



## PERFECT JET

TRAVELLING COLUMN VERTICAL/HORIZONTAL MACHINE CENTER  
VERTICAL MACHINE CENTER  
DEEP HOLE DRILLING & BORING MACHINE  
FLOOR TYPE BORING & MILLING MACHINE  
CNC & CONVENTIONAL BED-TYPE MACHINE  
DOUBLE COLUMNS MACHINING CENTER  
CUSTOMIZED MACHINE



## PERFECT JET

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品正機械PJM  
PING JENG MACHINERY INDUSTRY CO.,LTD

精微加工中心機/龍門加工中心  
HIGH PRECISION MACHINING CENTER  
DOUBLE COLUMNS MACHINING CENTER

# Profile



*Mission: Sincerity Progress Harmony*

*Vision: Cultivate Good Karma in the business, Benefit All People*

## History of Timeline

- 1981~Ping Jeng Company starts in Taichung, Taiwan. Capital 2.1 million. Launch :RD-600&600BL
- 1982~As customer needs to produce Bed Type Milling Machine:BM-2Vand Radial Drill Machine: CNC-RAMILL-VI.
- 1983~Launch: BM-3V&BM-4V ◦
- 1984~Launch:BM-3MV&BM-4MV ◦
- 1985~Launch:BM-3DS&4DS
- 1986~Launch:CNC-MGD-500&1000 ◦
- 1987~Launch:CNC-MGD-1015&1020
- 1988~Launch:CNC-MGD-1520&1525 ◦ TRAK-3S(BM-22VDA)
- 1989~Launch:DH-1500&3000&6000. Cooperate with American well-known NC Company and entered the U.S. market with CNC Milling Machine successfully. Capital increasing to 19.8 million.
- 1990~Launch:CNC-MGD-613&813 ◦ TRAK-5S(BM-24VDA)
- 1991~Launch:CNC-MGD-816&820
- 1992~Launch:CNC-MGD-1016&1020 ◦ TRAK-2S(BM-21VCA)
- 1993~Launch:CNC-51-VI/GA/GF(BM-1687). Expand European market & start to develop Box Ways machining centers. CE -TUV of Germany Authentication approved for CNC Milling Machines. Capital increasing to 30 million.
- 1994~Launch:CNC-61-VI/GA/GD(BM-2087)
- 1995~Launch:CNC-71-VI/GA/GD(BM-2587) ◦ CNC-81-VI/GA/GD(BM-3087)
- 1996~Launch:MCV-64BT
- 1997~MCV-85B&85G
- 1998~MCV-100B&100G
- 1999~Launch:MCV-168G&168B. All plants destroyed by 921 earthquake and almost forced to close down the business; after financing and capital increasing to 68 million, and enable to reconstruct the plants.
- 2000~Launch:MCV-86&116B. Merge a machinery company and acquire related technical staffs and some outstanding European agents. Develop Linear Guide Way machine center.

- 2001~Launch:MCV-127B &147B&147G
- 2002~Launch:MB-4R372 -4axes ROUTING. & MCV-M8 & M6
- 2003~Launch:CNC-24MA(740) CNC-34/36/46MB (1050-1350)◦MCV-M10. Attend EMO and international exhibitions actively to expand global market.



- 2004~Launch:CNC-12ME(QCM) ◦ MCV-M11. CE-TUV of Germany Authentication approved for all machine tools and successfully expanded Turkey and East Europe.
- 2005~ Launch:MB-1207/1210 ◦ MCV-M5. As Europe market need to R&D the Moving Column machining centers serial. New CIS & Logo – PERFECT JET & implement ERP management and target management.
- 2006~Launch:MHD-2678 ◦ DH-3100 ◦ MCV-M7
- 2007~Launch:MV-107P&107U ◦ MV-64P&64U. Italy well-known machinery dealer ask to be the exclusive agent for Moving Column serial and sign up 10 machines per year quota.
- 2008~Launch:MV-86P&86U, MB-1220.
- 2009~Launch:MCV-2010G, MV-308. R&D Submicron high precision machining center, and joint program of Ministry of Economic Affairs.
- 2010~Launch:MV-308-5X, MCV-188G.

As European Auto parts and Aero parts market needs, to develop 5-axis swiveling head MV-308-5x and gain the Patent.



- 2011~Launch:MH-1500D, MH-800P, MCV-435 v. MCV-435 v is launched in TIMTOS Exhibition and wins Grand Award and IENA in Germany invention competition for Grand Champion Award also. Capital increasing to 168 million.
- 2012~Launch:MH-1213, MH-500P, MH-630P, MCV-2510B/G
- 2013~Launch:BM-1620, CNC-GD-4axes, CNC-GD-6axes, CNC-GD-8axes

All machines are developed in-house. We have an outstanding R&D team who is dedicated to researching and developing new machines many years with expertise. Using AUTOCAN R14 software and AUTODESK3D/INVENTOR SERIES.

## COMPANY SCOPE:

Land Area:30000m<sup>2</sup> ◦ Factory Area:16000 m<sup>2</sup> ◦ Office Area:22000 m<sup>2</sup> ◦ Capital increasing to 168 million.

Perfect World, Perfect Jet, Perfect Efficiency: Creating job opportunity and supporting educational constitution are the main principles of Ping Jeng. To build a better society, Ping Jeng keeps doing its best to benefit the community for now and the future.

## Patent



**Geographic Location** 地理位置 全視圖



**BRIDGE TYPE MACHINING CENTER**  
龍門加工中心機



**PERFECT JET**

**Designed and Built with Excellent Quality, Efficiency and Accuracy**



P5 MCV-435H

4R-372

MB-1207

MB-1612E/2012E/3012E

MB-2122/2132/2142

P6

# HIGH PRECISION MACHINING CENTER 精微加工中心機 MCV-435 $\mu$

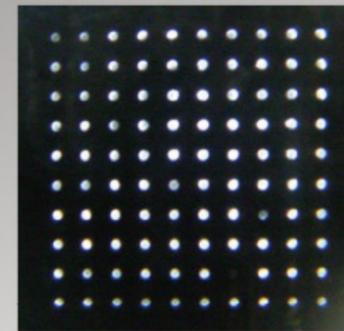


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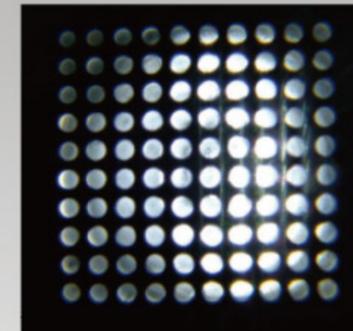


The MCV-435 $\mu$  is a high precision, high speed machining center that is designed specifically for precision mold making, medical instruments, biotechnology and the photoelectric industries. It's an ideal machine for producing high precision, small parts.

MCV-435 $\mu$  是一部超精密高速加工中心機，適用於精密磨具、醫療器材、生物科技與光電業...等，為生產高精度微小零件之最佳利器。



\* Ø0.1mm micro-drilling  
\* Through-hole depth:1.1mm



\* Ø0.05mm micro-drilling  
\* Through-hole depth:0.6mm



Medical Instruments  
Mold Machining  
\* Workpiece name:Artificial bone mold  
\* Workpiece material:SKD61(HardnessHRC50)  
\* Workpiece :SKD61(HardnessHRC50)



■ Domestically Developed! Best Price to Performance Ratio!

國內自主開發！價格與性能最佳組合！

With extensive experience in the R&D of precision machine tools, Ping Jeng has overcome a multitude of technical challenges to successfully develop the MCV-435 $\mu$  high precision machining center.

MCV-435 $\mu$ 精微加工中心機，是品正憑藉多年精密工具機研發經驗，克服種種技術瓶頸而成功研發出來的結晶。



Material	Before Cutting		After Cutting	
	Flatness	Surface roughness	Flatness	Surface roughness
Brass (C360)	Flatness	3 $\mu$ m	Flatness	0.7 $\mu$ m
	Surface roughness	Ra 1.0 $\mu$ m	Surface roughness	Ra 0.04 $\mu$ m
Mold steel (NAK80)	Flatness	3 $\mu$ m	Flatness	0.7 $\mu$ m
	Surface roughness	Ra 0.3 $\mu$ m	Surface roughness	Ra 0.05 $\mu$ m

Outstanding Features優異特性

- \* All critical parts of the machine are domestically developed.
- \* The machine bed is manufactured from artificial granite.
- \* Constant temperature control of the machine.
- \* X,Y-axes are mounted with air-cushioned slide ways combined with linear motor drivers.
- \* Graphical interface input for measuring function.
- \* Windows XP operating system.

