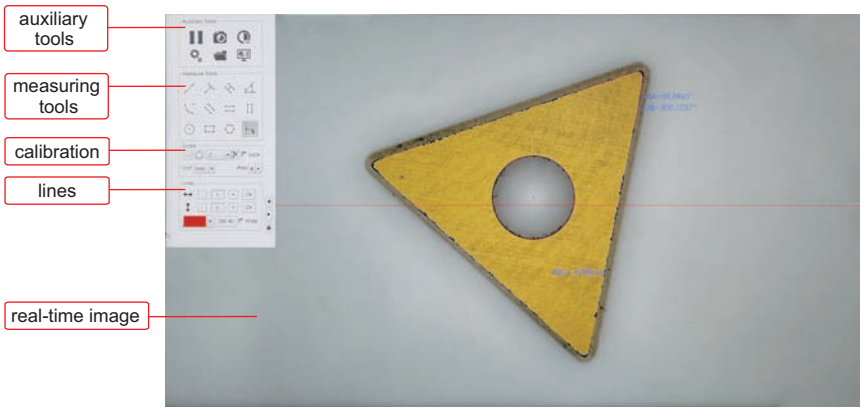
MAGNIFICATION AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter
		0.5X (included)
0.5X (optional)	magnification	6.2~40X
	view field	47×26~7.4×4mm
1X (included)	magnification	12.5~80X
	view field	23.5×13~3.7×2mm
2X (optional)	magnification	25~160X
	view field	11.8×6.5~1.8×1mm

OPTIONAL ACCESSORY

0.5X auxiliary objective	5318-OB05X
2X auxiliary objective	5318-OB2X

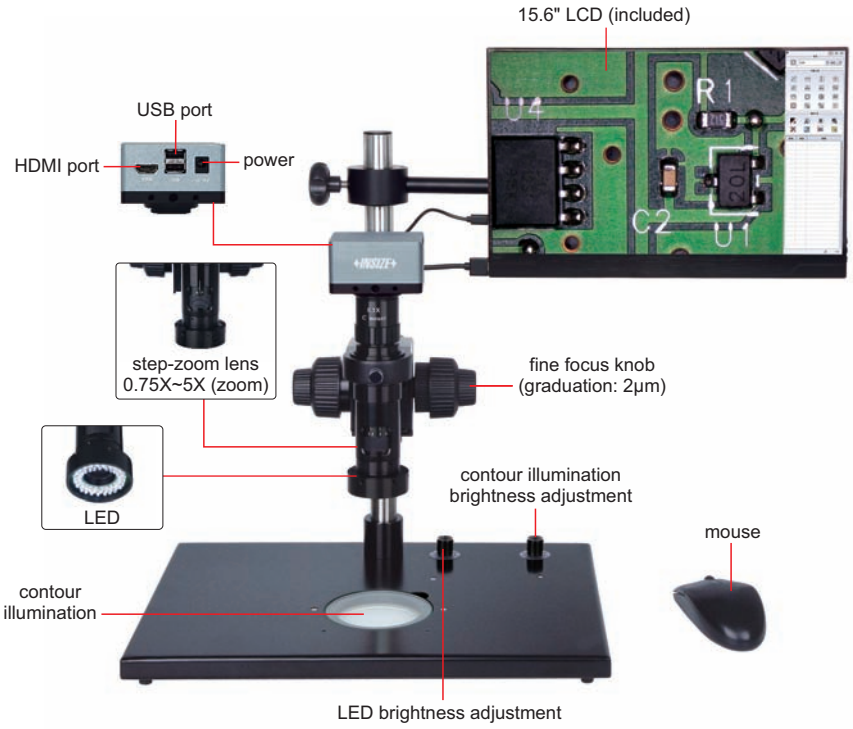
MEASURING SOFTWARE (INCLUDED)



4K DIGITAL MEASURING MICROSCOPE
CODE 5310-DL401

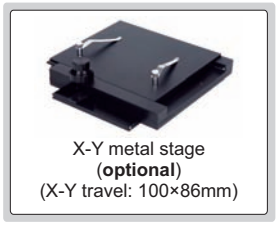
BUILT-IN SOFTWARE WITHOUT COMPUTER | TAKE PICTURES | MEASUREMENT

VIDEO





X-Y glass stage
(**optional**)
(X-Y travel: 100×86mm)



X-Y metal stage
(**optional**)
(X-Y travel: 100×86mm)



calibration plate
(included)



16G USB flash disk
(included)

- 4K high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable



0.5X camera adapter
(included)



1X auxiliary objective
(included)



1X camera adapter
(**optional**)



2X auxiliary objective
(**optional**)

SPECIFICATION

Magnification	17.6X~120X
Sensor	1/2.3" CMOS
Pixel	8M
Resolution	3840×2160
Frame rate	4K: 30fps, 1080P: 60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg

To be continued

Continued from previous page

MAGNIFICATION, VIEW FIELD AND MEASURING ACCURACY

Objective magnification	Image magnification	View field	Measuring accuracy
0.75X	17.6X	19.5×11.5mm	±5μm
1X	23.7X	14.0×8.0mm	±5μm
1.5X	36.6X	9.0×5.0mm	±5μm
2X	49X	7.0×4.0mm	±5μm
2.5X	62X	5.5×3.0mm	±4μm
3X	73X	4.5×2.5mm	±4μm
3.5X	85X	4.0×2.2mm	±4μm
4X	97X	3.5×2.0mm	±3μm
4.5X	109X	3.0×1.8mm	±3μm
5X	120X	2.7×1.5mm	±3μm

STANDARD DELIVERY

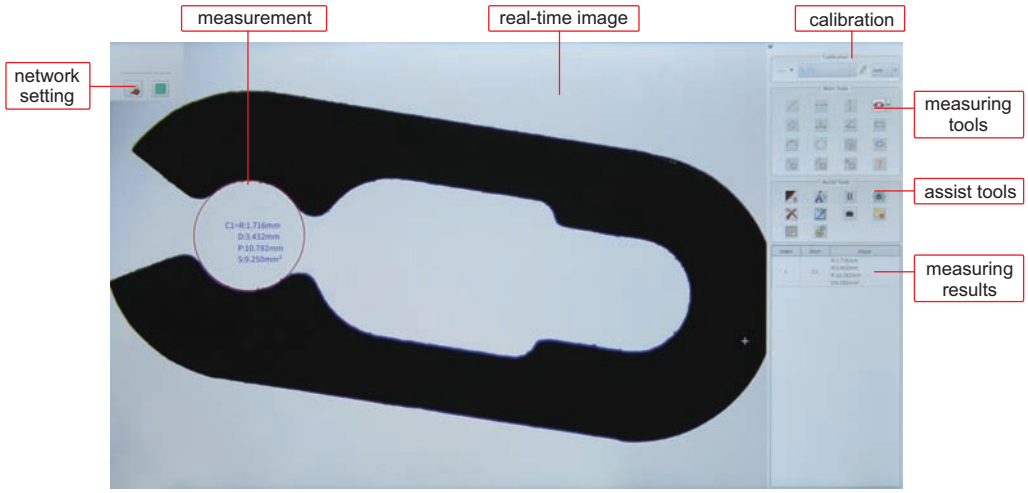
Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	3 pcs

OPTIONAL ACCESSORY

1X camera adapter	**ISM-DL-CA1X**
2X auxiliary objective	**ISM-DL-OB2X**
X-Y glass stage (travel: 100×86mm)	**ISM-DL-STAGE**
X-Y metal stage (travel: 100×86mm)	**ISM-DL-STAGE1**
LED light	page 808~809
Auxiliary objective	page 810

SOFTWARE (INCLUDED)

- Refer to page 807 for details

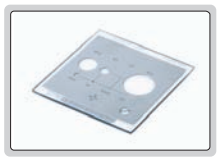


HIGH MAGNIFICATION MEASURING MICROSCOPE
CODE ISM-DL302

VIDEO

SOFTWARE IS INCLUDED, REFER TO PAGE 807 FOR DETAILS

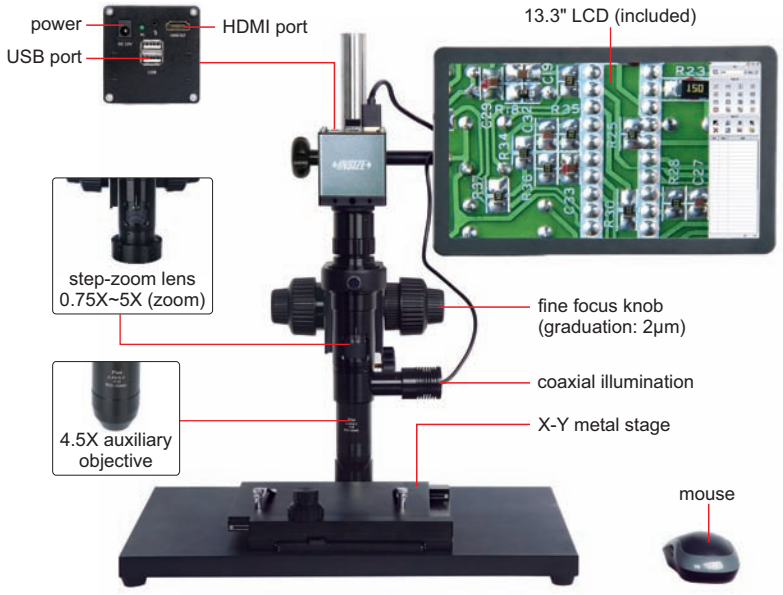
OBSERVATION AND MEASUREMENT AT HIGH MAGNIFICATION



calibration plate (included)



16G USB flash disk (included)





0.5X camera adapter (included)



1X camera adapter (**optional**)

- 1080P high-definition image
- Maximum 920X optical magnification (using camera adapter 1X, optional)
- Built-in software without computer, operated by mouse
- Solid base and column to avoid lens shaking during focusing
- Software is included, refer to page 807 for details

SPECIFICATION

Magnification	70X~460X
Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	15kg

SATNDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
4.5X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
X-Y metal stage	1 pc

OPTIONAL ACCESSORY

1X camera adapter	**ISM-DL-CA1X**
LED light	page 808~809

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy
0.75X	70X	±5μm
1X	90X	±4μm
1.5X	140X	±4μm
2X	180X	±4μm
2.5X	230X	±4μm
3X	275X	±4μm
3.5X	320X	±4μm
4X	370X	±4μm
4.5X	410X	±4μm
5X	460X	±4μm

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

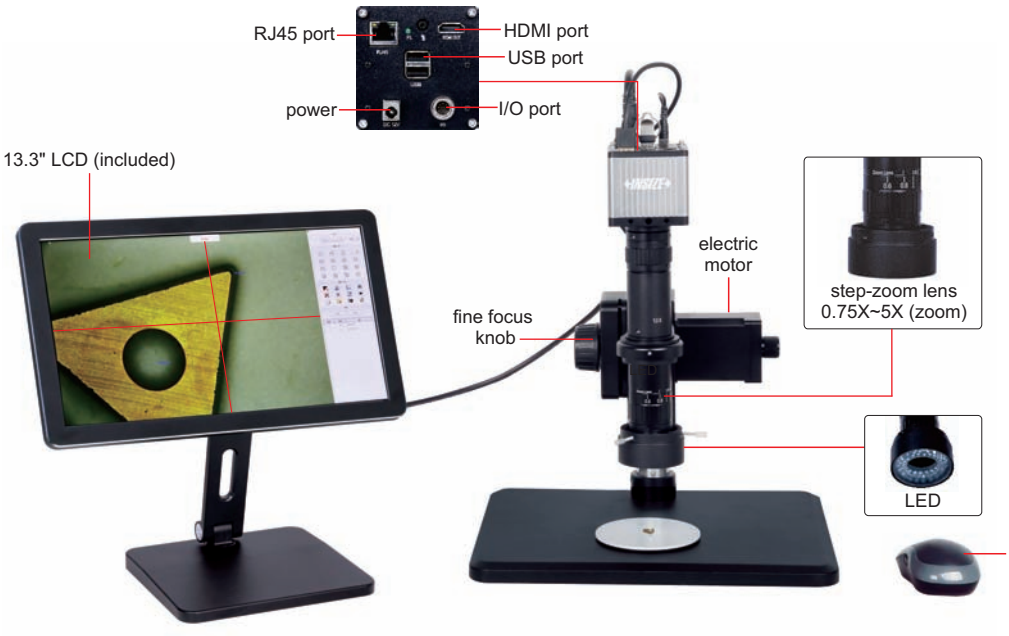
Camera adapter	0.5X (included)	1X (**optional**)
Magnification	70X~460X	140X~920X
Focus distance	14±2mm	14±2mm
View field	2.8×1.7~0.5×0.3mm	1.4×0.9~0.3×0.2mm

MOTORIZED FOCUS STACKING

BUILT-IN SOFTWARE WITHOUT COMPUTER

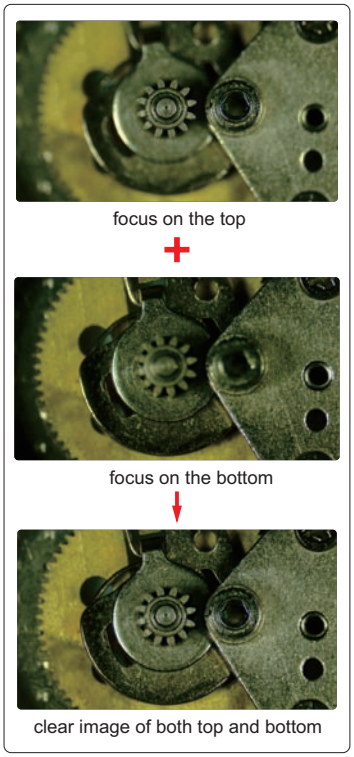
VIDEO

MOTORIZED FOCUS STACKING MICROSCOPE (WITH DISPLAY) CODE ISM-DL520



- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Motorized focus stacking
- Send photos and measurement data via ethernet (TCP/IP)
- Name photos and measurement data files with serial number of workpieces read by scanner

focus stacking

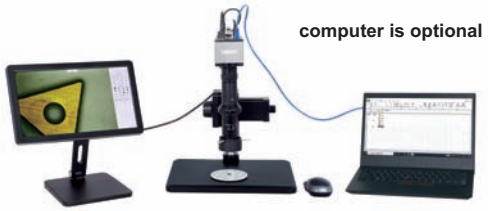


SPECIFICATION

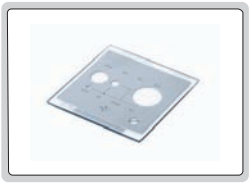
Magnification	14.7X~122.7X
View field	2.3×1.2~19.5×11mm
Focus distance	65mm
Sensor	1/1.2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	30fps
Output	RJ45
Power supply	power adapter
Dimension (L×W×H)	320×260×500mm
Weight	7kg

To be continued

Continued from previous page



send measurement data and photos to computer



calibration plate
(included)



16G USB flash disk
(included)

STANDARD DELIVERY

Main unit	1 pc
1X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
LED ring light	1 pc
White/black plate	1 pc
Power adapter	3 pcs

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy
0.6X	14.7X	±8μm
0.8X	19.6X	±7μm
1X	24.5X	±6μm
1.5X	36.8X	±6μm
2X	49.1X	±6μm
2.5X	61.3X	±5μm
3X	73.6X	±5μm
3.5X	85.9X	±4μm
4X	98.2X	±4μm
4.5X	110.4X	±4μm
5X	122.7X	±4μm



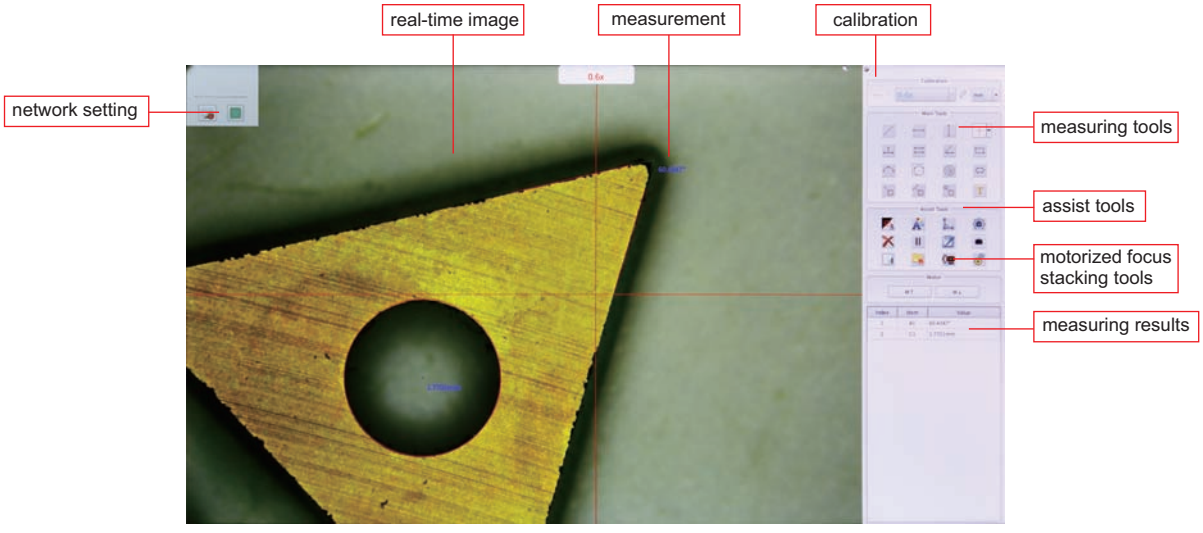
X-Y metal stage
(**optional**)
(X-Y travel: 100×86mm)

OPTIONAL ACCESSORY

X-Y metal stage (travel: 100×86mm)	ISM-DL-STAGE1

SOFTWARE (INCLUDED)

- Refer to page 807 for details

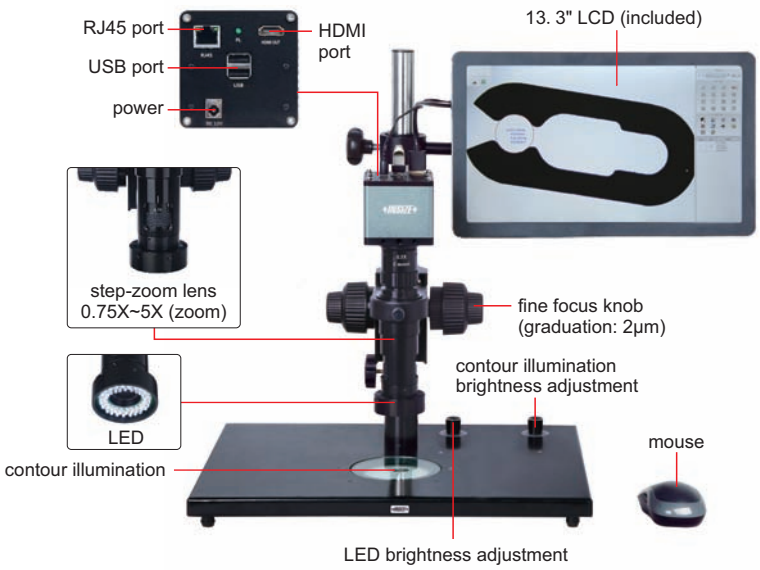


BUILT-IN SOFTWARE WITHOUT COMPUTER

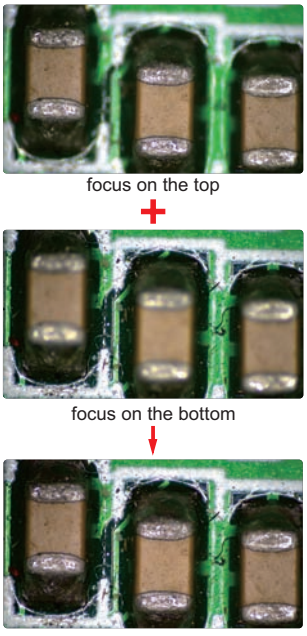
FOCUS STACKING

MANUAL FOCUS STACKING MICROSCOPE (LARGE DEPTH OF VIEW) CODE ISM-DL510

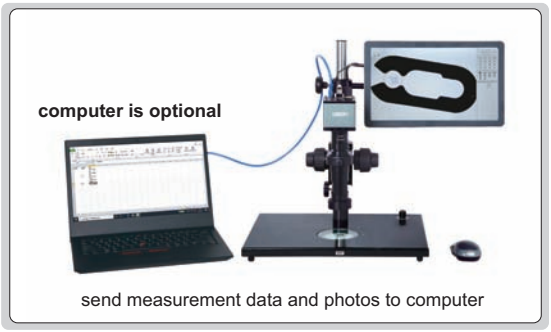
VIDEO



focus stacking



- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Focus stacking
- Send photos and measurement data via ethernet (TCP/IP)
- Name photos and measurement data files with serial number of workpieces read by scanner





1X auxiliary objective (included)



2X auxiliary objective (**optional**)



0.5X camera adapter (included)



1X camera adapter (**optional**)

SPECIFICATION

Magnification	15X~100X
Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	3 pcs

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 100×86mm)	ISM-DL-STAGE
Scanner and hub	7328-SCAN
LED light	page 808~809
Auxiliary objective	page 810

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy
0.75X	15X	±8μm
1X	20X	±7μm
1.5X	30X	±6μm
2X	40X	±6μm
2.5X	50X	±6μm
3X	60X	±5μm
3.5X	70X	±5μm
4X	80X	±4μm
4.5X	90X	±4μm
5X	100X	±4μm



X-Y glass stage
(**optional**)
(X-Y travel: 100×86mm)

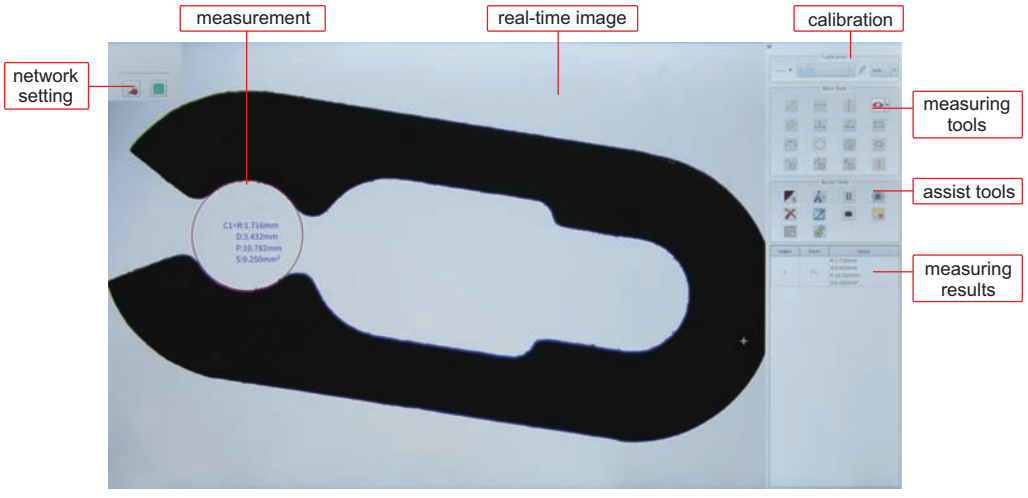


MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	15~100X	30~200X
	focus distance	70±2mm	70±2mm
	view filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	magnification	30~200X	60~400X
	focus distance	29±2mm	29±2mm
	view filed	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

SOFTWARE (INCLUDED)

- Refer to page 807 for details



VIDEO

BUILT-IN SOFTWARE WITHOUT COMPUTER

TAKE PICTURES

HORIZONTAL MICROSCOPE
CODE 5316-HM810



- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)



plastic calibration ruler (included, graduation 1mm)



16G USB flash disk (included)

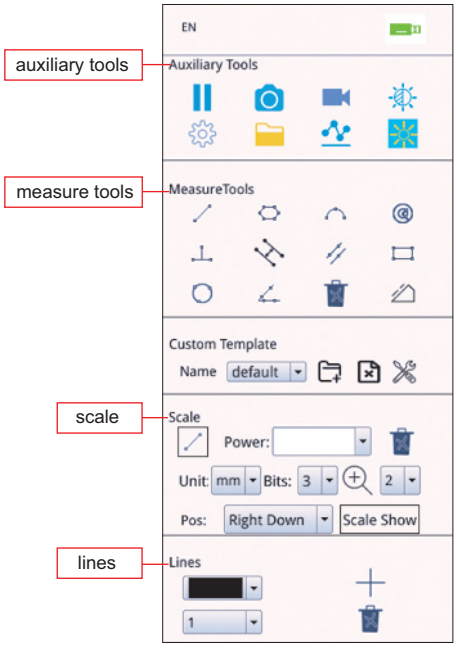
SPECIFICATION

Magnification	10.5X~62.5X
View field	4.5×2.5~28×12.3mm
Focus distance	115mm
Measuring accuracy	±0.02mm
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	1080P: 60fps/50fps
Output	HDMI
Power supply	220V, 50/60Hz
Dimension (L×W×H)	500×200×200mm
Weight	7kg

STANDARD DELIVERY

Main unit	1 pc
1X camera adapter	1 pc
1X auxiliary adapter	1 pc
Plastic calibration ruler	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
LED ring light	1 pc

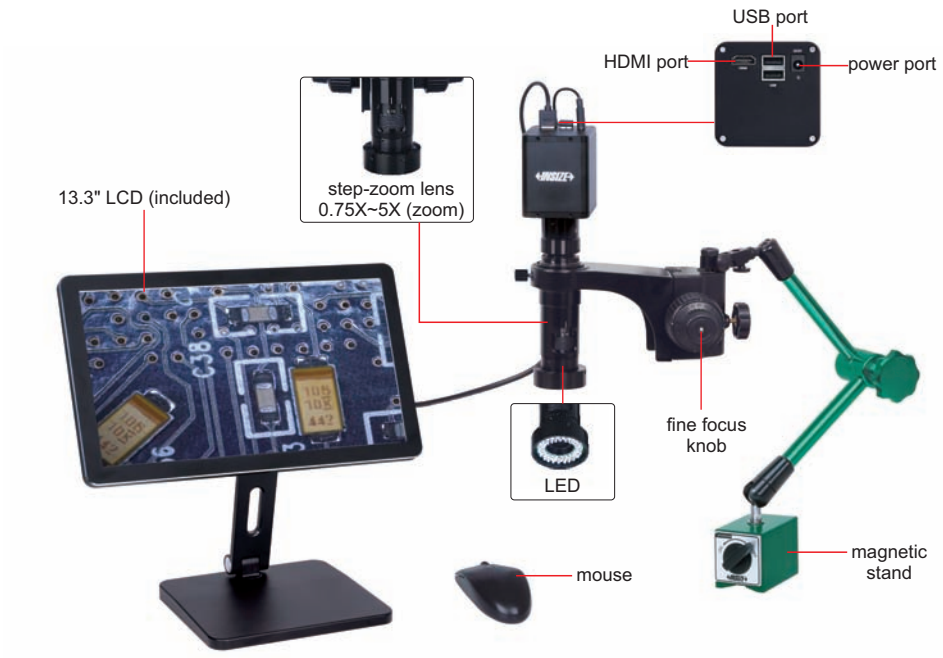
SOFTWARE (INCLUDED)



FLEXIBLE ARM AUTO FOCUS DIGITAL MICROSCOPES

AUTO FOCUS | TAKE PICTURES AND VIDEOS | MEASUREMENT

VIDEO

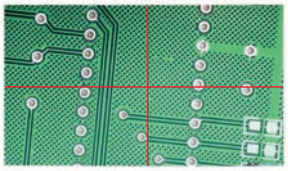


5317-AF109



5317-AF110

- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to USB flash disk
- Picture review, picture compare
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)
- Built-in software without computer, operation by mouse
- Flexible arm



display cross hair
(blue/green/red/yellow/
black/brown colors)

To be continued

Continued from previous page

SPECIFICATION

Code	5317-AF109 (with magnetic stand)	5317-AF110 (with desktop clamp)
Magnification	20X~123X	
Sensor	1/2.8" CMOS	
Pixel	2M	
Resolution	1920×1080	
Frame rate	60fps	
Power supply	power adapter	
Dimension (height)	480mm	600mm
Weight	5.6kg	8.5kg


calibration plate (included)


16G USB flash disk (included)



0.5X camera adapter (included)



1X auxiliary objective (included)

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	20~123X	40~246X
	focus distance	48~84mm	48~84mm
	view field	13×7~2.2×1mm	6.3×3.5~1.1×0.5mm
	measuring accuracy	±0.02mm	±0.02mm
2X (optional)	magnification	40~246X	80~492X
	focus distance	24~42mm	24~42mm
	view field	6.5×3.5~1.1×0.5mm	3.3×1.8~0.6×0.3mm
	measuring accuracy	±0.02mm	±0.02mm

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	2 pcs

AUTO FOCUS DISTANCE

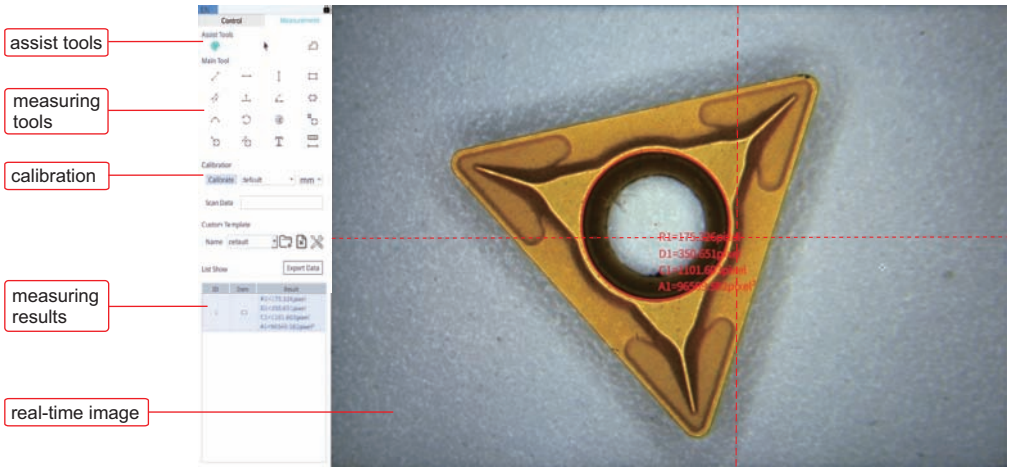
Zoom objective scale	0.75X	1X	1.5X	2X	2.5X
Auto focus distance	48~84mm	50~78mm	55~73mm	62~71mm	65~70mm

Zoom objective scale	3X	3.5X	4X	4.5X	5X
Auto focus distance	66~70mm	67~70mm	68~70mm	68~70mm	68~70mm

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
Auxiliary objective	page 810

MEASURING SOFTWARE (INCLUDED)



MOTORIZED ZOOM MICROSCOPE (BASIC TYPE)
CODE 5325-VM100

DISPLAY ACTUAL MAGNIFICATION

PROGRAMMABLE SEGMENTED RING LIGHT

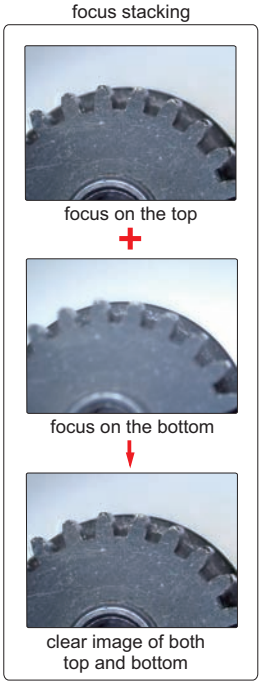
VIDEO

POPULAR MODEL

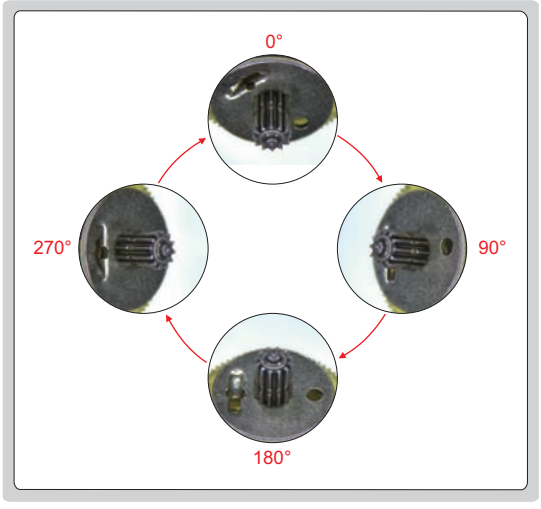


- Built-in software without computer
- Can be connected to display and computer at the same time
- Motorized zoom objective
- Display actual magnification
- Programmable segmented ring light
- Take pictures and videos

focus stacking







360° rotation observation (3D lens is needed)

SPECIFICATION

Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Magnification	10~68.5X
Measuring accuracy	±0.02mm
Max. workpiece height	245mm
Frame rate	60fps
Output	USB/LAN/HDMI
Power supply	power adapter
Dimension (L×W×H)	261×320×480mm
Weight	5.1kg



16G USB flash disk (included)



white/black plate (included)



glass calibration ruler (graduation 0.1mm, included)

To be continued

Continued from previous page

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (on 11.6" LCD)

Specification	Objective	
	0.5X (optional)	1X (included)
Magnification	5~34.2X	10~68.5X
Focus distance	185mm	95mm
View filed	7.4×4.2~53×31.2mm	3.7×2.1~26.5×15.6mm

OPTIONAL ACCESSORY

0.5X auxiliary objective *	5325-VM100-OB05X
3D lens	5325-VM100-3D

* Measurement is not recommended with 0.5X auxiliary objective

STANDARD DELIVERY

Main unit	1 pc
Glass calibration ruler	1 pc
Power adapter	1 pc
Mouse	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Network cable	1 pc
Shortcut keyboard	1 pc



shortcut keyboard
(included)

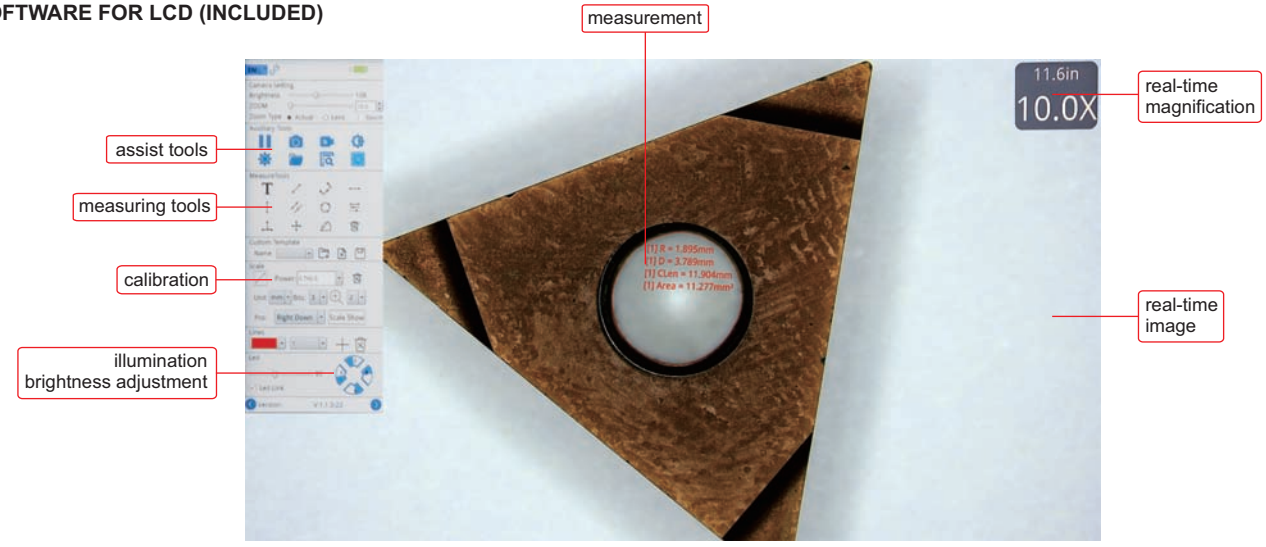
Shortcut Keyboard Fuction

- Take picture: take a picture and save it
- Video: record a video
- Freeze: the image can be frozen
- Zoom+: increase the magnification
- Zoom-: reduce the magnification
- Mirror: image horizontal flip over
- Flip: image vertical flip over
- Zoom 1, 2, 3, 4: save the current magnification
- Brightness+: increase the brightness of the light
- Brightness-: reduce the brightness of the light

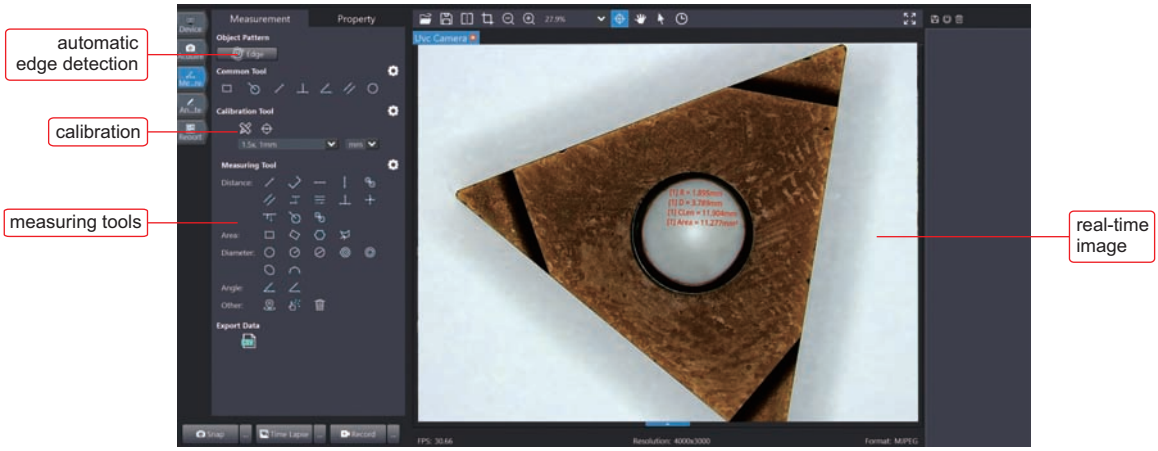


can be connected to display and
computer at the same time

SOFTWARE FOR LCD (INCLUDED)



SOFTWARE FOR COMPUTER (INCLUDED)



LARGE DEPTH OF VIEW DIGITAL MEASURING MICROSCOPES (ADVANCED TYPE)

DUAL SCREEN OPERATION | FOCUS STACKING | ELECTRONIC MAGNIFICATION FEEDBACK LENS | PROGRAMMABLE SEGMENTED RING LIGHT

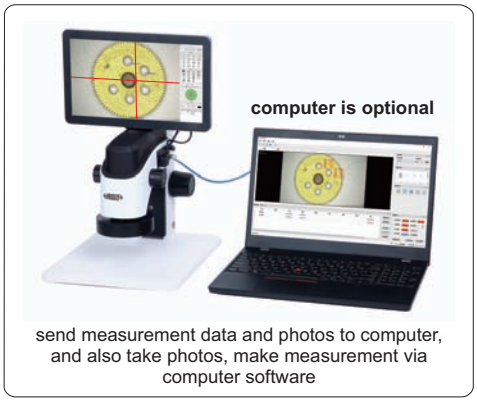
VIDEO



16G USB flash disk (included)



calibration plate (included)



send measurement data and photos to computer, and also take photos, make measurement via computer software



5322-ID250A



5322-ID300A

- Electronic magnification feedback lens: when the objective lens magnification is changed manually, the software automatically selects the corresponding pre-calibration data and calibration is not needed
- Send photos and measurement data via ethernet (TCP/IP)
- Digital magnification
- Can be connected to display and computer at the same time
- Take pictures, save to USB flash disk
- Measuring results can be sent to Excel

STANDARD DELIVERY

Main unit	1 pc
1X auxiliary objective (included in 5322-ID250A)	1 pc
0.5X auxiliary objective (included in 5322-ID300A)	1 pc
Calibration plate	1 pc
Power adapter	1 pc
Mouse	1 pc
16G USB flash disk	1 pc

OPTIONAL ACCESSORY

0.75X auxiliary objective	5307-ID100A-OB075X
2X auxiliary objective	5307-ID100A-OB2X

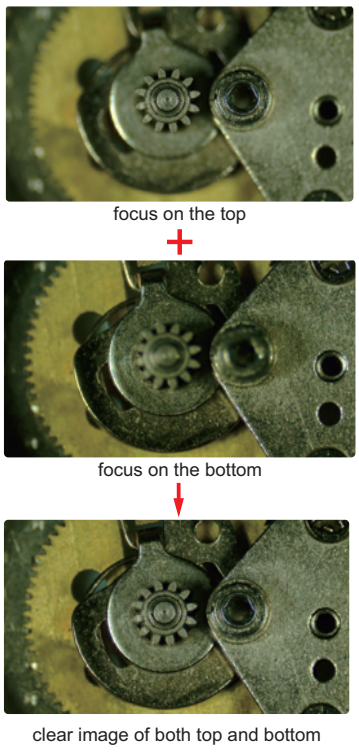
To be continued

Continued from previous page

SPECIFICATION

Code	5322-ID250A (high magnification)	5322-ID300A (large view field)
Sensor	1/2" CMOS	
Pixel	2M	
Resolution	1920×1080	
Magnification	12~77X	6~38X
Focus distance	60mm	120mm
View field	3.2×1.8~20.9×11.7mm	6.4×3.6~41.8×23.4mm
Max. workpiece height	53mm	205mm
Frame rate	60fps	
Output	USB/HDMI/LAN	
Power supply	power adapter	
Dimension (L×W×H)	260×320×500mm	305×405×530mm
Weight	5.2kg	7.6kg

focus stacking

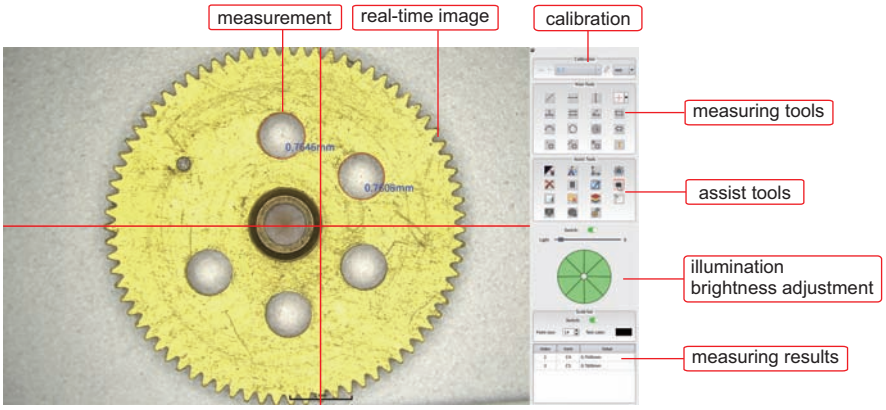


MAGNIFICATION AND MEASURING ACCURACY

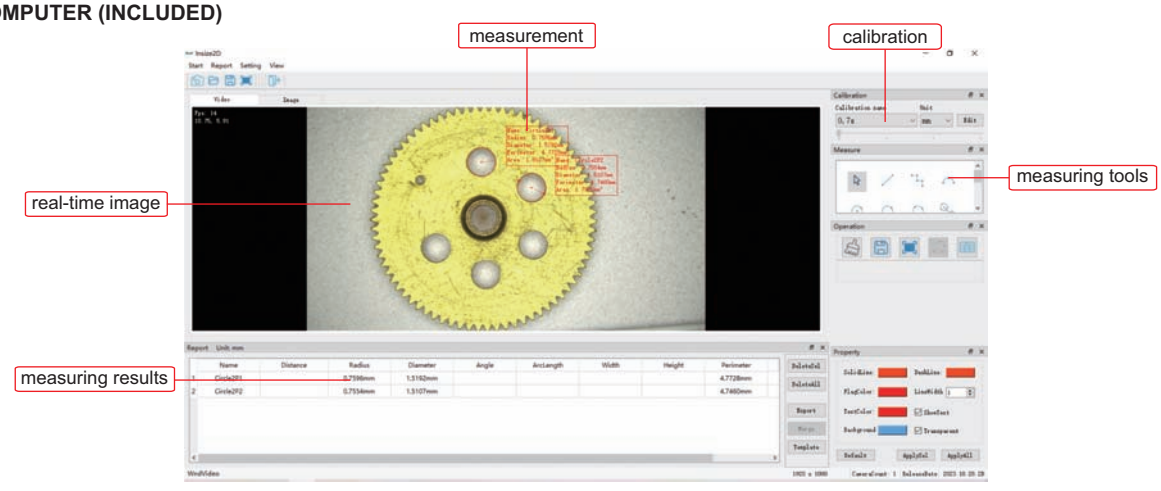
Objective magnification	5322-ID250A		5322-ID300A	
	Magnification	Measuring accuracy	Magnification	Measuring accuracy
0.7X	12X	±9μm	6X	±15μm
1X	17X	±9μm	8X	±15μm
1.5X	26X	±8μm	13X	±9μm
2X	35X	±7μm	17X	±9μm
2.5X	43X	±7μm	21X	±9μm
3X	51X	±7μm	25X	±9μm
3.5X	60X	±6μm	30X	±8μm
4X	68X	±6μm	34X	±8μm
4.5X	77X	±5μm	38X	±7μm

SOFTWARE FOR LCD (INCLUDED)

■ Refer to page 807 for details



SOFTWARE FOR COMPUTER (INCLUDED)



DIGITAL MEASURING MICROSCOPES (STANDARD TYPE)

ELECTRONIC MAGNIFICATION FEEDBACK LENS

BUILT-IN SOFTWARE WITHOUT COMPUTER

VIDEO



5307-ID100A



5307-ID200A

- Electronic magnification feedback lens: when the objective lens magnification is changed manually, the software automatically selects the corresponding pre-calibration data and calibration is not needed
- Two methods of LED brightness adjustment, knob adjustment and software adjustment
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measuring results can be sent to Excel

To be continued

Continued from previous page

SPECIFICATION

Code	5307-ID100A (high magnification)	5307-ID200A (large view field)
Sensor	1/2" CMOS	
Pixel	2M	
Resolution	1920×1080	
Magnification	12~77X	6~38X
Focus distance	65mm	130mm
View field	3.2×1.8~20.9×11.7mm	6.4×3.6~41.8×23.4mm
Max. workpiece height	60mm	210mm
Frame rate	60fps	
Output	USB/HDMI	
Power supply	power adapter	
Dimension (L×W×H)	260×320×500mm	305×405×530mm
Weight	5.2kg	7.6kg

MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	5307-ID100A		5307-ID200A	
	Magnification	Measuring accuracy	Magnification	Measuring accuracy
0.7X	12X	±9μm	6X	±15μm
1X	17X	±9μm	8X	±15μm
1.5X	26X	±8μm	13X	±9μm
2X	35X	±7μm	17X	±9μm
2.5X	43X	±7μm	21X	±9μm
3X	51X	±7μm	25X	±9μm
3.5X	60X	±6μm	30X	±8μm
4X	68X	±6μm	34X	±8μm
4.5X	77X	±5μm	38X	±7μm

STANDARD DELIVERY

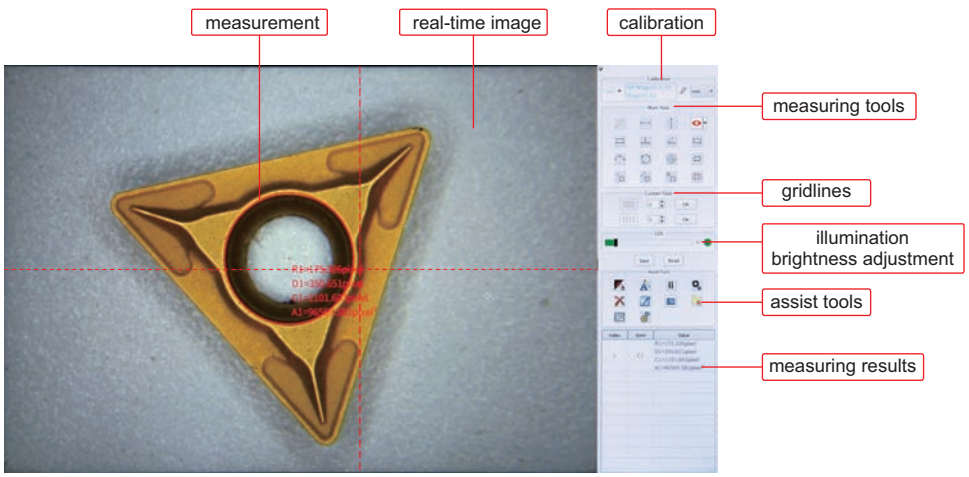
Main unit	1 pc
1X auxiliary objective (included in 5307-ID100A)	1 pc
0.5X auxiliary objective (included in 5307-ID200A)	1 pc
Calibration plate	1 pc
Power adapter	1 pc
Mouse	1 pc
16G USB flash disk	1 pc

OPTIONAL ACCESSORY

0.75X auxiliary objective	5307-ID100A-OB075X
2X auxiliary objective	5307-ID100A-OB2X

SOFTWARE (INCLUDED)

- Refer to page 807 for details



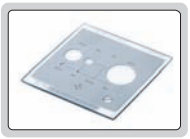
AUTO FOCUS DIGITAL MICROSCOPE (ADVANCED TYPE) CODE 5319-AF290

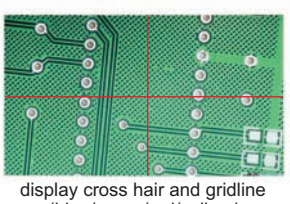
NO CALIBRATION AFTER ZOOM | TAKE PICTURES AND VIDEOS | MEASUREMENT | MOTORIZED ZOOM | MOTORIZED LIGHT CONTROL | AUTO FOCUS

VIDEO




16G USB flash disk (included)


calibration plate (included)


display cross hair and gridline (blue/green/red/yellow/black/white colors)

- Auto focus camera
- Take pictures and videos
- Built-in measuring software
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display actual magnification
- Digital magnification
- Shortcut keyboard operation
- Display cross hair and gridline (blue/green/red/yellow/black/white colors)


shortcut keyboard (included)

Shortcut keyboard fuction

- Take picture: take a picture and save it
- Video: record a video
- Freeze: the image can be frozen
- Manual focus-: reduce the manual focus value
- Manual focus+: increase the manual focus value
- Zoom+: increase the magnification
- Zoom-: reduce the magnification
- AF/MF: switch to auto focus or manual focus
- FBL: center the camera motor
- Mirror: image horizontal flipover
- Flip: image vertical flipover
- Focus: achieve one-key focus
- Zoom 1, 2, 3, 4: save the current magnification
- Brightness+: increase the brightness of the light
- Brightness-: reduce the brightness of the light

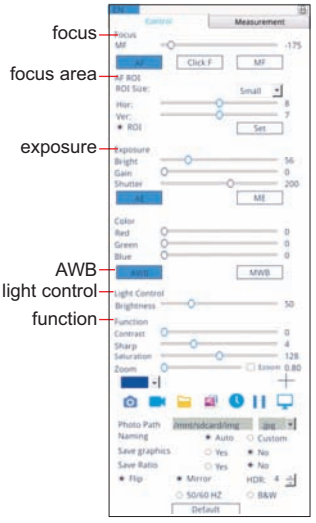
SPECIFICATION

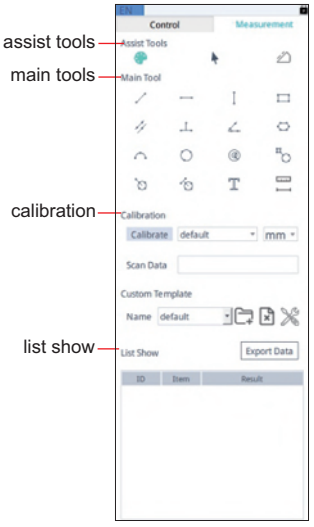
Magnification	27.4X~163X
Sensor	1/2.8" CMOS
Pixel	2M
Measuring accuracy	±0.02mm
Resolution	1920×1080
Frame rate	50/60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	600×280×390mm
Weight	6.5kg

STANDARD DELIVERY

Main unit (with stand)	1 pc
21.5" LCD	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
Calibration plate	1 pc
White/black plate	1 pc
Shortcut keyboard	1 pc
Power adapter	2 pcs

SOFTWARE (INCLUDED)





FOCUS DISTANCE AND VIEW FIELD

Optical magnification*	0.8X	1X	2X	3X	4X	4.76X
Focus distance	88~133mm	88~133mm	98~123mm	103~115mm	108~111mm	108~111mm
View field (mm)	19.4×11~15.8×8.8	15×8.3~12.7×7.2	7.1×4~6.7×3.8	4.8×2.7~4.5×2.5	3.6×2~3.3×1.8	3×1.7~2.8×1.6

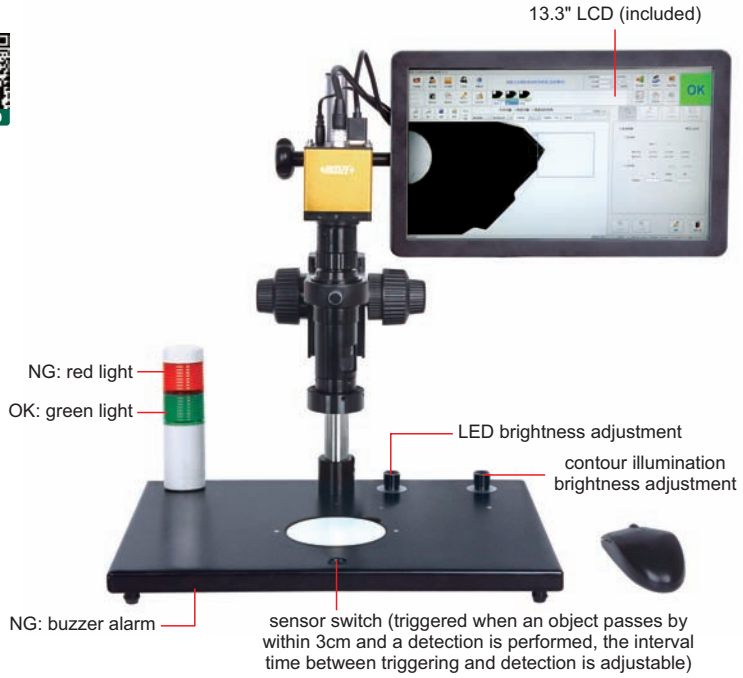
* The optical zoom lens can be arbitrarily zoomed between 0.8X and 4.76X

