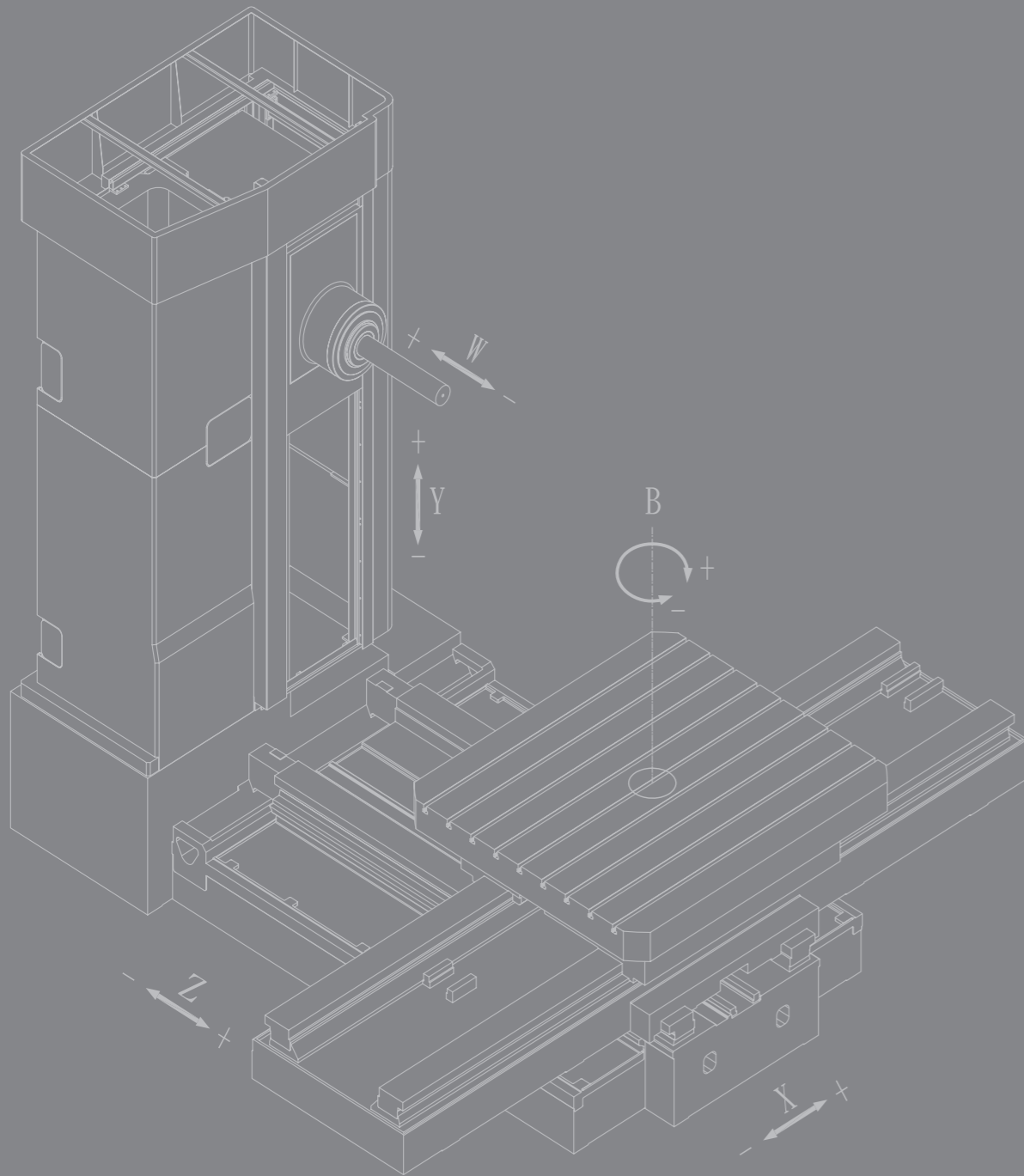




# HORIZONTAL BORING MACHINE CBA SERIES



*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 Rigidity

# CBA-110R3

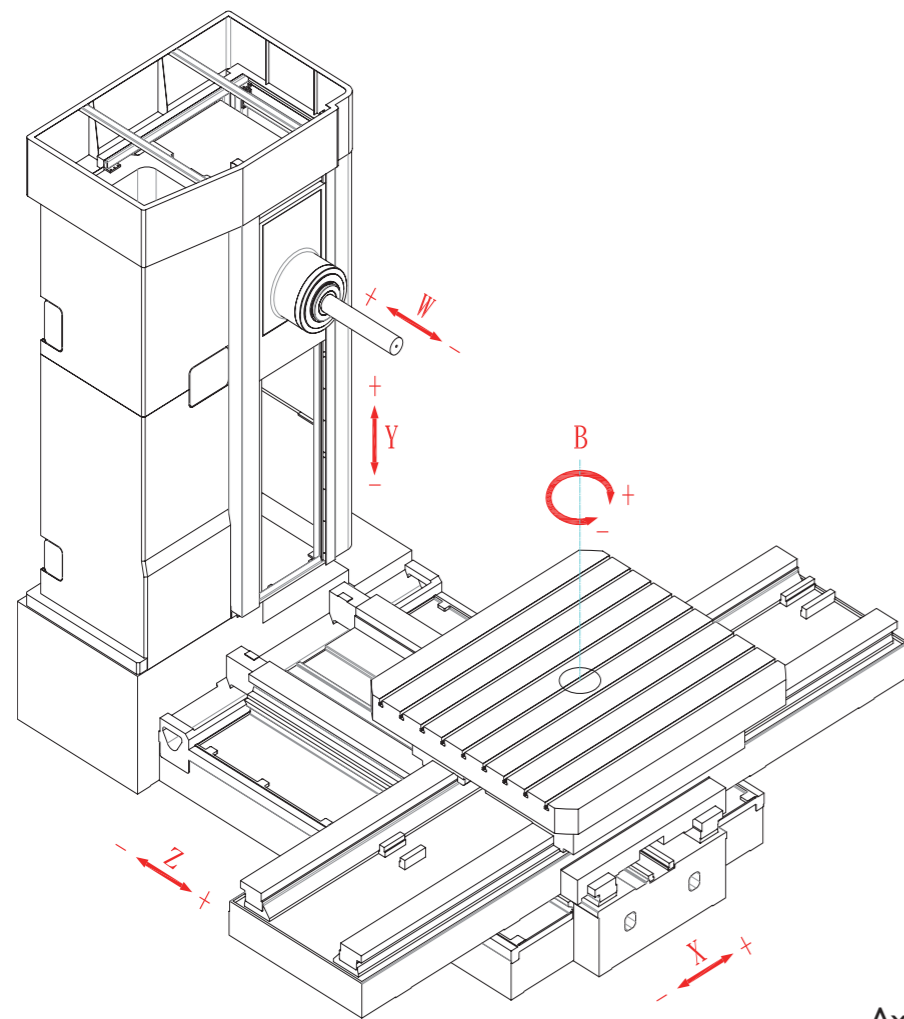
全自動操作  
主軸自製率高達95%  
適合模具加工使用  
高加工效率

Fully Automatic Operation  
Spindle Made In House  
Ideal for Fabricating Molds  
High Efficiency

