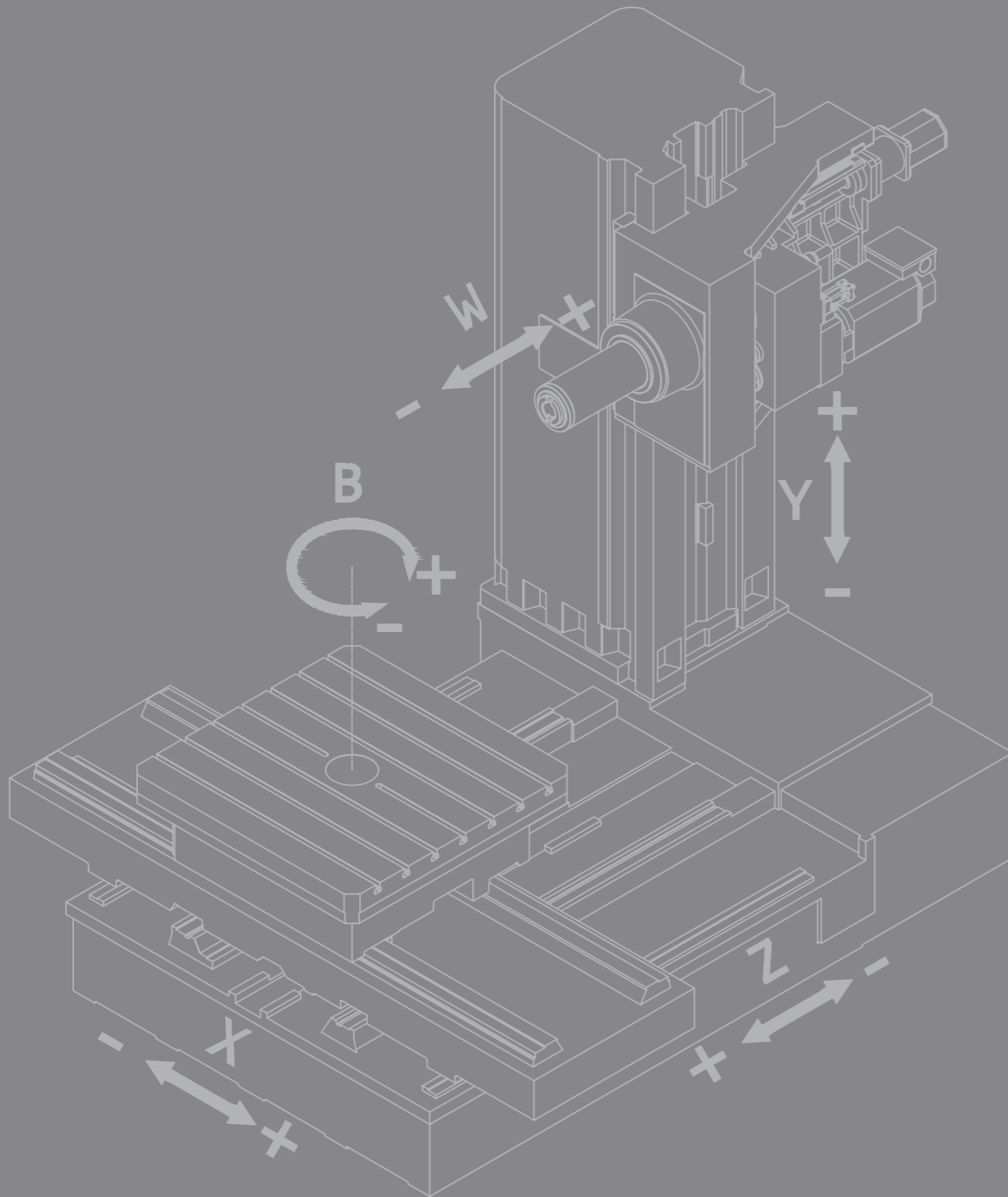




# HORIZONTAL BORING MACHINE CBA-200Q CBA-110B



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# CBA-200Q臥式鏜床

CBA-200Q Horizontal boring machine

# CBA-200Q

全自動操作

主軸滑枕直徑200mm

重切削

高加工效率

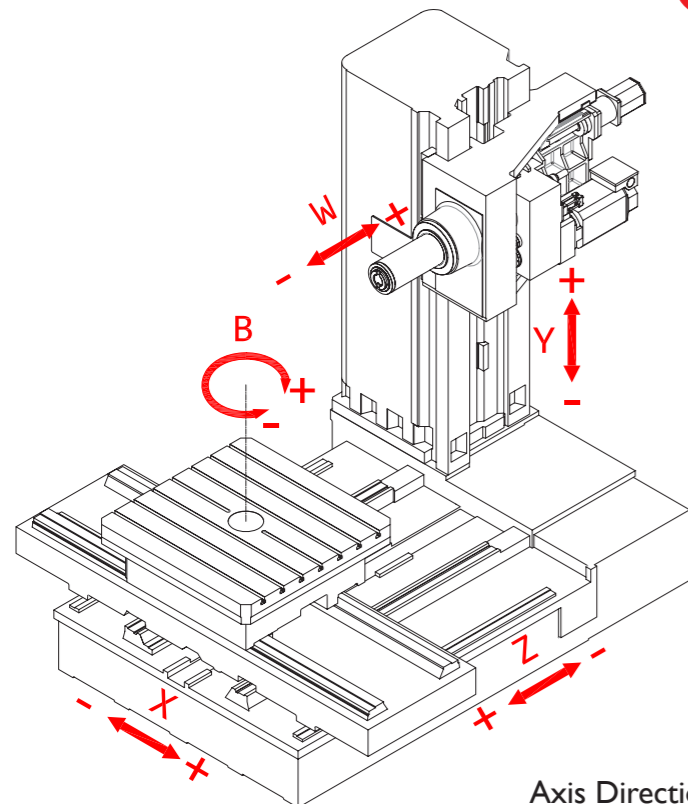
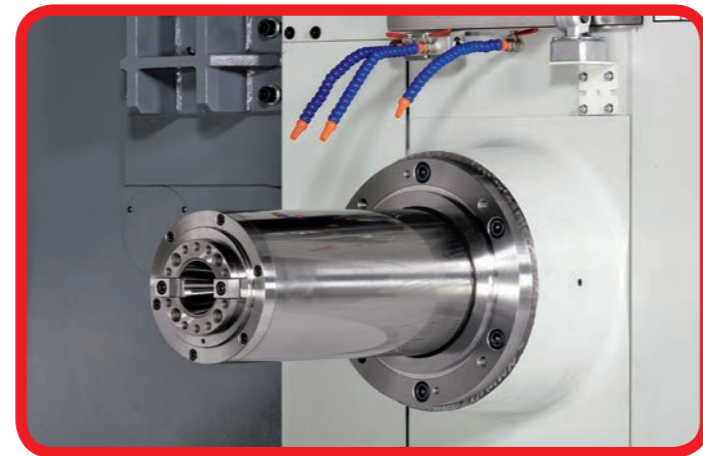
Fully Automatic Operation

Spindle Quill dia 200mm dia.

