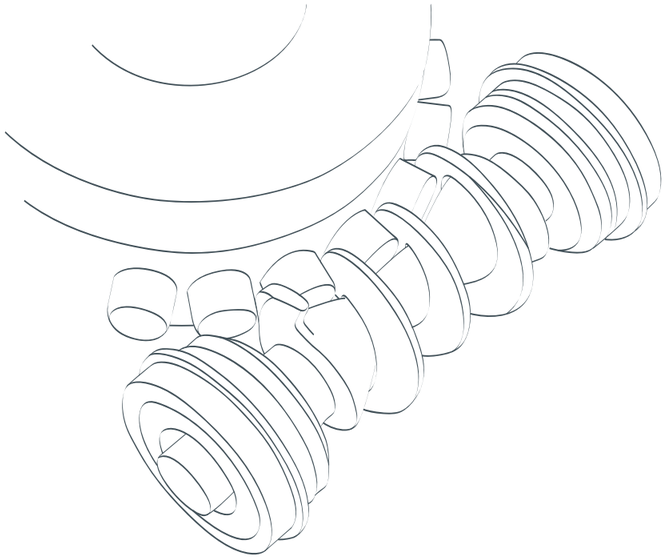


## 「精準」是我們的最低要求。

2011年**康普國際精密機械股份有限公司**在台中潭子成立，2013年透過與潭子精密技術合作，領先研發出全國第一台**「凸輪式離合齒分度台」**，並創下供應鴻海富士康兩千四百台的銷售實績，震撼業界。

而康普創新的腳步從未停歇，2015年全國第一台**「凸輪式工作交換台」**順利上市，將托盤交換時間從15秒降為6秒，提供客戶更高的生產效率和穩定的耐久性，滿足客戶在產能和品質上的雙重需求。

2016年歷經兩年開發設計及反覆測試，康普再度推出全國第一台**「內嵌式零背隙滾齒凸輪第四軸」**，立刻引來各大工具機廠關注的目光，高精度、高剛性、高效率的機構特性，加上滾齒凸輪零背隙轉位快的優點，可以確保大量生產下，客戶的加工品質穩定性。2018年陸續研發出**「RTA100單臂式雙軸工作台」**、**「RTB650搖籃式雙軸工作台」**、**「RSH主軸搖擺頭」**等全系列產品。

為解決精密加工產業產能提升問題，康普精機於2022年獨創研發出**「RTAD200雙盤單臂式雙軸工作台」**，在同樣生產時間下提升多一倍的產能效率，精度的準確性更無可披靡，讓客戶更加信任康普精機的產品。

數不盡的腳步，為追求高品質留下了不可抹滅的足跡，康普精機**「專注」**在凸輪機構的多方位運用及技術研發；**「精準」**是我們的最低要求；**「服務精神」**則已經深入員工的DNA中，成為康普精機的文化和傳承。

我司從日、德進口高精度的加工生產設備，是我們對核心零組件製程的最佳保證，而高精度的量測儀器檢驗設備則是我們對品質的苛求，只為提供最好的產品給客戶使用，康普精機立足台灣，放眼世界，是我們持續進步的動力，願與志同道合的客戶一同攜手前進，共創台灣精密機械在國際舞台發光發熱。

## Precision is Our Minimum Requirement

Founded in Tanzi in 2011, **Campower International Precision Machinery Co., Ltd.**

has inherited 30 years of expertise in cam manufacturing from Tan Tzu Precision Machinery Co., Ltd.

In 2013, Campower International pioneered in successfully developing Taiwan's first **Cam Clutch Coupling Index Table** in collaboration with Tan Tzu Precision and sent a shock wave across the industry by selling 2,400 units of the product to Foxconn.

Campower's innovation momentum never stops. 2015 saw the successful launch of, Taiwan's first **Auto Pallet Changer** with the ability to reduce pallet change time from 15 seconds to 6 seconds. It meets our clients' requirements for both productivity and quality by providing higher production efficiency and stable durability.

In 2016, Campower again launched Taiwan's first **Embedded Zero Backlash Roller Gear Cam Fourth Axis Rotary**, which immediately caught the eyes of major machine tool manufacturers. Its mechanism properties of high precision, high rigidity and high efficiency combined with the fast zero backlash shifting of the roller Gear Cam can ensure stable machining quality in mass production for our clients.

In 2018, Campower developed RTA100 Zero Backlash Roller Gear Cam Tilting 2-Axis Rotary Table, RTB650, RSH wobbler machine.

In 2022, Campower developed RTAD200 so as to resolve the problem that increased productivity.

Countless advancing footsteps have left lasting footprints in the pursuit of high quality. Campower International's **'focus'** is on diverse applications and technical development of cam mechanisms and **'precision'** is our minimum requirement.

**'Commitment to service'** has deeply engraved in our employees' DNA and has become our culture and legacy.

We have imported high precision machining equipment from Japan and Germany, which are our best guarantee of quality.

High precision measuring instruments represent our rigorous requirements for quality because we provide only the best products for our clients to use.

With our stronghold in Taiwan, aiming for the world, developing high precise CNC/NC 4-axes/5-axis rotary indexing table for our clients is the driving force for our continuing advancement.

We welcome all our clients with the same aspiration to move forwards with us. Together, we will bring Taiwan's precision machinery to shine on the world stage.

# 國際通用標準檢測定位與重覆精度
# Test the Positioning and Repeating Accuracy with International Common Standards

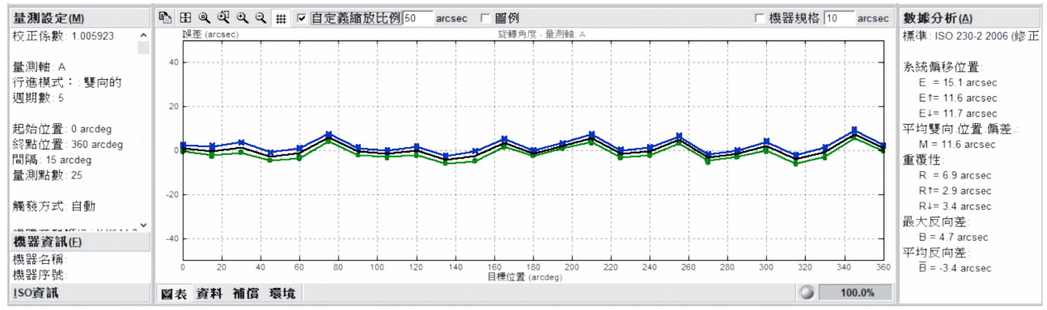
## 定位精度檢測
## The Inspection of Positional Accuracy

採用全球最大雷射干涉儀製造廠Agilent的雷射動態校準儀，嚴格檢測定位與重覆精度。

We utilize the laser interferometer from the biggest apparatus manufacturer Agilent for strict accuracy of position and repeatability positioning precision.

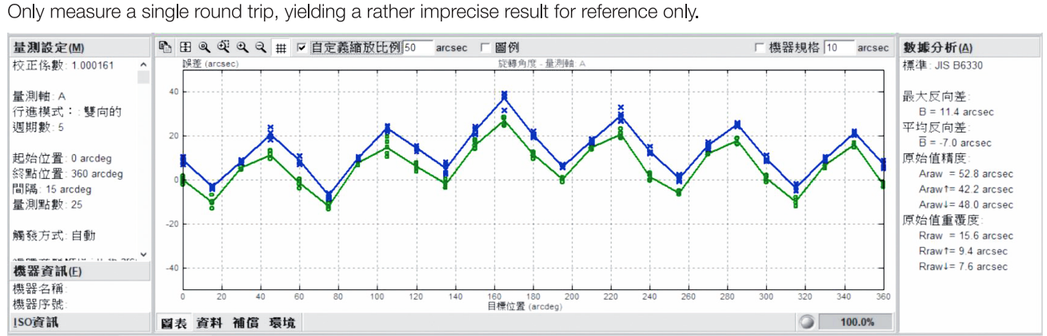
## 康普ISO-230-2 2014 國際標準
## Campower : ISO-230-2 2014 International Standard

康普轉台連續五次正轉/反轉重覆測定，符合ISO-230-2精度檢驗規範。
Campower rotary table, perform five consecutive forward/reverse motions as repeat measurements.
In compliance with ISO-230-2 precision inspection regulation.




## 同業: JIS單趟量測標準
## Peer Business: JIS Single Measuring Standard

只檢測單趟來回，結果粗糙，精度僅供參考。
Only measure a single round trip, yielding a rather imprecise result for reference only.










## 檢驗標準級別
# Inspection


## ISO-230-2
### 分割精度檢測說明 (單向系統偏移位置 E+/E-)
### Segmentation Accuracy Test Description (Unilateral system offset position E+/E-)

ISO-230-2所規範的精度檢測為透過連續五次正轉/反轉重覆測定。單方向定位的分割定位值來表示。
ISO-230-2 species accuracy test as continuous five consecutive forward/reverse motions in repeat
Represented by unilateral segmentation positioning value.

## ISO-230-2
### 重覆精度檢測說明 (單向重覆定位 R+/R-)
### Repetitive Accuracy Test Description (Unilateral repeated positioning R+/R-)

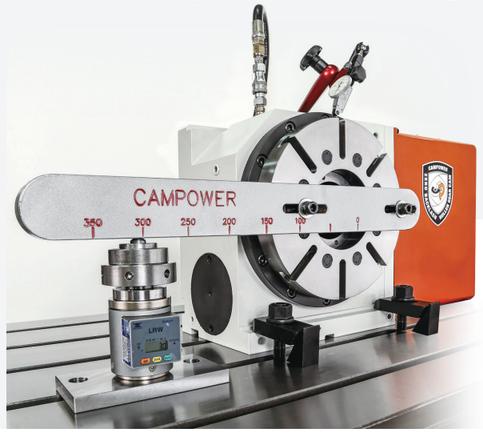
ISO-230-2所規範的精度檢測為透過連續五次正轉/反轉重覆測定。單方向定位的重覆定位值來表示。
ISO-230-2 specifies the accuracy test as continuous five forward/reverse motions in repeat.
Represented by unilateral repetitive positioning value.

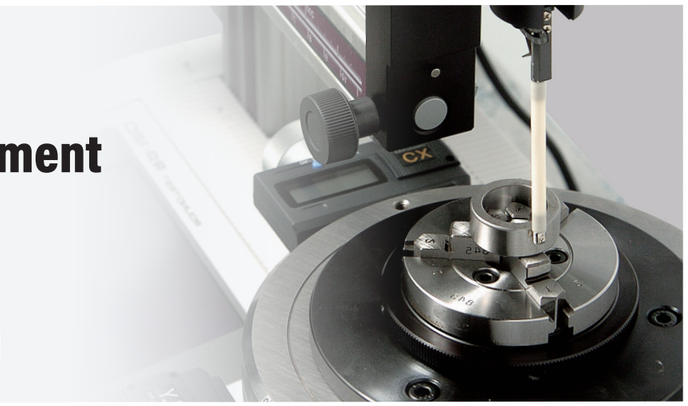
# 生產設備
# Production Equipment

**立式研磨機 / Vertical Grinding Machine**

關鍵零組件採用日本進口立式研磨機加工，確保產品高精度及高品質。
We import the vertical grinding machine from japan to process the key components, and make sure the product in high precision and high quality.

# 檢驗設備
# Inspection Equipment



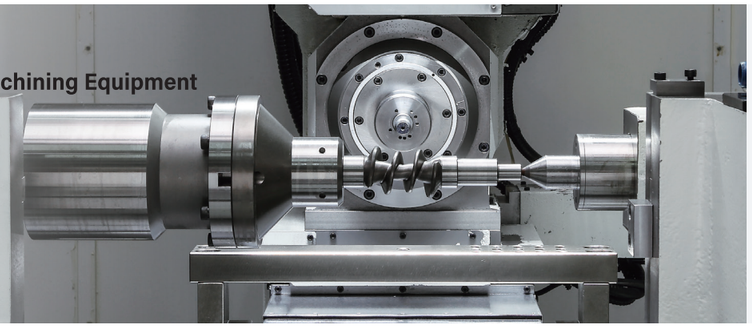



**剎車扭矩測試 / Brake Torque Test Station**

高精度交叉滾柱軸承配置，重覆測試鎖緊力，確保剎車性能穩定精準。
High precision of cross roller bearing mounting, and test the power of clamping repeatly, make sure the brake performance stability.

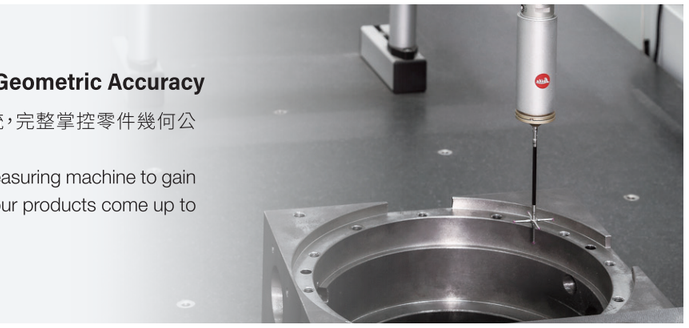
**高精度加工設備 / High Precision Machining Equipment**

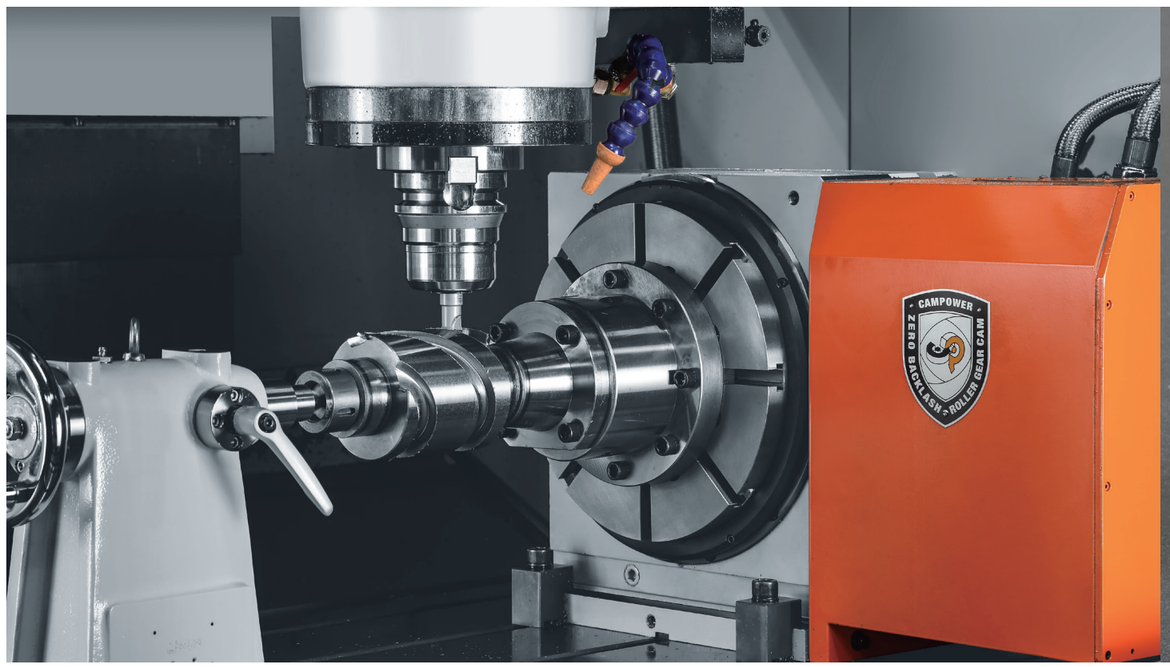
我司從日、德進口高精度加工設備，是我司對品質的最佳保證。
We have imported high precision machining equipment from Japan and Germany, which are our best guarantee of quality.



**幾何精度檢測 / The Inspection of Geometric Accuracy**

採用BROWN & SHARPE 三次元量測系統，完整掌控零件幾何公差，以達到對品質的最高要求。
We use BROWN & SHARPE coordinate measuring machine to gain control of geometric tolerance, and make our products come up to high quality standard.





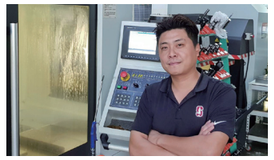

## 增加產能
## Improve Productivity

## 解決問題
## Solved Problems

易發精機
生產技術部協理
Easy Field Corp.
Production Planning Section
Assistant Vice President

公司使用它牌分度盤都有背隙及精度不佳的問題，康普精機生產的零背隙滾齒凸輪迴轉盤，徹底解決我們製造上多年的困擾，推薦給大家。

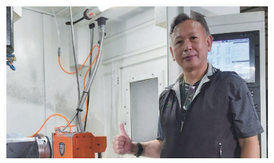
We had used other brand of worm gear, but it still have problem of backlash and precision did not well. Finally, we have been using Roller Gear Cam Rotary Table that has zero backlash, and it completely had solved the years of problems for manufacturing, I'm really recommend this product to everyone.



巨勤科技 董事長
Chairman
Ju Qin Technology

自從使用康普精機滾齒凸輪迴轉盤以後，加工時間節省許多，產能大幅度增加40%，為公司帶來獲利。

Since we have been using Roller Gear Cam Rotary Table, not only time-saving for processing but also improve the productivity for 40%.



晟暘工業 老闆
Proprietor
YLC Precision Industrial

康普精機的凸輪轉台能高速加工，增加生產效率，減少加工時間與成本。且精度準確平穩，長久使用下來都很穩定。

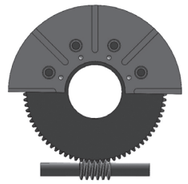
Campower Roller Gear Cam Rotary Table has high speed rotation, which can increase production efficiency, and reduce processing time and cost. The precision is accurate and stable, it is stable after long-term use.