**Table Type Fixed Column: CBA-R**

**T-Type Moving Column: CBA-TR**

**Table Type Fixed Column**

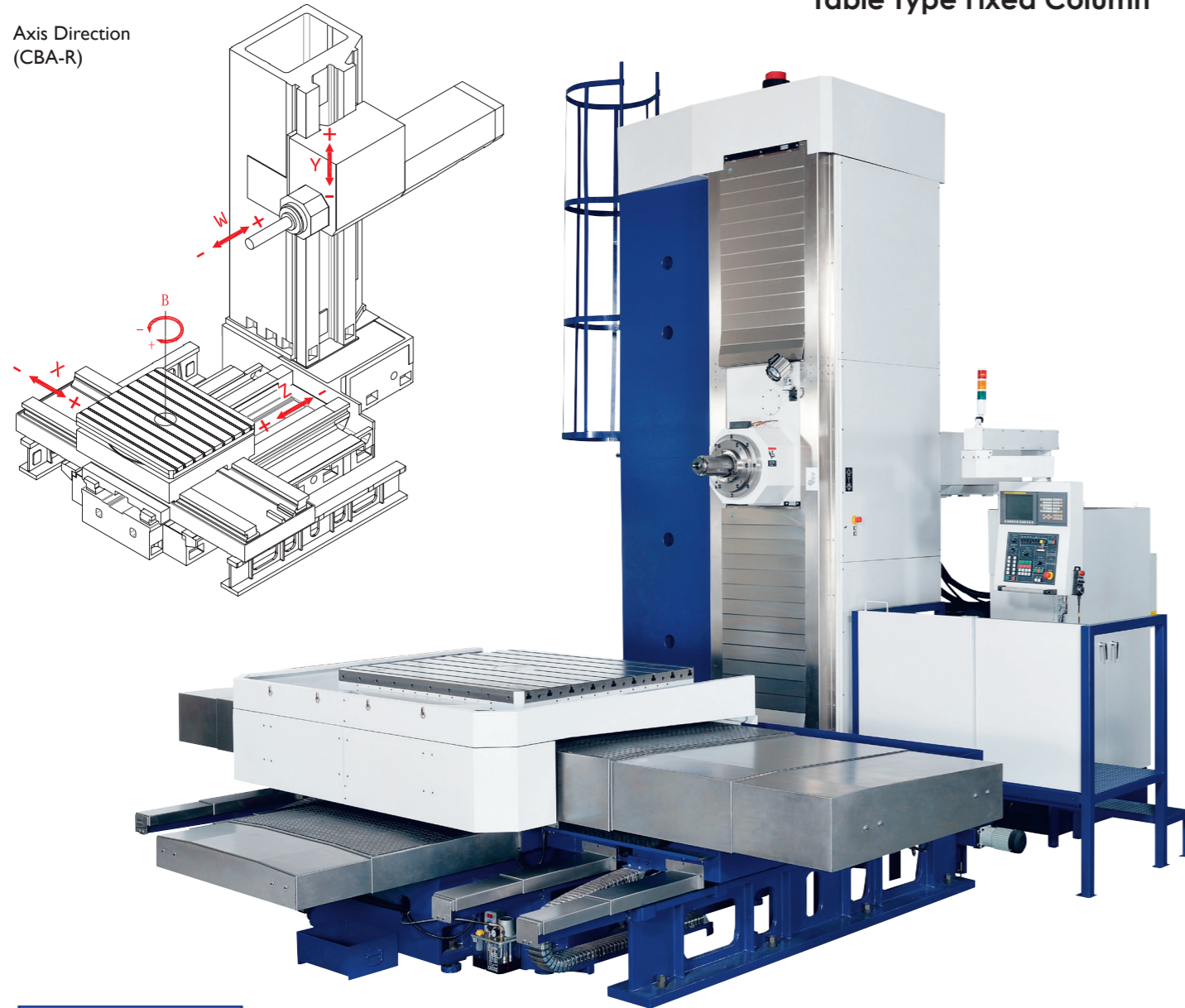


Axis Direction  
(CBA-R)

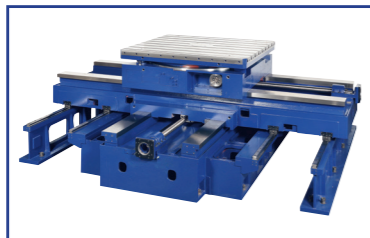


