



**JMH**

400 / 500 / 630 / 800 / 1000 (APC)

**BMH**

2200 / 2500 ( 6 Box Way Single Pallet )

**LMH**

800R / 1000R ( Linear Way Single Pallet )

**HORIZONTAL MACHINING CENTER**

**MILLSTAR**  
JIUH-YEH



ISO 9001:2015



# JMH 400 / 500 / 630 / 800

/ HORIZONTAL 臥式切削中心機 APC

## MACHINING CENTER AUTOMATIC PALLET CHANGE TYPE



/ JMH-400

- X / Y / Z Travels : 630 / 630 / 630 mm
- Work Table : 400 x 400 mm
- BT-40 Spindle Speed : 10,000 rpm
- Direct Drive Spindle / 主軸直結傳動
- ATC : 40T ( 60T / 90T / 120T opt. )
- Rotary APC / 迴轉式交換工作台



/ JMH-500

- X / Y / Z Travels : 800 / 725 / 725 mm
- Work Table : 500 x 500 mm
- BT-40 Spindle / 10,000 rpm  
or BT-50 Spindle / 6,000 rpm
- Direct Drive Spindle / 主軸直結傳動
- ATC : 40T ( 60T / 90T / 120T opt. )
- Rotary APC / 迴轉式交換工作台



/ JMH-630

- X / Y / Z Travels : 1,020 / 850 / 890 mm
- Work Table : 630 x 630 mm
- BT-50 Spindle / 6,000 rpm
- Gear Drive Spindle / 主軸齒輪傳動
- ATC : 40T ( 60T / 90T / 120T opt. )
- Rotary APC / 迴轉式交換工作台

### / FEATURES | 特性

- Traveling column construction
- Reciprocating automatic pallet change
- Roller type linear ways on X , Y , Z axes
- Full HMC performance by servomotor package
- ATC 60 / 90 / 120 tool chain type magazine ( Opt. )
- Table divide minium angle : 0.001° ( JMH-400 Std. )
- Direct drive spindle ( JMH-400 / JMH-500 )
- High torque performance, Japan brand Gear head ( JMH-630 ~ JMH-1000 )
- Hiwin ball screw coolant system ( JMH-630 / JMH-800 / JMH-1000 Std. )





# /1000

# MILLSTAR

JIUHYEH

# JMH

自動交換工作台

AUTOMATIC PALLET CHANGE TYPE



## / JMH-800

- X / Y / Z Travels : 1,270 / 1,050 / 1,050 mm
- Work Table : 800 x 800 mm
- BT-50 Spindle / 6,000 rpm
- Gear Driven Spindle / 主軸齒輪傳動
- ATC : 40T ( 60T / 90T / 120T opt. )
- Rotary APC / 迴轉式交換工作台



## / JMH-1000

- X / Y / Z Travels : 1,530 / 1,250 / 1,200 mm
- Work Table : 1000 x 1000 mm
- BT-50 Spindle / 6,000 rpm
- Gear Driven Spindle / 主軸齒輪傳動
- ATC : 40T ( 60T / 90T / 120T opt. )
- Rotary APC / 迴轉式交換工作台

- 動柱式結構
- 迴轉式自動交換工作台
- X, Y, Z 軸配置高剛性滾柱型線軌
- 可整合各機-FMS系統化生產
- ATC 60 / 90 / 120 刀鏈條式刀庫 ( 選配 )
- 工作台最小分割度0.001° ( JMH-400標配 )
- 直結式主軸 ( JMH-400 / JMH-500 )
- 日製高輸出切削扭力齒輪頭 ( JMH-630 ~ JMH-1000 )
- Hiwin螺桿中空冷卻系 ( JMH-630 / JMH-800 / JMH-1000 標配 )



# JMH Series

## / UNIQUE STRUCTURE DESIGN EXHIBITS PERFECT RIGIDITY & STABILITY

獨特設計的機械結構，展現完美剛性與穩定性。

### / FEATURES | 特性

- The major structural parts are ladle and box type integrated construction to fully overcome the “cutting Blind Rigidity” problem.
- 主要機體結構採用高剛性的梯型箱型連體結構，可徹底克服切削之「剛性盲點」問題。
- Three axes are mounted with heavy duty roller type linear guide ways, featuring heavy load resistance and rapid traverse.
- 三軸採用重負荷型滾柱線軌，具耐負荷，高速位移特性。
- The structural parts are symmetrical construction combined with “V” shape rib reinforcement that ensures they will remain deformation - free even after a long time.
- 主要結構鑄件採用對稱式結構設計，配合“V”型肋骨強化，確保機體長期不變形。
- The structural parts are manufactured from high quality cast iron, tempered for stress relief.
- 主要鑄件採用高級鑄鐵製成，經回火處理，消除內應力。

#### / BT-50 齒輪式主軸 (JMH-630 / 800 / 1000 標配.)



#### / BT-50 JAPAN BRAND GEAR HEAD SPINDLE (JMH-630 / 800 / 1000 Std.)

- The spindle is directly transmitted by gears, featuring extraordinary rigidity that provides high torque during low speed range, suitable for heavy duty cutting. Low noise and low vibration.

#### / BT-40/50 直結式主軸 (JMH-400 / JMH-500 標配.)



#### / BT-40 / BT-50 DIRECT DRIVE SPINDLE (JMH-400 / 500 Std.)

- The spindle is directly driven by a servo motor that upgrades spindle rigidity, reduces spindle vibration and increases machining accuracy.
- The spindle is equipped with air blast through spindle to prevent the accumulation of dust.
- Coolant curtain.
- Upon request, belt type or built-in type spindle is available.

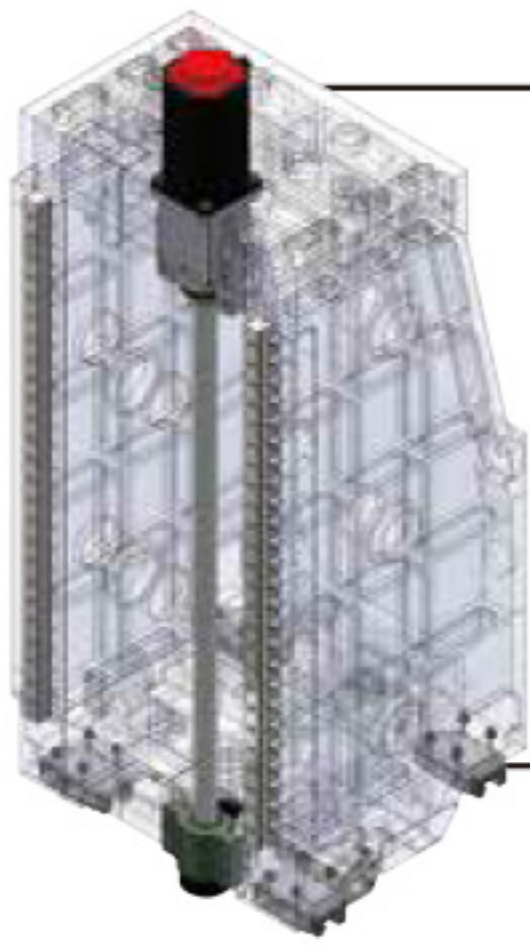
#### / 高剛性滾柱線軌



#### / RIGID ROLLER TYPE LINEAR WAY

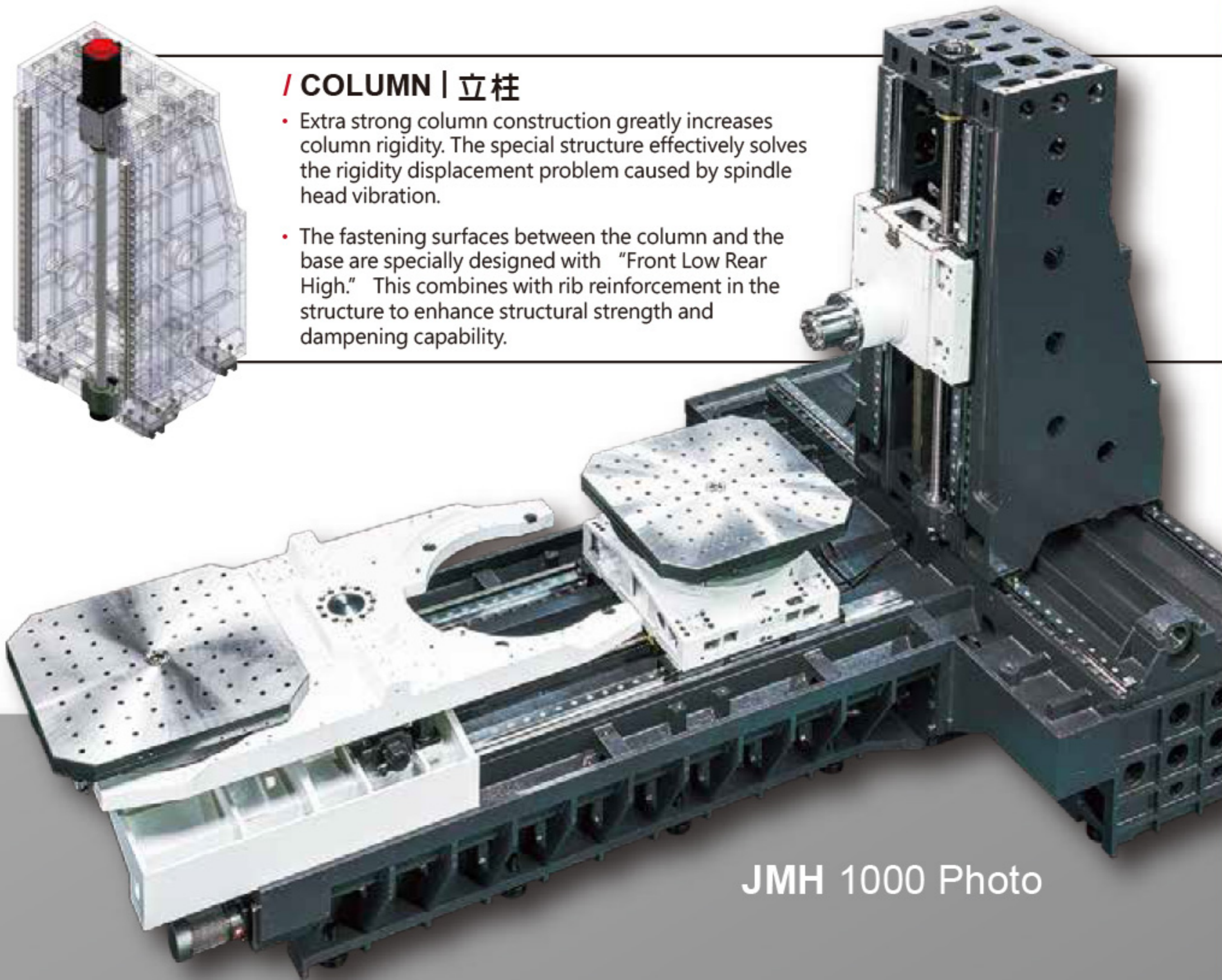
- Mounted with the highly rigid roller type linear guide ways combined with the use of roller retainer. These special linear guide ways feature low friction coefficient, smooth movement and maintenance-free performance for long periods of operation.