AUTOMATICALLY LOCATE WORKPIECES REGARDLESS OF POSITION AND DIRECTION

BUILT-IN SOFTWARE WITHOUT COMPUTER

SMART MICROSCOPE
CODE ISM-DL400

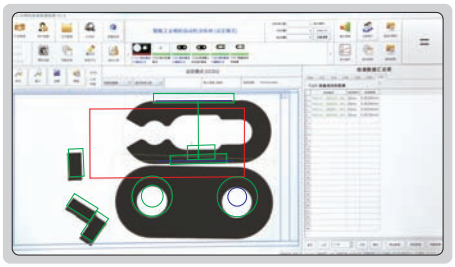
VIDEO



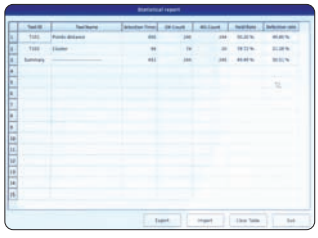
camera function

- surface defect detection
- dimension measurement
- read barcode
- burr detection
- contour matching
- character recognition
- color detection
- read QR code
- object counting
- thread measurement

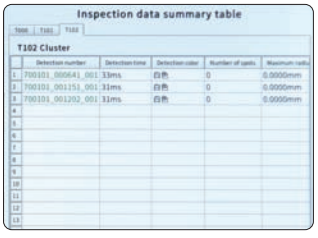
detect different workpieces at one time



- Automatically identify different workpieces
- Automatically locate workpieces regardless of position and direction
- Built-in software, PLC control input and output interface
- Including multiple detection tools
- Automatically calculate, store the test results and sent to Excel



report showing the perform times of each tool, quantity of OK and NG, the report can be saved



report of each detection is automatically created and saved

SPECIFICATION

Magnification	15X~100X
Resolution	1920×1080
Pixel	2M
Single pixel size	3.75×3.75μm
Frame rate	60fps
Sensor	1/2" CMOS
Chip structure	FPGA+ARM
Operation system	Linux 3.10
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
HDMI cable	1 pc
Power adapter	3 pcs

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	magnification	15~100X	30~200X
	focus distance	70±2mm	70±2mm
	view filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	magnification	30~200X	60~400X
	focus distance	29±2mm	29±2mm
	view filed	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
LED light	page 808~809
Auxiliary objective	page 810

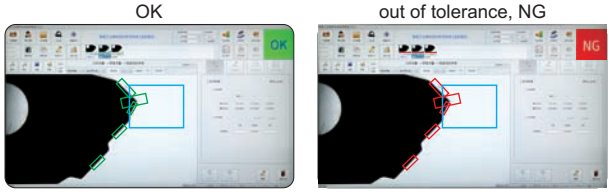
To be continued

Continued from previous page

▪ APPLICATION EXAMPLES:

dimension measurement

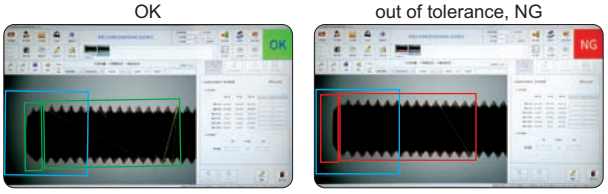
OK | out of tolerance, NG



automatically locate and measure, and judge OK or NG

thread measurement

OK | out of tolerance, NG



automatically measure major diameter, minor diameter, thread angle, pitch of thread, and judge OK or NG

cutting tools measurement

OK | length is too short, NG



measure length and angle

counting

15 pcs holes, OK | 12 pcs holes, NG



automatically locate and count, and judge OK or NG

existence or absence

existence, OK | absence, NG



automatically detect the existence or absence of the target

character recognition

character is “EF”, OK | character is “E”, NG



automatically detect letters or numbers in the area, and judge OK or NG

color detection

OK | sequence error, NG



automatically detect colors, and judge OK or NG

location detection

center line aligned, OK | center line misaligned, NG



automatically detect whether the center line is aligned or not

surface defect detection

no defect, OK | defect, NG



detect missing and burr on the edge of circle, and judge OK or NG

glue detection

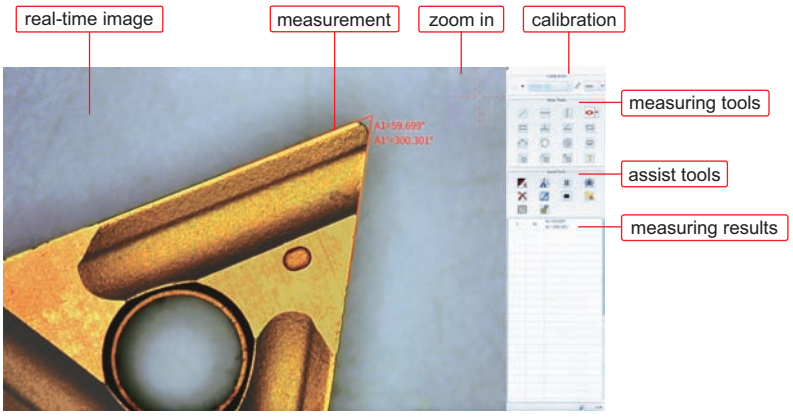
complete, OK | broken, NG



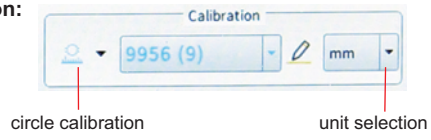
automatically detect if there is break of glue, measure width, and judge OK or NG

SOFTWARE CAN BE CUSTOMIZED

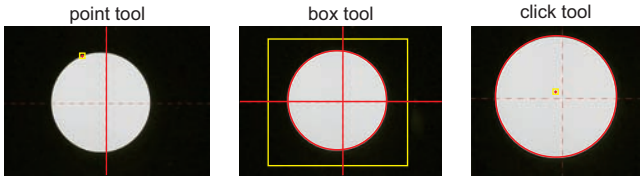
MEASURING SOFTWARE OF DIGITAL MICROSCOPES



- **Included in digital microscopes (ISM-DL300, ISM-DL301, 5310-DL401, ISM-DL302, ISM-DL510, ISM-DL520, 5307, 5322)**
- **Language:** Simplified Chinese, Traditional Chinese, English, Korean
- **Calibration:**



- **Edge-detection:**



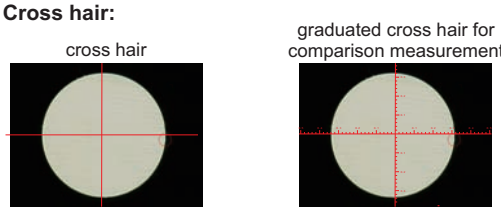
- **Measurement tools:**

measure length of line or distance between two points	measure length of line or distance between two points in horizontal direction	measure length of line or distance between two points in vertical direction
measure angle from horizontal line	measure angle from vertical line	measure angle of two lines
measure distance between two parallel lines	measure distance between two parallel lines	measure distance between multiple parallel lines
measure distance between point and line	measure radius, length and angle of arc	measure girth and area of polygon
measure radius, diameter, girth and area of circle with three points	measure radius, diameter, girth and area concentric of circles	measure length, width, girth and area of rectangle
measure minimum distance between point and circle	measure distance between point and center of circle	measure maximum distance between point and circle
measure minimum distance between line and circle	measure distance between line and center of circle	measure maximum distance between line and circle
measure minimum distance between two circles	measure center distance between two circles	measure maximum distance between two circles
add text	measure radius, diameter, girth and area of circle with two points	cross hair and graduated cross hair

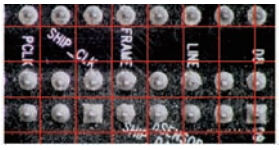
- **Assist tools:**

manual/automatic point selection	delete images
line width and color settings	export measurement data to U disk
freeze screen	take pictures and save
camera parameter settings	review pictures
layout settings of measurement items	system settings

- **Cross hair:**

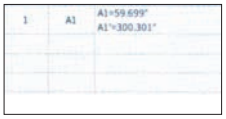


- **Grid comparison measurement:**



full-screen grid for comparison measurement, adjustable grid number

- **Output to Excel:**



- **Comparison:**

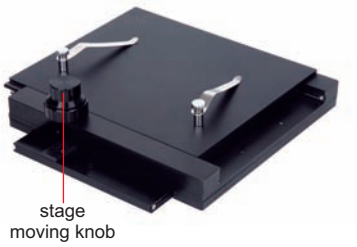
set the standard workpiece as the background image, superimpose the measured workpieces on the image for quick comparison

X-Y METAL STAGE
CODE ISM-DL-STAGE1

- Suitable for digital microscopes **5301-D400, 5303-AF103, 5310-DL401, 5313-S407, 5315-S710, 5318-MD60-XY 5324-K210, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL520**

SPECIFICATION

X-Y travel range	100×86mm
Dimension (L×W×H)	180×180×50mm
Weight	2.3kg





LED RING LIGHT
CODE ISM-LED-9245R

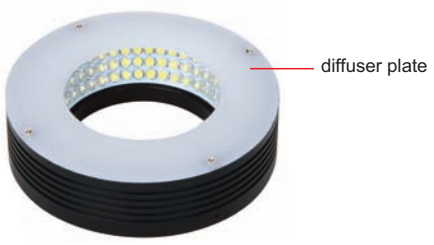
RED, GREEN, BLUE, INFRARED AND UV LIGHT CAN BE CUSTOMIZED

ATTENSION: MUST BE USED WITH LIGHT BRACKET AND LIGHT CONTROLLER

- Diffuser plate is included to reduce the reflective effect on workpieces
- Suitable for digital microscopes **5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710**

SPECIFICATION

Light color	white
Power supply	24V
Power	5.5W
Angle	45°
Outside/inside diameter	92/52mm



LED SQUARE LIGHT
CODE ISM-LED-100L4

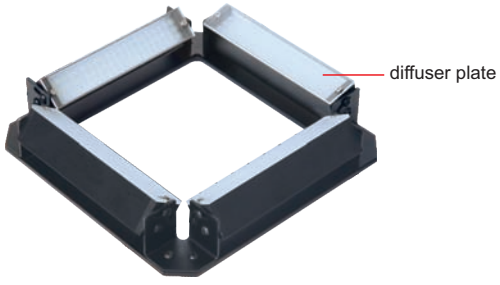
RED, GREEN, BLUE, INFRARED AND UV LIGHT CAN BE CUSTOMIZED

ATTENSION: MUST BE USED WITH LIGHT BRACKET AND LIGHT CONTROLLER

- Diffuser plate is included to reduce the reflective effect on workpieces
- Angle and brightness can be adjusted independently
- Suitable for digital microscopes **5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710**

SPECIFICATION

Light color	white
Power supply	24V
Power	10.36W
Angle	0~90°
Dimension (L×W×H)	154×154×30mm

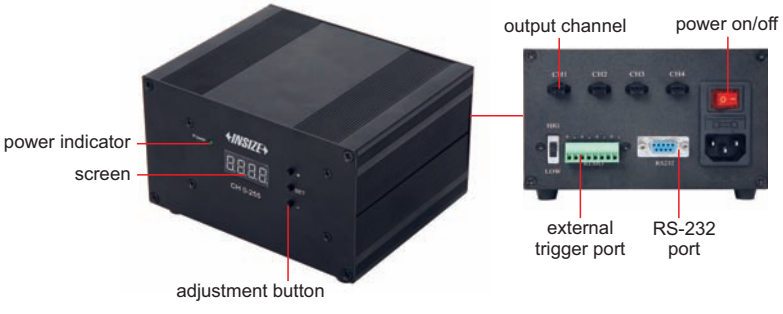


DIGITAL LIGHT CONTROLLER
CODE ISM-LED-CTRL

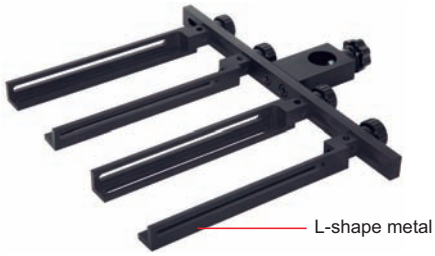
- 256 (0-255) steps of brightness adjustment
- With power off memory function and short circuit protection function
- Suitable for **ISM-LED-100L4, ISM-LED-9245R**

SPECIFICATION

Power supply	100~240V, 50/60HZ
Output power (rated)	60W
Output voltage (rated)	24V
Dimension (L×W×H)	145×118×83mm



BRACKET FOR LIGHTS
CODE ISM-LED-BRACKET



application



- 4 pcs L-shape bars are included, multiple combinations can be realized
- Suitable for **ISM-LED-100L4, ISM-LED-9245R**

SPECIFICATION

Size (L×W×H)	260×300×20mm
Weight	0.7kg

DUAL HEAD LED LIGHT
CODE ISM-ZS-LED

- Adjustable illumination
- For digital and stereo microscopes



application



SPECIFICATION

Power	3W
Power supply	100~240V
Working	10000h
Illumination	10000lux

LED AUXILIARY LIGHT
CODE ISM-DL-LED

- Suitable for digital microscopes **5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710**





illumination direction and brightness are adjustable

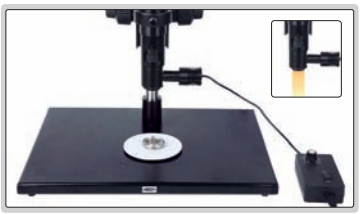
SPECIFICATION

Power	8W
Diameter of mounting hole	Ø25mm
Power supply	10~12V, 0~300mA

COAXIAL LIGHT
CODE ISM-DL-COAXIAL

- Suitable for digital microscopes **5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710**





for smooth surfaces and small holes, brightness is adjustable

SPECIFICATION

Power	1W
Power supply	0~3.4V, 0~400mA

AUXILIARY OBJECTIVES



**0.3X auxiliary objective*
ISM-DL-OB03X**



**0.5X auxiliary objective*
ISM-DL-OB05X**



**0.75X auxiliary objective*
ISM-DL-OB075X**



**1X auxiliary objective
ISM-DL-OB1X**



**1.5X auxiliary objective
ISM-DL-OB1D5X**



**2X auxiliary objective
ISM-DL-OB2X**

- Suitable for digital microscopes **5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL400, ISM-DL510, 5315-S710, 5317-AF109, 5317-AF110**

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (5303-AF103)

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
0.3X (optional)	magnification	6~37X	12~74X
	focus distance	120~310mm	120~310mm
	view field	52×30~8×5mm	26×15~4×2.5mm
0.5X (optional)	magnification	10~61X	20~123X
	focus distance	78~230mm	78~230mm
	view field	37×20~5×3mm	18×10~2.5×1.5mm
0.75X (optional)	magnification	15~92X	30~184X
	focus distance	60~125mm	60~125mm
	view field	21×13~3.4×2mm	10×6.5~1.7×1mm
1X (included)	magnification	20~123X	40~246X
	focus distance	48~84mm	48~84mm
	view field	15×8~2.5×1.5mm	7.5×4~1.3×0.7mm
1.5X (optional)	magnification	30~184X	60~368X
	focus distance	36~63mm	36~63mm
	view field	10×6~1.7×1mm	5×3~0.9×0.5mm
2X (optional)	magnification	40~246X	80~492X
	focus distance	24~42mm	24~42mm
	view field	7.5×4~1.3×0.7mm	3.8×2~0.7×0.4mm

MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (ISM-DL300, ISM-DL301, ISM-DL510)

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
0.3X (optional)	magnification	5~34X	10~68X
	focus distance	287±2mm	287±2mm
	view field	42×26~6.5×4.5mm	21×13~3.3×2.3mm
0.5X (optional)	magnification	9~56X	18~112X
	focus distance	166±2mm	166±2mm
	view field	25.6×16.8~5×3.5mm	12.8×8.4~2×1.3mm
0.75X (optional)	magnification	13~84X	26~168X
	focus distance	105±2mm	105±2mm
	view field	17×10.5~2.6×1.7mm	8.5×5.3~1.3×0.9mm
1X (included)	magnification	15~100X	30~200X
	focus distance	70±2mm	70±2mm
	view field	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
1.5X (optional)	magnification	26~168X	52~336X
	focus distance	42±2mm	42±2mm
	view field	8.5×5.2~1.3×0.9mm	4.3×2.6~0.7×0.5mm
2X (optional)	magnification	30~200X	60~400X
	focus distance	29±2mm	29±2mm
	view field	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

*For auxiliary objectives 0.3X, 0.5X, 0.75X, use contour illumination of **ISM-DL301, ISM-DL400, ISM-DL510, 5310-DL401** or LED light

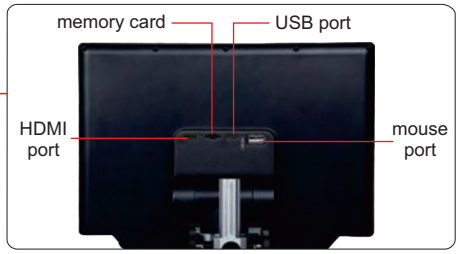
TAKE PICTURES AND VIDEOS

BUILT-IN LITHIUM BATTERY

MINI DIGITAL MICROSCOPE (ECONOMIC TYPE)
CODE 5311-M710

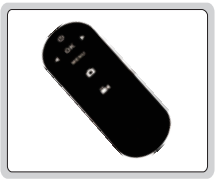
VIDEO



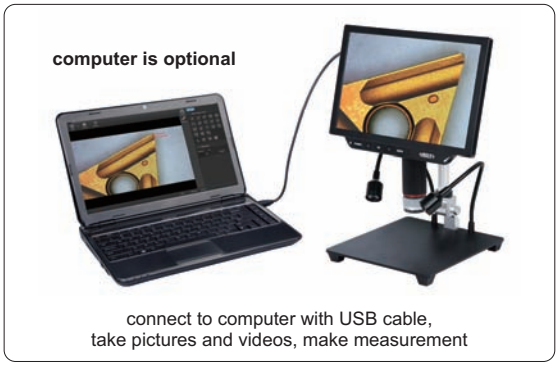




32G memory card and holder (included)

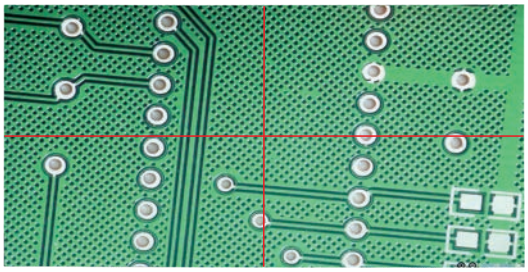


infrared ray remote controller (included)

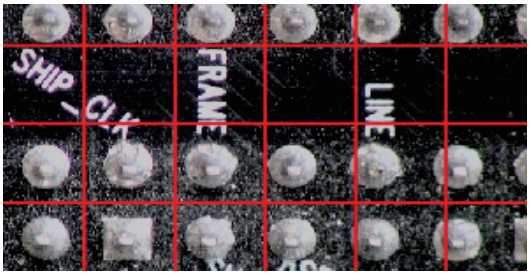


connect to computer with USB cable,
take pictures and videos, make measurement

cross hair



grid (color, line width and positions are adjustable)



SPECIFICATION

Display resolution	1280×800
Sensor	1/3" CMOS
Pixel	13M
Single pixel size	1.12μm×1.12μm
Frame rate	60fps/30fps
Magnification	6.5X~60X
View field	3.6×2~33×18.5mm
White balance	auto/manual (10 levels RGB)/calibration
Exposure control	AE lock/exposure compensation (10 levels)
Image control	contrast/saturation/sharpness (10 levels)
Record media	memory card (128G Max)
Output	HDMI
Power supply	power adapter
Dimension (LxWxH)	180×200×360mm
Weight	1.3kg

STANDARD DELIVERY

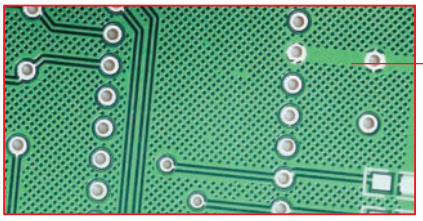
Main unit	1 pc
USB cable	1 pc
HDMI cable	1 pc
IR remote controller	1 pc
32G memory card and holder	1 pc
Plastic calibration ruler	1 pc
Power adapter	1 pc

To be continued

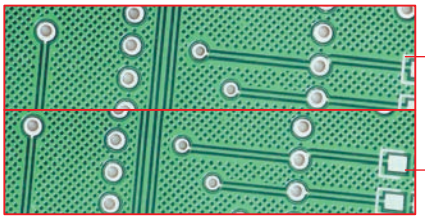
Continued from previous page

- **Screen freezing:**

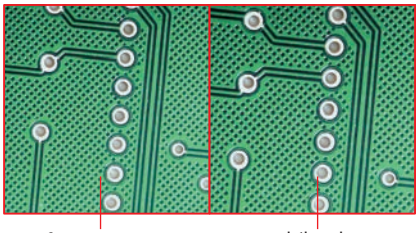
full screen



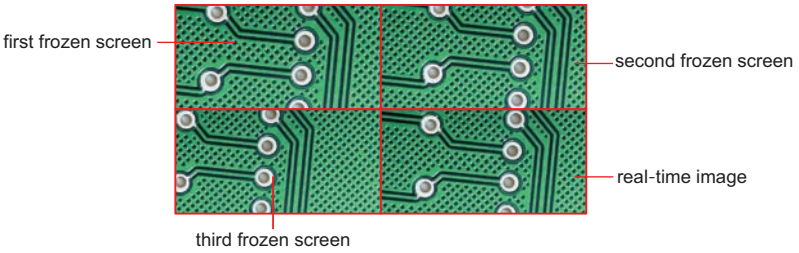
up-down split screen



left-right split screen



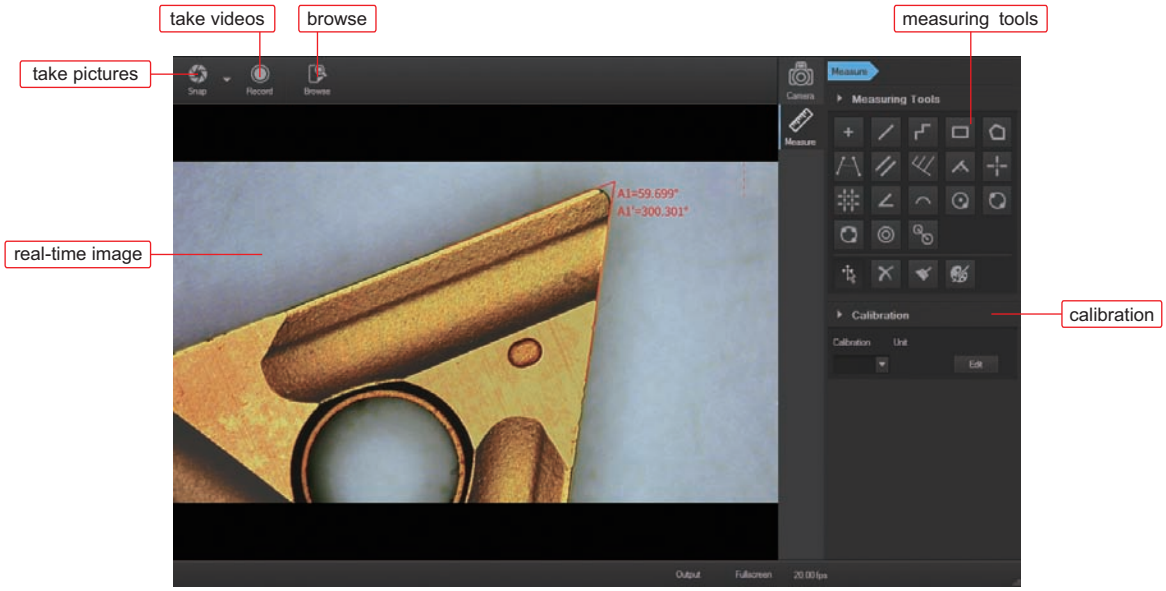
1/4 split screen



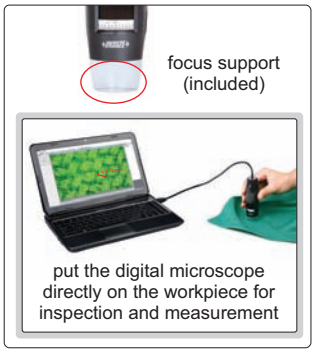
SOFTWARE FOR COMPUTER (INCLUDED)

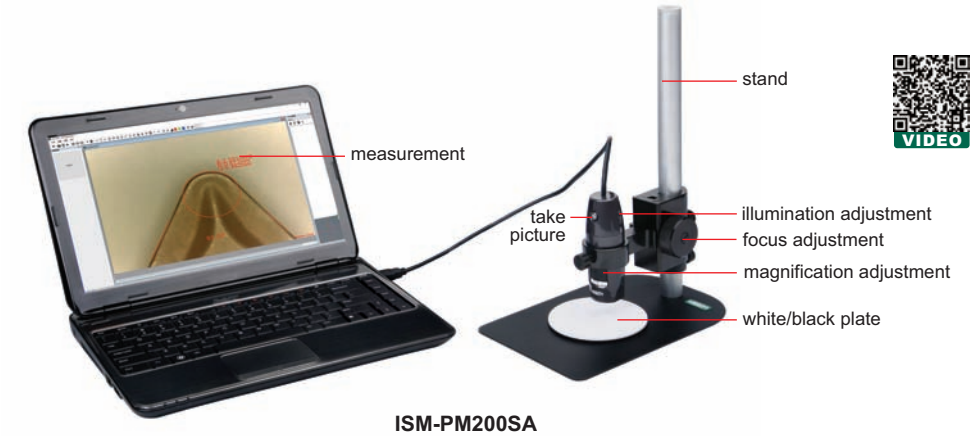
- **Language**: Chinese (Simplified), English
- **Operation system**: Windows 7/8/8.1/10 (64bit)
- **Port**: USB2.0 or above
- **Measuring accuracy**: 0.02mm

point counting	straight line length	continuous line length	area of a rectangle
area of a polygon	distance between 2 lines	distance between parallel lines	distance between line and first parallel line
point-line distance	cross line	double cross line	angle
arc	radius of a circle	radius of a 2-point circle	radius of a 3-point circle
center distance of 2 circles	center distance of concentric circle		



DIGITAL MEASURING MICROSCOPES (ECONOMIC TYPE)





ISM-PM200SA
computer is optional

- Can take pictures and videos
- Supplied with software
- Calibration rulers
  (graduation 0.1 and 1mm) are included
- With focus support

software flash disk
(included)



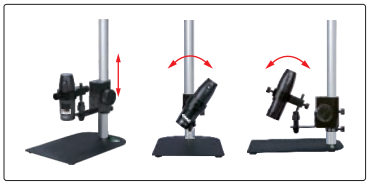
filter (**optional**)



SPECIFICATION

Code	ISM-PM200SA	ISM-PM200SB
Magnification	10X~200X	10X~200X
Stand	standard	universal
Pixel	2M (resolution: 1920×1080)	
Illumination	built-in adjustable LED	
Power supply	USB 2.0 cable (voltage required: 5±0.1V)	

universal stand (included in **ISM-PM200SB**)



MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

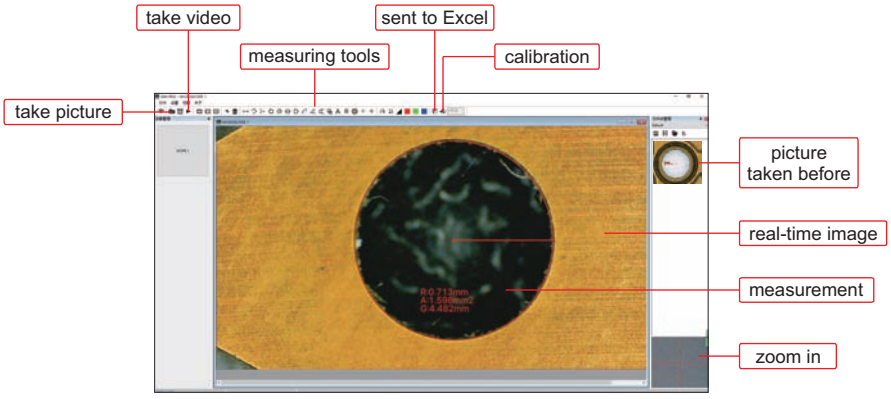
Magnification	Focus distance	View field	Accuracy
50X	22mm	9.6×7.1mm	30μm
100X	14mm	4.8×3.6mm	15μm
150X	14mm	3.3×2.5mm	10μm
200X	19mm	2.3×1.8mm	8μm

STANDARD DELIVERY

Main unit	1 pc
USB flash disk	1 pc

OPTIONAL ACCESSORY

Green filter	ISM-PM-GREEN
Yellow filter	ISM-PM-YELLOW
Blue filter	ISM-PM-BLUE

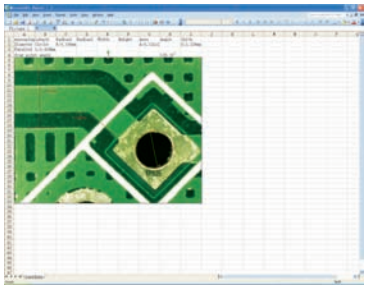


SOFTWARE

- **Language:** English, Japanese, Ukrainian, German, French, Italian, Spanish, Chinese
- **Operation system:** Windows 7/8/XP/Vista
- **Measuring tools:**

measure radius, diameter, girth and area of circle with two points
measure area of polygon
measure distance between two circles
measure distance between two parallel lines
measure angle with two lines
measure distance between point and line
measure radius of arc
measure radius of circle
measure length of continuous line
measure angle with three points
measure radius, girth and area of circle
add text

- **Data is sent to Excel:**



WIFI DIGITAL MEASURING MICROSCOPE (ECONOMIC TYPE)
CODE ISM-WF200

VIDEO

- Maximum working distance is 5m under WIFI mode
- Can be connected to multiple iPads, Android devices or computers together under WIFI mode
- Take pictures and videos
- Supplied with software



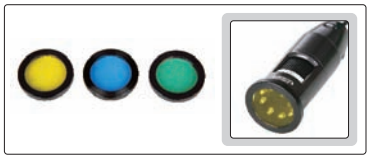
stand (code **ISM-PM-STAND**, **optional**)





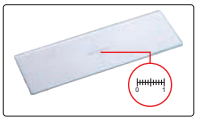
software flash disk (included)

filter (**optional**)





plastic calibration ruler (graduation 1mm, included)



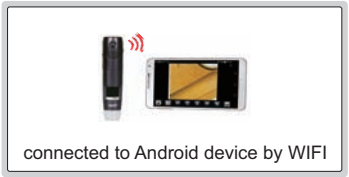
glass calibration ruler (graduation 0.1mm, included)

SPECIFICATION

Magnification	10X~200X
Pixel	1.3M (resolution: 1280×1024)
Illumination	built-in adjustable LED
Power supply	built-in rechargeable battery



connected to iPad by WIFI



connected to Android device by WIFI

STANDARD DELIVERY

Microscope	1 pc
Focus support ring for 80X/150X	1 pc
Focus support ring for 60X/200X	1 pc
Glass calibration ruler (graduation 0.1mm)	1 pc
Plastic calibration ruler (graduation 1mm)	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc



connected to computer by WIFI



connected to computer by USB cable

OPTIONAL ACCESSORY

Stand	**ISM-PM-STAND**
Green filter	**ISM-PM-GREEN**
Yellow filter	**ISM-PM-YELLOW**
Blue filter	**ISM-PM-BLUE**

MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

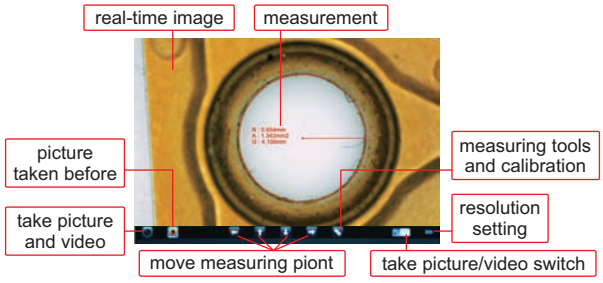
Magnification	Focus distance	View field	Accuracy
50X	21mm	8.1×6.4mm	30μm
100X	13mm	3.9×3.1mm	15μm
150X	16mm	2.6×2.1mm	10μm
200X	19mm	1.8×1.5mm	8μm

❶ Software ISM-WF200 (for iPad by WIFI)

measure length of line or distance between two points

measure radius, girth and area of circle with three points

measure angle

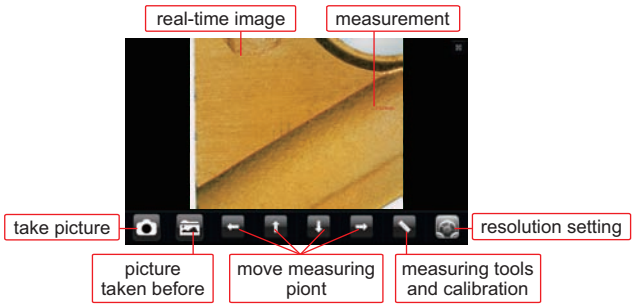


To be continued

Continued from previous page

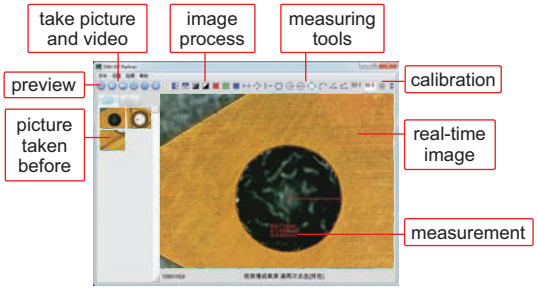
❷ Software ISM-APK (for Android devices by WIFI)

- measure length of line or distance between two points
- measure radius, girth and area of circle with three points
- measure angle



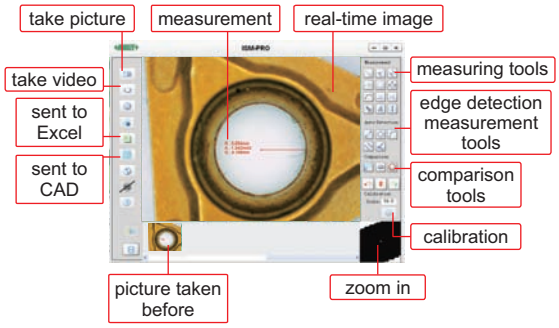
❸ Software ISM-WF Partner (for computer by WIFI)

- measure length of line or distance between two points
- measure area of polygon
- measure angle with three points
- measure radius, girth and area of circle with center point
- measure length of continuous line
- measure radius, girth and area of circle with three points
- measure angle with two lines
- measure radius, girth and area of circle with two points
- measure distance between point and line
- measure radius, length and angle of arc
- measure area of rectangle



❹ Software ISM-PRO (for computer by USB cable)

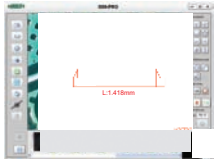
- **Measuring tools:**
  - measure length of line or distance between two points
  - measure length of continuous line
  - measure radius, length and angle of arc
  - measure distance between two circles
  - measure distance between two parallel lines
  - measure radius, girth and area of circle
  - measure distance between point and line
  - measure area of rectangle
  - measure angle with two lines
  - add number with circle
  - measure angle with three points
  - add text



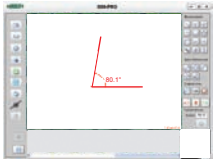
- **Edge detection measurement tools:**
  - detect line automatically, and calculate length
  - detect arc automatically, and calculate radius, angle and arc length
  - detect circle automatically, and calculate radius, girth and area
  - detect two lines automatically, and calculate angle
  - detect two parallel lines automatically and calculate distance

- **Comparison tools:**
  Create line, angle or circle with desired size, to compare with workpieces

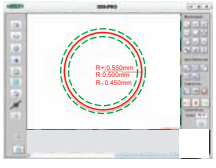
  create line



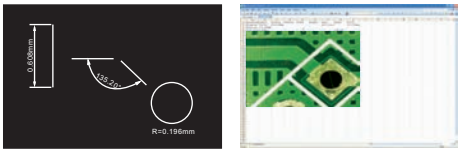
  create angle



  create circle with tolerance

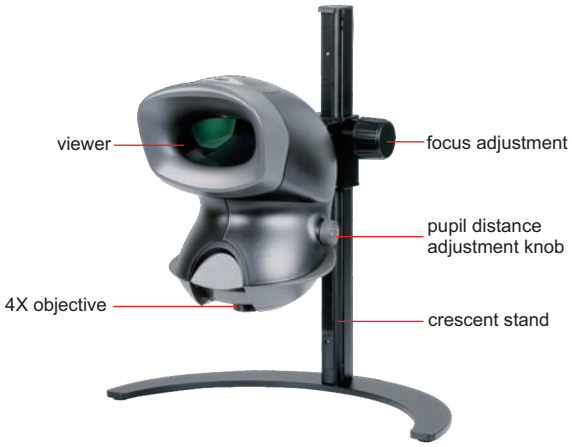


- **Data is sent to CAD or Excel:**



LOW-MAGNIFICATION HIGH-DEFINITION STEREO MICROSCOPES

INSIZE PLUS



ISM-VR200



ISM-VR300



ISM-VR400



universal stand can rotate up and down and left and right



6X objective
(included in **ISM-VR250, ISM-VR350, ISM-VR450**)

- Eyepiece-less design is ergonomic and reduces eye and body fatigue
- 3D stereoscopic imaging effect, enhanced hand-eye coordination, true depth of field

SPECIFICATION

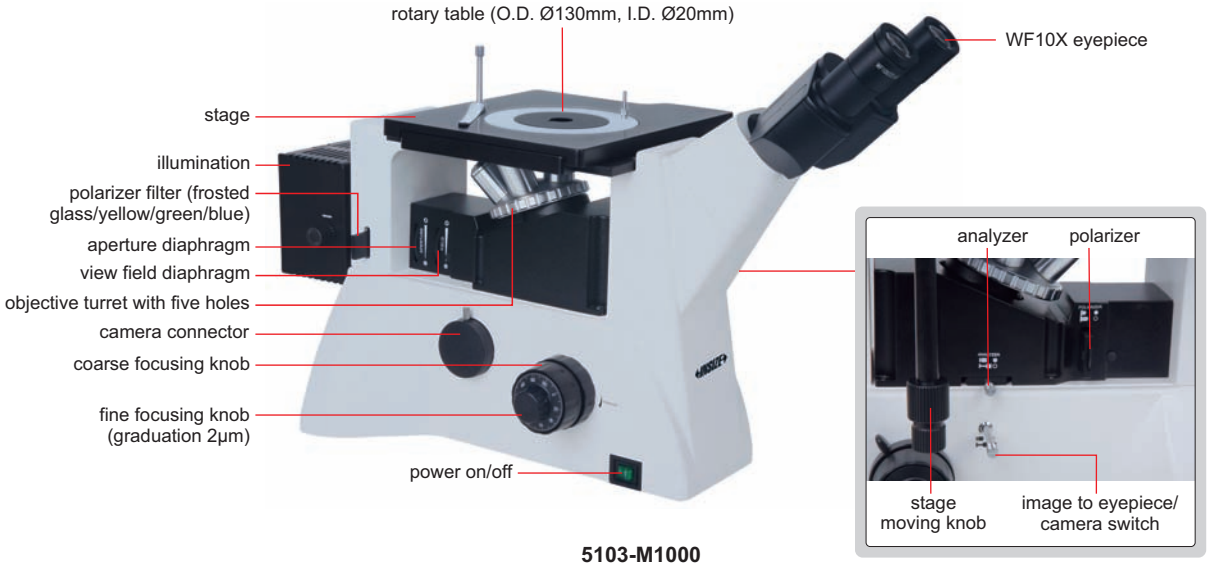
Code	ISM-VR200	ISM-VR250	ISM-VR300	ISM-VR350	ISM-VR400	ISM-VR450
Stand type	crescent stand		square stand		universal stand	
Objective	4X	6X	4X	6X	4X	6X
Focus distance	96mm	73mm	96mm	73mm	96mm	73mm
View filed	Ø27.5mm	Ø19.2mm	Ø27.5mm	Ø19.2mm	Ø27.5mm	Ø19.2mm
Dimension (L×W×H)	500×406×533mm		250×406×533mm		240×454×605mm	
Weight	5.8kg		6.9kg		5.3kg	

STANDARD DELIVERY

Main unit	1 pc
Objective	1 pc
Light source power adapter	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

8X objective	ISM-VR-OB8X



5103-M1000

- Infinite optical system, polarization observation
- Kohler illumination system provides uniform illumination field
- Objectives 50X, 100X are spring type

SPECIFICATION

Code	5103-M1000 (bright field objectives)				5103-M1000BD (bright & dark field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable				12V/50W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	10X	20X	50X	100X	5X	10X	20X	50X
Working distance	20.2mm	8.80mm	3.68mm	0.40mm	9.70mm	9.30mm	7.23mm	2.50mm
Numerical aperture	0.25	0.40	0.70	0.85	0.12	0.25	0.40	0.70
Magnification	100X~1000X				50X~500X			
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 242×200mm							
	travel: 30x30mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	614×250×394mm							
Weight	13kg							

STANDARD DELIVERY

Main unit	1 pc
Polarizer and analyzer	1 pc of each
Anti-dust cover	1 pc

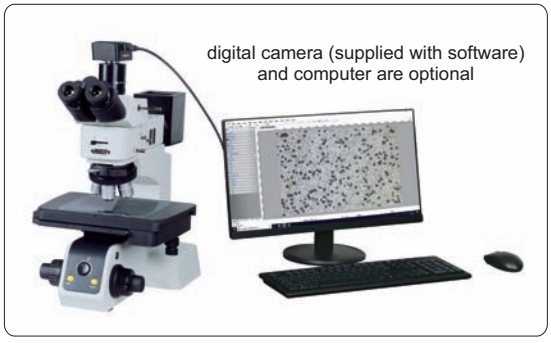
OPTIONAL ACCESSORY

Bright & dark field objective (for 5103-M1000BD)	PL40X	5101-M-BD40X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5101-M-EPD10X
Bright field objective (for 5103-M1000)	PL5X	5101-M-OB5X
	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
Digital camera		ISM-CM63
Camera adapter *		5101-M-ADAPTER

*Digital camera must be used with camera adapter

METALLURGICAL MICROSCOPES (ADVANCED TYPE)

VIDEO





5108-M3000

- Infinite chromatic aberration correction optical system
- Three way observation tube with infinite hinge
- Translucent and reflective frame, front low-hand position coarse and fine coaxial focus adjustment mechanism, with adjustment elastic device to prevent sliding and random upper limit device
- Bright and dark field five-hole converter with DIC slot
- Adopt digital dimming, with light intensity reset and setting function
- With polarizer insert plate and 360° rotating analyzer insert slot

SPECIFICATION

Code	5108-M3000 (standard type)				5108-M3000H (high-definition type)			
Eyepiece	high eye point large field SWH10X-H (view field: Ø25mm, adjustable visibility)							
Objective (infinite long working distance bright and dark field semi achromatic)	5X	10X	20X	50X	5X	10X	20X	50X
Working distance	15mm	8.4mm	10.3mm	3.0mm	20mm	11mm	3.0mm	1.0mm
Numerical aperture	0.15	0.30	0.40	0.75	0.15	0.30	0.45	0.80
Optical magnification	50X~500X (up to 1000X with optional 100X objective)							
Digital magnification	170X~1700X (on 21.5" monitor), up to 3400X with optional 100X objective							
Stage	double layer							
	size: 310×240mm							
	travel: 150×100mm							
Condenser	roll-out achromatic condenser (numerical aperture 0.9)							
Illumination	5W LED, transmitted and reflected							
Observation tube	inverse image, distance adjustment: 50~76mm, two grade spectral ratio binocular: trinocular=100:0							
Diopter adjustment	±5 diopter (two eyepieces)							
Power supply	AC 100-240V							
Dimension (L×W×H)	310×600×500mm							
Weight	27kg							

STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc
0.65X camera adapter (adjustable focus)	1 pc
Polarizer and analyzer	1 pc of each

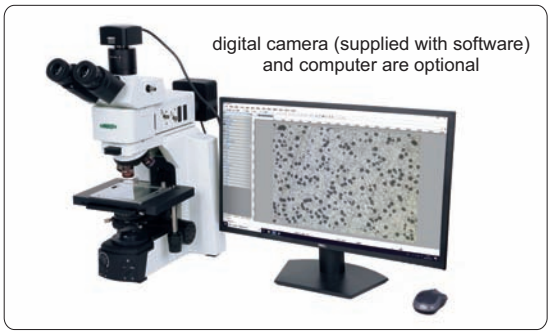
OPTIONAL ACCESSORY

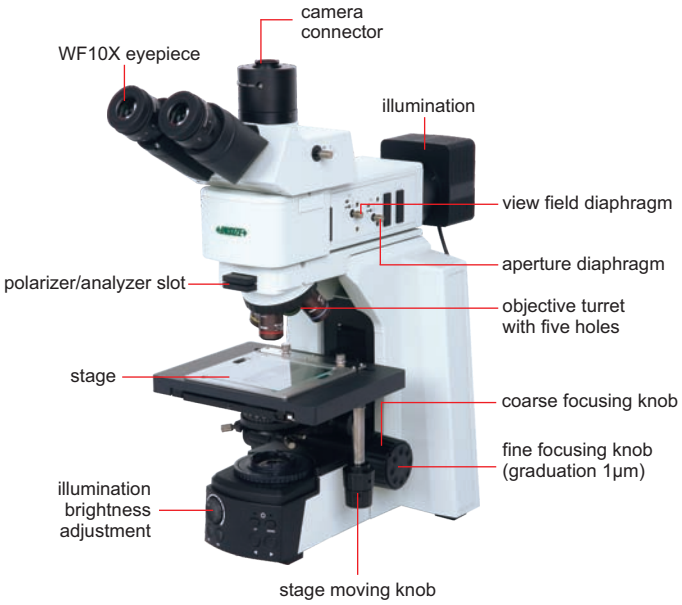
Camera and software	ISM-CM63
Glass calibration ruler	ISM-MAS-SCALE
Computer	5108-M-COMPUTER
2.5X infinite long working distance bright field semi achromatic objective	5108-M-OB2D5X
100X infinite long working distance bright and dark field semi achromatic objective	5108-M-BD100X
50X infinite long working distance bright and dark field achromatic objective	5108-M-APO50X
100X infinite long working distance bright and dark field achromatic objective	5108-M-APO100X
Differential interference module (DIC)	5108-M-DIC

METALLURGICAL MICROSCOPE (STANDARD TYPE)
CODE 5110-M900

VIDEO

- Infinite chromatic aberration correction optical system
- Three way observation tube with infinite hinge
- Translucent and reflective frame, front low-hand position coarse and fine coaxial focus adjustment mechanism, with adjustment elastic device to prevent sliding and random upper limit device
- With brightness memory function





SPECIFICATION

Eyepiece	high eye point large field SWH10X-H (view field: Ø23mm, adjustable visibility)			
Objective (infinite long working distance semicomplex achromatic)	bright field objectives			
	5X	10X	20X	50X
Numerical aperture	0.15	0.30	0.45	0.70
Working distance	13.5mm	10.3mm	3.0mm	2.5mm
Optical magnification	50X~500X (up to 1000X with optional 100X objective)			
Digital magnification	100X~1000X (on 21.5" monitor), up to 2000X with optional 100X objective			
Stage	double layer			
	glass workbench size: 101×101mm			
	travel: 75×50mm			
Condenser	roll-out achromatic condenser (numerical aperture 0.9)			
Diopter adjustment	±5 diopter (two eyepieces)			
Illumination	10W adjustable LED, transmitted and reflected			
Observation tube	inverse image, distance adjustment: 50~75mm, two grade spectral ratio binocular: trinocular=100:0			
Power supply	power adapter			
Dimension (L×W×H)	255×510×530mm			
Weight	25kg			

STANDARD DELIVERY

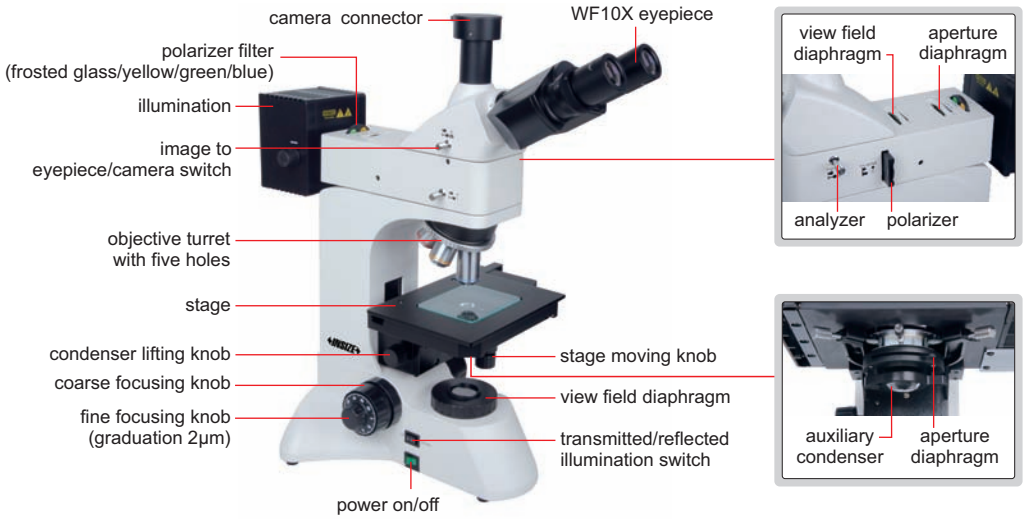
Main unit	1 pc
Anti-dust cover	1 pc
0.5X camera adapter	1 pc

OPTIONAL ACCESSORY

Camera and software	**ISM-CM63, ISM-KM60, ISM-MP8B, ISM-ZS70-S**
Glass calibration ruler	**ISM-MAS-SCALE**
Computer	**5110-M-COMPUTER**
Polarizer and analyzer	**5110-M-POA**
100X infinite long working distance bright field semi-apochromatic objective	**5110-M-BD100X**

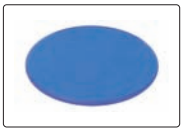
METALLURGICAL MICROSCOPES (BASIC TYPE)

VIDEO



5102-M600

- Infinite optical system, observation in reflected or transmitted illumination, polarizing observation
- Kohler illumination system provides uniform illumination field
- Objectives 40X, 60X are spring type



blue filter (included)



frosted glass filter (included)

SPECIFICATION

Code	5102-M600 (bright field objectives)				5102-M600BD (bright & dark field objectives)			
Illumination	6V/30W (transmitted) 6V/30W (reflected)				12V/30W (transmitted) 12V/50W (reflected)			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	5X	10X	40X	60X	5X	10X	20X	40X
Working distance	26.1mm	20.2mm	3.98mm	3.18mm	9.70mm	9.30mm	7.20mm	3.00mm
Numerical aperture	0.12	0.25	0.60	0.70	0.12	0.25	0.40	0.70
Magnification	50X~600X				50X~400X			
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 210×140mm							
	travel: 75x50mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	456×260×498mm							
Weight	11kg							

STANDARD DELIVERY

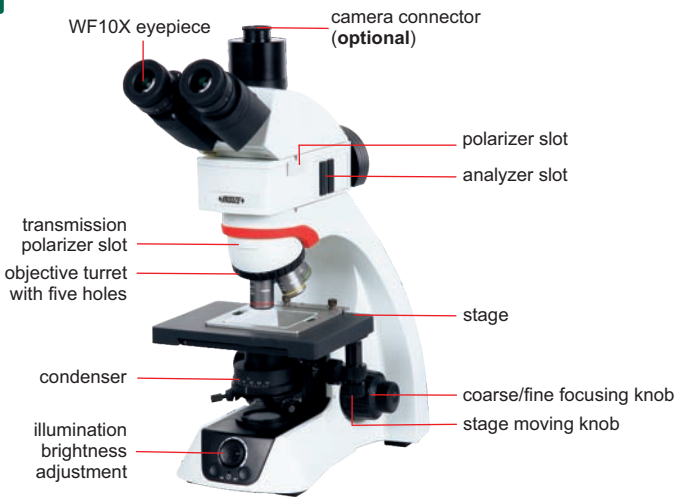
Main unit	1 pc
Anti-dust cover	1 pc
Filter (blue/frosted glass)	1 pc of each

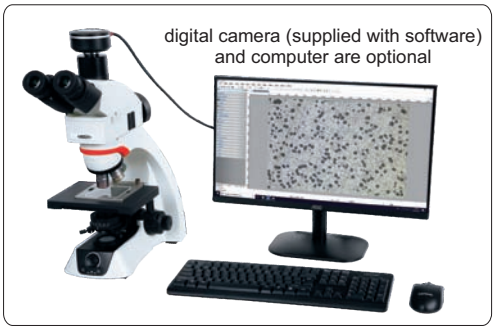
OPTIONAL ACCESSORY

Bright & dark field objective (for 5102-M600BD)	PL50X	5101-M-BD50X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5101-M-EPD10X
Bright field objective (for 5102-M600)	PL20X	5101-M-OB20X
	PL50X	5101-M-OB50X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter *		5101-M-ADAPTER