# CBA-135R2

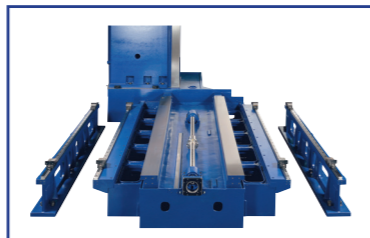
Table Type Fixed Column



Column



Saddle and rotary table



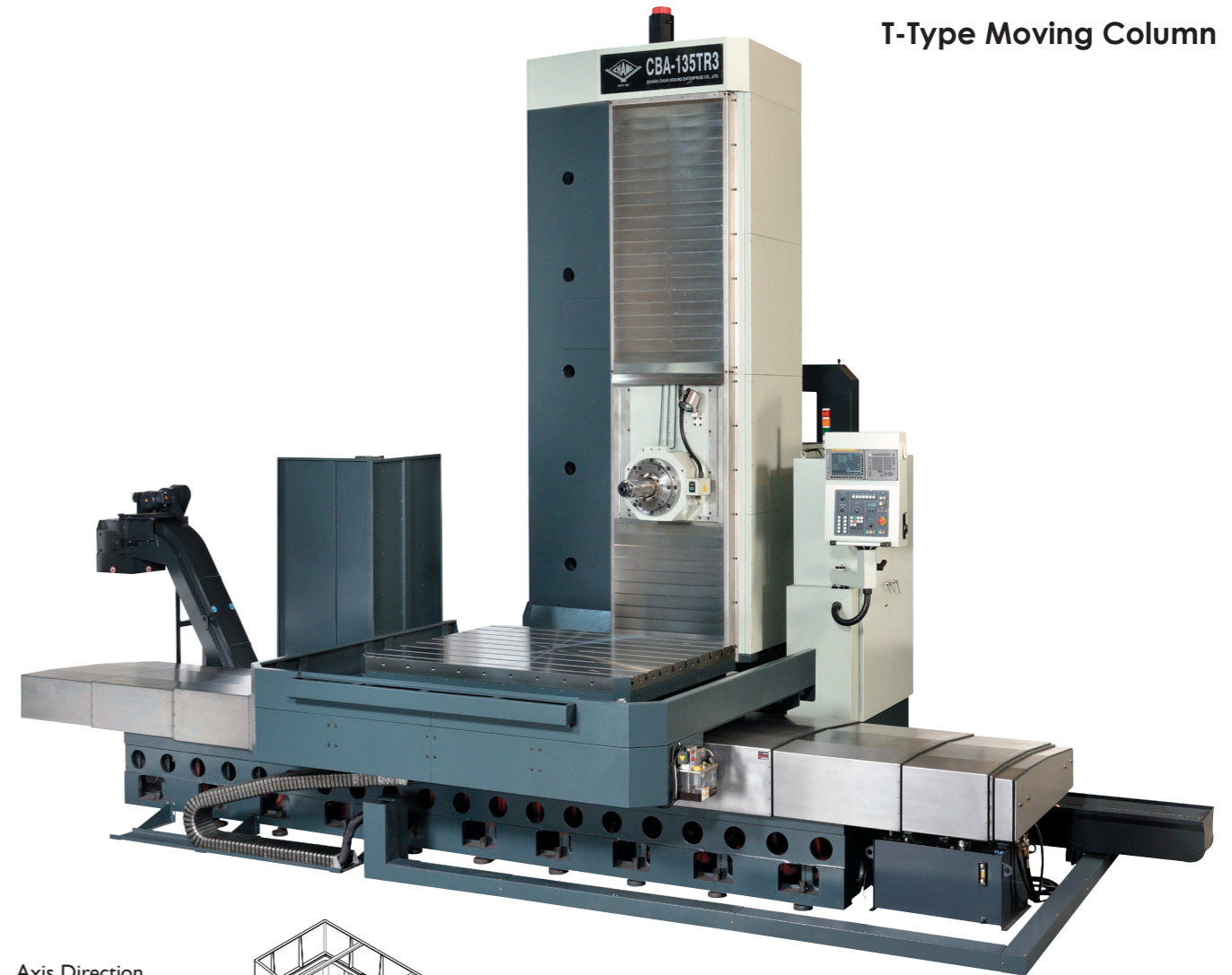
Base box way and auxiliary linear guideway