Heavy cutting

High Efficiency

*Spindle diameter 200mm*  
*Spindle travel 400mm*



Axis Direction





# 特點 Features

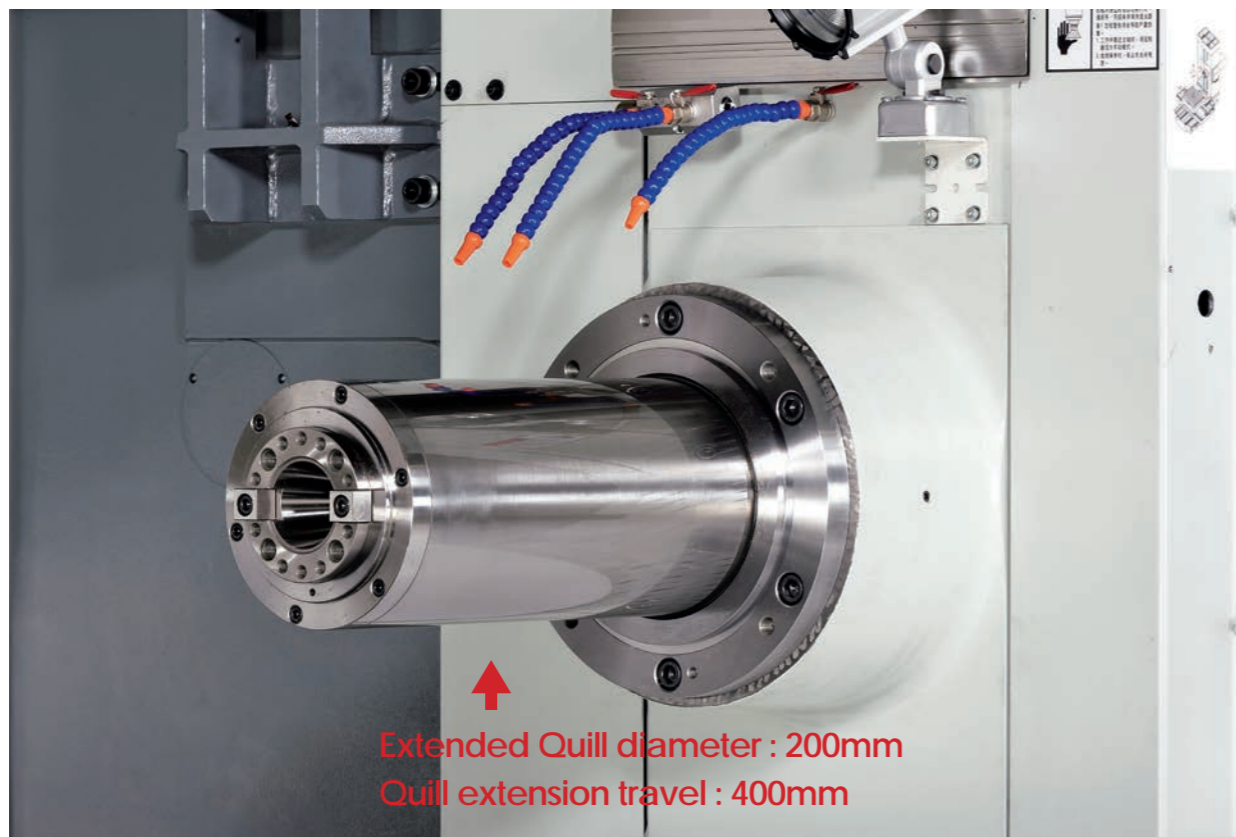
## 主軸直徑200mm

- 主軸伸出400mm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。
- 下垂量 $\leq 0.01\text{mm}$ （無刀具）

## Spindle diameter 200mm

- Keeping cutting ability when spindle extend to 400mm.
- Each axis is independently controlled to provide maximum feed as required.
- Sag tolerance  $\leq 0.01\text{mm}$ (without tool mounted)

