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VH, V, VT Series



- Bed Type Vertical & Horizontal Milling Series
- Bed Type CNC / PC Based Series



Bed Type / Bed Type CNC / PC Based

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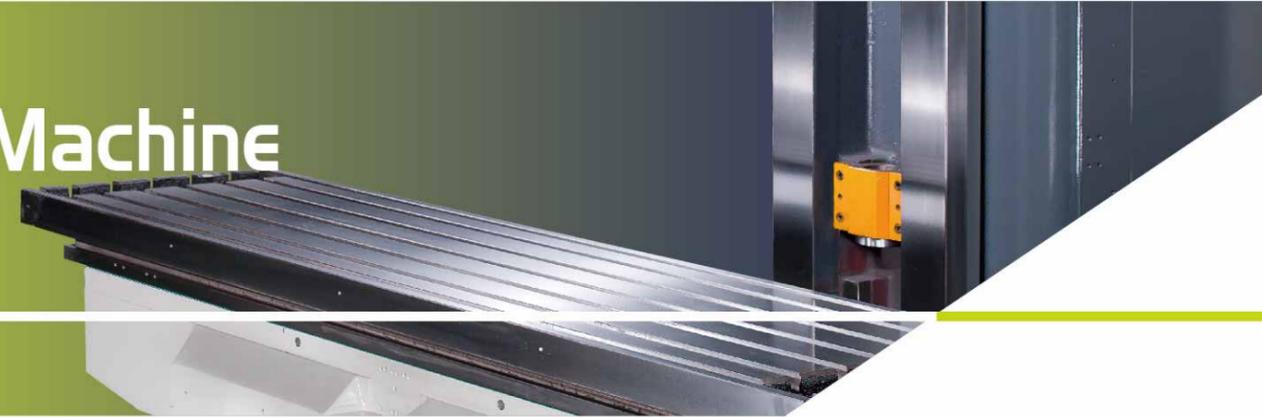
MILLSTAR DISCOVER YOUR BRIGHT FUTURE



COMPANY NAME: JIUH-YEH
A7861 ISO9001:2008

Bed Type Vertical & Horizontal Milling Machine 床型立橫兩用銑床VH Series

VH450/480/550/650B/780



JY-VH450

- 工作台尺寸 Table size: 1500 x 450 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1100 / 720 / 780 mm
- 最大工件載重 Max. loading weight 1000 kgs
- 主軸轉速 Spindle speeds 45-1500 rpm (Variable)
- 主軸錐度 Spindle taper NT#50
- 主軸馬達 10 HP Spindle motor
- 軸心至機柱滑動面距離 Spindle center to slide way: 450 mm



JY-VH480

- 工作台尺寸 Table size: 1900 x 500 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1300 / 850 / 780 mm
- 最大工件載重 Max. loading weight 1500 kgs
- 主軸轉速 Spindle speeds 45-1500 rpm (18 speeds)
- 主軸錐度 Spindle taper NT#50
- 主軸馬達 10 HP Spindle motor
- 軸心至機柱滑動面距離 Spindle center to slide way: 480 mm



GCT 超精密手動搪銑
分割台 (選配)
Precision Manual
Index Table (OPT.)

Half cover for work table (opt).
工作台半護罩 (選配)

JY-VH550

- 工作台尺寸 Table size: 1900 x 500 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1500 / 900 / 790 mm
- 最大工件載重 Max. loading weight 1500 kgs
- 主軸轉速 Spindle speeds 45-1500 rpm (18 speeds)
- 主軸錐度 Vertical & horizontal spindle taper NT#50
- 主軸馬達 10 HP spindle motor
- 軸心至機柱滑動面距離 Spindle center to slide way: 550 mm



JY-VH650B

- 工作台尺寸 Table size: 2200 x 600 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1700 / 1050 / 950 mm
- 最大工件載重 Max. loading weight 2000 kgs
- 主軸轉速 Spindle speeds 45-1500 rpm (18 speeds)
- 主軸錐度 Vertical & horizontal spindle taper NT#50
- 主軸馬達 15 HP spindle motor
- 軸心至機柱滑動面距離 Spindle center to slide way: 650 mm

From VH480 up, with MPG (std).
從VH480開始, MPG (為標配)

JY-VH780

- 工作台尺寸 Table size: 2600 x 700 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 2000 / 1200 / 1000 mm
- 最大工件載重 Max. loading weight 3000 kgs
- 主軸轉速 Spindle speeds 45-1500 rpm (18 speeds)
- 主軸錐度 Vertical & horizontal spindle taper NT#50
- 主軸馬達 15 HP spindle motor
- 軸心至機柱滑動面距離 Spindle center to slide way: 780 mm



Half cover for work table (opt).
工作台半護罩 (選配)

* Picture shown coolant tray and chip guard are optional.

* 以上照片所示水盤及擋屑板為選配

Bed Type Vertical Milling Machine 床型立式銑床 V Series

V520/V580/V680/V850



JY-V520

- 工作台尺寸 Table size: 1500 x 450 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1100 / 500 / 500 mm
- 最大工件載重 Max. loading weight: 1000 kgs
- 主軸轉速 Spindle speed: 45-1500 rpm (Variable speed)
- 主軸錐度 Vertical spindle taper: NT50
- 主軸馬達 Spindle motor: 10HP
- 軸心至機柱滑動面距離 Spindle center to slide way: 520mm



JY-V580

- 工作台尺寸 Table size: 1900 x 500 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1300 / 560 / 550 mm
- 最大工件載重 Max. loading weight: 1500 kgs
- 主軸轉速 Spindle speed: 45-1500 rpm (18 steps)
- 主軸錐度 Vertical spindle taper: NT50
- 主軸馬達 Spindle motor: 10 HP
- 軸心至機柱滑動面距離 Spindle center to slide way: 580 mm



JY-V680

- 工作台尺寸 Table size: 1900 x 500 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1500 / 660 / 600 mm
- 最大工件載重 Max. loading weight: 2000 kgs
- 主軸轉速 Spindle speed: 45-1500 rpm (18 steps)
- 主軸錐度 Vertical spindle taper: NT50
- 主軸馬達 Spindle motor: 10HP
- 軸心至機柱滑動面距離 Spindle center to slide way: 680 mm