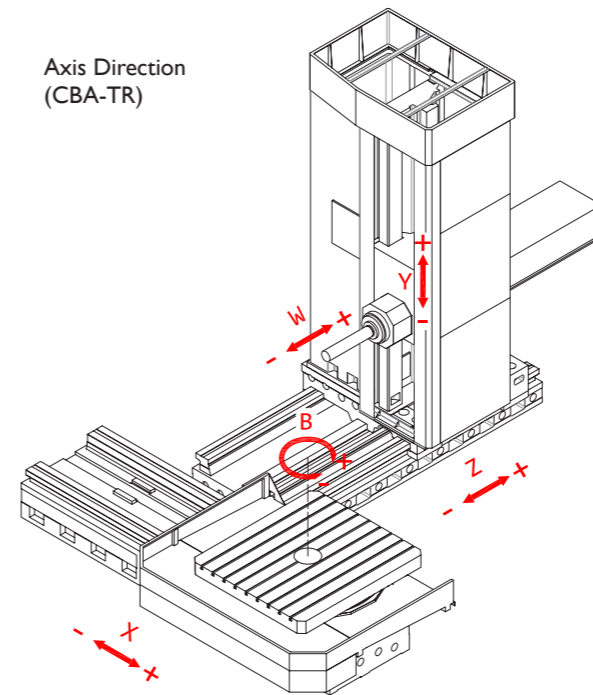
Splash guard for rotary table

# CBA-135TR3

T-Type Moving Column



Axis Direction (CBA-TR)



Splash guard for operator

# 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

The AC digital wrap around spindle drive and motor are more accurate and responsive than traditional analog spindle drives and motors.

The spindle performance is continuously monitored to provide the most efficient cutting conditions. Each axis is independently controlled to provide maximum feed as required.

## 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。

主軸與鏜桿是採用特殊合金鋼材，並經熱化處理可保不變形，並維持剛性達HRC62~68度。

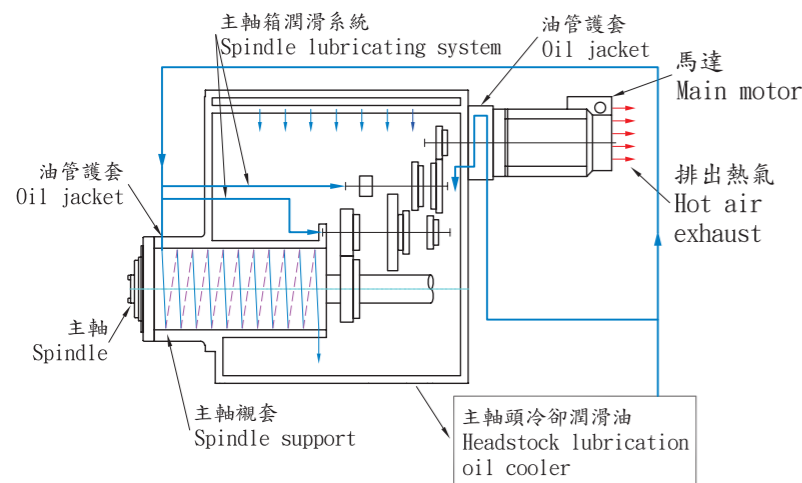
主軸軸承採用世界知名高品質軸承，並經跑合測試溫升標準合格，可維持主軸精度及使用壽命。

## Powerful Spindle

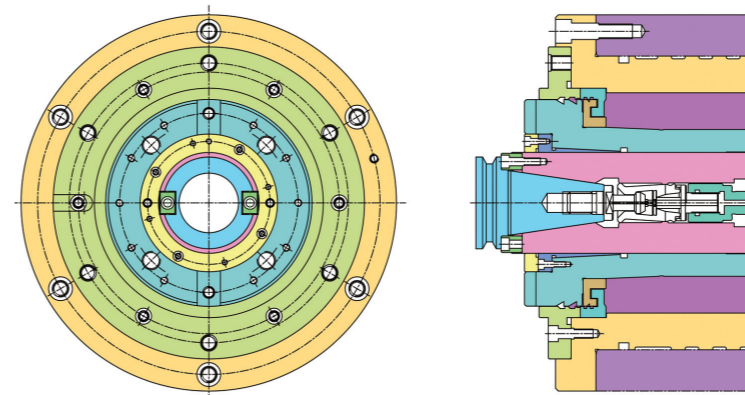
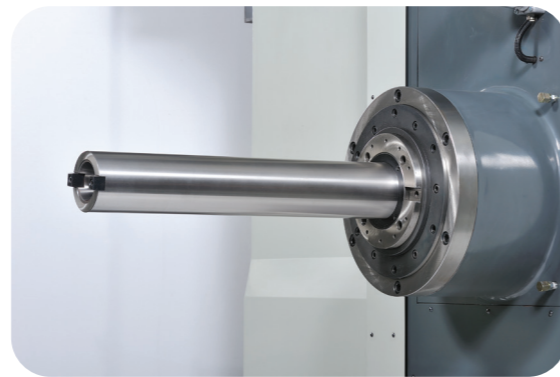
The specially designed spindle outer ring cooling system maintains constant bearing accuracy under normal operating conditions. This gear type auto-shift design and grease lubrication system also provides superior machine performance and reliability.

