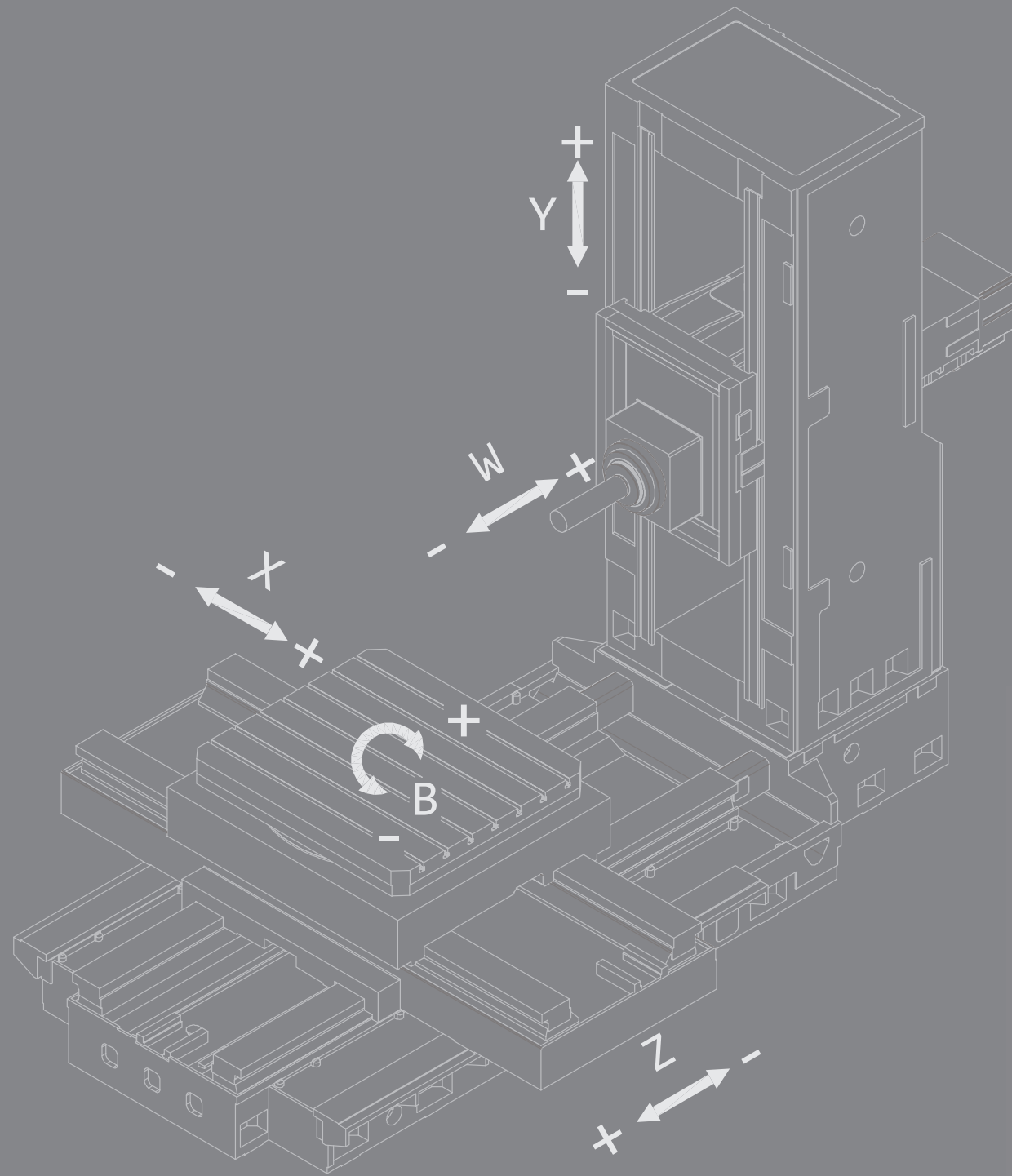




HORIZONTAL BORING MACHINE MH SERIES



High Accuracy
High Quality
High Rigidity



張圳雄企業股份有限公司

CHANG CHUN HSIUNG ENTERPRISE CO., LTD.