## / COLUMN | 立柱

- Extra strong column construction greatly increases column rigidity. The special structure effectively solves the rigidity displacement problem caused by spindle head vibration.
- The fastening surfaces between the column and the base are specially designed with "Front Low Rear High." This combines with rib reinforcement in the structure to enhance structural strength and dampening capability.



JMH 1000 Photo

- The advanced finite element analysis software is applied for simulating structural stress. This assures the best possible machine rigidity, stability and dampening capacity.
- 採用先進有限元素分析，以電腦模擬結構應力情況，確保最佳的機械剛性、穩定及抗震能力。

## / 滾珠螺桿中空油冷系統



### / COOLANT THROUGH BALL SCREW

( JMH-630 / 800 / 1000 std. )

- The coolant through ball screw effectively suppresses thermal expansion of ball screw, resulting in consistent accuracy.

## / 超強沖屑設計 效果**33% UP**



### / EXTRA POWERFUL CHIP FLUSHING EFFECT - 33%UP

- The chip flushing system has 3 flushing areas with 30 nozzles to provide extra powerful flushing effect. With this specially designed chip flushing system, the thermal deformation on workpiece is minimal.

## / 主軸中心出水

( CTS-20 / 30 / 50 / 70 bar 選配 )



### / CTS COOLANT THROUGH SPINDLE DEVICE

( CTS-20 / 30 / 50 / 70 bar Opt. )

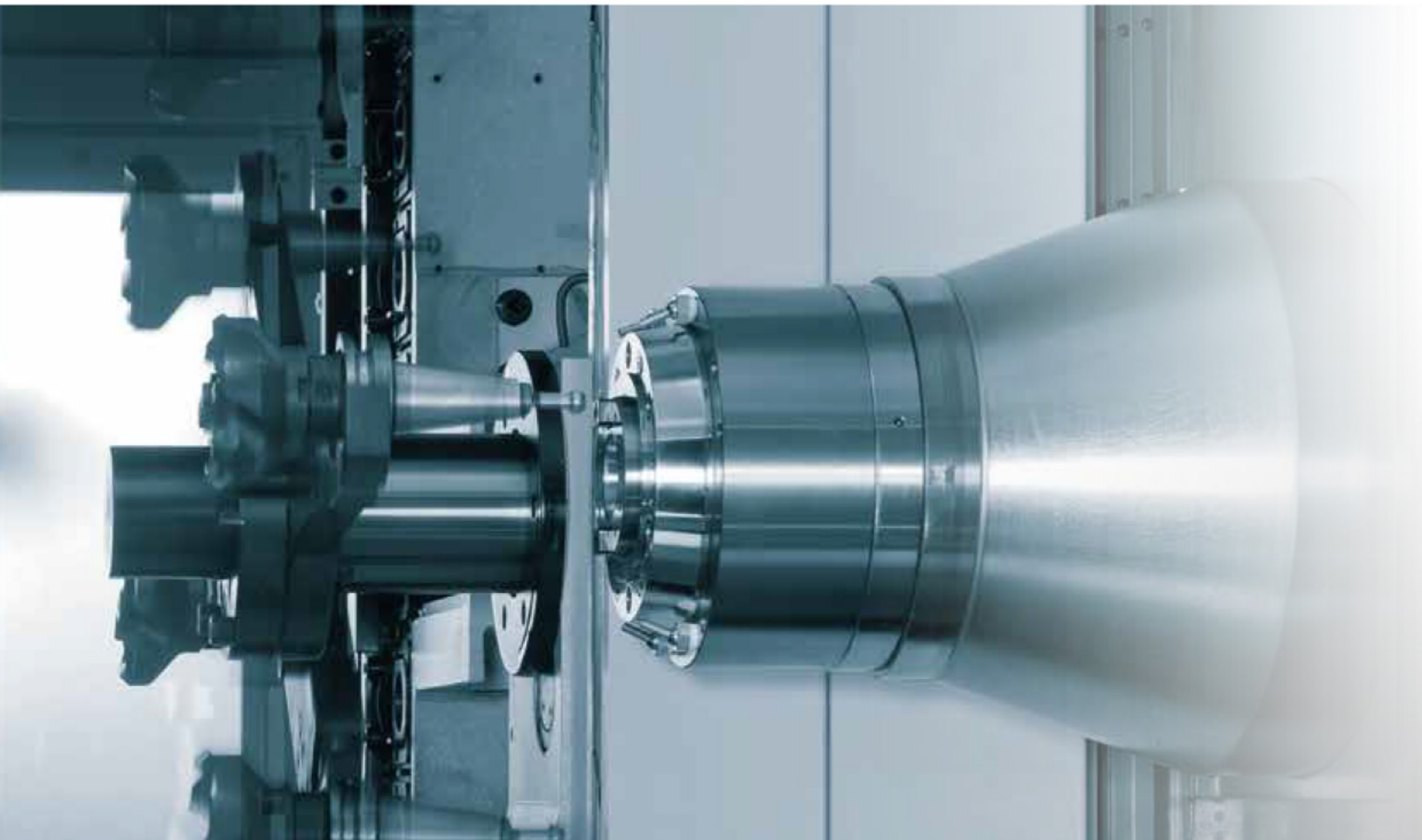
- 20-bar coolant through spindle with filtration unit features mighty performance that the cutting efficiency is increased, and the tool life time is extended. The 50-bar coolant through spindle is option.



# JMH Series 自動換刀機構 ATC

## / AUTOMATIC TOOL CHANGER

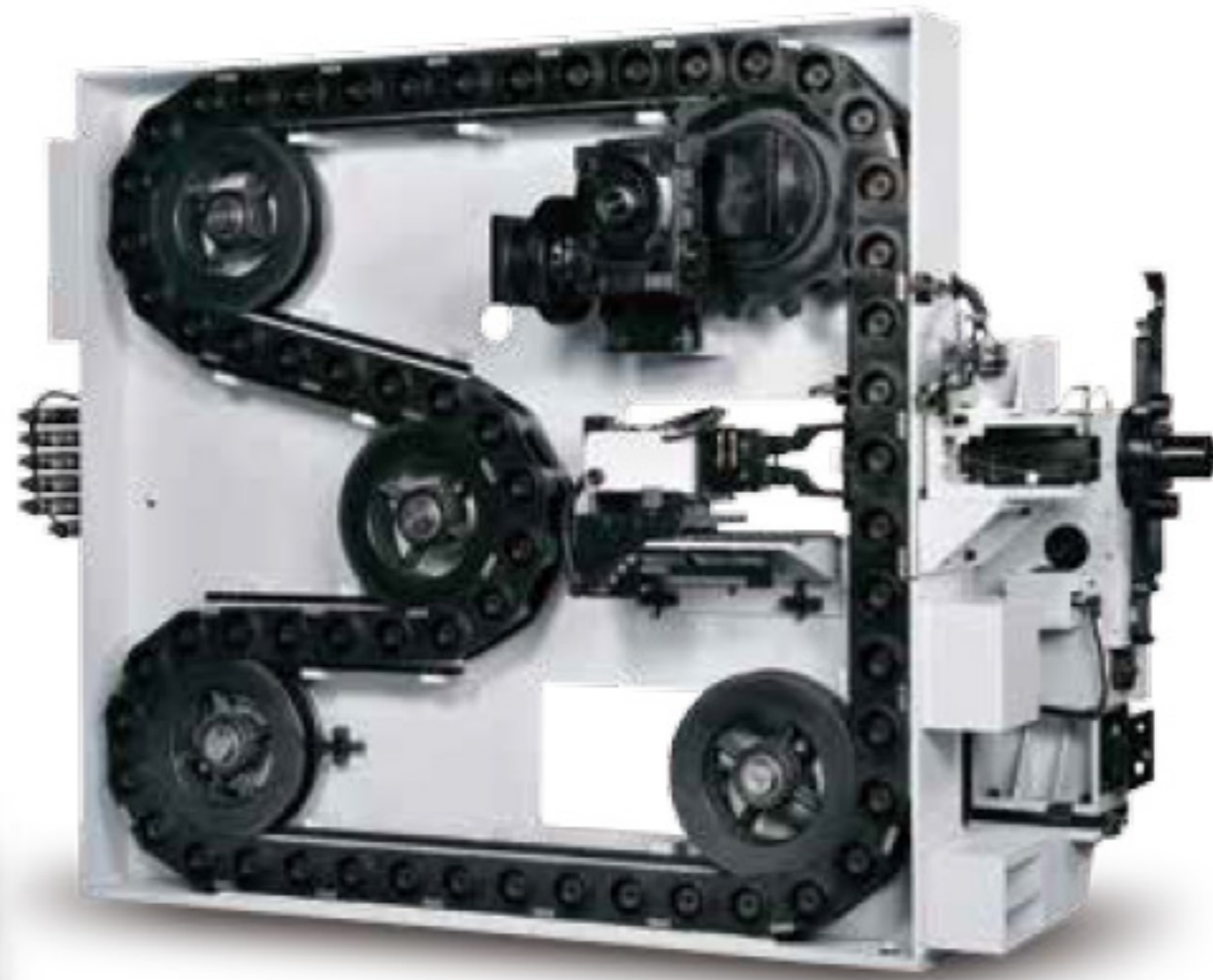
- Fast and stable tool changer motions asve non-cutting time and increases efficiency.
- The spindle features floating tool release to extend the service life of the spindle bearings.