●重要零組件均由國人自主研發

●機台採用人造花崗岩製成

●機台恆溫控制系統

●X,Y軸採用精密氣浮導軌，搭配線性馬達驅動

●圖形化介面輸入量測功能

●Windows XP作業系統

# HIGH PRECISION MACHINING CENTER 精微加工中心機 MCV-435 $\mu$



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**恆溫系統監控**  
Constant Temperature System Monitoring

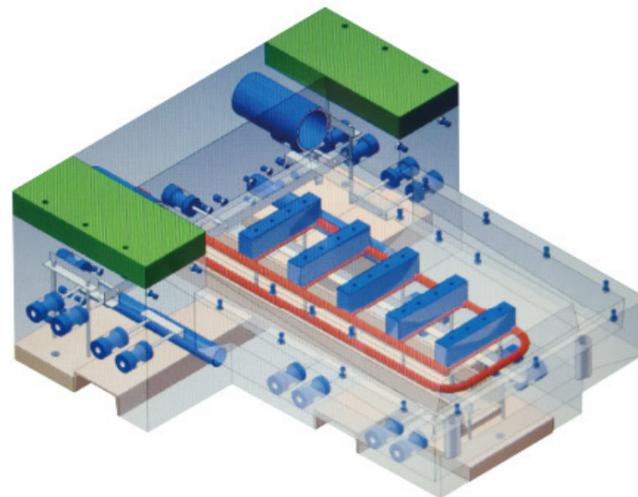
- ※ Spindle temperature setting and monitoring
- 主軸溫度設定監測
- ※ Chilling water temperature setting and monitoring
- 冰水溫度設定監測
- ※ Machining area temperature is controlled at 20°±0.5°C
- 加工區恆溫控制達20° ±0.5° C

## 內藏式循環恆溫控制

Built-in Circulated Coolant Circuit for Constant Temperature Control

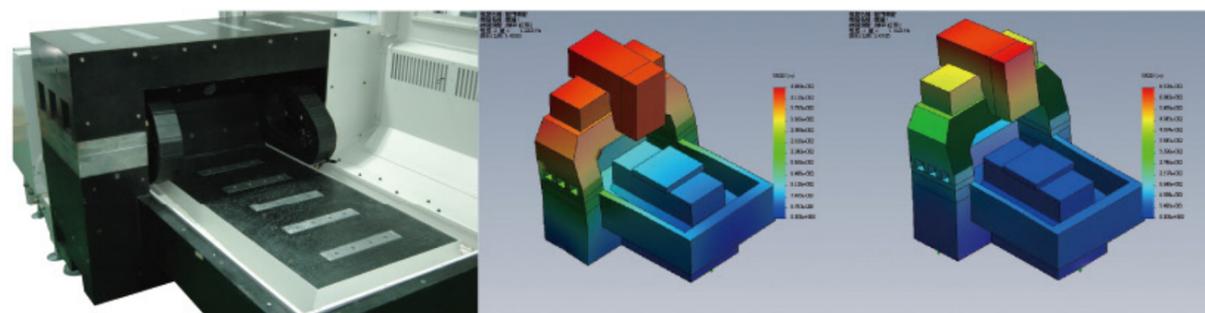
20°±0.5°

- \* The artificial granite base and saddle are designed with a built-in circulation cooling system that thoroughly suppresses thermal growth and deformation problems.
- \* The structural parts that contact with the heat source are equipped with coolant tubes to expel machine-generated heat. This also contributes to the constant temperature control of the machine, resulting in higher machining accuracy.



## 有限元素結構分析

Finite Element Analysis (FEA) for Machine Structure



## Air-Cushioned Slideways on X,Y-axis

X, Y軸氣浮式導軌線性馬達驅動

※ The advanced design of the air-cushioned slideways on the X and Y-axis exhibits extraordinary stability.

※ Linear Motor Drive

With the linear motor drive, feed rate can reach 100 mm/sec and acceleration may reach 0.5G.

※ X, Y軸採用先進的氣浮式導軌設計，展露獨特穩定性

※ 線性馬達驅動，進給速度最高可達100mm/秒。加速度高達0.5G

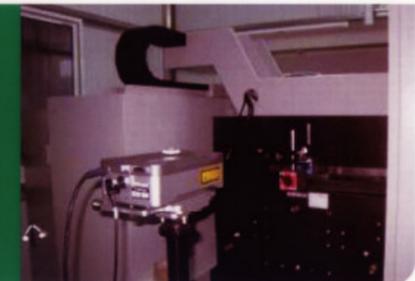
※ Z軸採用螺桿精密級C1級，線軌UP級功能達到3um以下

## 三軸精度檢測 Three-axes Accuracy Inspection

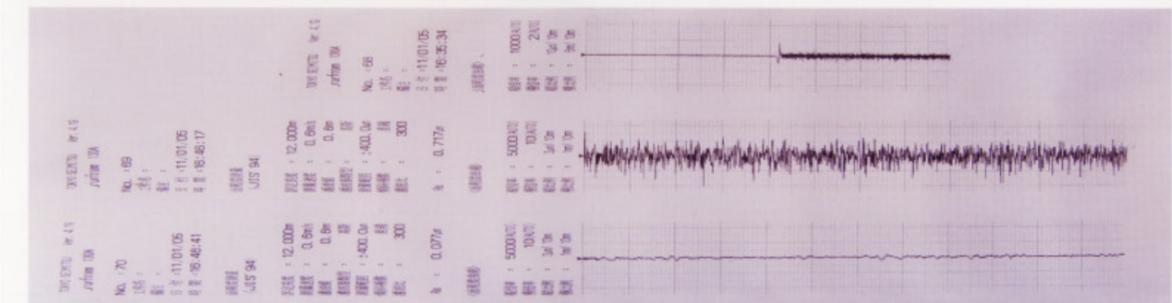
A laser unit is applied for inspecting the linear accuracy and pitch error on the X, Y and Z-axis. Through such inspection, the machining and repeatability accuracies can be assured.



Item	X-axis	Y-axis	Z-axis
Linear accuracy	2.6 $\mu$ m	3.0 $\mu$ m	2.8 $\mu$ m
Flatness	1.4 $\mu$ m	2.6 $\mu$ m	2.2 $\mu$ m
Pitch	4.6arc	2.6arc	2.5arc
Runout	5.3arc	5.3arc	6.5arc
Accuracy	0.3 $\mu$ m/400mm	0.2 $\mu$ m/300mm	0.8 $\mu$ m/150mm
Repeatability	0.2 $\mu$ m	0.1 $\mu$ m	0.4 $\mu$ m



## Surface Roughness Inspection Report:

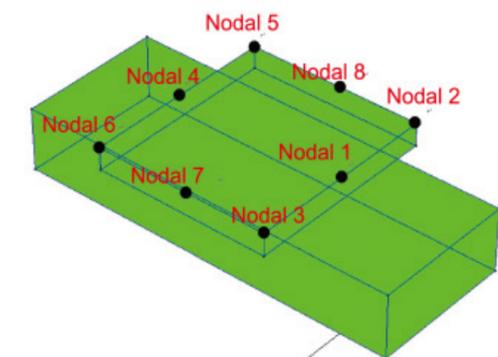


## 結構共振穩定性測試

Structural Resonance Frequency Test

68Mz

By the use of sophisticated instruments to inspect the resonance frequency on the table surface, accuracy can be further increased.



Standard value	Over 50Hz
Actual test value	68Hz

# HIGH PRECISION MACHINING CENTER 精微加工中心機 MCV-435 $\mu$



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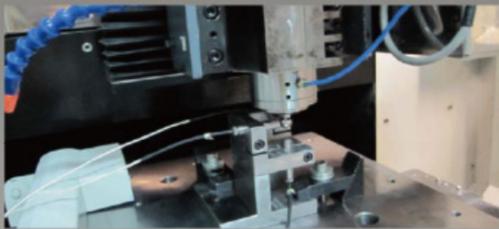
High Speed Built-in Type Spindle 120,000rpm  
高速內藏式主軸

Spindle Runout Inspection

測試結果

\* Static runout: 0.7 $\mu$ m

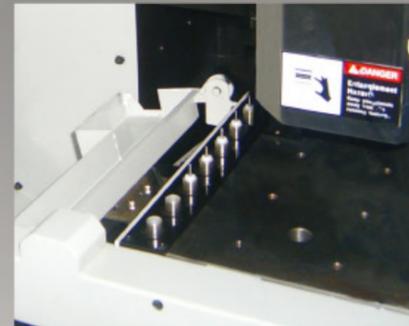
\* Dynamic runout:  $\leq 2 \mu$ m (speed 90,000rpm)