The spindle and boring bar are made of SACM645 alloy. The spindle has been heated treatment to HRC62~68. This hardness maintains spindle form and insures high reliability. This increased rigidity increases the overall machine capability.

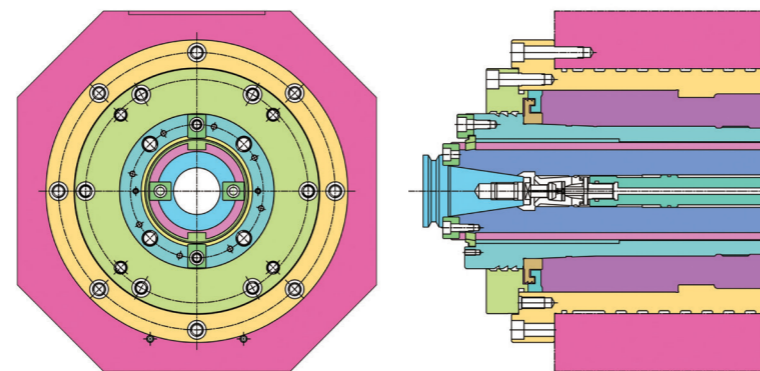
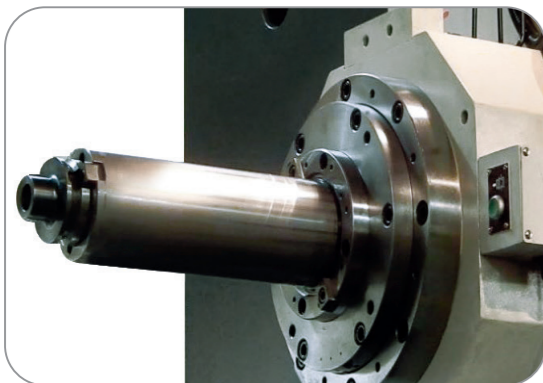
We use the highest quality spindle bearings insure machine consistency and a longer machine life.



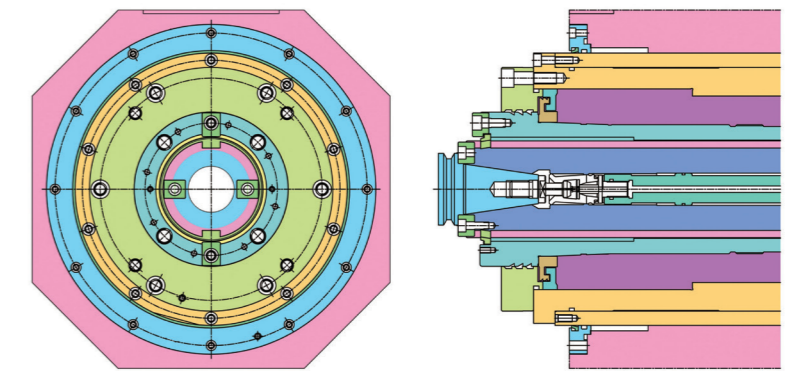
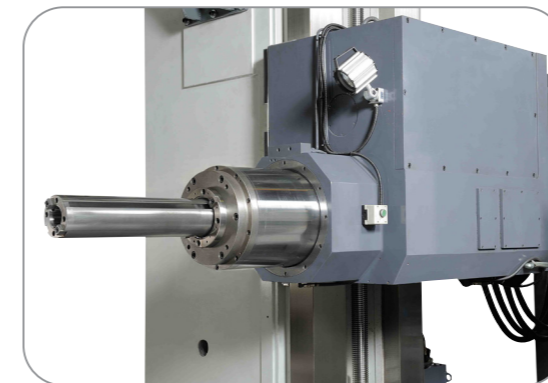
Spindle Dia.  $\varnothing$  110mm



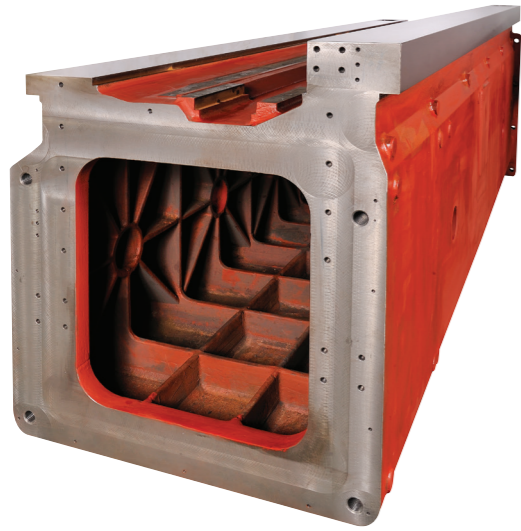
Spindle Dia.  $\varnothing$  135mm



Spindle 135P



Spindle 135Q



## 方型硬軌

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



## CBA Series Box Ways

These highly rigid box way structures give you the very best machine durability. The material is high-frequency-heat-treat for stress relief. The 4-in-

## 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，即使在低速運轉時仍可順暢滑動。

軸向傳動採用高剛性滾珠螺桿

R2.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

Our auto grease lubricating system provides several advantages for the overall machine capability. It not only maintains high accuracy during the long working hours, but also functions perfectly with low speed machining. The high precision ball screw axis transmission provides superior machine stability resulting in highly accurate work pieces.