### / FEATURES | 特性

換刀動作快速、穩定，有助於節省非切削時間，提升效率。  
主軸採用浮動退刀設計，以延長主軸軸承壽命。





**/ JMH - 500 / 630 / 800 / 1000**

- TOOL STORAGE CAPACITY :  
#50 x 60 TOOLS

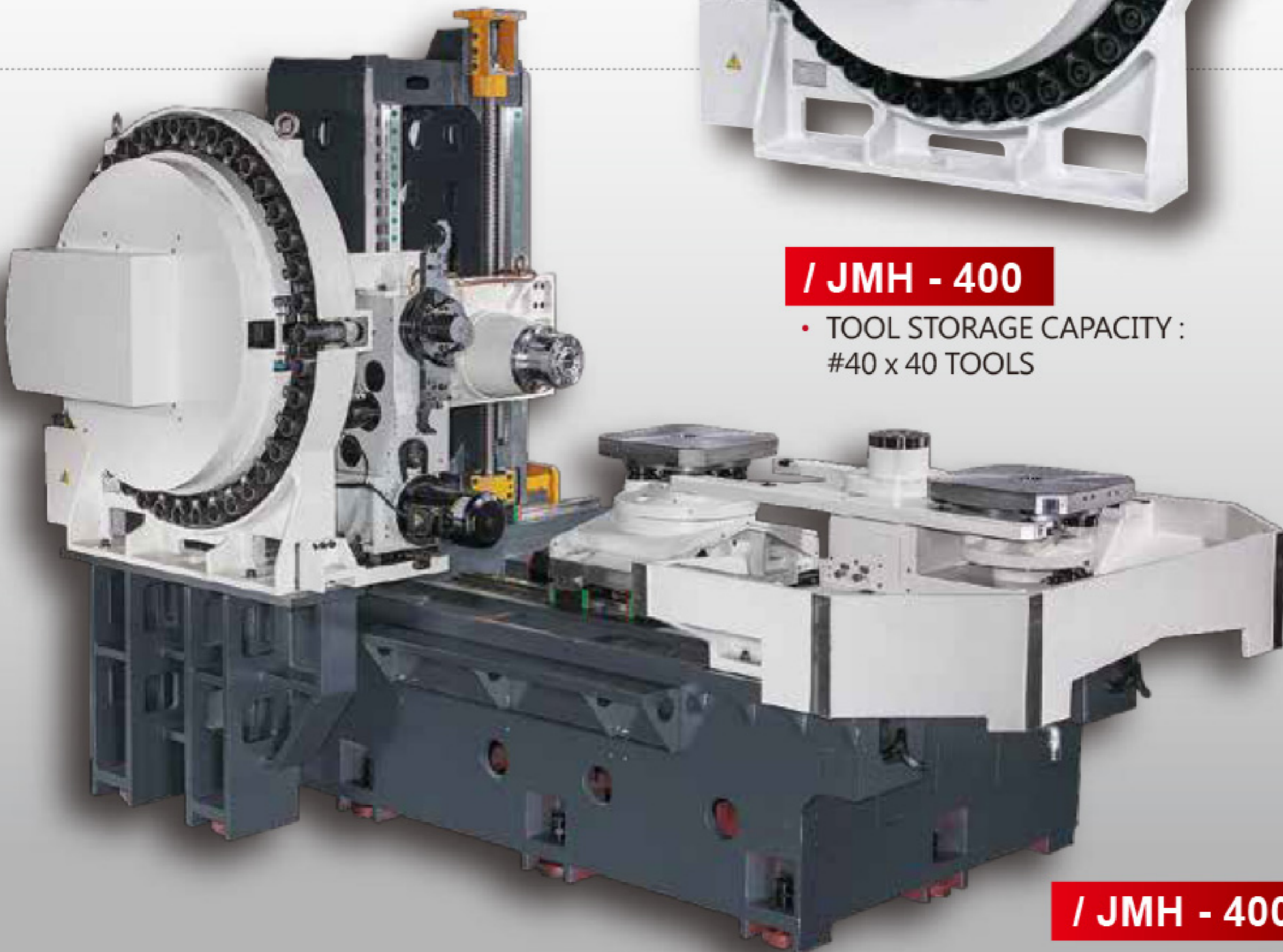
**/ JMH - 400 / 500**

- TOOL STORAGE CAPACITY :  
#40 x 40 TOOLS



**/ JMH - 400**

- TOOL STORAGE CAPACITY :  
#40 x 40 TOOLS



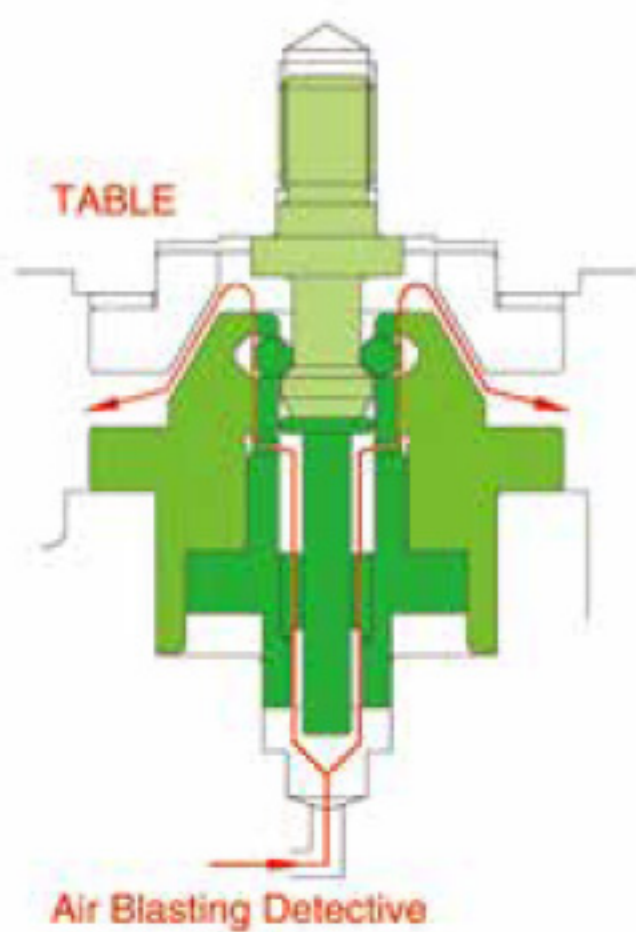
**/ JMH - 400**



# JMH Series

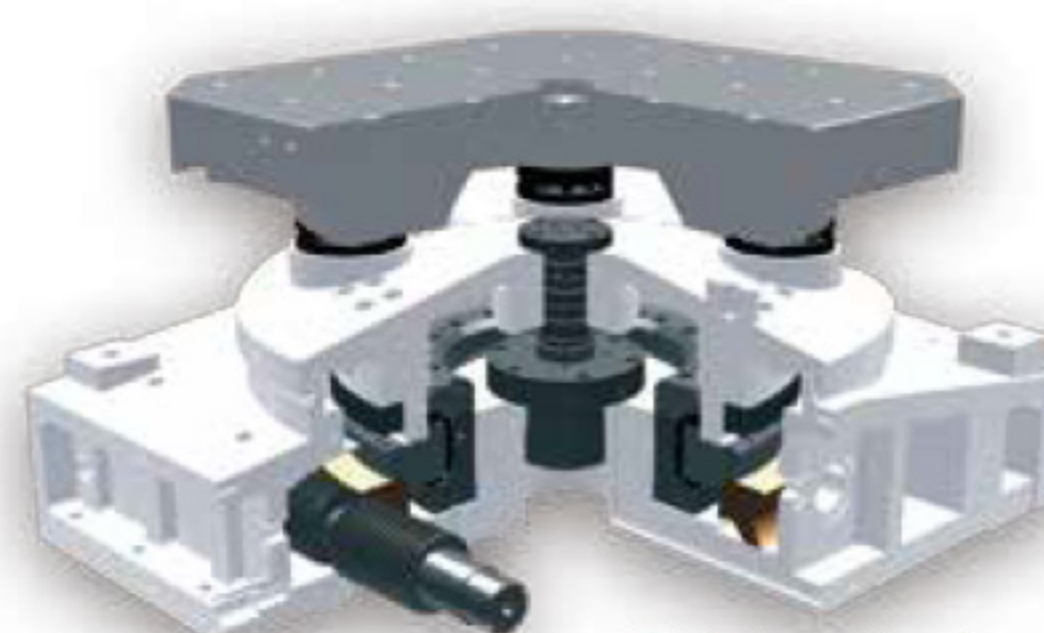
## / ROTARY TYPE - APC

THE COMBINATION OF FLEXIBILITY,  
HIGH PRODUCTIVITY AND PROFITABILITY



### / AIR BLAST ON POSITIONING CONES 定位錐塊吹氣

- The pallet is fitted on positioning cones. Before pallet positioning, the 4 positioning cone surfaces are cleaned by air blast, allowing the pallet to achieve higher stability and positioning accuracy.
- 工作台附有4個定位錐塊。工作台定位之前，定位錐塊表面經由吹氣清潔及定位檢知，確保工作台定位的穩定性，且定位更精準。