Automatic Tool changer自動換刀

\* Magazine loading capacity: 8 tools

\* Armless type tool changer



CNC Control 控制器

\* Windows XP operating system 作業系統

\* Graphical interface for measuring function

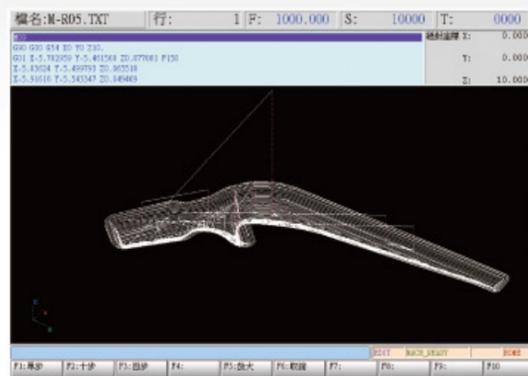
圖形化介面輸入量測功能

\* Far end diagnostic function 遠端機台診斷功能

\* Spindle speed and temperature monitoring

主軸轉速與溫度監控

\* Machining simulation 加工模擬



## SPECIFICATIONS:

MODEL	UNIT	MCV-435 $\mu$
XYZ axis	mm	400X350X150
Spindle nose to table surface	mm	30-180
Spindle center to column surface	mm	70
Travel 行程		
XYZ way span	mm	450X420X175
(XYZ)	mm	(LMT37)
Ball bar accuracy/Position-P	mm	$\pm 0.2\mu\text{m}/\pm 0.5\mu\text{m}$
Spindle 主軸		
Spindle taper ER-L6		$\phi 3.15$
Spindle transmission		Built-in
Spindle speed	rpm	120,000
controller 控制器		
CNC controller 任選		PC Base
Spindle motor	KW	500W
XYZ motor	KW	5.4/2.4/1.0
Table 工作台		
Table size(WxL)	mm	350x350
T-slots Screw	mm	M8x90x4
Table load	KG	50
Feed 進給		
XYZ Rapid feed rate	M/min	100/100/30
Cutting feed rate	M/min	1-20
Min. input increment	mm	X/Y 0.2 $\mu$ m/Z-8 $\mu$ m
Magazine 刀庫		
Max. tool dia./with adjacent tool	mm	42
Max. tool weight	KG	0.5
Max. tool length(Arm/Carousel type)	mm	30
Tool selection		Position
Tool capacity		8
Pull stud	角度	0
Tool changing time(T. to T.)	sec	12
Others 其他		
Spindle oil cooler	L	2
Lubrication capacity	L/W	2
Air conditioner	watt	250/200 CHR
Coolant tank oil/mist	L	2
Pneumatic unit		6
Power	KVA	15
Weight & Dimension 尺寸		
N.W./G.W. (Approximate)	TON	3.5/4.5
Packing(LxWxH)	M	2.6x1.4x2.4
Floor space(LxWxH)	M	2.6x1.4x2.4

Specifications subject to change without notice.

## Floor Area Occupation

MCV - 435 $\mu$  微細加工 :  
Standard Accessories:

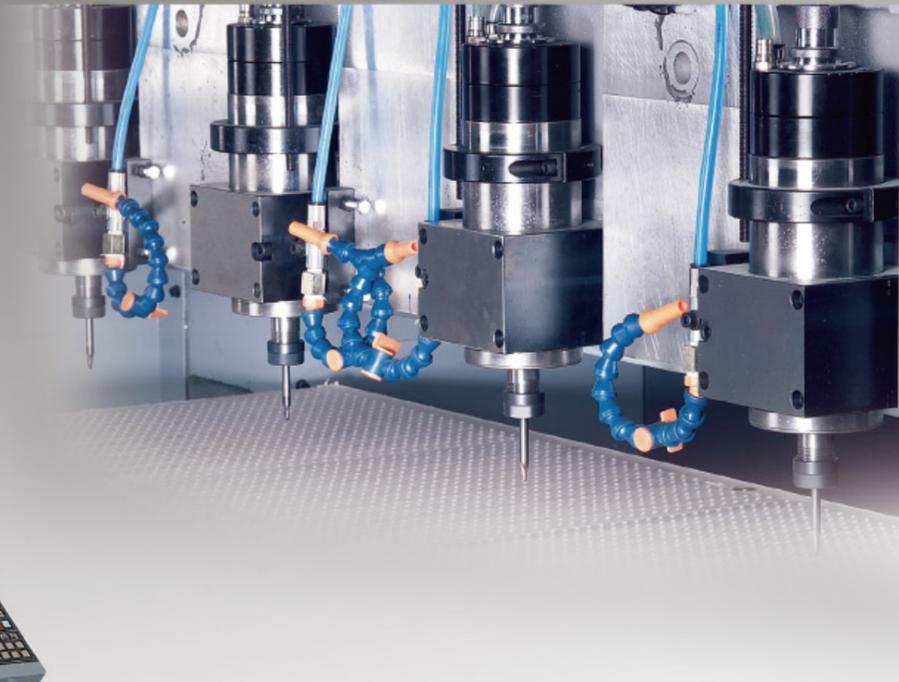
1. Direct drive linear motor XYZ
2. M.P.G. XYZ
3. fully splash guard
4. Built-in Spindle 120,000RPM
5. Spindle air blast
6. Spindle chiller
7. Spindle sound-proof
8. Automatic lubrication system
9. Wash down nozzles
10. Halogen working lamp&alarm light
11. RS-232interface+10M cables
12. Heat exchanger on electric cabinet
13. M30 auto power off
14. Leveling pads and adjusting screws
15. Tool box with adjusting tools
16. Operating manual and part list

# CNC ROUTING MACHINING 成型加工機 MB-4R372



PERFECT JET

PERFECT JET MB Series High Speed Double columns Machining Center  
The Ultimate Machining Center for Mold and Die Machining  
品正龍門加快速加中心，是模具加工和鑽磨加工最好的選擇



## SPECIFICATIONS:

	ITEM項目	單位	MB-4R372
Travel 行程	X/Y/Z axis	mm	320X700X250
	Spindle nose to table surface	mm	10-260
	Spindle center to column surface	mm	250
	X/Y/Z way span /pitch	mm	325/680/560
	X/Y/Z/pitch Ballscrew	mm	φ40/φ40/φ40/10
	Repetition precision/Location-P	mm	≥0.01/±0.005
Spindle 主軸	Spindle taper		ER16
	Spindle transmission		Built-in
	Spindle speed	rpm	30000(op)
Control 控制器	CNC control 任選		As customer's need
	Spindle motor	KW/NM	2.3/7.3 (op)
	X/Y/Z servo motor 8NM	KW	2.5/2.5/2.5
Table 工作台	Table size(WxL)	mm	1300X720
Feed 進給	Rapid feed rate(X/Y/Z)	M/min	30/30/15
	Cutting feed rate	M/min	1-12
	Min. input increment	mm	0.001
Magazine 刀庫	Max.tool diameter	mm	φ6-10
	Tool capacity	ea	5 (option)
Power Source 容量需求	spindle oil tank	L	22
	Lubrication capacity	L	2
	ElectricPower	KVA	15
	Pneumatic unit	kg/cm2	6
Weight & Dimension	N.W./G.W.(Approximate)	KG	5000/ 5500
	Packing(LxWxH)	M	2.4x2.3x2.4

Specifications subject to change without notice.

**BRIDGE TYPE MACHINING CENTER**  
**龍門加工中心 MB-1207/1612E/2012E/3012E**



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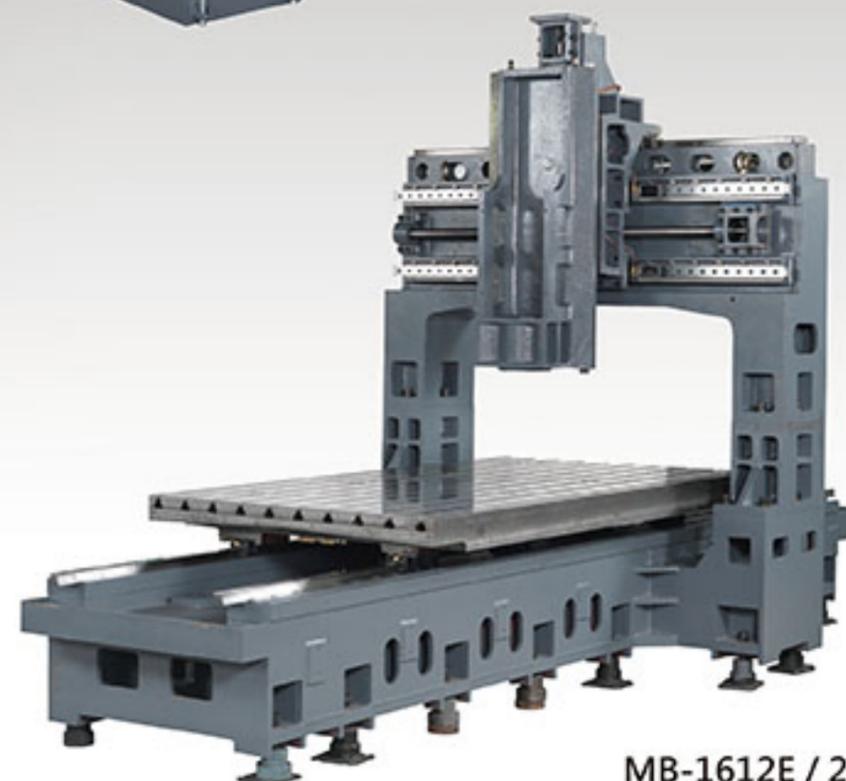
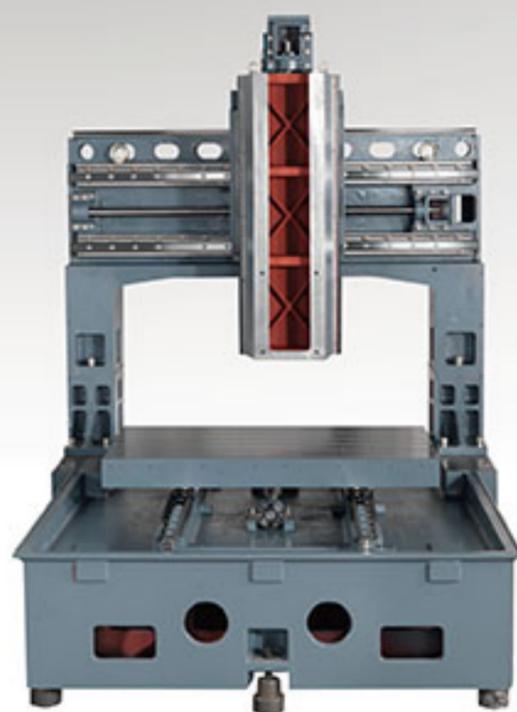
MB-1207全密