JY-V850

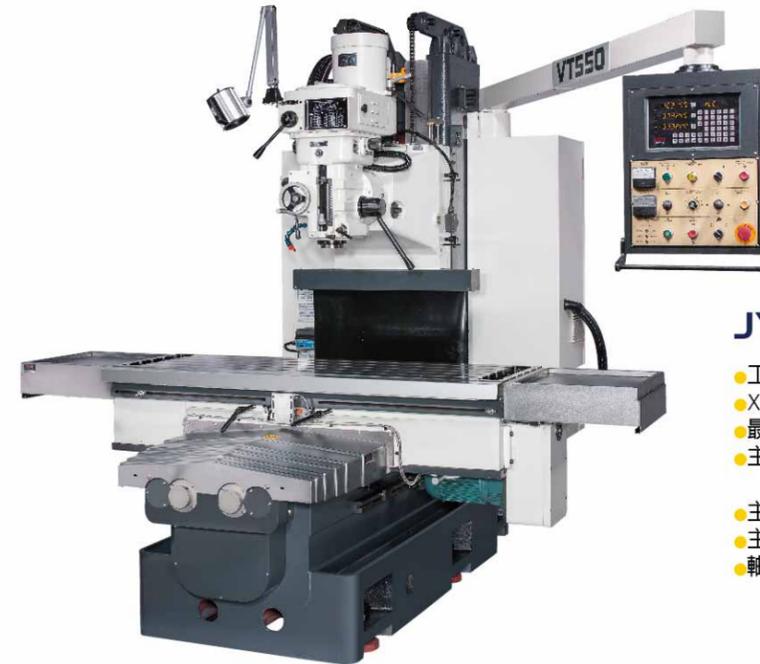
- 工作台尺寸 Table size: 2200 x 600 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1700 / 800 / 600 mm
- 最大工件載重 Max. loading weight: 2000 kgs
- 主軸轉速 Spindle speed: 45-1500 rpm (18 steps)
- 主軸錐度 Vertical spindle taper: NT50
- 主軸馬達 Spindle motor: 15HP
- 軸心至機柱滑動面距離 Spindle center to slide way: 850 mm

* Picture shown coolant tray and chip guard are optional.

* 以上照片所示水盤及擋屑板為選配

Bed Type Vertical Turret Head Milling Machine 床型立式砲塔頭兩用銑床 VT Series

VT550/VT630



JY-VT550

- 工作台尺寸 Table size: 1500 x 450 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1100 / 520 / 600 mm
- 最大工件載重 Max. loading weight: 1000 kgs
- 主軸轉速 Spindle speed: 75-3600 rpm (16 steps) STD.
80-3800 rpm (Variable speed) OPT.
- 主軸錐度 Vertical spindle taper: NT40
- 主軸馬達 Spindle motor: 5HP Pole change motor
- 軸心至機柱滑動面距離 Spindle center to slide way: 550 mm



NT40

TURRET TYPE HEAD

- 16-step speeds 75-3,600 rpm (Std.)
- Variable speeds 80-3,800 rpm (Opt.)

砲塔式立銑頭

- 主軸轉速16段75-3,600 rpm (標配)
- 無段變速80-3,800 rpm (選配)



JY-VT630

- 工作台尺寸 Table size: 1900 x 500 mm
- X/Y/Z軸行程 X/Y/Z axis travel: 1300 / 550 / 650 mm
- 最大工件載重 Max. loading weight: 1500 kgs
- 主軸轉速 Spindle speed: 75-3600 rpm (16 steps) STD.
80-3800 rpm (Variable speed) OPT.
- 主軸錐度 Vertical spindle taper: NT40
- 主軸馬達 Spindle motor: 5HP Pole change motor
- 軸心至機柱滑動面距離 Spindle center to slide way: 630 mm

Common Features of Millstar Bed Type Milling Machines

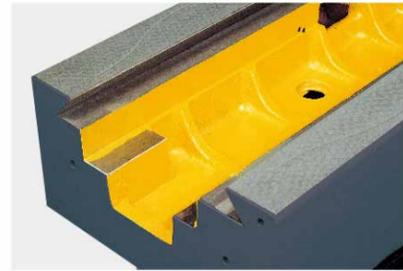
鉅業床式銑床共同特性



VERTICAL AND HORIZONTAL MILLING HEAD
立橫兩用銑頭



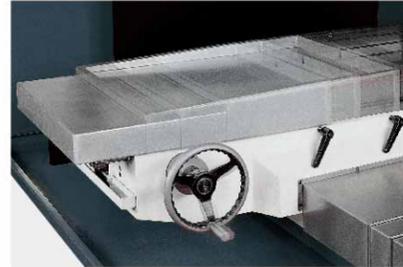
45-1500 RPM 18 SPEED CHANGE
45-1500 RPM 18段變速



RUGGED SADDLE
鞍座結構高剛性



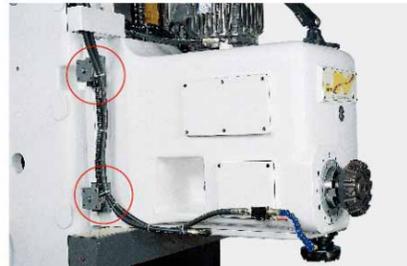
SPINDLE LUBRICATION SYSTEM
主軸冷卻系統



PRACTICAL TELESCOPIC COVER
金屬防屑護蓋



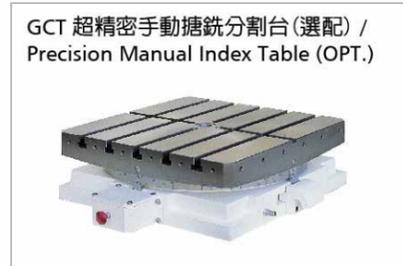
INTEGRATED AUTO LUBRICATING SYSTEM
滑道採用自動潤滑器



The Y, Z axis slideways are secured by compressed air, max. pressure of 1500 kg/cm², to avoid table movement while heavy cutting, thereby ensuring workpiece accuracy (For model VH480 up only) Y, Z 兩軸滑道採用空壓裝置固緊，最大固鎖力可達1500公斤/平方公分，即使進行重銑削工作，工作檯面無偏差滑動，確保工件成品精密度(適用於VH480以上機型)。



Air power draw bar (Vertical and horizontal spindle) (OPT.)
氣動鎖刀裝置(立式及橫式主軸)(選配)

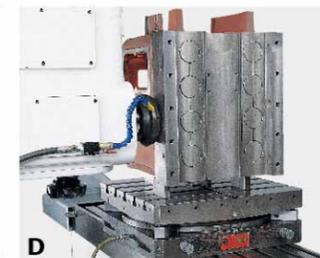
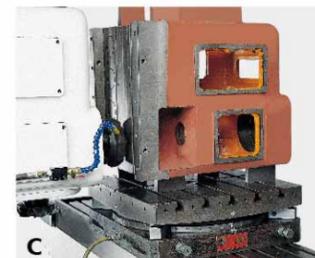
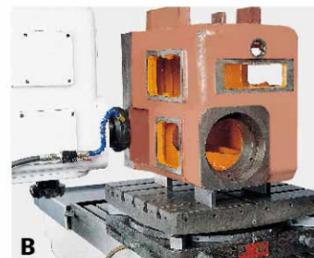


GCT 超精密手動搪銑分割台(選配) /
Precision Manual Index Table (OPT.)