### / 1° INDEXING TABLE HIRTH COUPLING 1° 分割工作台

| MODEL               | JMH-500      | JMH-630      | JMH-800      | JMH-1000       |
|---------------------|--------------|--------------|--------------|----------------|
| Pallet size         | 500 x 500 mm | 630 x 630 mm | 800 x 800 mm | 1000 x 1000 mm |
| Accuracy            | ± 5 sec      | ± 5 sec      | ± 5 sec      | ± 5 sec        |
| Repeatability       | ± 1.5 sec    | ± 1.5 sec    | ± 1.5 sec    | ± 1.5 sec      |
| Tilting moment      | 7,800 Nm     | 15,000 Nm    | 28,000 Nm    | 28,000 Nm      |
| High clamping force | 5,500 Nm     | 8,000 Nm     | 10,000 Nm    | 10,000 Nm      |

- JMH-500 / 630 four cones clamping system clamping force at 35,000N.
- JMH-800 / 1000 4 large size taper cones provide 70,000N clamping force.
- Dual-lead 0.001° worm shaft worm wheel set. (high positioning & repeatability accuracy)
- JMH-500之4錐塊鎖緊力為35,000N
- JMH-630 / 800 之4個大錐塊鎖緊力高達 70,000N.
- 雙截式 0.001° 蝸桿蝸輪組。(高定位及重複精度)

## 4th AXES



### / 0.001° NC ROTARY TABLE 0.001° NC分割工作台(Opt.)

| MODEL               | JMH - 400          | JMH - 500          | JMH - 630          | JMH - 800          | JMH - 1000         |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Pallet size         | 400 x 400 mm       | 500 x 500 mm       | 630 x 630 mm       | 800 x 800 mm       | 1000 x 1000 mm     |
| Indexing accuracy   | ± 7.5 sec          | ± 7.5 sec          | ± 7.5 sec          | ± 7.5 sec          | ± 7.5 sec          |
| Repeatability       | ± 3 sec            | ± 3 sec            | ± 3 sec            | ± 3 sec            | ± 3 sec            |
| Tilting moment      | 4,000 Nm           | 4,000 Nm           | 9,000 Nm           | 19,000 Nm          | 19,000 Nm          |
| High clamping force | 2,500 Nm<br>(Std.) | 3,000 Nm<br>(Opt.) | 5,000 Nm<br>(Opt.) | 8,000 Nm<br>(Opt.) | 8,000 Nm<br>(Opt.) |

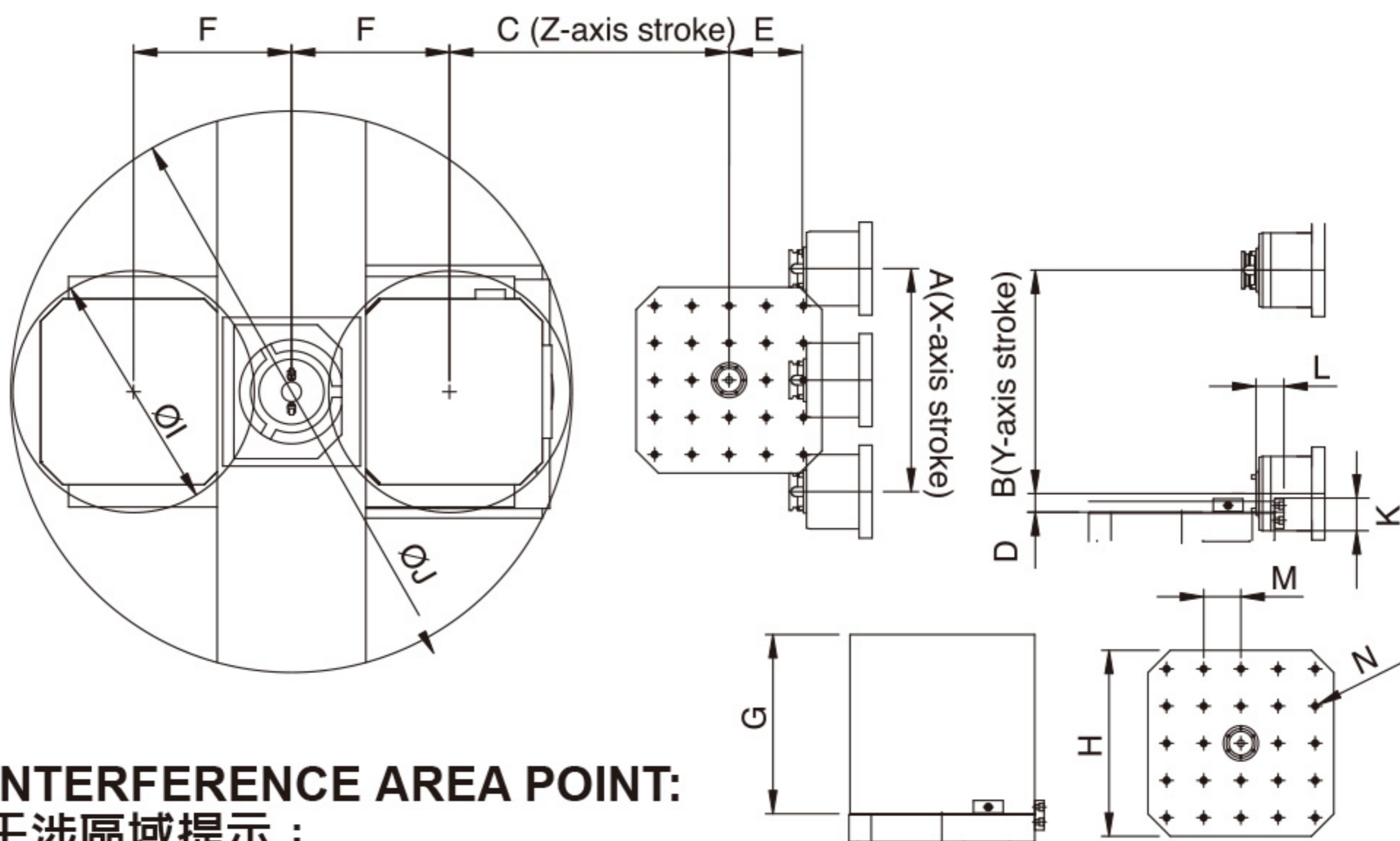


# 迴轉式自動交換工作台

融合多功能、高產能、創造利潤於一機

- One to one synchronized pallet change permits workpiece loading and unloading during machining.
- The pallet change system will save waiting time for loading and unloading workpieces, achieving 100% machining operation efficiency.
- Upon request, customers may order extra pallets.
- Fast pallet change time is 8-12 seconds.
- The pallet is positioned on 4 tapered cones for high positioning accuracy.
- 一對一同步交換工作台。
- 可於加工中裝卸工件，節省停機等待工件裝卸時間，達到100%機器運轉效率。
- 可依客戶需求選購拖板數量。
- 快速工作台交換時間 8-12 秒。
- 拖板採用四個錐塊定位，確保高精度定位。

## APC SPECIFICATIONS - EXCELLANT WORKING SPACE 自動交換工作台規格 - 優異的作業空間



## INTERFERENCE AREA POINT: 干涉區域提示：

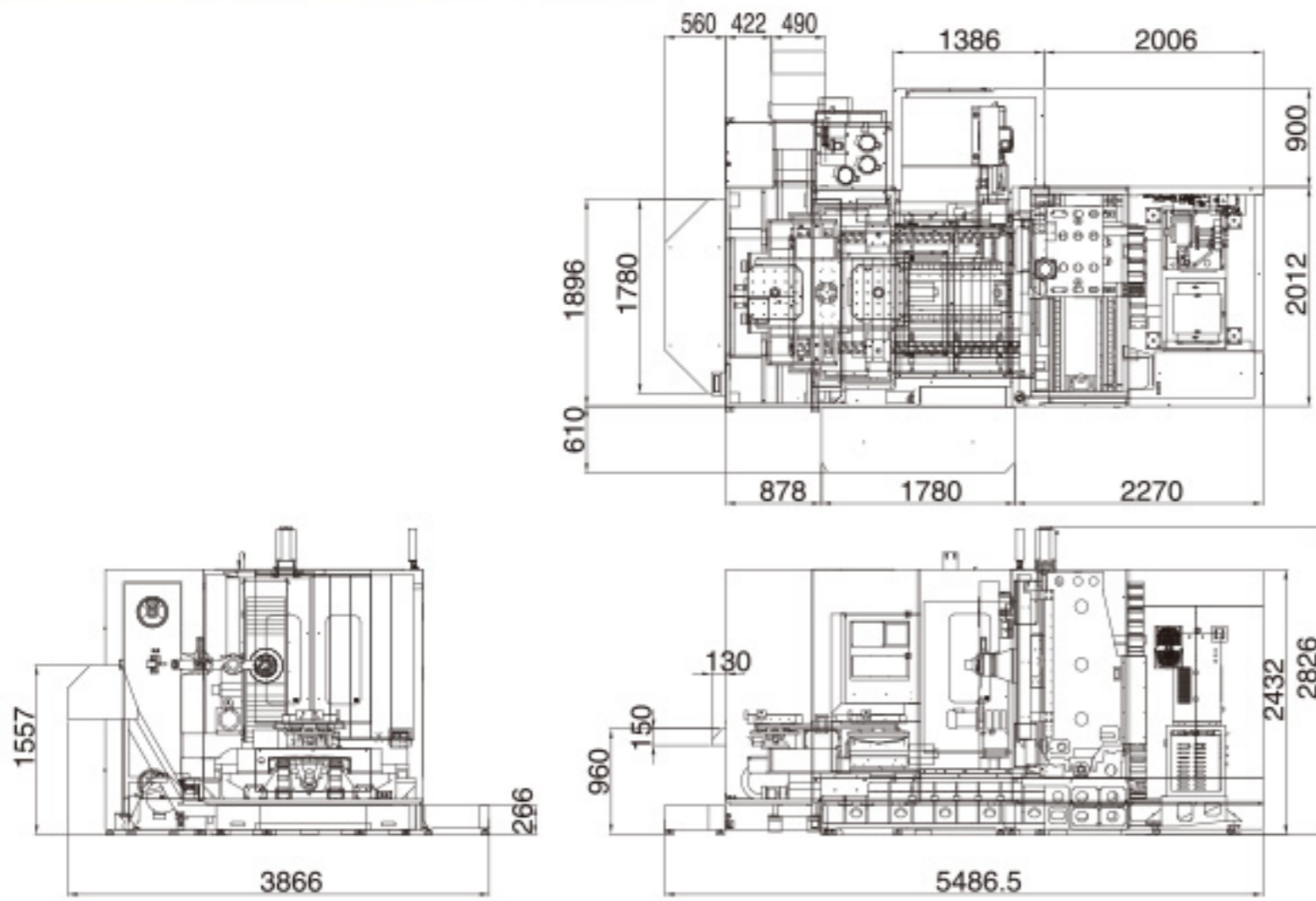
| INTERFERENCE DIAGRAM | JMH-400 (NO.40)    | JMH-500 (NO.40) | JMH-500 (NO.50) | JMH-630       | JMH-800       | JMH-1000      |
|----------------------|--------------------|-----------------|-----------------|---------------|---------------|---------------|
| A                    | 630                | 800             | 800             | 1020 (40")    | 1270 (50")    | 1530 (60")    |
| B                    | 630                | 725             | 725             | 850           | 1050          | 1250          |
| C                    | 630                | 725             | 725             | 890           | 1050          | 1200          |
| D                    | 50                 | 50              | 50              | 70            | 50            | 50            |
| E                    | 130                | 150             | 200             | 200           | 230           | 270           |
| F                    | 400                | 475             | 475             | 615           | 800           | 800           |
| G                    | 750                | 825             | 825             | 950           | 1150          | 1350          |
| H                    | 400 x 400          | 500 x 500       | 500 x 500       | 630 x 630     | 800 x 800     | 1000 x 1000   |
| I                    | 560                | 630             | 630             | 870           | 1110          | 1300          |
| J                    | 1360               | 1580            | 1580            | 2100          | 2710          | 2900          |
| K                    | 85                 | 85              | 110             | 90            | 110           | 110           |
| L                    | 90                 | 125             | 75              | 140           | 195           | 305           |
| M                    | 80                 | 100             | 100             | 125           | 160           | 160           |
| N                    | 24-M10 x P1.5 x 20 | 24-M16 x P2.0   | 24-M16 x P2.0   | 24-M16 x P2.0 | 24-M16 x P2.0 | 24-M16 x P2.5 |