The CBA-R2 and R3 provides 2 additional linear slide ways to enhance durability and eliminate unwanted deflection. This significantly improves machine 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，使操作更具有效率。

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面板，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 of Operation

Fanuc, Siemens, and Heidenhain control panels are available options. These value added features will enhance your working capability, efficiency, and much more. We are sure that you will be very satisfied with the high level of quality and improved machine performance.

## 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 Table

This special combination of highly rigid box ways, ball screws, and worm gear automatic lubrication system provides a highly satisfying compact rotary table design. With the Heidenhain angle encoder installed in the rotary table center shaft, combined with our specially designed hydraulic clamping system and positioning index pins, our machines can achieve any cutting angle. Reinforced heavy cutting angles at 0°, 90°, 180°, and 270° are included features. Hence resulting in superior accuracy and cutting efficiency.

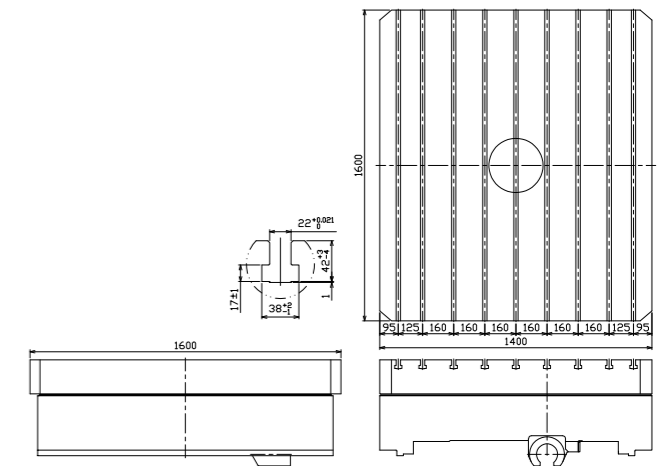


TABLE TYPE			CBA-110R2	CBA-110R3
主軸 Spindle	主軸馬達 Main Motor ( cont. / 30min )	kw	22/26	
	主軸最高轉速 Spindle Speed ( Max. )	rpm	3000	
	主軸錐度 Spindle Taper		ISO 50 / BT-50	
	主軸直徑 Spindle Diameter	mm	Ø 110	
	主軸最大扭矩 Max. Spindle Torque ( SI )	Nm	912	
行程 Travel	X軸 ( 工作台橫向行程 ) Work Table Travel X axis ( Horizontal )	mm	2000	3000
	Y軸 ( 主軸垂直行程 ) Spindle Travel Y axis ( Vertical )	mm	1800	
	Z軸 ( 工作台縱向行程 ) Work Table Travel Z axis ( Longitudinal )	mm	1300	1500
	W軸 ( 主軸行程 ) Spindle Travel W axis	mm	400	
	主軸鼻端到工作台中心 Distance from spindle nose to table center	mm	860~2160	860~2360
	主軸中心到工作台平面 Distance from spindle center to table surface	mm	0~1800	
旋轉工作台 Rotary Table	尺寸 Table Dimension	mm	1400×1600	1600×1800
	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 1-5000	
		W axis	mm/min 1-3000	
機械尺寸	Machine Dimension ( L×W×H )	mm	5500×8700×4540	6350×9000×4540
機械重量	Machine Weight	kg	25000	29000
控制器	Controller		Fanuc / Siemens / Heidenhain	

TABLE TYPE			CBA-135R2	CBA-135R3
主軸 Spindle	主軸馬達 Main Motor ( cont. / 30min )	kw	37/45	
	主軸最高轉速 Spindle Speed ( Max. )	rpm	2000	
	主軸錐度 Spindle Taper		ISO 50 / BT-50	
	主軸直徑 Spindle Diameter	mm	Ø 135	
	主軸最大扭矩 Max. Spindle Torque ( SI )	Nm	2150	
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	2000	
	Z軸 ( 工作台縱向行程 ) Work Table Travel Z axis ( Longitudinal )	mm	1300	1500
	W軸 ( 主軸行程 ) Spindle Travel W axis	mm	700	
	主軸鼻端到工作台中心 Distance from spindle nose to table center	mm	775~2075	775~2275
	主軸中心到工作台平面 Distance from spindle center to table surface	mm	0~2000	
旋轉工作台 Rotary Table	尺寸 Table Dimension	mm	1400×1600	1600×1800
	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 1-5000	
		W axis	mm/min 1-3000	
機械尺寸	Machine Dimension ( L×W×H )	mm	5500×9300×5300	6300×9600×5300
機械重量	Machine Weight	kg	38000	40500
控制器	Controller		Fanuc / Siemens / Heidenhain	