耀輝精密企業 老闆
Proprietor
Yaohui Precision Enterprise

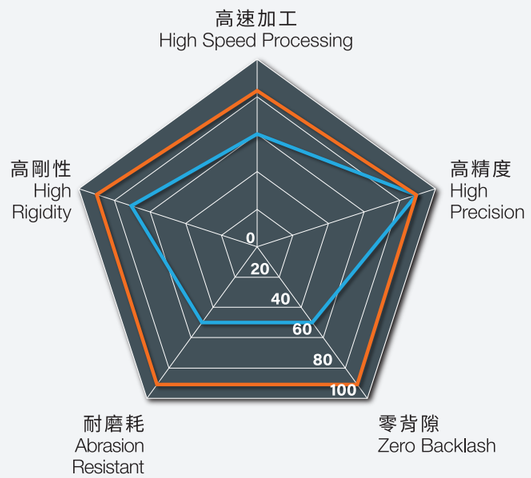
康普機台所用的滾齒凸輪與其他蝸桿蝸輪相比，在使用上加工速度更快，能提升更多產量。高精度與耐磨耗的機台使整體效能提升。

Compared with other worm gears, the Roller Gear Cam which Campower used, has faster processing speed that can increase more output. The Roller Gear Cam has high precision and abrasion resistant. It improved overall performance.

滾齒凸輪
Roller Gear Cam



蝸桿蝸輪
Worm Gear

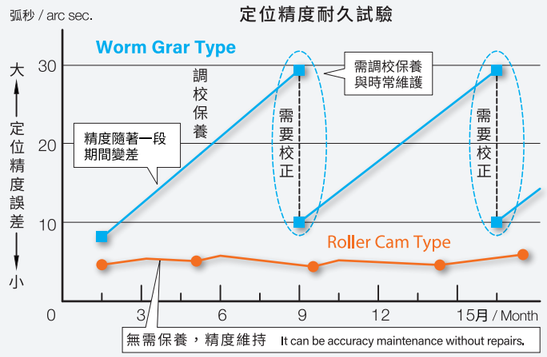



- 高速加工 High Speed Processing
- 高精度 High Precision
- 高剛性 High Rigidity
- 零背隙 Zero Backlash
- 耐磨耗 Wear Resistance





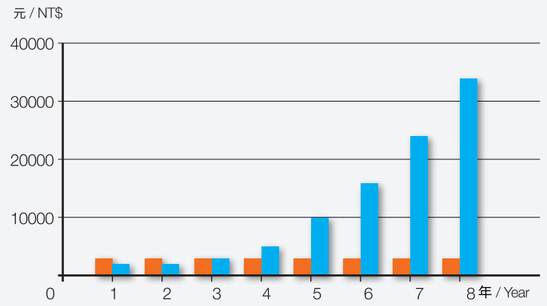
## 滾齒凸輪與蝸桿蝸輪比較圖表
## The Comparison Diagram of Roller Gear Cam and Worm Gear




### 長時間使用後的精度的比較
### Comparison of Accuracy for Long-time Used

滾齒凸輪運轉5年，即使未維護，也能保持最初的精度。
蝸桿蝸輪長時間運轉後，精度會下降，需定期保養。

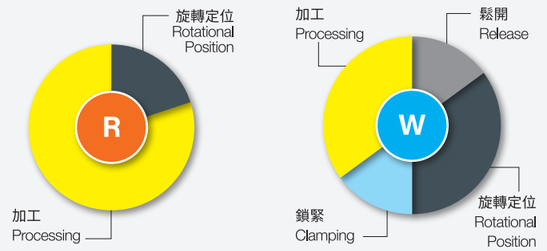
Even though roller gear rotating for 5 years, it can keep the precision at the first, without maintenance.
After long-time rotating, worm gears precision has diminished and needs to repair.




### 維修費用的比較
### Comparison of Maintenance Fee

滾齒凸輪不用調整背隙，大幅降低維修成本。
蝸桿蝸輪一年需調整精度1~2次，需花費背隙調整費用及停機所造成的損失。

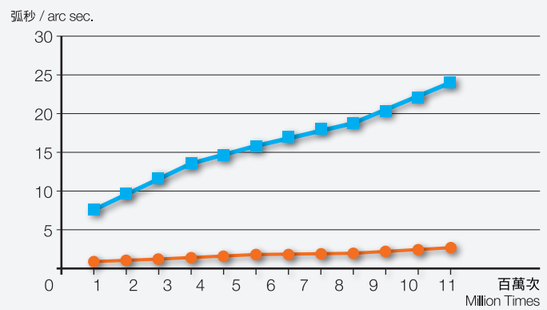
Roller gear didn't need to adjusted backlash. Therefore, it can reduce cost of maintenance.
Worm gear needs to adjusted 1 to 2 times per year, and it have to cost of maintenance. Moreover, it brings about loss by shut down machine.




### 旋轉定位時間比較
### Comparison the Time of Rotational Position

滾齒凸輪無背隙、高剛性，可節省鬆開鎖緊時間。
蝸桿蝸輪要固定動作，需花費時間鬆開鎖緊。

Roller gear is zero backlash, high rigidity and reduce the time to clamping and releasing.
Worm gear has to fired act pattern, it would be take time to clamping and releasing.




### 機構旋轉1200萬轉以後精度的比較
### Comparison of Precision After Rotating 12 Million Times

滾齒凸輪旋轉1200萬轉後，定位精度微幅增加1秒左右，穩定性極佳。
蝸桿蝸輪旋轉100萬轉後，隨著磨損，精度將逐步變差。

After roller gear has rotated for 12 million times, the precision is slight increase in 1 second, and super stability.
After worm gear has rotated for 1 million times, whereas the precision changes for the worse.

# RTD Series

## 交叉滾柱軸承凸輪轉台
## Roller Gear Cam Rotary Table

- 高精度 Precision
- 高轉速 Speed
- 傳動快 Transmission
- 極低磨耗 Extremely low wear consumption
- 立臥兩用 Suitable for vertical and horizontal mounting
- 交叉滾柱軸承 "Cross roller" bearing

### 規格 / Specification

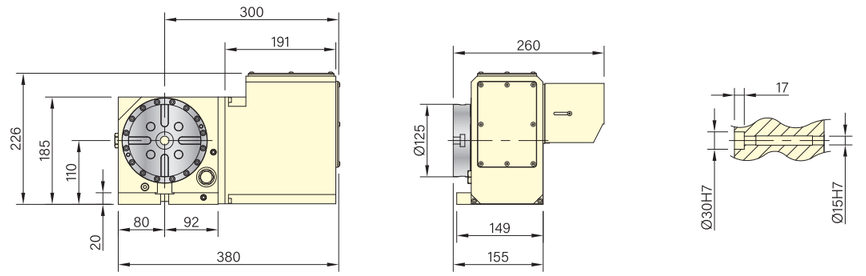
| | | | | RTD125 | RTD170 | RTD200 / RTD200L (左側) | RTD170L |
|---|---|---|---|---|---|---|---|
| 盤面直徑 | Table Diameter | | mm | Ø125 | Ø170 | Ø200 | Ø170 |
| 中心高度 (立式) | Center Height (Vertical) | | mm | 110 | 135 | 160 | 135 |
| 底部到盤面高度 (臥式) | Table Surface Height (Horizontal) | | mm | 155 | 195 | 205 | 195 |
| 盤面基準孔 | Reference Hole Diameter | | mm | Ø30H7 | Ø60H7 | Ø60H7 | Ø60H7 |
| 中心貫穿孔 | Through Hole Diameter | | mm | Ø15H7 | Ø45H7 | Ø45H7 | Ø45H7 |
| 盤面T型溝 | Table Width | | mm | 12H7 | 12H7 | 12H7 | 12H7 |
| 基準定位鍵 | Degree of Reference Channel Width | | mm | 14h7 | 14h7 | 18h7 | 14h7 |
| 最小分度單位 | MIN. Increment | | deg. | 0.001˚ | 0.001˚ | 0.001˚ | 0.001˚ |
| 最高轉速 (Motor 3000 min⁻¹) 數值由搭載伺服馬達決定 | Max. Rotation Speed (Motor 3000 min⁻¹) Values are Determined by the Motor | | rpm | 75 | 83 | 50 | 83 |
| 總減速比 | Gear Ratio | | | 1/40 | 1/36 | 1/60 | 1/36 |
| 分割定位精度 | Indexing Accuracy | | arc-sec | 30 | 18 | 18 | 18 |
| 重覆定位精度 | Repeatability Accuracy | | arc-sec | 6 | 4 | 4 | 4 |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | FANUC | | αiF 2<br>βiS 4 | αiF 4<br>βiS 8 | αiF 4<br>βiS 8 | αiF 4<br>βiS 8 |
| | | MITSUBISHI | | HG75S | HG104S | HG104S | HG104S |
| | | SIEMENS | | 1FK7042 | 1FK7060 | 1FK7060 | 1FK7060 |
| | | YASKAWA | | SGM7G-05 A | SGM7G-09 A | SGM7G-09 A | SGM7G-09 A |
| 鎖緊動力源 | Clamp System | | | 氣壓 P | 氣壓 P / 油壓 H | 油壓 H | 氣壓 P / 油壓 H |
| 氣壓/油壓鎖緊壓力 | Pneumatic / Hydraulic Pressure | | kg/cm² | 5 | 5/35 | 35 | 5/35 |
| 氣壓/油壓鎖緊扭矩 | Pneumatic / Hydraulic Clamping Torque | | kg.m | 8 | 13/40 | 60 | 13/40 |
| 容許工件載重 MAX. Allowable Load on the Table | 立式 Vertical |  | kg | 50 | 90 | 130 | 90 |
| | 立式使用尾座 Vertical with Tailstock |  | kg | 100 | 180 | 260 | 180 |
| | 臥式 Horizontal |  | kg | 100 | 180 | 260 | 180 |
| 最大容許切削推力 (氣/油壓鎖緊狀態) MAX. Allowable Thrust Load on the Table (When clamped) | 容許軸向負荷 Allowable Axial Load |  | kgf | 600 | 1250 | 2850 | 1250 |
| | 最大輸出扭矩 Max. Output Torque |  | kgf.m | 8 | 13/40 | 60 | 13/40 |
| | 容許彎曲扭矩 Allowable Bending Torque |  | kgf.m | 16 | 45 | 135 | 45 |
| 最大容許轉動慣量 Max. Allowable Moment of Inertia | J=(W•D²) / 8 |  | kgf.m² | 0.2 | 0.6 | 1.3 | 0.6 |
| 製品重量 (不含電機) | Net. Weight (Servo Motor Excluded) | | kg | 35 | 60 | 80 | 60 |

※ 最高轉速依不同馬達廠牌規定而有所不同
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元
※ Maximum speedo varies with different motor brand specifications
※ The above does not include servo motors, encoders, drives and hydraulic units

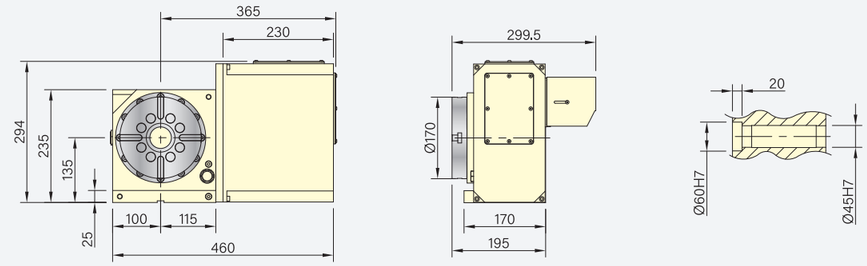


### 尺寸圖 / Dimension

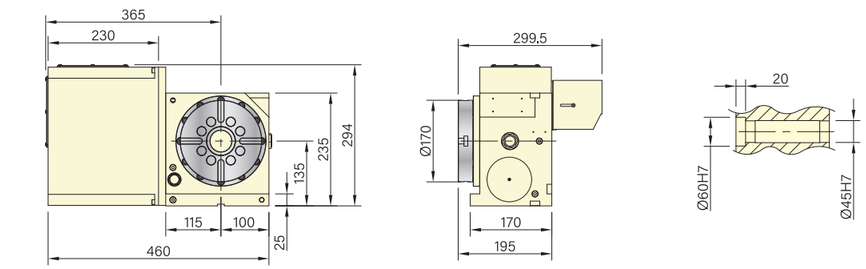
**RTD125**



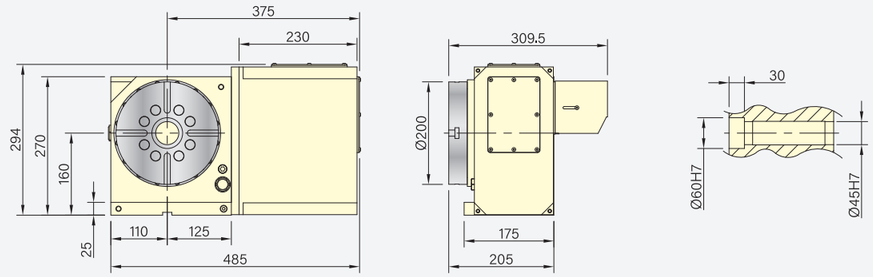

**RTD170**



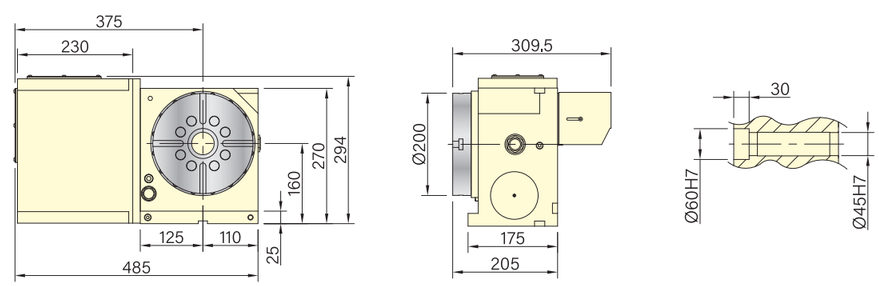

**RTD170L**




**RTD200**




**RTD200L**




※ 本公司保有產品設計及變更的權利，詳細規格資料請洽本公司
※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications
※ The length of servo guard may vary with servo motor type.(the metal sheet dimensions shown above are based on Fanuc motor)

# RTD Series

## 交叉滾柱軸承凸輪轉台
## Roller Gear Cam Rotary Table

- ☑ 高精度 Precision
- ☑ 高轉速 Speed
- ☑ 傳動快 Transmission
- ☑ 極低磨耗 Extremely low wear consumption
- ☑ 立臥兩用 Suitable for vertical and horizontal mounting
- ☑ 交叉滾柱軸承 "Cross roller" bearing

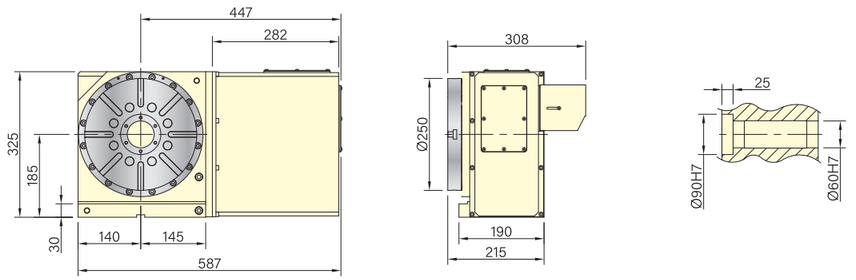
| 規格 / Specification | | | | RTD250 | RTD320 / RTD320L (左側) | RTD400 | RTD630 |
|---|---|---|---|---|---|---|---|
| 盤面直徑 | Table Diameter | | mm | Ø250 | Ø320 | Ø400 | Ø630 |
| 中心高度 (立式) | Center Height (Vertical) | | mm | 185 | 210 | 255 | 400 |
| 底部到盤面高度 (臥式) | Table Surface Height (Horizontal) | | mm | 215 | 235 | 240 | 380 |
| 盤面基準孔 | Reference Hole Diameter | | mm | Ø90H7 | Ø120H7 | Ø165H7 | Ø250H7 |
| 中心貫穿孔 | Through Hole Diameter | | mm | Ø60H7 | Ø90H7 | Ø165H7 | Ø220H7 |
| 盤面T型溝 | Table Width | | mm | 12H7 | 14H7 | 14H7 | 18H7 |
| 基準定位鍵 | Degree of Reference Channel Width | | mm | 18h7 | 18h7 | 18h7 | 18h7 |
| 最小分度單位 | MIN. Increment | | deg. | 0.001˚ | 0.001˚ | 0.001˚ | 0.001˚ |
| 最高轉速 (Motor 3000 min⁻¹) 數值由搭載伺服馬達決定 | Max. Rotation Speed (Motor 3000 min⁻¹) Values are Determined by the Motor | | rpm | 50 | 50 | 50 | 25 |
| 總減速比 | Gear Ratio | | | 1/60 | 1/60 | 1/60 | 1/120 |
| 分割定位精度 | Indexing Accuracy | | arc-sec | 16 | 16 | 16 | 15 |
| 重覆定位精度 | Repeatability Accuracy | | arc-sec | 4 | 4 | 4 | 4 |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | FANUC | | αiF 8<br>βiS 12 | αiF 12<br>βiS 22 | αiF 12<br>βiS 22 | αiF 22<br>βiS 22 |
| | | MITSUBISHI | | HG154S | HG204S | HG204S | HF354S |
| | | SIEMENS | | 1FK7063 | 1FK7083 | 1FK7083 | 1FK7101 |
| | | YASKAWA | | SGM7G-13 A | SGM7G-30 A | SGM7G-30 A | - |
| 鎖緊動力源 | Clamp System | | | 油壓 H | 油壓 H | 油壓 H | 油壓 H |
| 氣壓/油壓鎖緊壓力 | Pneumatic / Hydraulic Pressure | | kg/cm² | 35 | 35 | 35 | 35 |
| 氣壓/油壓鎖緊扭矩 | Pneumatic / Hydraulic Clamping Torque | | kg.m | 90 | 230 | 266 | 450 |
| 容許工件載重 MAX. Allowable Load on the Table | 立式 Vertical | | kg | 160 | 190 | 250 | 960 |
| | 立式使用尾座 Vertical with Tailstock | | kg | 320 | 380 | 500 | 1920 |
| | 臥式 Horizontal | | kg | 320 | 380 | 500 | 2000 |
| 最大容許切削推力 (氣/油壓鎖緊狀態) MAX. Allowable Thrust Load on the Table (When clamped) | 容許軸向負荷 Allowable Axial Load | | kgf | 3600 | 4800 | 7574 | 9000 |
| | 最大輸出扭矩 Max. Output Torque | | kgf.m | 90 | 230 | 273 | 450 |
| | 容許彎曲扭矩 Allowable Bending Torque | | kgf.m | 150 | 300 | 831 | 1632 |
| 最大容許轉動慣量 Max. Allowable Moment of Inertia | J=(W•D²) / 8 | | kgf.m² | 2 | 4.5 | 10 | 99 |
| 製品重量 (不含電機) | Net. Weight (Servo Motor Excluded) | | kg | 118 | 180 | 295 | 800 |