- 適用於各式搪、銑、磨床等高精度加工。
- 採二片齒式聯結器定位，分割精度可達±3"，且精度不隨使用時數之增加而改變。耐重切削。
- 使用空壓，鬆開、鎖緊，操作簡便。
- 採用FC35鑄鐵，並經過數次冷熱調質處理，精密度耐久不變形。
- Suitable for the high accuracy machining job like Boring-Milling and Grinding-Machine.
- Build-in 2 pieces hirth coupling for positioning, indexing accuracy ±3 sec, ensure a long-term operation and heavy cutting & boring.
- Clamping / Unclamping by pneumatic, easy operation.
- The body is made of FC-35 cast iron that will be durable without deformation.

5-SIDE Machining is Available 可做五面加工

This machine can be fitted with a rotary table for easy and time saving 5-side machining.
可搭配旋轉工作台，簡單且省時地做五面加工。



FEATURES:

- Equipped with automatic lubrication system.
- Equipped with cooling system.
- Limit switches are provided on all traverses for safety.
- The ways are hardened, precision ground, then coated with Turcite-B.
- The table is fully supported in full traverse.
- All castings are FC 30 high quality material, anneal treated to relieve internal stress.
- All slideways are protected by telescopic covers to prevent scratching.
- Oversized column ensures maximum rigidity and stability. Widely spaced base structure.
- Y, Z-axes are pneumatically locked for fast and accurate positioning.
- Centralized control panel minimizes operation fatigue while permitting efficient operation.
- Short distance between vertical and horizontal spindles provide increased capacity especially for multiple face machining.



VH, V, VT SERIES

Bed Type Vertical & Horizontal

床式立橫銑床 VH450/VH480/VH550/VH650B/VH780 V520/V580/V680/V850, VT550/VT630



VERTICAL AND HORIZONTAL MILLING HEAD (PATENT)
立橫兩用銑頭(專利)

機械特性:

- 本機裝置自動潤滑器。
- 配備冷卻系統。
- 所有行程附極限開關，確保行程安全。
- 滑道經硬化處理，精密研磨，並貼覆Turcite-B耐磨片。
- 工作台行程具全程支撐特性。
- FC30高級鑄鐵結構，經退火處理消除內應力。
- 滑道以金屬伸縮護蓋保護，有效避免灰塵及鐵屑傷害滑道。
- 超大立柱構造，展現優異的機械剛性及穩定性。
- 底座滑道寬闊，穩定性佳。
- Y, Z兩軸滑道採用空壓裝置固緊，可快速精確的鎖定滑動面。
- 集中式操作面板，可免除操作上之疲憊，提高生產效率。
- 立、橫兩主軸中心距離小，可加大多面同時加工之長度。

Development of convention-breaking CNCs

突破傳統CNC的研發過程

The new M80 Series, we went back to the drawing board and completely reexamined our cutting-edge control technologies. The result is a breakthrough in the control of high-speed, high-precision machining.

M800/M80系列產品是三菱電機至今為止所研發的高速和高精度加工控制技術以及尖端的控制技術，被譽為重大突破的升級版產品。



More efficiency and more convenience of application when you change to the CNC controller on Bed-Type Milling Machine.

升級為CNC控制器
使床式銑床操作更有效率
、提升操作便利性 !!



New Generation Milling PC-Based/CNC

床型數控銑床

VH450/VH480/VH550/VH650B/VH780
V520/V580/V680/V850, VT550/VT630

In-depth analysis and simulations achieve one volition

Achieving a lead in processing performance demanded the integration of innovative technologies beyond optimizing processor manufacturing processes. Overcoming numerous hurdles and maximizing the potential of the processor, we succeeded in producing a CNC-dedicated CPU that achieves unprecedented high-speed processing performance.

Experience the revolutionary high-speed processing of the new CNC-dedicated CPU

Incorporating the CNC-dedicated CPU in the new series not only results on phenomenal processing speed, but also reduces the number of required parts, leading to fewer possibilities of failure and increasing product quality. Equipped with Mitsubishi Electric's first-ever CNC-dedicated CPU, the long-awaited M800 / M80 Series is the fruit of an original development process and the sum of our latest technologies.

深層分析及模擬所成就的產品

為了實現高速處理性能，不僅需要優化處理器製造過程，還需要技術的革新。將處理器效能發揮到極致。

體驗CNC專用CPU的高速處理能力

CNC專用CPU，削減了使用的零件數，更有助於減少導致故障的因素，同時也能夠確保產品品質。M800 / M80系列搭載集結最新技術力所開發的三菱電機史上首顆CNC專用CPU。

INTEGRATED CONTROL PANEL 集中式控制面板

With new generation Syntec PC Base (Std), or Mitsubishi/Fanuc controller (Opt.) AC servo motor/Ball screw on 3 axes and RS 232 interface (Std). Increase user's machining to be more accurate are effective.