*Spindle dia. 200mm  
Keeping cutting ability when  
spindle extend to 400mm.*



## 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，並經熱處理可保不變形，並維持剛性。

主軸軸承採用歐系或日系知名大廠軸承，並經跑合測試溫升標準合格，可維持主軸精度及使用壽命。

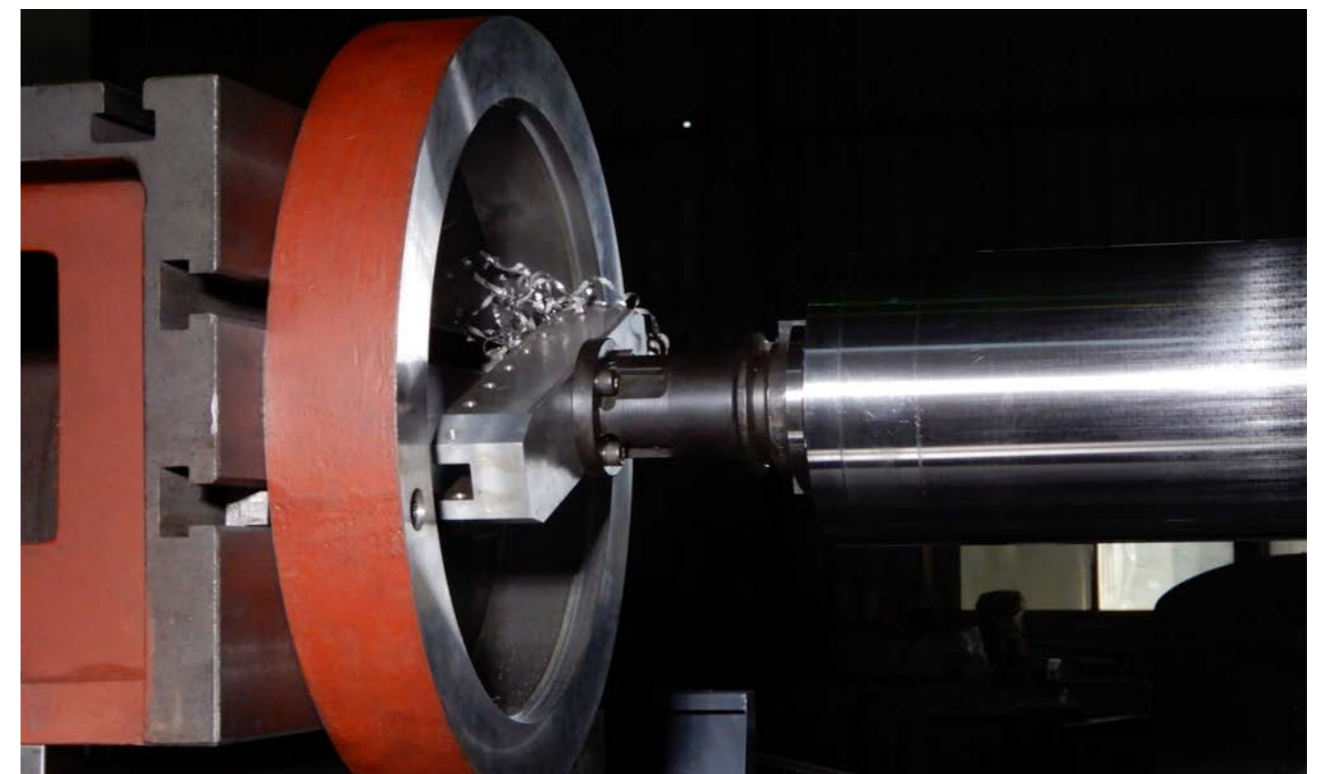
## High Power Spindle

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 alloy steel material and have been heated treatment.

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



切削條件 Cutting conditions		
主軸伸出長度	Spindle move out	400mm
刀盤	Face cutter	160mm
切削有效直徑	Cutting range	130mm
轉速	Speed	300rpm
切削深度	Cutting depth	3mm
切削進給速度	Feed rate	600mm/min
主軸負載	Spindle load	46%



## 線軌

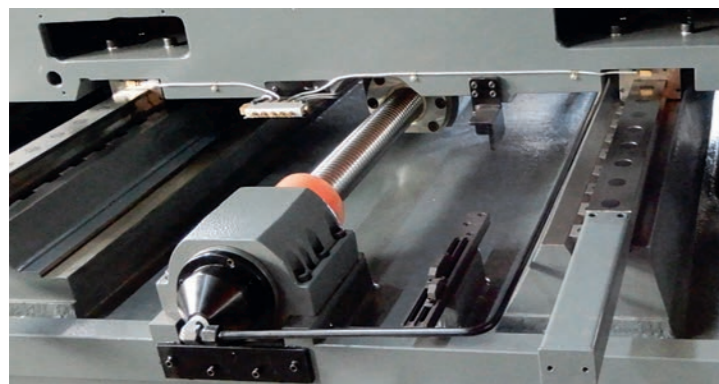
X & Z 軸：線軌

Y 軸：方型硬軌

- X&Z軸採用線軌，磨擦力較小，機械性能佳，運行速度快，方便維修。
- Y軸採用硬軌，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。Y軸採用硬軌可負重主軸頭升降穩定。