MB-1612E / 2012E / 3012E



MB-1207全罩

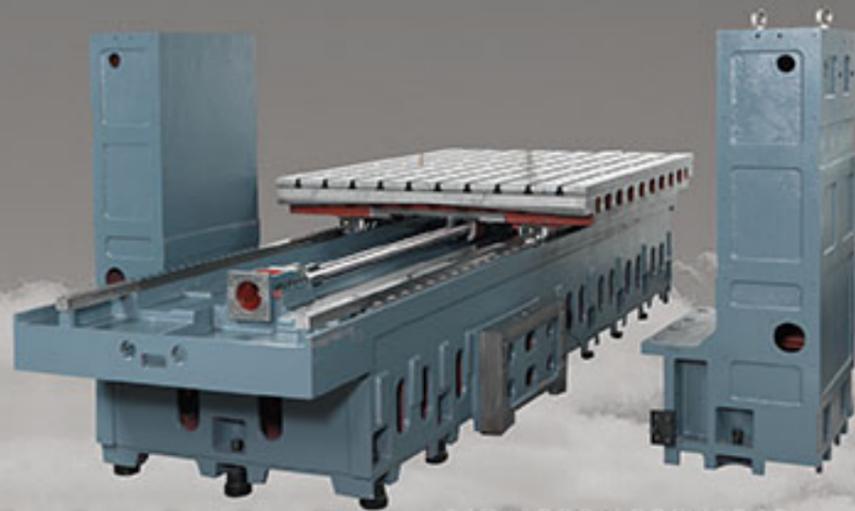


MB-1612E / 2012E / 3012E

# BRIDGE TYPE MACHINING CENTER 龍門加工中心機 MB-1620/1630/1640(H/G)



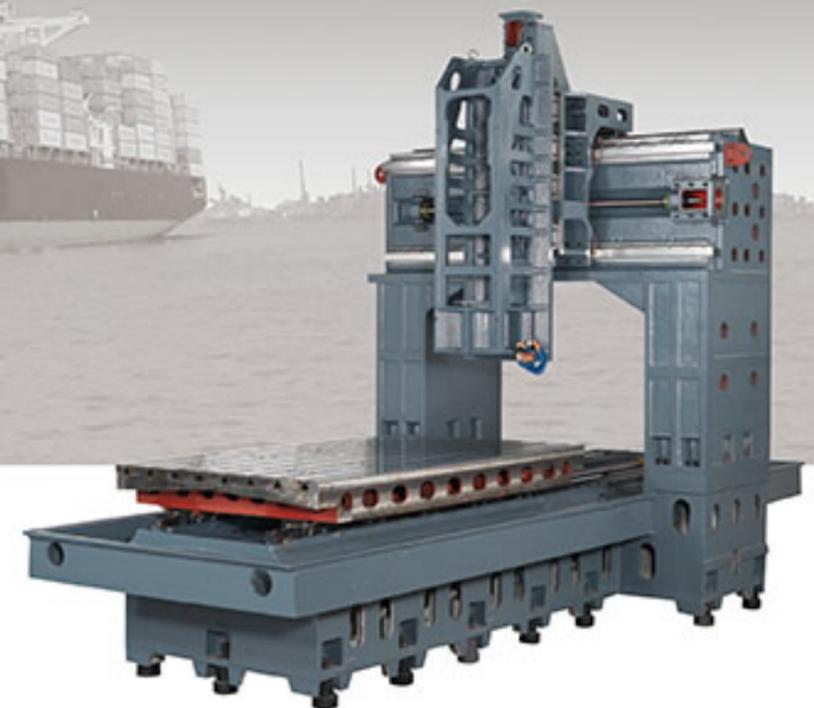
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MB-1620/1630/1640



MB-1620/1630/1640



## ■高強度的立柱與底座

The extraordinary stiffness of the column and bed construction provides unmatched rigidity.

The massively constructed spindle head casting with generously proportioned internal ribs maximizes rigidity.

The perfect combination of a full enclosure and a properly shaped base provide leak-free operation and ease of chip removal.

Ballscrew  $\phi 63 \times \phi 50 \times \phi 50$

# BRIDGE TYPE MACHINING CENTER

## 龍門加工中心機



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	MODEL	UNIT	MB-1207	MB-1612E	MB-2012E	MB-3012E
Travel 行程	X/Y/Z axis	mm	700x1200x500	1600x1200x500	2000x1200x500	3000x1200x500
	Spindle nose to table surface	mm	100-600	75-575		
	Spindle center to column surface	mm	385			
	X/Y/Z axis way span/Linear way	mm	680/556/380		M45/M45/M35	
	X/Y/Z ballscrew/pitch	mm	φ40/φ40/φ40/10	φ50/φ40/φ40/10	φ63/φ40/φ40/10	
	Ball bar accuracy/position-P	mm	±0.007 / ±0.005			
Spindle 主軸	Spindle taper		BT-40			
	Spindle transmission		Direct drive直傳			
	Spindle speed (O.P.)	rpm	10000 (O.P.12000)			
Controller 控制器	CNC controller 任選		As customer's choice			
	Spindle motor	KW(HP)	5.5/7.5 (O.P.7.5/11)			
	X/Y/Z motor	KW	2.5/2.5/4.5	4.5/2.5/4.5	5.5/2.5/4.5	5.5/2.5/4.5
Table 工作台	Table size(WxL)	mm	1300x720	1220x1700	1220x2000	1220x3000
	Table load	KG	1000	2000	2500	3000
	T-sockets(WidthxNo.xpitch)	mm	18x6x125			22x10x125
Feed 進給	X/Y/Z Rapid feed rate	M/min	24/24/12	15/15/15		
	Cutting feed rate	M/min	1-12M			
	Min. input increment	mm	0.001			
Magazine 刀庫	Max. tool dia./with adjacent tool	mm	78			
	Max. tool wieght BT-40	KG	6			
	Max. tool length(Carousel type)	mm	200			
	Tool selection 圓盤或手臂式		Bi-Direction RANDOM			
	Tool capacity		16			
	Pull stud	角度	45°			
Other 其它	Spindle oil collar	L	18			
	Lubrication capacity	L/W	4 / 150			
	Air conditioner	watt	700			
	Coolant tank	L	250	300		
	Pneumatic unit	kg/cm <sup>2</sup>	6			
	Power	KVA	25	35	40	45
Weight & Dimension 重量尺寸	N.W./G.W. (Approximate)	KGS	5200	9500	11500	16500
	Shipping Container HQ		40'HQX 1	40'HQX 1	40HQ X 1	40HQ X 1
	Floor space(LxWxH)	M	2.4X2.3X2.8	4.8X3.8X2.8	6.0X3.8X2.8	8.5X3.8X2.8