採用新一代的新代 PC Base 控制器(標準)或三菱/發那科控制器(選用配備)。搭配AC伺服馬達與3軸滾珠螺桿，RS232介面(標準)，讓使用者加工更快速精準，更有效率。



Syntec PC-Based Controller



Fanuc controller

規格表

SPECIFICATIONS

單位:mm / Unit:mm

	型式	MODEL	VT550 / VT630	V520	VH450	V580 / VH480 / VH550	V680 / V850	VH650B	VH780	
Table	工作台	工作台面積	Table size	1500 x 450 / 1900 x 500	1500 x 450	1500 x 450	1900 x 500	1900 x 500 / 2200 x 600	2200 x 600	2600 x 700
		XY軸行程	X & Y axes travel	1100 x 520 / 1300 x 550	1100 x 500	1100 x 720	1300 x 560 / 1300 x 850 / 1500 x 900	1500 x 660 / 1700 x 800	1700 x 1050	2000 x 1200
		Z軸行程	Z axis travel	600 / 650	500	780	550 / 780 / 790	600	950	1000
		T型槽 (尺寸槽數間距)	T-slot (size x number x distance)	18 x 5 x 80	18 x 5 x 80	18 x 5 x 80	18 x 5 x 80	18 x 5 x 80 / 20 x 5 x 125	20 x 5 x 125	20 x 5 x 125
		三軸快速移動率	3 axes rapid feed rate	25~1500 / 30~2800 (30~6000 PC-Based)	25~1500 (30~6000 PC-Based)	25~1500 (30~6000 PC-Based)	30~2800 (30~6000 PC-Based)	30~2800 (30~6000 PC-Based)	30~2800 (30~6000 PC-Based)	30~2800 (30~6000 PC-Based)
		三軸切削進給率	3 axes cutting feed rate	1500 / 2800 (30~6000 PC-Based)	1500 (30~6000 PC-Based)	1500 (30~6000 PC-Based)	2800 (30~6000 PC-Based)	2800 (30~6000 PC-Based)	2800 (30~6000 PC-Based)	2800 (30~6000 PC-Based)
Cutting Range Reference	切削工件參考工作範圍	切削長度	Cutting length	1100	1100	1100	1300	1500 / 1700	1700	2000
		切削寬度	Cutting width	520 / 550	490	420	530 / 450 / 520	610 / 780	620	750
		切削高度	Cutting height	600 / 650	500	500	500 / 500 / 520	700	640	750
		承載重量	Loading weight	1000 / 1500 kg	1000 kg	1000 kg	1500 kg	2000 kg	2000 kg	3000 kg
Vertical Spindle	立主軸	主軸轉速 (60HZ)	Spindle speed (60HZ)	75-3600 rpm 16 Steps (ST) 80-3800 rpm Variable (OP)	45-1500 rpm Variable	45-1500 rpm Variable	45-1500 rpm 18 Steps	45-1500 rpm 18 Steps	45-1500 rpm 18 Steps	45-1500 rpm 18 Steps
		主軸端孔斜度	Spindle taper	NT40 or BT40	NT50 or BT50	NT50 or BT50	NT50 or BT50	NT50 or BT50	NT50 or BT50	NT50 or BT50
		軸端至工作台面距離	Spindle nose to table surface distance	100-700 / 220-870	100-600	0-617	95-645 / 0-583 / 0-603	150-750	0-750	0-810
		軸心至機柱滑動面距離	Spindle center to slide way surface distance	550 / 630	520	450	580 / 480 / 550	680 / 850	650	780
		主軸進給 (3段)	Quill feedrate	0.035 / 0.07 / 0.14	NA	NA	NA	NA	NA	NA
		主軸頭左右旋轉角度	Turret head swivel angle	45°	NA	NA	NA	NA	NA	NA
		主軸通心軸上下行程	Quill travel	140	NA	NA	NA	NA	NA	NA
Horizon	橫主軸	主軸轉速 (60HZ)	Spindle speed (60HZ)	NA	NA	45-1500 rpm Variable	45-1500 rpm 18 steps (VH480, VH550)	NA	45-1500 rpm 18 Steps	45-1500 rpm 18 Steps
		主軸端孔斜度	Spindle taper	NA	NA	NT50 or BT50	NT50 (VH480, VH550) or BT50	NA	NT50 or BT50	NT50 or BT50
		軸心至工作台面距離	Spindle center to table surface distance	NA	NA	0-780	0-780 (VH480) / 0-790 (VH550)	NA	0-950	0-1000
		軸端至工作台面距離	Spindle nose to table edge distance	NA	NA	180	305 (VH480) / 285 (VH550)	NA	335	400
Motor	馬達	主軸馬達	Spindle motor	5HP變極馬達 Pole change motor	10HP x 4P AC	10HP x 4P AC	10HP x 4P AC	10HP x 4P AC / 15HP x 4P AC	15HP x 4P AC	15HP x 4P AC
		X軸進給馬達	X axis feeding motor	1HP x 4 P / 2HP	0.75 KW	0.75 KW	2.5 KW	2.5 KW / 3 KW	3 KW	3 KW
		Y軸進給馬達	Y axis feeding motor	1HP x 4 P / 2HP	0.75 KW	0.75 KW	2.5 KW	2.5 KW / 3 KW	3 KW	3 KW
		Z軸進給馬達	Z axis feeding motor	1HP x 4 P / 2HP	0.75 KW	0.75 KW	2.5 KW	2.5 KW / 3 KW	3 KW	3 KW
Dimensions	一段規格	淨重 (約)	Net weight	3400 / 5000 kg	3800 kg	4000 kg	5200 / 5500 / 6000 kg	7000 / 7500 kg	7500 kg	12500 kg
		毛重 (約)	Gross weight	3800 / 5500 kg (40"HQ)	4300 kg (40"HQ)	4500 kg (40"HQ)	6000 / 6500 / 7000 kg (40"HQ)	8000 / 8500 kg (40"HQ)	8500 kg (40"HQ)	13500 kg (20"FR)
		佔地面積 (長 x 寬 x 高)	Floor plan (L x W x H)	3500 x 3100 x 2620 4280 x 3780 x 2980	3500 x 2900 x 2900	3500 x 3100 x 2750	4300 x 3350 x 2980, 4280 x 3780 x 2980 4500 x 3780 x 2980	4500 x 3780 x 3160 5180 x 4080 x 3180	5180 x 4080 x 3180	5880 x 4450 x 3180

• 由於本公司不斷的研究改進，本型錄所示機械規格特性本公司有變更之權利，恕不另行通知。 • All specifications and designs are subject to change without prior notice.