*Digital camera must be used with camera adapter

METALLURGICAL MICROSCOPE
CODE 5113-M850





- ECGO infinity two-way chromatic aberration calibration system
- Built-in white LED, high color rendering index, long life time
- The same dimmer knob controls the free switching of reflected and transmitted light
- With anti-slip adjustable elastic and randomized upper limit device

SPECIFICATION

Eyepiece	large field 10X (view field: Ø23mm)			
Objective (infinite plan achromatic)	bright field objectives			
	5X	10X	20X	50X
Numerical aperture	0.15	0.30	0.45	0.80
Working distance	16mm	9mm	3mm	3mm
Optical magnification	50X~500X (up to 1000X with optional 100X objective)			
Stage	X-Y double layer			
	size: 200×150mm			
	travel: 78×50mm			
Condenser	pre-centered condenser with diaphragm indicator scale markings NA 0.1~1.1			
Diopter adjustment	±8 diopter			
Observation tube	30° hinged trinocular observation tube, pupil distance adjustment range 45~78mm			
Power supply	power adapter			
Dimension (L×W×H)	391×220×513mm			
Weight	18kg			

STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc

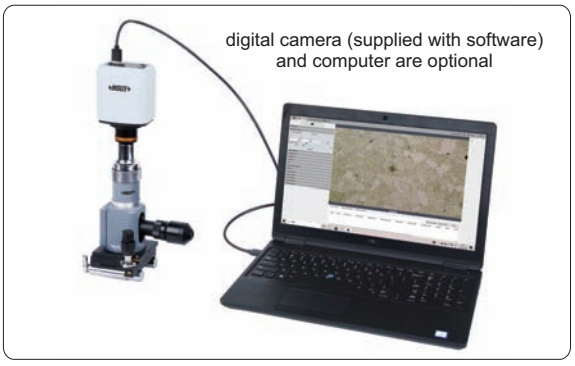
OPTIONAL ACCESSORY

Camera and software*	**ISM-CM63, ISM-KM60, ISM-MP8B, ISM-ZS70-S**
0.5X camera adapter	**5112-B-ADAPTER**
Polarizer and analyzer	**5113-M-POA**
100X objective (infinite plan achromatic)	**5113-M-OB100X**

*Camera and software must be used with camera adapter

PORTABLE METALLURGICAL MICROSCOPE
CODE 5109-PM500

VIDEO



connect to digital camera



- Illumination is powered by batteries
- Aperture diaphragm improves image quality and increases depth of field
- Magnetic base with on/off switch can adhere on metal workpieces
- Can be connected to digital cameras

SPECIFICATION

Magnification	100X~500X	
Eyepiece (wide field)	10X/12.5X	
Objective (plan achromatic)	10X (included)	40X (included)
Numerical aperture	0.25	0.64
Illumination	3W LED, built-in batteries	
Stage	double layer, size: 15×12mm	
Dimension (L×W×H)	210×160×95mm	
Weight	1.5kg	

STANDARD DELIVERY

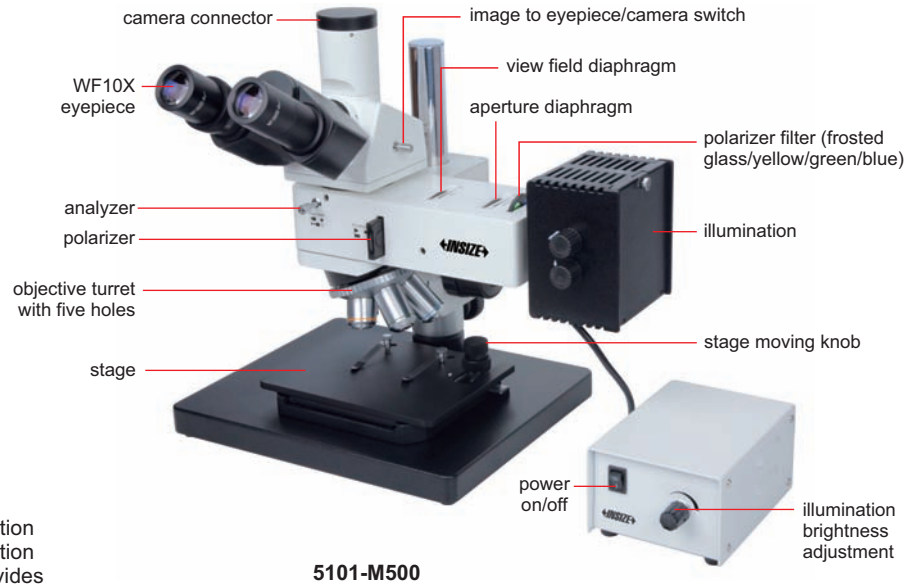
Main unit	1 pc
Eyepiece	2 pcs
Objective	2 pcs
Battery (AAA)	3 pcs

OPTIONAL ACCESSORY

Objective	**5X plan achromatic**	**5109-PM500-OB5X**
	20X plan achromatic	**5109-PM500-OB20X**
	100X plan achromatic	**5109-PM500-OB100X**
Eyepiece	**5X**	**5109-PM500-EP5X**
	15X	**5109-PM500-EP15X**
Digital camera*		**ISM-CM20, ISM-CM63, ISM-ZS70-S**
Camera adapter 0.5X		**ISM-MAS-ADAPTER**

* Digital camera must be used with camera adapter

VIDEO



5101-M500

- Infinite optical system, polarization observation, dark field observation
- Kohler illumination system provides uniform illumination field
- Objective 50X is spring type

SPECIFICATION

Code	5101-M500 (bright field objectives)				5101-M500BD (bright & dark field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable				12V/50W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	5X	10X	20X	50X	5X	10X	20X	50X
Working distance	26.1mm	20.2mm	8.80mm	3.68mm	9.70mm	9.30mm	7.23mm	2.50mm
Numerical aperture	0.12	0.25	0.40	0.70	0.12	0.25	0.40	0.70
Magnification	50X~500X							
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 160×140mm							
	travel: 35x30mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	415×345×380mm							
Weight	14kg							

STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Bright & dark field objective (for 5101-M500BD)	PL40X	5101-M-BD40X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5101-M-EPD10X
Bright field objective (for 5101-M500)	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter *		5101-M-ADAPTER

*Digital camera must be used with camera adapter

INDUSTRIAL INSPECTION MICROSCOPE (LARGE STAGE)
CODE 5104-M700

VIDEO



- For observation and inspection of large IC and chip in IT industry

SPECIFICATION

Magnification	40X~400X			
Eyepiece (wide field)	10X (view field: Ø22mm)			
Objective (plan achromatic)	4X	10X	20X	40X
Numerical aperture	0.10	0.25	0.40	0.60
Working distance	17.8mm	10mm	5.8mm	2.9mm
Stage	double layer, size: 300×268mm, travel: 250×200mm			
Kohler illumination	6V/20W halogen lamp, brightness is adjustable built-in green, blue, yellow and frosted glasses			
Pupil distance	48~75mm			
Diopter adjustment	±5 diopter (two eyepieces)			
Power supply	110/220V, 50/60Hz			
Dimension (L×W×H)	647×268×376mm			
Weight	12kg			

STANDARD DELIVERY

Main unit	1 pc
Camera connector	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

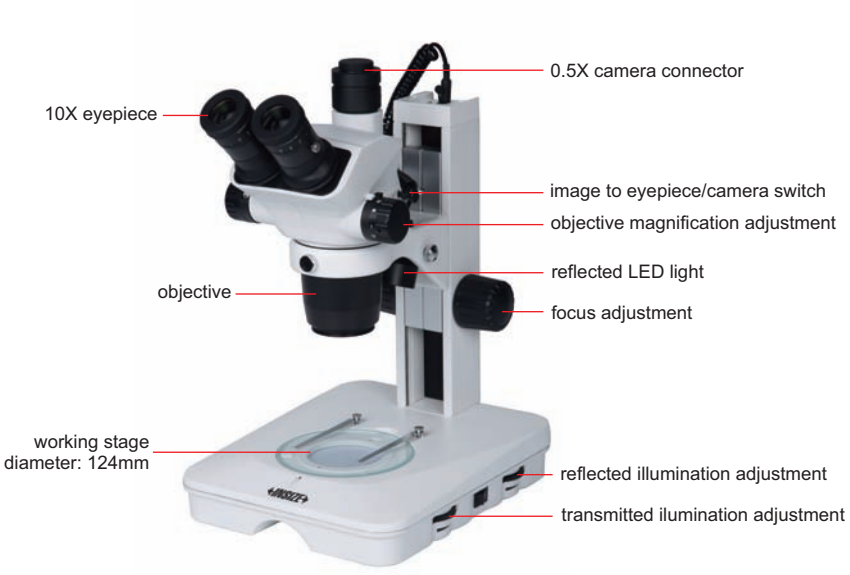
Bright field objective	**5X plan achromatic objective (focus distance: 15.5mm)**	**5104-M700-OB5X**
	50X plan achromatic objective (focus distance: 0.32mm)	**5104-M700-OB50X**
	100X plan achromatic objective (focus distance: 2mm)	**5104-M700-OB100X**
Polarizer and analyzer		**5104-M700-AP**
Digital camera		**ISM-CM20, ISM-CM63, ISM-ZS70-S**
Camera adapter 0.5X*		**ISM-MAS-ADAPTER**

*Digital camera must be used with camera adapter

ZOOM STEREO MICROSCOPE (ADVANCED TYPE)
CODE 5107-S70T



LED ring light (**optional**)



- Greenough optical system, clear observation, real color
- High working distance is convenient for operation
- Excellent flat image and large depth of field, make observation comfortable
- 6.7:1 large zoom ratio, allow quick observation adjustment

SPECIFICATION

Optical tube	trinocular
Eyepiece (wide field)	10X (view field: Ø22mm)
Objective	0.67X~4.5X (zoom)
Observation tube	45° trinocular tube inclination angle, built-in 0.5X adapter
Zoom ratio	6.7:1
Pupil distance	50~75mm
Diopter adjustment	-8~+5 diopter (both eyepieces)
Working distance of objective	100mm
Max. workpiece height	50mm
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60Hz
Dimension (L×W×H)	240×290×368mm
Weight	3.8kg



frosted glass filter
(included)



white/black plate
(included)

STANDARD DELIVERY

Main unit	1 pc
10X eyepiece	2 pcs
Ø124mm glass plate	1 pc
Ø124mm white/black plate	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Auxiliary objective	**0.5X**	**5107-S70T-OB05X**
	1.5X	**5107-S70T-OB15X**
	2X	**5107-S70T-OB20X**
Eyepiece	**15X (view field: Ø16mm)**	**5107-S70T-EP15X**
	20X (view field: Ø12.5mm)	**5107-S70T-EP20X**
LED ring light		**ISM-ZS-RL**
Digital camera		**ISM-CM20, ISM-CM63, ISM-ZS70-S**

PARALLEL LIGHT STEREO MICROSCOPE
CODE ISM-ZS200

PARALLEL LIGHT PATH: REDUCE FATIGUE, ACCESSORIES CAN BE ADDED INTO LIGHT PATH

VIDEO

coaxial illumination (**optional**)





optical path splitter (**optional**)



- Infinity parallel optical system and 20° inclined optical tube reduce fatigue
- Coaxial illumination is optional for deep holes which cannot be observed by ring light
- Aperture diaphragm is optional for large depth of field and high quality image

iris diaphragm (**optional**)



SPECIFICATION

Optical tube	binocular (20° inclined)
Eyepiece (wide field)	10X (view field: Ø22mm)
Objective	0.8X~8X (zoom)
Zoom ratio	1:10
Pupil distance	55~75mm
Diopter adjustment	±5 diopter (both eyepieces)
Working distance of objective	78mm
Max. workpiece height	72mm
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60Hz
Dimension (L×W×H)	240×280×440mm
Weight	4.3kg

STANDARD DELIVERY

Main unit	1 pc
WF10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Objective	**0.5X achromatic objective (focus distance: 186mm)**	**ISM-ZS200-OB05X***
	2X plan achromatic objective (focus distance: 32.5mm)	**ISM-ZS200-OB2X**
	0.5X plan apochromatic objective (focus distance: 126mm)	**ISM-ZS200-APO05X***
Eyepiece	**WF15X (view field: Ø16mm)**	**ISM-ZS200-EP15X**
	WF20X (view field: Ø12mm)	**ISM-ZS200-EP20X**
	WF30X (view field: Ø20mm)	**ISM-ZS200-EP30X**
Sleeve for objective		**ISM-ZS200-ADAPTER**
Iris diaphragm		**ISM-ZS200-IRD**
Optical path splitter		**ISM-ZS200-OBS**
Coaxial illumination		**ISM-ZS200-COAXIAL**
Digital camera **		**ISM-CM20, ISM-CM63**

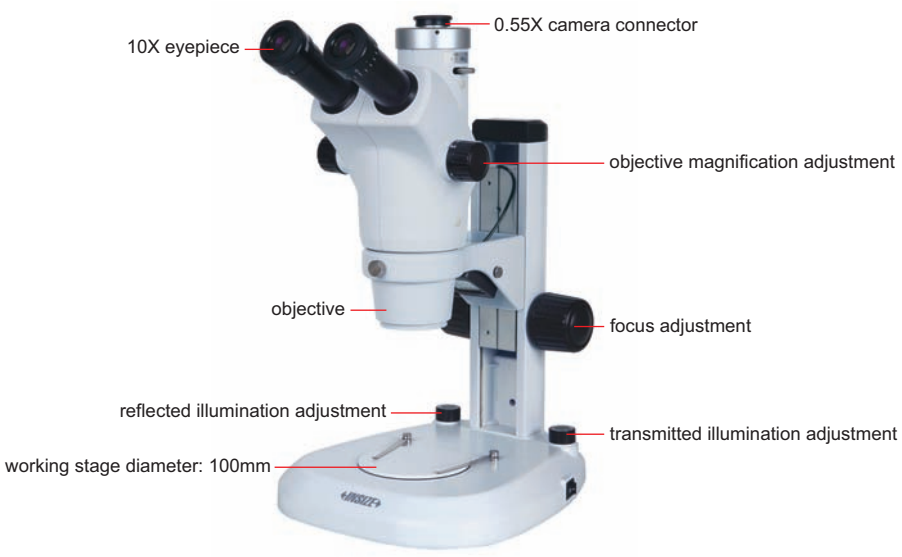
*0.5X auxiliary objective must be used with **ISM-ZS200-ADAPTER**

**Digital camera must be used with optical path splitter

LARGE ZOOM RATIO

ZOOM STEREO MICROSCOPES (ADVANCED TYPE)

VIDEO



ISM-ZS100T

connect to digital camera (for **ISM-ZS100T**)





LED ring light (**optional**)

SPECIFICATION

Code	ISM-ZS100	ISM-ZS100T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø23mm)	
Objective	0.6X~5X (zoom)	
Zoom ratio	1:8.3	
Pupil distance	55~75mm	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	75mm	
Illumination	adjustable reflected and transmitted LED light	
Power supply	110/220V, 50/60Hz	
Dimension (L×W×H)	260×310×490mm	
Weight	4.9kg	

STANDARD DELIVERY

Main unit	1 pc
Camera connector 0.55X for ISM-ZS100T	1 pc
Digital camera adapter 1X for ISM-ZS100T	1 pc
WF10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Auxiliary objective	0.5X (focus distance: 220mm)	ISM-ZS100-OB05X*
	0.7X (focus distance: 125mm)	ISM-ZS100-OB07X
	2X (focus distance: 45mm)	ISM-ZS100-OB2X
Eyepiece	WF15X (view field: Ø16mm)	ISM-ZS100-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS100-EP20X
	WF30X (view field: Ø8mm)	ISM-ZS100-EP30X
Sleeve for auxiliary objective		ISM-ZS200-ADAPTER
LED ring light		ISM-ZS-RL
Digital camera for ISM-ZS100T		ISM-CM20, ISM-CM63, ISM-ZS70-S

*0.5X auxiliary objective must be used with **ISM-ZS200-ADAPTER**

ZOOM STEREO MICROSCOPES (STANDARD TYPE)

VIDEO



LED ring light (**optional**)



ISM-ZS50

SPECIFICATION

Code	ISM-ZS50	ISM-ZS50T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø22mm)	
Objective	0.8X~5X (zoom)	
Zoom ratio	1:6.3	
Pupil distance	55~75mm (adjustable)	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	75mm	
Illumination	adjustable reflected and transmitted LED light	
Power supply	110/220V, 50/60Hz	
Dimension (L×W×H)	290×260×480mm	
Weight	4.9kg	

STANDARD DELIVERY

Main unit	1 pc
WF 10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

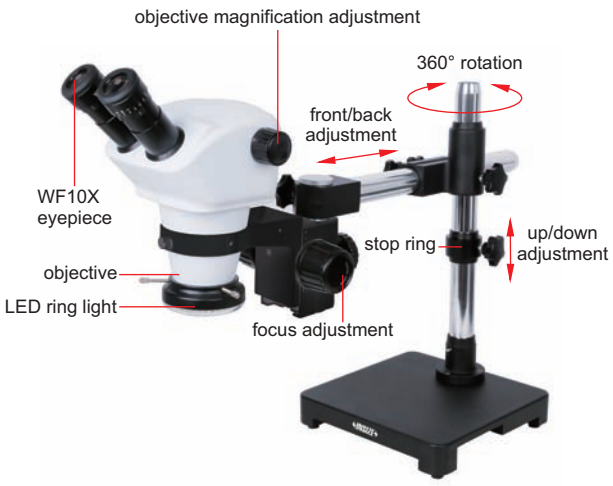
OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS50-OB05X*
	2X	ISM-ZS50-OB2X
Eyepiece	10X dividing eyepiece (graduation 0.1mm/div.)	ISM-ZS50-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
LED ring light		ISM-ZS-RL
Sleeve for auxiliary objective		ISM-ZS200-ADAPTER
Digital camera for ISM-ZS50T		ISM-CM20, ISM-CM63, ISM-ZS70-S, ISM-KM60

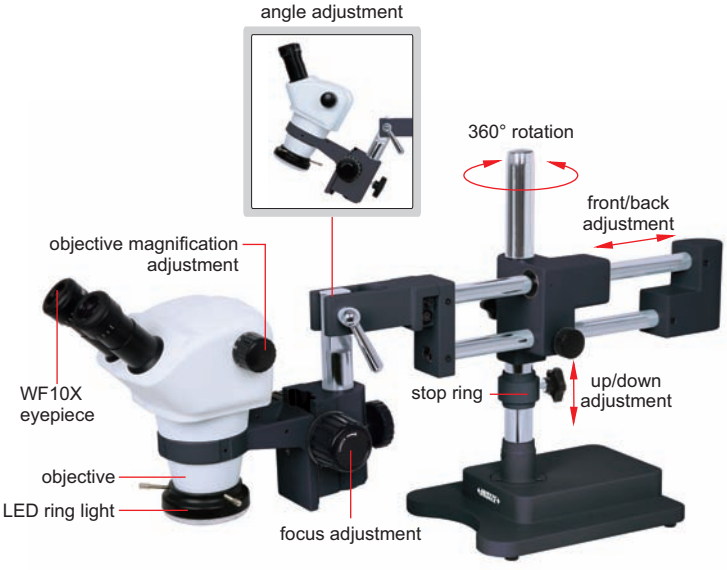
*0.5X auxiliary objective must be used with **ISM-ZS200-ADAPTER**

ZOOM STEREO MICROSCOPES (WITH UNIVERSAL STAND)

VIDEO



5106-M40 (with stand type A)



5106-M50 (with stand type B)

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SPECIFICATION

Code	5106-M40	5106-M40T	5106-M50	5106-M50T
Stand	type A		type B	
Optical tube	binocular	trinocular	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø22mm)			
Objective	0.8X~5X (zoom)			
Zoom ratio	1:6.3			
Pupil distance	55~75mm			
Diopter adjustment	±5 diopter (two eyepieces)			
Working distance of objective	115mm			
Max. workpiece height	300mm			
Illumination	adjustable reflected LED ring light			
Power supply	power adapter			
Dimension (L×W×H)	610×220×430mm		790×230×430mm	
Weight	13.7kg		20kg	

STANDARD DELIVERY

Main unit (with stand)	1 pc
WF10X eyepiece	2 pcs
LED ring light	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS50-OB05X*
	2X	ISM-ZS50-OB2X
Eyepiece	10X dividing eyepiece (0.1mm/div.)	ISM-ZS50-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
Adapter sleeve		ISM-ZS30-ADAPTER
0.5X adapter for 5106-M40T/M50T		ISM-MAS-ADAPTER
Digital camera for 5106-M40T/M50T **		ISM-CM20, ISM-CM63

*0.5X auxiliary objiective must be used with **ISM-ZS30-ADAPTER**

Digital camera must be used with 0.5X adapter **ISM-MAS-ADAPTER

ZOOM STEREO MICROSCOPE (BASIC TYPE)
CODE ISM-ZS30

VIDEO



SPECIFICATION

Optical tube	binocular
Eyepiece (wide field)	10X (view field: Ø20mm)
Objective	1X~4.5X (zoom)
Zoom ratio	1:4.5
Pupil distance	55~75mm (adjustable)
Diopter adjustment	±5 diopter (two eyepieces)
Working distance of objective	97mm
Max. workpiece height	60mm
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60Hz
Dimension (L×W×H)	260×190×400mm
Weight	4.3kg



LED ring light (**optional**)

STANDARD DELIVERY

Main unit	1 pc
WF 10X eyepiece	2 pcs
Ø95mm glass plate	1 pc
Ø95mm white/black plate	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Auxiliary objective	**0.5X**	**ISM-ZS30-OB05X***
	0.63X	**ISM-ZS30-OB06X***
	0.75X	**ISM-ZS30-OB07X***
	2X	**ISM-ZS30-OB2X**
Eyepiece	**10X dividing eyepiece (graduation 0.1mm/div.)**	**ISM-ZS30-EPD10X**
	WF15X (view field: Ø16mm)	**ISM-ZS50-EP15X**
	WF20X (view field: Ø12mm)	**ISM-ZS50-EP20X**
LED ring light		**ISM-ZS-RL**
Sleeve for auxiliary objective		**ISM-ZS30-ADAPTER**
Digital camera		**ISM-CM63**
Camera adapter 0.75X **		**ISM-AD-0D75**

*0.5X, 0.63X and 0.75X auxiliary objectives must be used with **ISM-ZS30-ADAPTER**

**Digital camera must be used with camera adapter 0.75X

LONG WORKING DISTANCE STEREO MICROSCOPES (LOW MAGNIFICATION)



5305-ZS80



5305-ZS90

SPECIFICATION

Code	**5305-ZS80** (with metal base)	**5305-ZS90** (with magnetic base)
Magnification	8X	
Eyepiece (wide field)	10X (view field: Ø20mm)	
Objective	0.8X	
Pupil distance	55~75mm	
Diopter adjustment	±5 diopter (one eyepiece)	
Working distance of objective	115mm	
Max. workpiece height	100mm	140mm
Dimension (L×W×H)	280x160x370mm	280x180x410mm
Weight	3.7kg	2.1kg

STANDARD DELIVERY

Main unit	1 pc
10X eyepieces	1 pair
0.8X objective	1 pc
Anti-dust cover	1 pc

LED ring light (**optional**)



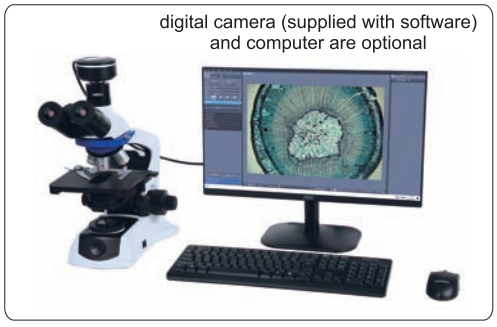
OPTIONAL ACCESSORY

Eyepiece	WF5X (view field: Ø20mm)	5305-ZS80-EP5X
	WF15X (view field: Ø15mm)	5305-ZS80-EP15X
	WF20X (view field: Ø10mm)	5305-ZS80-EP20X
LED ring light		ISM-ZS-RL

BIOLOGICAL MICROSCOPE (STANDARD TYPE)
CODE 5111-B230

VIDEO





- ECGO infinity two-way chromatic aberration calibration system
- Kohler illumination system provides uniform illumination field
- Low-hand position coarse and fine coaxial focus adjustment mechanism
- Camera connector is included, allows connection of camera and software

SPECIFICATION

Eyepiece	large field 10X (view field: Ø22mm)			
Objective (infinite plan achromatic)	bright field objectives			
	4X	10X	40X	100X (oil)
Numerical aperture	0.10	0.25	0.65	1.25
Working distance	17mm	10mm	0.6mm	0.25mm
Optical magnification	40X~1000X			
Observation tube	30°hinged trinocular observation tube			
Stage	X-Y double layer			
	size: 200×145mm			
	travel: 77×50mm			
Diopter adjustment	±5 diopter			
Power supply	power adapter			
Dimension (L×W×H)	390×220×390mm			
Weight	9.6kg			

STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

20X objective (infinite plan achromatic)	**5111-B-OB20X**
Camera and software	**ISM-CM63, ISM-KM60, ISM-MP8B, ISM-ZS70-S**

BIOLOGICAL MICROSCOPE (ADVANCED TYPE)
CODE 5112-B330



VIDEO



24

- ECGO infinity two-way chromatic aberration calibration system
- Kohler illumination system provides uniform illumination field
- Double mechanical structure with wear-resistant ceramic stage
- Coarse and fine focusing knob with synchronous adjustment, assisted fine adjustment, minimum step accuracy of 1μm

SPECIFICATION

Eyepiece	large field 10X (view field: Ø23mm)			
Objective (infinite plan achromatic)	bright field objectives			
	4X	10X	40X	100X (oil)
Numerical aperture	0.10	0.25	0.65	1.25
Working distance	17mm	10mm	0.6mm	0.25mm
Optical magnification	40X~1000X			
Observation tube	30° hinged trinocular observation tube			
Stage	X-Y double layer			
	size: 200×150mm			
	travel: 78×26mm			
Diopter adjustment	±8 diopter			
Power supply	power adapter			
Dimension (L×W×H)	391×220×313mm			
Weight	11kg			

STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Camera and software*	**ISM-CM63, ISM-KM60, ISM-MP8B, ISM-ZS70-S**
0.5X camera adapter	**5112-B-ADAPTER**
20X objective (infinite plan achromatic)	**5112-B-OB20X**

* Camera and software must be used with camera adapter

POLARIZING MICROSCOPE
CODE ISM-POL1000

VIDEO



- Widely used in geology, mineralogy, fossil fuel exploration
- Single polarization, othorgonal polarization or conoscopic observation are available

SPECIFICATION

Magnification	40X~600X				
Eyepiece	10X (view field: Ø20mm)				
Infinite strain free plan achromatic objective	4X (transmitted/ reflected)	10X (transmitted/ reflected)	20X (transmitted)	40X (transmitted)	60X (transmitted)
Working distance	22.2mm	6.1mm	6.4mm	0.6mm	0.3mm
Numerical aperture	0.1	0.25	0.4	0.65	0.8
Stage	revolving round stage				
	diameter: Ø160mm				
	graduation: 1°, resolution: 6'				
Pupil distance	53~75mm				
Diopter adjustment	±5 diopter (one eyepiece)				
Illumination	12V/50W halogen lamp, brightness is adjustable (reflected illumination)				
	12V/20W halogen lamp, brightness is adjustable (transmitted illumination)				
Power supply	110/220V, 50/60Hz				
Dimension (L×W×H)	614×250×394mm				
Weight	13kg				

STANDARD DELIVERY

Main unit	1 pc
Micrometer	1 pc
Grid plate	1 pc
10X crossing eyepiece (view field: Ø20mm)	1 pc
10X dividing eyepiece (view field: Ø20mm, graduation 0.1mm)	1 pc
λ slip (first class red) and 1/4λ slip	1 pc
Quartz wedge	1 pc

OPTIONAL ACCESSORY

Objective for reflected system	**PL20X**	**ISM-POL1000-OBR20X**
	PL40X	**ISM-POL1000-OBR40X**
	PL60X	**ISM-POL1000-OBR60X**
	PL100X	**ISM-POL1000-OBR100X**
Objective for transmitted system	**PL100X**	**ISM-POL1000-OBT100X**
Specimen presser		**ISM-POL1000-SP**

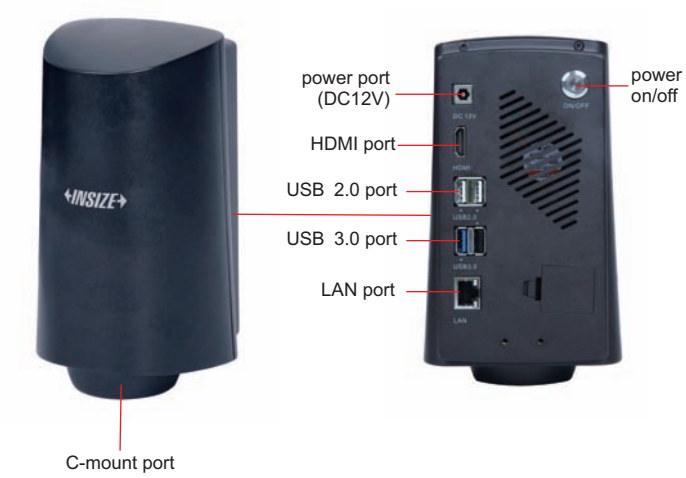
ROTATABLE OBSERVATION | STEREOSCOPIC 3D IMAGING AND MEASUREMET | AUTO FOCUS

3D LARGE DEPTH OF FIELD CAMERA
CODE ISM-DF80

VIDEO

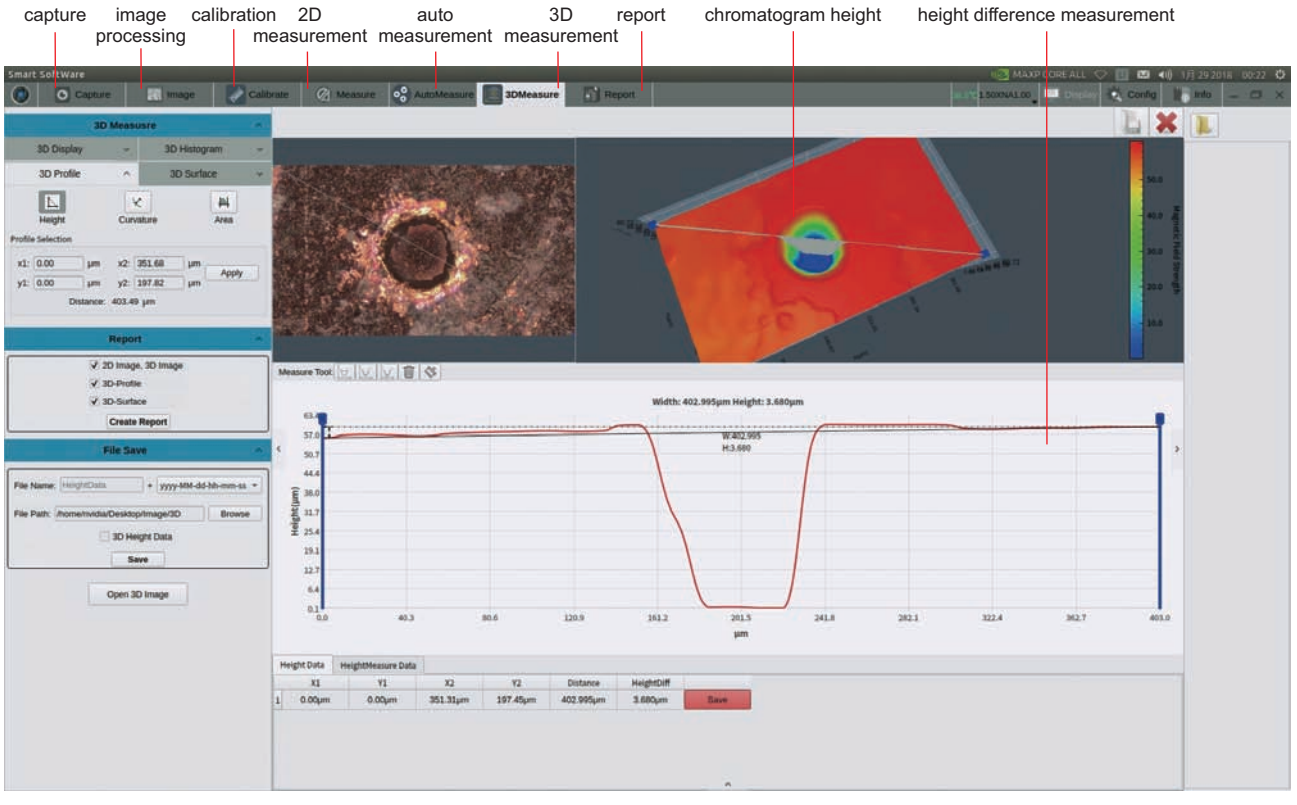
mounted on microscope





- Built-in measuring software for display, without computer
- 2D observation and measurement, auto focus
- Focus stacking for large depth of feld observation
- Constructing 3D imaging and 3D measurement
- Creating report automatic and data can be exported
- Real-time wide dynamic, effectively eliminating reflections on metal surfaces

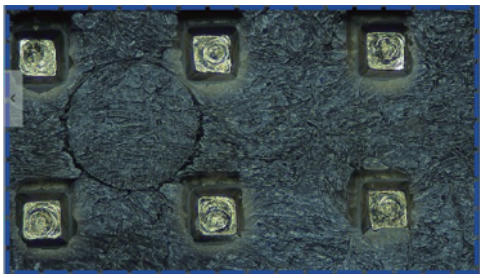
SOFTWARE



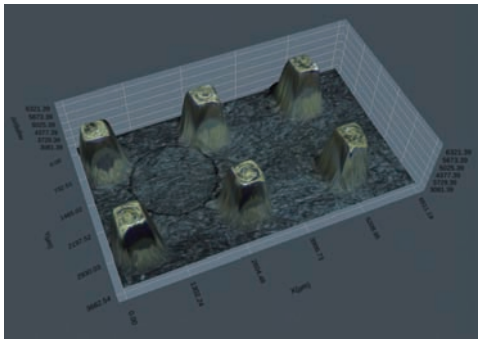
To be continued

Continued from previous page

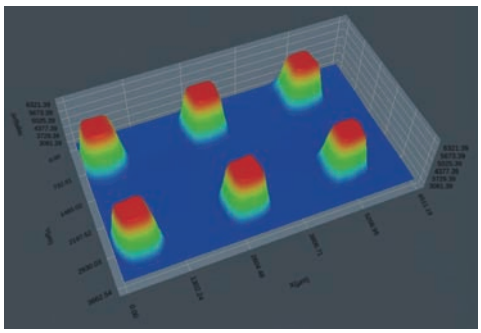
3D COMPOSITE IMAGE



depth of field synthesized image

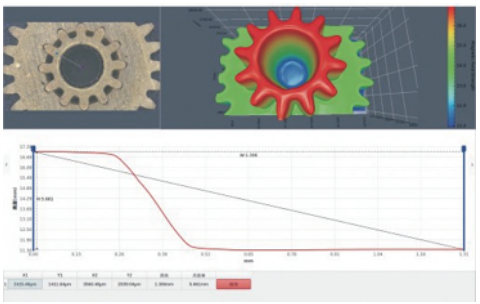


3D composite image

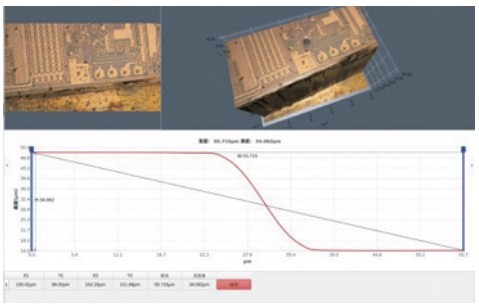


chromatogram height image

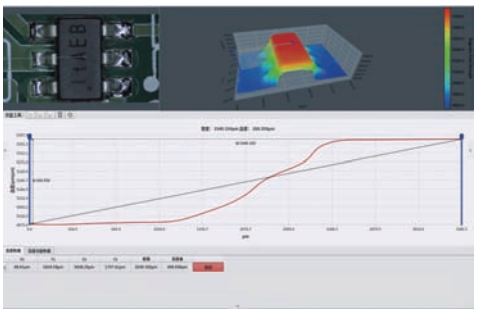
3D MEASUREMENT APPLICATION



measurement of component bore height



measurement of height difference of metal parts



measurement of board height differences

SPECIFICATION

Sensor	1/2" CMOS
Resolution	1920×1080
Pixel	2M
Single pixel	3.75×3.75μm
Frame rate	60fps (normal) / 30fps (WDR)
Output	HDMI/LAN
Lens connection	C-mount
Exposure	auto: 0.1~16.6ms, manual: 0.0001~1s
Power supply	110~220V, 50/60Hz
Dimension (L×W×H)	87×181×103mm
Weight	2500g

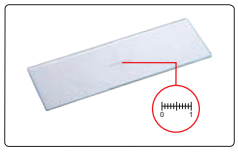
STANDARD DELIVERY

Camera	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
Keyboard	1 pc
HDMI 2.0 cable	1 pc
Glass calibration ruler	1 pc
Calibration block	1 set
Power adapter	1 pc

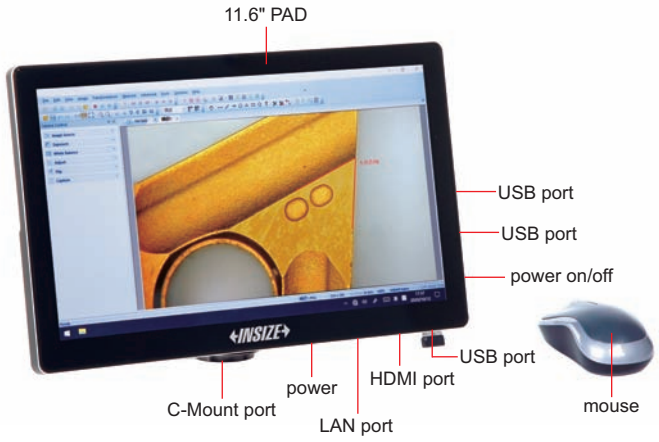
ATTENTION: CAMERA CONNECTOR AND ADAPTER ARE NEEDED ACCORDING TO MICROSCOPES

DIGITAL CAMERA FOR MICROSCOPES (WITH PAD) CODE ISM-ZS70-S

MEASUREMENT, TAKE PICTURES AND VIDEOS



glass calibration ruler
(included, graduation 0.1mm)



VIDEO

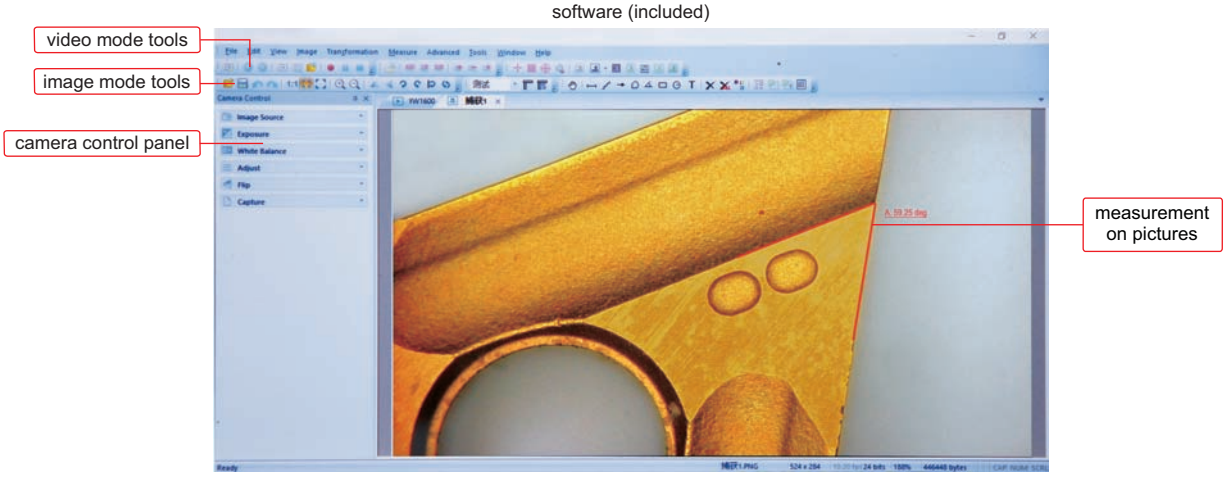
application

connected to microscope



- Windows 10 operation system
- Built-in software, can take pictures and videos, can measure
- Language: Chinese, English, French, Japanese, German, Polish, Arabic
- Automatic exposure, white balance, brightness, contrast ratio, saturation are adjustable
- Image process feature: zoom in/out, flip, mirror, stitching and so on
- Output to Excel or CSV file

software (included)



- **Measuring tools**

measure line | measure meander line | arrow mark | measure polygon | calibration
measure angle | measure rectangle | measure circle | text mark | show/hide scale

SPECIFICATION

Sensor	1/2.3" CMOS
Pixel	16M
Resolution	800×600, 1600×1200, 1920×1080, 2048×1536, 2304×1728, 2592×1944, 4608×3456
Frame rate	30fps (1920×1080)
Output	HDMI, USB 3.0
Power supply	power adapter
Dimension (L×W×H)	280.3×177.4×12.5mm
Weight	0.9kg

STANDARD DELIVERY

Main unit	1 pc
Mouse	1 pc
Glass calibration ruler (graduation 0.1mm)	1 pc
AC/DC adapter	1 pc

DIGITAL CAMERA FOR MICROSCOPES
CODE ISM-CM63

VIDEO

ATTENTION: ADAPTERS ARE NEEDED ACCORDING TO MICROSCOPES

- To be used with computers
- Sony Exmor back-illuminated CMOS sensor
- USB3.0 transmission
- Automatic exposure, gain adjustment, white balance, chrominance adjustment, saturation adjustment, gamma correction, luminance adjustment, contrast adjustment

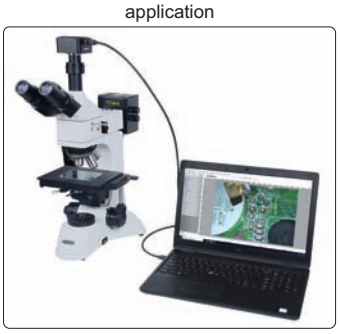


C-mount port

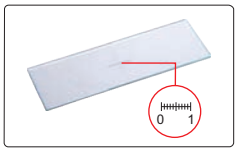
adapter 0.75X (**optional**)



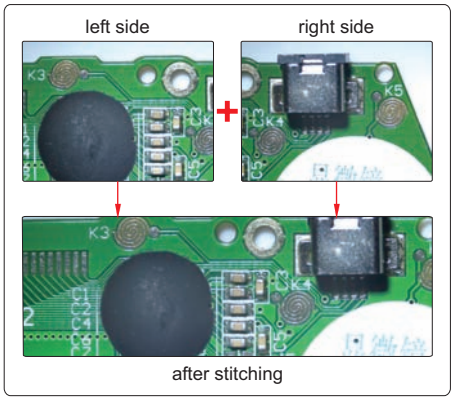
application



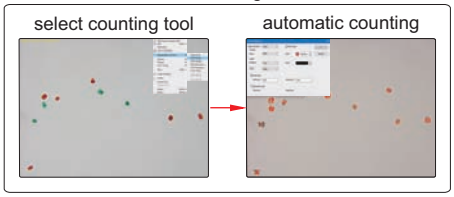
glass calibration ruler (included, graduation 0.1mm)



automatic image stitching (expand field of view)



counting



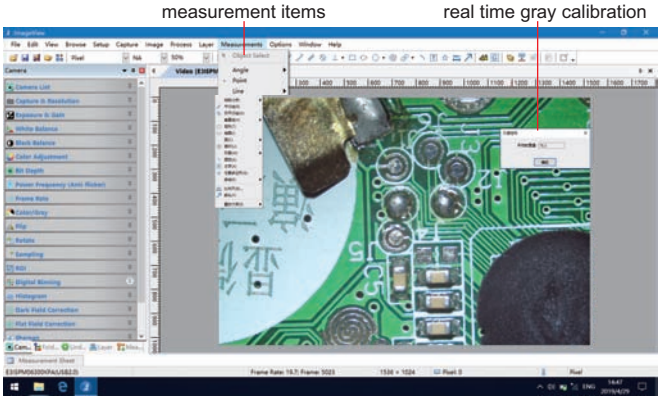
software (included)

selectable resolution

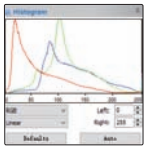


measurement items

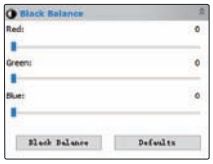
real time gray calibration



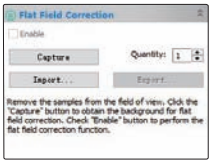
histogram (quantify the distribution of color and brightness)



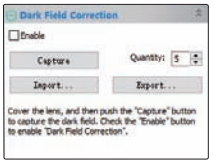
black balance (reduce color difference)



flat field correction (reduce brightness difference)



dark field correction (reduce thermal noise)



The software can control image completely, including measurement, image stitching, extend focus depth, image gray processing, RGB histogram observation, image color sampling, 3D plot (3D representation of image intensity), image exposure, white balance, black balance, image bit depth, flat field correction and dark field correction, etc.

focus stacking



focus on the top

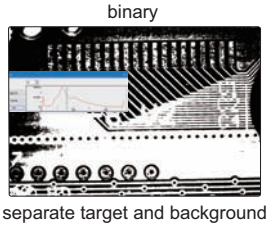
focus on the bottom

clear image of both top and bottom

Measuring tools:

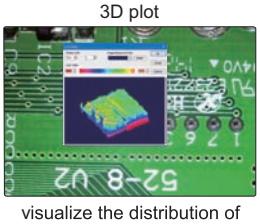
- measure length of line or distance between two points
- measure distance between two parallel lines
- measure angle
- measure radius, girth and area of circle
- measure axis lengths, girth and area of ellipse
- calibration
- measure rectangle
- measure width and diameter of ring
- measure diameter, length, perimeter angle of arc
- measure area of polygon
- measure center distance between two circles
- measure length of open curve

binary



separate target and background

3D plot



visualize the distribution of image brightness and color

To be continued

Continued from previous page

SPECIFICATION

Sensor (back-up)	1/1.8" CMOS
Resolution	3072×2048
Pixel	6.3M
Single pixel size	2.4×2.4μm
Spectral range	380-650nm (with infrared cut filter)
Frame rate	30fps
Sampling average	1×1
Exposure time	0.1ms~15s
Power supply	USB port
Weight	400g

COMPUTER REQUIREMENT

Operation system	Windows 7/8/10
CPU	Intel Core 2 2.8Hz or above
Memery	2GB or above
USB port	USB3.0 (recommand) or USB2.0
Display	17" or above

STANDARD DELIVERY

Camera (USB cable included)	1 pc
Software	1 pc
Glass calibration ruler (graduation 0.1mm)	1 pc

OPTIONAL ACCESSORY

Adapter 0.75X	ISM-AD-0D75

FOCUS STACKING | AUTOMATIC IMAGE STITCHING | ATTENTION: ADAPTERS ARE NEEDED ACCORDING TO MICROSCOPES

DIGITAL CAMERA FOR MICROSCOPES
CODE ISM-KM60

adapter 0.75X (**optional**)



VIDEO

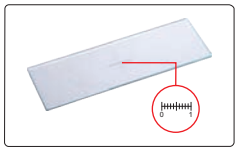


C-mount port

application

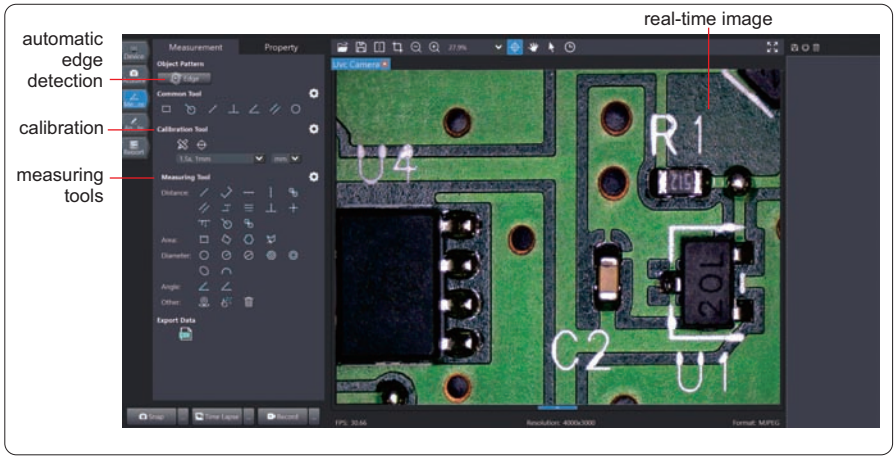


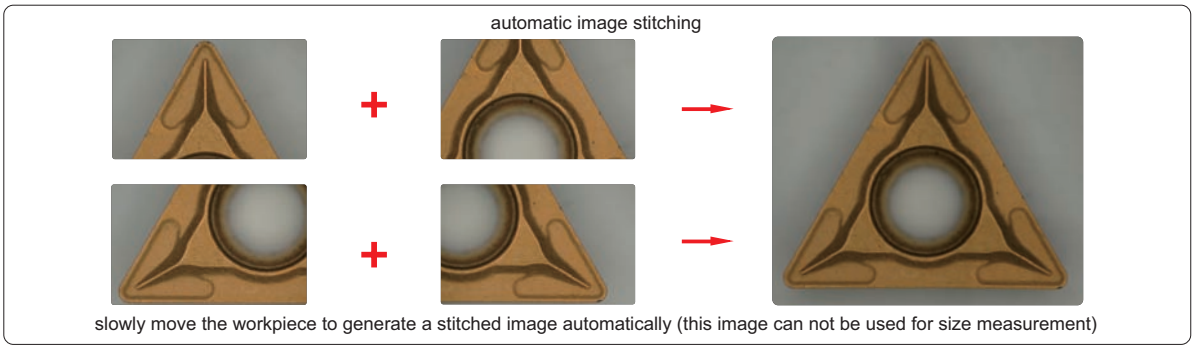
glass calibration ruler (included, graduation 0.1mm)



- To be used with computers
- Sony Exmor back-illuminated CMOS sensor
- USB3.0 transmission
- Measuring software for computers is included
- For bright field, dark field or fluorescent field
- Automatic exposure, gain adjustment, white balance, chrominance adjustment, saturation adjustment, gamma correction, luminance adjustment, contrast adjustment

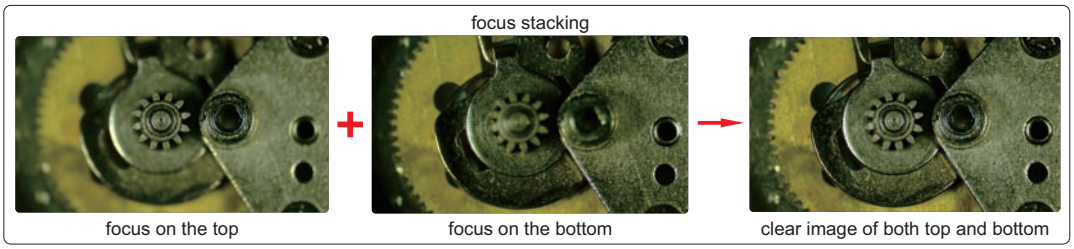
PROFESSIONAL MEASURING SOFTWARE (INCLUDED, FOR COMPUTERS)





To be continued

Continued from previous page



SPECIFICATION

Sensor (back-up)	1/1.8" CMOS
Resolution	3072×2048
Pixel	6M
Single pixel size	2.4×2.4μm
Frame rate	30fps
Lens connection	C-mount
Output	USB 3.0
Environmental requirement	temperature: -20°C~70°C
Weight	275g

OPTIONAL ACCESSORY

Adapter 0.75X	ISM-AD-0D75

COMPUTER REQUIREMENT

Operation system	Windows 10 or above
CPU	Intel Core i5 7th gen or above
Memery	8GB or above
USB port	USB3.0

STANDARD DELIVERY

Camera (USB cable included)	1 pc
Software	1 pc
Glass calibration ruler (graduation 0.1mm)	1 pc

SMART CAMERA
CODE ISM-MV10

VIDEO



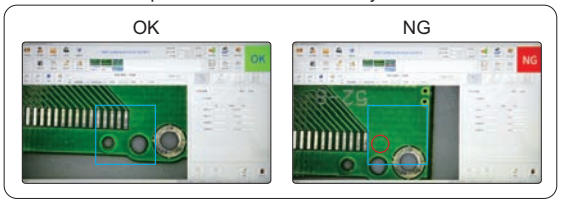
- Built-in software, operated by mouse.
- Automatically calculate, store the test results and sent to Excel
- Camera with PLC control input and output interface, can be integrated with automation equipment
- Functions: presence or absence of objects, position tilt correction, object counting, color detection, stain detection, dimension measurement, position guide, etc.