X axis linear guideway  
Optional : Ball screw with hollow cooling system



Z axis linear guideway  
Optional : Ball screw with hollow cooling system

## Linear guideway

X & Z axes : Linear guideway

Y axis : Box way

- X&Z axes use linear guideway, low friction, good mechanical performance, fast running speed and easy maintenance.
- Y axis uses box way, high rigidity rib structure and have been stress relief the heat treatment hardness is HRC43° ~47° . Good at loading 200Q spindle weight and vertical movement steady.



Y axis box way

## 硬軌

X & Z 軸方型硬軌

Y 軸方型硬軌

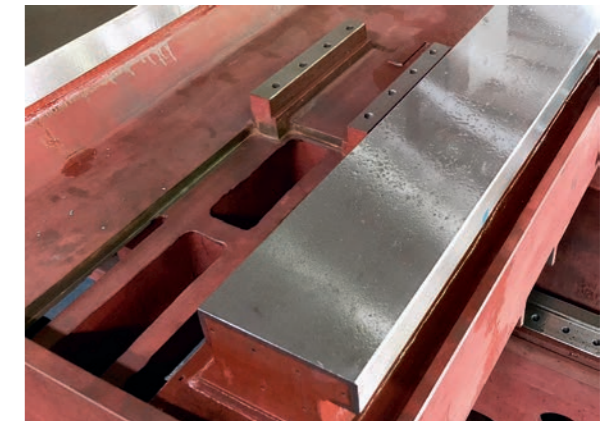
- XYZ軌道採用硬軌，具高鋼性筋骨結構，並經應力消除後再經高週波熱處理，硬度可高達HRC 43-47度。  
硬軌滑動接觸面大，剛性好、抗震能力強、承重能力強，適合重負荷切削。
- 滑動面有鐵氟龍黏附並經鏟花，使滑軌系統在長時間內保持高精確度，即使在低速運轉時仍可順暢滑動。
- 軸向傳動採用精密級滾珠螺桿