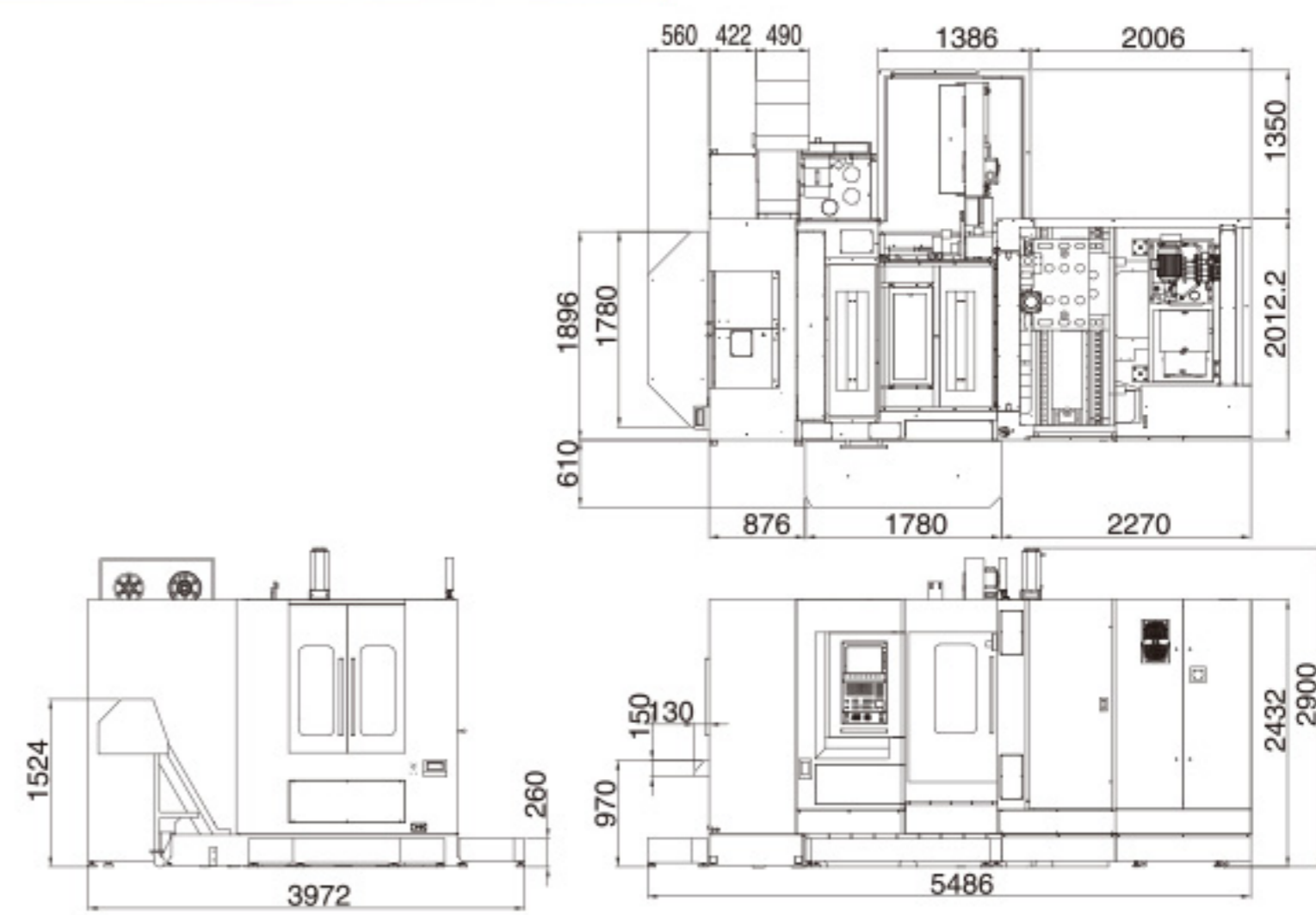
# JMH Series

## / MACHINE DIMENSIONS 佔地面積圖

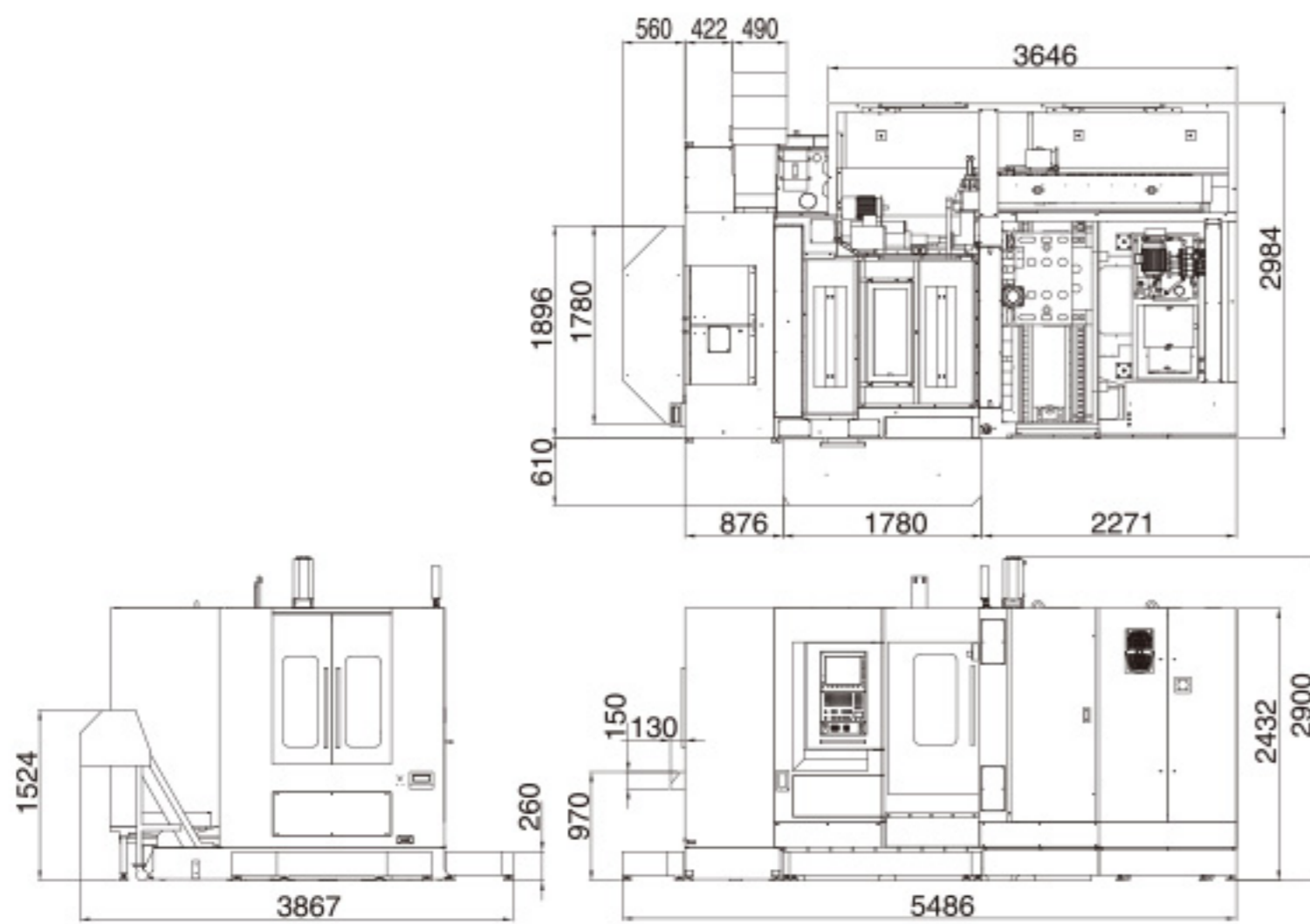
/ JMH-400 (BT-40,40T)