Bed Type Milling 傳統床型銑床

STANDARD ACCESSORIES 標準配備

- Automatic lubricating system
- Cooling system
- Tool box
- Spindle draw bar screw
- Leveling pads
- Leveling screws
- Air operated Y, Z axis lock (480, 550, 650, 780)
- Transformer (Export only)
- Coolant tray + Chip guard
- Spindle braking system
- 自動潤滑系統
- 冷卻系統
- 工具箱
- 主軸拉桿螺絲
- 水平墊片
- 水平調整螺絲
- Y, Z軸空壓鎖定功能 (480, 550, 650, 780)
- 變壓器(外銷專用)
- 水盤 + 擋屑板
- 主軸煞車系統

OPTIONAL ACCESSORIES 選購配備

- Ball screw (X, Y)
- Air power draw bar (Vertical and horizontal)
- 4th axis rotary table (Manual)
- Magnetic chuck
- Vice (16", 20")
- End milling collet chuck set
- Universal clamping set
- Half cover for work table
- 3 axes D.R.O (Fagor brand)
- CE norm
- 滾珠導螺桿(X, Y)
- 氣動鎖刀(立、橫主軸)
- 第四軸旋轉工作台(手動)
- 電磁盤
- 虎鉗(16", 20")
- 端銑刀具夾具組
- 萬能夾具組
- 半罩鍍金工作台
- 三軸發格光學尺
- CE標準