SPECIFICATION

Chip structure	FPGA+ARM
Operation system	Linux 3.10
Kernel structure	dual-core Cortex-A9
Frequency	1GHZ
I/O port	3 sets of input and output (can be connected to photoelectric switch, wire switch, PLC, etc.)
Operation temperature	-10~70°C
Sensor	1/2" CMOS
Single pixel size	3.75×3.75μm
Resolution	1920×1080
Frame rate	60fps
Video output	HDMI port
Lens connection	standard C port

SOFTWARE

presence or absence of objects



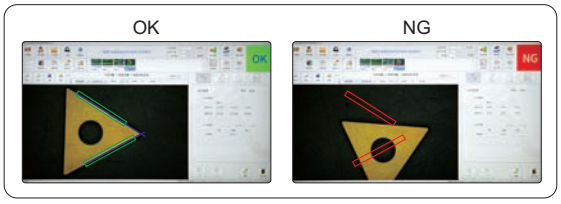
select the area and specify the target, the camera will automatically detect the presence or absence of the target.

automatic counting



select the area and specify the target, the camera will automatically calculate the number of targets.

dimension measurement



measuring angle, distance, radius, center distance, etc.

STANDARD DELIVERY

Camera (with HDMI cable)	1 pc
Software	1 pc

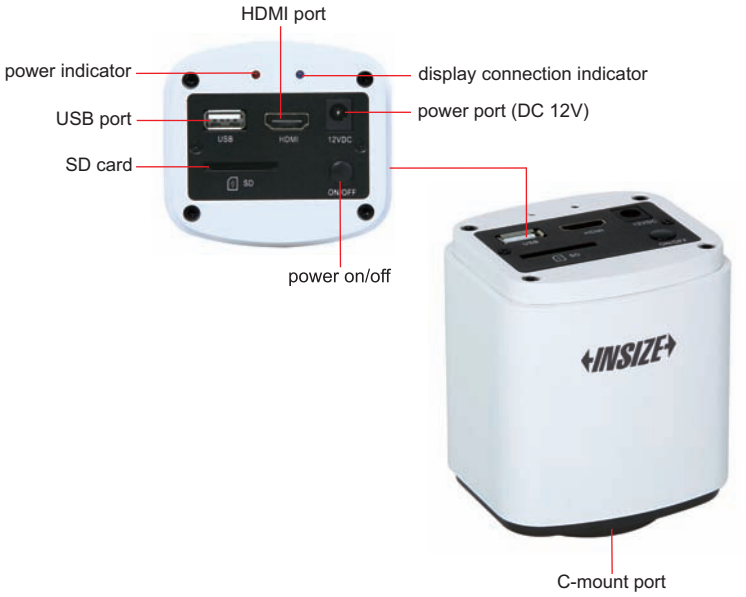
ATTENTION: ADAPTERS ARE NEEDED ACCORDING TO MICROSCOPES

FOCUS STACKING

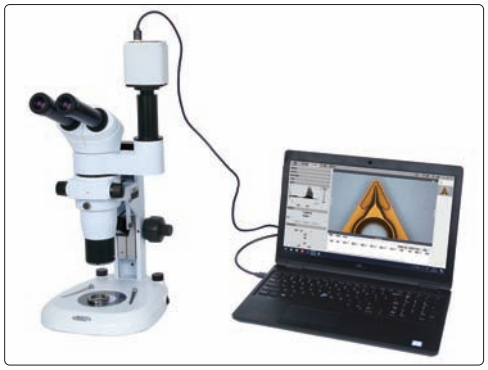
AUTOMATIC IMAGE STITCHING

DIGITAL CAMERA FOR MICROSCOPES
CODE ISM-CM20

VIDEO

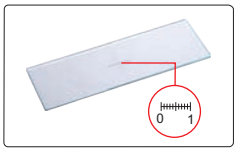


application



- 1080P high-definition image
- Can be connected with displays or computers
- Built-in simple measuring software for displays, without computer
- Professional measuring software for computers is included
- For bright field, dark field or fluorescent field
- Automatic exposure, white balance, gain adjustment, gamma correction, brightness contrast adjustment, saturation adjustment, chroma sharpness adjustment
- Focus stacking, automatic image stitching

glass calibration ruler
(included, graduation 0.1mm)

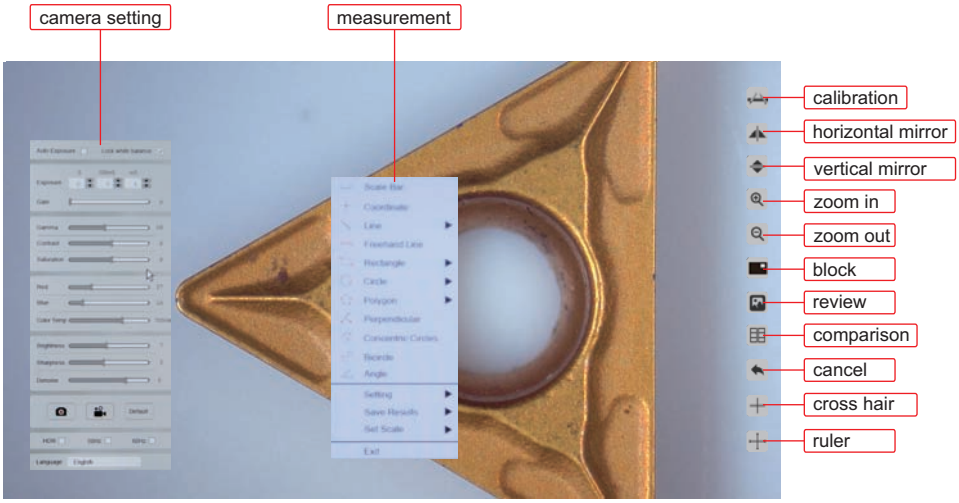


adapter 0.5X (**optional**)



SIMPLE MEASURING SOFTWARE (BUILT-IN, FOR DISPLAYS)

- **Measuring tools:**
  - measure length of line or distance between two points
  - measure distance between point and line
  - measure rectangle
  - measure concentric circles
  - measure circle
  - measure curve
  - measure polygon
  - measure center distance of two circles
  - measure angle of two lines



auto exposure, white balance, gain adjustment, gamma, chroma contrast adjustment, brightness sharpness adjustment, size measurement

To be continued

Continued from previous page

PROFESSIONAL MEASURING SOFTWARE (INCLUDED, FOR COMPUTERS)

selectable resolution

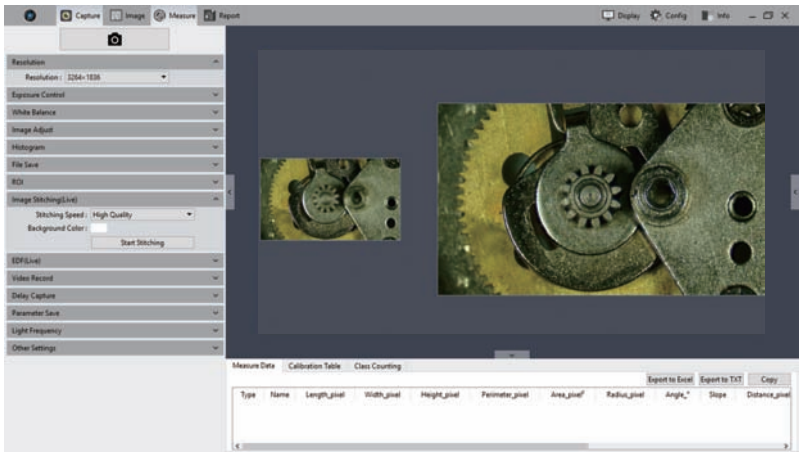


white balance
(balance color based on actual light source)



histogram
(quantify the distribution of color and brightness)





flat field correction



metrics flow
(create templates, set tolerances and build metrics flow)



manual counting
(class counting)



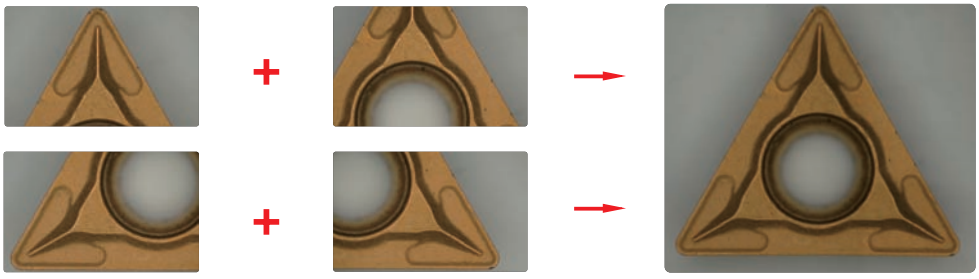
image coloring, fluorescence synthesis, binary, image smoothing, color filter/color extraction/ color inversion, delay capture, focus stacking, automatic image stitching, metrics flow, manual counting, dynamic and static measurement, layered measurement, report generation and printing, delay record, flat field correction, image adjustment, histogram.

focus stacking



focus on the top | focus on the bottom | clear image of both top and bottom

automatic image stitching



slowly move the workpiece to generate a stitched image automatically (this image can not be used for size measurement)

SPECIFICATION

Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	30fps
Power supply	power adapter
Output	HDMI/USB
Lens connection	C-mount

COMPUTER (optional) REQUIREMENT

Operation system	Windows 7/8/10 (64 bit)
CPU	Intel Core i5 or above
Memory	8GB or above
USB port	USB 3.0

DISPLAY (optional) REQUIREMENT

Size	13" or above
Resolution	1080P or above
HDMI port	type A

STANDARD DELIVERY

Main unit	1 pc
16G memory card and holder	1 pc
Glass calibration ruler (graduation 0.1mm)	1 pc
Mouse	1 pc
HDMI cable	1 pc
USB cable	1 pc
Power supply	1 pc

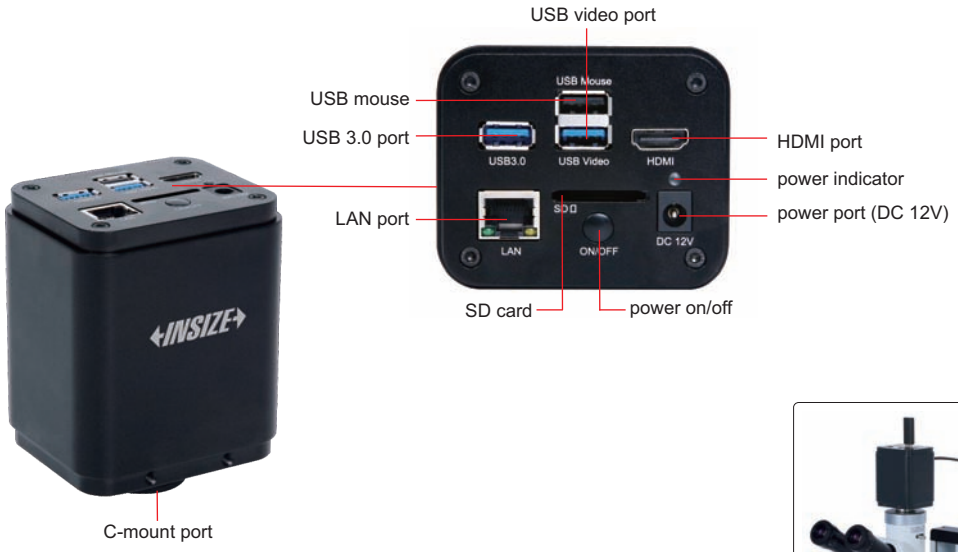
OPTIONAL ACCESSORY

Adapter 0.5X	ISM-MAS-ADAPTER

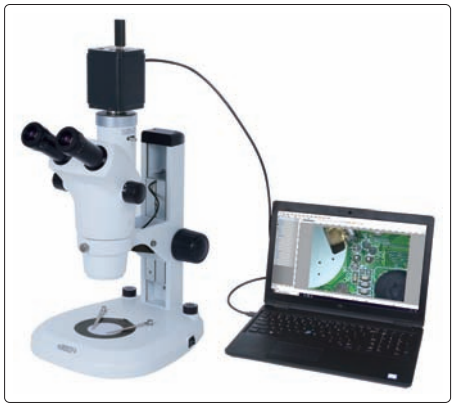
WIRELESS AD-HOC NETWORK | AUTOMATIC IMAGE STITCHING | FOCUS STACKING

WIFI 4K CAMERA FOR MICROSCOPES
CODE ISM-MP8B

VIDEO

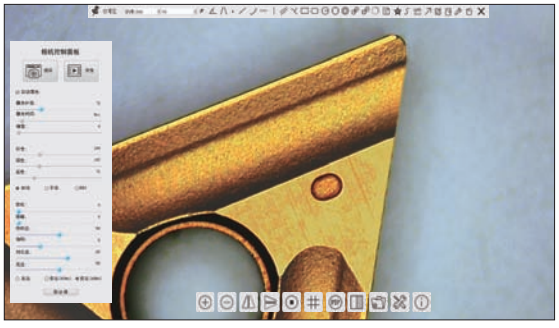


application



- 4K high-definition image
- Can be connected with displays or computers
- Built-in simple measuring software for display, without computer
- Professional measuring software for computers is included
- 4K HDMI/LAN/USB multiple video outputs
- 4K/1080P automatically switched by display resolution
- Focus stacking, automatic image stitching
- Wireless network or wired network

simple measuring software (built-in, for displays)



professional measuring software (included, for computers)



SPECIFICATION

Sensor	1/1.2" CMOS
Pixel	8M
Resolution	3840×2160, 1920×1080
Single pixel	2.9×2.9μm
Frame rate	60fps@3840×2160 (HDMI) 30fps@3840×2160 (LAN) 30fps@3840×2160 (USB)
Binning	1×1
Exposure	0.04~1000ms
Output	HDMI/USB/LAN
Lens connection	C-mount
Power supply	DC 12V 1A
Dimension (L×W×H)	80×65×105mm
Weight	700g

CONNECTION

HDMI	comply with HDMI 2.0 standard 4K/1080P automatically switched by display resolution
LAN	H264 encoded video bandwidth adjustment in real time DHCP configuration or manual configuration unicast/multicast configuration
WLAN	connecting 5G WLAN adapter (USB 3.0 interface) in AP/STA mode
COMPUTER	connecting USB video port of PC for video transmission H264/MJPEG format video

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
32G SD card	1 pc
USB mouse	1 pc
HDMI2.0 cable	1 pc
USB3.0 cable	1 pc
USB wlan adapter	1 pc
Wlan cable	1 pc
Glass calibration ruler	1 pc
Calibration plate	1 pc
Software	1 pc
Power adapter	1 pc

OPTIONAL ACCESSORY

16G USB flash disk		IS-USBDISK-16G
Adjustable lens adapter	Ø23.2mm eyepiece tube	ISM-MP-2A075
	Ø31.75mm eyepiece tube	ISM-MP-3A075
Fixed lens adapter	Ø23.2mm eyepiece tube	ISM-MP-2F075
	Ø31.75mm eyepiece tube	ISM-MP-3F075
Adapter ring for Ø30.0mm eyepiece tube		ISM-MP-300R
Adapter ring for Ø30.5mm eyepiece tube		ISM-MP-305R

COMPUTER

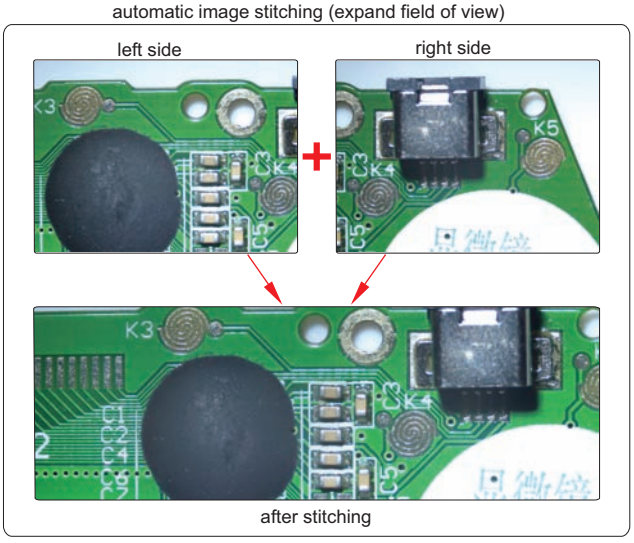
Operation system	Windows 7/8/10/11
CPU	Intel Core 2 2.8Hz
Memory	2GB
USB port	USB 3.0 or USB 2.0 port
Display	17"

PROFESSIONAL MEASURING SOFTWARE (INCLUDED, FOR COMPUTERS)

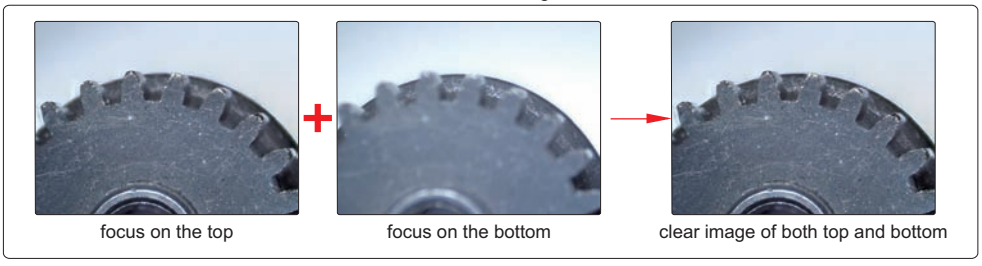
Measuring tools:

- measure length of line or distance between two points
- measure distance between two parallel lines
- measure angle
- measure radius, girth and area of circle
- measure axis lengths, girth and area of ellipse
- calibration
- measure rectangle
- measure width and diameter of ring
- measure diameter, length, perimeter angle of arc
- measure area of polygon
- measure center distance between two circles
- measure length of open curve

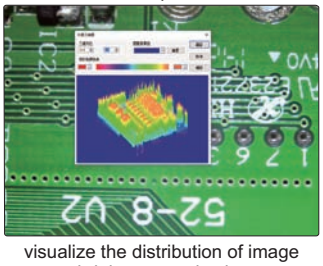
automatic image stitching (expand field of view)



focus stacking

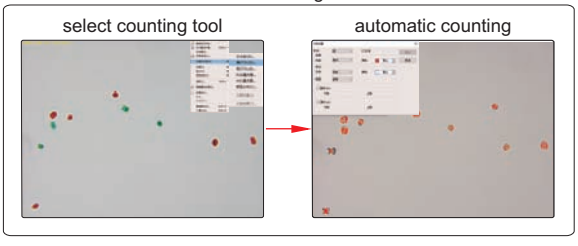


3D plot

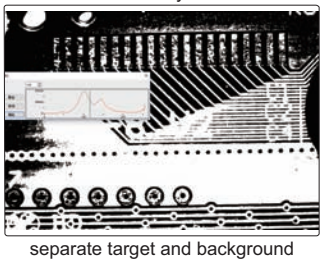


visualize the distribution of image brightness and color

counting



binary



separate target and background

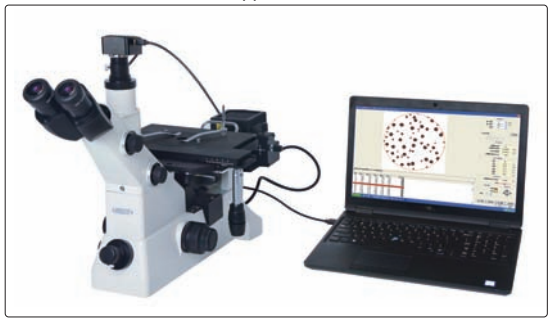
METALLURGICAL ANALYSIS SOFTWARE AND CAMERA
CODE ISM-MAS100

- More than 100 standards (ISO, ASTM, JIS, etc.)
- For metallurgical microscopes
- The camera can be inserted into the eyepiece tube or camera connector of microscopes
- Metallurgical analysis software is included, which can make comparative analysis, measurement and evaluation of various materials



VIDEO

application



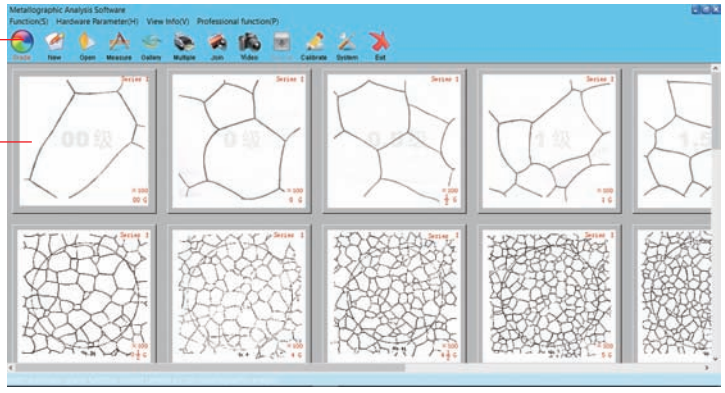


software flash disk
(included)



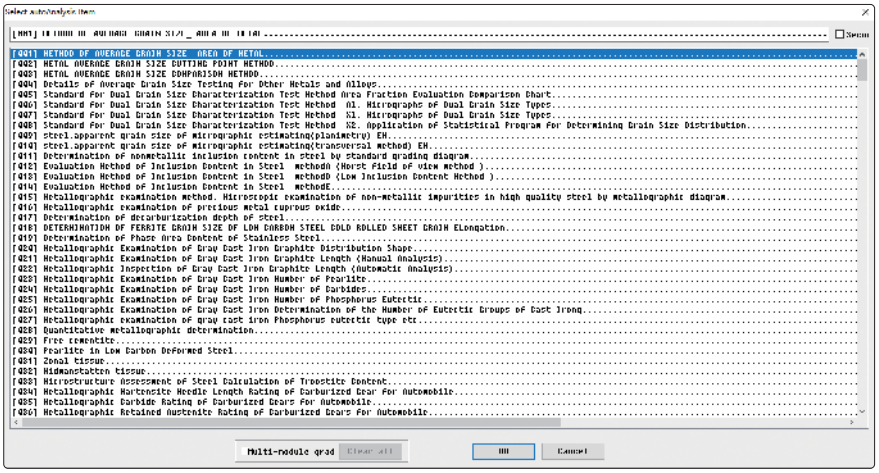
glass calibration ruler
(included)

metallurgical analysis software (included)



this software can be used with variety of metallographic microscopes for acquisition, processing, analysis, report generation of metallurgical images

metallurgical module list

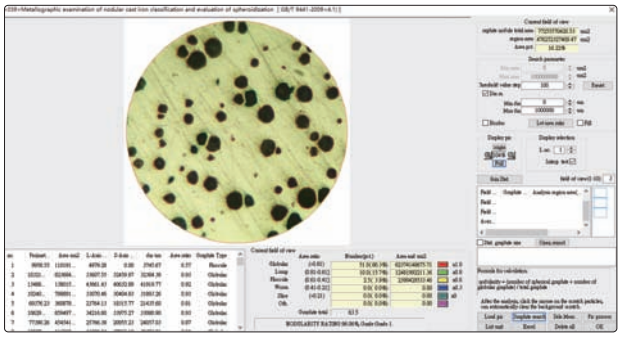


To be continued

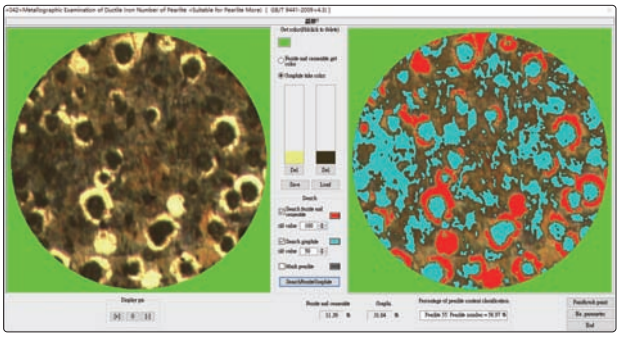
Continued from previous page

examples of metallurgical analysis

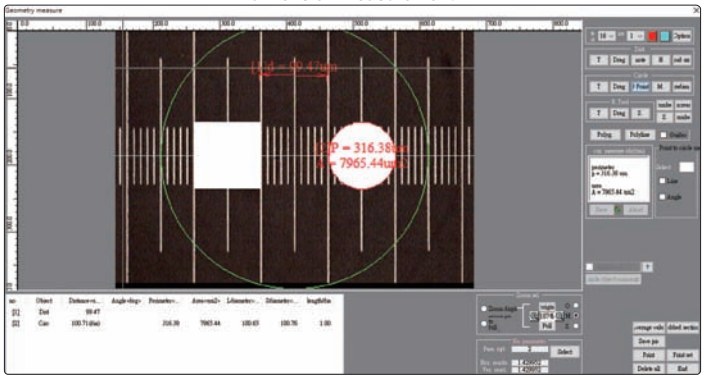
metallurgical analysis of ductile cast iron-spheroidizing grading



metallurgical analysis of ductile cast iron-pearlite quantity



dimension measurement



report



focus stacking

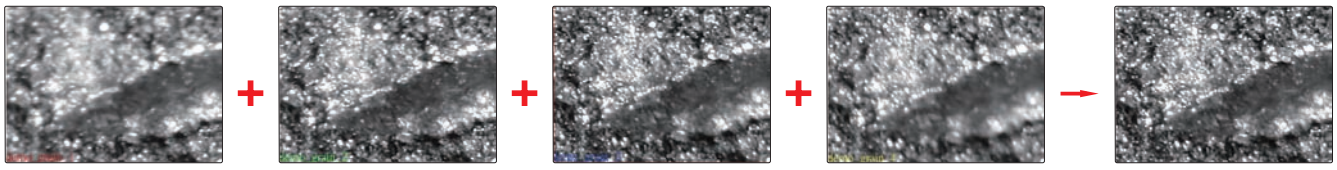
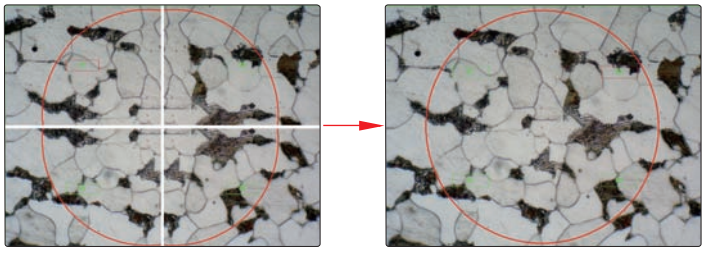
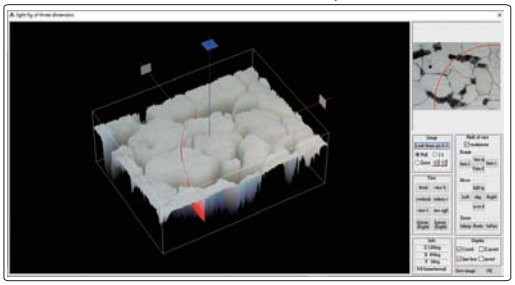


image stitch



three dimension map



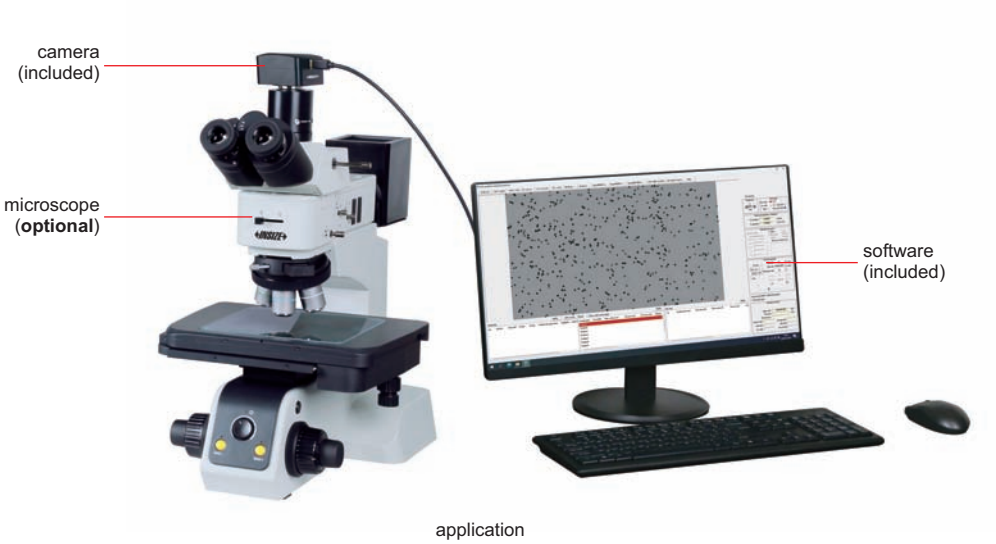
SPECIFICATION

Sensor	1/1.8" CMOS
Pixel	6.3M
Resolution	3072×2048
Frame rate	30fps
Exposure time	0.1ms~15s
Power supply	USB port
Weight	400g

STANDARD DELIVERY

Camera (USB cable included)	1 pc
Software	1 pc
Glass calibration ruler	1 pc

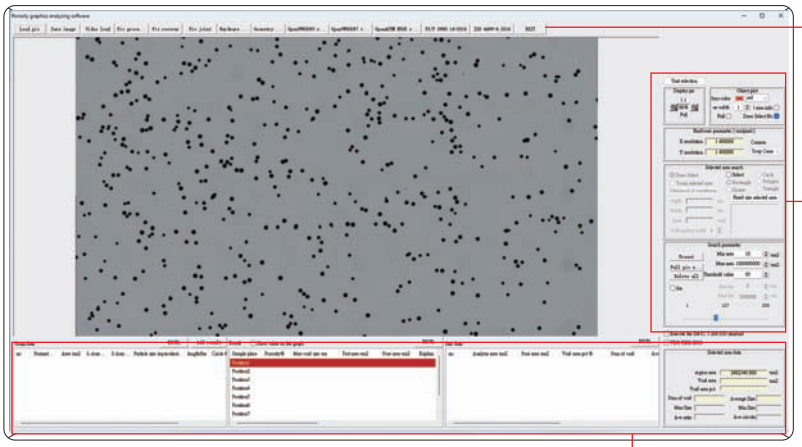
POROSITY MEASUREMENT SOFTWARE AND CAMERA
CODE ISM-MAS200

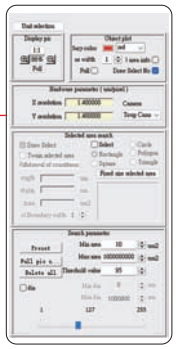


application

- Using advanced image processing algorithms, can accurately identify the boundaries between pores and solid parts
- One click measurement, simple and user friendly operation interface for quick operation mastery
- Clearly present porosity data and its distribution, conduct in depth analysis of measurement data
- Wide range of applications, compatible with multiple microscopes and cameras

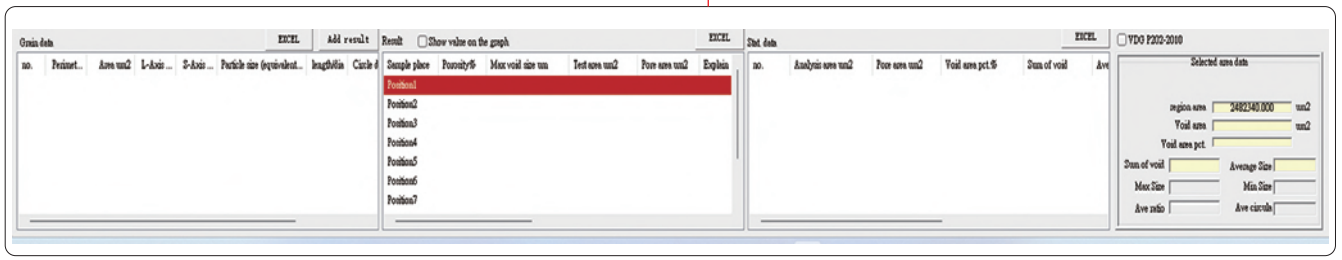
porosity measurement software (included)





Measuring tools:

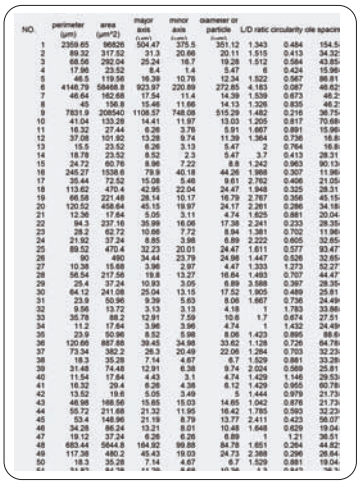
- Select image resolution parameters
- Freely choose the measurement area
- Preset search parameters to search for various types of pores accurately



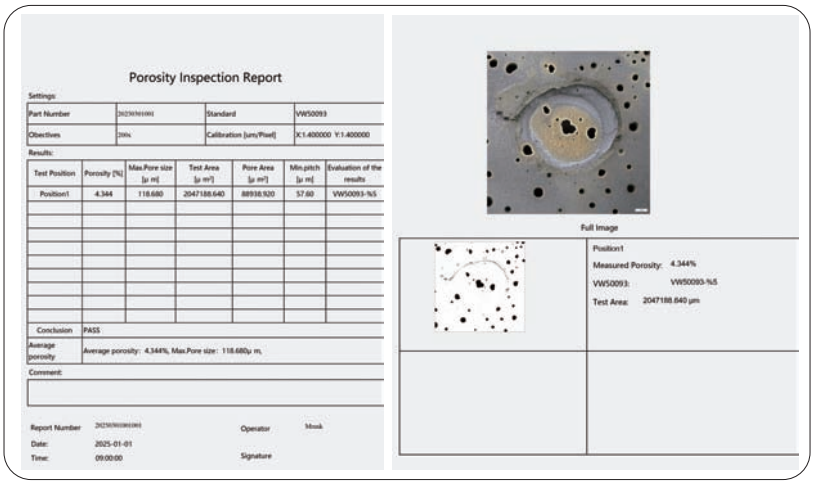
measurement results: statistics on data such as the perimeter and area of each pore are carried out, and the local or overall porosity is automatically calculated

To be continued

Continued from previous page



pore statistics table



porosity inspection report

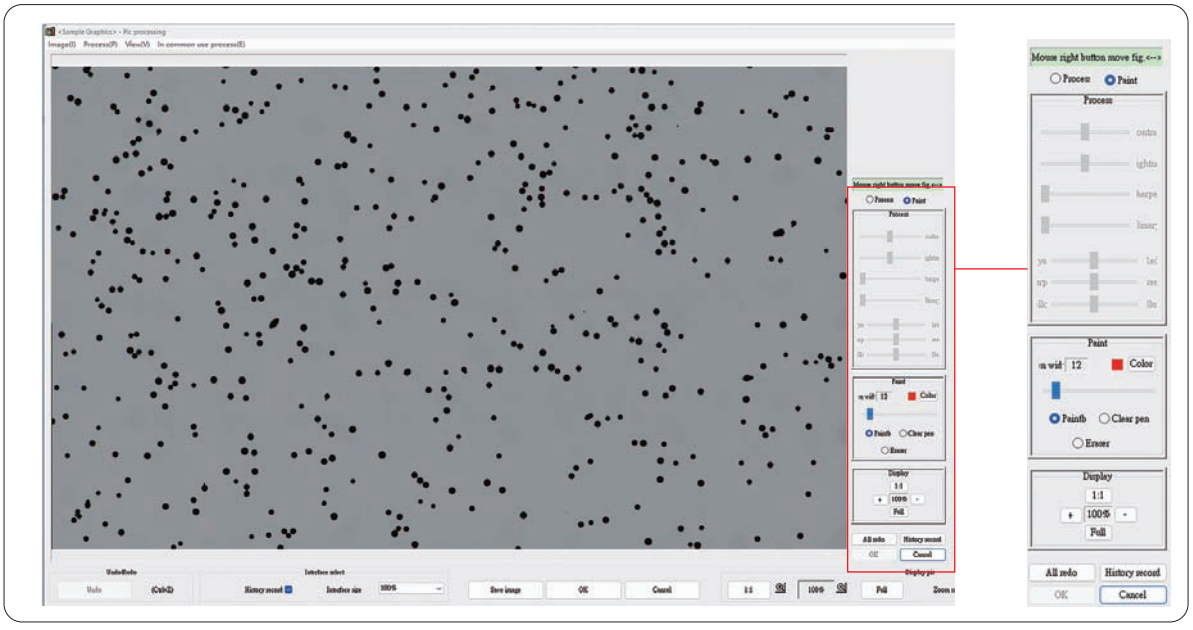


image processing: adjustment of image contrast, brightness, sharpening, binarization, RGB values, etc.
highlighting the contrast between pores and the base material to improve recognition accuracy

SPECIFICATION

Sensor	1/1.8" CMOS
Pixel	6.3M
Resolution	3072×2048
Frame rate	30fps
Exposure time	0.1ms~15s
Power supply	USB port
Weight	400g



camera (included)



microscope (**optional**)

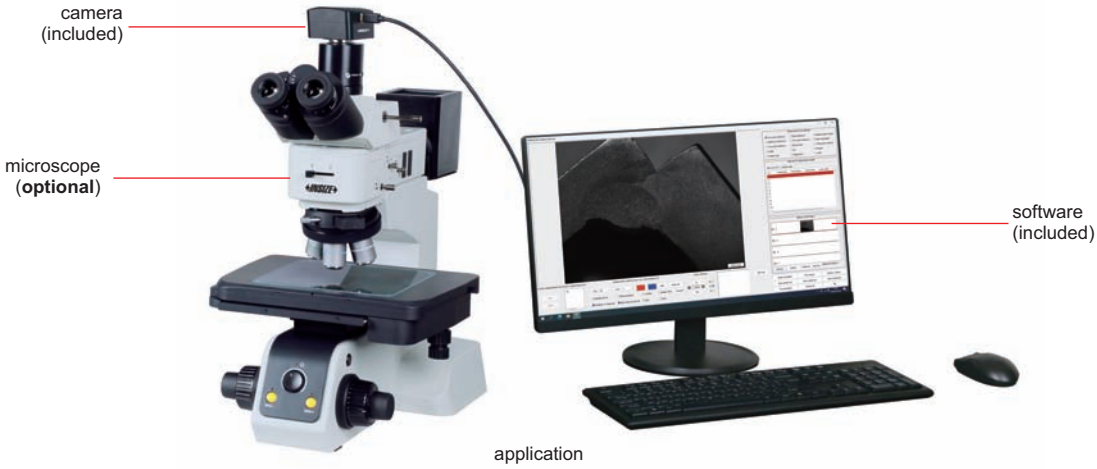
STANDARD DELIVERY

Camera	1pc
Software	1pc
Glass calibration ruler	1pc

OPTIONAL

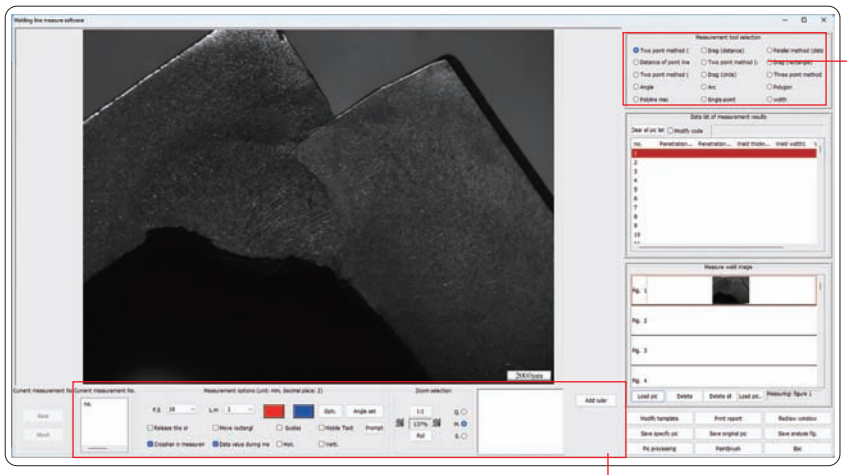
Microscope	**5110-M900, 5108, 5102-M600, 5103-M1000**

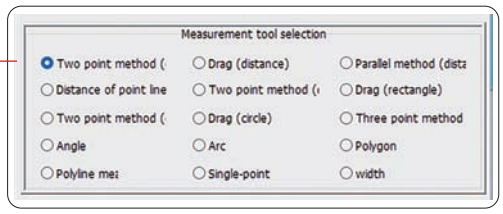
WELD SEAM MEASUREMENT SOFTWARE AND CAMERA
CODE ISM-MAS300



- Microscopic photographing and measurement of the weld penetration depth generated by various welding processes
- Measurement and analysis of penetration depth, penetration width, penetration height, overlap amount, cut, etc.
- Two report templates are provided and customized report templates can also be provided
- Wide range of applications, compatible with multiple microscopes and cameras

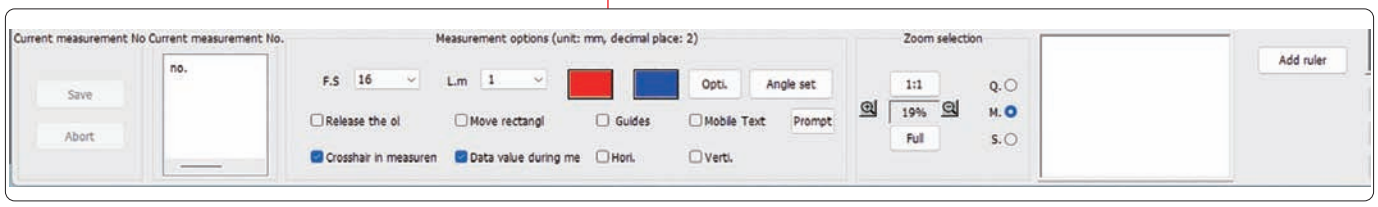
weld seam measurement software (included)





Measuring tools:

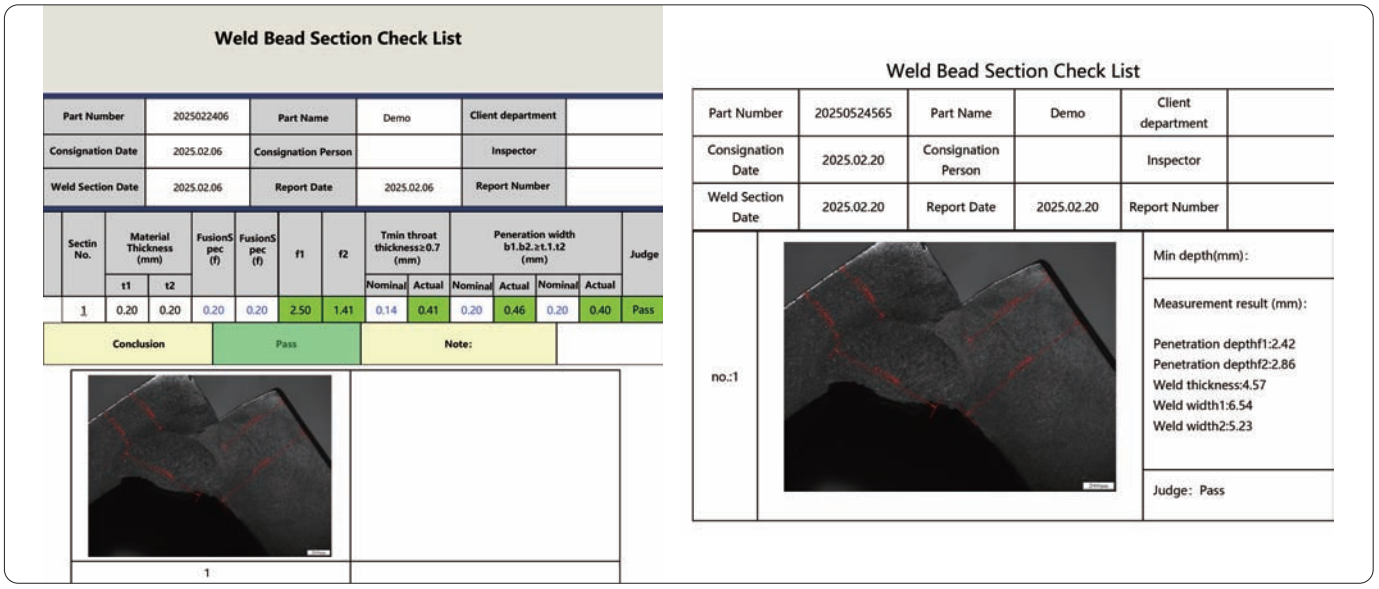
- Provides a variety of measurement tools and methods, including points, straight lines, rectangles, circles, polygons, angles, etc.
- Automatically judge the qualification after the measurement is finished
- After the measurement is completed, a report containing the measurement images can be generated



measurement options: auxiliary lines, horizontal lines and vertical lines can be added. The measured data can be modified or deleted. Text, scales can be noted on the measurement graph, and a fixed multiple can be set, etc.

To be continued

Continued from previous page



Weld Bead Section Check List

Part Number	2025022406	Part Name	Demo	Client department	
Consignation Date	2025.02.06	Consignation Person		Inspector	
Weld Section Date	2025.02.06	Report Date	2025.02.06	Report Number	

Sectin No.	Material Thickness (mm)		FusionSpec (f)	FusionSpec (f)	f1	f2	Tmin throat thickness≥0.7 (mm)		Peneration width b1.b2.≥t.1.t2 (mm)				Judge
	t1	t2					Nominal	Actual	Nominal	Actual	Nominal	Actual	
1	0.20	0.20	0.20	0.20	2.50	1.41	0.14	0.41	0.20	0.46	0.20	0.40	Pass

Conclusion	Pass	Note:	

1

Weld Bead Section Check List

Part Number	20250524565	Part Name	Demo	Client department	
Consignation Date	2025.02.20	Consignation Person		Inspector	
Weld Section Date	2025.02.20	Report Date	2025.02.20	Report Number	

no.:1

Min depth(mm):

Measurement result (mm):

Penetration depthf1:2.42
Penetration depthf2:2.86
Weld thickness:4.57
Weld width1:6.54
Weld width2:5.23

Judge: Pass

report: provide two types of weld inspection report templates, and customized report templates can also be provided



image processing: provide a large number of image processing methods, which can be used to process brightness, contrast, color, grayscale levels and binarization, and can complete image processing operations like removing noise points, connecting broken lines, sharpening, softening, and edge enhancement

SPECIFICATION

Sensor	1/1.8" CMOS
Pixel	6.3M
Resolution	3072×2048
Frame rate	30fps
Exposure time	0.1ms~15s
Power supply	USB port
Weight	400g



camera (included)



microscope (**optional**)

STANDARD DELIVERY

Camera	1pc
Software	1pc
Glass calibration ruler	1pc

OPTIONAL

Microscope	**5110-M900, 5108, 5102-M600, 5103-M1000**

CAMERA ADAPTERS

- Ø23.2/30mm eyepiece adapter is included
- Suitable for digital cameras **ISM-CM20, ISM-CM63, ISM-ZS70-S, ISM-KM60**



0.5X camera adapter (fixed focus distance) ISM-AD-0D5



0.75X camera adapter (fixed focus distance) ISM-AD-0D75

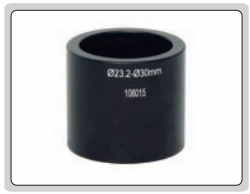
application

inserted into eyepiece tube



inserted into camera connecter





Ø23.2/30mm eyepiece adapter (included)



0.5X camera adapter (adjustable focus distance) ISM-AD-A0D5



0.75X camera adapter (adjustable focus distance) ISM-AD-A0D75

SPECIFICATION

Code	ISM-AD-0D5	ISM-AD-A0D5 *	ISM-AD-0D75	ISM-AD-A0D75
Type	fixed focus distance	adjustable focus distance	fixed focus distance	adjustable focus distance
Magnification	0.5X	0.41X~0.58X	0.75X	0.64X~0.86X

* There may be shadows on the edge of image when **ISM-AD-A0D5** is used

PORTABLE MEASURING MICROSCOPES



ISM-PM100

SPECIFICATION

Code	ISM-PM20	ISM-PM40	ISM-PM50	ISM-PM100
Total magnification	20X	40X	50X	100X
Eyepiece	10X with graduation	10X with graduation	10X with graduation	10X with graduation
Objective (achromatic)	2X (numerical aperture: 0.05)	4X (numerical aperture: 0.1)	5X (numerical aperture: 0.12)	10X (numerical aperture: 0.25)
Working distance	17.2mm	18mm	17.6mm	7mm
Graduation	0.05mm	0.025mm	0.02mm	0.01mm
Viewing field	Ø9mm	Ø4.5mm	Ø3.6mm	Ø1.8mm
Focus range	30mm			
Illumination	LED light			
Diameter of base	Ø63mm			
Height	210mm			
Weight	650g			

STANDARD DELIVERY

Main unit	1 pc
Pen light	1 pc
Battery (AAA)	2 pcs

TABLE MAGNIFIER WITH ILLUMINATION CODE 7517-3D

- Four steps brightness adjustment
- LED illumination, working life 20000h
- Resin lens

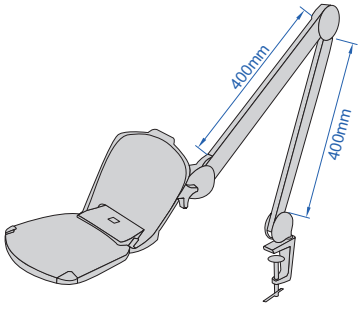




SPECIFICATION

Magnification	1.75X
Diopter	3D
Lens diameter	Ø125mm
Illumination	power: 3W, illumination: 260lm
Power supply	power adapter 12V, 1A

TABLE MAGNIFIERS WITH ILLUMINATION



- LED illumination, working life 20000h
- Resin lens



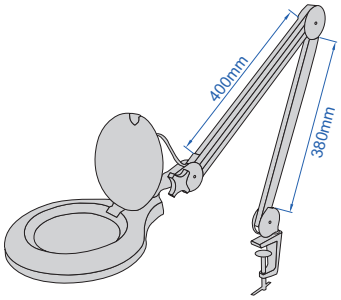


SPECIFICATION

Code	7520-320D	7521-3D
Magnification	two magnifications 1.75X/6X	1.75X
Diopter	3D/20D	3D
Lens dimension	160×127mm	Ø126mm
Illumination	power: 6W, illumination: 550lm	
Power supply	power adapter 12V, 1A	

TABLE MAGNIFIER WITH ILLUMINATION CODE 7516-5D

- LED illumination, working life 20000h



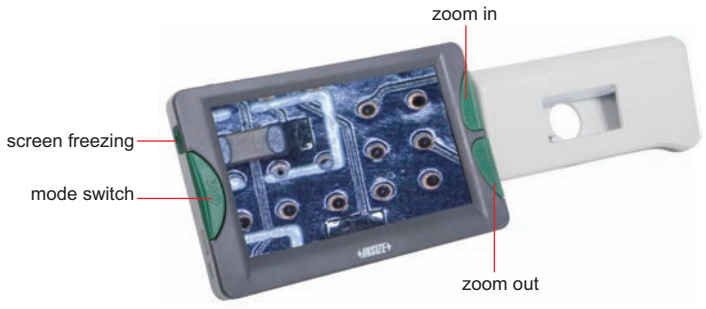
SPECIFICATION

Magnification	2.25X
Diopter	5D
Lens diameter	Ø122mm
Illumination	power: 7W, illumination: 420lm
Power supply	100~240V, 50~60Hz



DIGITAL MAGNIFIER
CODE 7525-D4

VIDEO



- 720P60 camera
- Auto focus
- With screen freezing function
- 26 color modes can be switched to meet the needs of different people
- Port to TV
- Automatic shutdown after 3 minutes

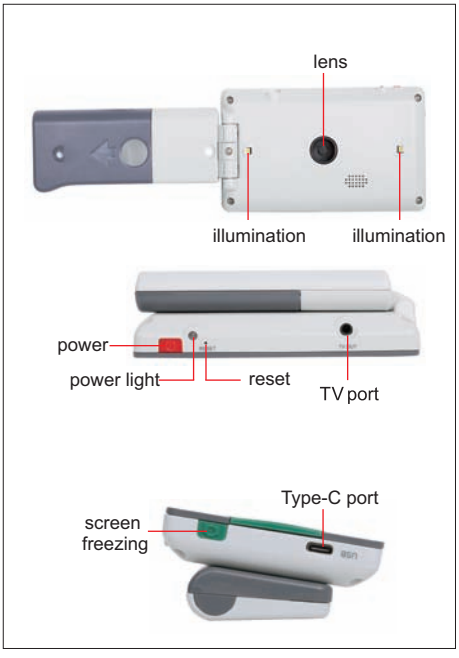
after the handle is folded, the magnifier can be directly placed on the object for observation



SPECIFICATION

Screen size	4.3 inch
Screen resolution	480×272
Magnification	2X-32X
Pixel	8M
Focus	manual/automatic
Color mode (26 modes)	color mode, color enhancement mode, negative mode, monochrome mode, black on white, white on black, blue on white, white on blue, yellow on black, black on yellow, yellow on blue, blue on yellow, green on white, white on green, orange on white, white on orange, red on black, black on red, orange on black, black on orange, yellow on green, green on yellow, red on white, white on red, yellow on white, white on yellow
Output	TV
Charging port	Type-C
Lithium battery	1600mAH (for 4 hours working)
Dimension (LxWxH)	123×39×76mm (when the handle is folded)
Weight	210g

side and back

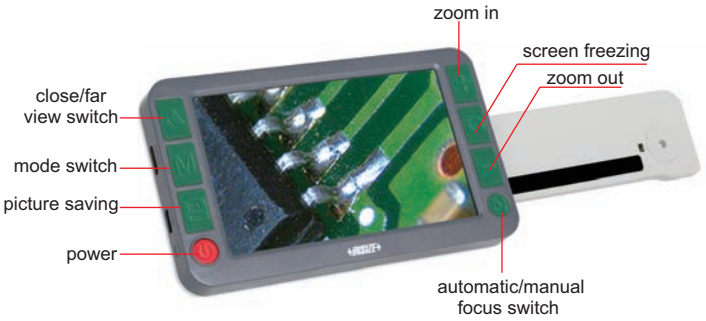


STANDARD DELIVERY

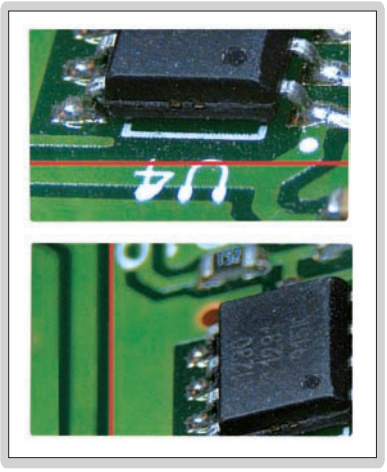
Main unit	1 pc
Video output cable	1 pc
USB charging cable	1 pc
Power adapter	1 pc