標準配備 Standard Accessories		
工具及工具箱	Tools and Tool Box	1
地基螺絲及墊片	Foundation Screws and Bolts	1
主軸油冷機	Spindle Oil Cooler	1
主軸箱升降配重	Spindle Box vertical movement counter weight	1
工作燈	Work Lamp	1
電器箱冷卻機	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
面盤	Facing head	1
變壓器	Transformer	1
旋轉工作台防濺板	Splash Guard For Rotary Table	1
操作員防濺板	Splash Guard For Operator	1
工件量測	Work Piece Measuring Device	1

標準配備 Standard Accessories		
工具及工具箱	Tools and Tool Box	1
地基螺絲及墊片	Foundation Screws and Bolts	1
主軸油冷機	Spindle Oil Cooler	1
主軸箱升降配重	Spindle Box vertical movement counter weight	1
工作燈	Work Lamp	1
電器箱冷卻機	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
面盤	Facing head	1
變壓器	Transformer	1
旋轉工作台防濺板	Splash Guard For Rotary Table	1
操作員防濺板	Splash Guard For Operator	1
工件量測	Work Piece Measuring Device	1
主軸滑枕行程	Spindle Quill Trave ( W2 axis)350mm	

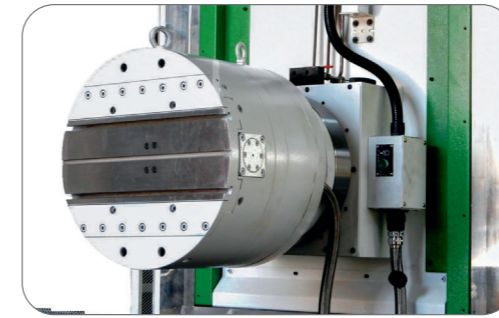
T-TYPE			CBA-135TR2	CBA-135TR3	CBA-135TR4
主軸 Spindle	主軸馬達 Main Motor (30min/cont.)	kw	37/45		
	主軸最高轉速 Spindle Speed (Max.)	rpm	2000		
	主軸錐度 Spindle Taper		ISO 50 / BT-50		
	主軸直徑 Spindle Diameter	mm	Ø 135		
	主軸最大扭矩 Max. Spindle Torque (S1)	Nm	2150		
行程 Travel	X 軸 (工作台橫向行程) Work Table Travel X axis (Horizontal)	mm	2000	3000	4000
	Y 軸 (主軸垂直行程) Spindle Travel Y axis (Vertical)	mm	1800	2300	2800
	Z 軸 (立柱前後移動行程) Column Moving Travel Z axis	mm	1100	1400	1700
	W 軸 (主軸行程) Spindle Travel W axis	mm	700		
	主軸鼻端到工作台中心 Distance from spindle nose to table center	mm	1045~2145	1045~2445	1045~2745
	主軸中心到工作台面 Distance from spindle center to table surface	mm	0~1800	0~2300	0~2800
旋轉工作台 Rotary Table	尺寸 Table Dimension	mm	1400×1600	1600×1800	1800×2000
	T型槽 T-Slot	mm×No.	22×9	22×9	22×9
	承載重量 Max. Loading Weight	kg	8,500	10,000	12,000
	最小分割角度 Index	degree	0.001°	0.001°	0.001°
	最大旋轉直徑 Max. Rotation Diameter	mm	2126	2408	2691
	旋轉速度 Table Rotation Speed	rpm	0.8	0.8	0.8
進給 Feed	快送 Rapid Feed	XYZW axis	mm/min XY axis = 8000 / W axis = 3000 / Z axis = 5000		
	切削進給速度 Feed Rate	X/Y/Z axis	mm/min I-5000		
		W axis	mm/min I-3000		
機械尺寸	Machine Dimension (L x W x H)	mm	7200×7720×5260	8700×7810×5760	10200×8250×6260
機械重量	Machine Weight	Kg	39500	43000	46000
控制器	Controller		Fanuc / Siemens / Heidenhain		

標準配備 Standard Accessories		
工具及工具箱	Tools and Tool Box	1
地基螺絲及墊片	Foundation Screws and Bolts	1
主軸油冷機	Spindle Oil Cooler	1
主軸箱升降配重	Spindle Box vertical movement counter weight	1
工作燈	Work Lamp	1
電器箱冷卻機	Electrical Cabinet Cooler	1
X軸防塵罩	X axis Dust Cover	2
Y軸防塵罩	Y axis Dust Cover	2
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
工作台	Work Table	
主軸中心出水	Coolant Through Spindle	1
光學尺	Linear Scale	1
主軸襯套	Spindle Support	1
面盤	Facing head	1
90° 頭	Angular Milling Head	1
萬向頭	Universal Milling Head	1
變壓器	Transformer	1
旋轉工作台防濺板	Splash Guard For Rotary Table	1
操作員防濺板	Splash Guard For Operator	1
工件量測	Work Piece Measuring Device	1
主軸滑枕行程	Spindle Quill Trave (W2 axis)350mm	