※ 最高轉速依不同馬達廠牌規定而有所不同
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元
※ Maximum speedo varies with different motor brand specifications
※ The above does not include servo motors, encoders, drives and hydraulic units

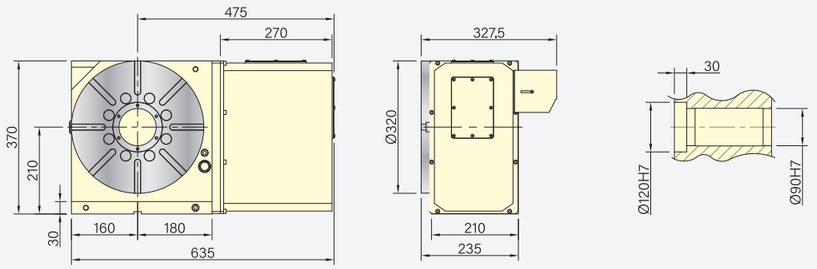


## 尺寸圖 / Dimension

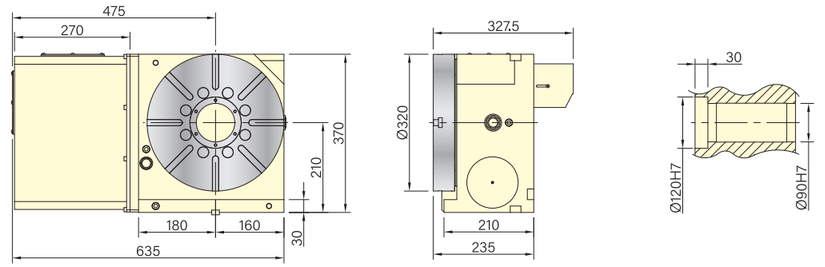
### RTD250



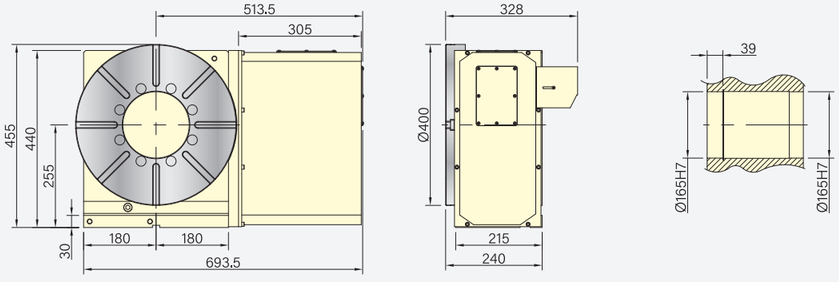

### RTD320



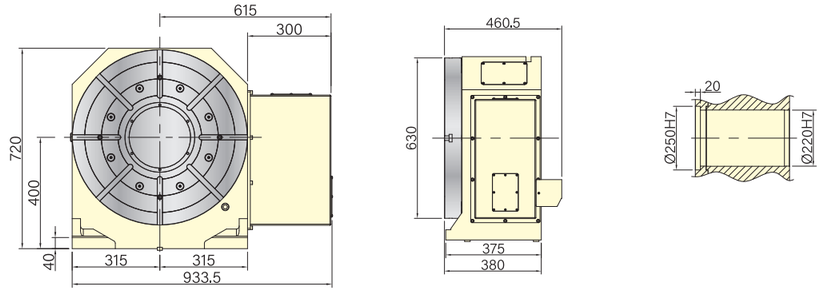

### RTD320L




### RTD400




### RTD630

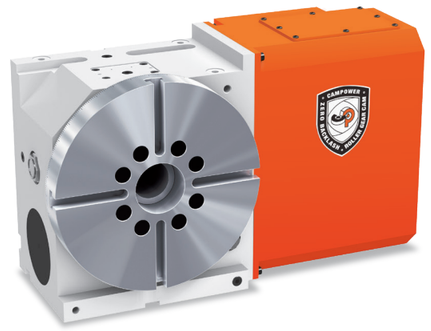



※ 本公司保有產品設計及變更的權利，詳細規格資料請洽本公司
※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications
※ The length of servo guard may vary with servo motor type.(the metal sheet dimensions shown above are based on Fanuc motor)

# RDS Series

## 交叉滾柱軸承凸輪轉台
## Roller Gear Cam Rotary Table

- ☑ 高精度 Precision
- ☑ 交叉滾柱軸承 "Cross roller" bearing
- ☑ 高轉速 Speed
- ☑ 高CP值 High CP
- ☑ 立臥兩用 Suitable for vertical and horizontal mounting
- ☑ 全新優化機種 Newly optimized model



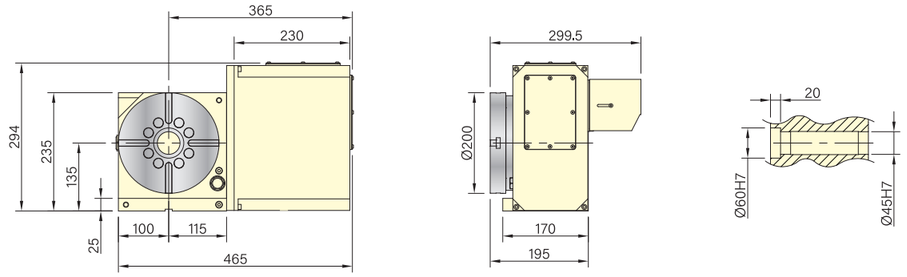
### 規格 / Specification

| | | | | RDS200 | RDS200H | RDS250 / RDS250L (左側) | RDS300 |
|---|---|---|---|---|---|---|---|
| 盤面直徑 | Table Diameter | | mm | Ø200 | Ø200 | Ø250 | Ø300 |
| 中心高度 (立式) | Center Height (Vertical) | | mm | 135 | 160 | 160 | 185 |
| 底部到盤面高度 (臥式) | Table Surface Height (Horizontal) | | mm | 195 | 195 | 205 | 215 |
| 盤面基準孔 | Reference Hole Diameter | | mm | Ø60H7 | Ø60H7 | Ø60H7 | Ø90H7 |
| 中心貫穿孔 | Through Hole Diameter | | mm | Ø45H7 | Ø45H7 | Ø45H7 | Ø60H7 |
| 盤面T型溝 | Table Width | | mm | 12H7 | 12H7 | 12H7 | 12H7 |
| 基準定位鍵 | Degree of Reference Channel Width | | mm | 14h7 | 18h7 | 18h7 | 18h7 |
| 最小分度單位 | MIN. Increment | | deg. | 0.001˚ | 0.001˚ | 0.001˚ | 0.001˚ |
| 最高轉速 (Motor 3000 min⁻¹) 數值由搭載伺服馬達決定 | Max. Rotation Speed (Motor 3000 min⁻¹) Values are Determined by the Motor | | rpm | 83 | 83 | 50 | 50 |
| 總減速比 | Gear Ratio | | | 1/36 | 1/36 | 1/60 | 1/60 |
| 分割定位精度 | Indexing Accuracy | | arc-sec | 18 | 18 | 18 | 16 |
| 重覆定位精度 | Repeatability Accuracy | | arc-sec | 4 | 4 | 4 | 4 |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | FANUC | | αiF 4<br>βiS 8 | αiF 4<br>βiS 8 | αiF 4<br>βiS 8 | αiF 8<br>βiS 12 |
| | | MITSUBISHI | | HG104S | HG104S | HG104S | HG154S |
| | | SIEMENS | | 1FK7060 | 1FK7060 | 1FK7060 | 1FK7063 |
| | | YASKAWA | | SGM7G-09A | SGM7G-09A | SGM7G-09A | SGM7G-13A |
| 鎖緊動力源 | Clamp System | | | 氣壓 P / 油壓 H | 氣壓 P / 油壓 H | 油壓 H | 油壓 H |
| 氣壓/油壓鎖緊壓力 | Pneumatic / Hydraulic Pressure | | kg/cm² | 5/35 | 5/35 | 35 | 35 |
| 氣壓/油壓鎖緊扭矩 | Pneumatic / Hydraulic Clamping Torque | | kg·m | 13/40 | 13/40 | 60 | 90 |
| 容許工件載重 MAX. Allowable Load on the Table | 立式 Vertical | | kg | 90 | 90 | 130 | 160 |
| | 立式使用尾座 Vertical with Tailstock | | kg | 180 | 180 | 260 | 320 |
| | 臥式 Horizontal | | kg | 180 | 180 | 260 | 320 |
| 最大容許切削推力 (氣/油壓鎖緊狀態) MAX. Allowable Thrust Load on the Table (When clamped) | 容許軸向負荷 Allowable Axial Load | | kgf | 1250 | 1250 | 2850 | 3600 |
| | 最大輸出扭矩 Max. Output Torque | | kgf·m | 13/40 | 13/40 | 60 | 90 |
| | 容許彎曲扭矩 Allowable Bending Torque | | kgf·m | 45 | 45 | 135 | 150 |
| 最大容許轉動慣量 Max. Allowable Moment of Inertia | J=(W·D²) / 8 | | kgf·m² | 0.6 | 0.6 | 1.3 | 2 |
| 製品重量 (不含電機) | Net. Weight (Servo Motor Excluded) | | kg | 65 | 65 | 89 | 130 |

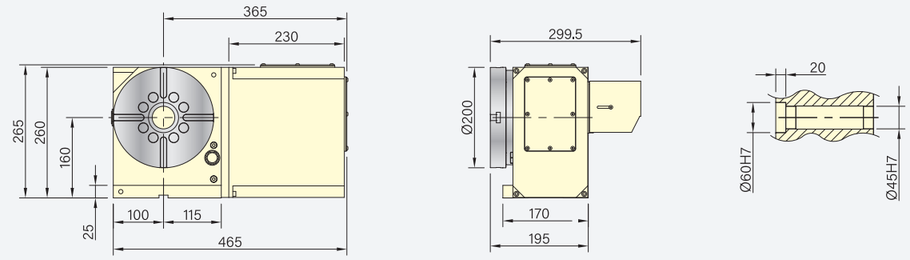
※ 最高轉速依不同馬達廠牌規定而有所不同
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元
※ Maximum speedo varies with different motor brand specifications
※ The above does not include servo motors, encoders, drives and hydraulic units

### 尺寸圖 / Dimension

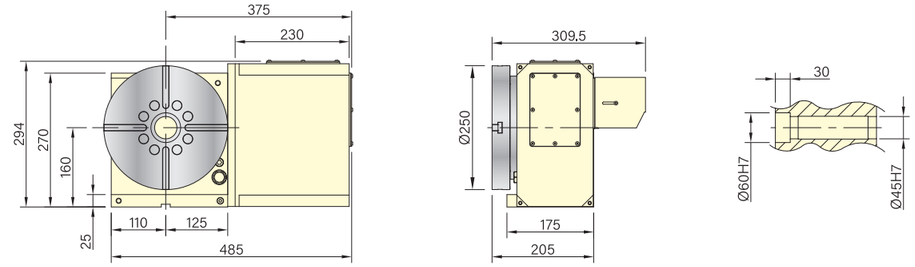
**RDS200**



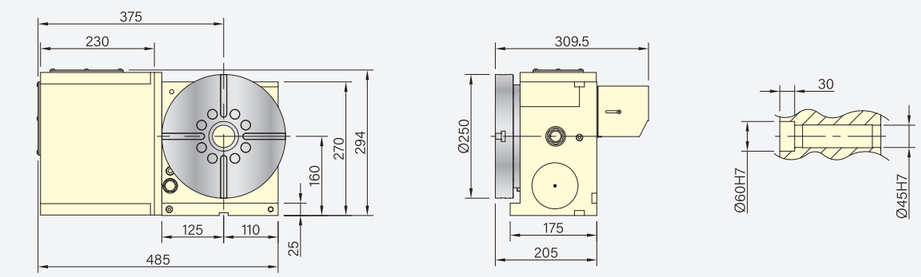

**RDS200H**



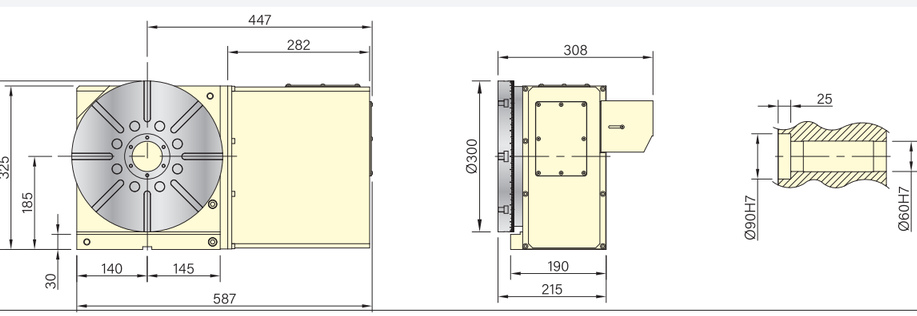

**RDS250**




**RDS250L**




**RDS300**

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※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
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※ The length of servo guard may vary with servo motor type.(the metal sheet dimensions shown above are based on Fanuc motor)

# RTC Series

## 內崁式交叉滾柱軸承凸輪轉台
## Zero Backlash Roller Gear Cam
## Fourth Axis Rotary

- ☑ 高精度 Precision
- ☑ 高剛性 Rigidity
- ☑ 高扭力 Torque
- ☑ 大孔徑 Big spindel bore
- ☑ 立臥兩用 Suitable for vertical and horizontal mounting
- ☑ 油壓環抱 Hydraulic embracing


## 規格 / Specification

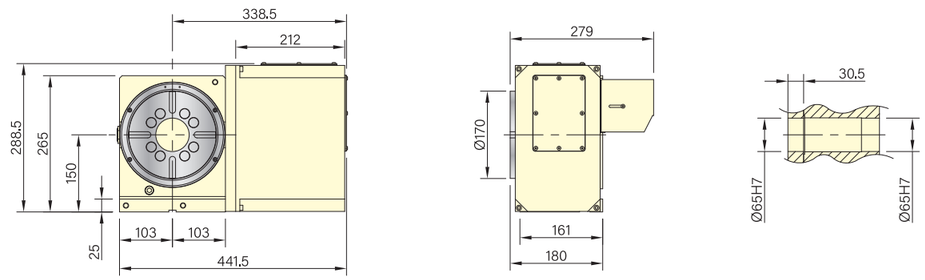
| | | | | RTC170 | RTC200 | RTC250 | RTC320 |
|---|---|---|---|---|---|---|---|
| 盤面直徑 | Table Diameter | | mm | Ø170 | Ø200 | Ø250 | Ø320 |
| 中心高度 (立式) | Center Height (Vertical) | | mm | 150 | 165 | 210 | 255 |
| 底部到盤面高度 (臥式) | Table Surface Height (Horizontal) | | mm | 180 | 185 | 220 | 240 |
| 盤面基準孔 | Reference Hole Diameter | | mm | Ø65H7 | Ø75H7 | Ø110H7 | Ø165H7 |
| 中心貫穿孔 | Through Hole Diameter | | mm | Ø65H7 | Ø75H7 | Ø110H7 | Ø165H7 |
| 盤面T型溝 | Table Width | | mm | 12H7 | 12H7 | 12H7 | 14H7 |
| 基準定位鍵 | Degree of Reference Channel Width | | mm | 14h7 | 18h7 | 18h7 | 18h7 |
| 最小分度單位 | MIN. Increment | | deg. | 0.001˚ | 0.001˚ | 0.001˚ | 0.001˚ |
| 最高轉速 (Motor 3000 min⁻¹) 數值由搭載伺服馬達決定 | Max. Rotation Speed (Motor 3000 min⁻¹) Values are Determined by the Motor | | rpm | 50 | 50 | 50 | 50 |
| 總減速比 | Gear Ratio | | | 1/60 | 1/60 | 1/60 | 1/60 |
| 分割定位精度 | Indexing Accuracy | | arc-sec | 18 | 18 | 15 | 15 |
| 重覆定位精度 | Repeatability Accuracy | | arc-sec | 4 | 4 | 4 | 4 |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | FANUC | | αiF 4 | αiF 4 | αiF 8 | αiF 12 |
| | | MITSUBISHI | | HG104S | HG104S | HG154S | HG204S |
| | | SIEMENS | | 1FK7060 | 1FK7060 | 1FK7063 | 1FK7083 |
| | | YASKAWA | | SGM7G-09A | SGM7G-09A | SGM7G-13A | SGM7G-30A |
| 鎖緊動力源 | Clamp System | | | 油壓 H | 油壓 H | 油壓 H | 油壓 H |
| 氣壓/油壓鎖緊壓力 | Pneumatic / Hydraulic Pressure | | kg/cm² | 35 | 35 | 35 | 35 |
| 氣壓/油壓鎖緊扭矩 | Pneumatic / Hydraulic Clamping Torque | | kg·m | 36 | 46 | 101 | 123 |
| 容許工件載重 MAX. Allowable Load on the Table | 立式 Vertical | W | kg | 80 | 100 | 125 | 180 |
| | 立式使用尾座 Vertical with Tailstock | W | kg | 160 | 200 | 250 | 360 |
| | 臥式 Horizontal | W | kg | 160 | 200 | 250 | 360 |
| 最大容許切削推力 (氣/油壓鎖緊狀態) MAX. Allowable Thrust Load on the Table (When clamped) | 容許軸向負荷 Allowable Axial Load | F | kgf | 1300 | 1612 | 3819 | 5715 |
| | 最大輸出扭矩 Max. Output Torque | L | kgf·m | 30 | 54 | 103 | 152 |
| | 容許彎曲扭矩 Allowable Bending Torque | L F | kgf·m | 61 | 97 | 226 | 363 |
| 最大容許轉動慣量 Max. Allowable Moment of Inertia | J=(W·D²) / 8 | W D | kgf·m² | 0.6 | 1.2 | 2 | 4.5 |
| 製品重量 (不含電機) | Net. Weight (Servo Motor Excluded) | | kg | 70 | 100 | 170 | 280 |