DIGITAL MAGNIFIER
CODE 7526-D5

VIDEO



horizontal and vertical red lines



- 720P60 (close view) and 1080P30 (far view) cameras
- Double autofocus
- 26 color modes can be switched to meet the needs of different people
- Adopt folding bracket
- Detachable handle design, suitable for left-handed or right-handed use
- TV and HDMI ports to TV and display
- Automatic shutdown after 3 minutes

SPECIFICATION

Screen size	5 inch
Screen resolution	800×480
Magnification	2X-32X
Close view pixel	8M
Far view pixel	8M
Focus	manual/automatic
Color mode (26 modes)	color mode, color enhancement mode, negative mode, monochrome mode, black on white, white on black, blue on white, white on blue, yellow on black, black on yellow, yellow on blue, blue on yellow, green on white, white on green, orange on white, white on orange, red on black, black on red, orange on black, black on orange, yellow on green, green on yellow, red on white, white on red, yellow on white, white on yellow
Line	horizontal and vertical red lines
Function	screen freezing, image moving, photo playback, and high definition storage
Output	TV and HDMI
Storage	supports up to 32G TF card
Charging port	Type-C
Lithium battery	2500mAH (for 4 hours working)
Dimension (LxWxH)	145×30×85mm (when the handle is folded)
Weight	275g

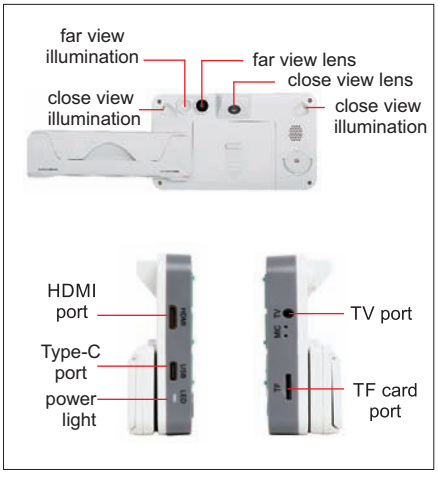
STANDARD DELIVERY

Main unit	1 pc
HDMI cable	1 pc
Video output cable	1 pc
USB charging cable	1 pc
Power adapter	1 pc

after the handle is folded, the magnifier can be directly placed on the object for observation



side and back



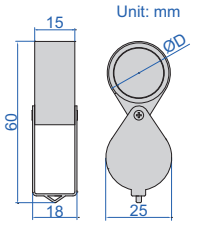
FOLDING MAGNIFIER

- Glass lens



7511-8





Code	Magnification	Lens diameter (ØD)
7511-8	10X	Ø21mm

FOLDING MAGNIFIER WITH ILLUMINATION

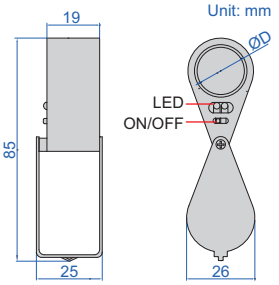
- Resin lens
- Powered by 3xLR927 batteries (included)







7515-10



Code	Magnification	Lens diameter (ØD)
7515-10	10X	Ø21mm

FOLDING MAGNIFIER WITH ILLUMINATION

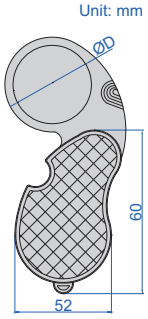


- Resin lens
- Powered by 2xCR1620 batteries (included)
- LED lights up automatically when opened



7514-1

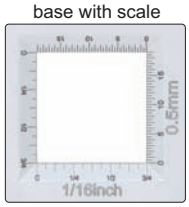




Code	Magnification	Lens diameter (ØD)
7514-1	2.5X	Ø45mm

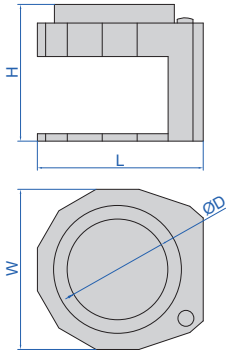
MAGNIFIER WITH ILLUMINATION

- Glass lens
- Powered by 3xAG7 batteries
- 3 pcs LED and 3 pcs UV
- Base with scale, graduation: 0.5mm, 1/16"



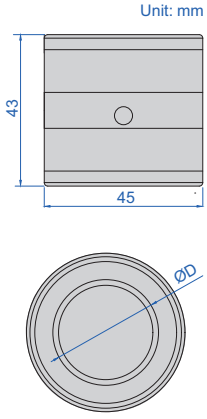


7524-10



Code	Magnification	Lens diameter (ØD)	L	H	W
7524-10	10X	Ø30mm	60mm	50mm	56mm

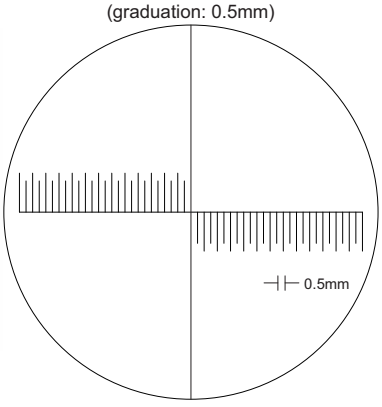
MEASURING MAGNIFIERS (WITH ILLUMINATION)



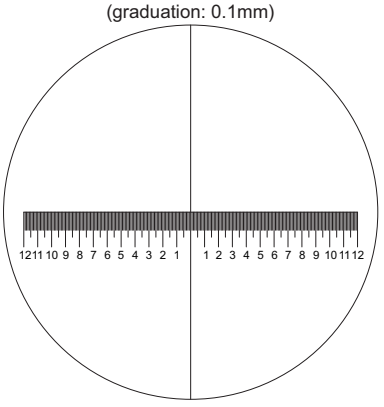


7527-D1

scale of **7527-D1**
(graduation: 0.5mm)

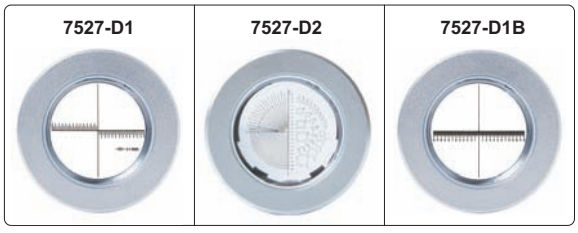


scale of **7527-D1B**
(graduation: 0.1mm)

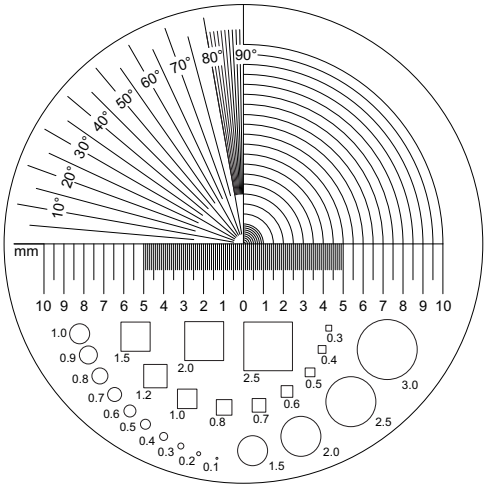


- Base with scale
- With 5 white LED and 5 UV LED
- Charging port: Type-C
- Work for 1.5h after fully charged

base with scale



scale of **7527-D2**
(0-5mm graduation: 0.1mm, 5-10mm graduation: 0.5mm)



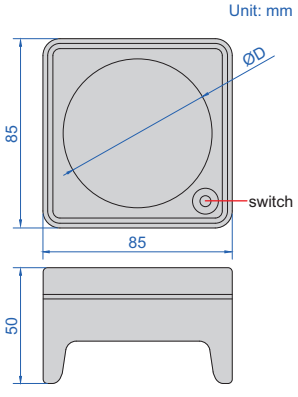
Code	Magnification	Lens diameter (ØD)
7527-D1	10X	Ø30mm
7527-D2	10X	Ø30mm
7527-D1B	10X	Ø30mm

MAGNIFIER WITH ILLUMINATION

- Glass lens
- With 4 white LED, three levels brightness adjustment
- Charging port: Type-C



7528-3



Code	Magnification	Lens diameter (ØD)
7528-3	3X	Ø70mm

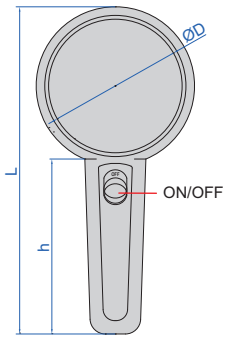
MAGNIFIERS WITH ILLUMINATION



- Glass lens
- Powered by 3xAAA batteries (included)



7513-2 7513-4



Code	Magnification	Lens diameter (ØD)	L	h
7513-2	2X	Ø75mm	170mm	90mm
7513-4	4X	Ø50mm	145mm	90mm

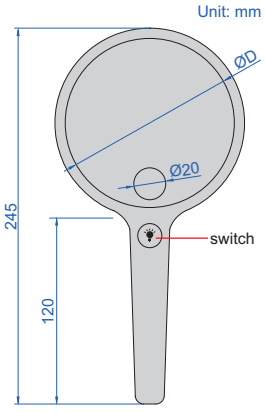
24

MAGNIFIER WITH ILLUMINATION

- Resin lens
- With 20 white LED, three levels brightness adjustment
- Charging port: Type-C



7529-24



Code	Magnification	Lens diameter (ØD)
7529-24	2X/4X	Ø105mm

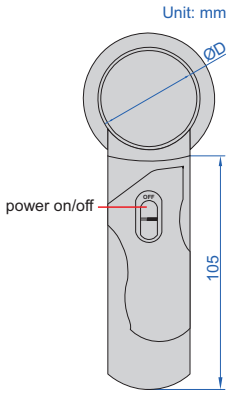
MAGNIFIER WITH TWO LENSES

- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)





7522-610



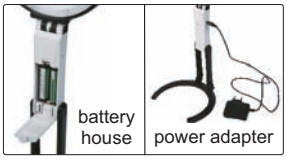
Code	Lens number	Magnification	Lens diameter (ØD)
7522-610	2 pcs	6X	50mm
		10X	37mm

THREE WAYS MAGNIFIER WITH ILLUMINATION

VIDEO

three ways use

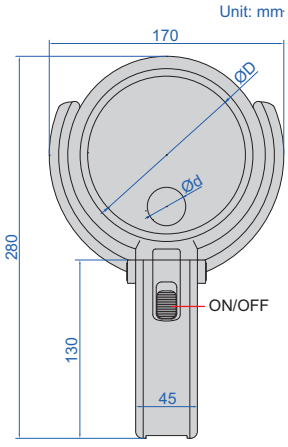








7512-1



- Resin lens
- Powered by 2xAA batteries (included) or power adapter (110~240V, 50~60Hz)

Code	Magnification	Lens diameter (ØD/Ød)
7512-1	2X/4X	Ø120mm/Ø28mm

MAGNIFICATION GLASS

VIDEO

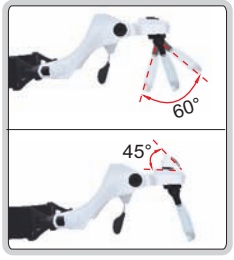


7523-3D5

interchangeable lenses



adjustable lens and LED angle



head band (included)



- Resin lens
- Interchangeable lenses
- Powered by 3 pcs AAA batteries (included)

Code	Lens number	Magnification
7523-3D5	5 pcs	1X
		1.5X
		2X
		2.5X
		3.5X

adjustable holder angle



moveable lens for focus



2 pcs LED



MAGNIFIER

using on table



hanging around neck



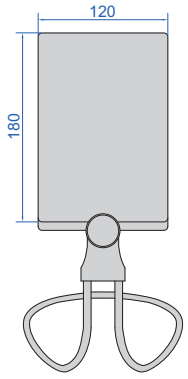
- Resin lens
- Silicone hose can be shaped according to needs
- Can be used on table or hanging around neck

Code	Magnification	Lens size
7530-1D8	1.8X	180×120mm



7530-1D8

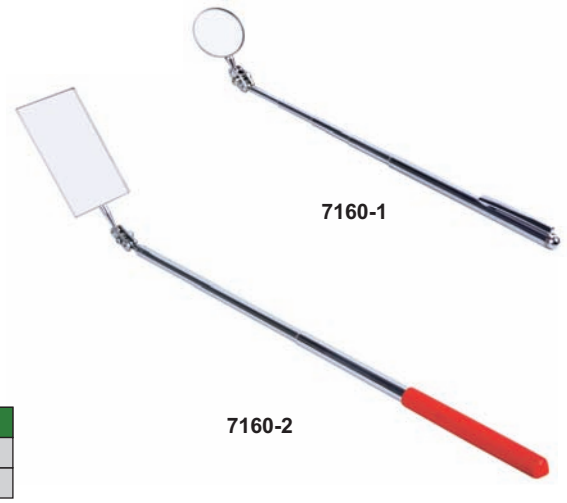
Unit: mm



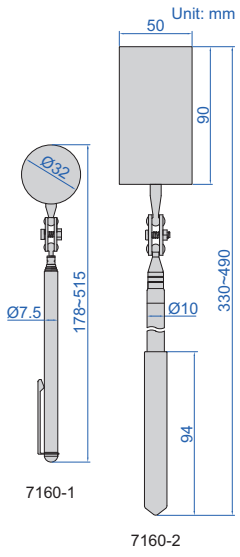
TELESCOPING INSPECTION MIRRORS

- Inspect hidden areas
- Rotation of the mirror: 360°
- Length of handle is adjustable, handle is made of stainless steel

Code	Size of mirror	Length
7160-1	Ø32mm	178~515mm
7160-2	50×90mm	330~490mm

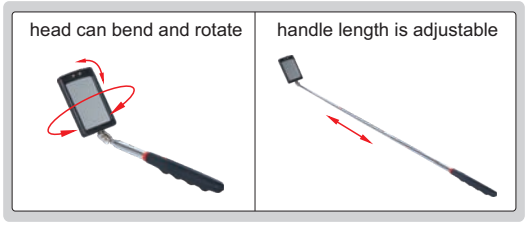


Unit: mm



TELESCOPING INSPECTION MIRROR (WITH ILLUMINATION)

- Inspect hidden areas
- Head can bend and rotate
- Telescoping handle, made of stainless steel
- With two CR2032 batteries

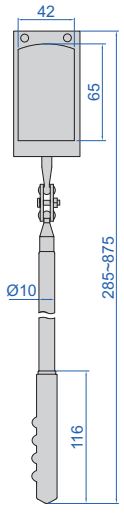


Code	Size of mirror	Length
7162-1	65×42mm	285~875mm



7162-1

Unit: mm



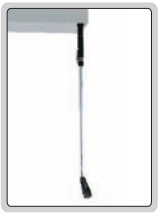
TELESCOPING MAGNETIC PICK-UP AND FLASHLIGHT



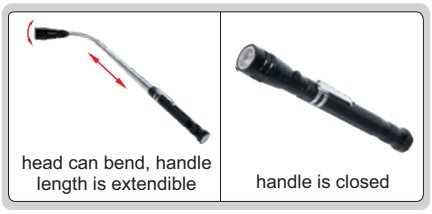
7163-1



magnetic head

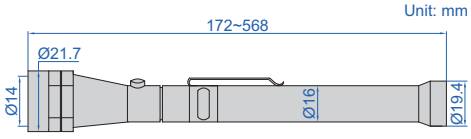


magnetic end to attach on steel surfaces



- For illumination and pick up steel parts in hidden areas
- Head can bend
- Telescoping handle, made of stainless steel
- Magnetic head and end
- With four LR44 batteries

Unit: mm



Code	Magnetic force of the end	Magnetic force of the head	Flashlight range	Battery life	Length
7163-1	4kgf	2kgf	3m	8h	172~568mm

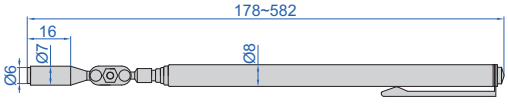
TELESCOPING MAGNETIC PICK-UP



7161-1

- Pick up steel parts from hidden areas
- Rotation of magnetic head: 360°
- Length of handle is adjustable, handle is made of stainless steel

Unit: mm



Code	Size of magnetic tip	Magnetic force	Length
7161-1	Ø6mm	0.45kgf	178~582mm

VIDEOSCOPES 25



Videoscopes (Desk Type)
Page 862-863



Videoscopes
Page 864-874



Multipurpose Videoscopes
Page 875-876



Carbon Fiber Telescopic
Pole Videoscopes
Page 877



Rigid Borescopes
Page 878



LED Light Handles
Page 879



Cameras (With Display)
Page 879

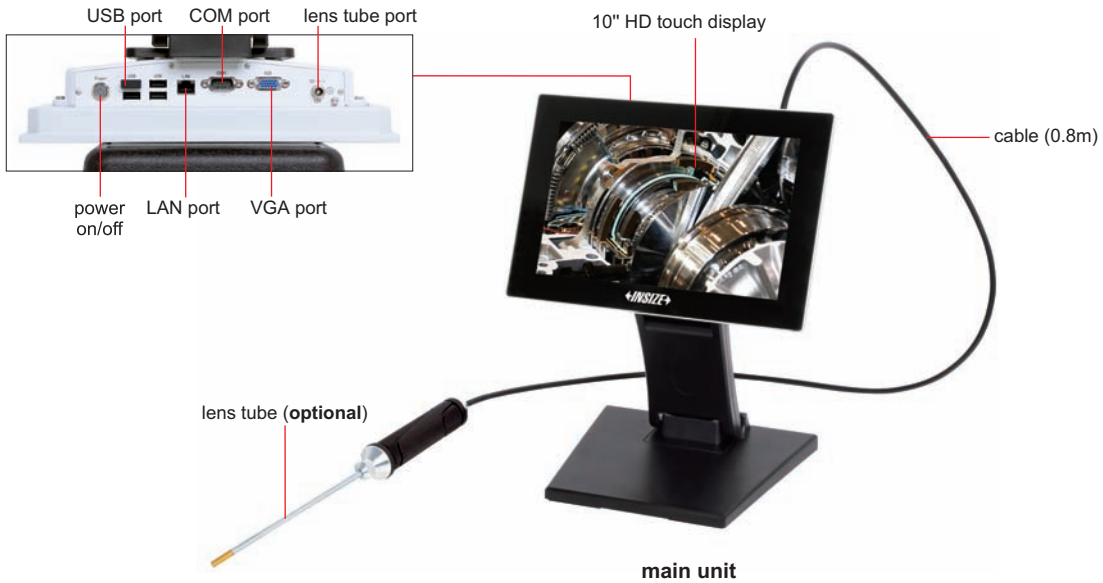


Fixture For Rigid Borescopes
Page 880

VIDEOSCOPE (DESK TYPE)

REAR FIBER ILLUMINATION

VIDEO



main unit

MAIN UNIT (WITHOUT LENS TUBE)

Code	ISV-Y
Display	10" HD touch display
Function	take picture, take video
File format	picture: JPG, video: MP4
Memory	built-in hard disk or USB flash disk
Image process	image zoom (1X, 2X, 3X)
Image control	noise reduction, negative film, flip over, freeze, on-line edit
Illumination	stepless adjustment
Additional function	real-time dynamic annotation, real-time watermark, rapid defect mark
Output	USB
Power supply	AC/DC adapter (for continuous working)
Weight	1000g

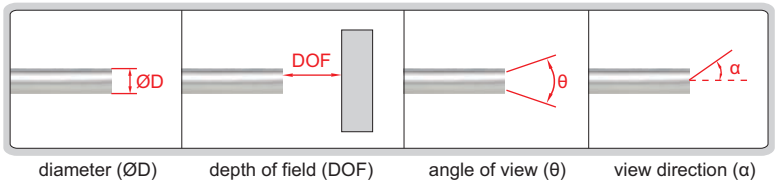
STANDARD DELIVERY

Main unit	1 pc
USB disk	1 pc
Mouse	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Lens tube	refer to below details
Software for automatic defect identification	can be customized





diameter (ØD) | depth of field (DOF) | angle of view (θ) | view direction (α)

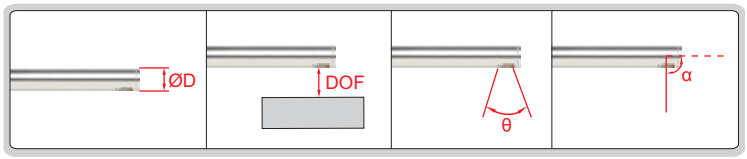
RIGID STRAIGHT LENS TUBE, FRONT VIEW

Code	Lens tube		Lens					
	diameter (ØD)	length (L)	pixel	illumination	angle of view (θ)	depth of field (DOF)	view direction (α)	dust/ waterproof
ISV-Y1210	1.2mm	90mm	0.04M	rear optical fiber	120°	3~70mm	0°	IP67
ISV-Y1810	1.8mm	120mm (**optional** 90-150mm)	0.16M			3~70mm	0°	
ISV-Y2010	2.0mm	120mm (**optional** 90-150mm)	0.16M			3~70mm	0°	
ISV-Y2410	2.4mm	150mm (**optional** 90-300mm)	0.16M			3~70mm	0°	
ISV-Y2810	2.8mm	150mm (**optional** 90-300mm)	0.16M			3~70mm	0°	
ISV-Y3910	3.9mm	200mm (**optional** 90-500mm)	1M			8~150mm	0° (**optional** 30°, 70°)	
ISV-Y6010	6.0mm	300mm (**optional** 90-1000mm)	1M			12~200mm	0° (**optional** 30°, 70°)	

To be continued

Continued from previous page



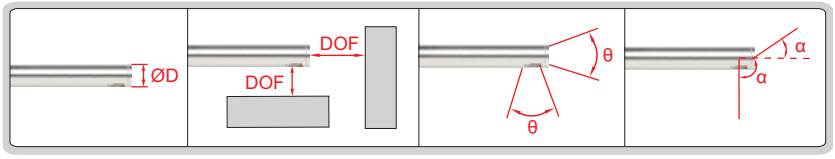


diameter (ØD) depth of field (DOF) angle of view (θ) view direction (α)

RIGID STRAIGHT LENS TUBE, SIDE VIEW

Code	Lens tube		Lens					
	diameter (ØD)	length (L)	pixel	illumination	angle of view (θ)	depth of field (DOF)	view direction (α)	dust/ waterproof
ISV-Y2810C	2.8mm	150mm (**optional** 90-300mm)	0.16M	rear optical fiber	120°	3~70mm	90°	IP67
ISV-Y3910C	3.9mm	200mm (**optional** 90-500mm)	1M			8~150mm		
ISV-Y4510C	4.5mm	250mm (**optional** 90-800mm)	1M			8~150mm		
ISV-Y6010C	6.0mm	300mm (**optional** 90-1000mm)	1M			12~200mm		



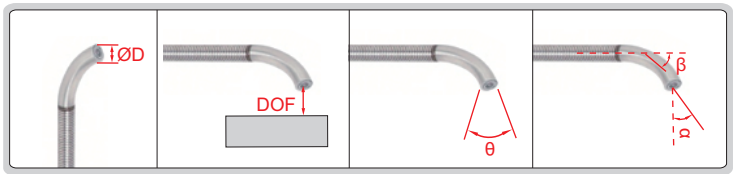


diameter (ØD) depth of field (DOF) angle of view (θ) view direction (α)

RIGID STRAIGHT LENS TUBE, FRONT VIEW & SIDE VIEW

Code	Lens tube		Lens					
	diameter (ØD)	length (L)	pixel	illumination	angle of view (θ)	depth of field (DOF)	view direction (α)	dust/ waterproof
ISV-Y6010S	6.0mm	300mm (**optional** 90-1000mm)	1M	rear optical fiber	120°	front view: 12~200mm side view: 8~150mm	front view: 0° side view: 90°	IP67





diameter (ØD) depth of field (DOF) angle of view (θ) view direction (α)
bending angle (β)

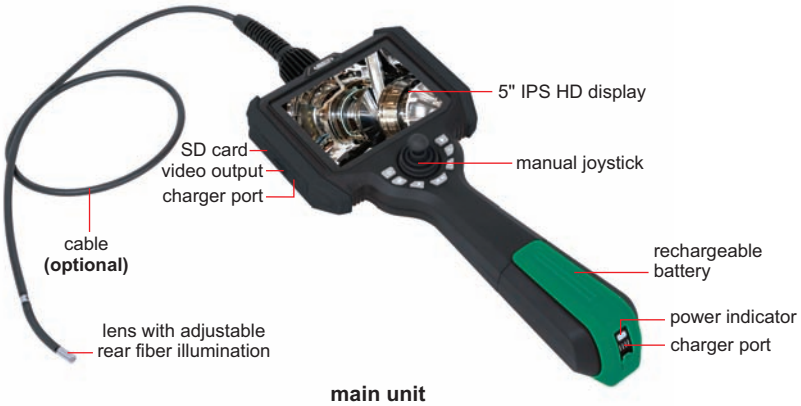
BENDING SPRING LENS TUBE

Code	Lens tube		Lens						
	diameter (ØD)	length (L)	pixel	illumination	angle of view (θ)	depth of field (DOF)	view direction (α)	bending angle (β)	dust/ waterproof
ISV-Y3010W	3.0mm	1000mm	0.16M	rear optical fiber	120°	8~150mm	0°	75° (can be customized)	IP65
ISV-Y5010W	5.0mm		1M			8~150mm			
ISV-Y7010W	7.0mm		1M			12~200mm			

VIDEOSCOPE (CABLE IS OPTIONAL)

VIDEO

REAR FIBER ILLUMINATION



main unit



changeable lens cable



tripod (included)



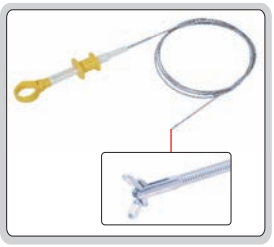
ISV-L-HOOK (optional)



ISV-L-MAGNET (optional)



WIFI real-time image transmission



ISV-L-CLAMP (optional)

MAIN UNIT (WITHOUT CABLE)

Code	**ISV-L**
Display	5" high definition LCD
Resolution	1024×720
Function	take pictures, take videos
File format	picture: JPG, video: MP4
Image process	image zoom (1X, 2X, 3X, 4X)
Image control	freeze, flip over, playback and analog ruler
Memory	memory card
Output	WIFI (only for Android OS), USB, HDMI
Power supply	rechargeable lithium battery (working time ≥ 4hours) AC/DC adapter (for continuous working)
Weight	1000g

OPERATION ENVIRONMENT

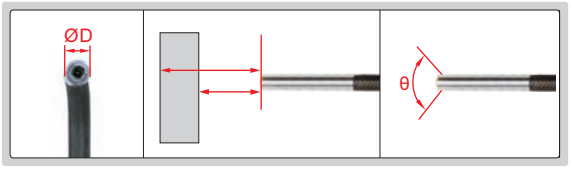
Main unit	-10~50°C, no preheat
Operation temperature	-20~70°C
Storage temperature	-20~60°C
Relative humidity	maximum 90%, no condensation

STANDARD DELIVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
Tripod	1 pc
AC/DC adapter	1 pc

OPTIONAL ACCESSORY

Cable	please refer to details
Temperature alarm	**ISV-L-HTALARM** (must be installed in factory, for Ø3.9mm, Ø4.5mm and Ø6.0mm)
Hook	**ISV-L-HOOK** (must be installed in factory, for Ø3.9mm, Ø4.5mm and Ø6.0mm)
Magnet	**ISV-L-MAGNET** (must be installed in factory, for Ø3.9mm, Ø4.5mm and Ø6.0mm)
Clamp	**ISV-L-CLAMP**



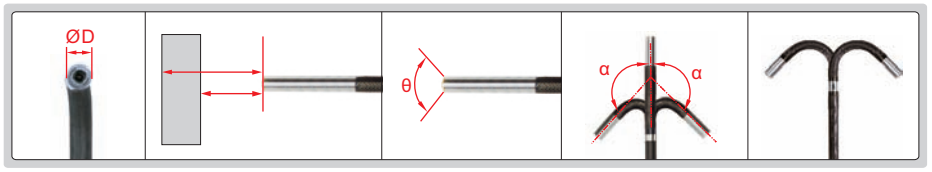
diameter (ØD) depth of field (DOF) angle of view (θ)

ONE-DIRECTION CABLE (NO BENDING), FRONT VIEW

Code	Cable		Lens							
	length	type	view direction	diameter (ØD)	depth of field (DOF)	angle of view (θ)	illumination	pixel	resolution	dust/ waterproof
ISV-L09505	0.5m	spring tube	front view	0.95mm	3~30mm	>120°	rear fiber	0.16M	400×400	IP65
ISV-L09510	1m									
ISV-L1210	1m			1.2mm	3~30mm					
ISV-L1510	1m	tungsten wire weaved cable		1.5mm	3~70mm					
ISV-L1515	1.5m									

To be continued

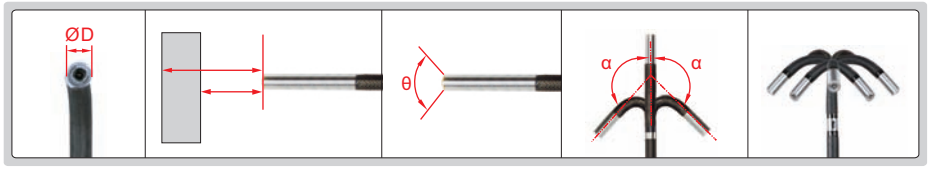
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diameter (ØD) | depth of field (DOF) | angle of view (θ) | bend range (α) | bend in 2 directions

TWO-DIRECTION BENDING CABLE, FRONT VIEW

Code	Cable		Lens									
	length	type	view direction	bend direction	diameter (ØD)	depth of field (DOF)	bend range (α)	angle of view (θ)	illumination	pixel	resolution	dust/ waterproof
ISV-L1810	1m	tungsten wire weaved cable	front view	two directions	1.8mm	3~30mm	±160°	>120°	rear fiber	0.16M	400×400	IP65
ISV-L2010	1m				2.0mm	3~30mm						
ISV-L2410	1m				2.4mm	3~70mm (**optional** 5~100mm)						
ISV-L2415	1.5m											
ISV-L2420	2m											



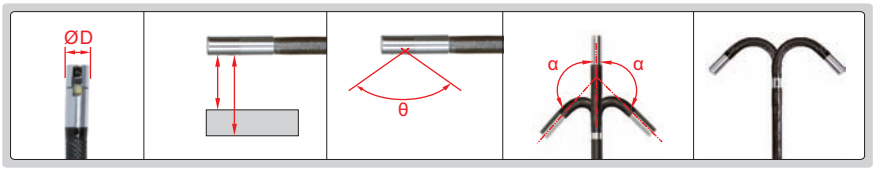
diameter (ØD) | depth of field (DOF) | angle of view (θ) | bend range (α) | bend in 4 directions

FOUR-DIRECTION BENDING CABLE, FRONT VIEW

Code	Cable		Lens									
	length	type	view direction	bend direction	diameter (ØD)	depth of field (DOF)	bend range (α)	angle of view (θ)	illumination	pixel	resolution	dust/ waterproof
ISV-L2810	1m	tungsten wire weaved cable	front view	four directions	2.8mm	3~70mm (**optional** 5~100mm)	±160°	>120°	rear fiber	0.16M	400×400	IP65
ISV-L2815	1.5m											
ISV-L2820	2m											
ISV-L2830	3m											
ISV-L3910	1m				3.9mm	8~150mm (**optional** 3~70mm)				0.92M	1280×720	IP67
ISV-L3915	1.5m											
ISV-L3920	2m											
ISV-L3930	3m											
ISV-L3940	4m											
ISV-L3950	5m											
ISV-L6010	1m				6.0mm	12~200mm (**optional** 3~70mm, 8~150mm)				0.92M	1280×720	IP67
ISV-L6015	1.5m											
ISV-L6020	2m											
ISV-L6030	3m											
ISV-L6040	4m											
ISV-L6050	5m											
ISV-L6060	6m											
ISV-L6070	7m											

To be continued

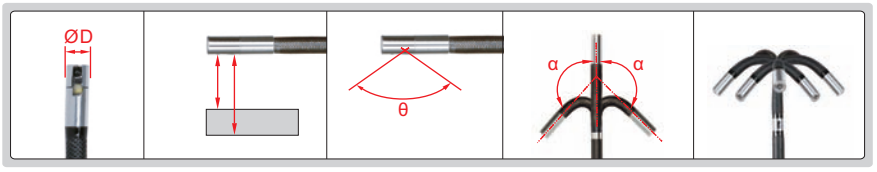
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diameter (ØD) depth of field (DOF) angle of view (θ) bend range (α) bend in 2 directions

TWO-DIRECTION BENDING CABLE, SIDE VIEW

Code	Cable		Lens									
	length	type	view direction	bend direction	diameter (ØD)	depth of field (DOF)	bend range (α)	angle of view (θ)	illumination	pixel	resolution	dust/ waterproof
ISV-L1810C	1m	tungsten wire weaved cable	side view	two directions	1.8mm	3~30mm	±160°	>120°	rear fiber	0.16M	400×400	IP65
ISV-L1815C	1.5m											



diameter (ØD) depth of field (DOF) angle of view (θ) bend range (α) bend in 4 directions

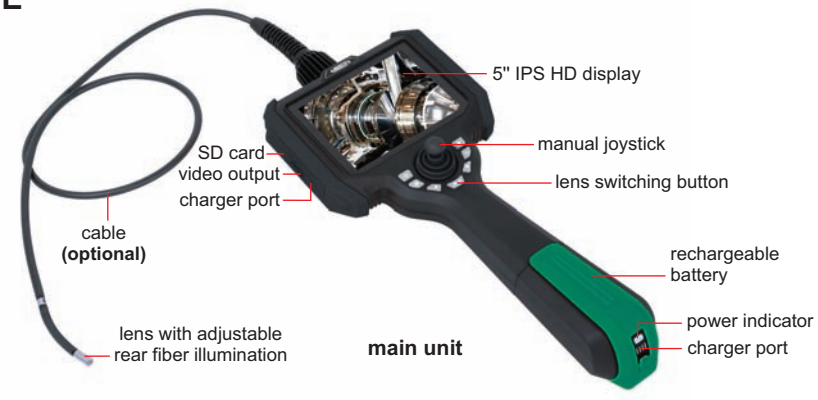
FOUR-DIRECTION BENDING CABLE, SIDE VIEW

Code	Cable		Lens									
	length	type	view direction	bend direction	diameter (ØD)	depth of field (DOF)	bend range (α)	angle of view (θ)	illumination	pixel	resolution	dust/ waterproof
ISV-L2810C	1m	tungsten wire weaved cable	side view	four directions	2.8mm	3~70mm	±160°	>120°	rear fiber	0.16M	400×400	IP65
ISV-L2815C	1.5m											
ISV-L2820C	2m											
ISV-L2830C	3m											
ISV-L4510C	1m				4.5mm	5~100mm (**optional** 8~150mm)				0.92M	960×720	IP67
ISV-L4515C	1.5m											
ISV-L4520C	2m											
ISV-L4530C	3m											
ISV-L6010C	1m				6.0mm	8~150mm (**optional** 5~100mm)						
ISV-L6015C	1.5m											
ISV-L6020C	2m											
ISV-L6030C	3m											
ISV-L6040C	4m											
ISV-L6050C	5m											

FRONT AND SIDE VIEW VIDEOSCOPE (CABLE IS OPTIONAL)

REAR FIBER ILLUMINATION

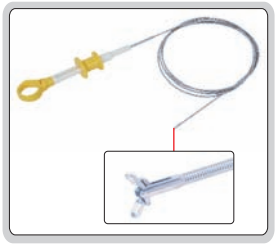
VIDEO



To be continued

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WIFI real-time image transmission


ISV-K-CLAMP (optional)


changeable lens cable


tripod (included)


ISV-S-HOOK (optional)


ISV-S-MAGNET (optional)

OPTIONAL ACCESSORY

Cable	please refer to details
Temperature alarm	**ISV-S-HTALARM** (must be installed in factory, for Ø3.9mm, Ø6.0mm)
Hook	**ISV-S-HOOK** (must be installed in factory, for Ø3.9mm, Ø6.0mm)
Magnet	**ISV-S-MAGNET** (must be installed in factory, for Ø3.9mm, Ø6.0mm)
Clamp	**ISV-K-CLAMP**

MAIN UNIT (WITHOUT CABLE)

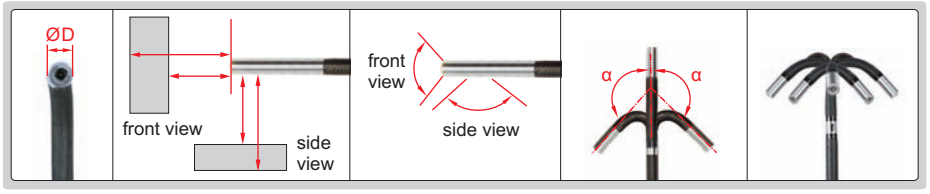
Code	**ISV-S**
Display	5" high definition LCD
Resolution	1024×720
Function	take pictures, take videos
File format	picture: JPG, video: MP4
Image process	image zoom (1X, 2X, 3X, 4X)
Image control	freeze, flip over, playback and analog ruler
Memory	memory card
Output	WIFI (only for Android OS), USB, HDMI
Power supply	rechargeable lithium battery (working time ≥ 4hours) AC/DC adapter (for continuous working)
Weight	1000g

STANDARD DELIVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
Tripod	1 pc
AC/DC adapter	1 pc

OPERATION ENVIRONMENT

Main unit	-10~50°C, no preheat
Operation temperature	-20~70°C
Storage temperature	-20~60°C
Relative humidity	maximum 90%, no condensation



diameter (ØD) depth of field (DOF) angle of view (θ) bend range (α) bend in 4 directions

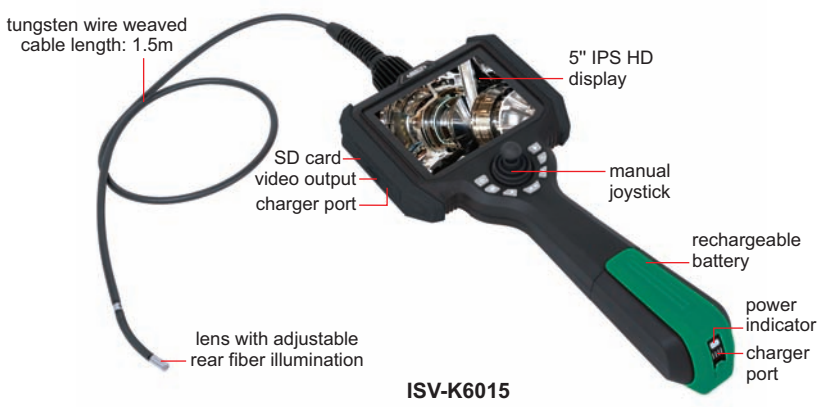
FOUR-DIRECTION BENDING CABLE, FRONT VIEW&SIDE VIEW

Code	**Cable**		**Lens**									
	length	**type**	**view direction**	**bend direction**	**diameter (ØD)**	**depth of field (DOF)**	**bend range (α)**	**angle of view (θ)**	**illumination**	**pixel**	**resolution**	**dust/ waterproof**
ISV-S2810	1m	tungsten wire weaved cable	front view and side view	four directions	2.8mm	front view: 3~70mm side view: 3~70mm	±160°	>120°	front LED	0.16M	400×400	IP65
ISV-S2815	1.5m											
ISV-S2820	2m											
ISV-S2830	3m											
ISV-S3910	1m	tungsten wire weaved cable	front view and side view	four directions	3.9mm	front view: 7~150mm side view: 5~80mm	±160°	>120°	rear fiber	0.92M	1280×720	IP67
ISV-S3915	1.5m											
ISV-S3920	2m											
ISV-S3930	3m											
ISV-S3940	4m											
ISV-S3950	5m											
ISV-S6010	1m	tungsten wire weaved cable	front view and side view	four directions	6.0mm	front view: 12~200mm (**optional** 3~70mm) side view: 8~150mm (**optional** 3~70mm)	±160°	>120°	rear fiber	0.92M	1280×720	IP67
ISV-S6015	1.5m											
ISV-S6020	2m											
ISV-S6030	3m											
ISV-S6040	4m											
ISV-S6050	5m											

VIDEOSCOPES (WITH CABLE)

REAR FIBER ILLUMINATION

VIDEO



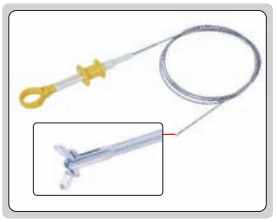
ISV-K6015



WIFI real-time image transmission



changeable lens cable



ISV-K-CLAMP (optional)



ISV-K-MAGNET (optional)



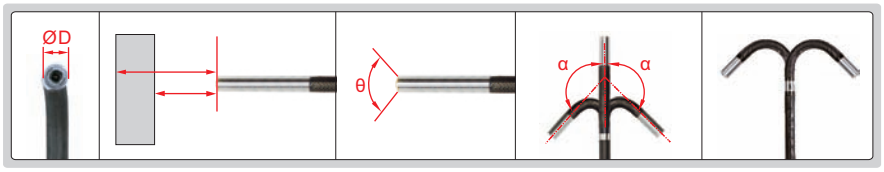
ISV-K-HOOK (optional)

SPECIFICATION

Code		ISV-K1810	ISV-K2410	ISV-K2810	ISV-K3915	ISV-K6015
Lens	diameter (ØD)	1.8mm	2.4mm	2.8mm	3.9mm	6.0mm
	pixel	0.16M			0.92M	
	resolution	400×400			1280×720	
	depth of field	3-30mm	3-70mm	3-70mm	8-150mm	12-200mm
	bending direction	two directions	two directions	four directions	four directions	four directions
	bending range (α)	±160°				
	angle of view (θ)	120°				
	illumination	rear fiber				
	lens	sapphire glass lens				
	dust/waterproof	IP65			IP67	
	bend control	manual joystick				
Cable	length	1m	1m	1m	1.5m	1.5m
	type	tungsten wire weaved cable				
Main unit	display	5" high definition LCD				
	function	take pictures, take videos				
	file format	picture: JPG, video: MP4				
	image process	image zoom (1X, 2X, 3X, 4X)				
	image control	freeze, flip over, playback and analog ruler				
	memory	memory card				
	output	WIFI (only for Android OS), USB, HDMI				
	power supply	rechargeable lithium battery (working time ≥ 4 hours), AC/DC adapter (for continuous working)				
Weight		1000g				

To be continued

Continued from previous page



diameter (ØD) | depth of field (DOF) | angle of view (θ) | bend range (α) | bend

STANDARD DELIVERY

Main unit (with cable)	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
Tripod	1 pc
AC/DC adapter	1 pc

OPERATION ENVIRONMENT

Main unit	-10~50°C, no preheat
Operation temperature	-20~70°C
Storage temperature	-20~60°C
Relative humidity	maximum 90%, no condensation

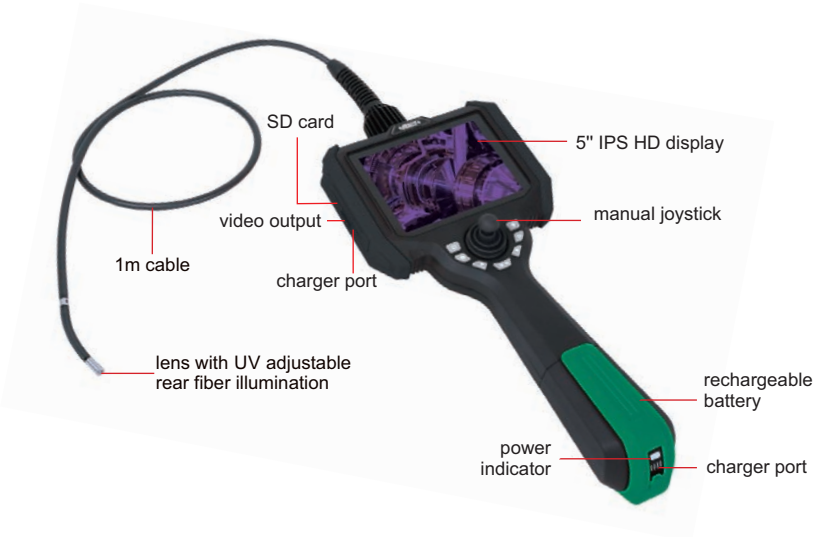
OPTIONAL ACCESSORY

Temperature alarm	**ISV-K-HTALARM** (must be installed in factory, for **ISV-K3915** and **ISV-K6015**)
Hook	**ISV-K-HOOK** (must be installed in factory, for **ISV-K3915** and **ISV-K6015**)
Magnet	**ISV-K-MAGNET** (must be installed in factory, for **ISV-K3915** and **ISV-K6015**)
Clamp	**ISV-K-CLAMP**

UV OPTICAL FIBER ILLUMINATION

UV VIDEOSCOPES (WITH CABLE)

VIDEO



ISV-U6010



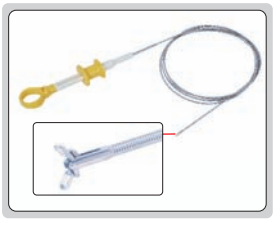
tripod (included)



WIFI real-time image transmission



changeable lens cable



ISV-K-CLAMP (**optional**)



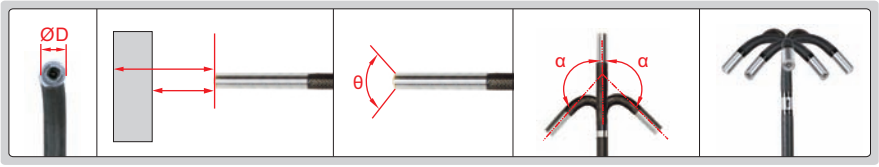
ISV-U-MAGNET (**optional**)



ISV-U-HOOK (**optional**)

To be continued

Continued from previous page



diameter (ØD) | depth of field (DOF) | angle of view (θ) | bend range (α) | bend in 4 directions

SPECIFICATION

Code		ISV-U6010	ISV-U6020	ISV-U6030	ISV-U8010	ISV-U8020	ISV-U8030
Camera	diameter (ØD)	Ø6mm			Ø8mm		
	pixel	1M					
	lens length	13±0.5mm					
	depth of field (DOF)	10~200mm (**optional** 50mm~∞)					
	bend direction	four directions					
	bend ramher (a)	±150°	±130°	±100°	±150°	±130°	±100°
	angel of view (θ)	120°					
	lighting	rear UV fiber optic illumination					
	ultraviolet wavelength	365nm					
	waterproof grade	IP67					
Cable	length	1m	2m	3m	1m	2m	3m
	type	soft (tungsten wire weaved cable)					
Main unit	display	5" HD IPS display screen					
	file format	picture: JPG, video: AVI					
	image control	freezing, zoom, flip over, playback and analog ruler					
	memory	memory card					
	output	WIFI (only for Android OS), USB, HDMI					
	power supply	rechargeable lithium battery (working time ≥ 4hours), AC/DC adapter (for continuous working)					
Weight		1000g					

STANDARD DELIVERY

Main unit (with cable)	1 pc	USB cable	1 pc
32G SD card	1 pc	Tripod	1 pc
Card reader	1 pc	AC/DC adapter	1 pc

OPERATION ENVIRONMENT

Main unit	-10~50°C, no preheat
Operation temperature	-20~70°C
Storage temperature	-20~60°C
Relative humidity	maximum 90%, no condensation

OPTIONAL ACCESSORY

Hook	**ISV-U-HOOK** (must be installed in factory)
Magnet	**ISV-U-MAGNET** (must be installed in factory)
Clamp	**ISV-K-CLAMP**

VIDEOSCOPES (BASIC TYPE)

TUNGSTEN WIRE WEAVED CABLE
BREAK AND WEAR RESISTANCE

VIDEO

IP67
WATERPROOF

POPULAR MODEL



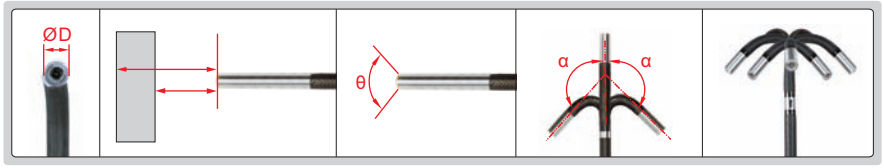
WIFI real-time image transmission



ISV-J6010

replaceable lens cable





diameter (ØD) | depth of field (DOF) | angle of view (θ) | bend range (α) | bend in 4 directions

SPECIFICATION

Code		ISV-J2810	ISV-J2815	ISV-J4010	ISV-J4030	ISV-J6010	ISV-J6030
Lens	diameter (ØD)	2.8mm	2.8mm	4.0mm	4.0mm	6.0mm	6.0mm
	pixel	0.16M		1M			
	resolution	400×400		1280×720			
	depth of field	10~∞mm					
	bending direction	four directions					
	bending range (α)	±160°					
	angle of view (θ)	120°					
	illumination	front LED					
	lens	sapphire glass lens					
	dust/waterproof	IP67					
	bend control	manual joystick					
Cable	length	1m	1.5m	1m	3m	1m	3m
	type	wire weaved cable					
Main unit	display	5" HD screen (resolution: 1920x1080)					
	function	take pictures, take videos					
	file format	picture: JPG, video: MOV					
	image process	image zoom (1X, 2X, 3X, 4X, 5X)					
	image control	freeze, flip over, playback, analog ruler					
	memory	32G memory card					
	output	WIFI (only for Android OS), USB, HDMI					
	power supply	rechargeable lithium battery (working time ≥ 4 hours), AC/DC adapter (for continuous working)					
Weight		1000g					

To be continued

Continued from previous page

STANDARD DELIVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc
USB cable	1 pc
AC/DC adapter	1 pc

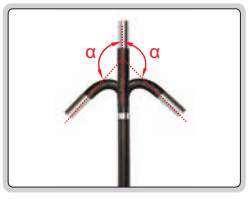
OPERATION ENVIRONMENT

Main unit	-10~50°C, no preheat
Operation temperature	-20~70°C
Storage temperature	-20~60°C
Relative humidity	maximum 90%, no condensation

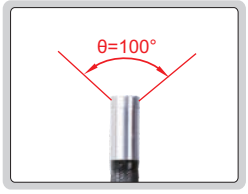
MOBILE PHONE VIDEOSCOPE
CODE ISV-P6

VIDEO

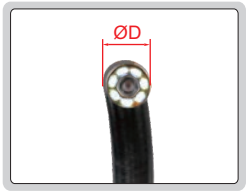




bending of lens up to 180°



angle of view



lens with LED

- For Android and iOS mobile phones


bend in any direction

SPECIFICATION

Diameter of lens (ØD)	6±0.2mm
Length of cable	1m
Resolution	960×720, 1280×720 (switchable)
Depth of field	20mm~∞
Angle of view (θ)	100°
Bending range (α)	0~180°
Illumination	LED with 3 levels control
Cable type	wear resistant
Interface	USB, Type-C
Mobile phone system	Android, iOS
Power supply	rechargeable battery (for 2 hours working)
Dimension (L×W×H)	195×57×105mm
Weight	450g

STANDARD DELIVERY

Main unit (with cable)	1 pc
Type-C cable	1 pc
Micro USB cable	1 pc
Iphone cable	1 pc
Charging cable	1 pc

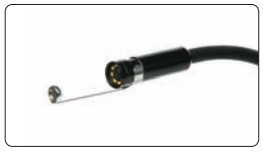
MEMORY CABLE CAN BE FIXED AT ANY SHAPE

IP67 WATERPROOF

VIDEOSCOPE (BASIC TYPE)
CODE ISV-E40

VIDEO




magnet pick up (included)


hook (included)


45° mirror (included)

SPECIFICATION

Lens	diameter (ØD)	8mm
	pixel	0.92M
	resolution	1280x720
	depth of field	30~80mm
	angle of view	77°
	illumination	3 levels
	dust/waterproof	IP67
Cable	length	1180mm
	type	memory (can be set at any shape)
Main unit	display	5" IPS LCD
	function	take picture, take video
	file format	picture: JPG, video: MOV
	image process	image zoom (1.5X, 2X, 3X, 4X)
	memory	memory card (**optional**)
	output	Type-C
	power supply	rechargeable lithium battery (for 5 hours working)
	dimension	217×155×131mm
Weight		506g