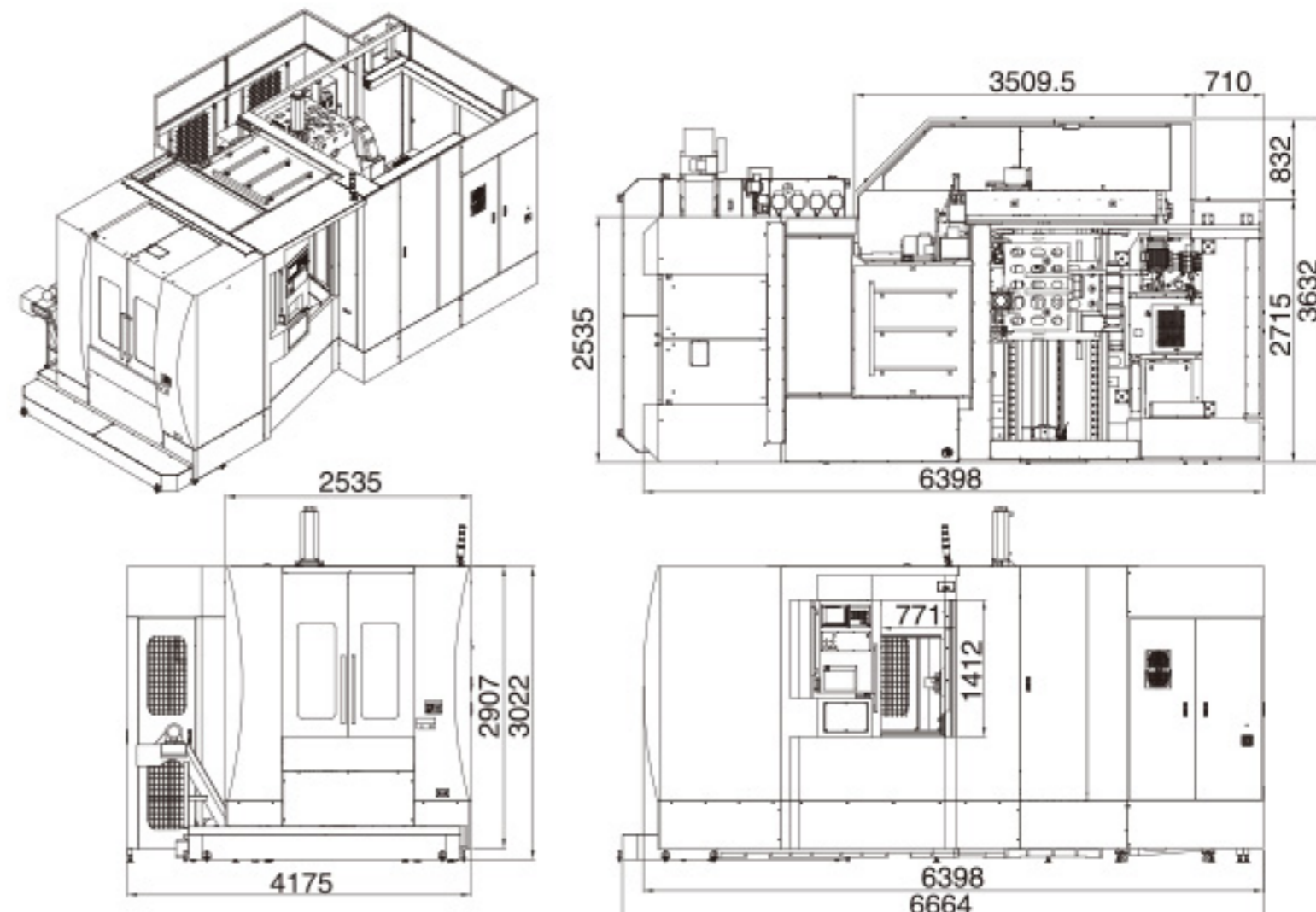
/ JMH-500 (BT-40,60T)



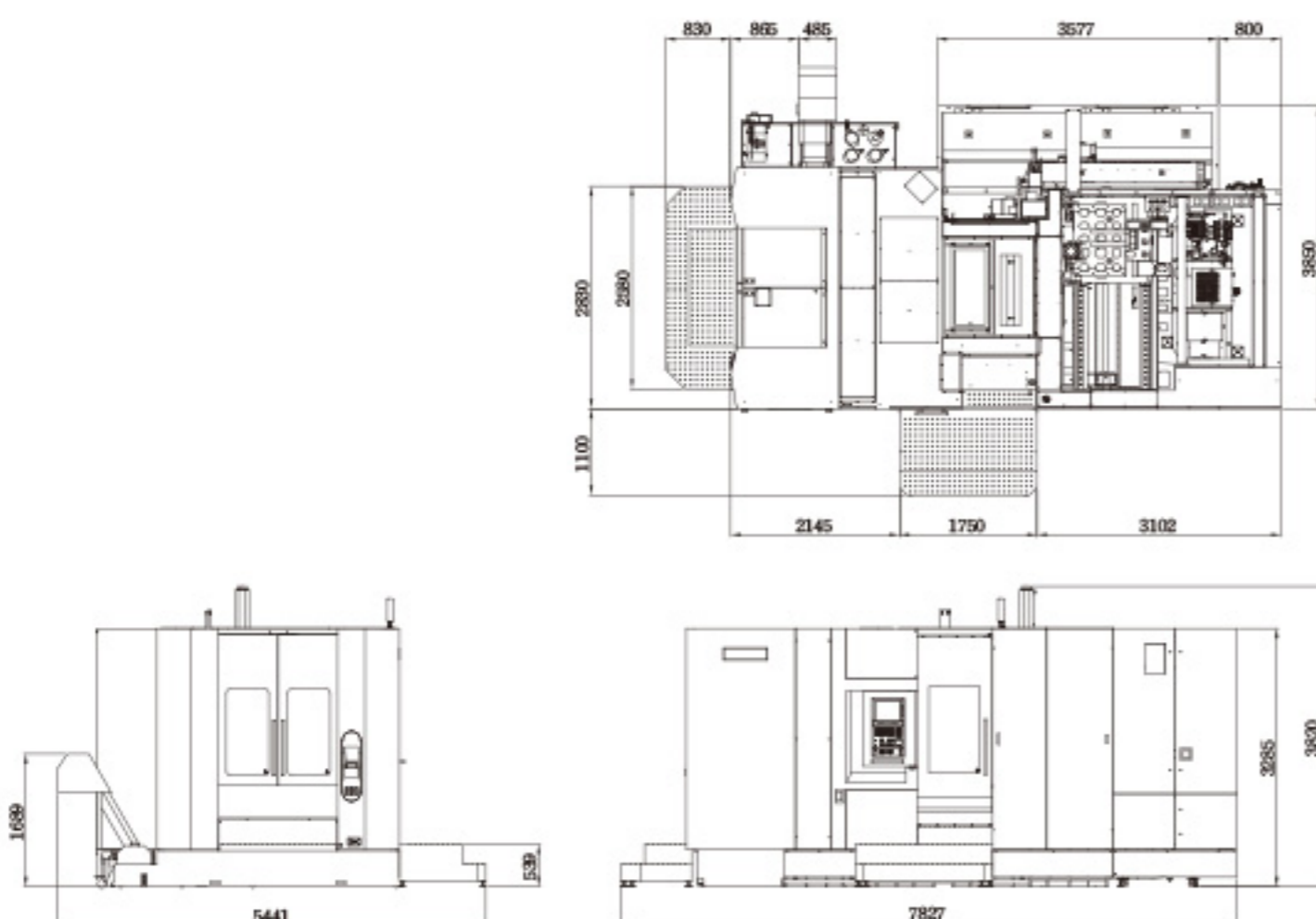
/ JMH-500 (BT-50,60T)