※ 最高轉速依不同馬達廠牌規定而有所不同
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元
※ Maximum speedo varies with different motor brand specifications
※ The above does not include servo motors, encoders, drives and hydraulic units

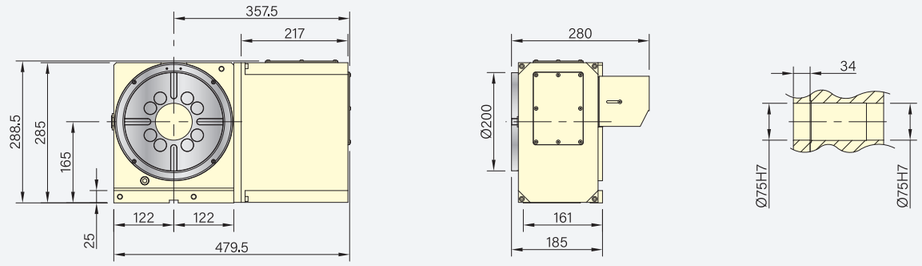


## 尺寸圖 / Dimensions

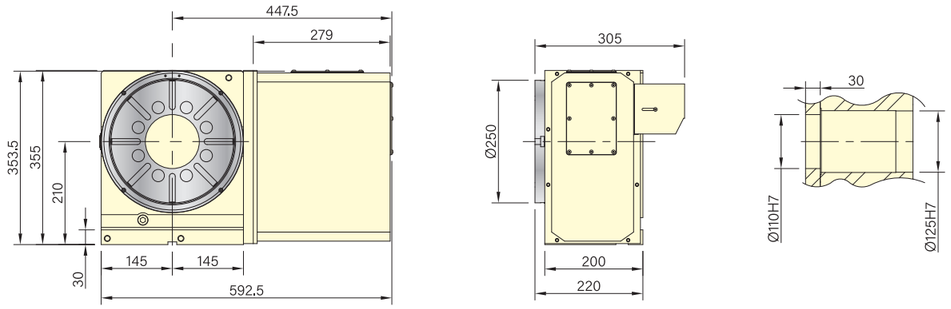
### RTC170



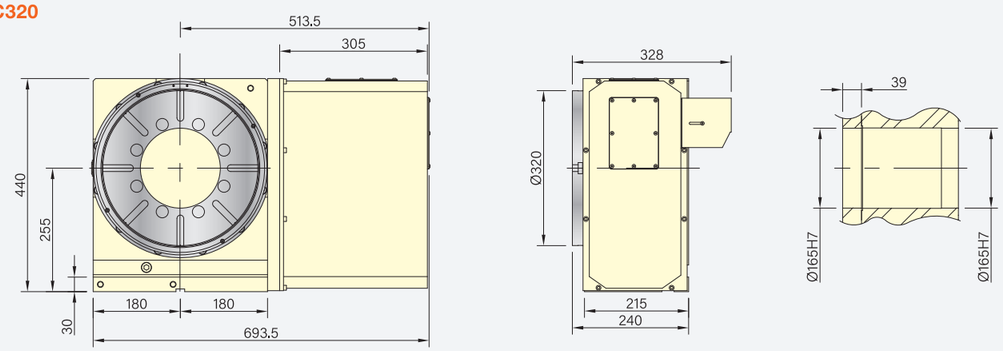

### RTC200




### RTC250

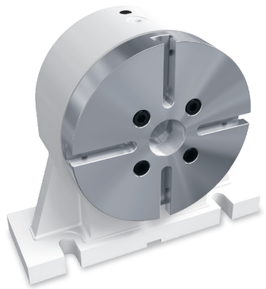



### RTC320




※ 本公司保有產品設計及變更的權利，詳細規格資料請洽本公司
※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
※ 康普技術研發專利將交叉滾柱軸承與旋轉軸結合為一體，達到減少零件、降低組裝工差，達到真正零背隙領域
※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications
※ The length of servo guard may vary with servo motor type.(the metal sheet dimensions shown above are based on Fanuc motor)
※ Campower technology research and development patent combines crossed roller bearing with rotating shafts to reduce parts, reduce assembly tolerances, and achieve ture zero backlash.

# 圓盤尾座
## Rotary Tailstock



型號說明 Illustration of Models

| TR | 170 | P/H |
|---|---|---|
| 圓盤煞車尾座<br>Rotary Tailstock | 盤面大小 (單位:mm)<br>Table size (unit:mm) | P:氣壓驅動 H:油壓驅動<br>P:Pneumatic clamping<br>H:Hydraulic clamping |

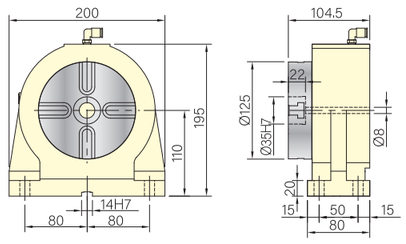
TR圓盤尾座可與RTD/RDS系列CNC Rotary Table搭配使用，加上治具中板的應用，可達到一次作動多模數加工效果，採用氣壓/油壓煞車鎖緊方式，完整的搭配設計，有效確實節省加工工時及成本。

The TR Rotary Tailstock can operate as attach to CNC Rotary Table of RTD/RDS series, and its plate application assembly can reach to the effectiveness of making many moulds one time. It adopts overall P/H brake disc locking system. The integrate design ensures to save the working-hour and cost efficiently.

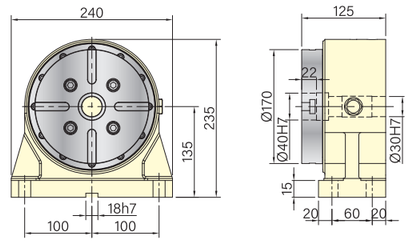
| 規格 / Specification | | | TR-125P | TR-170P/H | TR-200H | TR-250H | TR-250HS | TR-320H |
|---|---|---|---|---|---|---|---|---|
| 中心高 | Center Height | mm | 110 | 135 | 160 | 185 | 160 | 210 |
| 製品重量 | Net. Weight | kg | 16 | 22 | 35 | 40 | 45 | 107 |

## 尺寸圖 / Dimensions

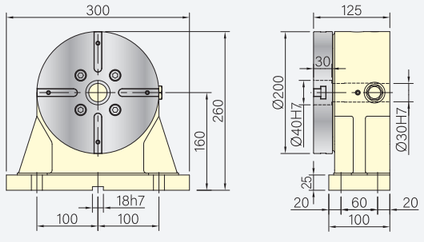
### TR-125P



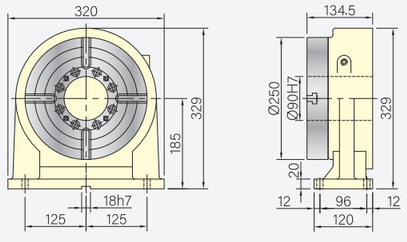

### TR-170P/H



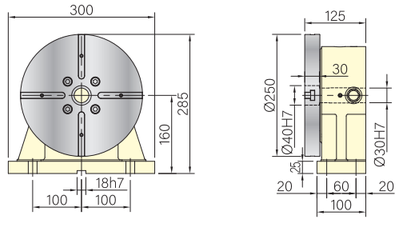

### TR-200H



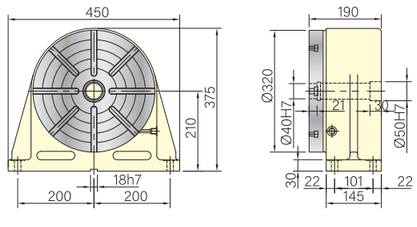

### TR-250H




### TR-250HS




### TR-320H




# 頂針尾座
## Quill Tailstock

型號說明 Illustration of Models

| TS | 135 | P/H |
|---|---|---|
| 頂針尾座<br>Quill Tailstock | 中心高尺寸(單位:mm)<br>Indicates the size of the matching Center Height (unit:mm) | P:氣壓驅動 H:油壓驅動<br>P:Pneumatic clamping<br>H:Hydraulic clamping |

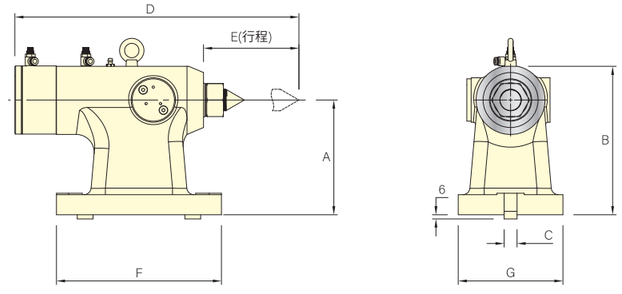
| 規格 / Specification | | TS-110P | TS-135P | TS-160P/H | TS-210P/H |
|---|---|---|---|---|---|
| A | mm | 110 | 135 | 160 | 210 |
| B | mm | 140.5 | 182 | 207 | 257 |
| C | mm | 14 | 18 | 18 | 18 |
| D | mm | 294/324 | 405/455 | 320/370 | 320/370 |
| E | mm | 30 | 50 | 50 | 50 |
| F | mm | 140 | 215 | 215 | 215 |
| G | mm | 80 | 122 | 122 | 122 |
| 莫氏錐度 Morse | — | #MT2 | #MT4 | #MT4 | #MT4 |

## 尺寸圖 / Dimensions

### 氣壓/油壓頂針尾座
### Pneumatic/Hydraulic Quill Tailstock

TS頂針尾座，與RTD/RDS系列CNC Rotary Table 搭配使用，固定工件中心旋轉加工應用。

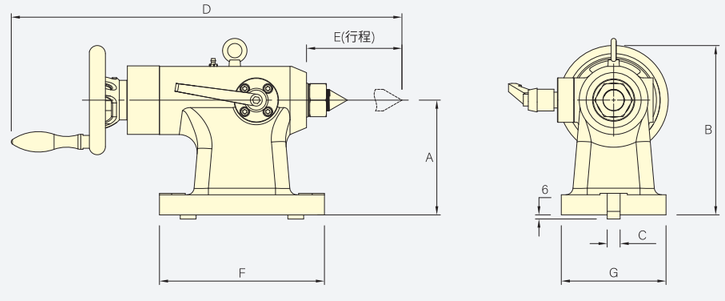
TS Center Tailstock can attach to CNC Rotary Table of RTD/RDS series. The alternative choices are apindle with center type changeable center type for pivoting the work piece for swivel processing application.




### 手動頂針尾座
### Manual Quill Tailstock

TS頂針尾座，與RTD/RDS系列CNC Rotary Table 搭配使用，固定工件中心旋轉加工應用。

TS Manual Tailstock can attach to CNC Rotary Table of RTD/RDS series. The alternative choices are apindle with center type changeable center type for pivoting the work piece for swivel processing application.

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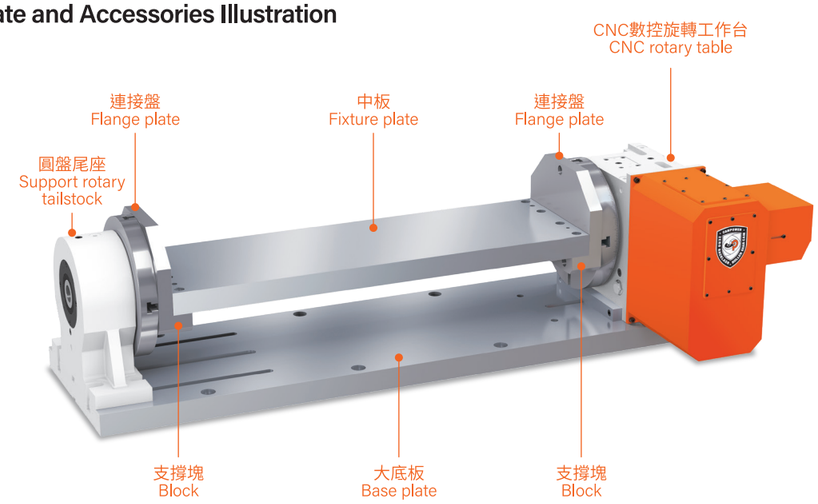
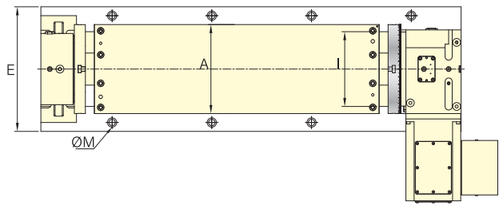
※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications

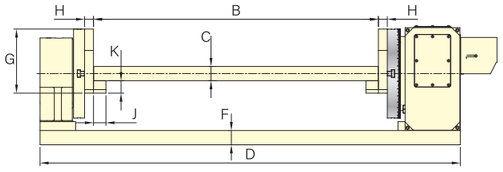
※ 最大油壓操作壓力2MPa
※ 圖例行程至110mm為退頂針用。實際頂針有效使用行程50mm
※ 頂針行程大於50mm 以上之需求，請來電洽詢
※ Max. operating pressure: 2MPa
※ Illustration stroke 10mm is for quill withdraw. The effective quill stroke is 50mm
※ Quill stroke more than 50mm is an available option

# 數控旋轉工作台橋式中底板組選配
## Fixture Plate and Accessories Illustration




# 標準橋式中底板組規格尺寸
## Suggested Dimension Fixture and Base Plate




| 規格 / Specification | | RTD125 | RTD170 | RDS200 | RTD200 | RDS250 | RTD250 | RTD320 |
|---|---|---|---|---|---|---|---|---|
| A | mm | 125 | 170 | 200 | 200 | 250 | 250 | 320 |
| B | mm | 400 | 500 | 500 | 600 | 600 | 700 | 800 |
| C | mm | 30 | 30 | 30 | 40 | 40 | 40 | 45 |
| D | mm | 800 | 950 | 950 | 1050 | 1050 | 1150 | 1250 |
| E | mm | 250 | 300 | 300 | 300 | 300 | 300 | 400 |
| F | mm | 35 | 40 | 40 | 40 | 40 | 40 | 40 |
| G | mm | Ø125 | Ø170 | Ø200 | Ø200 | Ø250 | Ø250 | Ø320 |
| H | mm | 20 | 25 | 25 | 25 | 25 | 25 | 30 |
| I | mm | 125 | 170 | 200 | 200 | 250 | 250 | 320 |
| J | mm | 30 | 35 | 35 | 40 | 40 | 40 | 45 |
| K | mm | 30 | 35 | 35 | 35 | 35 | 40 | 45 |

※ 依工件尺寸數量定義
※ 注意與機床干涉考慮
※ CNC數控旋轉工作台及圓盤尾座中心高誤差容許值為 ± 0.01mm內
※ Defined by the number of parts and work piecs.
※ Attention to machine interference.
※ The center height of permissible error between rotary table and support rotary tailstock is within ± 0.01mm

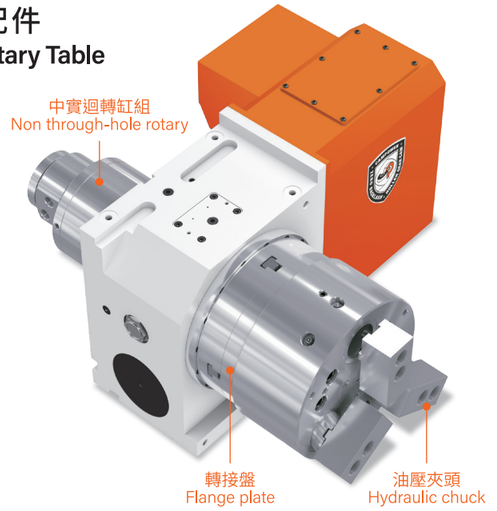


# 數控旋轉工作台夾頭及其他配件
## Chuck and Other Options for CNC Rotary Table

## 夾頭
## CHUCK

搭配油壓自動夾頭及手動切換閥，可縮短換料時間，增加產能，提升工作效率。

Equipped with hydraulic chuck and manual switch shorten loading and unloading time, increasing productivity and efficiency.