STANDARD DELIVERY

Main unit	1 pc
45° mirror	1 pc
Hook	1 pc
Magnet pick up	1 pc

OPTIONAL ACCESSORY

32G memory card	ISV-E40-CARD
Card reader	ISV-E40-READER

OPERATION ENVIRONMENT

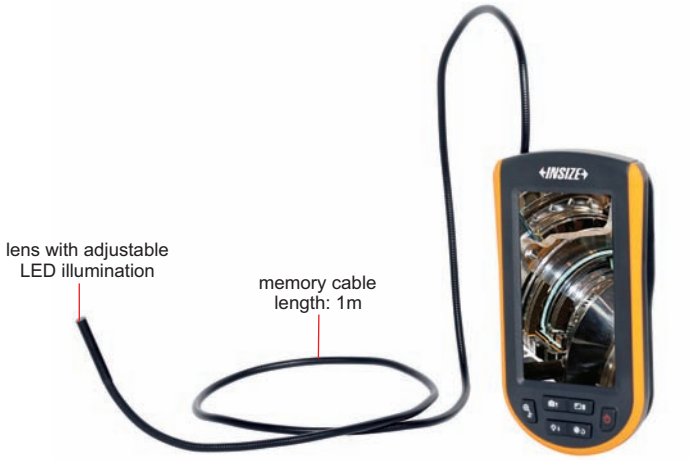
Operation temperature	-10~50°C
Storage temperature	-20~60°C
Operation humidity	15%~85%

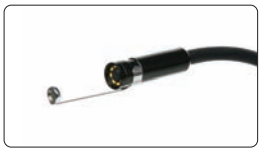
VIDEOSCOPE (ECONOMIC TYPE)
CODE ISV-E30

MEMORY CABLE CAN BE FIXED AT ANY SHAPE

IP67 WATERPROOF

VIDEO




magnet pick up (included)


hook (included)

SPECIFICATION

Lens	diameter	5.2mm
	pixel	0.4M
	depth of field	30~80mm
	angle of view	72°±2°
	illumination	8 levels
	dust/waterproof	IP67
Cable	length	1m
	type	memory (can be set at any shape)
Main unit	display	4.3" LCD
	function	take picture, take video
	file format	picture: JPG, video: AVI
	image zoom	2X
	memory card	memory card (**optional**)
	output	micro USB
	power supply	AA battery
	dimension	154×32.5×87.5mm
Weight		280g


cable can be wrapped around the main unit

OPTIONAL ACCESSORY

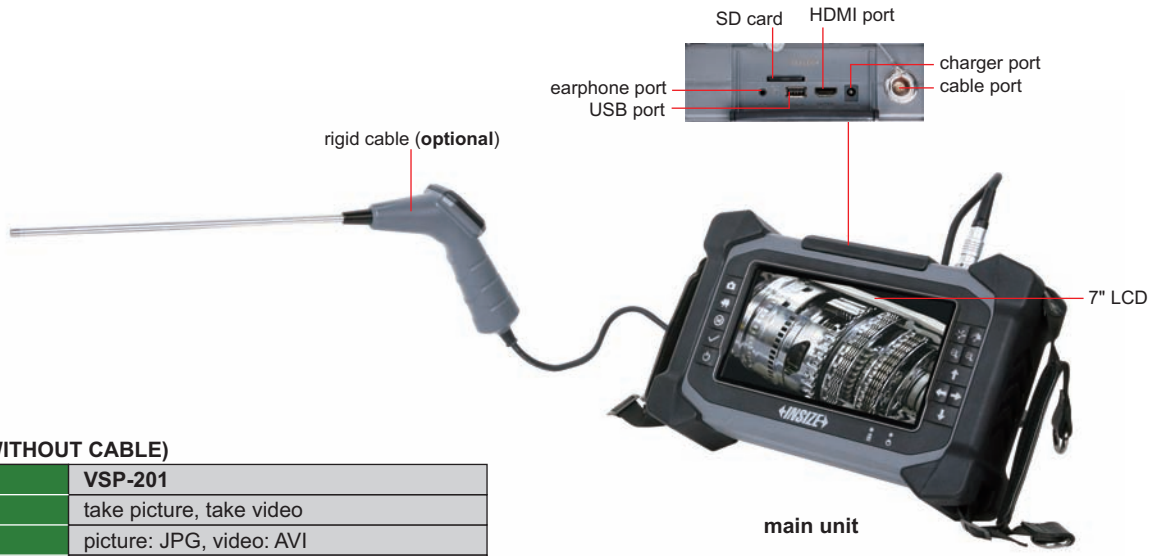
32G memory card	ISV-E40-CARD
Card reader	ISV-E40-READER

STANDARD DELIVERY

Main unit	1 pc
Hook	1 pc
Magnet pick up	1 pc
AA battery	4 pcs

OPERATION ENVIRONMENT

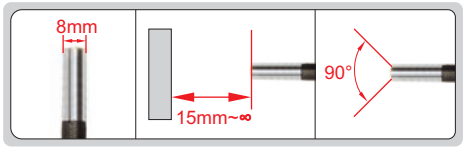
Operation temperature	-10~50°C
Storage temperature	-20~60°C
Operation humidity	15%~85%



main unit

MAIN UNIT (WITHOUT CABLE)

Code	VSP-201
Function	take picture, take video
File format	picture: JPG, video: AVI
Image process	brightness, contrast
Memory	64GB
Output	HDMI, USB
Power supply	rechargeable battery (for 4 hours working)
Dimension	260×170×65mm
Weight	1.2kg



diameter (ØD) focus distance (F) angle of view (θ)



bend in any direction | 360° swivel in clockwise and counter-clockwise | bend within 120°



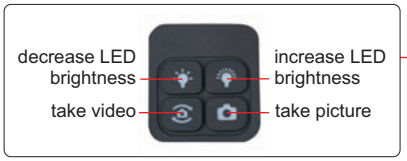
FOUR-DIRECTION BENDING CABLE (FRONT VIEW)

Code		VSP-201D
Cable	length	3m
	type	tungsten wire weaved cable
Lens	diameter (ØD)	8mm
	focus distance (F)	15mm~∞
	angle of view (θ)	90°
	illumination	6 pcs LED
	pixel	1M
	resolution	1280×720
	dust/waterproof	IP67



To be continued

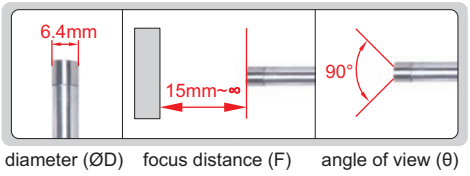
Continued from previous page





RIGID CABLE

Code		VSP-201H
Cable	length (L)	250mm
	type	stainless steel
Lens	diameter (ØD)	6.4mm
	focus distance (F)	15mm~∞
	angle of view (θ)	90°
	illumination	6 pcs LED
	pixel	1M
	resolution	1280×720
	dust/waterproof	IP64

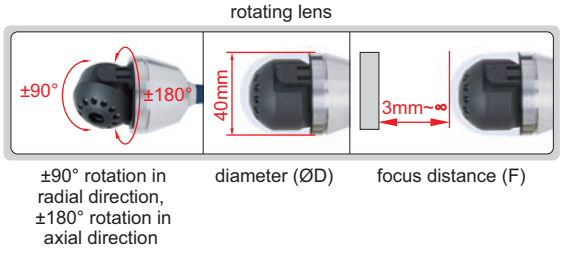


ROTATING LENS CABLE

Code		VSP-201R
Cable	length	30m
	type	high strength glass fibre
Lens	diameter (ØD)	40mm
	focus distance (F)	3mm~∞
	angle of view (θ)	100°
	illumination	12 pcs LED
	pixel	1M
	resolution	1280×720
	dust/waterproof	IP67
	lens control	motorized





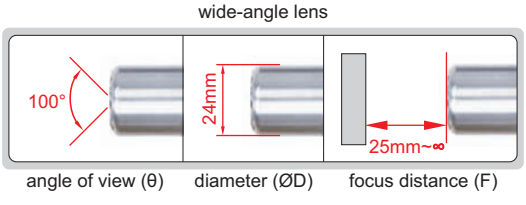


WIDE-ANGLE LENS CABLE

Code		VSP-201W
Cable	length	30m
	type	high strength glass fibre
Lens	diameter (ØD)	24mm
	focus distance (F)	25mm~∞
	angle of view (θ)	100°
	illumination	12 pcs LED
	pixel	1M
	resolution	1280×720
	dust/waterproof	IP67



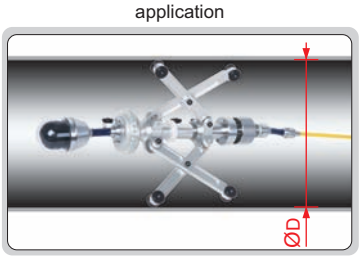




ADJUSTABLE SUPPORT

Code	Working diameter (ØD)	Remark
VSP-201-R200	60~200mm	for **VSP-201R** or **VSP-201W**





4K CARBON FIBER TELESCOPIC POLE VIDEOSCOPE
CODE ISV-CF5

IP65 WATERPROOF

VIDEO



WIFI real-time image transmission



built-in infrared and white light
for night and day use

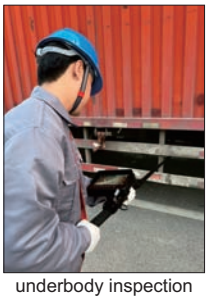


dual motorized control of lens view,
300° horizontal and vertical 360° rotation

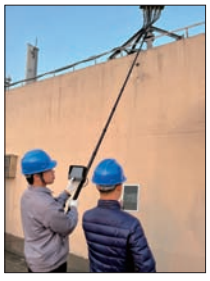


- Dual motorized control of lens view, 300° horizontal and vertical 360° rotation
- 4K HD true color camera
- Built-in infrared and white light for night and day use
- Insert SD card and export photos, videos

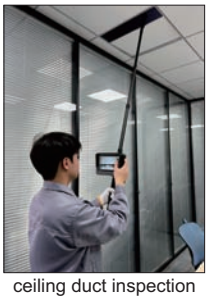
application scenario



underbody inspection



constructure inspection
(WIFI real-time image transmission)



ceiling duct inspection



roof inspection



car roof inspection

SPECIFICATION

Display	7" color touch LCD
Function	take photos and videos
Resolution	3840×2160
Image process	image mirror or flipping, real-time image magnification (1X, 2X, 3X, 4X)
Lens diameter (ØD)	40mm
Display image ratio	16:9, 4:3, 1:1
Memory	SD card (128G Max)
Illumination	infrared and white light LED, manual 5-level brightness adjustment
Output	HDMI
Wireless transmission	WIFI real-time image transmission
Pole	carbon fiber, can be fixed between 1~5 meters
Environmental requirement	temperature: -20°C~60°C, relative humidity: 10%~85%
Power supply	rechargeable battery (18650 lithium battery), power adapter (for continuous working)
Dust/waterproof	IP65
Weight	2kg

STANDARD DELIVERY

Main unit	1 pc
32G SD card	1 pc
Card reader	1 pc

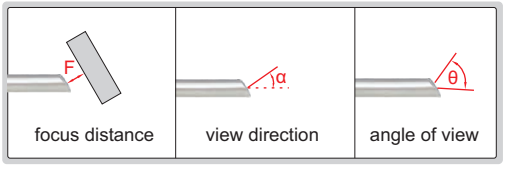
Carbon fiber telescopic pole	1 pc
HDMI cable	1 pc
Power adapter	1 pc

RIGID BORESCOPES

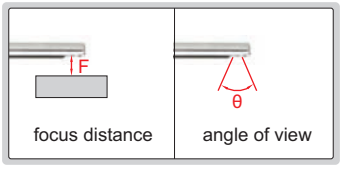
IP67 WATERPROOF



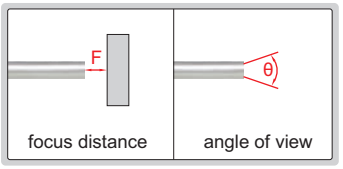
ISV-1H4300



view direction α=30° or 70°



view direction α=90°



view direction 0°

- Focus distance: 2mm, depth of view: 5~100mm
- Dust/waterproof level: IP67
- Can be used in liquid with temperature -10°C~85°C



LED light handle (**optional**)



adjustable LED light source (**optional**)



camera and display (**optional**)

SPECIFICATION

Code	Length (L)	View direction (α)	Diameter (ØD)	Angle of view (θ)
ISV-1H4170	174mm	0°	4mm	≥60°
ISV-1H4173	174mm	30°		
ISV-1H4177	174mm	70°		
ISV-1H4179	166mm	90°		
ISV-1H4300	302mm	0°		
ISV-1H4303	302mm	30°		
ISV-1H4307	302mm	70°		

OPTIONAL ACCESSORY

LED light handle	**ISV-1HLED**
Adjustable LED light source	**ISV-1LED1**
Camera and display	**ISV-2CAM**

LED LIGHT HANDLE
CODE ISV-1HLED


battery (included)


charger (included)





- For rigid borescopes

SPECIFICATION

Power	3W
Battery	3.7V rechargeable battery (for 2 hours working)
Dimension	120×27×27mm
Weight	300g

STANDARD DELIVERY

Main unit	1 pc
Battery	1 pc
Charger	1 pc

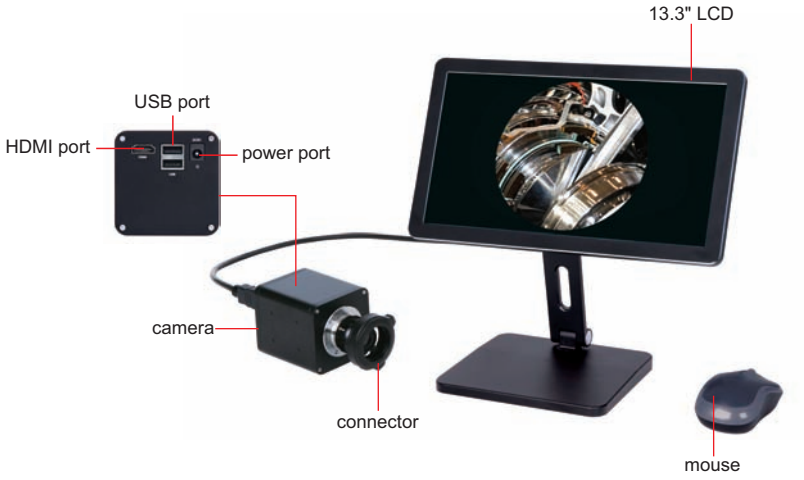
VIDEO

TAKE PICTURES AND VIDEOS

AUTO FOCUS

CAMERA (WITH DISPLAY)
CODE ISV-2CAM





- For rigid borescopes
- 1080P high-definition image
- Auto-focus camera
- Take pictures and videos, saved to USB flash disk
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable

SPECIFICATION

Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	350×100×430mm
Weight	2kg

STANDARD DELIVERY

Camera	1 pc
Connector	1 pc
13.3" LCD (with stand)	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	2 pcs


16G USB flash disk (included)

ADJUSTABLE LED LIGHT SOURCE
CODE ISV-1LED1





- For rigid borescopes
- High LED illumination and brightness is adjustable
- For long time work with low noise

SPECIFICATION

Color temperature	5600K
Cooling	fan cooling
Power supply	AC110~220V, 50/60Hz
Dimension	400×300×112mm
Weight	7kg

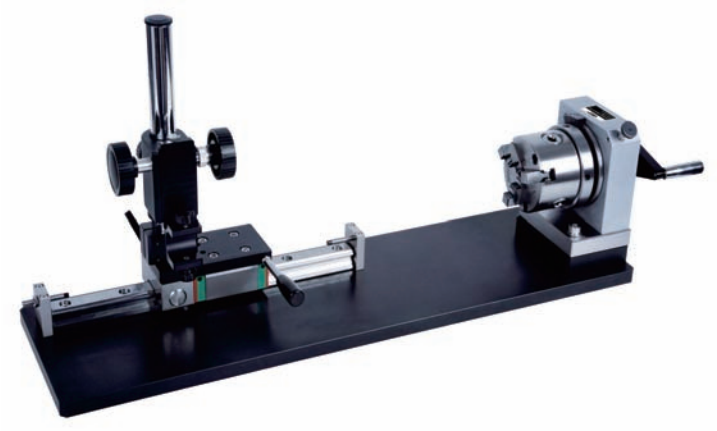
STANDARD DELIVERY

Main unit	1 pc
1.8m optical fiber cable	1 pc

FIXTURE FOR RIGID BORESCOPES
CODE ISV-H□□□

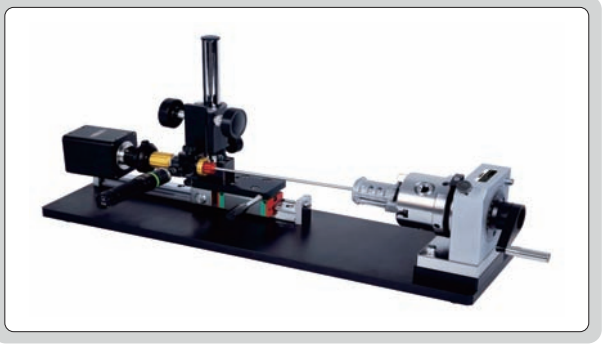
CUSTOMIZED ACCORDING TO WORKPIECES

VIDEO



- Rotation by handle
- Move borescope along sliding rail
- For viewing the inside of workpieces
- Can be customized according to workpieces

application



SPECIFICATION

Max. clamping diameter of chuck	Ø68mm
Max. length of workpieces	384mm
Dimension (L×W×H)	650×180×297mm

OTHER DIMENSION MEASURING INSTRUMENTS

26



Coating Thickness Gauges
Page 883



XRF Plating Thickness Instruments
Page 884



Electromagnetic Ultrasonic Thickness Gauges
Page 885-886



Ultrasonic Thickness Gauges
Page 887-895



Glass Thickness Meters
Page 896



Laser Distance Meters
Page 897-898



Handheld 3D Scanners
Page 899-900



Laser Scan Micrometers
Page 901-907



Dual Axis Photoelectric Autocollimators
Page 908-909



Air Gauges And Displays
Page 910-913



Length Presetters
Page 914-917



Digital Gap Gauges
Page 918-920

26 OTHER DIMENSION MEASURING INSTRUMENTS



3D Line Laser Profile Measuring Machines
Page 921-922



Automatic Vision Inspection Machines
Page 923-924



Semi-Auto Measurement Stations
Page 925-928



Three-Dimension Full-Field Strain Measurement Systems
Page 929



Large Field Of View Dynamic Measurement Systems
Page 930

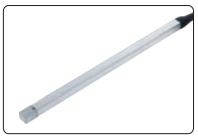


Total Stations
Page 931-932

BLUETOOTH | FOR MAGNETIC AND NON-MAGNETIC SUBSTRATES | DATA OUTPUT

COATING THICKNESS GAUGES (STANDARD TYPE)

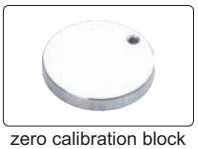

eddy current probe **NFE** with zero calibration block (**9501-1200N** included)


magnetic induction probe **FE90** for bores and grooves (**optional**)


calibration foils (included)

VIDEO


magnetic induction probe **FE10** for large range (**optional**)


zero calibration block (included)


receiver (**optional**)

INSPECTION CERTIFICATE

POPULAR MODEL



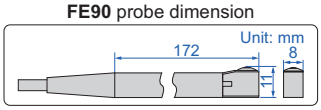
button for data transmission

9501-1200

magnetic induction probe **FE** (included)

- Magnetic induction probe (FE) measures the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate.
  Substrate: iron, steel, magnetic stainless steel (not for non-magnetic stainless steel)
  Coating: zinc, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Eddy current probe (NFE) measures the thickness of non-conductive coating on non-magnetic metal substrate.
  Substrate: copper, aluminum, zinc, non-magnetic stainless steel
  Coating: plastic, powder, paint, anodizing (not for chrome and zinc plating)
- Tolerance measurement
- Data statistic, including average, variance, maximum and minimum values
- Data can be sent to Excel by connecting to computers via bluetooth or cable of receiver
- Support bluetooth printer
- Automatic power off

FE90 probe dimension



SPECIFICATION

Code	9501-1200	9501-1200N
Probe	magnetic induction probe	eddy current probe
Measuring range	refer to the specification of probes	
Accuracy	±(3%L+1)μm (range≤1250μm) ±(3%L+10)μm (range>1250μm) L is measuring thickness in μm	
Resolution	0.1μm (range<100μm) 1μm (range≥100μm)	
Measuring mode	continuous and single	
Storage capacity	600	
Output	Type-C	
Power supply	2×1.5V AA batteries	
Dimension	135×77×32mm	
Weight	172g	

STANDARD DELIVERY

Code	9501-1200	9501-1200N
Magnetic induction probe (9501-1200-FE)	1 pc	—
Zero calibration block for FE probe	1 pc	—
Eddy current probe (9501-1200-NFE)	—	1 pc
Zero calibration block for NFE probe	—	1 pc
Main unit	1 pc	1 pc
Software and USB cable	1 pc	1 pc
Calibration foils (50/100/250/500/1000μm)	1 set	1 set
1.5V AA battery	2 pcs	2 pcs

OPTIONAL ACCESSORY

Code	9501-1200	9501-1200N
Probe	9501-1200-NFE, 9501-1200-FE90, 9501-1200-FE10	9501-1200-FE, 9501-1200-FE90, 9501-1200-FE10
Receiver	ISR-C300-RECEIVER	
Cable of receiver	9501-1200-CABLE	
Bluetooth printer	ISR-C002-PRINTER	

SPECIFICATION OF PROBES

Code	Range	Minimum substrate thickness	Minimum measuring area	Minimum curvature radius of convex workpiece	Probe type
9501-1200-FE	0~1250μm	0.5mm	Ø7mm	1.5mm	magnetic induction probe (**FE**)
9501-1200-NFE	0~1250μm	0.3mm	Ø15mm	3mm	eddy current probe (**NFE**)
9501-1200-FE90	0~1250μm	0.5mm	Ø7mm	—	magnetic induction probe (**FE90**) for bores and grooves
9501-1200-FE10	500μm~10000μm	2mm	Ø40mm	10mm	magnetic induction probe (**FE10**) for large range

COATING THICKNESS GAUGES

REFER TO PAGE 278-284 OF "TESTING INSTRUMENTS" CATALOGUE FOR DETAILS



ISO-8000FN



5401-TC11



5402-TC21



5404-QM42



ISO-1000FN



ISO-1200FN



5403-QM32

XRF PLATING THICKNESS INSTRUMENTS

REFER TO PAGE 240-244 OF "TESTING INSTRUMENTS" CATALOGUE FOR DETAILS



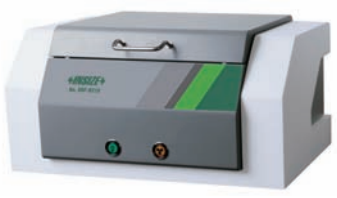
XRF-PT230



XRF-FA350



XRF-VF300



XRF-B210

MEASUREMENT THROUGH COATING AND RUST LAYER

ELECTROMAGNETIC ULTRASONIC THICKNESS GAUGE CODE EMU-S340

NO COUPLING AGENT REQUIRED

NON-CONTACT MEASUREMENT

TEMPERATURE COMPENSATION

VIDEO

- No surface polishing required, can penetrate anti-corrosion coating and rust (maximum 4mm), no coupling agent required
- Normal temperature permanent magnetic probe and high temperature permanent magnetic probe are using weak permanent magnet, to replace the strong permanent magnet commonly used nowadays. Completely solve the problem that EMAT transducer suction force is too large and difficult to move, so that the manual inspection is more simple, convenient and safe
- Temperature compensation function, can input the actual temperature of high-temperature components to automatically compensate the speed of sound, making the thickness measurement value more accurate
- Measurement of non verticality up to ±25°, low verticality requirements for probe placement
- Scanning mode: A-scan format, B-scan image format display of thickness measurement values
- 50000 thickness values and 4000 A-scan or B-scan data can be stored
- Integrated high-brightness LEDs on the back for easy on-site illumination



SPECIFICATION

Measuring range	1.5~200mm (steel, stainless steel)
Resolution	0.02mm
Accuracy	±0.04mm+H/1000 (H≤50mm) ±0.2mm (50≥H≥100mm) ±0.3mm (100≥H≥200mm)
Working gap (the distance between the probe and the measured object)	normal temperature permanent magnetic probe≤4mm high temperature permanent magnetic probe≤2mm
Minimum required diameter	≥8mm
Non-perpendicularity	±25°
Excitation frequency	3.0MHz~3.9MHz
Material velocity	1000~9999m/s
Adjustment increments	1m/s
Gate function	automatic gate, manual single gate, manual double gate
Display	color LCD, 3.5 inch/320×480 pixel
Interface	USB2.0
Power supply	rechargeable lithium battery, working time≥8 hours
Dimension	195×90×40mm
Weight	820g



normal temperature permanent magnetic probe sweep support
EMU-S52 (optional)



high temperature permanent magnetic probe
EMU-S51 (optional)

STANDARD DELIVERY

Main unit	1 pc
Transducer EMU-S50	1 pc
Calibration block (diameter Ø36×wall thickness 10mm)	1 pc
4G USB flash disk	1 pc
USB cable	1 pc

OPTIONAL ACCESSORY

High temperature permanent magnetic probe	EMU-S51
Normal temperature permanent magnetic probe sweep support	EMU-S52

SPECIFICATION OF TRANSDUCERS

Code	Magnetism	Magnetic force	Diameter (Ød)	Applicable temperature	Application
EMU-S50 (included)	weak permanent magnet	≤15N	Ø30mm	-10~60°C	general use
EMU-S51 (optional)	weak permanent magnet	≤20N	Ø45mm	-50~800°C	for high temperature

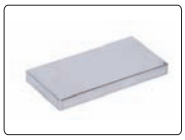
PEN TYPE ELECTROMAGNETIC ULTRASONIC THICKNESS GAUGES

VIDEO

COUPLING AGENT IS NOT REQUIRED | MEASUREMENT THROUGH COATING AND RUST LAYER | WORK AT MAXIMUM 600°C | WITH A AND B SCAN



high temperature probe (**optional**)



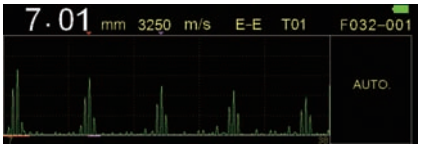
calibration block (included)



normal temperature probe (included)

EMU-A100

- Measurement without ultrasonic coupling agent, for workpieces with surface temperatures less than 600°C (depending on the probes)
- Compact size, easy to carry, comes with waveform display and full-function keyboard, easy to adjust the measurement parameters
- Non-contact measurement of rough, corroded surfaces without sanding
- Storage of 10000 data and 100 files
- Highly intelligent functions such as alarm for exceeding upper and lower limits, automatic zero calibration, automatic identification of probes, etc.
- Automatic power off
- Suitable for inspection of workpieces of various shapes, such as pipes, small tubes, elbows, etc.



A-Scan



B-Scan

SPECIFICATION

Code	EMU-A100	EMU-B100
Data output	USB	USB, Bluetooth
Measuring range	refer to the specification of probes	
Resolution	0.01mm	
Accuracy	±0.04mm (H≤10mm) ±(0.04+H/1000)mm (10≤H<100mm) ±H/333mm (H≥100mm) H is measuring thickness in mm	
Working gap (the distance between the probe and the measured object)	≤1mm	
Gain	automatic and manual gain	
Material velocity	1000~9999 m/s	
Measurement frequency	2 times/second 10 times/second fast measurement mode	
Measuring mode	auto mode, manual mode	
Display	LED, 800×268	
Storage	10000 data stored in 100 files	
Power supply	5V rechargeable lithium battery, 6 hours working time	
Operation temperature	-10°C~350°C	
Dimension	180×35×34mm	
Weight	300g	

STANDARD DELIVERY

Main unit	1 pc
Normal temperature probe	1 pc
Calibration block (8mm)	1 pc
USB cable	1 pc

OPTIONAL ACCESSORY

High temperature probe	EMU-B100-T02

SPECIFICATON OF PROBES

Code	Magnet	Measuring range	Diameter (Ød)	Working temperature	Applications
EMU-B100-T01 (included)	permanent magnet	1.5~150mm	Ø20mm	-10~120°C	general use, mainly used for fine crystal materials, such as mild steel, aluminum
EMU-B100-T02 (optional)	permanent magnet	1.5~300mm	Ø25mm	-10~600°C	high temperature environment, mainly used for ferromagnetic fine crystal materials, such as mild steel

ULTRASONIC THICKNESS GAUGE (ADVANCED TYPE) CODE ISU-800D

PENETRATE COATING AND MEASURE THE THICKNESS OF SUBSTRATE | BLUETOOTH | REAL-TIME TEMPERATURE COMPENSATION | DATA OUTPUT

VIDEO

- Real-time temperature compensation eliminates the error caused by temperature variation
- Support both single element transducers and dual element transducers
- Measure the thickness of substrate through coating
- Measuring mode: standard mode (dual element transducer: P-E mode, single element transducer: I-E mode), penetrate coating mode (dual element transducer: I-E mode, single element transducer: E-E mode or auto mode)
- Measure method: single point, scanning, deviation
- Set upper and lower limits for alarm when out-of-tolerance
- Single point and 2 points calibration
- Keyboard lock function avoids parameter setting change caused by unintended press during measurement
- Memory 1000 measurement values
- Data can be transmitted to PC by Bluetooth connection or Mini-USB cable



transducer **ISU-S15-P06** (included)



transducer **ISU-S2M-P14** (**optional**)



transducer **ISU-G5M-P10** (**optional**)



transducer **ISU-G5M-P08** (**optional**)



transducer **ISU-G7M-P06** (**optional**)



transducer **ISU-G2M-P12** (**optional**)



transducer **ISU-H3M-P12** (**optional**)



delay block **ISU-S15-P06-CB** (**optional**)



delay block **ISU-S15-P06-CB1** (**optional**)



SPECIFICATION

Measuring range	refer to the specification of transducers
Resolution	0.01mm/0.001mm
Accuracy	refer to the specification of transducers
Data output	bluetooth and USB
Velocity	1~19999m/s
Power supply	3.7V rechargeable lithium battery
Dimension	157×78×37mm
Weight	260g

STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-S15-P06	1 pc
Power adaptor	1 pc
USB cable	1 pc
Couplant	1 bottle

OPTIONAL ACCESSORY

Transducer	refer to the specification of transducers
Couplant (for ISU-H3M-P12)	**ISU-HT5-COUPLANT**
Thermal printer (with cable)	**ISU-800D-PRINTER**

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Code	Type	Freq	Diameter (Ød)	Measuring range	Min. size of pipes (diameter x wall thickness)	Accuracy	Applicable temperature	Application
ISU-S15-P06 (included)	single element	15MHz	8mm	I-E: 0.9~28mm E-E: 0.15~14mm	Ø10x1.5mm Ø15x0.35mm	±0.02mm/0.3%H* (take the larger one)	-10~60°C	high precision or thin workpieces
ISU-S15-P06-CB (optional)**	–	–	5mm	I-E: 0.9~10mm E-E: 0.15~5mm	Ø10x1.2mm Ø15x0.35mm			high precision or irregular surface
ISU-S15-P06-CB1 (optional)**	–	–	8mm	I-E: 0.9~38mm E-E: 0.3~19mm	–			high precision or thick workpieces
ISU-S2M-P14 (optional)	single element	2MHz	19mm	I-E: 30~2000mm E-E: 30~1000mm	–	±0.5%H*	-10~310°C	ultra-thick workpieces
ISU-G5M-P10 (optional)	dual element	5MHz	13mm	0.8~300mm	Ø25x3mm	±0.04mm (range: <10mm) ±H/333mm* (range: ≥10mm)	-10~60°C	normal workpieces
ISU-G5M-P08 (optional)	dual element	5MHz	11mm	0.8~225mm	Ø20x1.2mm			curved surface and normal workpieces
ISU-G7M-P06 (optional)	dual element	7.5MHz	9mm	0.8~50mm	Ø15x1.2mm			curved surface and small workpieces
ISU-G2M-P12 (optional)	dual element	2MHz	17mm	3~700mm	Ø30x4mm	±0.05mm/0.5%H* (take the larger one)		castings and thick workpieces
ISU-H3M-P12 (optional)	dual element	3MHz	15mm	2~200mm	Ø25x3mm	±0.05mm/0.5%H* (take the larger one)	-10~310°C	workpieces with high temperature

* H is the measured thickness in mm
** Delay blockers, suitable for transducer **ISU-S15-P06**

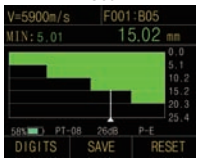
ULTRASONIC THICKNESS GAUGE
CODE ISU-810D

PENETRATE COATING AND MEASURE THE THICKNESS OF SUBSTRATES | WITH A AND B SCAN | DATA OUTPUT | VIDEO

A scan

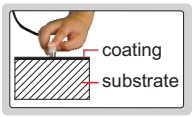


B scan

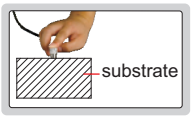




- Measure the thickness of substrate through coating
- Measuring mode: standard mode (dual element transducer: P-E), penetrate coating mode (dual element transducer: E-E)
- Dispiay mode: real-time color A-scan waveform mode, real-time color B-scan waveform mode, thickness value mode, Min/Max capture mode, difference or reduction rate mode
- Can measure gray cast iron, ductile iron, PE, PVC pipe, fiberglass, 3PE anticorrosive layer pipes, metal pipes, pressure vessels, shaped parts, wall thickness of small pipes etc.
- Set the upper and lower limits, and the reading color will change when the limit is exceeded
- One-point calibration and two-point calibration
- Can compensate the non-linearity of the twin-crystal probe by automatic V path correction
- Can store 100000 thickness values and 1000 waveforms
- USB 2.0 port connected to computer for statistics
- Languages: Chinese, English, German, French, Japanese
- Power off: automatic/manual



Echo-Echo mode (E-E)



Transmit-Echo mode (T-E)

SPECIFICATION

Measuring range	refer to the specification of transducers
Resolution	0.1/0.01mm
Accuracy	±0.05mm (H<10mm) ±(0.05%H+0.01)mm (H≥100mm) H is the thickness to be measured in mm
Display	320×240, color screen display
Measuring frequency	4Hz, 8Hz, 16Hz
Velocity	500~9999m/s
Applicable temperature	-20~50°C
Output	USB
Measuring unit	mm/inch
Power supply	2×1.5V AA batteries
Dimension	153×76×37mm
Weight	280g (including batteries)

transducer **ISU-810D-TC550** (**optional**)



transducer **ISU-810D-P04** (**optional**)



transducer **ISU-810D-P06** (**optional**)



transducer **ISU-810D-PT08** (**optional**)



transducer **ISU-810D-ZT12** (**optional**)



transducer **ISU-810D-GT12** (**optional**)



STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-810D-TC510	1 pc
Battery (AA)	2 pcs
Couplant	1 bottle
USB cable	1 pc

OPTIONAL ACCESSORY

Transducer	refer to the specification of transducers
Couplant (for ISU-810D-GT12)	**ISU-HT5-COUPLANT**

SPECIFICATION OF TRANSDUCERS

Code	Frequency	Diameter (Ød)	Measuring range	Applicable temperature	Application
ISU-810D-TC510 (included)	5MHz	13.5mm	1.2~400mm	-10~70°C	normal workpieces
ISU-810D-TC550 (optional)	5MHz	13.5mm	1~200mm	-10~70°C	fiberglass and organic material
ISU-810D-PT04 (optional)	10MHz	7mm	0.7~12mm	-10~70°C	small diameter workpieces
ISU-810D-PT06 (optional)	7.5MHz	8.7mm	0.8~30mm	-10~70°C	curved surface and small workpieces
ISU-810D-PT08 (optional)	5MHz	11mm	0.8~100mm	-10~60°C	normal workpieces
ISU-810D-ZT12 (optional)	2MHz	17mm	4~508mm	-10~70°C	cast iron (coarse grain) and thick workpieces
ISU-810D-GT12 (optional)	3MHz	15mm	2~80mm	-20~480°C	workpieces with high temperature

ULTRASONIC THICKNESS GAUGE
CODE ISU-720D

PENETRATE NON-METALLIC COATING AND MEASURE THE THICKNESS OF METAL SUBSTRATES

VIDEO

DATA OUTPUT

WITH A AND B SCAN

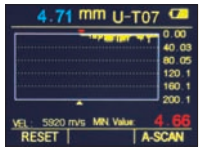
- Two measuring modes, Echo-Echo (E-E) and Transmit-Echo (T-E):
  – E-E is applicable for non-metallic coating (such as paint, plastic resin, etc.) on metal substrates, can penetrate coating and measure the thickness of substrates
  – T-E is to measure the thickness of material without coating, such as metal, plastic, glass, nylon, resin, ceramics, ice, etc.
- A scan, through the waveform, judges whether there are impurities, pores, cracks and so on inside, in order to avoid wrong measurement
- B scan, measures continuously, displays the thickness change on the screen
- Transducers can be automatically identified and zeroed
- Memory 10000 measurement values
- Data can be input to Excel and Word as keyboard signal
- Automatic or manual measurement
- When transducers are removed from workpieces, the measurement data are held on screen for easy viewing
- Set upper and lower limits for alarm when out-of-tolerance
- Automatic power off



A scan

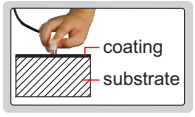


B scan

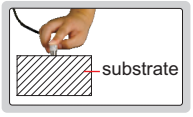


SPECIFICATION (ON STEEL)

Measuring range	refer to specification of transducers
Resolution	0.1/0.01mm
Accuracy	±0.04mm (H<10mm) ±(0.04+H/1000)mm (10≤H<100mm) ±H/333mm (H≥100mm) H is the thickness to be measured in mm
Frequency	refer to specification of transducers
Display	320×240, color screen display
Velocity	1000~9999m/s
Measuring frequency	2 times/second and 10 times/second
Operation temperature of main unit	-20~50°C
Output	USB
Measuring unit	mm/inch
Power supply	2×1.5V AA batteries
Dimension	133×75×29mm
Weight	260g (including batteries)



Echo-Echo mode (E-E)



Transmit-Echo mode (T-E)

transducer **ISU-T04** (**optional**)



transducer **ISU-T06** (**optional**)



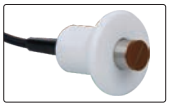
transducer **ISU-T08** (**optional**)



transducer **ISU-T12** (**optional**)



transducer **ISU-T13** (**optional**)



transducer **ISU-T25** (**optional**)



STANDARD DELIVERY

Main unit	1 pc
Bicrystal transducer ISU-T07	1 pc
Battery (AA)	2 pcs
Couplant	1 bottle
USB cable	1 pc

OPTIONAL ACCESSORY

Transducer	**ISU-T04, ISU-T06, ISU-T08, ISU-T12, ISU-T13, ISU-T25**
Couplant (for ISU-T13)	**ISU-HT5-COUPLANT**

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Code	Mode	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipes for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T07 (included)	T-E E-E	5.0MHz	13.2mm	T-E mode: 1.5~200mm E-E mode: 3~25mm	T-E mode: Ø25×3mm	-20~60°C	general use
ISU-T04 (optional)	T-E	10.0MHz	6mm	0.7~20mm	Ø15×1mm	-20~60°C	for small tubes
ISU-T06 (optional)	T-E	7.5MHz	9mm	0.7~50mm	Ø15×1.2mm	-20~60°C	for thin workpieces
ISU-T08 (optional)	T-E	5.0MHz	11mm	0.8~300mm	Ø25×1.2mm	-20~60°C	general use
ISU-T12 (optional)	T-E	2.0MHz	17mm	2~400mm	Ø40×3mm	-20~60°C	for casting iron
ISU-T13 (optional)	T-E	5.0MHz	15mm	3~100mm	Ø25×2mm	0~350°C	for high temperature
ISU-T25 (optional)	T-E	1.0MHz	26mm	3~200mm	–	-20~60°C	for fiberglass and organic material

ULTRASONIC THICKNESS GAUGE (FOR THICK WORKPIECES MADE OF ORGANIC MATERIALS) CODE ISU-710D

DATA OUTPUT

WITH A AND B SCAN

VIDEO

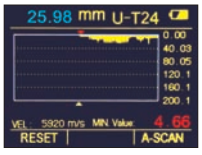


- For thick workpieces made of organic materials
- A scan, through the waveform, judges whether there are impurities, pores, cracks and so on inside, in order to avoid wrong measurement
- B scan, measures continuously, displays the thickness change on the screen
- Transducers can be automatically identified and zeroed
- Memory 10000 measurement values
- Data can be input to Excel and Word as keyboard signal
- Automatic or manual measurement
- When transducers are removed from workpieces, the measurement data are held on screen for easy viewing
- Set upper and lower limits for alarm when out-of-tolerance
- Automatic power off

A scan



B scan



SPECIFICATION (ON STEEL)

Measuring range		20~590mm
Resolution		0.1/0.01mm
Accuracy		±(0.04+H/1000)mm (H<100mm) ±H/333mm (H≥100mm) H is the thickness to be measured in mm
Transducer	**type**	single element transducer
	frequency	1.0MHz
	diameter (Ød)	26mm
Display		320×240, color screen display
Velocity		1000~9999m/s
Measuring frequency		2 times/second and 10 times/second
Operation temperature		main unit: -20~50°C transducer: -20~60°C
Output		USB
Measuring unit		mm/inch
Power supply		2×1.5V AA batteries
Dimension		133×75×29mm
Weight		260g (including batteries)

STANDARD DELIVERY

Main unit	1 pc
Transducer	1 pc
Battery (AA)	2 pcs
Couplant	1 bottle
USB cable	1 pc

DATA OUTPUT

WITH A AND B SCAN

ULTRASONIC THICKNESS GAUGE (FOR THIN WORKPIECES) CODE ISU-700D

VIDEO

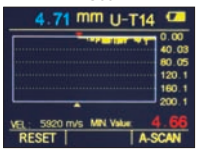


- For thin workpieces
- A scan, through the waveform, judges whether there are impurities, pores, cracks and so on inside, in order to avoid wrong measurement
- B scan, measures continuously, displays the thickness change on the screen
- Transducers can be automatically identified and zeroed
- Memory 10000 measurement values
- Data can be input to Excel and Word as keyboard signal
- Automatic or manual measurement
- When transducers are removed from workpieces, the measurement data are held on screen for easy viewing
- Set upper and lower limits for alarm when out-of-tolerance
- Automatic power off

A scan



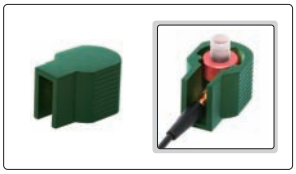
B scan



SPECIFICATION (ON STEEL)

Measuring range		Transmit-echo (T-E) mode: 1.5~20mm
		Echo-echo (E-E) mode: 0.2~10mm
Resolution		0.1/0.01/0.001mm
Accuracy		±0.04mm (H<10mm) ±(0.04+H/1000)mm (H≥10mm) H is the thickness to be measured in mm
Transducer	type	single element transducer
	frequency	15.0MHz
	diameter (Ød)	7.5mm
Display		320×240, color screen display
Velocity		1000~9999m/s
Measuring frequency		2 times/second and 10 times/second
Operation temperature		main unit: -20~50°C transducer: -20~60°C
Output		USB
Measuring unit		mm/inch
Power supply		2×1.5V AA batteries
Dimension		133×75×29mm
Weight		260g (including batteries)

transducer protective sleeve (included)



STANDARD DELIVERY

Main unit	1 pc
Transducer	1 pc
Transducer protective sleeve	1 pc
Battery (AA)	2 pcs
Couplant	1 bottle
USB cable	1 pc

ULTRASONIC THICKNESS GAUGE (THROUGH COATING)
CODE ISU-300D

PENETRATE NON-METALLIC COATING AND MEASURE THE THICKNESS OF METAL SUBSTRATE

VIDEO

DATA OUTPUT

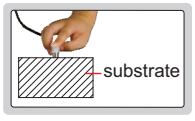
INSPECTION CERTIFICATE

- Two measuring modes, Echo-Echo (E-E) and Transmit-Echo (T-E):
  – E-E is applicable for non-metallic coating (such as paint, plastic resin, etc.) on metal substrates, can penetrate coating and measure the thickness of substrates
  – T-E is to measure the thickness of material without coating, such as metal, plastic, glass, nylon, resin, ceramics, ice, etc.
- Tolerance measurement
- Average calculation of maximum 9 readings
- Data can be input to Excel and Word as keyboard signal



SPECIFICATION (ON STEEL)

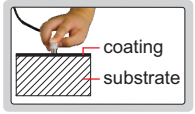
Measuring range	refer to specification of transducers
Resolution	0.1/0.01mm
Accuracy	±0.04mm (H<10mm) ±(0.04+H/1000)mm (10≤H<100mm) ±H/333mm (H≥100mm) H is the thickness to be measured in mm
Velocity	1000~9999m/s
Operation temperature of main unit	-20~50°C
Output	USB
Measuring unit	mm/inch
Power supply	2×1.5V AAA batteries
Dimension	116×64×27mm
Weight	220g



Transmit-Echo mode (T-E)


transducer **ISU-T04** (**optional**)


transducer **ISU-T06** (**optional**)



Echo-Echo mode (E-E)


transducer **ISU-T12** (**optional**)


transducer **ISU-T13** (**optional**)

STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-T07	1 pc
Battery (AAA)	2 pcs
Couplant (for ISU-T04, ISU-T06, ISU-T07, ISU-T12)	1 bottle
USB cable	1 pc

OPTIONAL ACCESSORY

Transducer	**ISU-T04, ISU-T06, ISU-T12, ISU-T13**
Couplant (for ISU-T13)	**ISU-HT5-COUPLANT**

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Code	Mode	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipes for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T07 (included)	T-E E-E	5.0MHz	13.2mm	T-E mode: 1.5~200mm E-E mode: 3~25mm	T-E mode: Ø25×3mm	-20~60°C	general use
ISU-T04 (optional)	T-E	10.0MHz	6mm	0.7~20mm	Ø15×1mm	-20~60°C	for small tubes
ISU-T06 (optional)	T-E	7.5MHz	9mm	0.7~50mm	Ø15×1.2mm	-20~60°C	for thin workpieces
ISU-T12 (optional)	T-E	2.0MHz	17mm	2~400mm	Ø40×3mm	-20~60°C	for casting iron
ISU-T13 (optional)	T-E	5.0MHz	15mm	3~100mm	Ø25×2mm	0~350°C	for high temperature

INSPECTION CERTIFICATE DATA OUTPUT

ULTRASONIC THICKNESS GAUGE
CODE ISU-250C

VIDEO



- Measure the thickness from one side of objects, suitable for pipes, tanks, etc.
- Applicable material: metal, plastic, glass, nylon, resin, ceramic, ice
- Tolerance measurement
- Average calculation of 9 readings
- Data can be input to Excel and Word as keyboard signal

SPECIFICATION (ON STEEL)

Measuring range	refer to specification of transducers
Resolution	0.1/0.01mm
Accuracy	±0.04mm (H<10mm) ±(0.04+H/1000)mm (10≤H<100mm) ±H/333mm (H≥100mm) H is the thickness to be measured in mm
Velocity	1000-9999m/s
Operation temperature of main unit	-20~50°C
Output	USB
Measuring unit	mm/inch
Power supply	2×1.5V AAA batteries
Dimension	64×116×27mm
Weight	220g




transducer **ISU-T06** (**optional**)


transducer **ISU-T13** (**optional**)


transducer **ISU-T04** (**optional**)


transducer **ISU-T12** (**optional**)

STANDARD DELIVERY

Main unit	1 pc
Transducer ISU-T08	1 pc
Battery (AAA)	2 pcs
Couplant (for ISU-T04, ISU-T06, ISU-T08, ISU-T12)	1 bottle
USB cable	1 pc

OPTIONAL ACCESSORY

Transducer	**ISU-T04, ISU-T06, ISU-T12, ISU-T13**
Couplant (for ISU-T13)	**ISU-HT5-COUPLANT**

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Code	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipes for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-T08 (included)	5.0MHz	11mm	0.8~300mm	Ø25×1.2mm	-20~60°C	general use
ISU-T04 (optional)	10.0MHz	6mm	0.7~20mm	Ø15×1mm	-20~60°C	for small tubes
ISU-T06 (optional)	7.5MHz	9mm	0.7~50mm	Ø15×1.2mm	-20~60°C	for thin workpieces
ISU-T12 (optional)	2.0MHz	17mm	2~400mm	Ø40×3mm	-20~60°C	for casting iron
ISU-T13 (optional)	5.0MHz	15mm	3~100mm	Ø25×2mm	0~350°C	for high temperature

ULTRASONIC THICKNESS GAUGE
CODE ISU-200D

VIDEO

POPULAR MODEL

transducer
ISU-200D-N02
(optional)



transducer
ISU-200D-N07
(optional)



transducer
ISU-200D-W05
(optional)



transducer
ISU-200D-HT5
(optional)





- With zero calibration and two-point calibration function, can automatically correct the system error
- Measure method: single point, scanning, deviation
- Measures steel, cast iron, aluminum, copper, plastics, ceramics, glass, fiberglass, etc
- Set upper and lower limits for alarm when out-of-tolerance
- Memory 500 measurement values

SPECIFICATION

Measuring range	refer to the specification of transducers
Resolution	0.01mm
Accuracy	±0.05mm (H<10mm) ±0.5%Hmm (H≥10mm) H is the thickness to be measured in mm
Velocity	1~9999m/s
Measuring frequency	4 times/second
Operation temperature of main unit	-10~50°C
Output	USB
Measuring unit	mm/inch
Power supply	3×1.5V AAA batteries
Dimension	150×70×30mm
Weight	180g

OPTIONAL ACCESSORY

Transducer	refer to the specification of transducers
Couplant (for ISU-200D-HT5)	**ISU-HT5-COUPLANT**
Thermal printer (with cable)	**ISU-200D-PRINTER**

STANDARD DELIVERY

Main unit	1 pc
Transducer (ISU-200D-N05)	1 pc
Battery (AA)	3 pcs
USB cable	1 pc
Couplant	1 bottle

SPECIFICATION OF TRANSDUCERS (ON STEEL)

Code	Frequency	Diameter (Ød)	Measuring range	Minimum size of pipe for measurement (diameter × wall thickness)	Applicable temperature	Application
ISU-200D-N05 (included)	5.0MHz	13mm	0.8~300mm	Ø25×3mm	-10~60°C	general use
ISU-200D-N02 (optional)	2.0MHz	17mm	3~400mm	Ø30×4mm	-10~60°C	for casting steel
ISU-200D-N07 (optional)	7.5MHz	9mm	0.75~50mm	Ø15×1.2mm	-10~60°C	for thin material
ISU-200D-W05 (optional)	5.0MHz	11mm	0.8~225mm	Ø20×1.2mm	-10~60°C	for wall thickness
ISU-200D-HT5 (optional)	3.0MHz	15mm	2~200mm	Ø25×3mm	-10~310°C	for high temperature

ATTENTION: NOT SUITABLE FOR CASTINGS AND ALUMINUM WORKPIECES

ULTRASONIC THICKNESS GAUGE (BASIC TYPE)
CODE ISU-100D

INSPECTION CERTIFICATE

VIDEO



- Measure the thickness from one side of objects, suitable for pipes, tanks, etc.
- Applicable material: steel, stainless steel, glass, copper, brass, polystyrene, titanium, etc.

SPECIFICATION (ON STEEL)

Measuring range		0.8~300mm
Resolution		0.1/0.01mm
Accuracy		±0.05mm (H<10mm) ±(0.05+H/1000)mm (10≤H<100mm) ±H/333mm (H≥100mm) H is the thickness to be measured in mm
Transducer	frequency	5MHz
	diameter (Ød)	10.8mm
Minimum size of pipes		20×1.2mm (diameter×wall thickness)
Velocity		1000-9999m/s
Operation temperature		main unit: -20~50°C transducer: -20~60°C
Measuring unit		mm/inch
Power supply		2×AAA batteries
Dimension		114×64×28mm
Weight		200g



STANDARD DELIVERY

Main unit	1 pc
Transducer	1 pc
Couplant	1 bottle
Battery (AAA)	2 pcs

STANDARD TEST BLOCKS FOR ULTRASONIC THICKNESS GAUGES

STEP WEDGE BLOCKS CAN BE CUSTOMIZED

INSPECTION CERTIFICATE

Cylinder block set (17 blocks are included) (mm)

Code	Material	Diameter	Thickness	Accuracy	QTY
ISU-ST	45#	20	0.5	±0.01	1 pc
	45#	20	1		1 pc
	45#	20	1.2		1 pc
	45#	20	1.5		1 pc
	45#	20	2		1 pc
	45#	20	3.3		1 pc
	45#	20	5.5		1 pc
	45#	20	7.7		1 pc
	45#	20	10		1 pc
	45#	20	15		1 pc
	45#	20	20	±0.02	1 pc
	45#	20	25		1 pc
	45#	20	50		1 pc
	45#	20	75		1 pc
	45#	20	100	±0.05	1 pc
	45#	20	150		1 pc
	45#	20	200		1 pc



cylinder block



round tube block

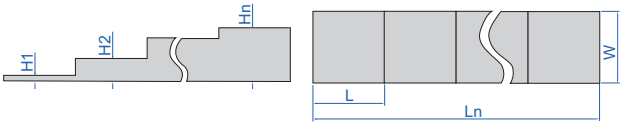
- Supplied with manufacturer inspection certificate
- Material of step wedge blocks can be customized

Round tube block set (2 blocks are included) (mm)

Code	Material	Outer diameter	Wall thickness	Accuracy	Length	QTY
ISU-SWT	45#	30	2	±0.02	40	1 pc
	45#	40	3	±0.02	40	1 pc



step wedge block



Step wedge blocks (mm)

Code	Material	QTY of steps (n)	Thickness							Accuracy	Width (W)	Length of each step (L)	Total length (Ln)
			H1	H2	H3	H4	H5	H6	H7				
ISU-S4A	45#	4	6.25	12.5	18.75	25	-	-	-	±0.02	20	20	80
ISU-S4B	45#	4	5	10	15	20	-	-	-	±0.02	20	20	80
ISU-S5A	45#	5	2.5	5	7.5	10	12.5	-	-	±0.02	20	20	100
ISU-S5B	45#	5	2	4	6	8	10	-	-	±0.02	20	20	100
ISU-S7A	45#	7	3	12.5	24	30	36	42	48	±0.02	40	40	280
ISU-S7B	45#	7	1	1.5	2	4	6	8	10	±0.02	40	40	280

DIGITAL GLASS THICKNESS METER CODE 5805-GT22

VIDEO

- Laser reflection principle to measure the thickness of glass and internal air layer. Especially suitable for building laminated glasses, hollow glass windows, etc.
- To test the thickness of single layer glasses, multi-layer glasses, two glasses with one cavity, three glasses with two cavities, laminated glasses, laminated insulating glasses, etc.