## Box way

X & Z axes box way

Y axis box way

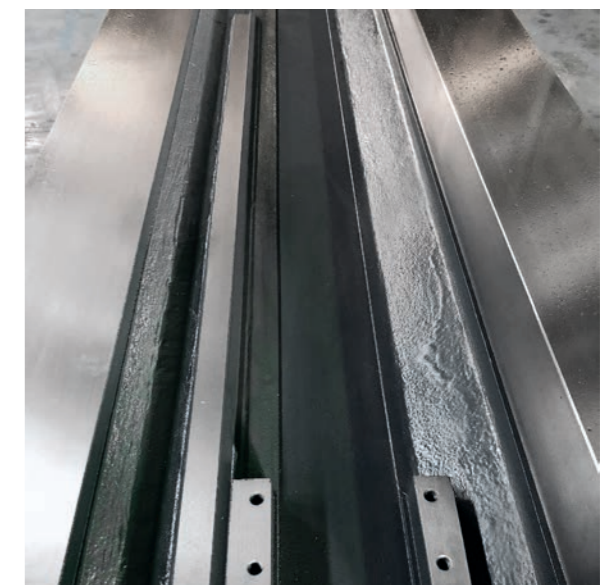
- XYZ axes use box slide way, high rigidity rib structure and have been stress relief the heat treatment hardness is HRC43° ~47° . The box way contact surface is large, the rigidity is good, the vibration resistance is strong, and good loading capacity performance suitable for heavy cutting.
- The mating surfaces of the moving units are coated with a special fluorine resin, and scrapping 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.
- XYZ axes use precision ball screw.



X axis box way



Z axis box way



Y axis box way



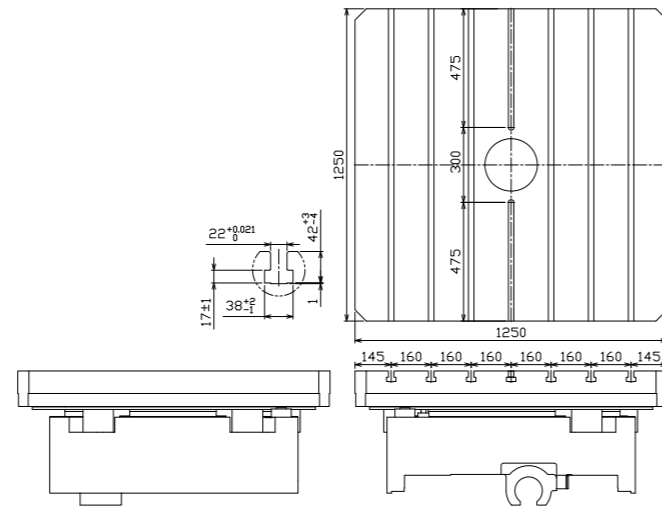
## 操作容易

- 座立式開關操控箱，可左右有限制旋轉，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。



## Easy 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。迴轉工作台具有特殊設計油壓鎖，可用於任何角度鎖定切削及正角度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.