### 數控旋轉工作台與夾頭選配表 / Rotary Table and Compatible Chuck

| 規格 / Specification | RTD125 | RTD170 | RTD200 | RTD250 | RTD320 | RTD400 |
|---|---|---|---|---|---|---|
| 手動夾頭規格 Manual Chuck | SK04/05 | SK06/07 | SK07/08 | SK08/09 | SK10/12 | SK12/16 |
| 油壓夾頭規格 Hydrauilc Chuck | | HCK06 | HCK06 | HCK08 | HCK10 | |

### 三爪夾頭夾持範圍 / Gripping Range of 3-Jaw Chuck

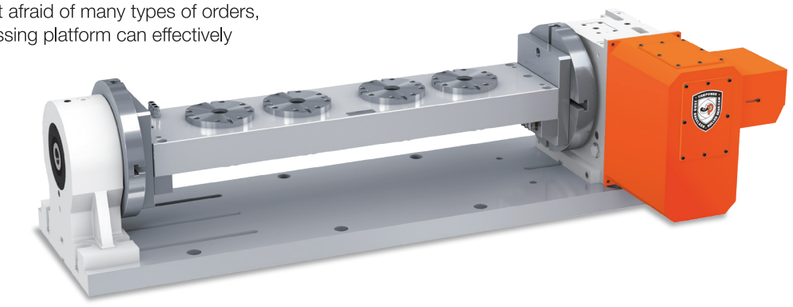
| 規格 / Specification | SK-04 | SK-05 | SK-06 | SK-07 | SK-08 | SK-09 | SK-10 | SK-12 | SK-16 |
|---|---|---|---|---|---|---|---|---|---|
| 外徑挾持範圍(正) Outer diameter holding range | Ø3-Ø90 | Ø3-Ø110 | Ø3-Ø160 | Ø8-Ø180 | Ø8-Ø190 | Ø11-Ø220 | Ø12-Ø260 | Ø15-Ø300 | Ø30-Ø400 |
| 內徑挾持範圍(反) Inner diameter holding range | Ø32-Ø84 | Ø35-Ø100 | Ø55-Ø150 | Ø62-Ø170 | Ø68-Ø180 | Ø70-Ø210 | Ø80-Ø250 | Ø90-Ø290 | Ø110-Ø380 |

單位：mm

# 原點定位
## Right on Point

- 原點夾持系統，能快速上下料以及變換夾治具，有效縮短換線時間。
- 搭配康普四、五軸橋式中板組，可有效提升產量，一次進行多面加工。
- 搭配自動化系統，不怕訂單種類多，加工平台模組化可有效提升加工效率。

- The origin clamping system can quickly load and unload and change the fixture, effectively shortening the line change time.
- With Campower's four- and five-axis fixture plate, it can effectively increase the output and perform multi-faceted processing at one time.
- With the automation system, it is not afraid of many types of orders, and the modularization of the processing platform can effectively improve the processing efficiency.



# RTA Series

## 雙軸單臂凸輪轉台
## Zero Backlash Roller Gear Cam Tilting 2-Axis Rotary Table

- ☑ 零背隙 Zero Backlash
- ☑ 高剛性 Rigidity
- ☑ 高精度 Precision
- ☑ 耐磨耗 Resistance
- ☑ 高效率 Efficiency
- ☑ 熱變位低 Low Thermal Deformation

## 規格 / Specification

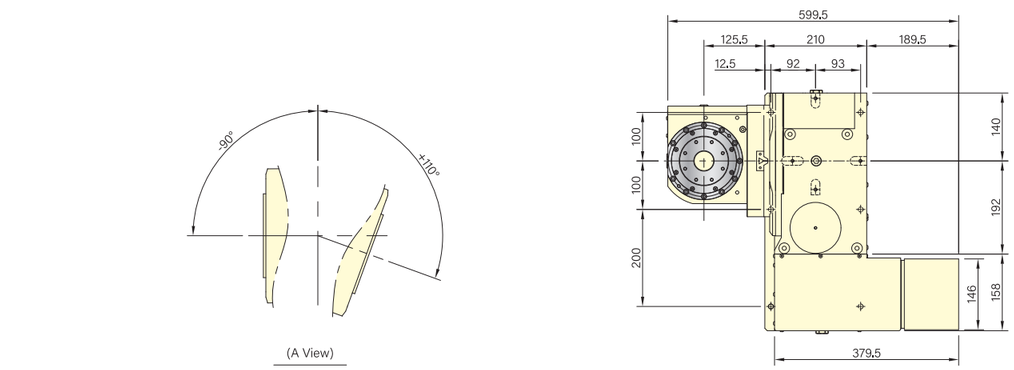
| | | | | RTA100 | RTA200 |
|---|---|---|---|---|---|
| 盤面直徑 | Table Diameter | | mm | Ø100 (Ø125 / Ø170) | Ø200 (Ø210 / Ø220) |
| 中心高度(立式) | Center Height(Vertical) | | mm | 150 | 150 |
| 底部到盤面高度(臥式) | Table Surface Height(Horizontal) | | mm | 215 (240) | 245 |
| 盤面基準孔 | Reference Hole Diameter | | mm | Ø42H7 | Ø42H7 |
| 中心貫穿孔 | Through Hole Diameter | | mm | Ø40H7 | Ø40H7 |
| 盤面T型溝 | Table Width | | mm | - (12H7) | 12H7 |
| 基準定位鍵 | Degree of Reference Channel Width | | mm | 18h7 | 18h7 |
| 最小分度單位 | MIN. Increment | | deg. | 0.001° | 0.001° |
| 迴轉角度 | Swing Angle | | deg. | 迴轉軸 360° Rotating Axis / 傾斜軸 -90°~+110° Tilting Axis | 迴轉軸 360° Rotating Axis / 傾斜軸 -90°~+110° Tilting Axis |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | FANUC | | αiF 2 / βiS 4 | αiF 4 + B / βiS 8 + B |
| | | MITSUBISHI | | HG75S | HG104S + B |
| | | SIEMENS | | 1FK7034 | 1FK7060 + B |
| 最高轉速 (Motor 3000 min⁻¹) 數值由搭載伺服馬達決定 | MAX. Rotation Speed (Motor 3000 min⁻¹) Values are Determined by the Motor | | rpm | 62.5 | 50 |
| 總減速比 | Gear Ratio | | | 1/48 | 1/60 |
| 分割定位精度 | Indexing Accuracy | | arc-sec | 20 | 15 |
| 重覆定位精度 | Repeatability Accuracy | | arc-sec | 8 | 4 |
| 容許工件載重 MAX.Allowable Load on the Table | 在水平 Level | | kg | 30 | 30 |
| | 在傾斜 Tilt | | kg | 30 | 30 |
| 最大容許切削推力 (無油壓鎖緊狀態) MAX. Allowable Thrust Load on the Table (When Clamped) | 容許軸向負荷 Allowable Axial Load | | kgf | 620 | 620 |
| | 最大輸出扭矩 MAX. Output Torque | | kgf.m | 22 | 22 |
| | 容許彎曲扭矩 Allowable Bending Torque | | kgf.m | 30 | 30 |
| 最大容許轉動慣量 MAX. Allowable Moment of Inertia | $J=(W\cdot D^2)/8$ | | kgf.m² | 0.1 | 0.1 |
| 製品重量(不含電機) | Net Weight (servo motor excluded) | | kg | 128 | 140 |

※ 最高轉速依不同馬達廠牌規定而有所不同
※ B表示伺服馬達加煞車
※ 光學尺選配
※ 二進二出油壓分配器選配
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元
※ Maximum speedo varies with different motor brand specifications.
※ B is Servo motor with brake.
※ Angular encoder.(Option)
※ Optional two-in-two-out hydraulic distributor
※ The above does not include servo motors, encoders, drives and hydraulic units.

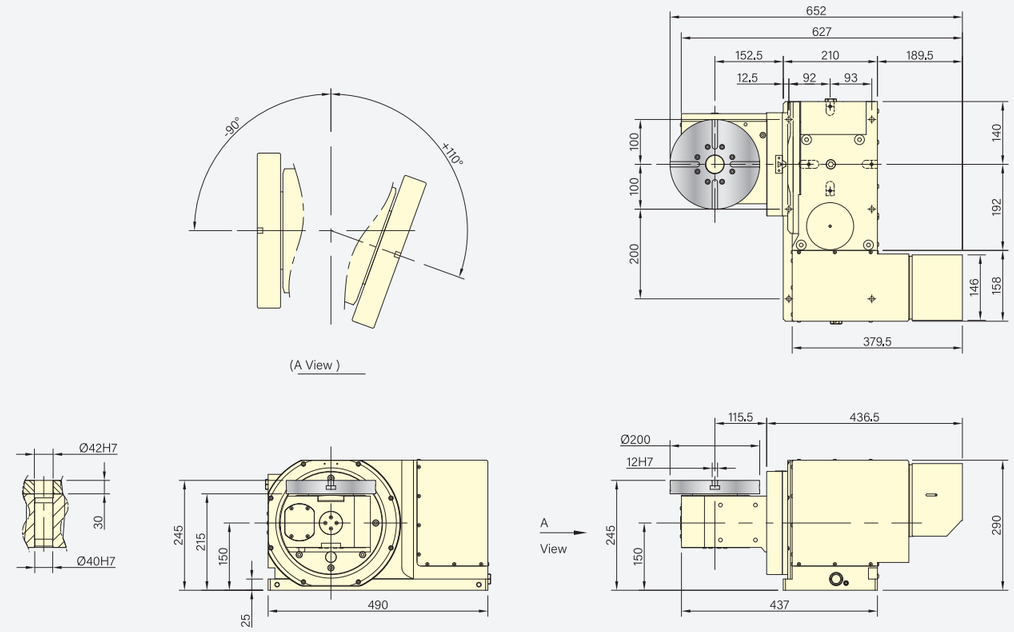


## 尺寸圖 / Dimensions

### RTA100




### RTA200

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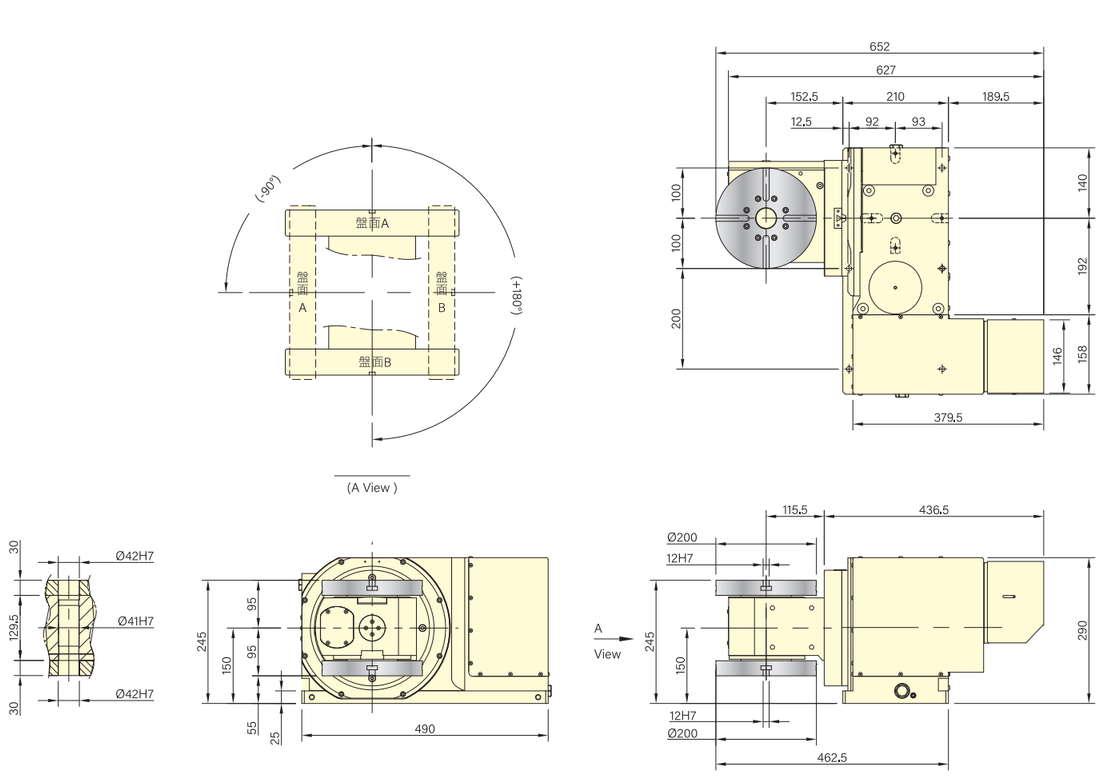
※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications.
※ The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown above are based on Fanuc motor)

# RTAD200

## 雙盤雙軸單臂凸輪轉台
## Zero Backlash Roller Gear Cam Tilting 2-Axis Rotary Table

- ☑ 零背隙 Zero Backlash
- ☑ 高精度 Precision
- ☑ 高效率 Efficiency
- ☑ 高剛性 Rigidity
- ☑ 耐磨耗 Resistance
- ☑ 熱變位低 Low Thermal Deformation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※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications.
※ The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown above are based on Fanuc motor)

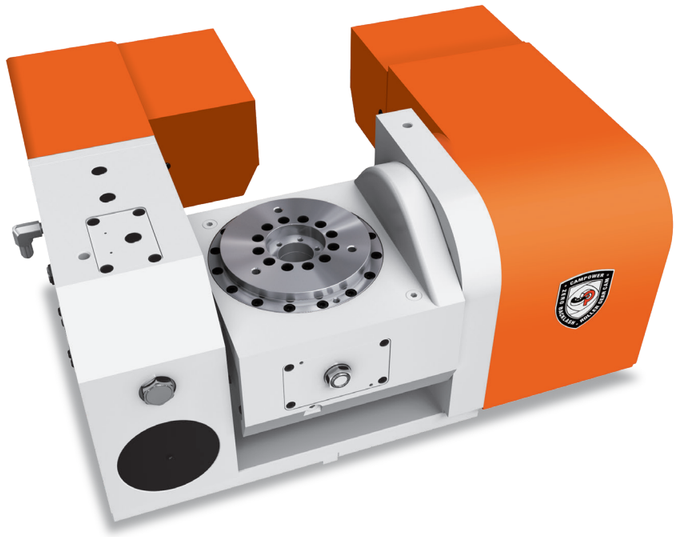
| 規格 / Specification | | | RTAD200 | |
|---|---|---|---|---|
| 盤面直徑 | Table Diameter | mm | Ø200 ( Ø170 / Ø220 ) | |
| 中心高度(立式) | Center Height(Vertical) | mm | 150 | |
| 底部到盤面高度(臥式) | Table Surface Height(Horizontal) | mm | 245 ( 240 ) | |
| 盤面基準孔 | Reference Hole Diameter | mm | Ø42H7 | |
| 中心貫穿孔 | Through Hole Diameter | mm | Ø40H7 | |
| 盤面T型溝 | Table Width | mm | 12H7 | |
| 基準定位鍵 | Degree of Reference Channel Width | mm | 18h7 | |
| 最小分度單位 | MIN. Increment | deg. | 0.001° | |
| 迴轉角度 | Swing Angle | deg. | 迴轉軸 360° Rotating Axis | 傾斜軸-90° ~ +180° Tilting Axis |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | | | |
| | FANUC | | αiF 2<br>βiS 4 | αiF 4 + **B**<br>βiS 8 + **B** |
| | MITSUBISHI | | HG75S | HG104S + **B** |
| | YASKAWA | | SGM7J-04A | SGM7G-09A+B |
| | SIEMENS | | 1FK7034 | 1FK7060 + **B** |
| 最高轉速 (Motor 3000 min⁻¹)<br>數值由搭載伺服馬達決定 | MAX. Rotation Speed (Motor 3000 min⁻¹)<br>Values are Deterined by the Motor | rpm | 75 | 50 |
| 總減速比 | Gear Ratio | | 1/40 | 1/60 |
| 分割定位精度 | Indexing Accuracy | arc-sec | 20 | 15 |
| 重覆定位精度 | Repeatability Accuracy | arc-sec | 8 | 4 |
| 容許工件載重<br>MAX.Allowable Load on the Table | 立式 Vertical | kg | 30 | |
| | 臥式 Horizontal | kg | 30 | |
| 最大容許切削推力 (無油壓鎖緊狀態)<br>MAX. Allowable Thrust Load on the Table (When Clamped) | 容許軸向負荷 Allowable Axial Load | kgf | 620 | |
| | 最大輸出扭矩 MAX. Output Torque | kgf.m | 22 | |
| | 容許彎曲扭矩 Allowable Bending Torque | kgf.m | 30 | |
| 最大容許轉動慣量 | MAX. Allowable Moment of Inertia $J=(W\cdot D^2)/8$ | kgf.m² | 0.1 | |
| 製品重量(不含電機) | Net Weight (servo motor excluded) | kg | 128 | |

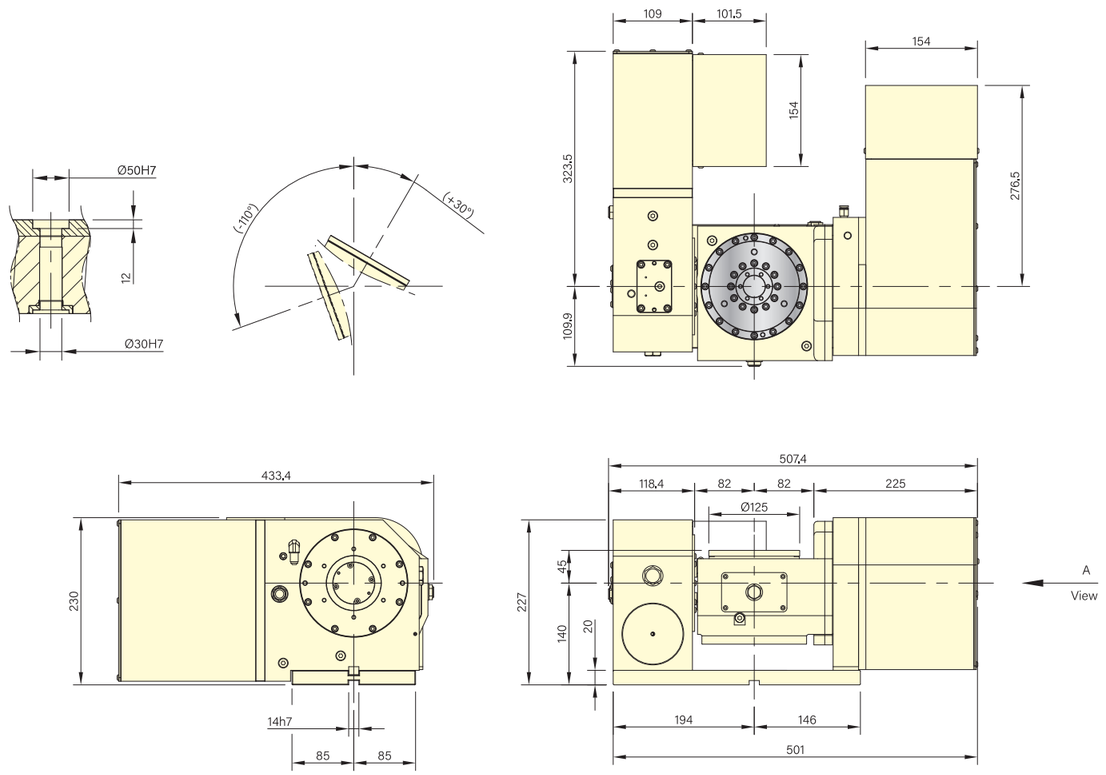
※ 最高轉速依不同馬達廠牌規定而有所不同
※ **B**表示伺服馬達加煞車
※ 光學尺選配
※ 二進二出油壓分配器選配
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元
※ Maximum speedo varies with different motor brand specifications.
※ **B** is Servo motor with brake.
※ Angular encoder.(Option)
※ Optional two-in-two-out hydraulic distributor
※ The above does not include servo motors, encoders, drives and hydraulic units.