公司（台灣）：台中市太平區永義路113號
工廠（台灣）：台中市太平區永義路117巷1號
113, YUNG YI ROAD, TAIPING, DIST, TAICHUNG
CITY, TAIWAN

TEL : 886-4-22733363 · 886-4-22733665

FAX : 886-4-22733369

E-mail : changccb@ms36.hinet.net

<http://www.cch1967.com>

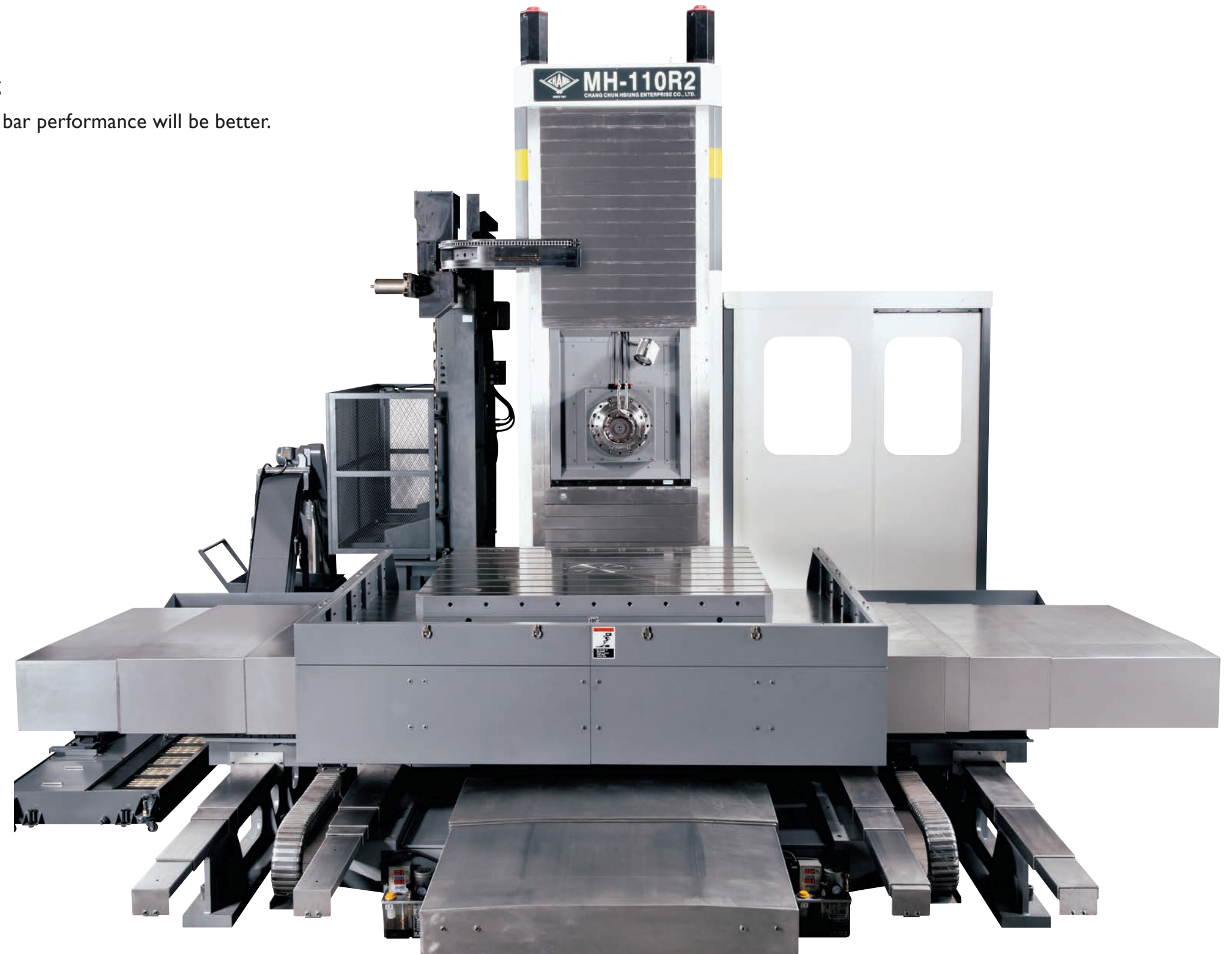
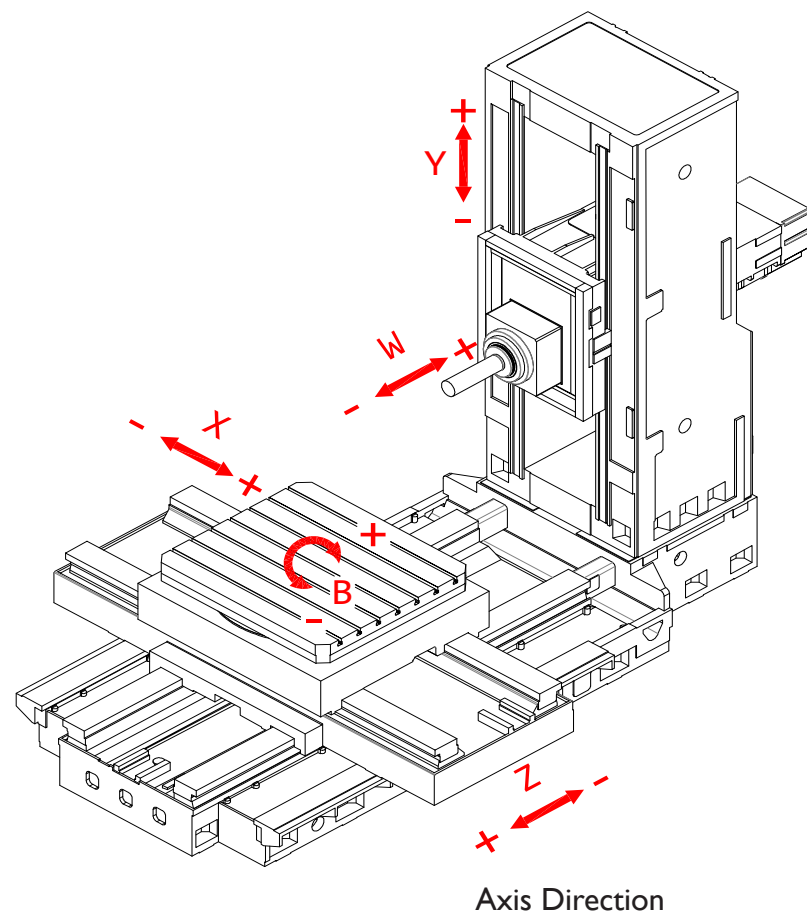
高精度 · 高品質 · 高剛性臥式鏜床
HIGH ACCURACY · HIGH QUALITY · HIGH RIGID