Bed Type Milling CNC / PC-Based 床型數控銑床

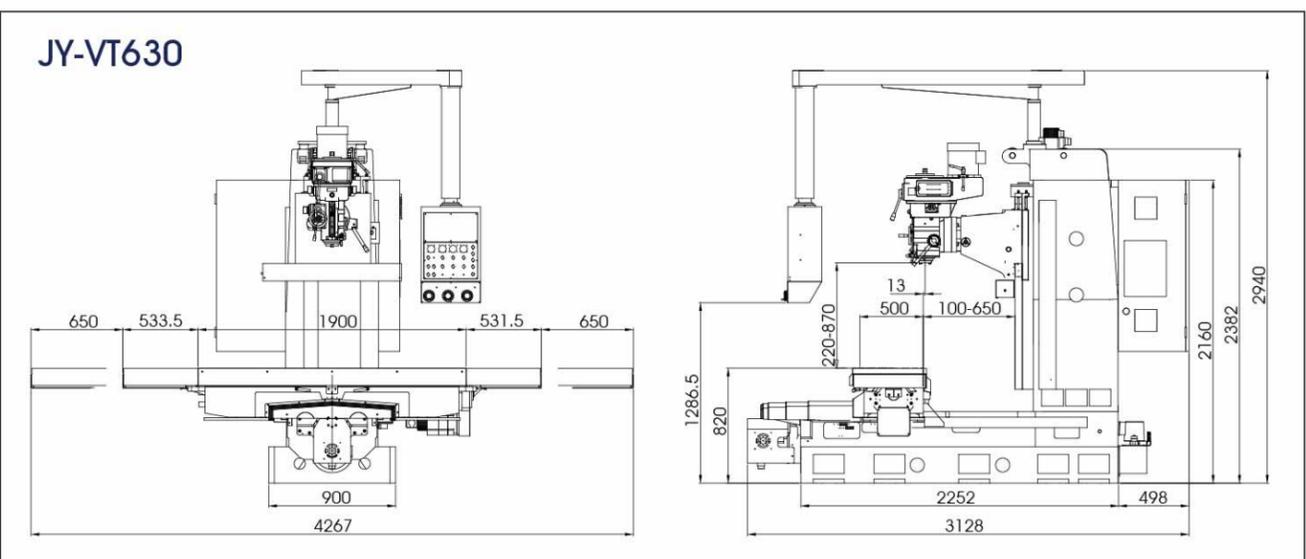
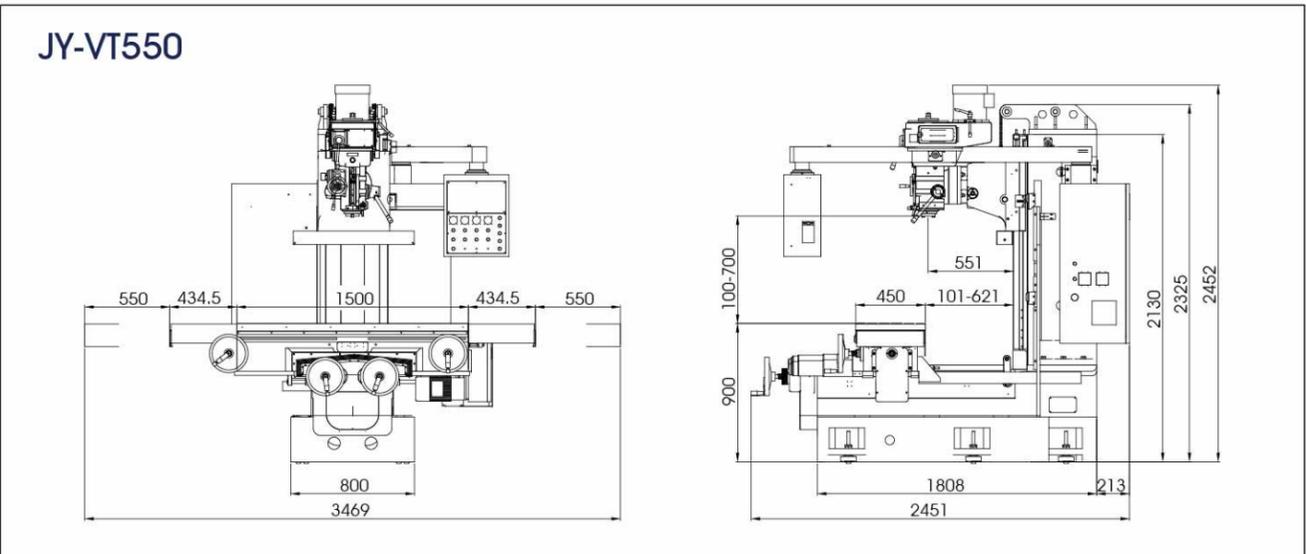
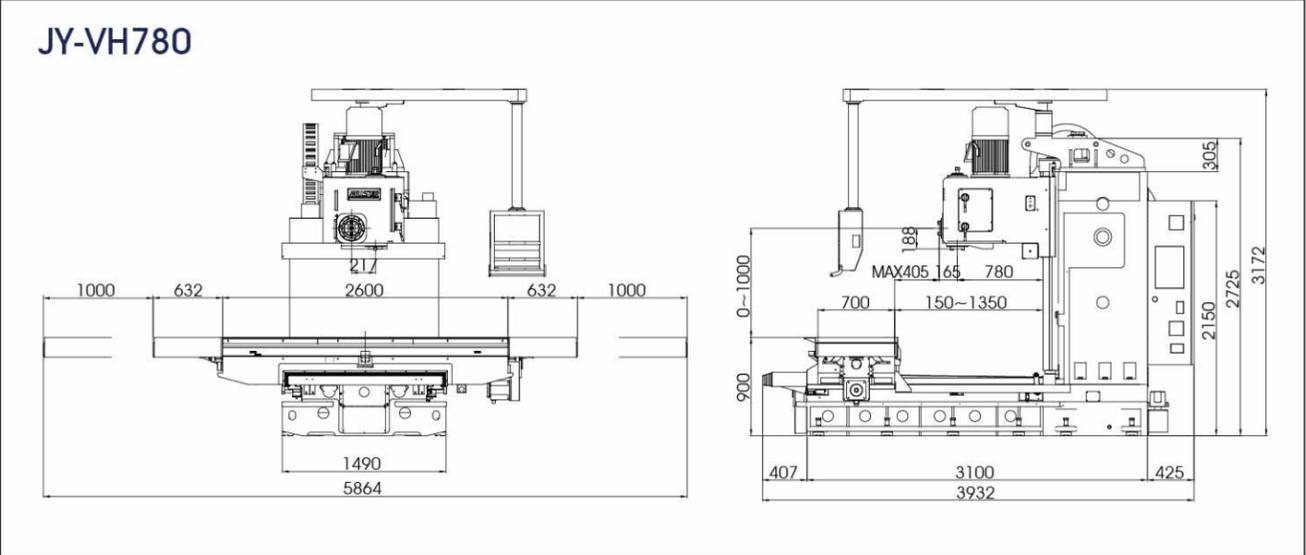