# RTB125

## 雙軸搖籃凸輪轉台
## Zero Backlash Roller Gear Cam Tilting 2-Axis Rotary Table

- 零背隙 Zero Backlash
- 高精度 Precision
- 高速度 Speed
- 高剛性 Rigidity
- 高扭力 Torque



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※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
※ 傾斜軸長期偏載在特定角度時，推薦加裝光學尺。(視個別加工需求)

※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications.
※ The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown above are based on Fanuc motor)
※ Optical encoder is recommended for tilting axis. (According to application engineering)

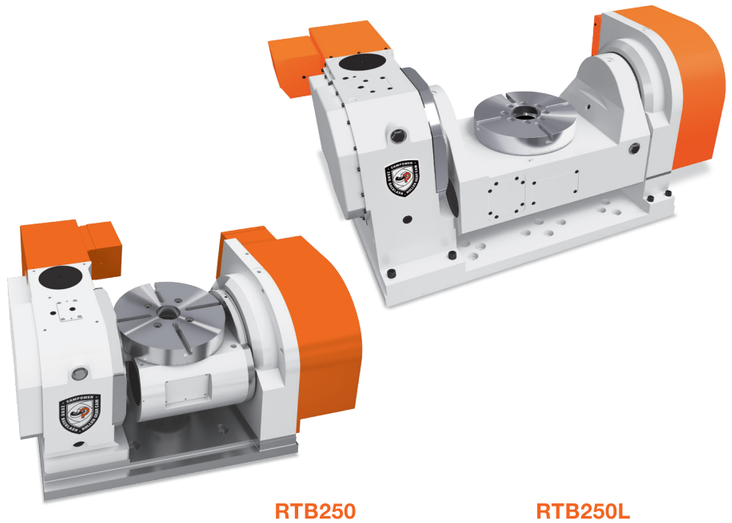
| 規格 / Specification | | | RTB125 | |
|---|---|---|---|---|
| 盤面直徑 | Table Diameter | mm | Ø125 | |
| 中心高度(立式) | Center Height(Vertical) | mm | 140 | |
| 底部到盤面高度(臥式) | Table Surface Height(Horizontal) | mm | 185 | |
| 盤面基準孔 | Reference Hole Diameter | mm | Ø50H7 | |
| 中心貫穿孔 | Through Hole Diameter | mm | Ø30H7 | |
| 盤面T型溝 | Table Width | mm | 12H7 | |
| 基準定位鍵 | Degree of Reference Channel Width | mm | 14h7 | |
| 最小分度單位 | MIN. Increment | deg. | 0.001° | |
| 迴轉角度 | Swing Angle | deg. | 迴轉軸 360° Rotating Axis | 傾斜軸+30° ~ -110° Tilting Axis |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | | | |
| | FANUC | | αiF 1 / αiF 2 βiS 2 | αiF 2 + B βiS 2 + B |
| | MITSUBISHI | | HG105S | HG105S + B |
| | SIEMENS | | 1FK7040 | 1FK7040 + B |
| 最高轉速 (Motor 3000 min⁻¹) 數值由搭載伺服馬達決定 | MAX. Rotation Speed (Motor 3000 min⁻¹) Values are Determined by the Motor | rpm | 37.5 | 25 |
| 總減速比 | Gear Ratio | | 1/80 | 1/120 |
| 分割定位精度 | Indexing Accuracy | arc-sec | 45 | 30 |
| 重覆定位精度 | Repeatability Accuracy | arc-sec | 8 | 8 |
| 鎖緊動力源(氣壓/油壓) | Clamp System(Pneumatic/Hydraulic) | | 氣壓 P / 油壓 H | 氣壓 P / 油壓 H |
| 氣壓/油壓鎖緊壓力 | Pneumatic/Hydraulic Pressure | kg/cm² | 6/25 | 6/25 |
| 氣壓/油壓鎖緊扭力 | Pneumatic/Hydraulic Clamping Torque | kg.m | 5/20 | 5/20 |
| 容許工件載重 MAX. Allowable Load on the Table | 在水平 Level | kg | 35 | |
| | 在傾斜 Tilt | kg | 20 | |
| 最大容許切削推力 (無油壓鎖緊狀態) MAX. Allowable Thrust Load on the Table (When Clamped) | 容許軸向負荷 Allowable Axial Load | kgf | 400 | |
| | 最大輸出扭矩 MAX. Output Torque | kgf.m | 14 | |
| | 容許彎曲扭矩 Allowable Bending Torque | kgf.m | 30 | |
| 最大容許轉動慣量 | MAX. Allowable Moment of Inertia J=(W·D²) / 8 | kgf.m² | 0.1 | |
| 製品重量(不含電機) | Net Weight (servo motor excluded) | kg | 120 | |

※ 最高轉速依不同馬達廠牌規定而有所不同
※ B表示伺服馬達加煞車
※ 光學尺選配
※ 二進二出油壓分配器選配
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元

※ Maximum speedo varies with different motor brand specifications.
※ B is Servo motor with brake.
※ Angular encoder.(Option)
※ Optional two-in-two-out hydraulic distributor
※ The above does not include servo motors, encoders, drives and hydraulic units.

# RTB250

## 雙軸搖籃凸輪轉台
## Zero Backlash Roller Gear Cam Tilting 2-Axis Rotary Table



- ☑ 零背隙 Zero Backlash
- ☑ 高精度 Precision
- ☑ 高剛性 Rigidity
- ☑ 高速度 Speed
- ☑ 高扭力 Torque

## 規格 / Specification

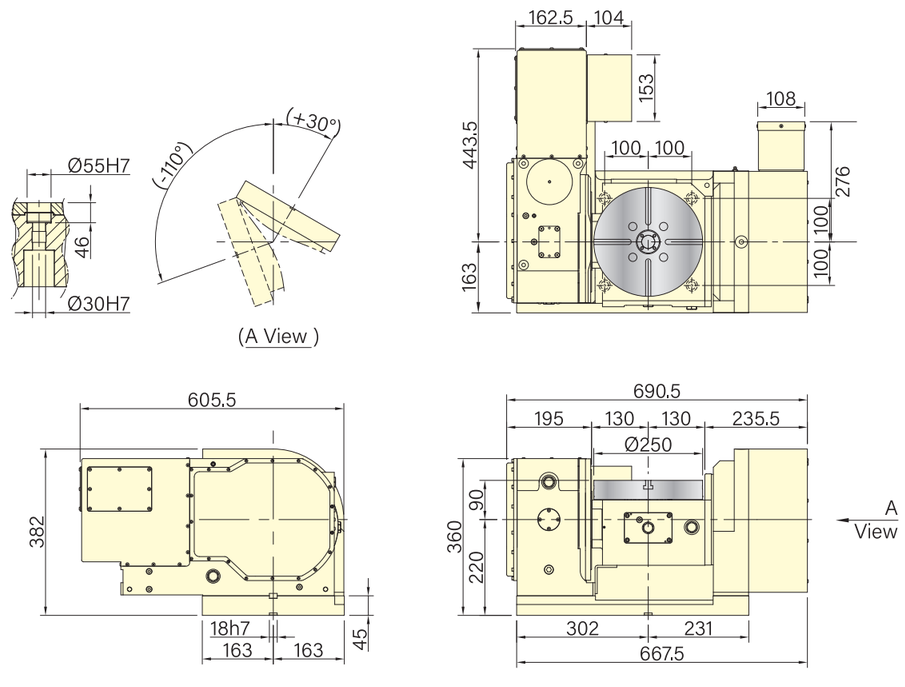
| | | | | RTB250 | | RTB250L | |
|---|---|---|---|---|---|---|---|
| 盤面直徑 | Table Diameter | | mm | Ø250 | | Ø250 | |
| 中心高度(立式) | Center Height(Vertical) | | mm | 220 | | 290 | |
| 底部到盤面高度(臥式) | Table Surface Height(Horizontal) | | mm | 310 | | 290 | |
| 盤面基準孔 | Reference Hole Diameter | | mm | Ø55H7 | | Ø75H7 | |
| 中心貫穿孔 | Through Hole Diameter | | mm | Ø30H7 | | Ø30H7 | |
| 盤面T型溝 | Table Width | | mm | 12H7 | | 12H7 | |
| 基準定位鍵 | Degree of Reference Channel Width | | mm | 18h7 | | 18h7 | |
| 最小分度單位 | MIN. Increment | | deg. | 0.001° | | 0.001° | |
| 迴轉角度 | Swing Angle | | deg. | 迴轉軸 360° Rotating Axis | 傾斜軸 +30°~-110° Tilting Axis | 迴轉軸 360° Rotating Axis | 傾斜軸 +30°~-110° Tilting Axis |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | FANUC | | αiF 4 | αiF 4 + B | αiF 4 βiS 8 | αiF 8 + B βiS 8 + B / βiS 12 + B |
| | | MITSUBISHI | | HG154S | HG154S + B | HG154S | HG154S + B |
| | | SIEMENS | | 1FK7060 | 1FK7060 + B | 1FK7060 | 1FK7063 + B |
| | | HEIDENHAIN | | QSY116C | QSY116C + B | QSY116E | QSY116J + B |
| 最高轉速 (Motor 3000 min⁻¹) 數值由搭載伺服馬達決定 | MAX. Rotation Speed (Motor 3000 min⁻¹) Values are Determined by the Motor | | rpm | 66.6 | 31.25 | 50 | 31.25 |
| 總減速比 | Gear Ratio | | | 1/45 | 1/96 | 1/60 | 1/96 |
| 分割定位精度 | Indexing Accuracy | | arc-sec | 15 | 30 | 15 | 30 |
| 重覆定位精度 | Repeatability Accuracy | | arc-sec | 6 | 8 | 6 | 8 |
| 鎖緊動力源(氣壓/油壓) | Clamp System (Pneumatic/Hydraulic) | | | 油壓 H | 油壓 H | 油壓 H | 油壓 H |
| 氣壓/油壓鎖緊壓力 | Pneumatic/Hydraulic Pressure | | kg/cm² | 35 | 35 | 35 | 35 |
| 氣壓/油壓鎖緊扭力 | Pneumatic/Hydraulic Clamping Torque | | kg.m | 60 | 180 | 60 | 180 |
| 容許工件載重 MAX.Allowable Load on the Table | 在水平 Level | | kg | 120 | | 120 | |
| | 在傾斜 Tilt | | kg | 80 | | 80 | |
| 最大容許切削推力 (無油壓鎖緊狀態) MAX. Allowable Thrust Load on the Table (When Clamped) | 容許軸向負荷 Allowable Axial Load | | kgf | 1632 | | 1632 | |
| | 最大輸出扭矩 MAX. Output Torque | | kgf.m | 92 | | 92 | |
| | 容許彎曲扭矩 Allowable Bending Torque | | kgf.m | 92 | | 92 | |
| 最大容許轉動慣量 MAX. Allowable Moment of Inertia | J=(W•D²) / 8 | | kgf.m² | 0.4 | | 0.4 | |
| 製品重量(不含電機) | Net Weight (servo motor excluded) | | kg | 320 | | 460 | |

※ 最高轉速依不同馬達廠牌規定而有所不同
※ B表示伺服馬達加煞車　※ 光學尺選配
※ 二進二出油壓分配器選配
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元
※ Maximum speedo varies with different motor brand specifications.
※ B is Servo motor with brake.　※ Angular encoder.(Option)
※ Optional two-in-two-out hydraulic distributor
※ The above does not include servo motors, encoders, drives and hydraulic units.

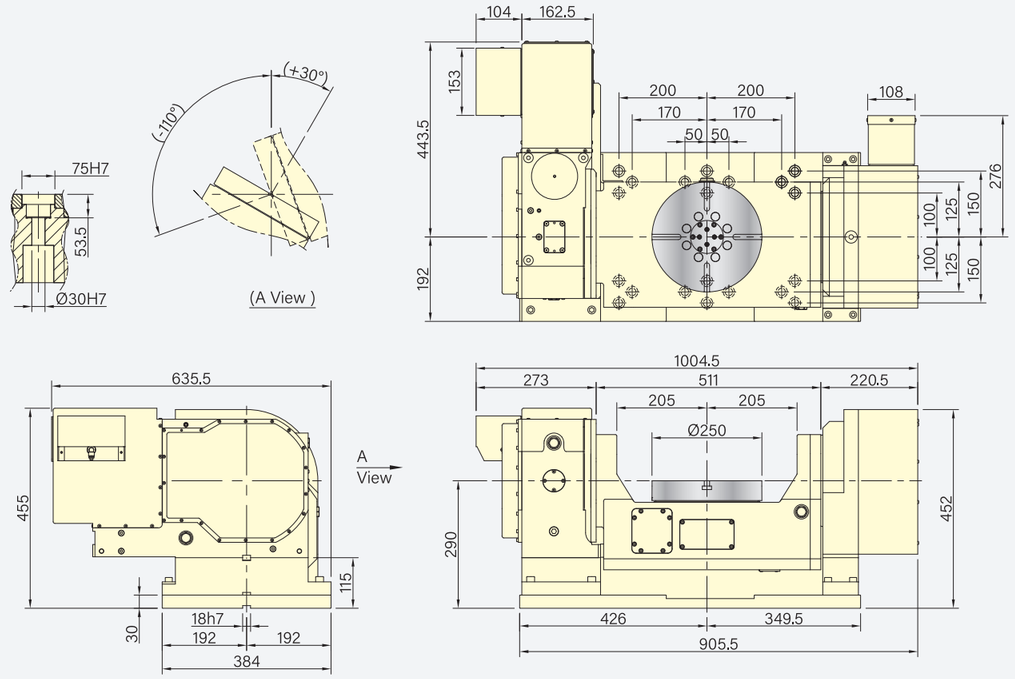


## 尺寸圖 / Dimensions

### RTB250




### RTB250L

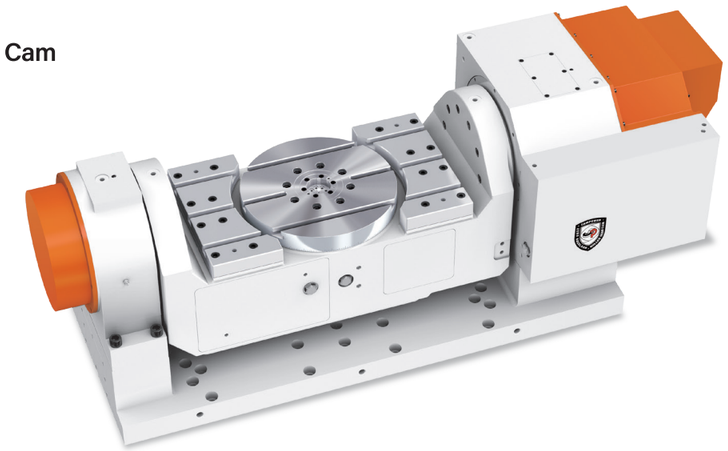


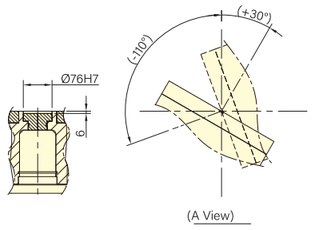

※ 本公司保有產品設計及變更的權利，詳細規格資料請洽本公司。
※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
※ 傾斜軸長期偏載在特定角度時，推薦加裝光學尺。(視個別加工需求)
※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications.
※ The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown above are based on Fanuc motor)
※ Optical encoder is recommended for tilting axis. (According to application engineering)