SPECIFICATION

Measuring range	glass thickness (0~70mm), air layer (0~45mm)
Accuracy	±0.1mm (measuring range≤63mm), ±0.2mm (measuring range>63mm)
Resolution	0.01mm
Display	LCD
Power supply	4×1.5V AAA batteries
Dimension	130×72×33mm
Weight	330g

STANDARD DELIVERY

Main unit	1 pc
Cross screwdriver	1 pc
1.5V AAA battery	4 pcs

BUILT-IN BLUETOOTH

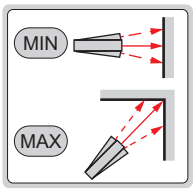
BLUETOOTH LASER DISTANCE METERS



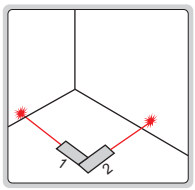
9564-D50

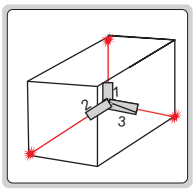


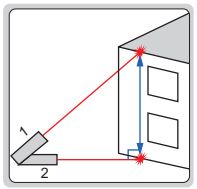
- Built-in bluetooth, transmission distance is 10 meters (no obstacles, no electromagnetic interference)
- Built-in angle sensor
- Display with backlight
- Distance, area, volume and height measurement
- Continuos measuring mode to track maximum and minimum value
- Unit: m, ft, in, ft+in
- Memory of 20 measurement values
- Automatic power off: laser 30s, main unit 180s

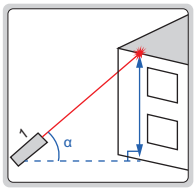


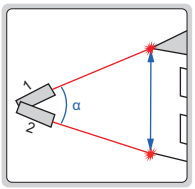
continuos measurement


area measurement


volume measurement


height measurement (1)


height measurement (2)


height measurement (3)

SPECIFICATION

Code	9564-D50	9564-D60
Measuring range	0.2~100m	0.2~120m
Resolution	0.001m	<100m: 0.001m 100~120m: 0.01m
Accuracy	±(2+D/20)mm D: measured distance, unit: m	<100m: ±(2+D/20)mm 100~120m: ±10mm D: measured distance, unit: m
Laser type	490~670nm, class II, <1mW	
Accuracy of tilt angle*	±(0.4°+0.01°×T) T: operation temperature, unit: °C	
Power supply	3×rechargeable batteries	
Operation temperature	0~40°C	
Dimension (L×W×H)	120×57×28mm	
Weight	125g	

*Angle between the laser beam and the horizontal line

STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	3 pcs

OPTIONAL ACCESSORY

Tripod	0701-TR175

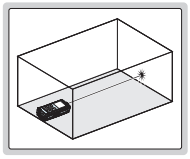
LASER DISTANCE METERS

POPULAR MODEL

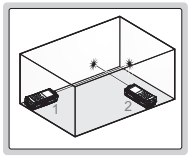
- High accuracy models: **9561-50B**, **9561-70B**
  Low accuracy models: **9561-50B-F**, **9561-70B-F**
- Large display with backlight
- Unit: m, ft, in, ft+in
- Distance, area, volume and height measurement
- Continuos measuring mode to track maximum and minimum value
- Memory of 30 measurement values
- Automatic power off: laser 30s, main unit 180s



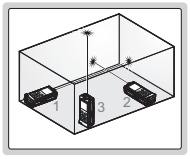
9561-50B



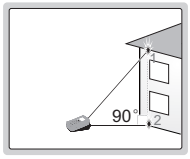
distance measurement



area measurement



volume measurement



height measurement

SPECIFICATION

Code	9561-50B	9561-70B	9561-50B-F	9561-70B-F
Measuring range	0.2~50m	0.2~70m	0.2~50m	0.2~70m
Resolution	0.001m, 0.001ft, 1/16"			
Accuracy	±(3+D/20)mm D: measured distance, unit: m		±(5+D/20)mm D: measured distance, unit: m	
Laser type	red laser, 630~670nm, class II, <1mW			
Power supply	2×AAA batteries			
Dimension (L×W×H)	115×50×28mm			
Weight	95g			

STANDARD DELIVERY

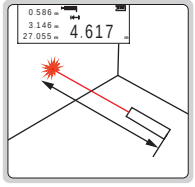
Main unit	1 pc
Battery (AAA)	2 pcs

MINI LASER DISTANCE METER
CODE 9565-E40

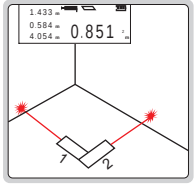
BUILT-IN BLUETOOTH

VIDEO



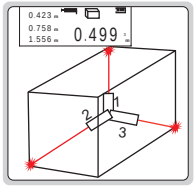


distance measurement

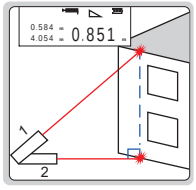


area measurement

- Built-in bluetooth, transmission distance is 10 meters
  (no obstacles, no electromagnetic interference)
- Display with backlight
- Unit: m, ft, in, ft+in
- Distance, area, volume and height measurement
- Automatic power off: laser 30s, main unit 180s



volume measurement



height measurement

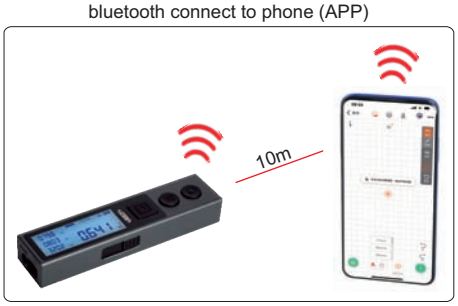
SPECIFICATION

Measuring range	0.2~40m
Resolution	0.001m, 0.001ft, 1/16"
Accuracy	±(3+D/20)mm, D: measured distance, unit: m
Laser type	red laser, 630~670nm, class II, <1mW
Charging interface	USB (type-C)
Dimension	180×28×40mm
Weight	53g

STANDARD DELIVERY

Main unit	1 pc
USB charging cable	1 pc

bluetooth connect to phone (APP)



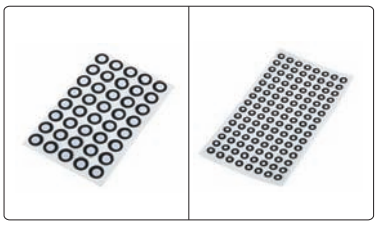
VIDEO

HANDHELD 3D SCANNER
CODE LSM-L340



- Dual-layer LED design for clearer deep hole scanning
- AI algorithm module, greatly improve the scanning effect
- Highly efficient scanning with ultra-fast measuring speeds
- Metrology-grade measuring accuracy


calibration plate (included)


R3mm and R1.5mm mark (included)

SPECIFICATION

Scanning mode	hige-speed scanning	26 crossed blue laser lines
	precision scanning	7 parallel blue laser lines
	deep hole scanning	1 blue laser line
Maximum scanning speed		3800000 measurements/s
Volume accuracy		0.020mm+0.030mm/m
Laser class		CLASS II (eye-safe)
Maximum resolution		0.01mm
Depth of field		550mm
Reference distance		300mm
Maximum scanning field		650mm×550mm
Output format		.stl .ply .txt
Interface		USB 3.2
Power supply		100~240V, 50/60Hz
Dimension (L×W×H)		315×140×85mm

STANDARD DELIVERY

Main unit	1 pc
Scanning software	1 pc
R1.5mm mark	1000 pcs
R3.0mm mark	4000 pcs
Calibration plate	1 pc

OPTIONAL ACCESSORY

3D measuring software	CMM-CEM-PI
Computer	customized according to measuring requirements

To be continued

Continued from previous page



high-speed scanning: 26 crossed blue laser lines



precision scanning: 7 parallel blue laser lines



deep hole scanning: 1 blue laser line

SCANNING SOFTWARE (INCLUDED)

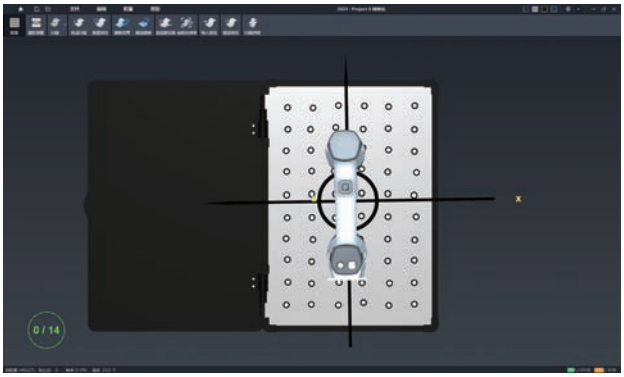
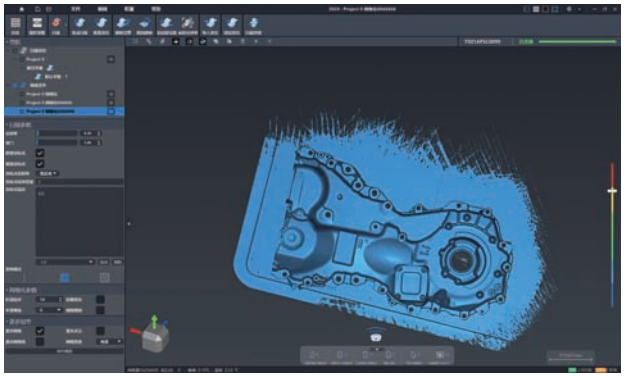
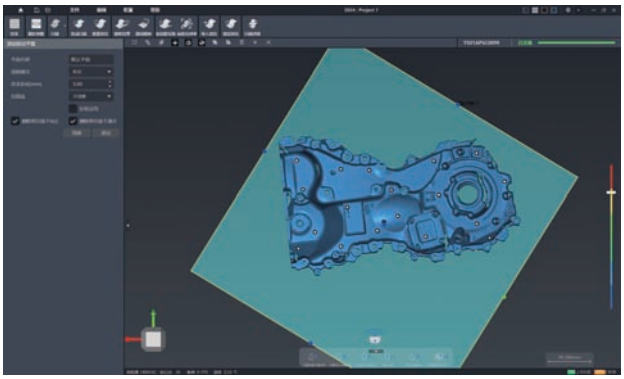


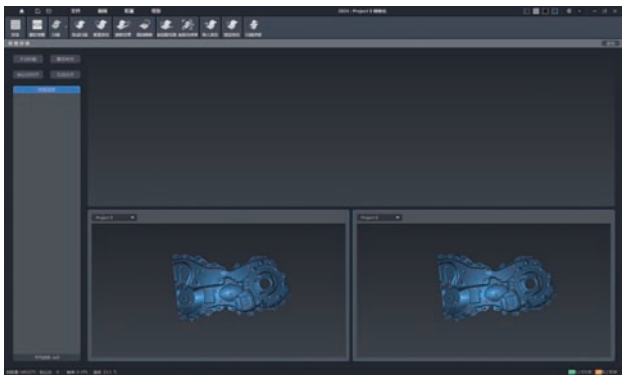
image-guided calibration



point cloud meshing



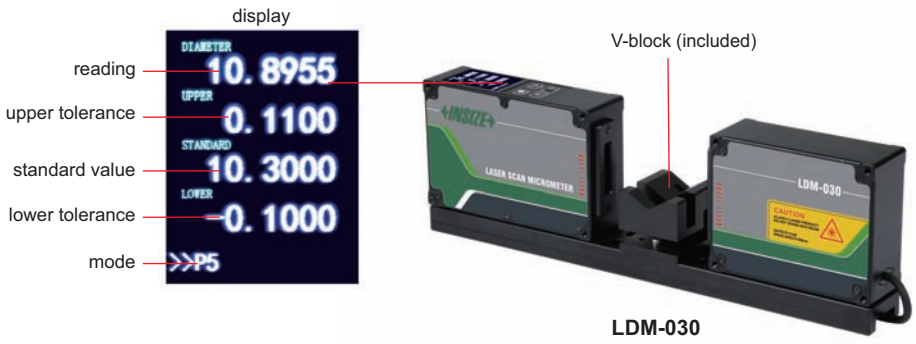
invalid area removal



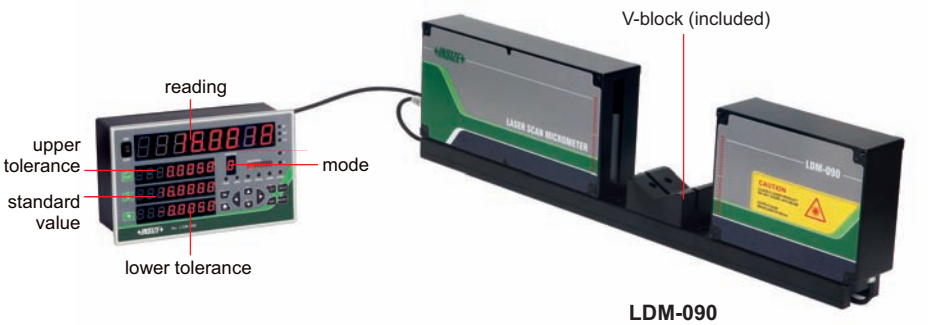
scanning splicing

LASER SCAN MICROMETERS (ADVANCED TYPE)

VIDEO

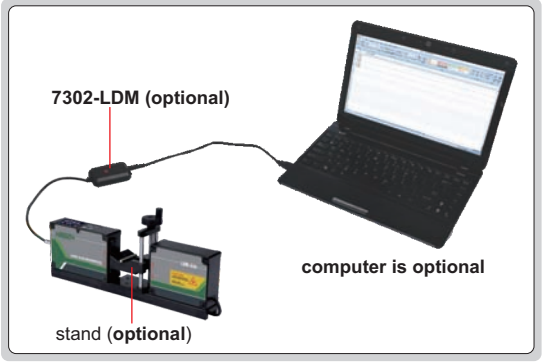


LDM-030



LDM-090

- Measure outer diameter, ellipticity, run-out, maximum diameter of tools, etc.
- Can be used for transparent or non transparent workpieces
- Simultaneous measurement of 4 outer diameters
- Tolerance measurement
- Online or offline measurement
- Connected with computer, PLC, control box



keyboard signal, can be transmitted to Excel

SPECIFICATION

Code	LDM-030	LDM-065	LDM-090
Measuring range	0.1~30mm	0.5~65mm	1~85mm
Resolution	0.01/0.1/1/10/100μm selectable		
Accuracy (25°C in laboratory)	±(0.5+10%D)μm, D is measuring diameter in mm		±6μm
Repeatability (25°C in laboratory)	(0.3+5%D)μm, D is measuring diameter in mm		3μm
Laser wave length	650nm		
Measuring speed	800 times/s		
Operation temperature	0~50°C		
Operation humidity	35~85% without condensation		
Output	dual channel RS485, network port		
Alarm output	24V, 1A		
Power supply	DC24V, 2A		
Dimension (L×W×H)	375×46×120mm	495×46×156mm	608×60×162mm
Weight	5kg	8kg	10kg



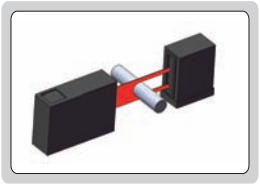
calibration gauge (**optional**)

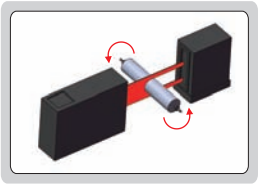


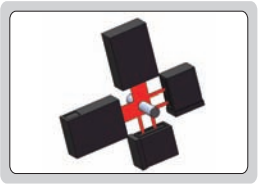
stand (**optional**)

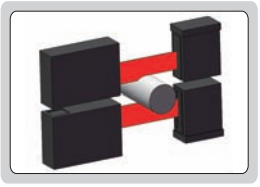
To be continued

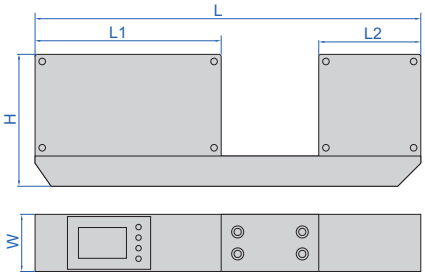
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measure external diameter


measure ellipticity and run-out


two-axis measurement


large size measurement

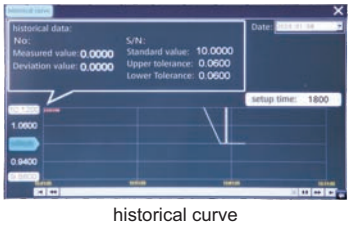


Dimension **(mm)**

Code	LDM-030	LDM-065	LDM-090
L	375	495	608
W	46	46	60
H	120	156	162
L1	150	180	278
L2	115	152	179


connect to control box (**optional**)


main interface


historical curve


parameter setting


data enquiry

STANDARD DELIVERY

Main unit	1 pc
V-block	1 pc
AC/DC adapter	1 pc
RS485 cable	1 pc

OPTIONAL ACCESSORY

Data output cable (keyboard format)	**7302-LDM** page 17
Stand	**LDM-V1**
Calibration gauge	custom made
Control box	custom made
Computer software	custom made

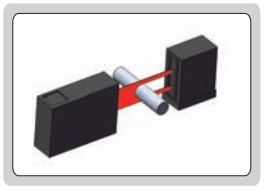
LASER SCAN MICROMETER (BASIC TYPE)
CODE LDM-D090



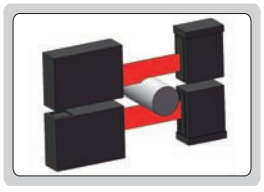


calibration gauge (**optional**)

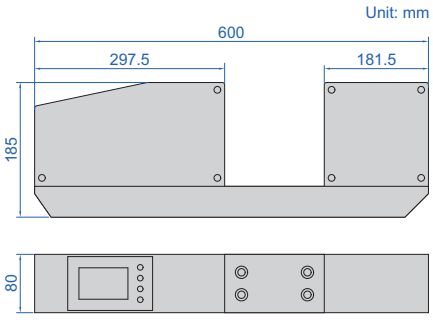
- Can measure the width and thickness of flat cables and tapes
- Can measure the outer diameter of cables, pipes and wires
- Laser scanning technology, large measurement range, high accuracy, high repeatability
- Connected with PLC and PC with RS485 interface
- Use high-precision F (θ) mirror, the swing of the measured object does not affect the measurement



measure external diameter



large size measurement



SPECIFICATION

Measuring range	0.5~90mm
Resolution	1μm
25°C accuracy	±(5+20%D)μm, D is measuring diameter in mm
Repeatability	(3+20%D)μm, D is measuring diameter in mm
Laser wave length	650nm
Measuring speed	600 times/s
Operation temperature	5~45°C
Operation humidity	≤80%RH without condensation
Output	RS485/MODBUS protocol
Alarm output	24V, 1A
Power supply	AC85V~220V (50~60Hz)
Dimension (L×W×H)	600×80×185mm
Weight	6.5kg

STANDARD DELIVERY

Main unit	1 pc
V-block	1 pc
AC/DC adapter	1 pc
RS485 cable	1 pc

OPTIONAL ACCESSORY

Calibration gauge	custom made

AUTOMATIC LASER SCAN MICROMETER
CODE LDM-AT01

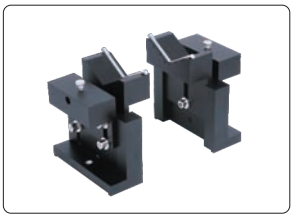
CUSTOMIZED ACCORDING TO WORKPIECES

VIDEO





center-type bench center (included)



V-type bench center (included)



clamping workpieces by V-type bench center



clamping workpieces by center-type bench center

- Motorised rotation with adjustable speed
- Auto-moving laser scan micrometer
- Measure the outer diameter, roundness and runout of workpieces at multiple sections

SPECIFICATION

Workpiece clamping mode		center-type bench center (with centre holes at the end)	V-type bench center (without centre holes at the end)
Measuring range of workpieces	length	5~300mm	10~230mm
	diameter	3~60mm	10~60mm
	max. weight	20kg	1.5kg
Accuracy at 25°C		±(0.5+10%D)μm, D is measuring diameter in mm	
Repeatability at 25°C		(0.3+5%D)μm, D is measuring diameter in mm	
Runout accuracy at 25°C		≤5μm	
Size of working table		400×200mm	
Driving method		motor drive	
Power supply		220V, 50/60Hz	
Dimension		750×600×900mm	
Weight		50kg	

STANDARD DELIVERY

Main unit	1 pc
Center-type bench center	1 pc
V-type bench center	1 pc

To be continued

Continued from previous page

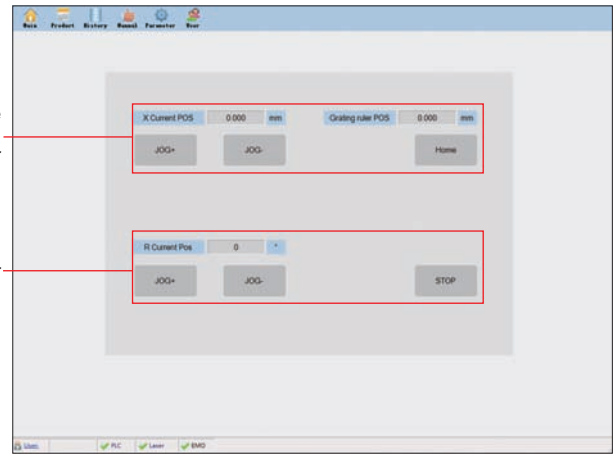
MEASURING SOFTWARE (INCLUDED)

- Language: English and Chinese
- Operation system: Windows 7
- Measure the outer diameter, roundness and runout of workpieces automatically, then the data, trend graphs and judgement results can be displayed in real time
- Auto-saving measurement data, query and export to EXCEL at any time
- Switch to manual test to move the laser scan micrometer and rotate the motor by hand

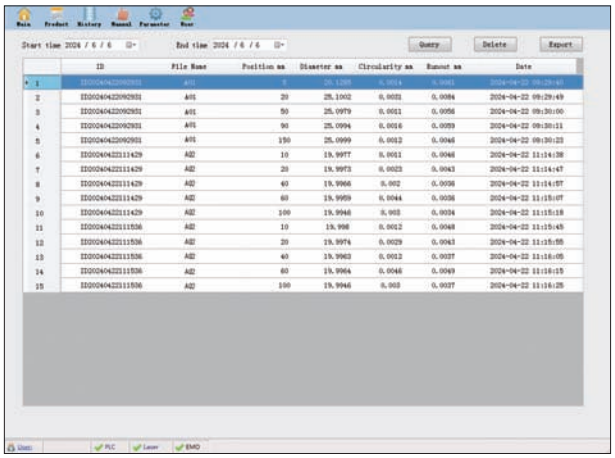
main interface



manual test



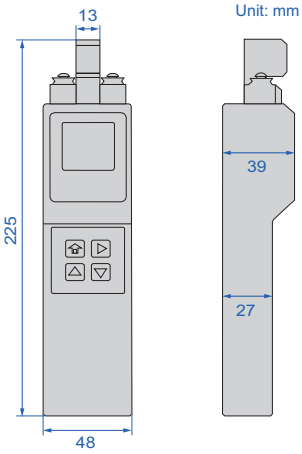
history data



HANDHOLD LASER SCAN MICROMETER
CODE LDM-H02

VIDEO

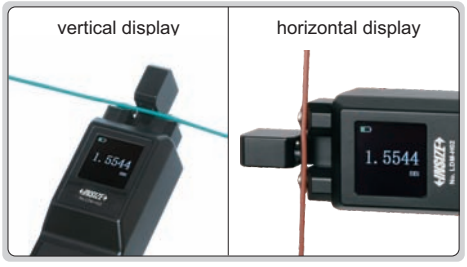




calibration gauge
(included)



application



- Measure the outside diameter of cables, pipes and wires
- For transparent or non transparent workpieces
- Unit: mm, inch, mil, μm
- Compact and portable, the reading can be displayed vertically or horizontally

SPECIFICATION

Measuring range	0.02~2mm
Resolution	0.001mm/0.0001mm/0.00001mm adjustable
Accuracy (at 25°C)	±0.5μm
Repeatability (at 25°C)	0.3μm
Laser wave length	650nm
Measuring speed	800 times/s
Operation temperature	0~50°C
Operation humidity	35~85%RH without condensation
Power supply	built-in 7.4V rechargeable battery
Weight	495g

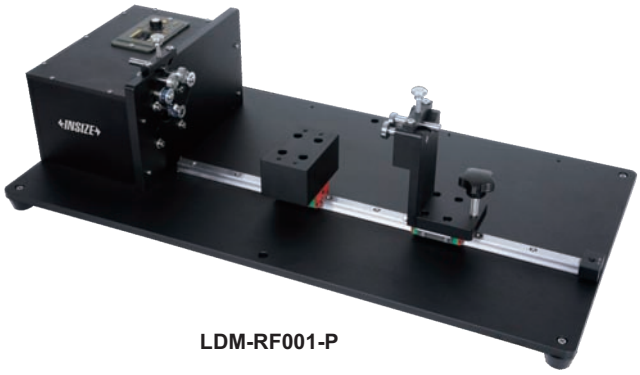
STANDARD DELIVERY

Main unit	1 pc
Calibration gauge	3 pcs (0.10±0.001mm, 0.30±0.001mm, 0.80±0.001mm)
AC/DC adapter	1 pc

VIDEO

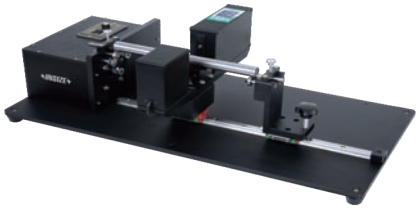
CUSTOMIZED TO WORKPIECES

FIXTURE FOR LASER SCAN MICROMETERS

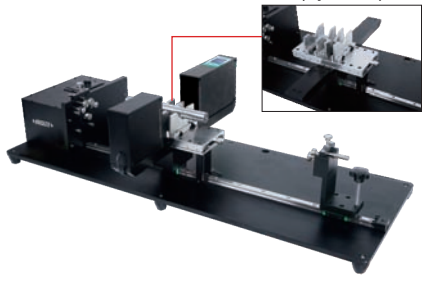


LDM-RF001-P

application



customized fixture (**optional**)



customized fixtures are available for special shapes of workpieces, such as stepped shapes

- Motorised rotation with adjustable speed
- Move laser scan micrometer by hand
- Measurement of the outer diameter and runout of workpieces at multiple sections
- Can be customized to the workpieces

SPECIFICATION

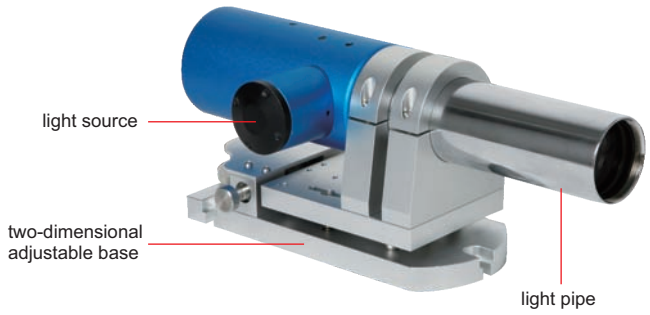
Code		LDM-RF001-P	LDM-RF001-K	LDM-RF001-B
Measuring range	diameter	Ø3~25mm		
	length	50~350mm		
Runout accuracy		2μm		
Power supply		AC 220V, 50/60Hz		
Power cord		European type	British type	Brazilian type
Dimension		680×360×200mm		

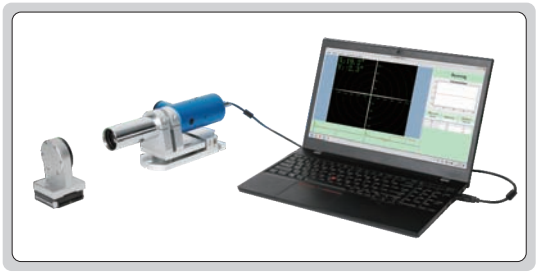
OPTIONAL ACCESSORY

Customized fixture	customized according to customer workpieces

DUAL AXIS PHOTOELECTRIC AUTOCOLLIMATOR
CODE CMS-L401

VIDEO





software (included)

- Dual axis simultaneous measurement, convenient and efficient
- Electronic eyepiece, low aiming error
- High resolution photodetector, high measurement accuracy
- Semiconductor LED light source, long service life of the light source
- Automatic curve plotting, automatic error calculation
- Multiple data processing methods, can generate standard Excel reports
- Selection of different accessories and measurement software modules, for different measurement needs

SPECIFICATION

Working distance	0-10m
Focal length of objective lens	200mm
Caliber of light	38mm
Light source	semiconductor LED
Field of view range	3200×2400"
Accuracy	±1000" within ±1"
Resolution	0.1"
Data transmission	USB2.0
Dimension (L×W×H)	288×130×115mm
Weight	3.5kg

STANDARD DELIVERY

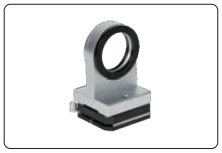
Main unit	1 pc
Reflector	1 pc
Magnetic base	1 pc
Software (including straightness measurement)	1 set
Data cable	1 pc

OPTIONAL ACCESSORY

Tripod	**CMS-L-TR**
Adjustable bridge plate	**CMS-L-BR**
Assisted laser image finder	**CMS-L-FD**
Prism adjustment platform	**CMS-L-PL**
Optical right angle	**CMS-L-SQ**
Wireless collector	**CMS-L-CL**
Lifting platform	**CMS-L-ST**
Parallelism and perpendicularity software module	**CMS-L-PA**
Flatness software module	**CMS-L-FL**
Turntable software module	**CMS-L-AG**

To be continued

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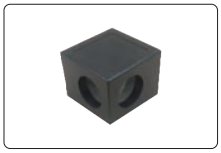
reflector and magnetic base (included)



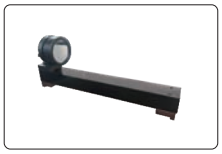
tripod (**optional**)



prism adjustment platform (**optional**)



optical right angle (**optional**)



adjustable bridge plate (**optional**)



assisted laser image finder (**optional**)

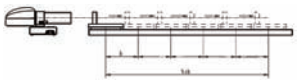


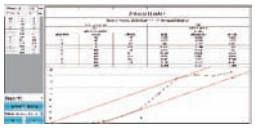
wireless collector (**optional**)



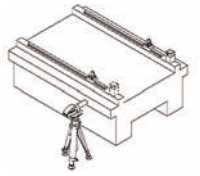
lifting platform (**optional**)

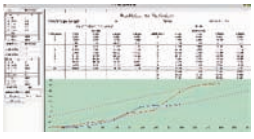
application



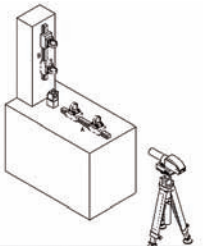


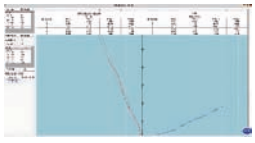
straightness measurement (software is included)



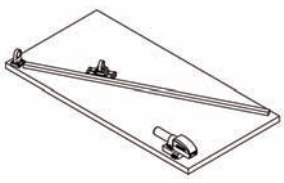


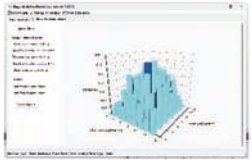
parallelism measurement (software is **optional**)



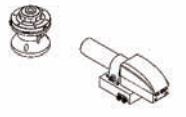


perpendicularity measurement (software is **optional**)





flatness measurement (software is **optional**)





turntable measurement (software is **optional**)

AIR GAUGES
CODE 9401

CUSTOM-MADE

air plug gauges and standard rings



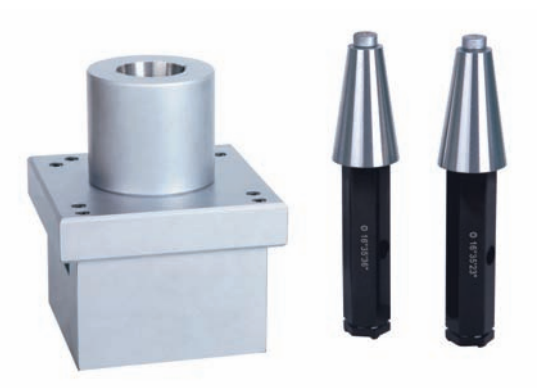
air ring gauges and standard plain plug gauges



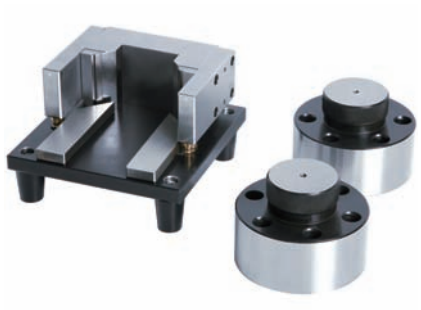
air snap gauges and standard gauges



air taper gauges and standard gauges



air outside diameter measuring stages and standard gauges



air inside diameter measuring stages and standard rings



air angle gauges and standard gauges

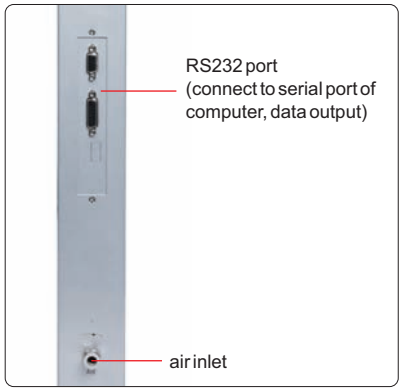


INSPECTION CERTIFICATE

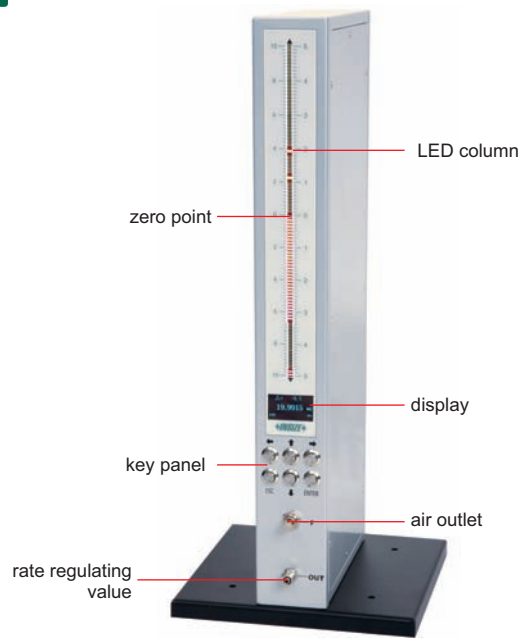
DATA OUTPUT

VIDEO

AIR GAUGE DISPLAYS (BASIC TYPE)

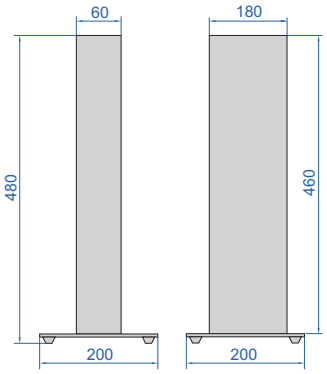


back of **9416-2**



9416-2

Unit: mm



- Can store 9 measuring programs, and the programs can be switched quickly
- Data storage function, 99 groups data can be stored

SPECIFICATION

Code	**9416-1** (without data output)		**9416-2** (with data output)	
LED quantity	101 pcs			
LED color	red, orange, green			
LED height	254mm			
Range, resolution and accuracy	range	resolution		accuracy
		LED	display	
	10μm	0.1μm	0.1μm	0.2μm
	20μm	0.2μm	0.1μm	0.4μm
	50μm	0.5μm	0.5μm	1μm
	100μm	1μm	0.5μm	2μm
Unit	mm, μm			
Air supply	dry and clean, 0.4~0.8MPa			
Data interface	/		RS232	
Operation temperature	-20~45°C			
Power supply	220V, 50Hz			
Dimension (L×W×H)	200×200×480mm			
Weight	3kg			

STANDARD DELIVERY

Main unit	1 pc

OPTIONAL ACCESSORY

Air filter	**9401-FILTER-A**
Pressure regulating valve	**9404-PRV**
RS232 cable	**9416-CB**
Foot switch	**9416-FS** (requires pre-shipment installation)
Data output cable (keyboard format)	**7302-9416**



air filter (**optional**)



pressure regulating valve (**optional**)



RS232 cable (**optional**)



foot switch (**optional**) (for data transmission)

AIR GAUGE DISPLAYS

DATA OUTPUT

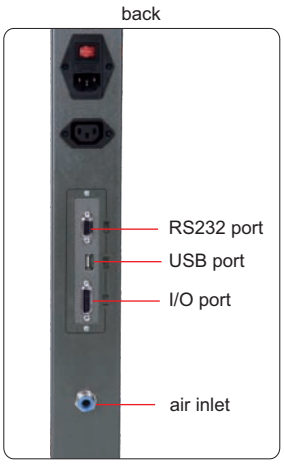
VIDEO

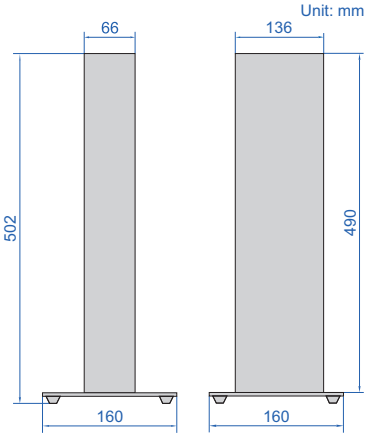


9408-QD100



9408-QA101





- Can store 10 measuring programs, and the programs can be switched quickly
- Data storage and query function

SPECIFICATION

Code		9408-QD100 (without beep and light alarm)		9408-QA101 (with beep and light alarm)
LED quantity		101 pcs		
LED color		red, orange, green		
LED height		254mm		
Range, resolution and accuracy		range (μm)	resolution(μm) LED	resolution(μm) display / accuracy (μm)
		10	0.1	0.1 / 0.2
		20	0.2	0.1 / 0.4
		50	0.5	0.1 / 1
		100	1	0.2 / 3
Unit		mm, inch		
Air supply		dry and clean, 0.4~0.7MPa		
Data interface		RS232, USB		
Operation temperature	temperature	0~45°C		
	humidity	≤85%		
Power supply		AC185~265V, 50/60Hz		
Dimension (L×W×H)		160×160×490mm		
Weight		2.8kg		

STANDARD DELIVERY

Main unit	1 pc

OPTIONAL ACCESSORY

RS232 cable	9408-CB
Foot switch	9408-FS (must be installed in factory)
Data output cable (keyboard format)	7302-9408
Wireless transmitter (receiver is needed)	7315-9408
Air filter	9401-FILTER-A
Pressure regulating valve	9404-PRV



foot switch (**optional**)



RS232 cable (**optional**)



pressure regulating valve (**optional**)

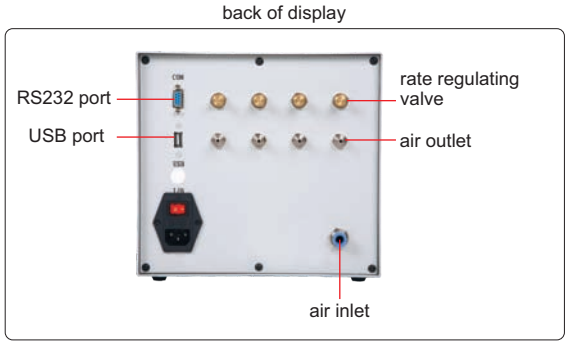


air filter (**optional**)

MULTI CHANNEL AIR GAUGE DISPLAYS

VIDEO

TOUCH SCREEN





9440-DP4

- Data storage function, 2 million groups data can be stored
- Can store 10 groups measuring programs, and the program can be switched quickly
- Insert USB flash disk to output storage data, update program
- Data can be shared or networked via TCP/IP (customized)
- Product codes can be entered by scanning gun or manually (customized)
- With data statistics and analysis functions, can display graphs and Xbar-R control charts



air filter (**optional**)



RS232 cable (**optional**)



foot switch (**optional**)



scanning gun input product code function (customized)

SPECIFICATION

Code	9440-DP1	9440-DP2	9440-DP3	9440-DP4	9440-DP5	9440-DP6	9440-DP7	9440-DP8
Number of channels	1	2	3	4	5	6	7	8
Display screen	7" TFT LCD touch screen display				10" TFT LCD touch screen display			
Display mode	graphic display, digital display							
Range	10μm, 20μm, 50μm, 100μm (adjustable)							
Accuracy	0.2μm (range 10μm)							
	0.4μm (range 20μm)							
	1μm (range 50μm)							
	3μm (range 100μm)							
Resolution	0.1μm							
Unit	mm							
Air supply	dry and clean, 0.4~0.7MPa							
Data interface	RS232/USB*							
Operation temperature	-10~55°C							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	240×230×230mm				320×145×325mm			
Weight	5.6kg				11.2kg			

*RS485 port, I/O port, ethernet communication port can be customized according to customer requirements

STANDARD DELIVERY

Main unit	1 pc

OPTIONAL ACCESSORY

Air filter	9401-FILTER-A
Foot switch	9440-FS
RS232 cable	9440-CB
Data output cable (keyboard format)	7302-9440

LENGTH PRESETTERS (MOTORIZED TYPE)

INSIZE PLUS

ATTENTION: WORKING TEMPERATURE 10-35°C, TEMPERATURE CHANGE ≤1°C/h

ATTENTION: ADAPTERS ARE NEEDED

REPLACING RING GAUGES AND GAUGE BLOCKS

CAN BE USED IN WORKSHOPS

INSPECTION CERTIFICATE

VIDEO



ISQ-S300

- Used to set and calibrate various measuring tools, such as bore gauges, multifunctional calipers, internal/external snap gauges, three-point internal micrometers, tubular inside micrometers, calipers, micrometers, etc.
- Stores up to 100 positions (OD+ID)
- Can preset any position and save it
- Can set the step distance and move continuously
- The built-in steel strip grating ruler has the same temperature expansion coefficient as the steel workpiece, so length presetters can be used in workshops
- Connect to computers through Modbus protocol

SPECIFICATION

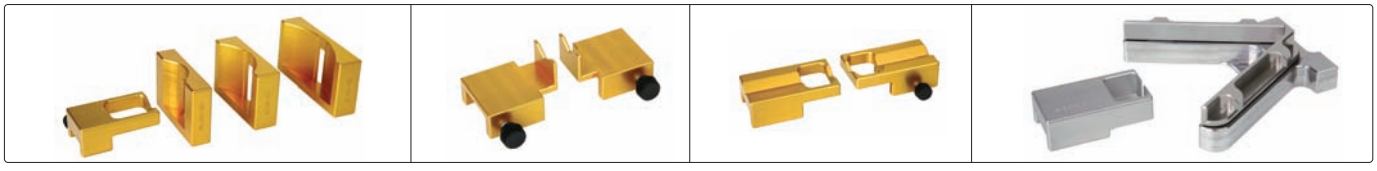
Code		ISQ-S300	ISQ-S600	ISQ-S1000	ISQ-S1500	ISQ-S2000
Range	inter diameter	0.1~300mm	0.1~600mm	0.1~1000mm	0.1~1500mm	0.1~2000mm
	outer diameter	40~340mm	40~640mm	40~1040mm	40~1540mm	40~2040mm
Resolution		0.5μm				
Accuracy		(1.5+L/500)μm, (L is measuring length in mm)				
Repeatability		0.8μm				
Zeroing method		motorized				
Interface		ETHERNET, USB				
Environment requirement		temperature: 10~35°C, temperature change: ≤1°C/h				
Power supply		100~240V				
Weight		80kg	140kg	360kg	450kg	650kg

Code		ISQ-S3000	ISQ-S4000	ISQ-S5000
Range	inter diameter	0.1~3000mm	0.1~4000mm	0.1~5000mm
	outer diameter	40~3040mm	40~4040mm	40~5040mm
Resolution		0.5μm		
Accuracy		(3+L/500)μm, (L is measuring length in mm)		
Repeatability		0.8μm		
Zeroing method		motorized		
Interface		ETHERNET, USB		
Environment requirement		temperature: 10~35°C, temperature change: ≤1°C/h		
Power supply		100~240V		
Weight		1500kg	2000kg	2400kg

OPTIONAL ACCESSORY

Adapter	need to consult based on measuring tools

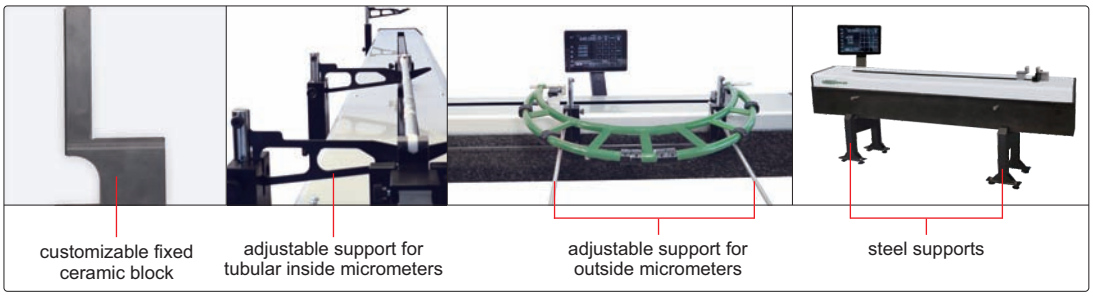
need to select adapters based on different measuring tools



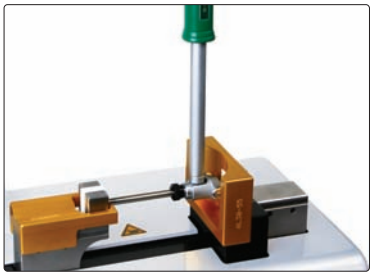
To be continued

Continued from previous page

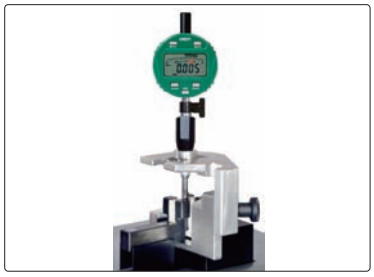
other optional accessories



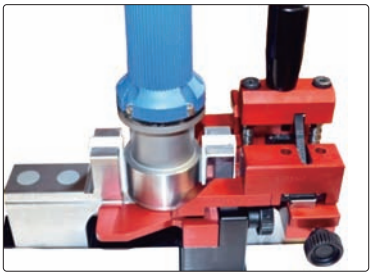
application



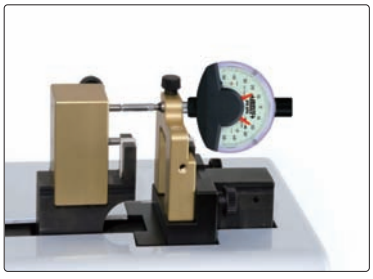
zero setting and calibration of bore gauges



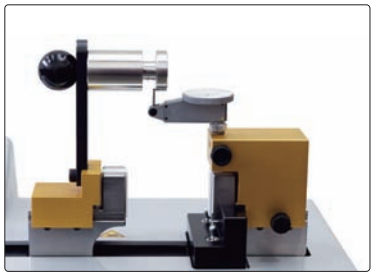
zero setting and calibration of split type dial bore gauges



zero setting and calibration of plug bore gauges



dial comparator calibration



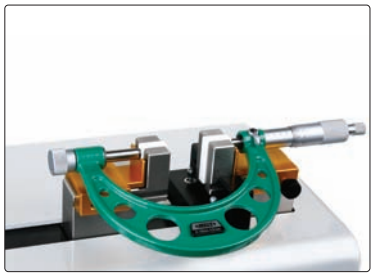
dial test indicator calibration



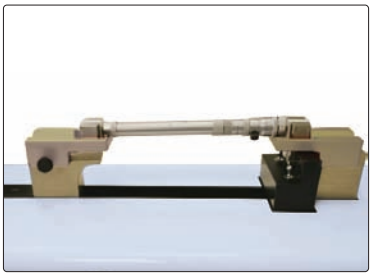
zero setting and calibration of internal/external snap gauges



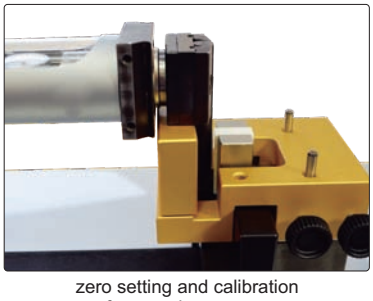
zero setting and calibration of three-point internal micrometers



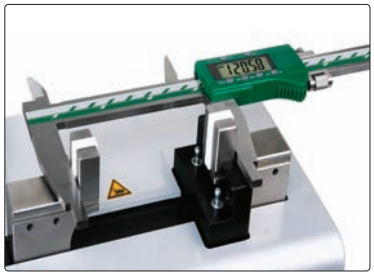
zero setting and calibration of micrometers



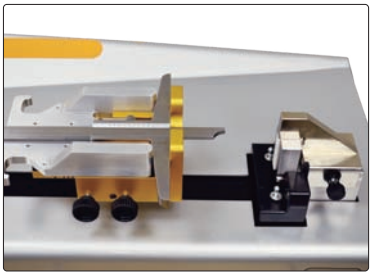
zero setting and calibration of tubular inside micrometers



zero setting and calibration of comparison gauges



caliper calibration



depth caliper calibration

LENGTH PRESETTERS (MOTORIZED/MANUAL TYPE)

INSIZE PLUS

ATTENTION: WORKING TEMPERATURE 10-35°C, TEMPERATURE CHANGE ≤1°C/h

ATTENTION: ADAPTERS ARE NEEDED

REPLACING RING GAUGES AND GAUGE BLOCKS

CAN BE USED IN WORKSHOPS

INSPECTION CERTIFICATE

VIDEO



ISQ-M300

- Used to set and calibrate various measuring tools, such as bore gauges, multifunctional calipers, internal/external snap gauges, three-point internal micrometers, tubular inside micrometers, calipers, micrometers, etc.
- Manual mode can be used to measure workpieces
- Stores up to 100 positions (OD+ID)
- Can preset any position and save it
- Can set the step distance and move continuously
- The built-in steel strip grating ruler has the same temperature expansion coefficient as the steel workpiece, so length presetters can be used in workshops
- Connect to computers through Modbus protocol

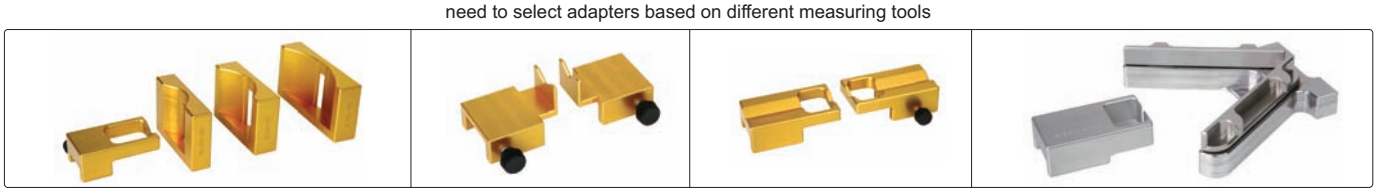
SPECIFICATION

Code		ISQ-M300	ISQ-M600	ISQ-M1000	ISQ-M1500	ISQ-M2000	ISQ-M3000
Range	inter diameter	0.1~260mm	0.1~560mm	0.1~960mm	0.1~1450mm	0.1~1950mm	0.1~2950mm
	outer diameter	40~300mm	40~600mm	40~1000mm	40~1490mm	40~1990mm	40~2990mm
Resolution		0.5μm					
Accuracy		(1.5+L/500)μm, (L is measuring length in mm)					
Repeatability		0.8μm					
Zeroing method		motorized, manual					
Interface		ETHERNET, USB					
Environment requirement		temperature: 10~35°C, temperature change: ≤1°C/h					
Power supply		100~240V					
Weight		80kg	140kg	360kg	450kg	650kg	1500kg