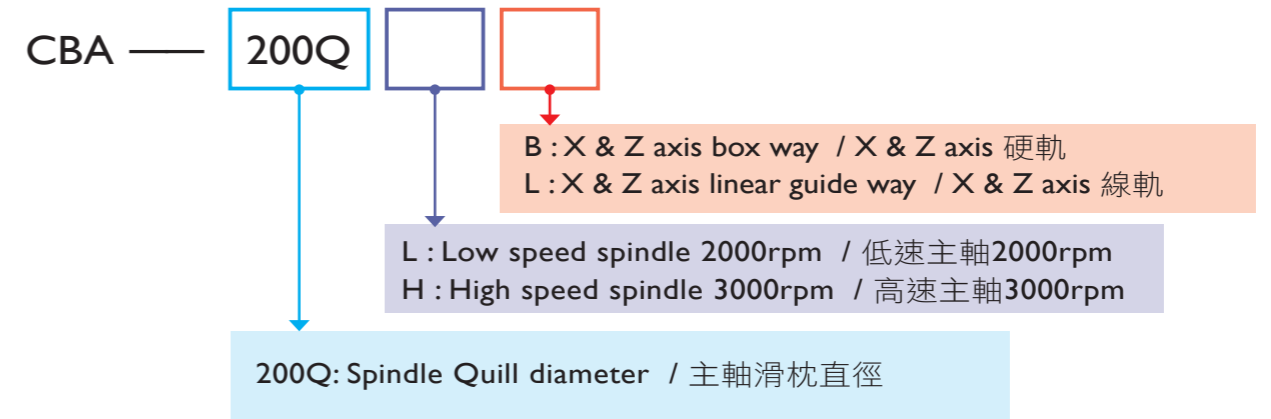


TABLE TYPE			CBA-200Q	
主軸 Spindle	主軸馬達 Spindle Motor ( 30min/cont. )	kw	22 / 26	
	主軸最高轉速 Spindle Speed ( Max. )	rpm	Standard : L - 2000rpm Optional : H - 3000rpm	
	主軸錐度 Spindle Taper		ISO 50 / BT-50	
	滑枕直徑 Extended quill diameter	mm	200	
	主軸最大扭矩 Max. Spindle Torque	Nm	Standard : L - 1360Nm / 155 rpm Optional : H - 665Nm / 316 rpm	
行程 Travel	X軸 ( 工作台橫向行程 ) Work Table Travel X axis ( Horizontal )	mm	1500	
	Y軸 ( 主軸垂直行程 ) Spindle Travel Y axis ( Vertical )	mm	1200	
	Z軸 ( 工作台垂直行程 ) Work Table Travel Z axis ( Vertical )	mm	1000	
	W軸(滑枕行程) Quill extension travel W axis	mm	400	
	主軸鼻端到工作台中心 Distance from spindle nose to table center	mm	530 - 1530	
	主軸中心到工作台平面 Distance from spindle center to table surface	mm	0-1200	
軌道 Slideway			Standard : X&Z axis linear guide way ( X & Z軸-線軌 )	
			Optional : X & Z axis box way ( X & Z軸-硬軌 )	
			Y axis : Box way ( Y軸硬軌 )	
旋轉工作台 (B軸) Rotary working table ( B axis )	尺寸	Table Dimension	mm	1250×1250
	T型槽	T-Slot	mm×No.	22×7
	承載重量	Max. Loading Weight	kg	4,500
	最小分割角度	Index	degree	0.001°
	最大旋轉直徑	Max. Rotation Dia.	mm	1768
	旋轉速度	Rapid Rotation of Table	rpm	4
進給 Feed	快送 Rapid	XYZW axis	mm/min	X & Z axis linear guide way : 13000 ( X & Z軸線軌 : 13000 ) X & Z axis box way : 10000 ( X & Z軸硬軌 : 10000 ) Y 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	7355×4500×3610	
機械重量	Machine Weight	kg	17500	
控制器	Controller		Fanuc / Siemens / Heidenhain	