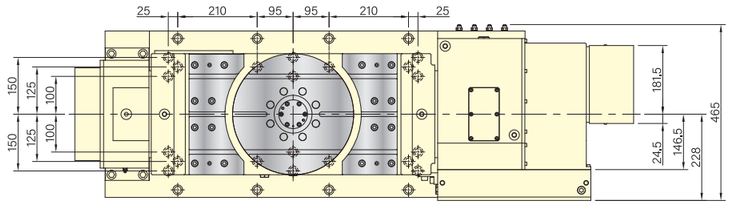
# RTB320BS

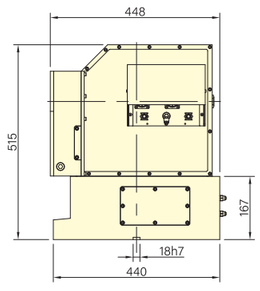
## 雙軸搖籃凸輪轉台
## Zero Backlash Roller Gear Cam Tilting 2-Axis Rotary Table

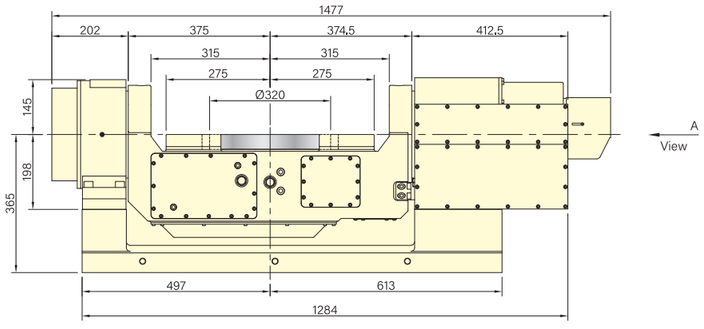
- ☑ 零背隙 Zero Backlash
- ☑ 高精度 Precision
- ☑ 高速度 Speed
- ☑ 高剛性 Rigidity
- ☑ 高扭力 Torque






※ 本公司保有產品設計及變更的權利，詳細規格資料請洽本公司。
※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
※ 傾斜軸長期偏載在特定角度時，推薦加裝光學尺。(視個別加工需求)

※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications.
※ The length of servo guard may vary with servo motor type.(the metal sheet dimensions shown above are based on Fanuc motor)
※ Optical encoder is recommended for tilting axis.(According to application engineering)

| 規格 / Specification | | | RTB320BS | |
|---|---|---|---|---|
| 盤面直徑 | Table Diameter | mm | Ø320 | |
| 中心高度(立式) | Center Height(Vertical) | mm | 365 | |
| 底部到盤面高度(臥式) | Table Surface Height(Horizontal) | mm | – | |
| 盤面基準孔 | Reference Hole Diameter | mm | Ø76H7 | |
| 中心貫穿孔 | Through Hole Diameter | mm | – | |
| 盤面T型溝 | Table Width | mm | 12H7 | |
| 基準定位鍵 | Degree of Reference Channel Width | mm | 18h7 | |
| 最小分度單位 | MIN. Increment | deg. | 0.001° | |
| 迴轉角度 | Swing Angle | deg. | 迴轉軸 360° Rotating Axis | 傾斜軸+30° ~ -110° Tilting Axis |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | | | |
| | FANUC | | αiF 8<br>βiS 12 | αiF 8 + B<br>βiS 12 + B |
| | MITSUBISHI | | HG154S | HG154S + B |
| | SIEMENS | | 1FK7063 | 1FK7063 + B |
| | HEIDENHAIN | | QSY116E | QSY116J + B |
| 最高轉速 (Motor 3000 min⁻¹)<br>數值由搭載伺服馬達決定 | MAX. Rotation Speed (Motor 3000 min⁻¹)<br>Values are Determined by the Motor | rpm | 50 | 25 |
| 總減速比 | Gear Ratio | | 1/60 | 1/120 |
| 分割定位精度 | Indexing Accuracy | arc-sec | 20 | 40 |
| 重覆定位精度 | Repeatability Accuracy | arc-sec | 4 | 8 |
| 鎖緊動力源(空壓/油壓) | Clamp System(Pneumatic/Hydraulic) | | 油壓 H | 油壓 H |
| 氣壓/油壓鎖緊壓力 | Pneumatic/Hydraulic Pressure | kg/cm² | 35 | 35 |
| 氣壓/油壓鎖緊扭力 | Pneumatic/Hydraulic Clamping Torque | kg.m | 90 | 180 |
| 容許工件載重<br>MAX. Allowable Load on the Table | 在水平 Level | kg | 200 | |
| | 在傾斜 Tilt | kg | 200 | |
| 製品重量(不含電機) | Net Weight (servo motor excluded) | kg | 725 | |

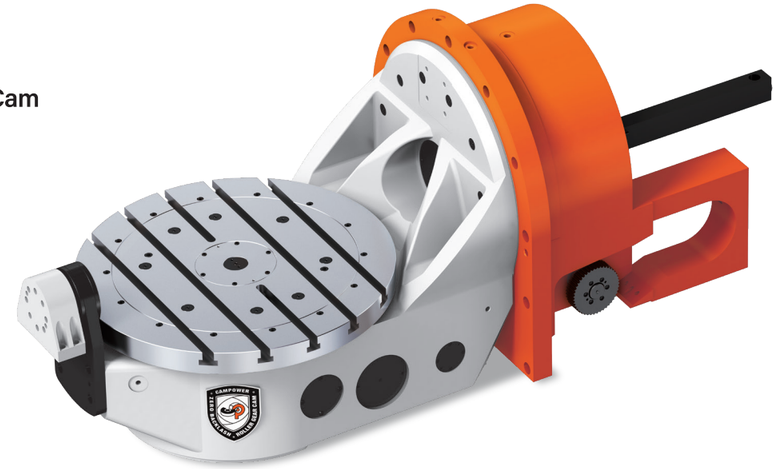
※ 最高轉速依不同馬達廠牌規定而有所不同
※ B表示伺服馬達加煞車
※ 傾斜軸與迴轉軸均由滾齒凸輪機構組成，透過預壓的精準調校，每個滾針軸承緊密的與凸輪軸曲面嵌合，達到零背隙、低磨耗、高剛性、高精度等特性，適用於電子、汽車等需要超精密五軸聯動加工之產業。
※ 光學尺選配
※ 三進三出油壓分配器選配
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元

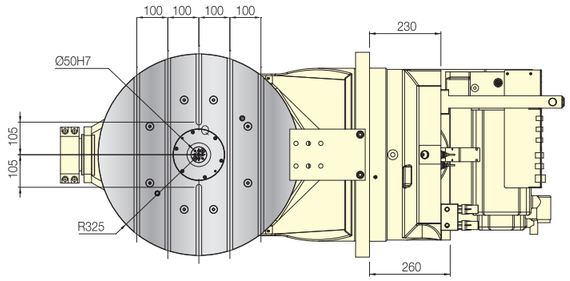
※ Maximum speedo varies with different motor brand specifications.
※ B is Servo motor with brake.
※ Our RollerDrive RTB-Zero Backlash Roller Gear Cam Tilting 2-Axis Rotary Table, the tilting shaft and the rotary shaft are composed of roller cam mechanisms. Through precise adjustment of preloading, each needle bearing is tightly fitted with the camshaft surface to achieve zero backlash, low wear, high rigidity and high precision. It is suitable for industries such as electronics industry and auto industry that require ultra-precision five-axis linkage processing.
※ Angular encoder.(Option)
※ Optional three-in-three-out hydraulic distributor
※ The above does not include servo motors, encoders, drives and hydraulic units.

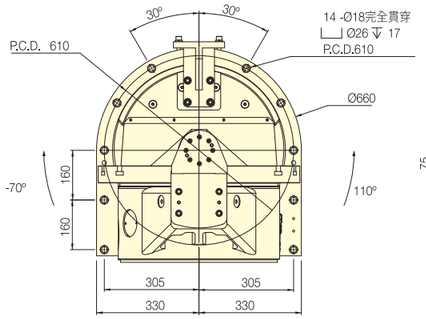
# RTB650

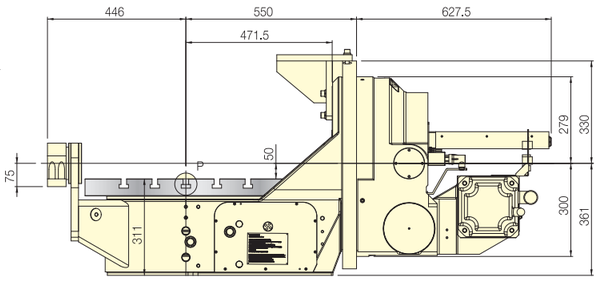
## 雙軸搖籃凸輪轉台
## Zero Backlash Roller Gear Cam Tilting 2-Axis Rotary Table

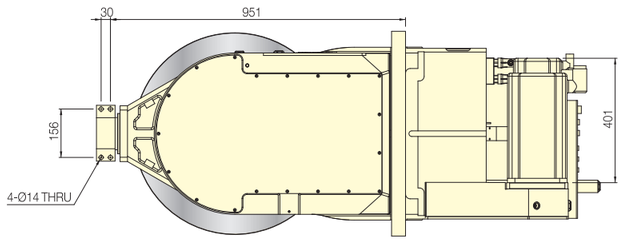
- 零背隙 Zero Backlash
- 高剛性 Rigidity
- 高性能B、C軸旋轉工作台 Performance B and C-axis rotary
- 操作簡單、維修容易 Simple operation and easy maintenance






※ 本公司保有產品設計及變更的權利，詳細規格資料請洽本公司。
※ 伺服馬達護蓋長度依不同馬達而變更(鈑金以發那科馬達為基礎)
※ 傾斜軸長期偏載 在特定角度時，推薦加裝光學尺。(視個別加工需求)

※ The campany reserves the rights to design and change the products. Please contact us for detailed specifications.
※ The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown above are based on Fanuc motor)
※ Optical encoder is recommended for tilting axis. (According to application engineering)

## 規格 / Specification

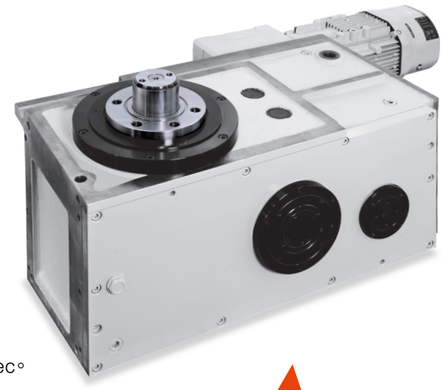
| | | | RTB650 | |
|---|---|---|---|---|
| 盤面直徑 | Table Diameter | mm | Ø650 | |
| 中心高度(立式) | Center Height(Vertical) | mm | 350 | |
| 底部到盤面高度(臥式) | Table Surface Height(Horizontal) | mm | 300 | |
| 盤面基準孔 | Reference Hole Diameter | mm | Ø50H7 | |
| 中心貫穿孔 | Through Hole Diameter | mm | - | |
| 盤面T型溝 | Table Width | mm | 18H7 | |
| 基準定位鍵 | Degree of Reference Channel Width | mm | - | |
| 最小分度單位 | MIN. Increment | deg. | 0.001° | |
| 迴轉角度 | Swing Angle | deg. | 迴轉軸 360° Rotating Axis | 傾斜軸-70° ~ +110° Tilting Axis |
| 伺服馬達 (客戶自選) | Servo Motor (Customer's choice) | | | |
| | FANUC | | αiF 12 | αiF30 + B |
| | MITSUBISHI | | HG204S | HG703S + B |
| | SIEMENS | | 1FK7086 | 1FK7105 + B |
| | HEIDENHAIN | | QSY155C | QSY190D + B |
| 最高轉速 (Motor 3000 min⁻¹) 數值由搭載伺服馬達決定 | MAX. Rotation Speed (Motor 3000 min⁻¹) Values are Determined by the Motor | rpm | 50 | 33.3 |
| 總減速比 | Gear Ratio | | 1/60 | 1/90 |
| 分割定位精度 | Indexing Accuracy | arc-sec | 15 | 15 |
| 重覆定位精度 | Repeatability Accuracy | arc-sec | 4 | 4 |
| 鎖緊動力源(空壓/油壓) | Clamp System (Pneumatic/Hydraulic) | | 油壓 H | 油壓 H |
| 氣壓/油壓鎖緊壓力 | Pneumatic/Hydraulic Pressure | kg/cm² | 35 | 35 |
| 氣壓/油壓鎖緊扭力 | Pneumatic/Hydraulic Clamping Torque | kg.m | 250 | 450 |
| 容許工件載重 MAX. Allowable Load on the Table | 在水平 Level | kg | 500 | |
| | 在傾斜 Tilt | kg | 500 | |
| 最大工件慣性 | Maximum Workpiece Inertia | kgf.m² | 396 | |
| 容許旋轉切削力 | Allowable Rotary Cutting Force | kgf.m | 78 | |
| 製品重量(不含電機) | Net Weight (servo motor excluded) | kg | 1220 | |

※ 最高轉速依不同馬達廠牌規定而有所不同
※ B表示伺服馬達加煞車
※ 光學尺選配
※ 二進二出油壓分配器選配
※ 以上不包含伺服馬達、編碼器、驅動器及油壓單元
※ 為搭配海德漢RCN-2380系列光學尺使用。
※ 伺服馬達可依客戶需求指定廠牌。
※ 當工件或刀具的直徑大於轉台直徑時，負載量即使在容量範圍內，但工件的慣性須保持於容量值內。
※ 盤面最高轉速之定義為★迴轉盤面於0～360度內，旋轉任意角度可開出之最高轉速，由於滾齒凸輪機構具有無背隙、有預壓特性，適合用於分割高精度連續加工，如盤面需要長時間連續運轉我司建議，於傳動齒輪箱機構中，加裝油冷卻系統。
※ 此表為本公司標準規格，客戶特殊訂製請依相關確認圖為主。

※ Maximum speedo varies with different motor brand specifications.
※ B is Servo motor with brake.
※ Angular encoder.(Option)
※ Optional two-in-two-out hydraulic distributor
※ The above does not include servo motors, encoders, drives and hydraulic units.encoder.
※ This index is designed for use with Heidenhain RCN-2380 series optical rulers.
※ Servo motor can be specified the brand optionally accordling to the needs of the customer.
※ When the diameter of the workpiece or tool is larger than the diameter of the turntable, the load is probably within the capacity range, but the inertia of the component must be kept within the capacity value.
※ The maximum speed of the disk surface is defined as the maximum speed that within 360°.Since the roller cam mechanism has designed no backlash and preload characteristics, it is suitable for indexing high-precision continuous processing. In case, the disk surface needs to run continuously for a long time, it is recommended that an auxiliary oil cooling system be installed in this transmission gear box mechanism.
※ This table is the company's standard specifications, please refer to the relevant confirmation drawings for special orders.

# SPC Series

## 凸輪式工作交換台
## Auto Pallet Changer



# 6.0sec / ■400mm

**更高的生產效率**

通過托盤高速交換，縮短工作時間，將15sec交換時間降為6sec。

**更穩定的耐久性**

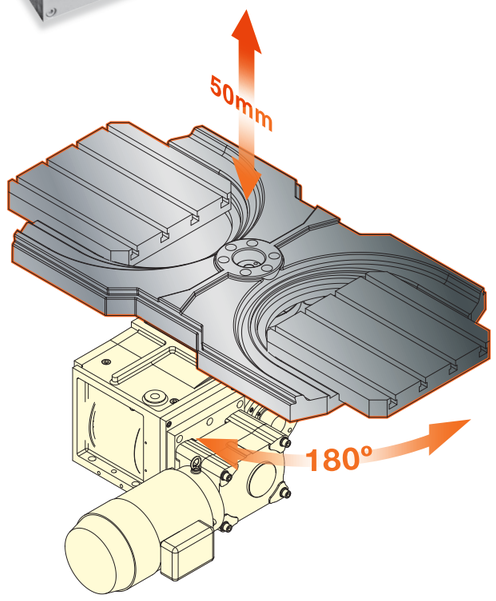
凸輪與從動滾子採滾動接觸，高精度、高剛性、零背隙、磨損極低。

**更簡潔的機構設計**

僅透過凸輪機構，即可完成托盤上升、180°旋轉以及下降等動作。

**更節省的成本**

只需一個動力源即可平穩運轉，無需任何氣、油壓裝置，降低成本。




**Higher Productivity**

Through high-speed exchange of the tray to shorten the working time, and reduce exchange time from 15 sec to 6 sec.

**More Stability and Durability**

Cam and driven roller use rolling contact; high precision, high rigidity, zero backlash, and low wear.

**More Concise Mechanical Design**

Only through the cam mechanism, you can complete tray ascending, 180° rotating, descending, and other actions.

**More Cost Savings**

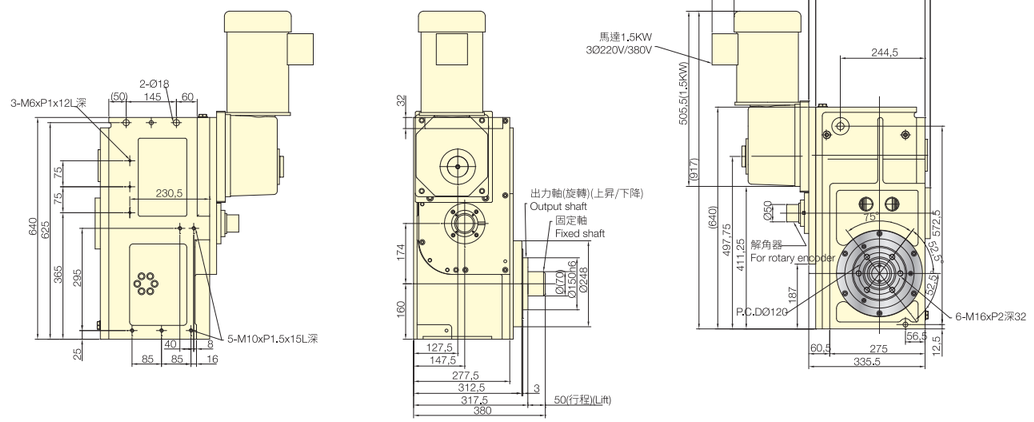
Only with one power source can operate smoothly without any gas or hydraulic devices to reduce costs.