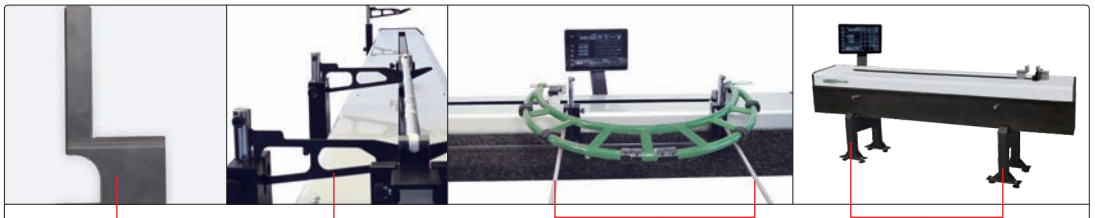
OPTIONAL ACCESSORY

Adapter	need to consult based on measuring tools

need to select adapters based on different measuring tools



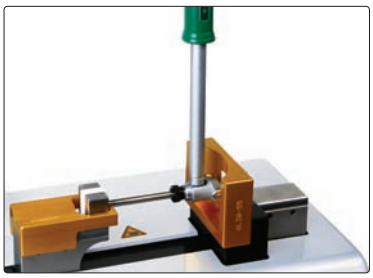
other optional accessories



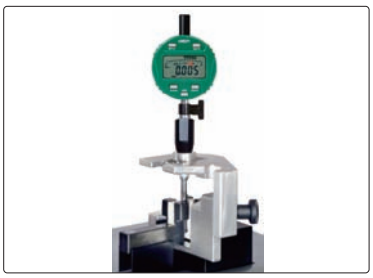
To be continued

Continued from previous page

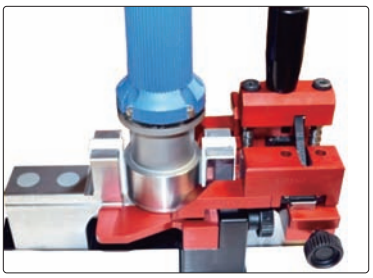
application



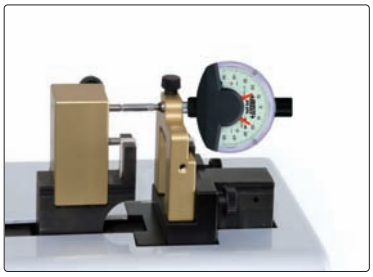
zero setting and calibration of bore gauges



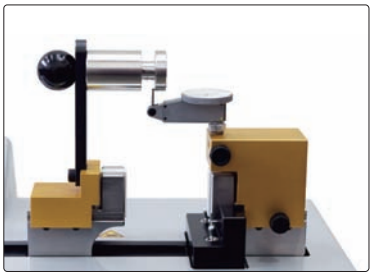
zero setting and calibration of split type dial bore gauges



zero setting and calibration of plug bore gauges



dial comparator calibration



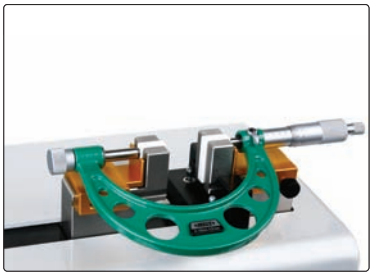
dial test indicator calibration



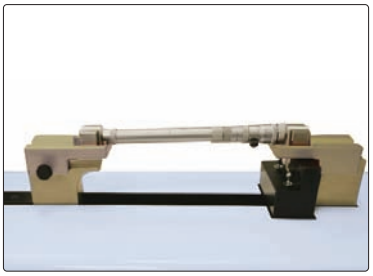
zero setting and calibration of internal/external snap gauges



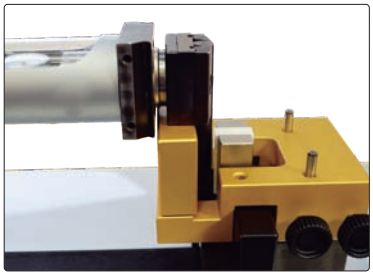
zero setting and calibration of three-point internal micrometers



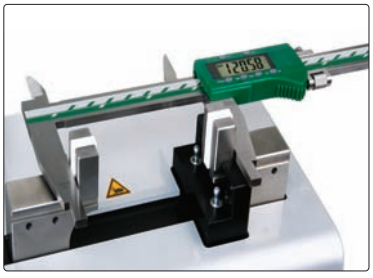
zero setting and calibration of micrometers



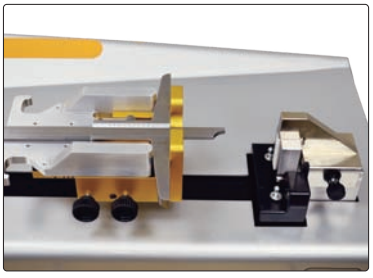
zero setting and calibration of tubular inside micrometers



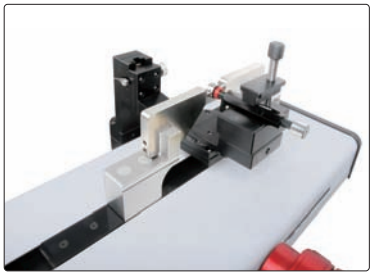
zero setting and calibration of comparison gauges



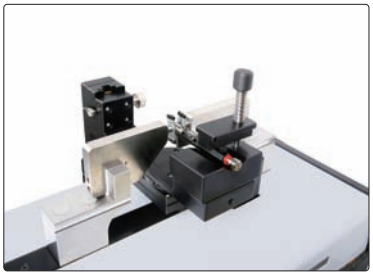
caliper calibration



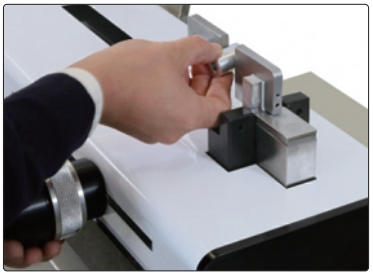
depth caliper calibration



measuring plain plug gauges (manual mode)



measuring thread plug gauges (manual mode)



measuring workpieces (manual mode)

DIGITAL GAP GAUGES

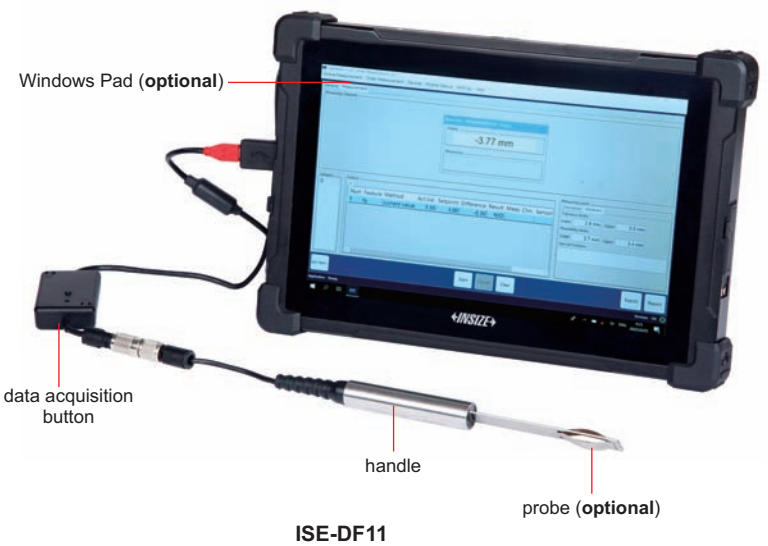
INSIZE PLUS

TITANIUM AND SYNTHETIC DIAMOND COATING PROBES ARE OPTIONAL

CUSTOMIZABLE PROBES
MEASURING RANGE: (0.35~6)mm
MEASURING DEPTH: (2~500)mm

DATA OUTPUT

VIDEO



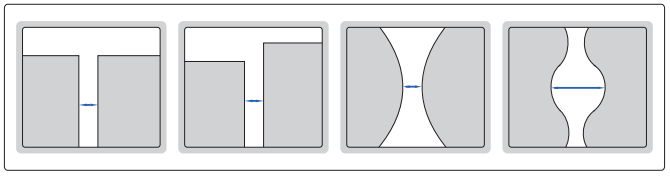
ISE-DF11



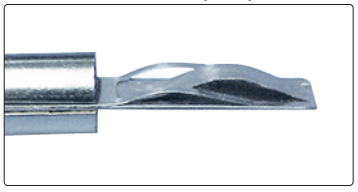
ISE-DF10

- Real-time measurement: display maximum value, minimum value current measurement value and measurement curve
- Group measurement: target value and upper and lower tolerance can be set, automatic judgement of OK and NG
- The measurement results can be exported as XML or CSV

application



measurement principle



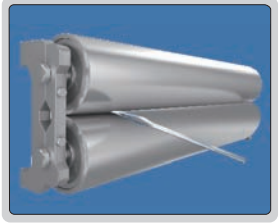
the deformation of the probe results in the output of an analogue signal, which is then used by the software to calculate the dimensional value



measuring car body seam



measuring gaps on the car dashboard



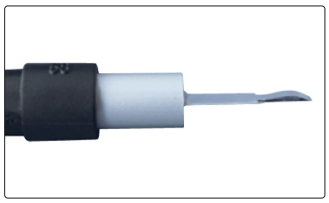
measuring roll gap

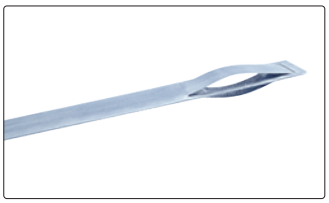


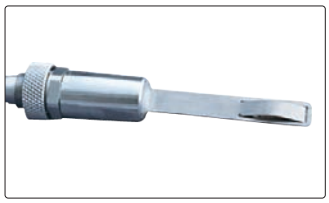
measuring blade to sidewall gap

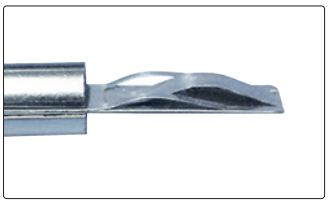
To be continued

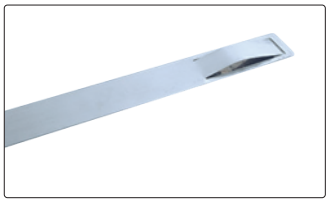
Continued from previous page


single-side probe
(**optional**)


bilateral probe
(**optional**)

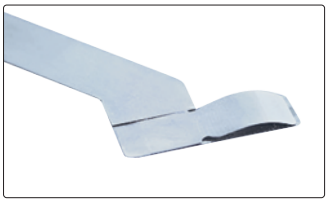

bilateral probe
(**optional**)


single-side probe
(**optional**)

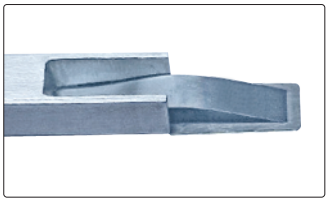

bilateral probe
(**optional**)

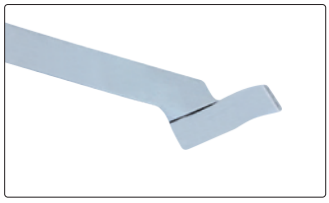

bilateral long depth probe
(**optional**)

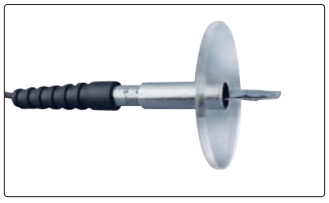

single-side probe
(**optional**)


single-side hockey stick shaped probe
(**optional**)

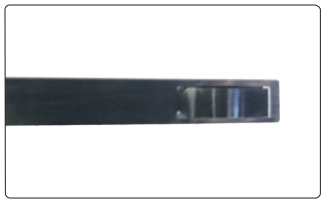

90° probe
(**optional**)


single-side positioning probe
(**optional**)


single-side hockey stick shaped probe
(**optional**)


depth positioning probe
(**optional**)


single-side positioning probe
(**optional**)


synthetic diamond coated probe
(**optional**)


titanium plated probe
(**optional**)

SPECIFICATION OF MAIN UNIT

Code	ISE-DF11	ISE-DF10
Resolution	0.1/0.01/0.001mm	0.1/0.01/0.001mm
System	Windows	Android
Output	USB	USB, WIFI
Output format	XML, CSV, PDF	XML, CSV

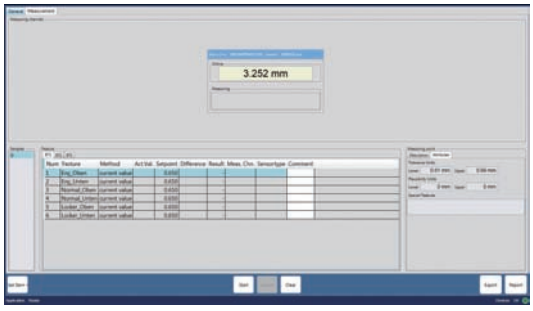
SPECIFICATION OF PROBES (OPTIONAL)

Customizable measuring range	(0.35-6)mm
Effective range	±0.5mm
Accuracy	range: (0.35~2.0)mm, accuracy: ±0.03mm range: (0.35~6.0)mm, accuracy: ±0.04mm
Max. customizable length	500mm
Repeatability	0.02mm
Measuring force	<3.5N
Measuring time	<1s

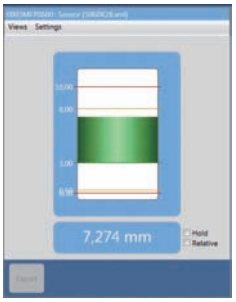
To be continued

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ISE-DF11 software (included)



scheduled measurement mode,
set the tolerance and judge OK or NG



real-time
measurement mode



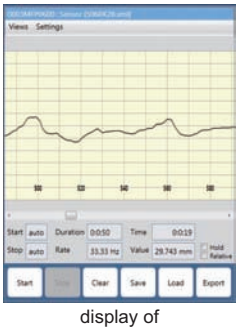
average value
measurement mode



maximum
measurement mode



minimum
measurement mode

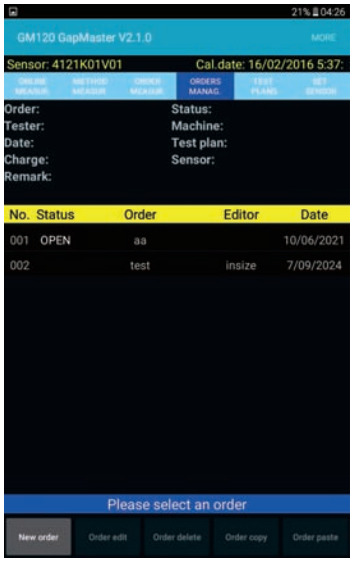


display of
measurement curve

ISE-DF10 software (included)



real-time
measurement mode



view
measurement data

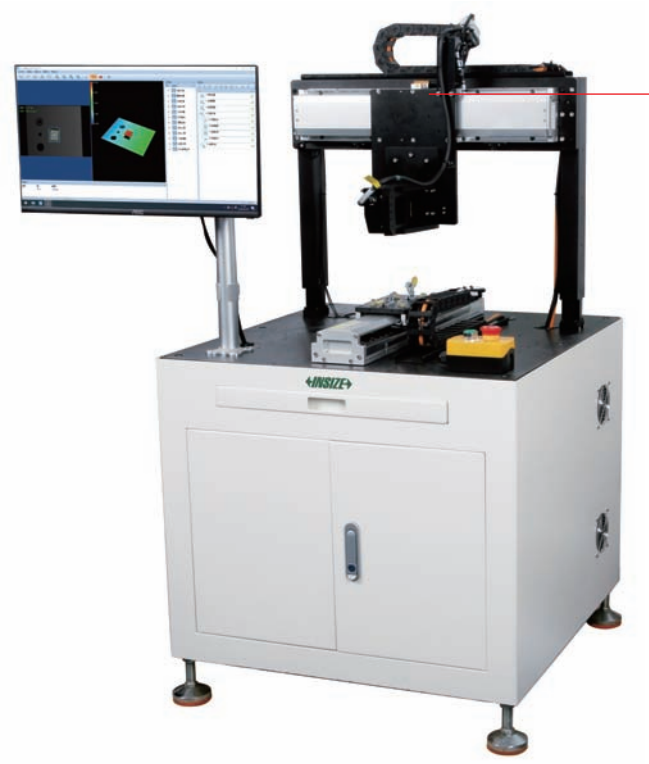


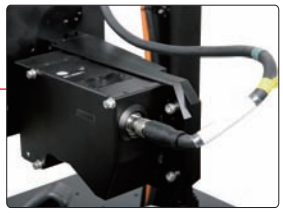
sensor
calibration information

3D LINE LASER PROFILE MEASURING MACHINE
CODE VIM-P140

NON-CONTACT SCANNING | HIGH SPEED MEASUREMENT | FLATNESS/HEIGHT DIFFERENCE MEASUREMENT | CUSTOM-MADE

VIDEO





3D line laser scanning camera

- Flatness and height difference measurement of machinery, electronics, cell phones, molds, circuit boards and other products
- Full-range focusable optical system allows you to take pictures in focus range, even when the target height is changed
- Combing 2D and 3D data for complete detection; 2D data can be used for localization, code reading, character recognition, etc.
- The software is automatically corrected for workpiece position deviation; multiple scanned images can be automatically spliced to achieve stable detection

SPECIFICATION

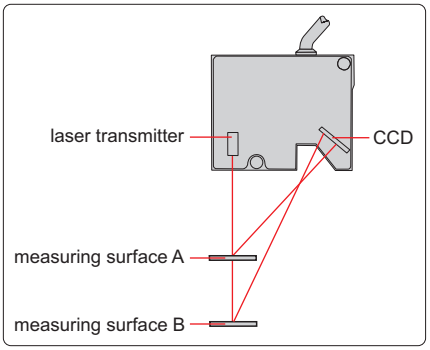
Travel range XY	400×350mm
Repeat positioning accuracy	2μm
Measuring range of Z-axis	24mm
Width of X-axis	96mm
Accuracy of Z-axis	±0.02mm
Repeatability of Z-axis	±0.5μm
Scanning speed	2500~10000Hz
Power supply	220V, 50Hz
Weight	200kg
Dimension (L×W×H)	750×760×400mm

STANDARD DELIVERY

Main unit	1 pc
Industrial computer	1 pc
Display	1 pc
Keyboard and mouse	1 pc

CAMERA PRINCIPLE

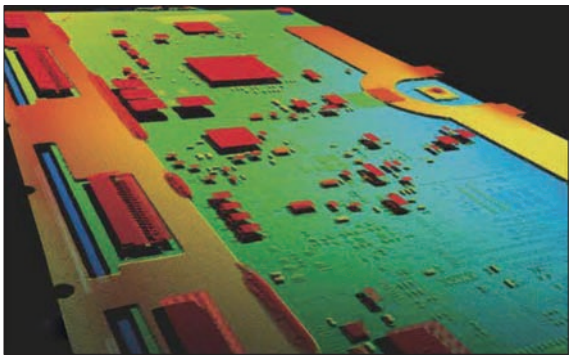
line laser scanning camera measurement principle



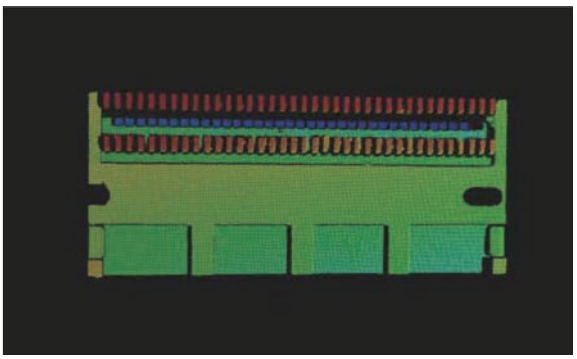
To be continued

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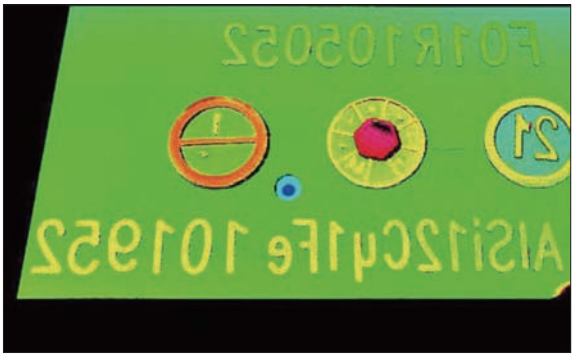
application



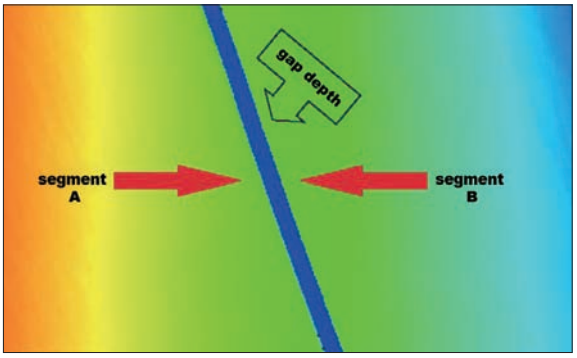
component height measurement on circuit boards



flatness and height difference measurement

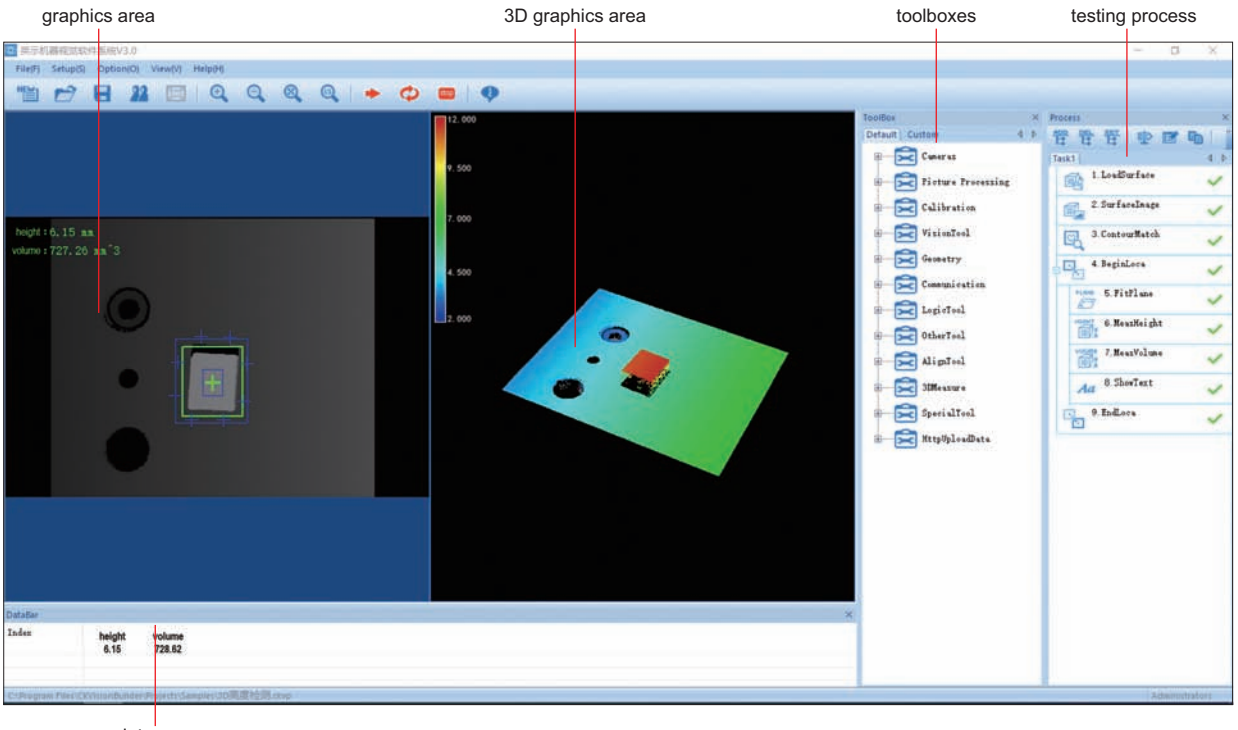


character height measurement



gap depth measurement

MEASURING SOFTWARE (INCLUDED)



AUTOMATIC VISION INSPECTION MACHINE
CODE AVIM

AUTOMATIC INSPECTION OF LARGE QUANTITIES OF WORKPIECES

AUTOMATIC SORTING

VIDEO

SIZES MEASUREMENT AND DETECTION OF SURFACE DEFECTS

CUSTOM-MADE



- For testing fasteners, mobile phone parts, plastical products, electronic components and special-shaped hardware, etc.
- Can be equipped with laser, marking, automatic counting and packing, automatic feeding, eddy probe (detecting heat treatment)

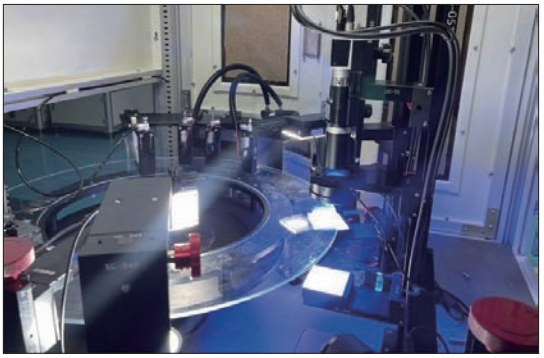
SPECIFICATION

Diameter of workpiece	1-25mm
Height of workpiece	1-40mm
Sorting accuracy	±0.005~±0.02mm
Air pressure	5kg/cm²
PC mainframe	industrial computer
Digital camera	8 sets of industrial cameras (to be determined according to the actual situation)
Weight	800kg
Dimension (L×W×H)	1500×1100×1800mm

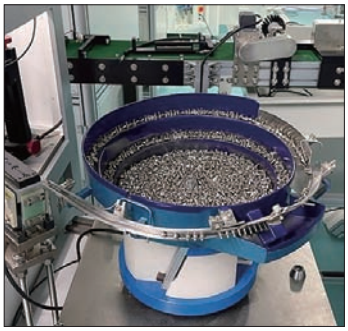
INTERNAL STRUCTURE



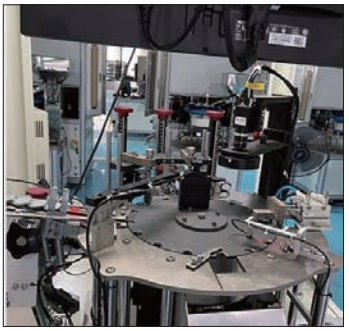
electrical system



glass sorting plate



vibratory feeder loading



turntable structure

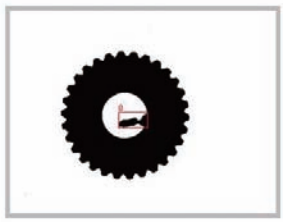


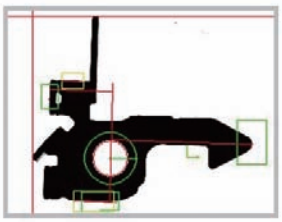
multiple cameras detection

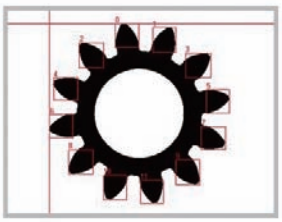
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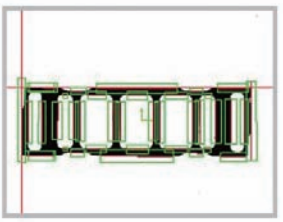
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PARTS EXAMPLE

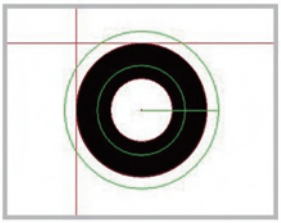

burr in hole

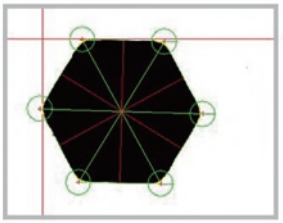

special stamping

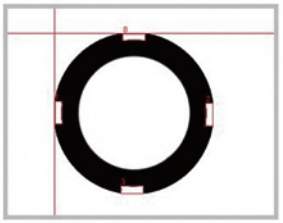

number of tooth

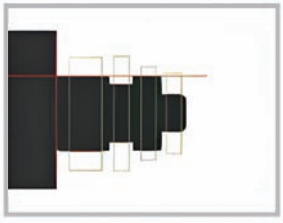

special hardware

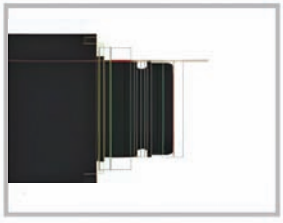

cross recess excess material

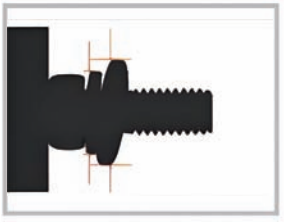

concentricity, roundness

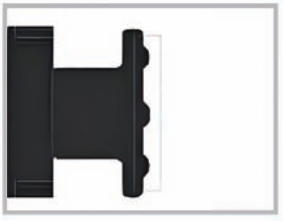

diagonal, opposite side


gap


multi-width


multi-height


gasket


welding height

PRODUCT EXAMPLES


precision screws


nuts


automative fasteners

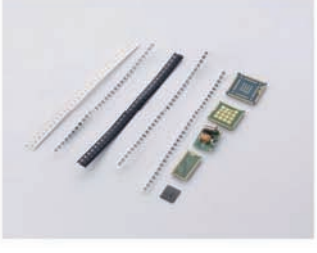

powder metallurgy


new energy parts


electronic products


plastic or rubber parts


capacitance resistances


semiconductor workpieces


magnetic products

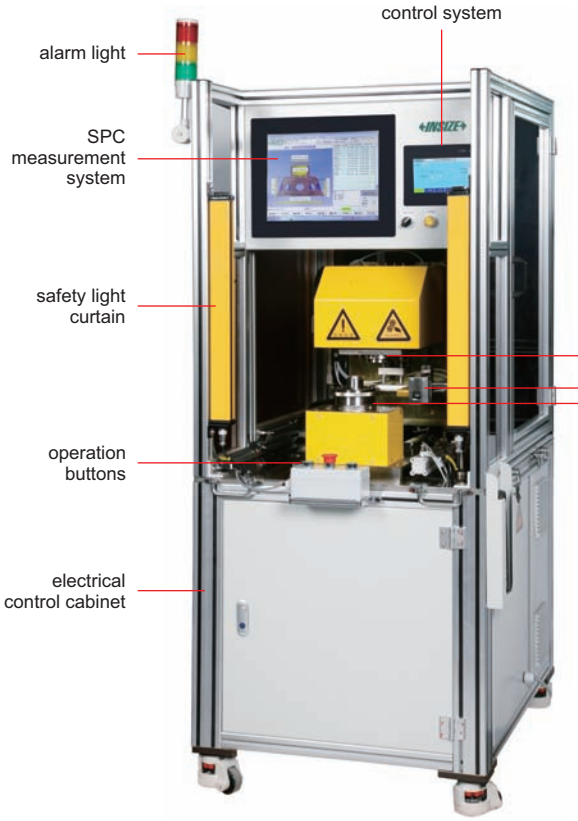

connectors


electronic cigarettes

VIDEO

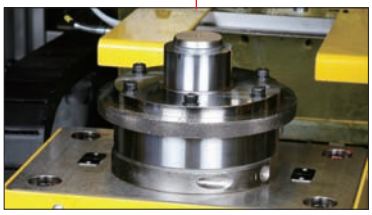
CUSTOMIZED ACCORDING TO WORKPIECES

SEMI-AUTO MEASUREMENT STATION
CODE ATU-01A



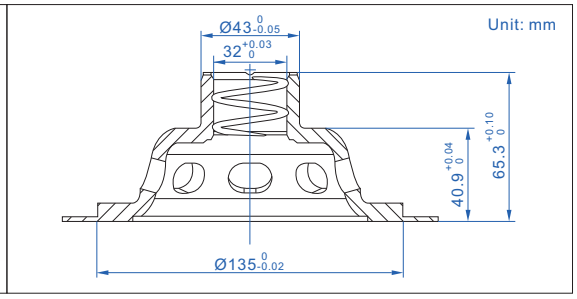

inductive probe


measurement device


workpiece fixing device

- Inductive probe with control system and SPC measurement system to complete the workpiece measurement
- Manual placement of calibration and workpiece, automatic scanning of workpiece QR code, QR code is automatically associated with the inspection program
- Automatic calibration and measurement with manual start button


measured workpiece



drawing of the measured workpiece

SPECIFICATION

Repeatability	3μm
Measurement cycle time	8s
Power supply	AC 220V, 50Hz
Air supply	0.45-0.7MPa

STANDARD DELIVERY

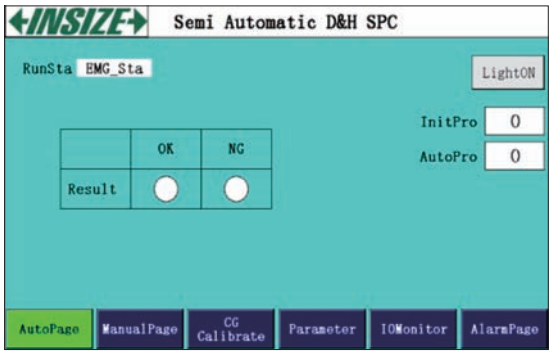
Measurement mechanism	1 set
Electric control cabinet	1 set
Industrial computer	1 pc
Automatic scanner	1 pc
SPC measurement system	1 set
Control system	1 set

To be continued

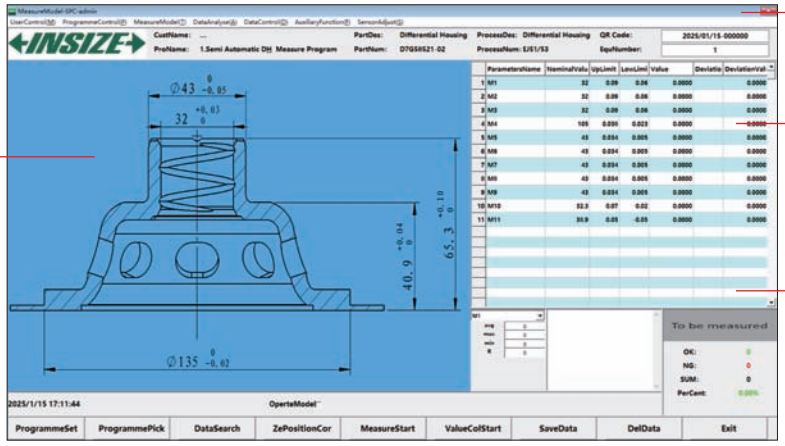
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Control system

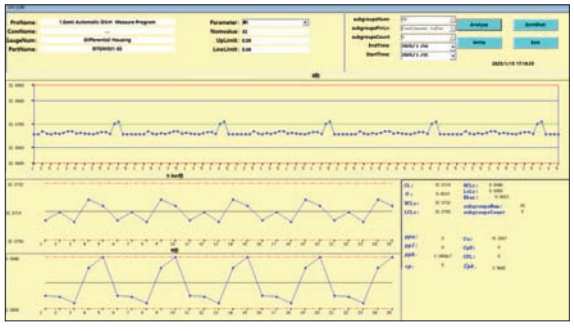
- Commissioning of measurement programs and control of measurement items
- Monitoring of measurement status, alarms for abnormal conditions



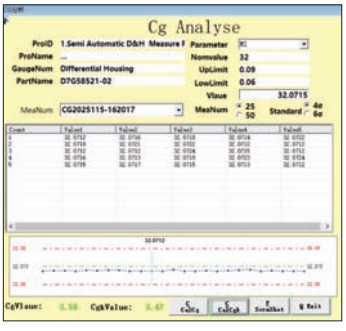
SPC measurement system



- Simultaneous display of measurement data and automatic judgment of measurement results (green when within tolerance, red when out of tolerance)
- Measurement data can be analyzed by SPC, CG and GRR
- Measurement data can be exported to Excel report



SPC analysis



CG analysis



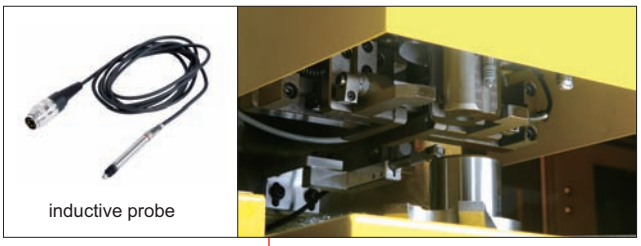
GRR analysis

VIDEO

CUSTOMIZED ACCORDING TO WORKPIECES

SEMI-AUTO ROTARY MEASUREMENT STATION
CODE ATU-01B





measurement device

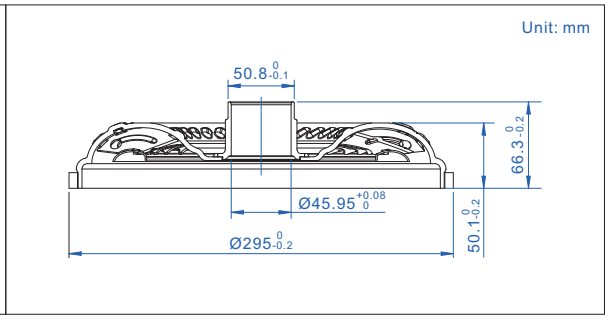


workpiece fixture and rotating plate

- Inductive probe with control system and SPC measurement system to complete the workpiece measurement
- Manual placement of calibration and workpiece, manual scanning of workpiece QR code, QR code is automatically associated with the inspection program
- Manual activation of the button, the motor automatically rotates and automatically completes the calibration and measurement



measured workpiece



drawing of the measured workpiece

SPECIFICATION

Repeatability	10μm
Measurement cycle time	46s
Power supply	AC 220V, 50Hz
Air supply	0.45-0.7MPa

STANDARD DELIVERY

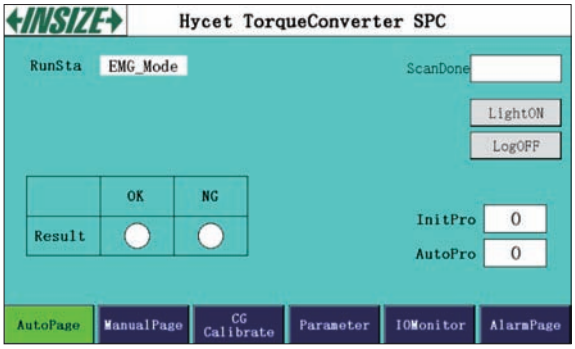
Measurement mechanism	1 set
Electric control cabinet	1 set
Industrial computer	1 pc
Scanner	1 pc
SPC measurement system	1 set
Control system	1 set

To be continued

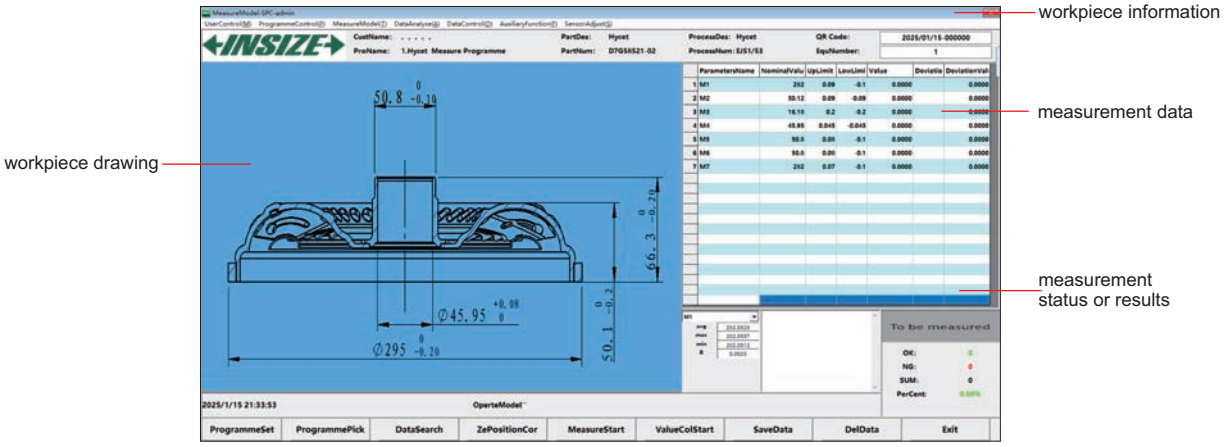
Continued from previous page

Control system

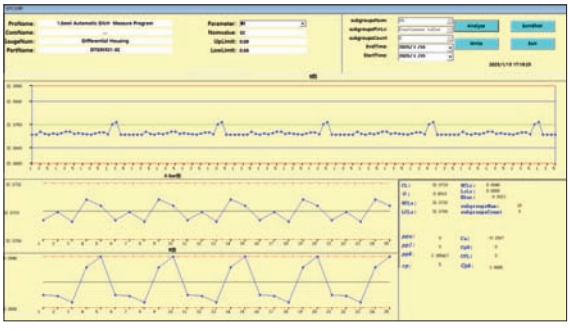
- Commissioning of measurement programs and control of measurement items
- Monitoring of measurement status, alarms for abnormal conditions



SPC measurement system



- Simultaneous display of measurement data and automatic judgment of measurement results (green when within tolerance, red when out of tolerance)
- Measurement data can be analyzed by SPC, CG and GRR
- Measurement data can be exported to Excel report



SPC analysis



CG analysis



GRR analysis

VIDEO

SUBPIXEL MEASUREMENT ACCURACY

DISPLACEMENT/DEFORMATION AND MOTION ANALYSIS

MULTIPLE MEASUREMENTS

THREE-DIMENSION FULL-FIELD STRAIN MEASUREMENT SYSTEMS

- Accurate calculation of 3D coordinates, 3D displacements and strains, velocities and accelerations, etc.
- By analyzing the measurement data, parameters of the mechanical properties, trajectory and deformation of the material are obtained
- Comprehensive range of measurement results, including single-point, multi-point, full-field data, 2D/3D data, images, tables, videos, curves, and customized data



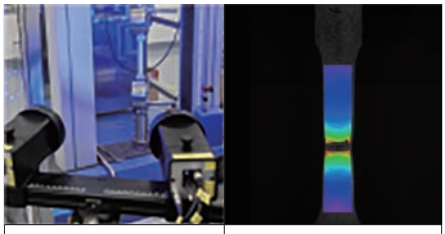
ISD-TD1

Main application

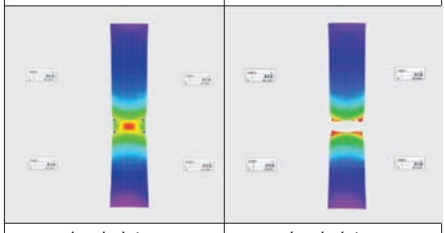
- Testing of mechanical properties of materials and parts
- Structural strength and stiffness analysis
- Vibration analysis
- Collision test
- Complex 3D motion analysis
- High and low temperature expansion analysis
- Video Extensometer

Typical application

tensile testing of steel plates of automobiles

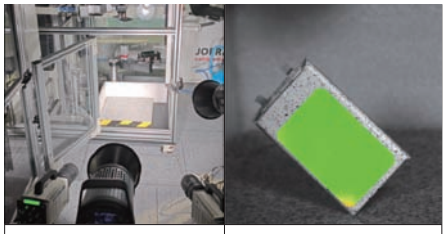


test site | picture after breaking

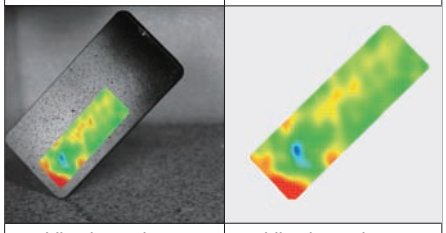


cloud picture before breaking | cloud picture after breaking

various drop tests



test site | battery pack drop test strain field picture



mobile phone drop test strain field picture | mobile phone drop test strain field cloud picture

SPECIFICATION

Code	ISD-TD1	ISD-TD2	ISD-TD3
Pixel	5M	12M	25M
Frame rate	60fps	30fps	90fps
Strain accuracy	≤50με	≤20με	≤20με
Strain range	0.005%~2000%	0.002%~2000%	0.002%~2000%
View field	10mm~4m	10mm~10m	10mm~10m

*Can be customized according to actual scenarios (microscopic, high-speed, etc.)

STANDARD DELIVERY

Camera	2 pcs
Tripod	1 pc
Computer	1 pc
Three-dimension software	1 pc

OPTIONAL ACCESSORY

Video extensometer software	ISD-UTM-M

LARGE FIELD OF VIEW DYNAMIC MEASUREMENT SYSTEM
CODE ISD-LF

SUBPIXEL MEASUREMENT ACCURACY

VIDEO

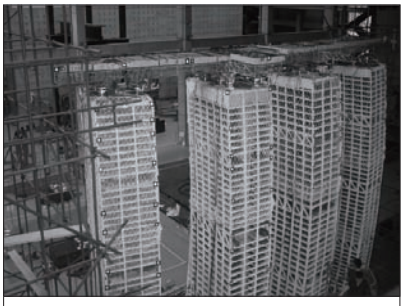
WIDE MEASURING RANGE

CUSTOM-MADE



- A three-dimension dynamic system based on marking points of tracking, using close-range industrial photogrammetry and visual triangulation
- Measuring the trajectory, attitude and velocity accurately of the marking point in 3D space
- Analyzes data such as 3D coordinates, 3D motion deformation, 3D velocity and acceleration, 3D trajectory measurement, and 6-degree-of-freedom measurement
- Measurement results can be provided as images, tables, videos, curves, customized data, etc.
- Adaptable to high and low temperatures, high-speed shock, vibration and other environments
- Traceable testing process

Application



deformation monitoring of large building vibration test



deformation monitoring of bridges and tunnels



wind blade deformation inspection



static and dynamic load deformation inspection of large traveling frame structures

SPECIFICATION

Pixel	5M~25M
View field	1m~200m
Real-time measurement speed	20Hz~500Hz
Accuracy	0.01%

STANDARD DELIVERY

Camera	2 pcs
Tripod	1 pc
Computer	1 pc
Three-dimension software	1 pc

*Customized according to actual scenarios

VIDEO

IP55
WATERPROOF

DATA
OUTPUT

TOTAL STATION (BASIC TYPE)
CODE TSA-B33



single prism (**optional**)



prism tripod (**optional**)



measuring tape (included)



USB flash drive
(included)



tripod (included)



- With rear intersection, setting out, overhang measurement, eccentricity measurement and other functions
- Widely used in surveying and mapping engineering, construction engineering and many other precise measurement fields
- Safe class 3R laser rangefinder with prism-free range up to 1500m
- Absolute coded goniometric technology, horizontal and vertical discs are easy to measure with a counterpoise probe
- Biaxial liquid photoelectric electronic compensator automatically corrects instrument leveling errors
- Built-in temperature and air pressure sensor automatically corrects distance measurement errors
- Can revise prism constant

To be continued

Continued from previous page

SPECIFICATION

Distance measurement (With cooperation target)	measuring range	prism: 5000m
		reflective patch (60mm×60mm): 1000m
	accuracy	±(2+D/500)mm, D: measured distance, unit: m
	measuring time	continuous measurement: 0.25s, tracking measurement: 0.1s, single measurement: <1.0s
Prism-free distance measurement (Without cooperation target)	measuring range	1500m (Kodak Grey, 90% reflectivity)*
	accuracy	0-300m: ±(3+D/500)mm 300-600m: ±(5+D/500)mm >600m: ±(10+D/500)mm, D: measured distance, unit: m
	measuring time	continuous measurement: 0.25s tracking measurement: 0.1s single measurement: <1.0s
Angle accuracy		±2"
Minimum angular reading		0.1"/1" (selectable)
Telescope barrel length		152mm
Telescope magnification		30X
Field of view		1°30"
Frame rate		3"
Minimum focus distance		1.5m
Compensator		range: ±6', accuracy: ±1"
Tube level bubble		30"/2mm
Round level bubble		8'/2mm
Display	screen type	240×160 dot matrix high definition high brightness display
	screen size	3.1 inch
	digital display	maximum: 99999999.9999m minimum: 0.1mm
Data transmission		USB flash drive, bluetooth
Power supply		7.4V replaceable battery for 8 hours of continuous operation
Dimension (L×W×H)		206×180×353mm
Weight		5.4kg

*Good weather: overcast sky, light wind, no fog, visibility about 40km

STANDARD DELIVERY

Main unit	1 pc
Tripod	1 pc
Power adapter and charging cable	1 set
Li-ion battery	2 pcs
USB flash drive	1 pc
Measuring tape	1 pc

OPTIONAL ACCESSORY

Single prism	TSA-B33-PR
Prism tripod	TSA-B33-PRT

CODE	PAGE
11	
1102	29
1103	28
1106	39
1108	27
1109	30
1110	32
1111	34
1113	27
1114	28
1117	40
1118	26
1119	30
1120	56
1121	55
1122	71
1123	65
1124	52
1125	49~50
1128	60
1129	60
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1135	41
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2126	239
2127	245

CODE	PAGE
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2133	293
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2135	295~296
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2137	288
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2139	284
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2147	369
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2259	357
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2261	387
2262	360
2263	359
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2276	532
2278	533
2280	472
2281	534
2282	534
2283	238
2284	235
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2308	302
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2310	305
2311	302
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2318	306
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2326	309
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2333	348

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2361	353
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2364	351
2365	353
2366	351
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2374	464
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2383	277
2385	595
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2394	614
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2399	278
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2421	232~233
2422	234
2423	242
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2425	235
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2877	354
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2879	349
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CODE	PAGE
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3262	188

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CODE	PAGE
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4794	469
4795	471

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4906	580
4907	582
4908	582
4910-400	584
4910-600	584

CODE	PAGE
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4910-400WL	583
4910-600WL	583
4910-1000WL	583
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4912	584
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4914	586
4917	588
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4921	585
4922	585
4923	587
4950	580
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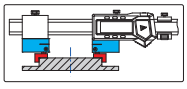
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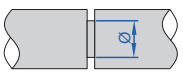
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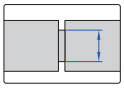
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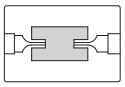


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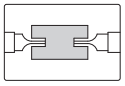


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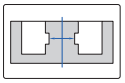


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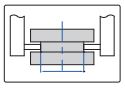


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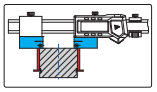
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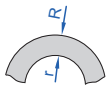


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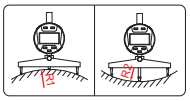
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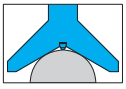


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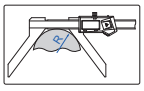


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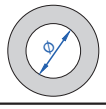
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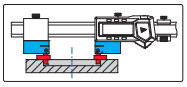


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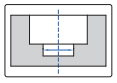
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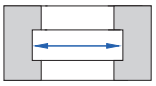
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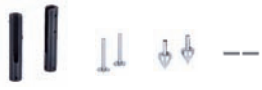
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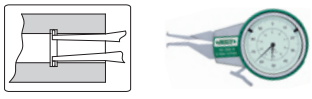
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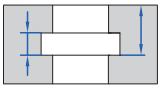
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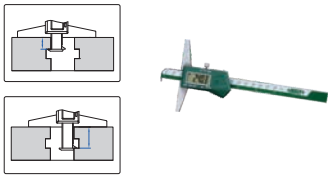
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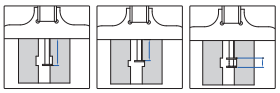
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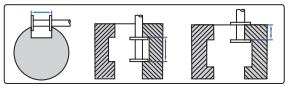
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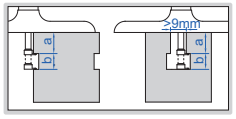


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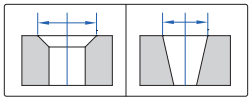
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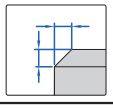


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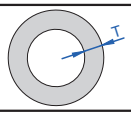
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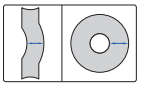
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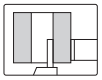


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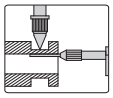


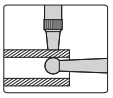


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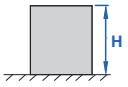
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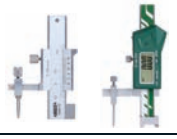
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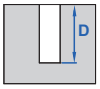
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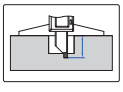
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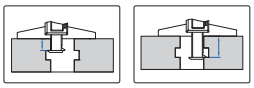
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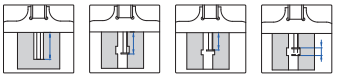


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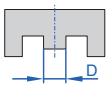
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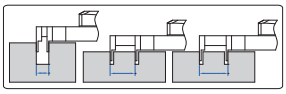

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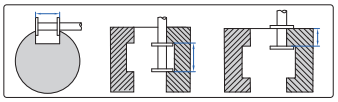
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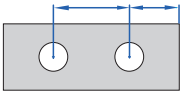
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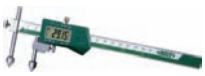

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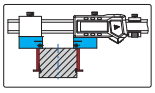

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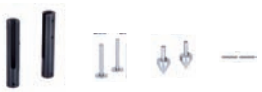
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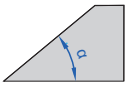
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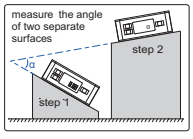
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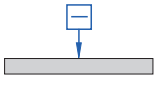


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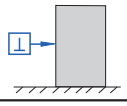
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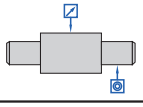




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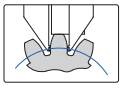
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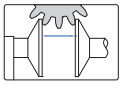


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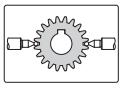


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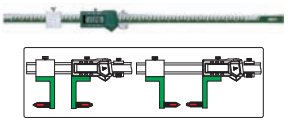


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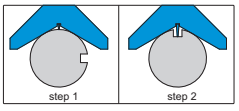
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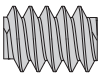
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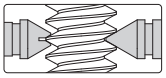


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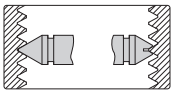
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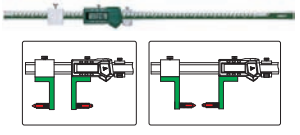
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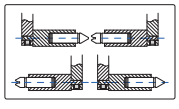
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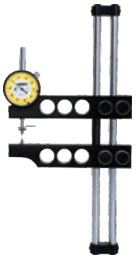


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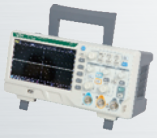
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