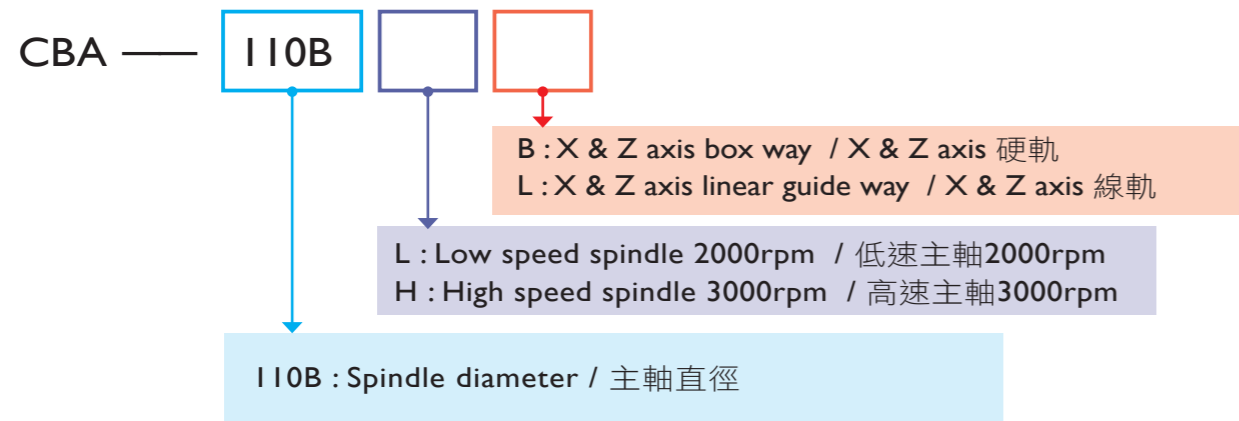


TABLE TYPE			CBA-I 10B	
主軸 Spindle	主軸馬達 Spindle Motor ( 30min/cont. )	kw	22 / 26	
	主軸最高轉速 Spindle Speed ( Max. )	rpm	Standard : L - 2000rpm Optional : H - 3000rpm	
	主軸錐度 Spindle Taper		ISO 50 / BT-50	
	主軸直徑 Spindle Diameter	mm	110	
	主軸最大扭矩 Max. Spindle Torque	Nm	912Nm / 230 rpm	
行程 Travel	X軸 ( 工作台橫向行程 ) Work Table Travel X axis ( Horizontal )	mm	1500	
	Y軸 ( 主軸垂直行程 ) Spindle Travel Y axis ( Vertical )	mm	1100	
	Z軸 ( 工作台垂直行程 ) Work Table Travel Z axis ( Vertical )	mm	1000	
	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	505 – 1505	
	主軸中心到工作台平面 Distance from spindle center to table surface	mm	0 - 1100	
軌道 Slideway			Standard : X&Z axis linear guide way ( X & Z軸-線軌 )	
			Optional : X & Z axis box way ( X & Z軸-硬軌 )	
			Y axis : Box way(Y軸硬軌)	
旋轉工作台 (B軸) Rotary working table (B axis)	尺寸	Table Dimension	mm	1250 × 1250
	T型槽	T-Slot	mm × No.	22 × 7
	承載重量	Max. Loading Weight	kg	4,500
	最小分割角度	Index	degree	0.001°
	最大旋轉直徑	Max. Rotation Dia.	mm	1768
進給 Feed	快送 Rapid	XYZW axis	mm/min	X & Z axis linear guide way : 13000 ( X & Z軸線軌 : 13000 )
				X & Z axis box way : 10000 ( X & Z軸硬軌 : 10000 )
				Y 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	7355 × 4500 × 3800	
機械重量	Machine Weight	kg	18500	
控制器	Controller	Fanuc / Siemens / Heidenhain		

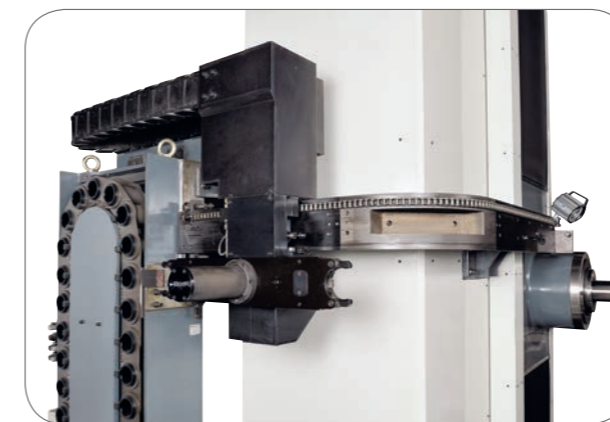
標準配備 Standard Accessories		
工具及工具箱	Tool and Tool Box	1
地基螺絲及墊片	Foundation Screw and Bolt	1
主軸油冷機	Spindle Oil Cooler	1
主軸配重裝置	Spindle Counter Weight Device	1
工作燈	Working Lamp	1
電器箱冷卻機	Electro Cabinet Cooler	1
X軸防塵罩	X Axis Dust Cover	2
Y軸防塵罩	Y Axis Dust Cover	2
Z軸防塵罩	Z Axis Dust Cover	2
手輪	MPG	1
自動潤滑系統	Auto 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

刀庫 AUTOMATIC TOOL CHANGER (optional accessory)		
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-1
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)

選擇配備 Optional Accessories		
刀庫	Automatic Tool Changer	1
主軸中心出水	Coolant Through Spindle	1
光學尺	Liner Scale	1
變壓器	Transformer	1
旋轉工作台防濺鈹金	Splash Guard For Rotary Table	1
操作員防濺鈹金	Splash Guard For Operator	1
工件量測	Workpiece Measuring Device	1
工作台	Working Table	1