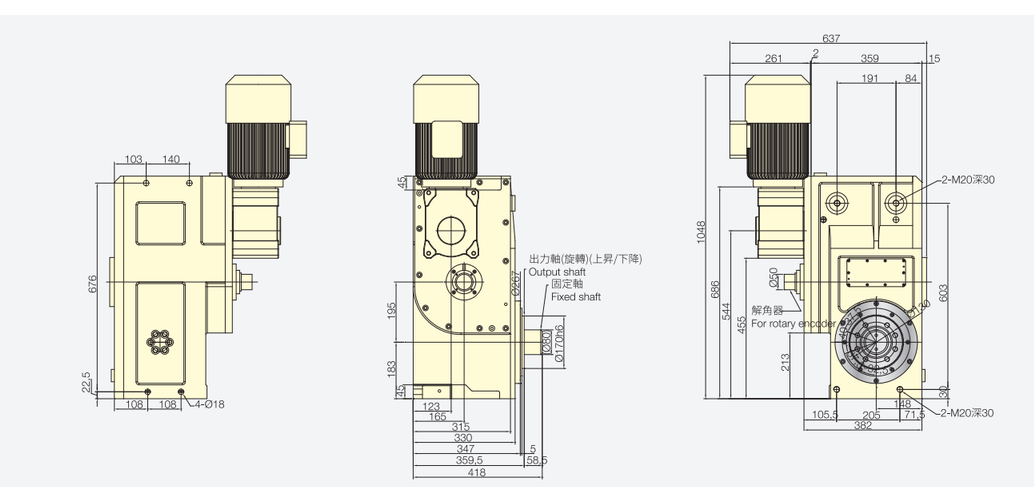
## 規格 / Specification

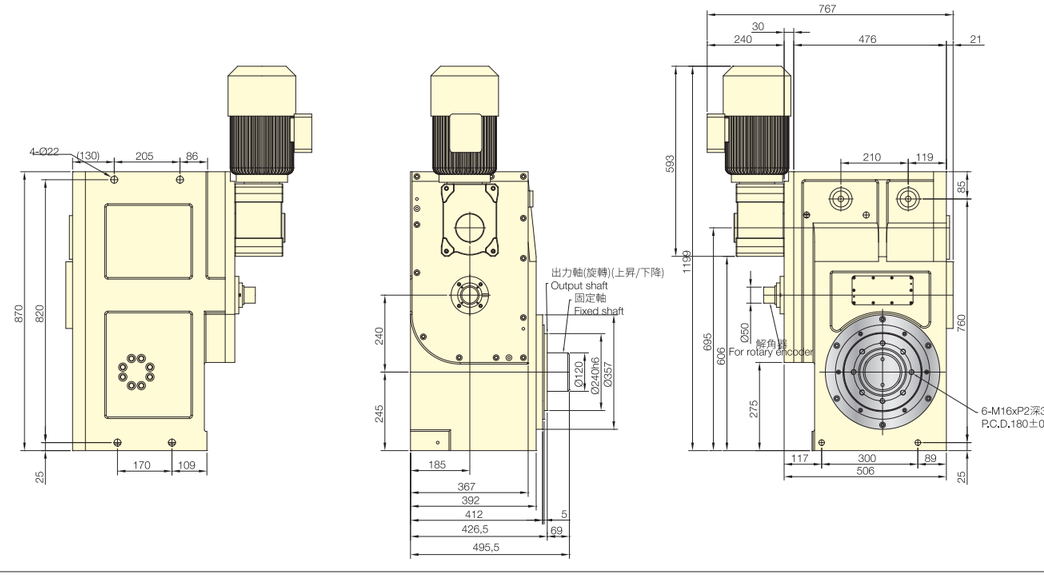
| | | | SPC-40 | SPC-50 | SPC-63 |
|---|---|---|---|---|---|
| 盤面尺寸 | Pallet Size | mm | 400 x 400 | 500 x 500 | 630 x 630 |
| 盤面重量 | Pallet Mass | kg | 100 x 2 | 150 x 2 | 300 x 2 |
| 叉型舉盤 | Fork Mass | kg | 200 | 210 | 450 |
| 容許負載 | Max. Work Mass | kg | 400 x 2 | 600 x 2 | 1000 x 2 |
| 最大容許慣性矩 | Max. Allowable Moment of Inertia | $kg.m^2$ | 267 | 456 | 1321 |
| 工作台迴轉角度 | Fork Swing Angle | deg. | 180° | 180° | 180° |
| 升降行程 | Lift Stroke | mm | 50 | 55 | 60 |
| 交換時間 | Takt Time | sec. | 6 | 8 | 10 |
| 製品重量 | Net. Weight | kg | 270 | 430 | 820 |
| 馬達瓦數 | Motor Watts | kw | 1.5 | 1.5 | 1.5 |
| 長度 | Length | mm | 640 | 676 | 870 |
| 高度 | Height | mm | 380 | 418 | 495.5 |
| 寬度 | Width | mm | 335.5 | 382 | 506 |

※ 最高轉速依不同馬達廠牌規格而有所不同
※ Maximum speed varies with different motor brand specifications

## 規格 / Specification

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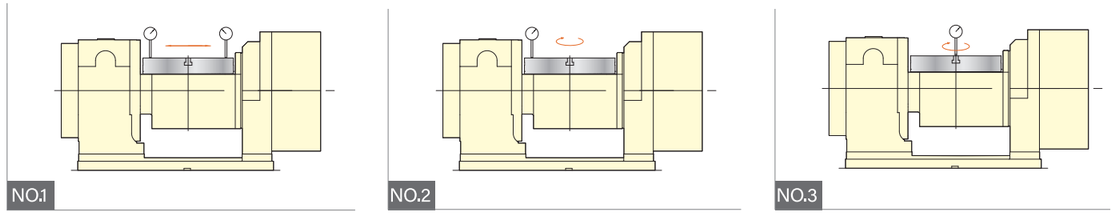
# Accuracy Tolerance Chart

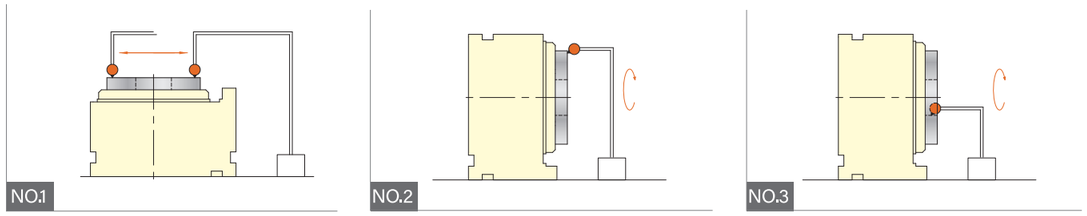
## 五軸檢驗精度表
## Accuracy Tolerance Chart for 5-th axis

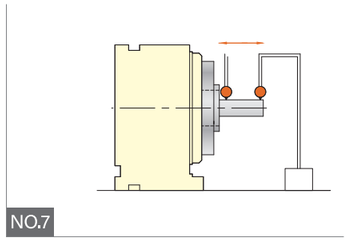



| 檢驗項目 / Description of Insection | NO. | 容許值 Allowable value | |
|---|---|---|---|
| 工作盤面與基座底面平行度<br>Parallelism Between Table Surface and Frame Bottom Surface | 1 | 0.02 mm | |
| 工作盤面旋轉起伏度<br>Runout of Table SurfaceFork Mass | 2 | 0.02 mm | |
| 盤面中心孔旋轉偏擺量<br>Runout of Table Conter Bore | 3 | 0.01 mm | |
| 工作盤面與基座底面的高度<br>Height Between Bottom Surface and Table Surface | 4 | Hbc ± 0.5 | |
| 傾斜軸中心與基座底面的高度<br>Height Between Bottom Surface and Tilting Center | 5 | Hbc ± 0.5 | |
| 傾斜軸旋轉 +90°與 -90°時迴轉工作盤面的垂直誤差<br>Squareness of Rotary Table When Tilting at +90° and -90° | 6 | 0.02 mm | |
| T型溝真直度<br>T-slot straightness | 7 | 0.015/300 mm | |
| B軸旋轉+90°，Y軸方向運動平行度<br>Parallelism of Y-axis when tilting at +90° | 8 | +90°<br>T型溝真直度 T-slot Truth measure | 以型錄數據為主<br>Main catalog data |
| B軸旋轉-90°，Y軸方向運動平行度<br>Parallelism of Y-axis when tilting at -90° | 9 | -90°<br>T型溝真直度 T-slot Truth measure | |
| 分割定位精度<br>Rotating Axis Indexing Accuracy | 10 | 旋轉軸 Rotation<br>傾斜軸 Tilt | |
| 重覆定位精度<br>Rotating Axis Repeatability accuracy | 11 | 旋轉軸 Rotation<br>傾斜軸 Tilt | |

# Accuracy Tolerance Chart

## 四軸檢驗精度表
## Accuracy Tolerance Chart for 4-th axis




| 檢驗項目 / Description of Insection | NO. | 容許值 Allowable value | | |
|---|---|---|---|---|
| 臥式安裝方式，盤面與底面平行度<br>Parallelism between table surface and frame bottom surface | 1 | 圓盤 170~200<br>0.015 | 圓盤 250~400<br>0.02 | |
| 盤面旋轉起伏<br>Runout of table surface | 2 | 0.01 | | |
| 盤面基準孔旋轉偏擺<br>Runout of table reference bore | 3 | 0.01 | | |
| 盤面與底面垂直度<br>Squareness of table surface | 4 | 0.02 | | |
| 迴轉中心線與基準定位鍵平行度<br>Parallelism between rotating center and center of guide blocks | 5 | 0.02 | | |
| 迴轉中心線與基準定位鍵偏差值<br>Deviation between rotating center and center of guide blocks | 6 | 0.02 | | |
| 迴轉中心線與底面平行度<br>Parallelism between rotating center and frame bottom surface | 7 | 0.02 | | |
| 分割定位精度 arc. sec<br>Indexing accuracy | 8 | Model<br>RTC170<br>RTC200<br>RTC250<br>RTC300<br>RTC320 | Angle<br>θ= 18 {deg}<br>θ= 15 {deg} | 以型錄數據為主<br>Main catalog data |
| 重複定位精度 arc. sec<br>Repeatability accuracy | 9 | – | | |

## 剎車結構+迴轉軸結構
## Brake Structure + Rotary Shaft Structure

### 康普 機構一體式
### CAMPOWER : Integrated Structure


內崁式交叉滾柱軸承穩定支撐旋轉軸在旋轉中心線上旋轉，環抱鎖緊力量強，軸心不偏擺。

Built-in cross roller bearing stably supports the rotating shaft to rotate on the center line of rotation, the structure has strong locking force, which ensure the shaft center is not deflected.

### 他廠 機構分離式
### Other : Separation Structure


零件堆疊累積公差存在，鎖緊方向與中心線方向一致，避免軸心偏擺。

Since the cumulative tolerances for part stacking is exist, keep the locking direction consistent with the centerline direction to avoid the axis deflection.

| | | 滾齒凸輪 Roller Gear Cam<br>滾動接觸 Rolling Contact | | 蝸桿蝸輪 Worm Gear<br>滑動接觸 Slide Contact | |
|---|---|---|---|---|---|
| 熱變位 | Heating Possibility | ☑ | 低 Low | 高 | High |
| 摩擦係數 | Coefficient of Friction | ☑ | 低 Low | 高 | High |
| 耐久性 | Durability | ☑ | 長 Long | 短 | Short |
| 剛性 | Rigidity | ☑ | 高剛性 High Rigidity | 背隙存在 | Backlash |
| 背隙調整 | Backlash Adjustment | ☑ | 不需要 Unnecessary | 需要 | Necessary |
| 全時預壓 | Preload | ☑ | 有 Have | 無 | No |
| 加工震動 | Processing Vibration | ☑ | 無 No | 有 | Have |

## 四/五軸工作台選用指引表 Order Sheet Of 4/5-th axis

| | | | |
|---|---|---|---|
| 機床資料 Machine Information | 機台規格 Spec. | 品牌 Machine Brand _____ 型號 Machine Model _____ | |
| | 機床控制器 Controller | □發那科FANUC □三菱MITSUBISHI □西門子SIEMENS □海德漢HEIDENHAIN<br>□其它Other _____ | |
| | 驅動器及配線 Driver and wiring | □全無None □只有配線Only wiring<br>□有驅動器及配線With driver and wiring | |
| 機床工作台 Machine Working Table | T槽寬 T-slot | □ 14 mm □ 16 mm □ 18 mm □ 22 mm | |
| | T槽Pitch尺寸 T-slot pitch | □ 100 mm □ 150 mm □ 其它Other _____ | |
| | T槽寬工作台槽數 Number of T-slot | □ 3 □ 4 □ 其它Other _____ | |
| 數控旋轉工作台 (五軸) CNC Rotary Table (5th axis) | 機型代號 Campower Model | □RTA100 □RTA125 □RTA170 □RTA200 □RTA210 □RTA220<br>□RTAD200 □RTB125 □RTB250 □RTB250L □RTB320BS □RTB650<br>□其他特殊五軸需求盤面 _____<br>Other special requirements regarding 5-th axis disc surface | |
| | 夾緊方式 Locking method | □ 氣壓 Pneumatic □油壓 Hydraulic | |
| | 電磁閥 Solenoid | □ AC110V □ AC220V □ DC24V | |
| | 放置方向 Placement direction | □ 與X軸平行放置，A、C軸 Parallel to the X axis(A/C)<br>□ 與Y軸平行放置，B、C軸 Parallel to the Y axis(B/C) | |
| | 接線盒位置 Connector Cover | □ 後方(一般用於A、C軸)Back(Generally used A/C axis)<br>□ 前方(一般用於B、C軸)Front(Grenerally used B/C axis) | |
| | 動力/信號線出線方式 Power/Signal Wires | □ 標準軍規接頭 (日系系統) Standard Miltary Connector (for JP NC System)<br>□ 貼壁式接頭 (歐規系統) Aero-Connector (for EU NC System)<br>□ 其他Other _____ | |
| | 三菱系統接角方式 Mitsubishi system angle method | □ 17PIN □ 19PIN | |
| | 極限角度及開關型式 Limit Switch | □ 標準(依型錄規格) Standard (According to the catalog) □ 其他Other _____<br>□ 2線NC (標準) (Standard) □ 其他Other _____ | |
| | 伺服電機規格 Servo Motor<br>□客戶提供Buyer<br>□康普提供Campower<br>□錐柄Taper<br>□直柄Straight | 旋轉軸 Rotation axis<br>□發那科FANUC<br>□三菱MITSUBISHI<br>□西門子SIEMENS<br>□安川YASKAWA<br>□海德漢HEIDENHAIN<br>□其它 _____<br>Other _____ | 傾斜軸 Tilting axis<br>□發那科FANUC<br>□三菱MITSUBISHI<br>□西門子SIEMENS<br>□安川YASKAWA<br>□海德漢HEIDENHAIN<br>□其它 _____<br>Other _____ |
| 滾齒凸輪旋轉台 (四軸) Roller Gear Cam Rotary Table (4th axis) | 機型代號 Campower Model | □RTD _____ □中心高 Height of center _____<br>□RDS _____ □中心高 Height of center _____<br>□RTC _____ □中心高 Height of center _____ | |
| | 夾緊方式 Locking method | □ 氣壓 Pneumatic □ 油壓 Hydraulic | |
| | 電磁閥 Solenoid | □ AC110V □ AC220V □ DC24V | |
| | 接線盒方向 Connector Cover | □ 側方Side □ 上方Upside □ 後方Back<br>□ 標準軍規接頭 (日系系統) Standard Miltary Connector (for JP NC System)<br>□ 貼壁式接頭 (歐規系統) Aero-Connector (for EU NC System) | |
| | 伺服電機規格 Servo Motor<br>□客戶提供Buyer<br>□康普提供Campower<br>□錐柄Taper<br>□直柄Straight | □發那科FANUC □三菱MITSUBISHI<br>□西門子SIEMENS □安川YASKAWA<br>□海德漢HEIDENHAIN<br>□其它Other _____ | |
| 特別附件 Special Additional | 尾座 Tailstock | 圓盤煞車尾座 Rotary Tailstock | □ TR-125P □ TR-170P/H □ TR-200H □ TR-250H □TR-250HS □ TR-320 |
| | | 手動頂針尾座 Manual Quill Tailstock | □ TS-110 □ TS-135 □ TS-160 □ TS-210 |
| | | 氣/油壓頂針尾座 P/H Quill Tailstock | □ TS-160 □ TS-210 |
| | 光學尺 Optical Scale<br>□客戶提供Buyer<br>□康普提供Campower | □海德漢HEIDENHAIN □雷尼紹RENISHAW □其它Other _____<br>As a recommended option for tilting axis upon 5 axis application. | |
| | 氣油壓分配器 Oil/Air Distributor (for end-user) | 4th axis | □ HA80x100LB(腳架型)(Tripod type)<br>□ HA80x100FB(安裝版)使用壓力5公斤 (Installed version)Working pressure 5 kg<br>※耐壓1.5Mpa 壓力0.07~0.97Mpa Withstand pressure 1.5Mpa pressure 0.07 ~ 0.97Mpa |
| | | 5th axis | □ 1P(進)/1T(出) 1P(in)/2T(out) □ 2P(進)/2T(出) 2P(in)/2T(out) □ 其他Other _____ |