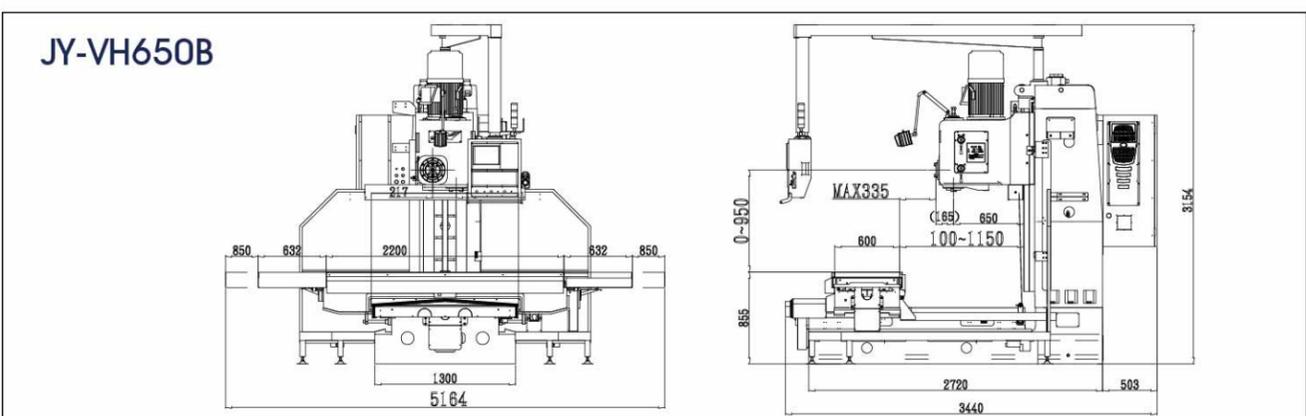
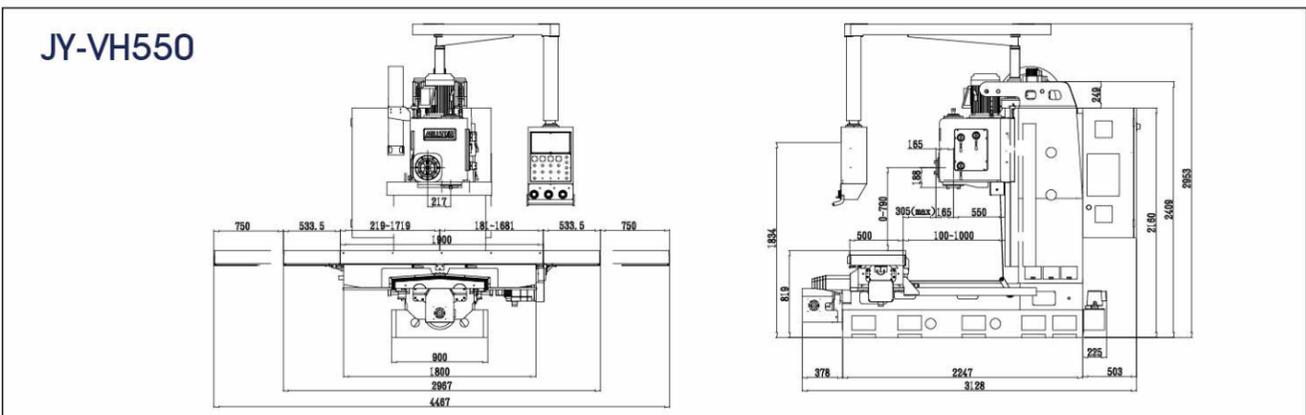
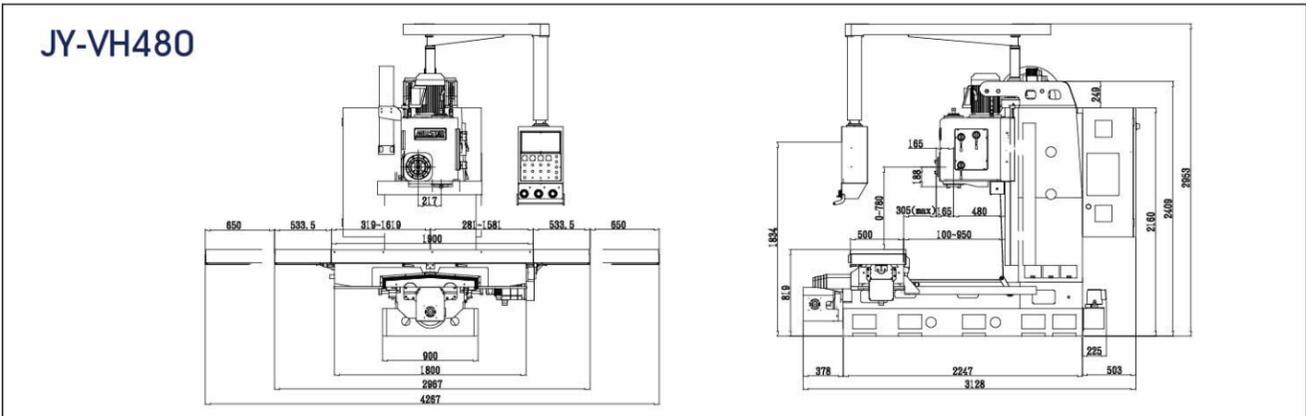
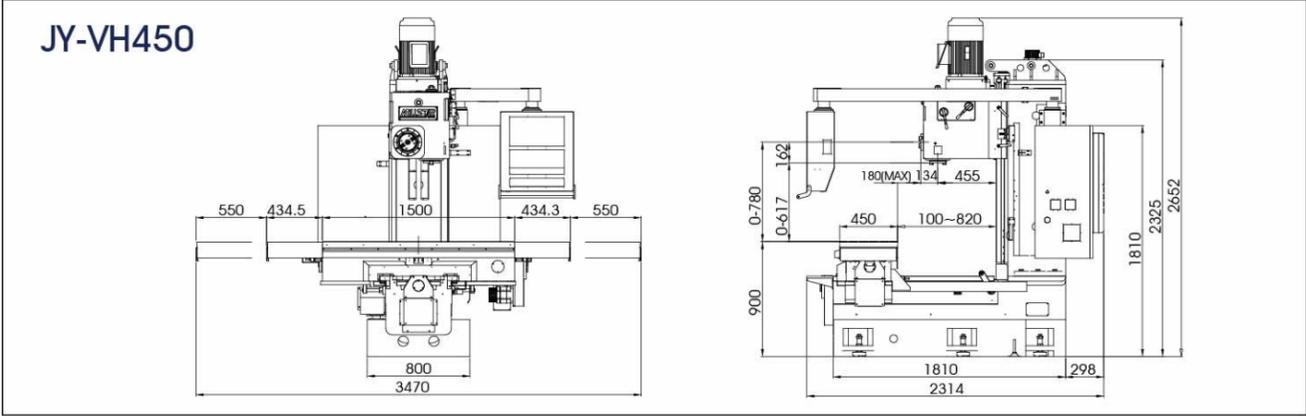
STANDARD ACCESSORIES 標準配備