	MODEL	UNIT	MB-1620	MB-1630	MB-1640
Travel 行程	X/Y/Z axis	mm	2000x1600x700	3000x1600x700	4000x1600x700
	Spindle nose to table surface	mm	BT-40 (150-850)	BT-50 (200-900)	
	Spindle center to column surface	mm	270		
	X/Y/Z axis way span/Linear way	mm	960/770/420	M55/M45/M45 (M55 OPG)	
	X/Y/Z ballscrew/pitch	mm	φ50/φ50/φ45/10	φ63/φ50/φ45/10	
	Ball bar accuracy/position-P	mm	±0.01 / ±0.005		
Spindle 主軸	Spindle taper		BT-40/BT-50 (OP)		
	Spindle transmission	rpm	Direct drive直傳 10000(OP 12000 OP 15000)		
	Spindle speed (O.P.) G6000	rpm	Hi/LOW 30-999 1000-6000		
Controller 控制器	CNC controller 任選		As customer's choice		
	Spindle motor OPGear	KW(HP)	(7.5/11) OP.G 11/15 HI/LOW		
	X/Y/Z motor FANCU	KW	5.5/2.5/5.5	5.5/2.5/5.5	5.5/2.5/5.5
Table 工作台	Table size(WxL)	mm	1600x2000	1600x3000	1600x4000
	Table load	KG	2000	4000	6000
	T-sockets(WidthxNo.xpitch)	mm	22x10x125		
Feed 進給	X/Y/Z Rapid feed rate	M/min	15/15/15		
	Cutting feed rate	M/min	1-12M		
	Min. input increment	mm	0.001		
Magazine 刀庫	Max. tool dia./with adjacent tool	mm	78		
	Max. tool wieght BT-40/BT-50	KG	8	8/	15
	Max. tool length(Carousel type)	mm	300	300/	350
	Tool selection 圓盤或手臂式		Bi-Direction RANDOM		
	Tool capacity		16		
	Pull stud	角度	45°		
Other 其它	Spindle oil collar	L	18		
	Lubrication capacity	L/W	4 / 150		
	Air conditioner	watt	700		
	Coolant tank	L	300		
	Pneumatic unit	kg/cm <sup>2</sup>	6		
	Power	KVA	35	40	45
Weight & Dimension 重量尺寸	N.W./G.W. (Approximate)	KGS	15000/17500	19000/21500	23000/25500
	Shipping Container HQ		40'HQX 1	40HQ	40HQ
	Floor space(LxWxH)	M	4.8X3.8X2.8	6.0X3.8X2.8	8.5X3.8X2.8



### MB 龍門系列

#### Standard accessories:標準配備

- 1.Direct-coupled drive XYZ 直傳
- 2.M.P.G. XYZ 電子手輪
- 3.Fully splash guard 全罩
- 4.Direct drive 10,000rpm 直結式
- 5.Spindle air blast 主軸吹氣
- 6.Spindle chiller 主軸冷卻
- 7.Spindle sound-proof 主軸隔音
- 8.Automatic lubrication system 自動潤滑
- 9.Coolant system 冷卻系統
10. Washing gun and air gun 水槍風槍

- 11.Wash down nozzles 沖水噴嘴
- 12.Halogen working lamp & alarm light 日光/三軸警示燈
- 13.RS-232 interface+10M cables 介面及線
- 14.Heat exchanger on electric cabinet 熱交換器
- 15.M30 auto power off 自動斷電
16. Leveling pads & adjusting screws 水平調整螺絲+角墊
- 17.Tool box with adjusting tools 工具箱
- 18.Operating manual & part list 操作及零件手冊
- 19.XYZ Roller type way 滾柱線軌
20. Rigid taping 剛性咬牙

#### Optional accessories:選購配備

- 1.Coolant ring around spindle system 環噴
- 2.Coolant through spindle system 中心出水(簡易式箱)
- 3.CTS. With seperated coolant tank 中心出水+水箱
- 4.Upgrade spindle motor 主軸馬達加大
- 5.12K/15K/24K RPM 轉速
- 6.24/30T Arm type ATC (BT40/50) 刀庫
- 7.Chain/Scraper type conveyor 鍊條/刮板式龍船
- 8.Chip auger 捲屑機
- 9.Oil skimmer 油水分離
- 10.Transformer/Voltage regulator 變/穩壓器
- 11.Seaworthy Packing 海運包裝

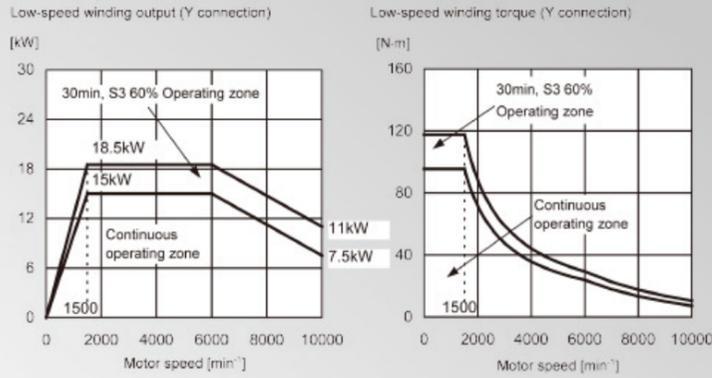
# BRIDGE TYPE MACHINING CENTER 龍門加工中心機 MB-2122/2132/2142(H/G)



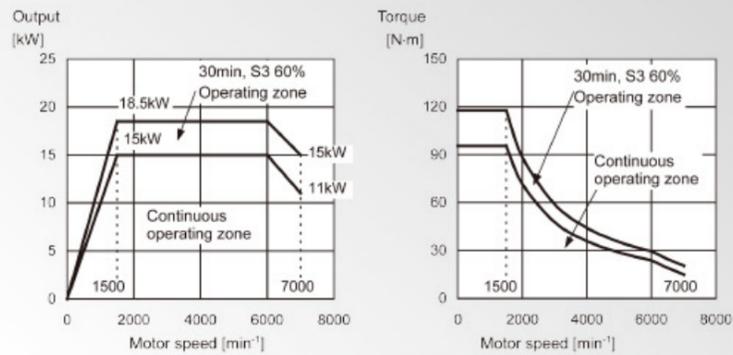
PERFECT JET

### 3.7 MODEL $\alpha 15/10000i$

Applicable amplifier SPM-22i



### 3.9 MODEL $\alpha 15/7000i$

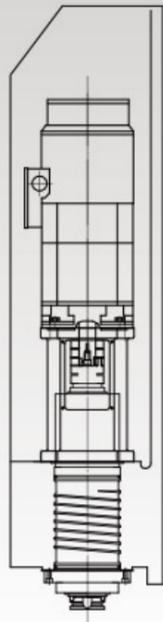


**Dynamic Cutting test**  
To ensure the machine achieves the best operational performance, we perform dynamic cutting test prior to shipping.

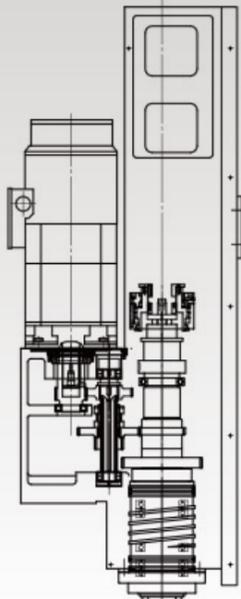


15/18 KW 430 NM  
18.5/22KW 530 NM

**H**  
Direct Drive  
直結式主軸傳動



**G**  
GearBox Drive  
齒輪式主軸傳動  
High 高檔=1:0.9(速比)  
Low 低檔=1:4.4(速比)



MB-2122/2132/2142(H/G)

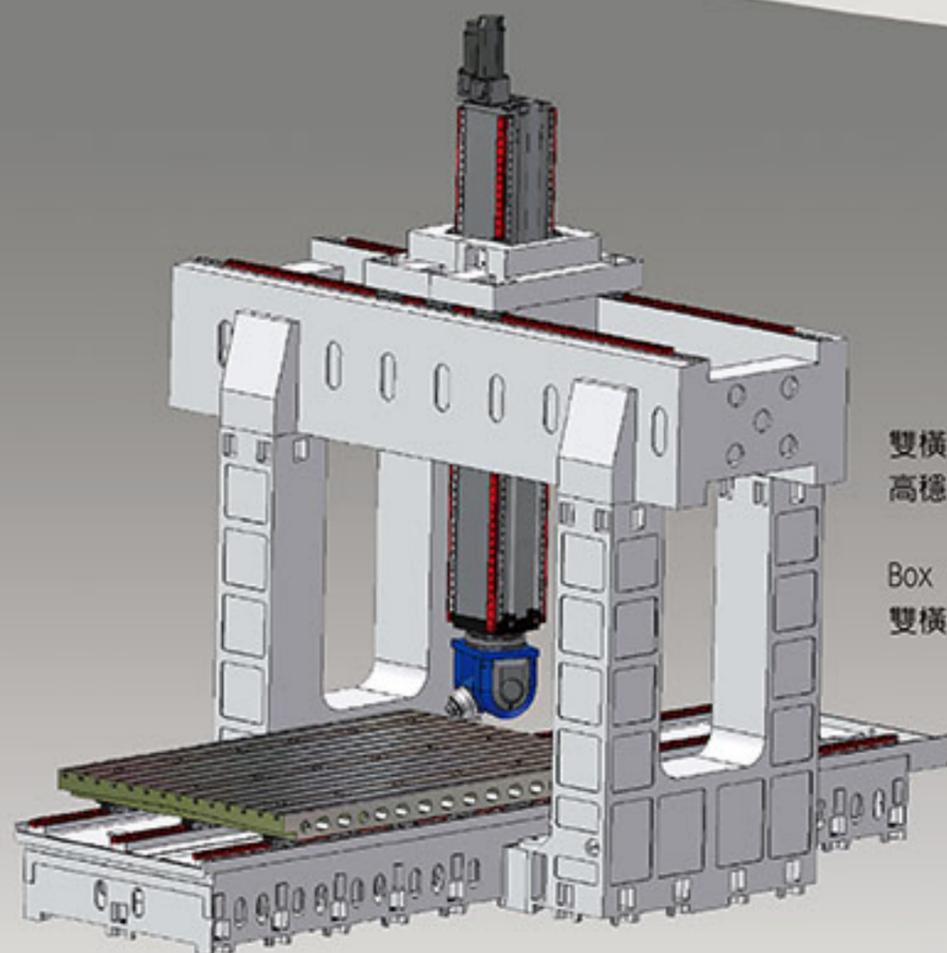
# BRIDGE TYPE MACHINING CENTER

龍門加工中心機

5X (HSK-100A五軸同動)  
MB-2522/2532/2542- L (BT/NBT-50/HSK-100A)  
H (BT-40/HSK63A)