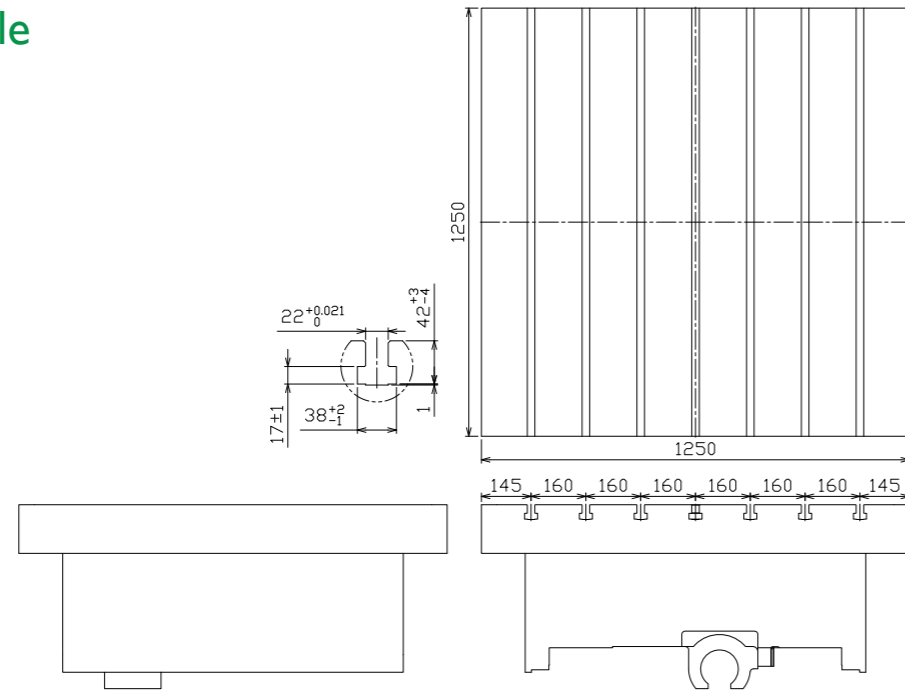


**Spindle : 110B**  
**Spindle diameter 110mm**  
**Spindle travel 400mm**

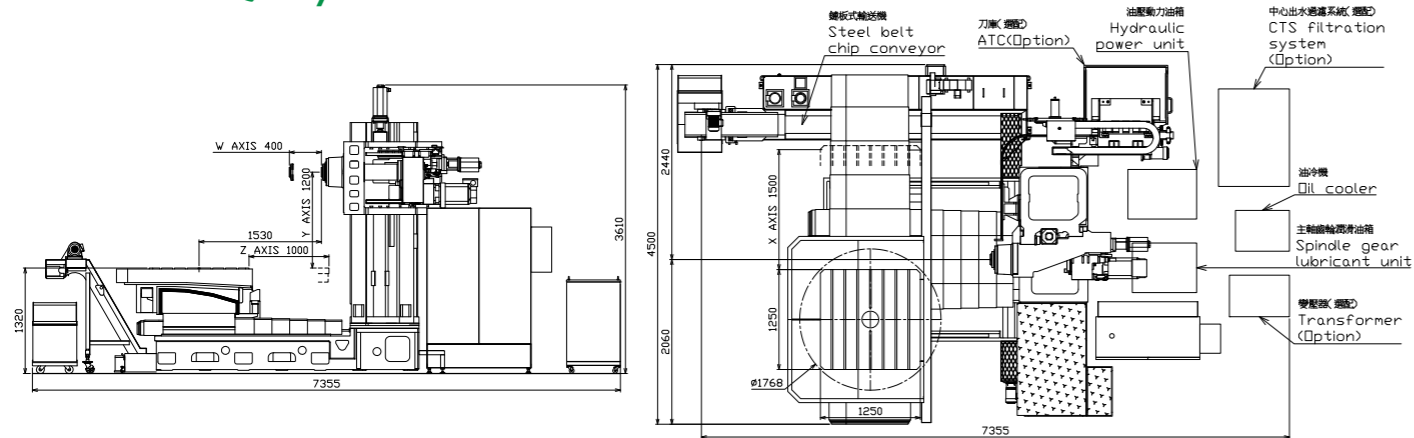


工作台 Working Table (Optional accessories)			
尺寸	Table Dimension	mm	1250 × 1250
T型槽	T Slot	mm x No.	24 × 7
承載重量	Max. Loading Weight	kg	4,000

# Working Table



# CBA-200Q Layout



# CBA-110B Layout