- Syntec PC-based controller
- 3 axes ball screw
- Coolant tray & chip guard
- Auto lubrication system
- Cooling system
- Leveling pad
- Leveling screws
- Working condition light
- RS232 interface
- Transformer (Export only)
- Spindle braking system
- 新代控制器
- 三軸滾珠螺桿
- 水盤+擋屑板
- 自動潤滑系統
- 冷卻系統
- 水平墊片
- 水平調整螺絲
- 雙色指示器
- RS232介面
- 變壓器(外銷專用)
- 主軸煞車系統

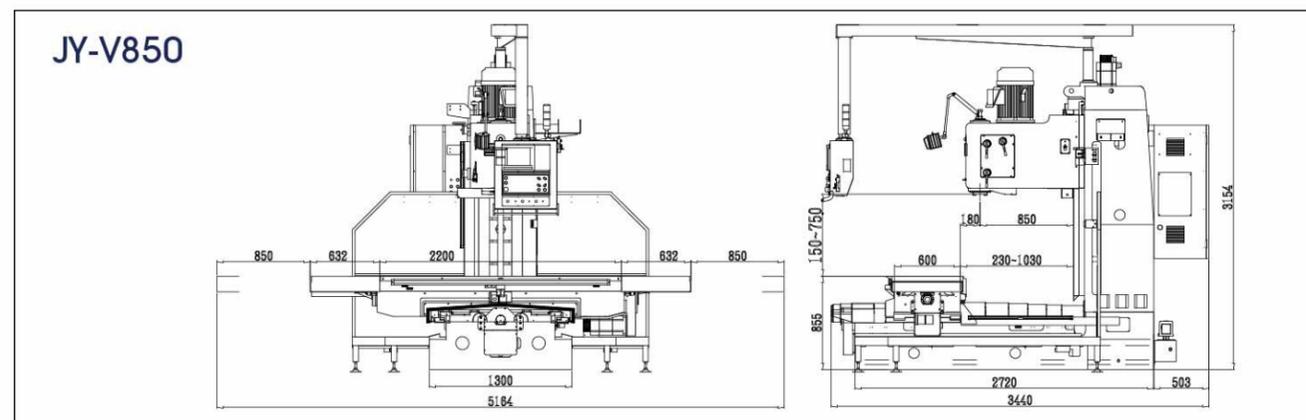
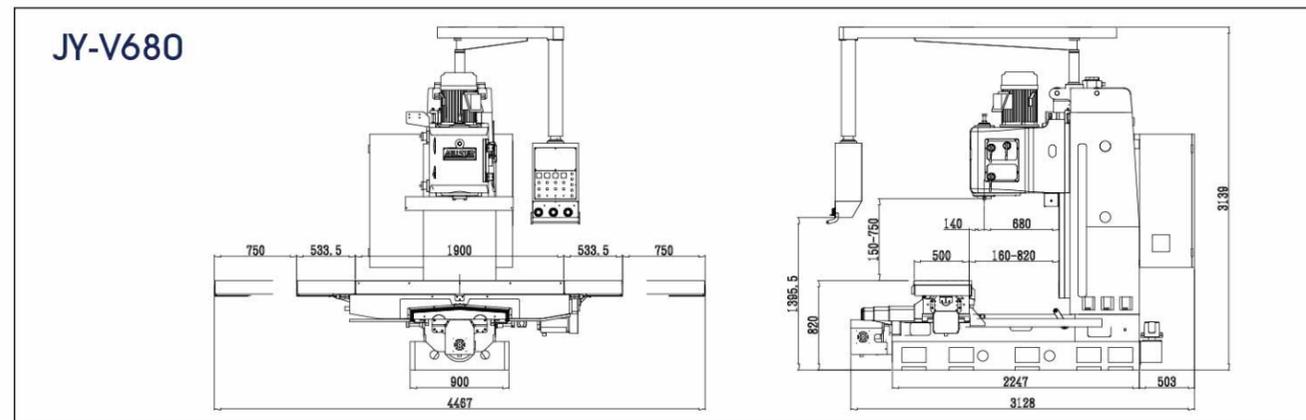
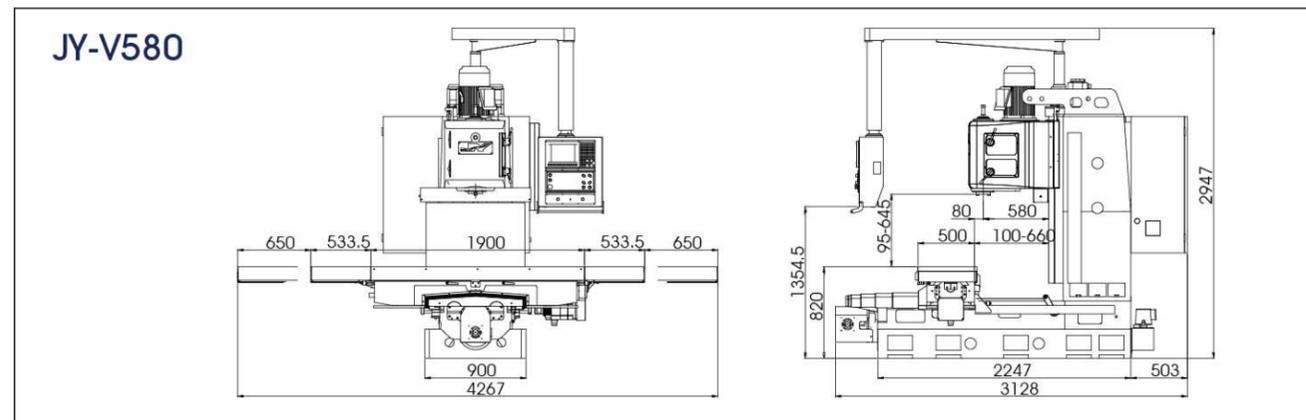
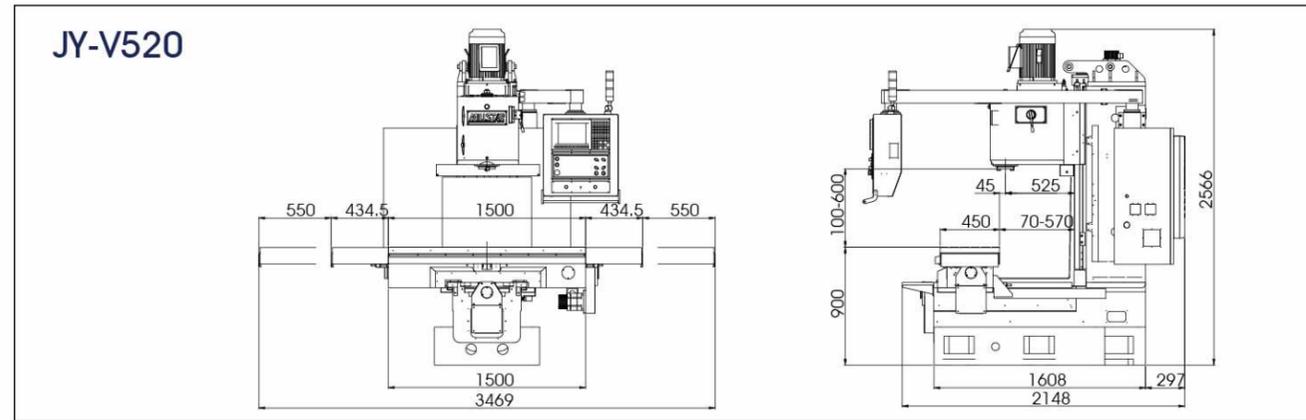
OPTIONAL ACCESSORIES 選購配備

- Mitsubishi or Fanuc controller
- Magnetic chuck
- 4th axis rotary table (Manual)
- Half cover for work table
- 3 axes D.R.O (Fagor brand)
- Air power draw bar (Vertical and horizontal spindle)
- CE Norm
- 三菱或發那科控制器
- 電磁盤
- 第四軸旋轉工作台(手動)
- 半罩鍍金工作台
- 三軸發格光學尺
- 氣動鎖刀(立、橫主軸)
- CE標準

Dimensional Drawings 尺寸圖



Dimensional Drawings 尺寸圖



BED TYPE VERTICAL & HORIZONTAL MILLING MACHINE

床式立橫兩用銑床

Millstar VH Series Traditional Milling Machine Advantages:

- With electronic MPG automation technology, the 3 axes can be independently operated thereby reducing mistakes, saving manpower and making for easy maintenance.
- The MPG micro feed, with high precision, efficient ball screw and AC servo-motor to fully upgrade your machining.
- Ergonomic design of the interface provides easier operations when machining. The VH series provides more exact feedback control to increase feeding stability.
- The Vertical & Horizontal double-spindle features an integrated structural design. The distance of center lines are narrowly reduced by 60%, allowing multi-surface milling works can be finished in one setup without the problem of tolerance accumulation. This design has been patented.
- Spindle temperature rise protection systems, oil cooling device coupled with the structural design of the non-contact labyrinth path (dust-proof, anti-wear, anti-temperature rise, anti-oil spill) temperature control in less than $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$. (Above design has been patented, too.)
- The VH series has got three patents, work pieces from 1000 kg up to 3000 kg for 5-side simultaneous machining.
- All in one: Highest flexibility with Vertical and Horizontal machining.

VH系列傳統銑床位階提昇實際體現

- 以「電子式MPG」自動化技術、獨立三軸操控減少誤動作、能夠節省人力，並具備維修容易的特性。
- MPG微量進給，搭配高精度、高效率之滾珠螺桿，及伺服馬達，在質量構面、加工構面，位階全面升級。
- 人機介面之設計，符合人體功能化運作、回饋控制更為精良，提高進給穩定度。
- 立臥兩用雙主軸一體式結構設計，中心距離窄形化(比分離式縮減60%以上)，可一次裝夾、多面加工，無累積公差之虞。(已獲專利)
- 主軸溫升防護系統、潤滑油冷卻循環裝置加上非接觸式與迷宮式路徑結構設計(防塵、防磨耗、防溫升、防漏油)可溫控在 $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 以內。(已獲專利兩項)
- 本機型擁有三項專利加持、更實質體現機器，附加價值之磅礴氣勢。