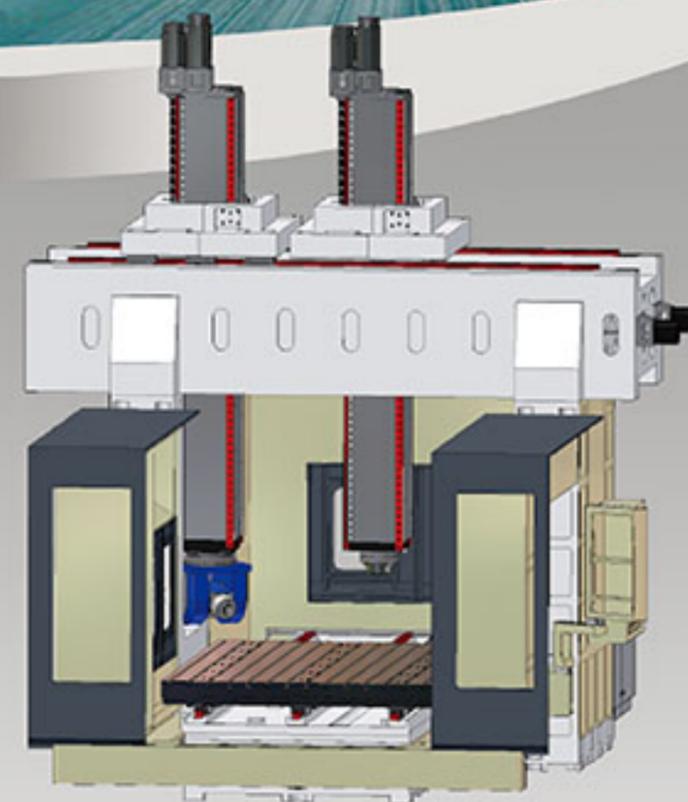


PERFECT JET



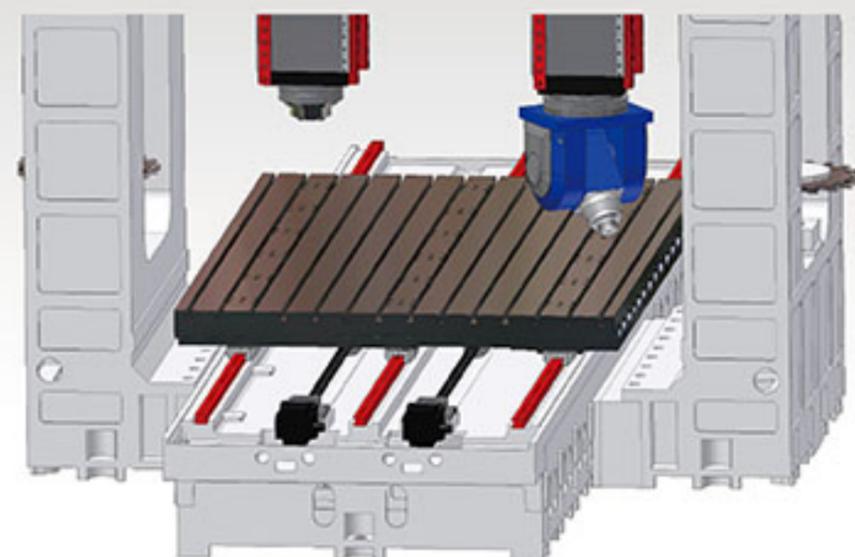
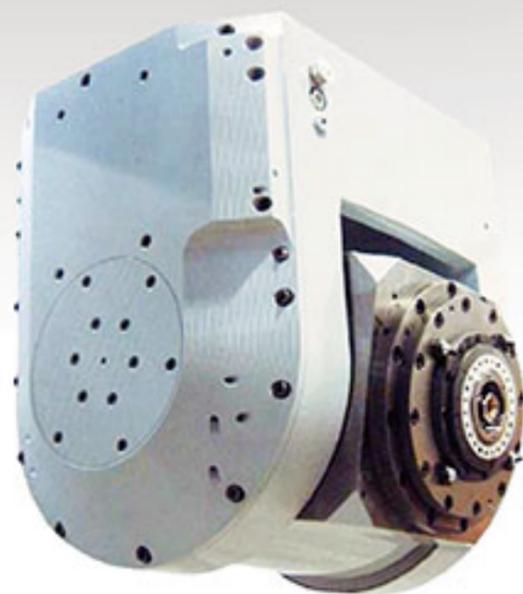
雙橫樑雙U型立柱雙夾持，上端跨距大，高鋼性，高穩定，避震能力強；提供高精度及高強度加工。

Box in Box 結構，創新革命設計徹底改善龍門立銑效率。雙橫樑雙U型立柱設計理念，也可選擇單/雙頭的結構設計。



為了方便大型工件的裝卸，設計出雙翼前、後端雙開式防護門，可節省空間；也方便可隨時監視工漸加工情形。

專為高精度模具加工設計  
依加工需求不同有三種立銑頭可選：  
5X/L/H(5X為五軸同動頭)



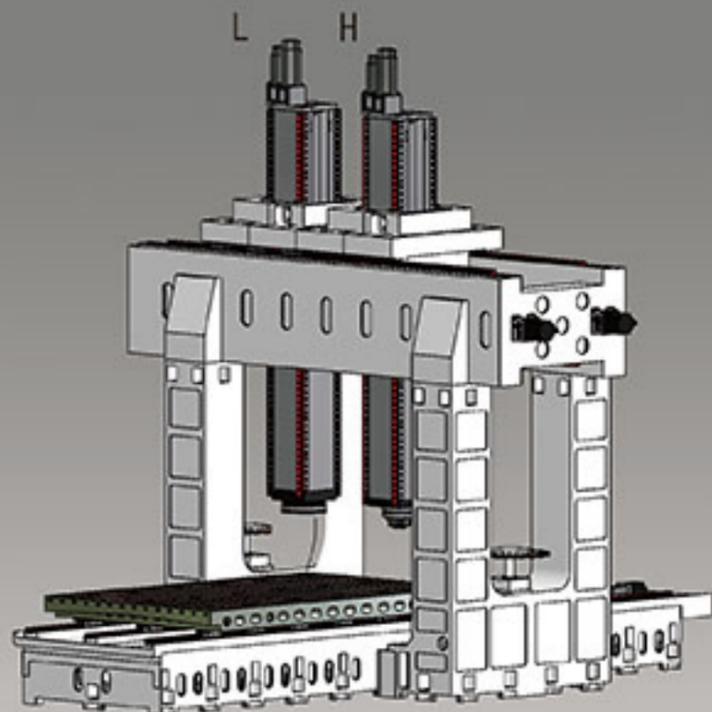
工件重量超過 25 噸以上，可加一組鋼珠螺桿和伺服馬達，來支撐極重負載。也同時可再加一組線軌來承載：三線軌+二螺桿來增強載重及加工靈敏度。

# BRIDGE TYPE MACHINING CENTER 龍門加工中心機 MB-2522/2532/2542-5X-LH



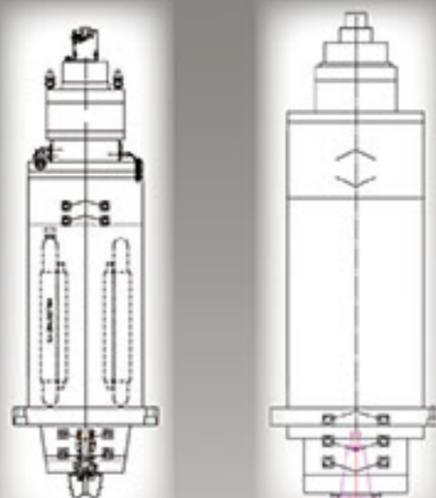
PERFECT JET

OP: 特選主軸扭力分解分析圖



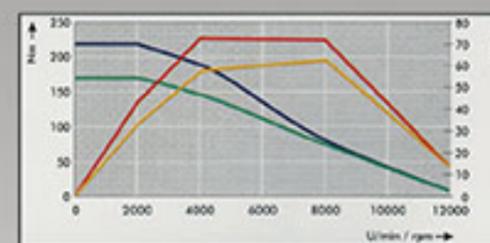
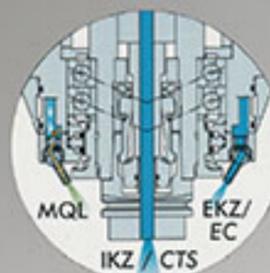
L: BT/NB-50  
10000RPM  
φ 310