## CBA-110

## 面盤 Facing Head FH-500

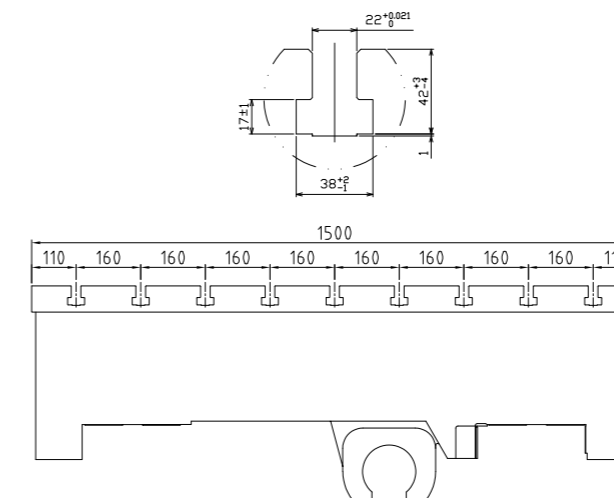


U軸行程 : 160mm U axis travel : 160mm  
Max. Speed 180rpm

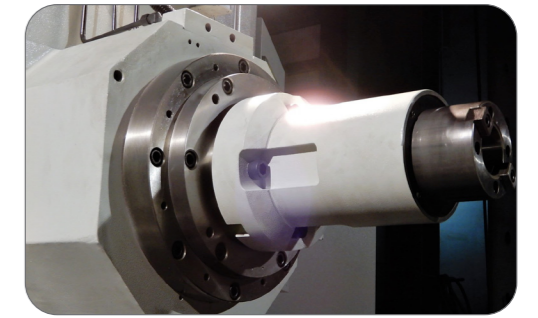
刀庫 Automatic Tool Changer (Optional Accessories)		
刀具容量	Tool Capacity	24 / 32 / 40 / 60
刀柄	Tool Shank	MAS 403 BT-50
拉刀裝置	Pull Stud	MAS 403 P50T-I
刀具重量	Tool Weight	25 kg
刀具最大長度	Max. Tool Length	350 mm
刀具最大直徑	Max. Tool Diameter	Ø 125 mm (Ø250mm)

## 工作台 Work Table

工作台 Work Table (Optional Accessories)					
尺寸	Table Dimension	mm	1500×2000	1500×3000	1500×4000
T型槽	T-Slot	mm×No.	24×9	24×9	24×9
承載重量	Max. Loading Weight	kg	10,500	12,500	12,500

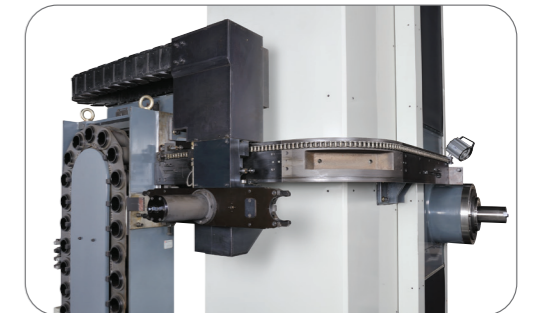


## 主軸襯套 Spindle Support



長度 Length(mm)

300



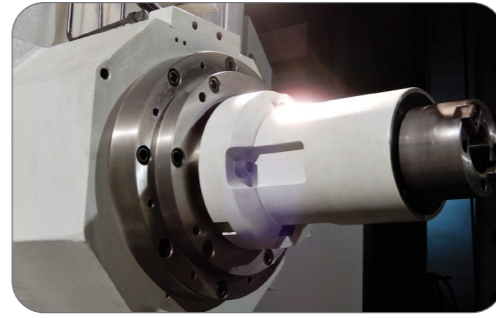
# CBA-135

## 面盤 Facing Head FH-700



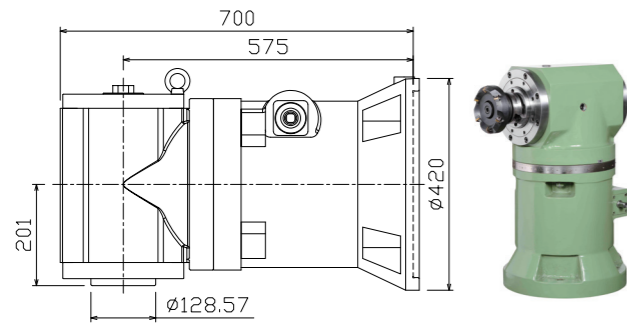
U軸行程 : 240mm U axis travel : 240mm  
Max.Speed 120rpm

## 主軸襯套 Spindle Support



長度 Length(mm)
300

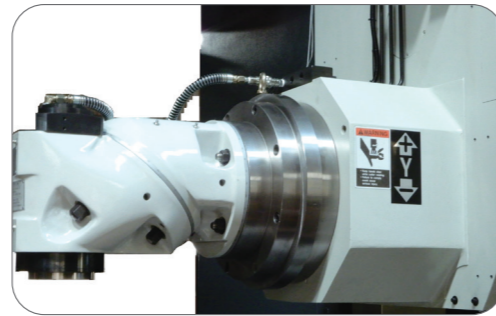
## 90° Angle Milling Head



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)

## 萬向頭 Universal Milling Head



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 P-50T-I
刀具重量	Tool Weight	25 kg
刀具最大長度	Max.Tool Length	350 mm
刀具最大直徑	Max.Tool Diameter	∅ 125 mm (∅250mm)