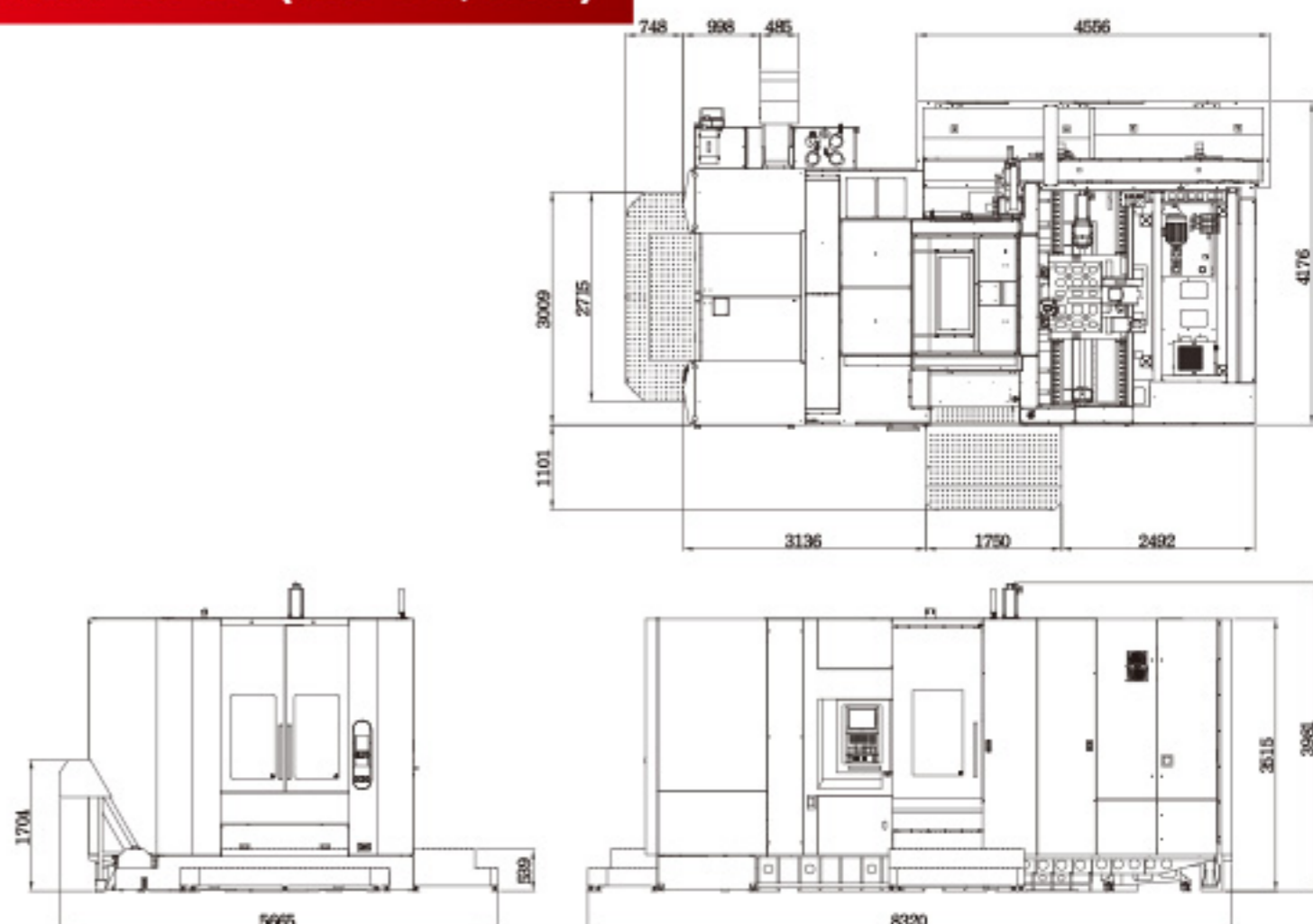
/ JMH-630 (BT-50,60T)



/ JMH-800 (BT-50,60T)



/ JMH-1000 (BT-50,60T)