H: BT40/HSKA63  
20000RPM  
φ 230

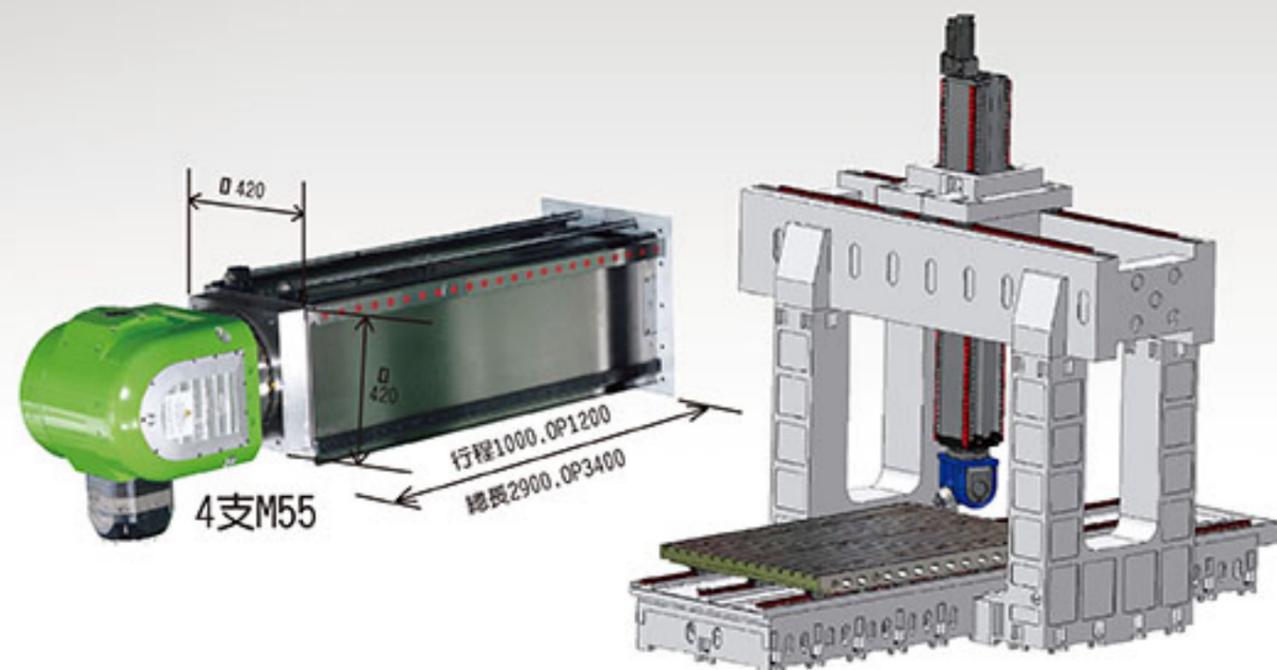
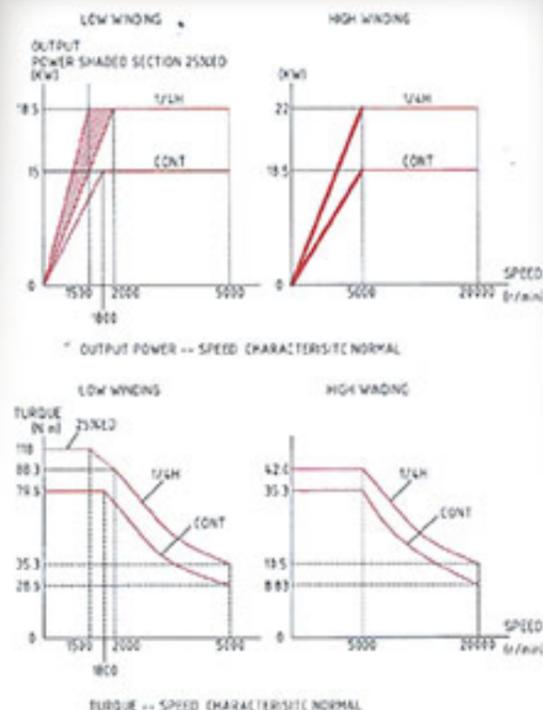
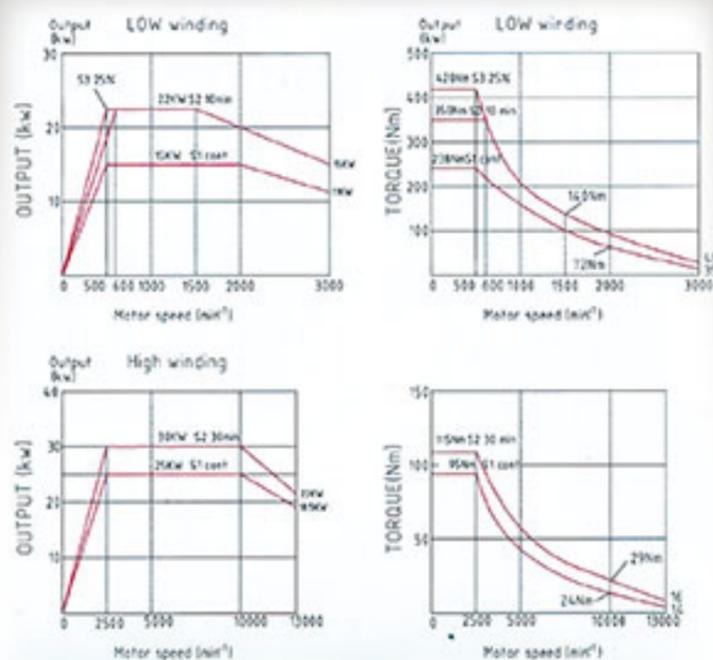
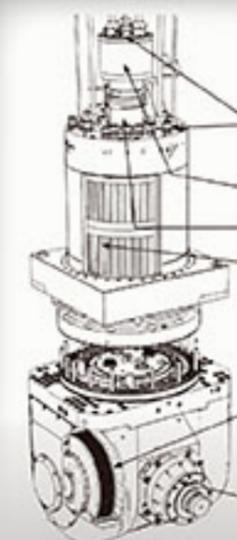


H

5X萬向頭B.C軸扭力分析圖



CS 34-180-S	
Nennleistung S1 / nom. power S1 (kW):	34
Max. Drehmoment S6 / max. torque S6 (Nm):	220
Max. Drehzahl / max. speed (U/min / rpm):	12.000
WZ-Schnittstelle / tool interface:	HSK-A100*



# BRIDGE TYPE MACHINING CENTER

## 龍門加工中心機



PERFECT JET

	MODEL	UNIT	MB-2122-H/G	MB-2132H/G	MB-2142H/G
Travel 行程	X/Y/Z axis	mm	2000/2100/800	3000/2100/800	4000/2100/800
	O.P.-1000				
	Spindle nose to table surface	mm	BT-50 (200-1000) O.P.200-1200		
	Spindle center to column surface	mm	450		
	X/Y/Z axis way span/Linear way	mm	1100 / 750 / 420 / M55XM45XM45		
	X/Y/Z ballscrew/pitch	mm	φ63xφ50xφ50 / 20x12x10		
Spindle 主軸	Ball bar accuracy/position-P	mm	±0.005		
	Spindle taper BT/HSK100A		BT-50 (HSK-100A)		
	Spindle transmission		Deirec (H) /Gear (G) drive		
Controller 控制器	Spindle speed (O.P.) Gear	rpm	8000 (H) /G6000Hi/Low		
	CNC controller 任選		As cutomer's choice		
Table 工作台	Spindle motor	KW	11/15 (H)	15/18 (G)	
	X/Y/Z motor	KW	9/7/9		
	Table size (WxL)	mm	1800x2000	1800x3000	1800x4000
Feed 進給	Table load	KG	6000	8000	10000
	T-slots (WidthxNo.xpitch)	mm	22x12x150		
	X/Y/Z Rapid feed rate	M/min	15 / 15 /15		
Magazine 刀庫	Cutting feed rate	M/min	1-10		
	Min. input increment	mm	0.001		
	Max. tool dia./with adjacent tool	mm	φ110 / φ220		
	Max. tool wieght BT-50	KG	15		
	Max. tool length (Carousel type)	mm	350		
Other 其它	Tool selection 手臂式		ARM		
	Tool capacity		24 (32 / 40)		
	Pull stud	角度	45°		
	Spindle oil coller	L	18		
	Lubrication capacity	L/W	4 / 150W		
Weight &Dimension 重量尺寸	Air conditioner	watt	700		
	Coolant tank	L	400		
	Pneumatic unit	kg/cm <sup>2</sup>	6		
	Power	KVA	45	50	60
	N.W./G.W. (Approximate)	KGS	22,500	25,000	28,000
Shipping Container			40HQ X 2	40HQ X 2	40HQ X 2
	Floor space (LxWxH)	M	6500x4800x4000	8500x4800x4000	10500x4800x4000