MH-110R2

MH Series

主軸採中置雙掛式
適用於搪孔加工及模具加工
穩定性 / 精度 / 循圓表現優

Centrally-mounted head
Ideal for boring processing
Stability, Accuracy and Ball bar performance will be better.



特點 Features

高生產力

AC馬達驅動主軸，可持續調整主軸轉速，即使在切削操作時，也可維持在最佳的切削狀態。

每一進給機構的馬達／軸多重驅動系統，均可提供最大的進給效率。

High Productivity

Spindle continuously monitored to provide most efficient cutting conditions.

Each axis is independently controlled to provide maximum feed as required.

Y軸採用3支線性滑軌

Y軸雙滾珠螺桿

Y軸雙伺服馬達

確保主軸升降補正精度

3 roller guideway on Y axis

Twin ball screw on Y axis

Twin servo motor on Y axis

Ensure symmetric and accuracy

高動力主軸

主軸外環設計有冷卻系統，可保持軸承長時間使用時維持在標準溫升並穩定精度。

主軸全採用齒輪式高低檔可自動換檔，並採用強制潤滑系統可保持潤滑穩定。

主軸與搪桿是採用特殊合金鋼材，並經滲碳處理可保不變形，並維持剛性達HRC62~68度。

主軸軸承採用世界知名高品質SKF、NSK軸承，並經跑合測試溫升標準合格，可維持主軸精度及使用壽命。

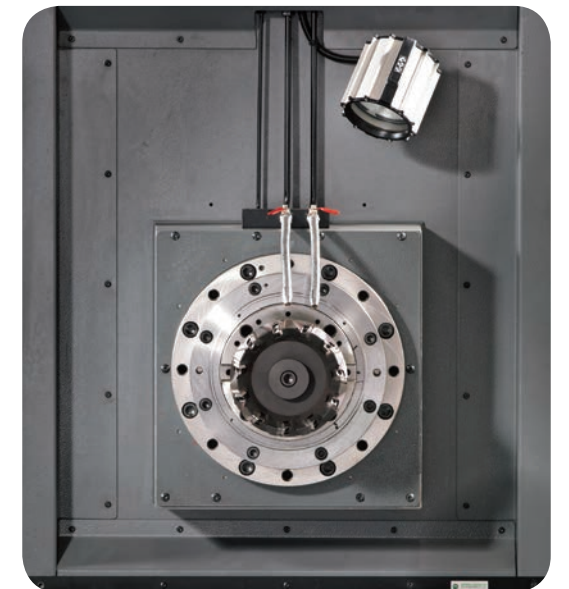
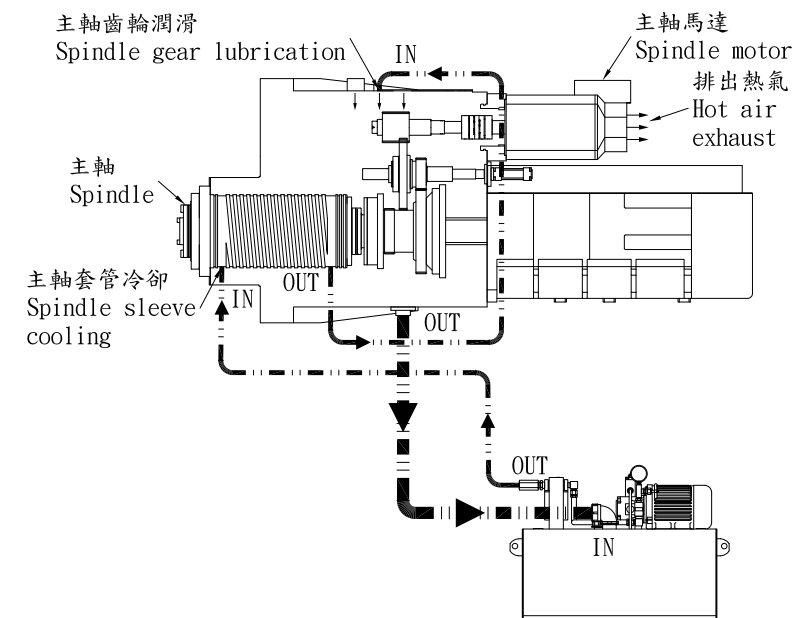
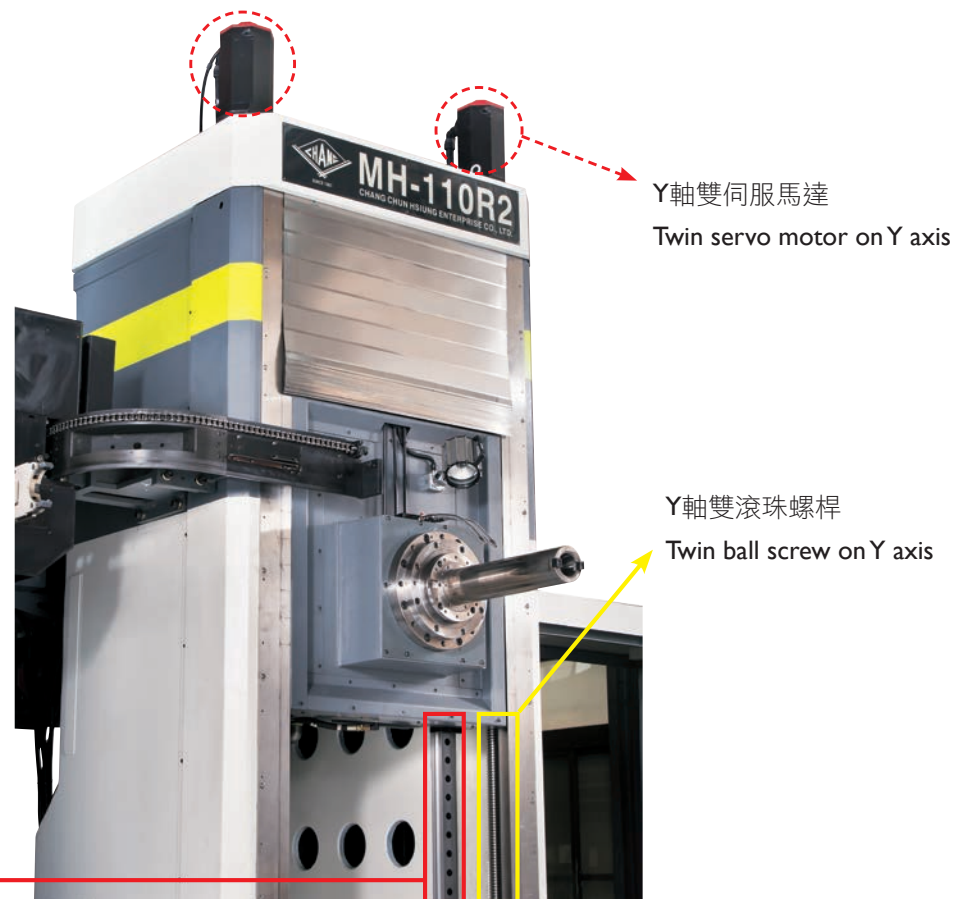
High Power Spindle

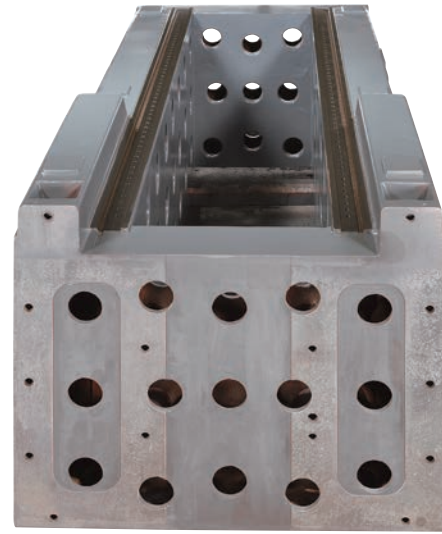
Cooling system in spindle outer ring, it will remain bearings accuracy & heat raising in normal level.

Spindle is geared equipped High/Low speed & automatically changed. Adopted forced-lubricated system can assure lubrication stable.

Spindle & quill are using special mix steel material and have been carbonic heated treatment, remain HRC62° ~68° .

Bearing adopted famous brands SKF, NSK and pass running & heat raising testing. Assure perfect accuracy & using life.