	MODEL	UNIT	MB-2522-5X	MB-2532-5X	MB-2542-5X
Travel 行程	X/Y/Z axis	mm	2000/2500/1000	3000/2500/1000	4000/2500/1000
	O.P.-1200				
	Spindle nose to table surface	mm	BT-50 (200-1200) O.P.200-1400		
	Spindle center to column surface	mm	506		
	X/Y/Z axis way span/Linear way	mm	1100 / 1140 / 420—M55/M55/M55		
	X/Y/Z ballscrew/pitch	mm	φ63xφ50xφ50 / 20x12x10		
Spindle 軸	Ball bar accuracy/position-P	mm	±0.005		
	Spindle taper BT50 OP BT40		BT50 (HSK-100A)	BT50 (HSK-100A)	BT40 (HSK-63)
	Spindle transmission		Built-in		
Controller 控制器	Spindle speed (O.P.)	rpm	12000	10000	20000
	B axis swivling/position accuracy		±110° / ±3sec		
	max. swivling torque	Nm	1000	420	118
	C axis swivling/position accuracy		±360° / ±2sec		
Table 工作台	max. swivling torque		1200Nm		
	CNC controller (任選)		As cutomer's choice		
	Spindle motor	KW	34 (S1)	42 (S6)	
Table 工作台	X/Y/Z motor	KW	9 / 7x2 /9		
	Table size (WxL)	mm	1800x2000	1800x3000	1800x4000
	Table load 平均分佈	KG	8000	10000	10000
Feed 進給	T-slots (WidthxNo.xpitch)	mm	22x12x150		
	X/Y/Z Rapid feed rate	M/min	15 / 15 /15		
	Cutting feed rate	M/min	1-10000		
Magazine 刀庫	Min. input increment	mm	0.001		
	Max. tool dia./with adjacent tool	mm	φ110 / φ220		
	Max. tool wieght BT-50	KG	15		
	Max. tool length (Carousel type)	mm	350		
	Tool selection 手臂式		ARM		
Other 其它	Tool capacity		24 (32 / 40)		
	Pull stud	角度	45°		
	Spindle oil coller	L	18		
	Lubrication capacity	L/W	4 / 150W		
	Air conditioner	watt	700		
Weight &Dimension 重量尺寸	Coolant tank	L	400		
	Pneumatic unit	kg/cm <sup>2</sup>	6		
	Power	KVA	45	50	60
	N.W./G.W. (Approximate)	KGS	34,500	38,000	41,000
	Shipping Container		40HQ X 2	40HQ X 2	40HQ X 2
Floor space (LxWxH)	M	6500x4800x5500	8500x4800x5500	10500x4800x5500	

### MB龍門系列

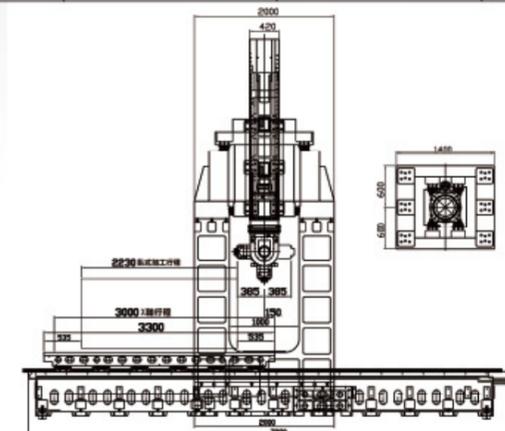
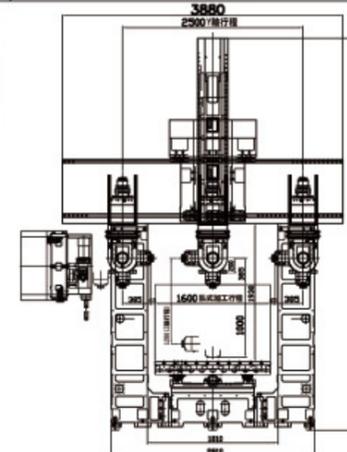
Standard accessories: 標準配備

1. Direct-coupled drive XYZ 直傳
2. M.P.G. XYZ 電子手輪
3. Fully splash guard 全罩
4. Direct drive 10,000rpm 直結式
5. Spindle air blast 主軸吹氣
6. Spindle chiller 主軸冷卻
7. Spindle sound-proof 主軸隔音
8. Automatic lubrication system 自動潤滑
9. Collant system 冷卻系統
10. Washing gun and air gun 水槍風槍

11. Wash down nozzles 沖水噴嘴
12. Halogen working lamp & alarm light 日光/三軸警示燈
13. RS-232 interface+10M cables 介面及線
14. Heat exchanger on electric cabinet 熱交換器
15. M30 auto power off 自動斷電
16. Leveling pads & adjusting screws 水平調整螺絲+角墊
17. Tool box with adjusting tools 工具箱
18. Operating manual & part list 操作及零件手冊
19. XYZ Roller type way 滾柱線軌
20. Rigid tapping 剛性攻牙

### Optional accessories: 選購配備

1. Coolant ring around spindle system 環噴
2. Coolant through spindle system 中心出水(簡易式)
3. CTS. With seperated coolant tank 中心出水+水箱
4. Upgrade spindle motor 主軸馬達加大
5. 12K/15K/24K RPM 轉速
6. 24/30T Arm type ATC (BT40/50) 刀庫
7. chain/Scrapper type conveyor 鍊條/括板式龍船
8. Chip auger 捲屑機
9. Oil skimmer 油水分離
10. Transformer/Voltage regulator 變/穩壓器
11. Seaworthy Packing 海運包裝



# Accessories 相同配件



Carousel type  
日內互輪式  
op:10/16/20



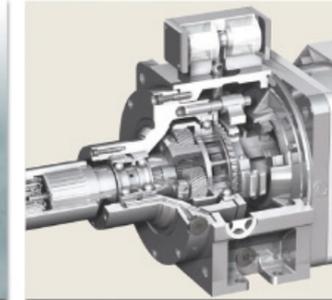
OP:24/30把刀刀臂式 Arm ATC



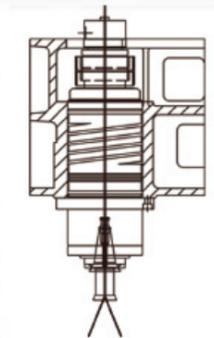
OP:高容量刀庫 (40刀) Chain type ATC



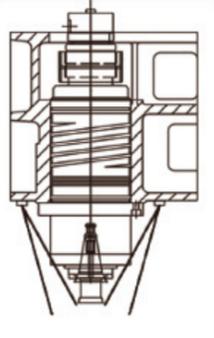
採高鋼性直結式主軸  
High rigid direct-coupled  
spindle 15000/ 10000 rpm



OP:ZF 1:4減速機  
Gear Ratio



OP:CTS主軸中心出水  
Coolant through spindle



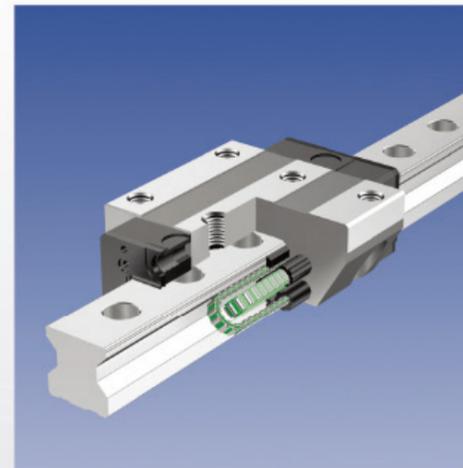
ST:標準環狀出水  
Coolant ring around spindle



三點組合  
Equipped with high  
reliability lubrication  
pump and solenoid valves.



風槍水槍 Powerful air and  
wash down gun are conveniently  
built-in



滾柱線軌: Roller type guide way:  
M55 for base, M45 for bridge and head.  
MB- 1207 M45 for base and bridge,  
M35 for head



OP:簡易式CTS  
可到20BAR pump for CTS

- OP: 1.高精度的壓泵 CTS:0-70 BAR Variable coolant pump for CTS  
2.馬力 10HP power supply 5-30 Bar 5HP31-60 Bar  
3-1磁鐵過濾機 Magnetic filter.  
3-2紙帶過濾機 Paper filter  
3-3羊毛氈過濾機 Wool filter  
( Particle size can be controlled under 0.02mm.)



直立式泵浦  
Vertical coolant pumps



X/Y/Z: 三軸鋼珠螺桿雙帽  
C3 3 axes double nut  
ballscrew C3



OP:油水分離機 Oil skimmer:  
Eco-friendly coolant disposal system

Cutting Shape	Material	Screw Type Conveyor	Screw Type Conveyor
Metallic Chip		○	○
Cut Chip		○	○
Curly Aluminum Chip		○	○
Aluminum Chip		○	○
Non-Metallic Chip		○	

鐵屑送機選購指示  
RECOMMENDED TYPES OF CHIP CONEYORS



OP:鍊板式  
Chain type chip conveyor

OP:括板式  
Scraper type chip conveyor