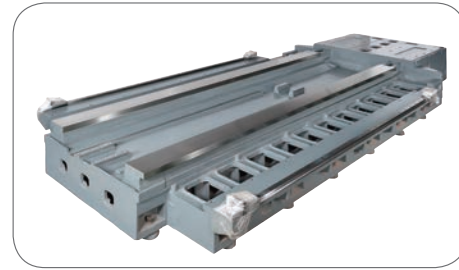




方型硬軌

CBA軌道全採用硬軌，具高鋼性筋骨結構，並經應力消除後再經高週波熱處理，硬度可高達HRC 43-47度。

R、R2床台軌道採用四軌一體成形，使Z軸移動行程保持穩定切削精度。



Box Ways

CBA type is box slide way, high rigidity rib structure and have been stress relief the heat treatment hardness is HRC43° ~47° .

R, R2 type slide ways is 4 in 1 design it will assure the stability of Z axis movement and accuracy.

高精度滑軌

立柱及床台滑軌具高剛性及穩固性，滑動面有鐵氟龍黏附並強制潤滑，使滑軌系統在長時間內保持高精度度，即使在低速運轉時仍可順暢滑動。

軸向傳動採用高鋼性滾珠螺桿

R3床台軌道附加二軌輔助線軌，使Z軸移動行程保持穩定切削精度。



High Precision Slide Ways

The column and bed slide ways are hardened and ground. The mating surfaces of the moving units are coated with a special fluorine resin, and forced-lubricated so that the system for slide ways offers minimum friction resulting in high precision which will be maintained over a long period of time, this ensures a very smooth feed stroke even at low speeds without stick/slip.

Axial transmission adopted high precision ball screw.

R3 table equipped two extra sub-slideway assure Z axis movement stability & cutting accuracy.



操作容易

座立式開關操控箱，分別為加工操作提供最有效率的設計，使操作更有效率。

程式編輯及運用功能都陳列在CRT，可使程式編輯及確認更容易。

使用此種輕便的操作控制箱，可讓加工工作調整於中心及允許分段操作。

電控系統可選用國際知名大廠FANUC、SIEMENS、HEIDENHAIN品牌控制器，在安全性均有CE認證。

Ease Operation

The switches on the pendant control box have the most efficient layouts for working respectively. This ensures improved operating efficiency.

The contents of programs and the current positions are displayed on the CRT display. This enables to make preparation and checking of the programs easily.

Using the portable operation control box allows the work to be adjusted to be centered, and permits manual cutting operation.

Control system can choose international famous brands FANUC, SIEMENS, HEIDENHAIN. All CE NORM certificated in safety operation.

迴轉工作台

迴轉工作台採用硬軌、滾柱軸承及傳動蝸輪強制潤滑。迴轉工作台中心軸裝設有海德漢環式回饋尺，絕對保證分度準確。迴轉工作台具有油壓鎖及定位銷，可用於任何角度切削及正角度0°、90°、180°、270°重切準確度。

Rotary Working Table

The bed slideway is box way, adopted roller bearing and worm-gear equipped force lubricated system. Table center equipped Heidenhain rotary encoder assure index accuracy. Table equipped Hydraulic clamping system & positioning pin, assure indexing angle 0° ,90° ,180° ,270° heavy cutting accuracy.

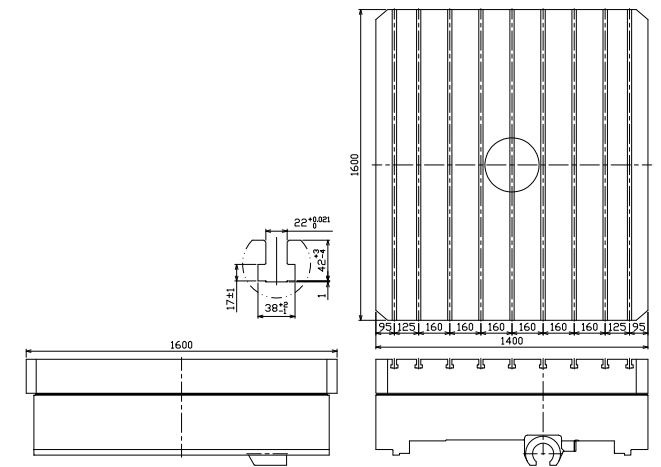


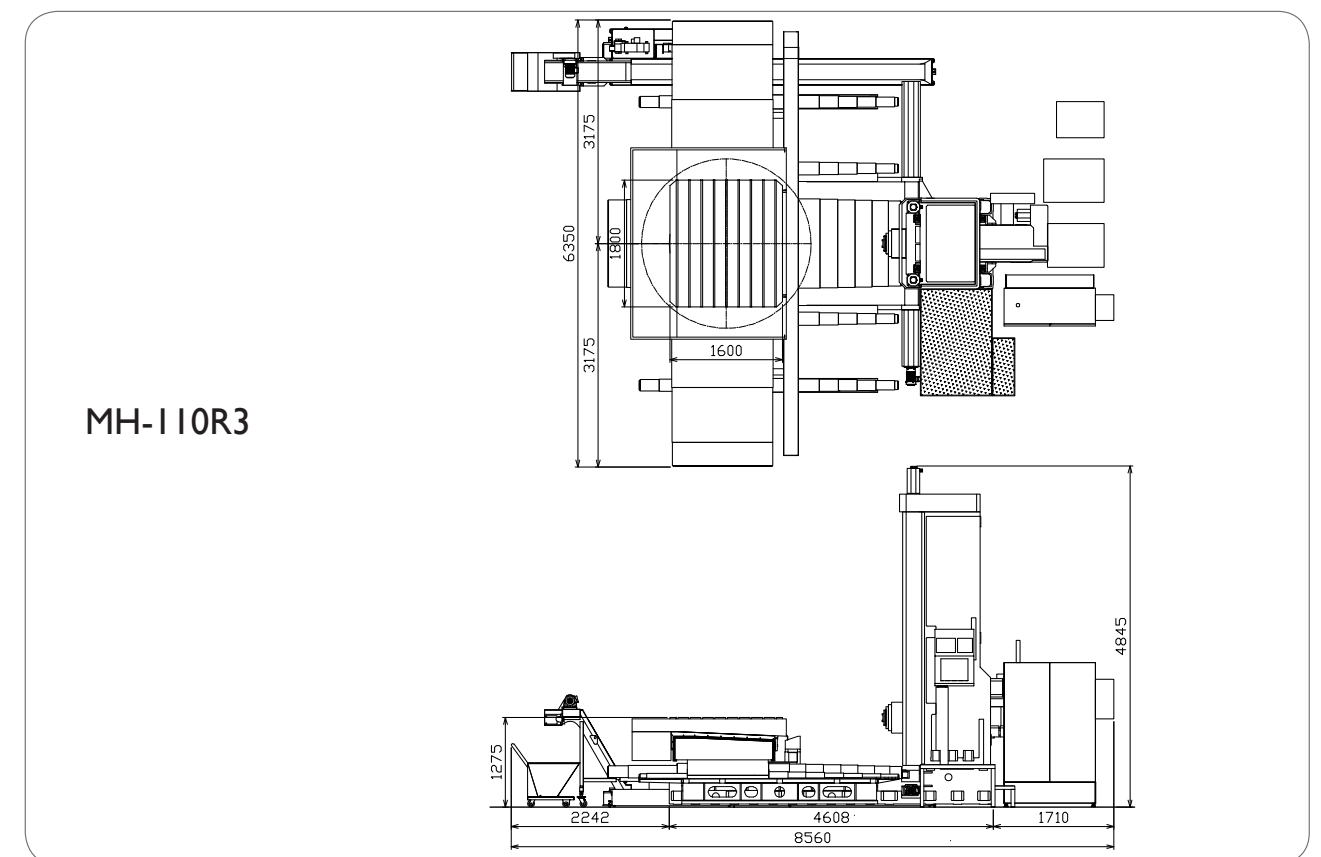
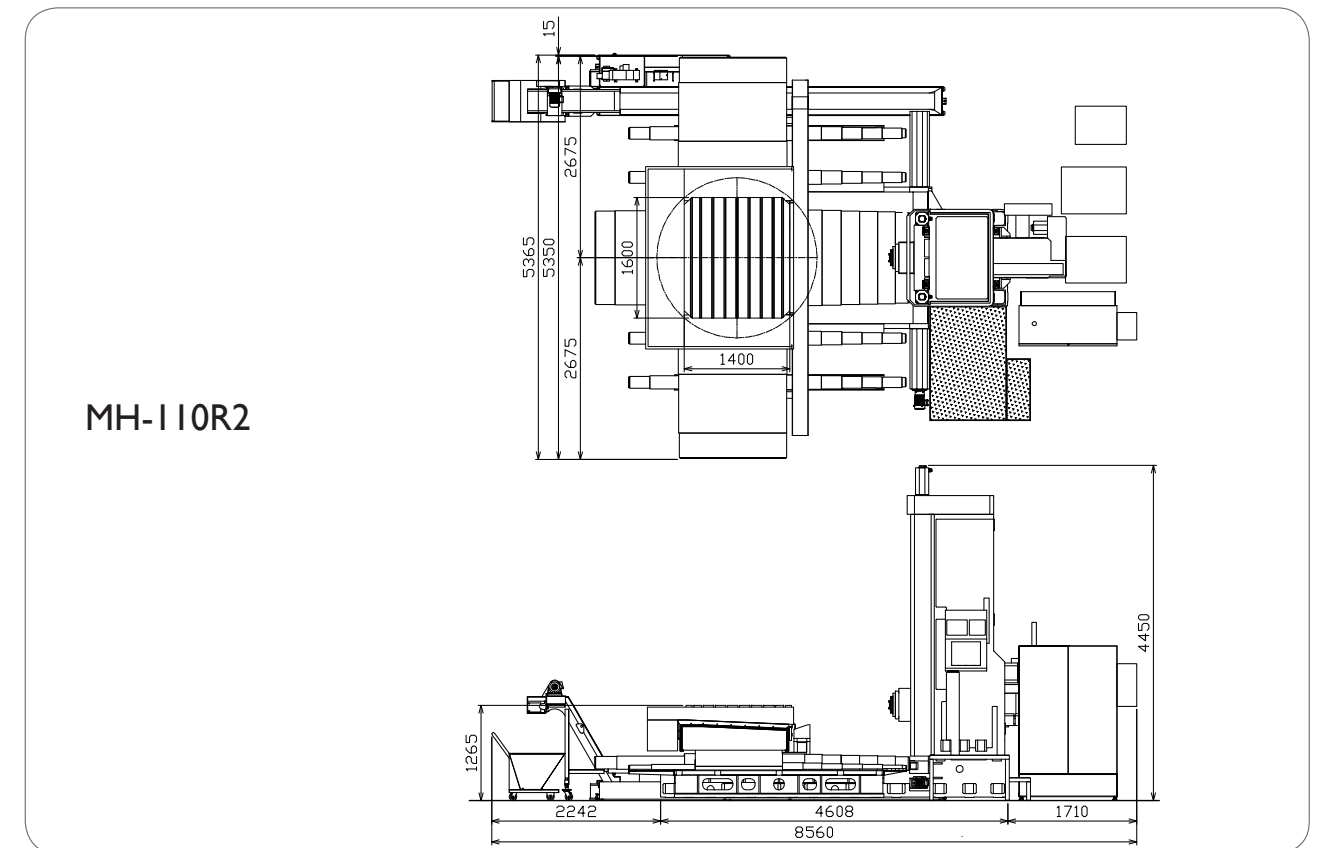
TABLE TYPE			MH-110R2	MH-110R3
主軸 Spindle	主軸馬達 Main Motor (30min/cont.)	kw	Standard : 18.5/22kw / Optional : 22/26kw	
	主軸最高轉速 Spindle Max. Speed	rpm	Standard : 2500 Optional : 4000 * (for VW: 400mm only)	
	主軸錐度 Spindle Taper		ISO 50 / BT-50	
	主軸直徑 Spindle Diameter	mm	Ø 110	
	主軸鼻端直徑 Spindle End Diameter	mm	Ø 215	
	主軸最大扭矩 Spindle Max. Torque	Nm	18.5/22kw : 760 / 22/26kw : 910	
行程 Travel	X軸 (工作台橫向行程) Work Table Travel X axis (Horizontal)	mm	2000	3000
	Y軸 (主軸垂直行程) Spindle Travel Y axis (Vertical)	mm	1600	2000
	Z軸 (工作台垂直行程) Work Table Travel Z axis (Vertical)	mm	1300	1500
	W軸 (主軸行程) Spindle Travel W axis	mm	Standard : 600 / Optional : 400	
	主軸鼻端到工作台中心 Distance from spindle nose to table center	mm	723~2023	723~2223
	主軸中心到工作台平面 Distance from spindle center to table surface	mm	0~1600	0~2000
	旋轉工作台 Rotary Table	尺寸 Table Dimension	mm	1400×1600
T型槽 T-Slot		mm×No.	22×9	22×9
承載重量 Max. Loading Weight		kg	8,500	10,000
最小分割角度 Index		degree	0.001°	0.001°
最大旋轉直徑 Max. Rotation Diameter		mm	2126	2408
旋轉速度 Table Rotation Speed		rpm	0.8	0.8
進給 Feed	快送 Rapid Feed	XYZW axis	mm/min XYZ axis = 10000 / W axis = 3000	
	切削進給速度 Feed Rate	X/Y/Z axis	mm/min I-5000	
		Z / W axis	mm/min I-5000	
電源容量	Power Capacity	KVA	100	100
機械尺寸	Machine Dimension (L×W×H)	mm	5365×8560×4450	6350×8560×4845
機械重量	Machine Weight	kg	29000	32000
控制器	Controller		Fanuc / Siemens / Heidenhain	

標準配備 Standard Accessories		
工具及工具箱	Tool and Tool Box	1
地基螺絲及墊片	Foundation Screws and pads	1
主軸油冷機	Spindle Oil Cooler	1
工作燈	Working Lamp	1
電氣箱空調冷卻機	Electrical Cabinet Cooler	1
X軸防塵罩	X axis Dust Cover	2
Y軸防塵罩	Y axis Dust Cover	2
Z軸防塵罩	Z axis Dust Cover	2
手輪	MPG (Manual Pause Generator)	1
自動潤滑系統	Automatic Lubrication System	1
螺桿式鐵屑輸送機	Screw Chip Conveyor	1
鏈板式輸送機 (附鐵屑車)	Steel Belt Chip Conveyor (with cart)	1

選擇配備 Optional Accessories		
刀庫	ATC (Automatic Tool Changer)	1
主軸中心出水	Coolant Through Spindle	1
光學尺	Linear Scale	1
主軸襯套	Spindle Support	1
面板	Facing head	1
變壓器	Transformer	1
旋轉工作台防濺鍍金	Splash Guard For Rotary Table	1
操作員防濺鍍金	Splash Guard For Operator	1
工件量測	Workpiece Measuring Device	1

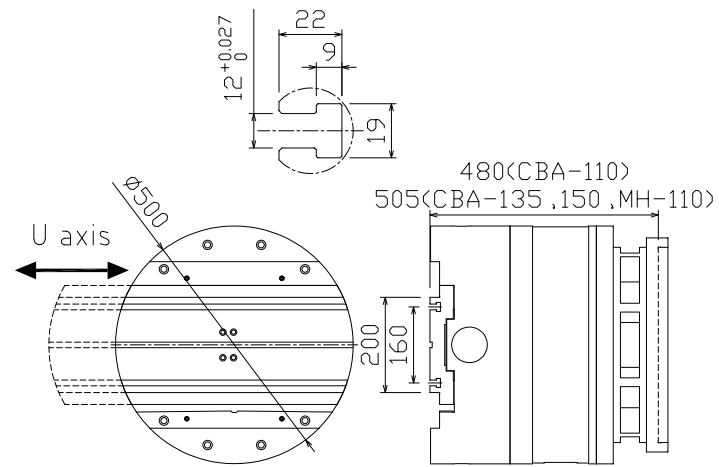
外型尺寸圖 (不含選擇配件)

Machine layout (not included optional accessories)



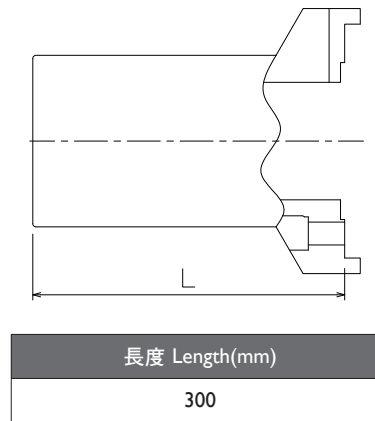
MH-110

面板 Facing Head FH-500

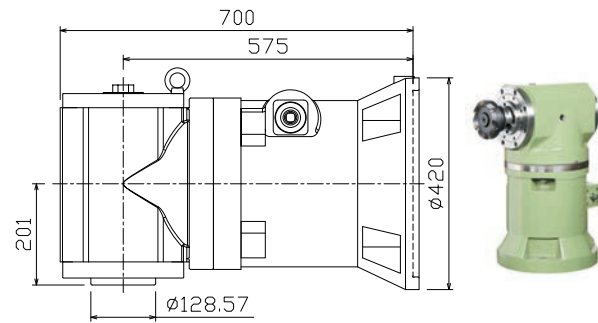


U軸行程 : 160mm U axis travel : 160mm
Max. Speed 220rpm

主軸襯套 Spindle Support



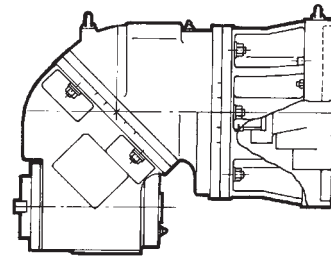
90°頭 Angular Milling Head



Spindle Rotation Speed 主軸轉速
1000 rpm 1000 rpm (無段)

型號 Model : A50		
主軸錐度	Spindle Tapper	ISO No.50
平面銑刀最大直徑	Max. Cutter Diameter	8 inch
平面銑刀最大扭矩	Max. Cutter Torque	588 Nm (60kgf-m)

萬用銑頭 Universal Milling Head



Spindle Rotation Speed 主軸轉速
3~200 rpm 3~200 rpm (無段)

型號 Model : U50		
主軸錐度	Spindle Tapper	ISO No.50
平面銑刀最大直徑	Max. Cutter Diameter	8 inch
平面銑刀最大扭矩	Max. Cutter Torque	490 Nm (50kgf-m)

刀庫 Automatic Tool Changer (Optional Accessories)		
刀具容量	Tool Capacity	24 / 32 / 40 / 60
刀柄	Tool Shank	MAS 403 BT-50
拉刀裝置	Pull Stud	MAS 403 P50T-I
刀具重量	Tool Weight	25 kg
刀具最大長度	Max. Tool Length	300 mm
刀具最大直徑	Max. Tool Diameter	Ø 125 mm (Ø250mm)