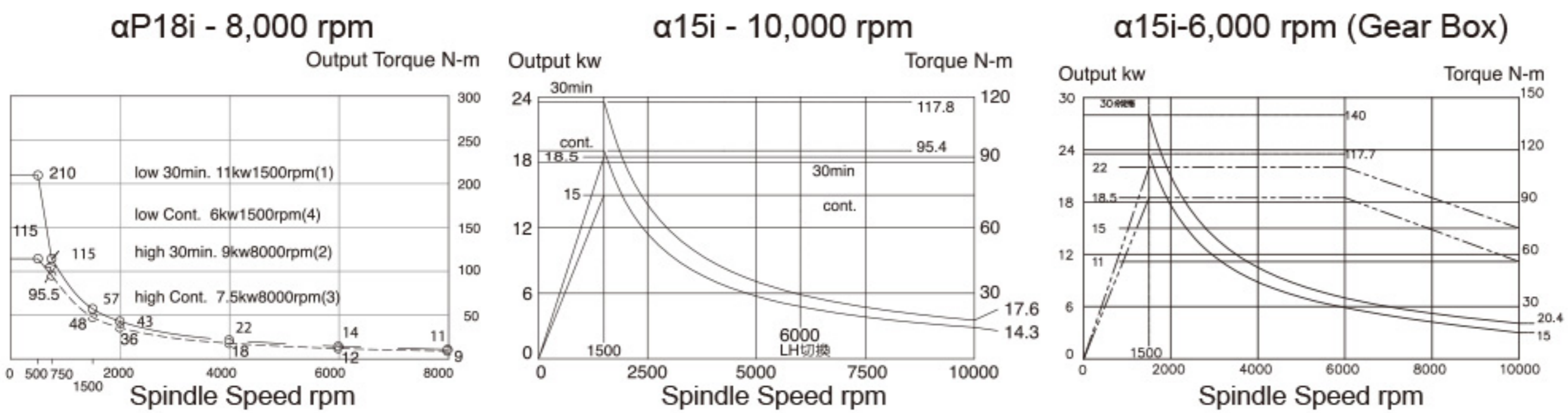




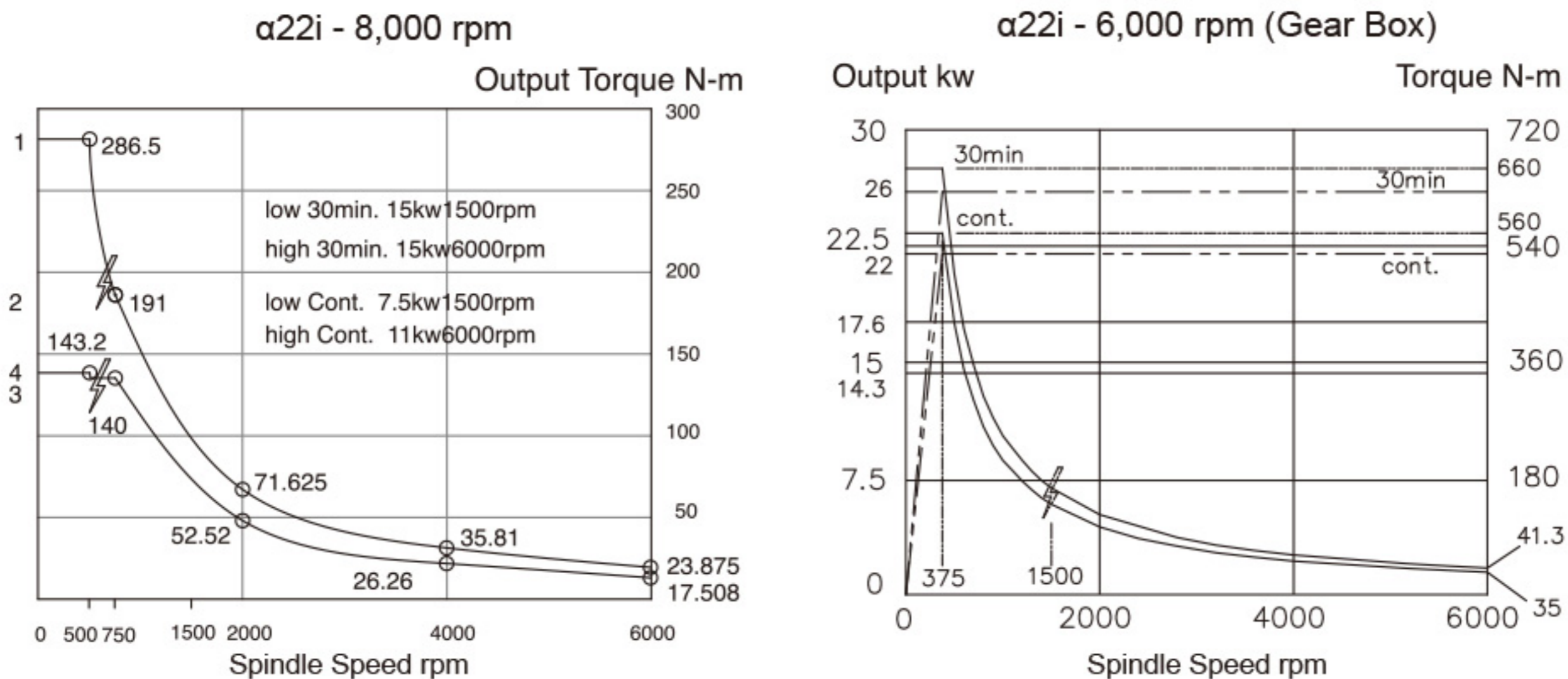
# / SPINDLE SPEED

# OUTPUT DIAGRAM 主軸扭力輸出圖

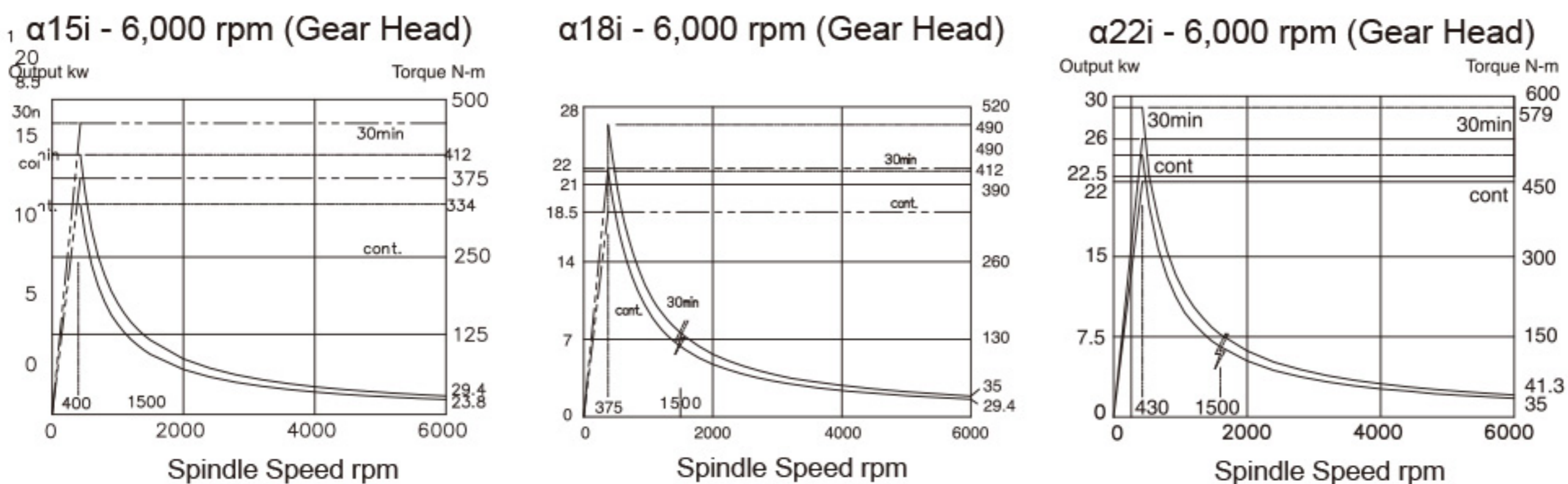
## / BT- 40:JMH-400 / 500



## / BT- 50:JMH-500



## / BT- 50:JMH-630 / 800 / 1000 Gear Head Spindle



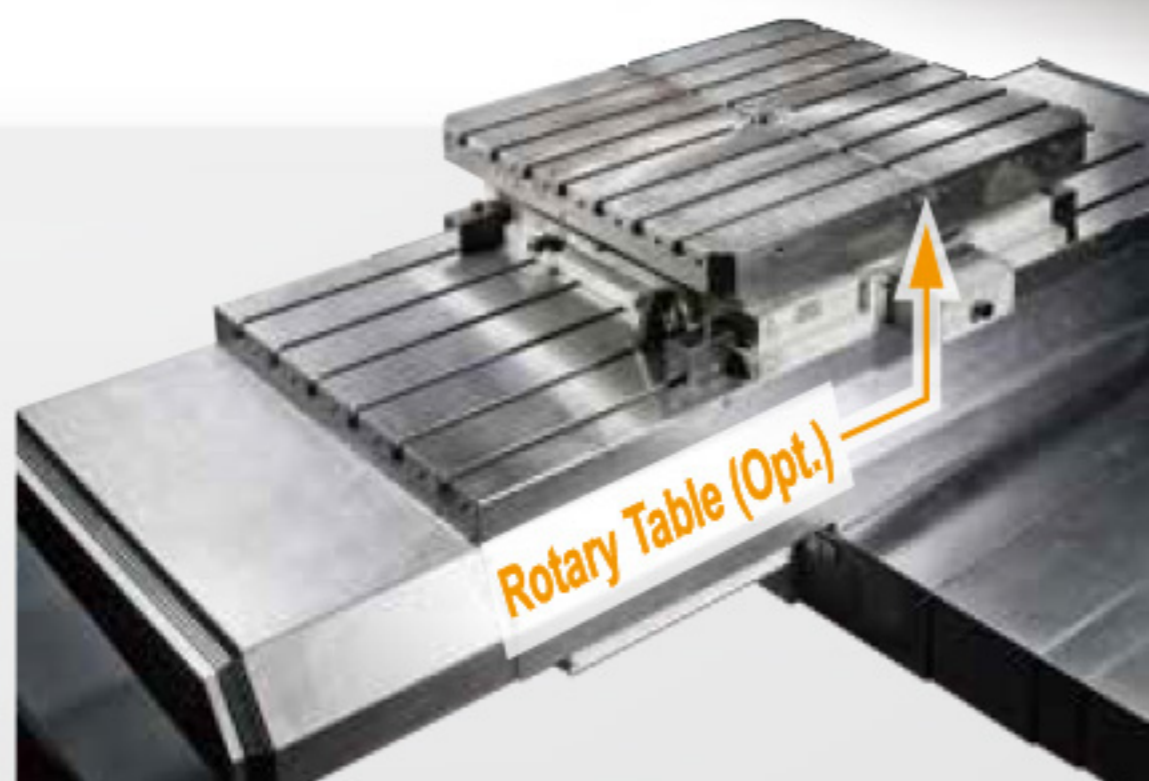
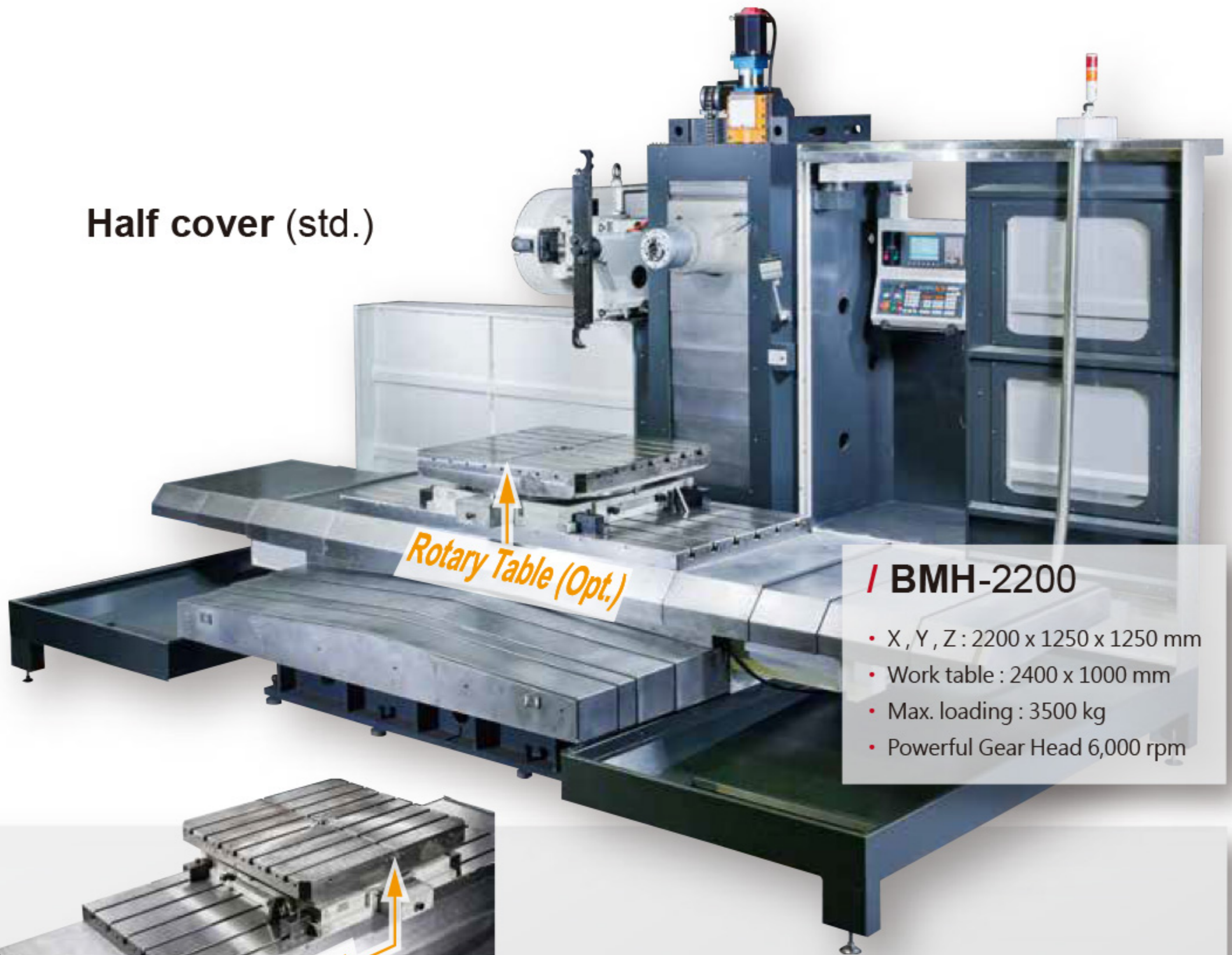


# BMH 2200 / 2500 Extra Heavy

/ 6 BOX WAY 六硬軌臥式綜合加工機

## HORIZONTAL MACHINING CENTER

Half cover (std.)



### / FEATURES | 特性

- The gear-type spindle is transmitted by a gearbox with high / low speed change, featuring greater torque output for heavy duty machining.
- Massive base weighs 9 tons combined with extra wide 6 box ways ( span between ways up to 2,800 mm ) providing solid support for the entire machine. 27-ton total machine weight features unmatched structural rigidity.
- Big table surface measures 2,400 ( L ) x 1,000 ( W ) (2200) and 2700 ( L ) x 1000 ( W ) (2500) mm permitting maximum load up to 3,500 kgs, making the machine ideal for medium and large mold machining. ( L x W : 2,200 mm x 1,000 mm )
- Extra large Y-axis ( 1,250 mm ) design provides increased working capacity.
- Comprehensive Chip Removal System: Two chip augers are provided at the right and left side of the machine combined with powerful flushing device and screw-type or link chain-type ( optional ) chip conveyor at front of the machine. All these ensure that the machine is clean at all times.





Fully cover (opt.)

### / BMH-2500

- X, Y, Z: 2500 x 1250 x 1250 mm
- Work table: 2700 x 1000 mm
- Max. loading: 3500 kg
- Powerful Gear Head 6,000 rpm



### / Extra Heavy 6 Box Way Base 超大噸位 六軌式底座

- 齒輪式主軸採用高低速變換齒輪箱傳動，提供更高的扭力輸出，耐重切削加工。
- 重達九噸的底座結構與超大跨距六硬軌設計(跨距寬達 2800 mm)，提供全機最佳的支撐穩定性，機台總重量27噸重，提供整機最佳的剛性結構。
- 大面積工作台設計：  
2400 mm (L) x 1000 mm (W) (Model: 2200) ;  
2700 mm (L) x 1000 mm (W) (Model: 2500) 最大負重可達 3500 kgs，適合中大型模具業之精密加工。
- 超大Y軸 (1250 mm)設計，提供客戶較大的加工範圍。
- 完善的除屑系統：左右雙螺旋除屑螺桿，  
配合左右兩邊之強力沖屑裝置與機械前面的螺旋或履帶式 (選配) 切削輸送機，隨時確保機台之清潔。



# LMH 800R / 1000R

/ RIGIDITY 滾柱型線軌臥式綜合加工機

## HORIZONTAL ROLLER TYPE LINEAR GUIDE WAY



### / LMH-800R

- X, Y, Z : 1270 x 1250 x 1050mm
- Work table : 800 x 800 mm ( 0.001° )
- Table loading : 2000 kg
- Powerful Gear Head 6,000 rpm

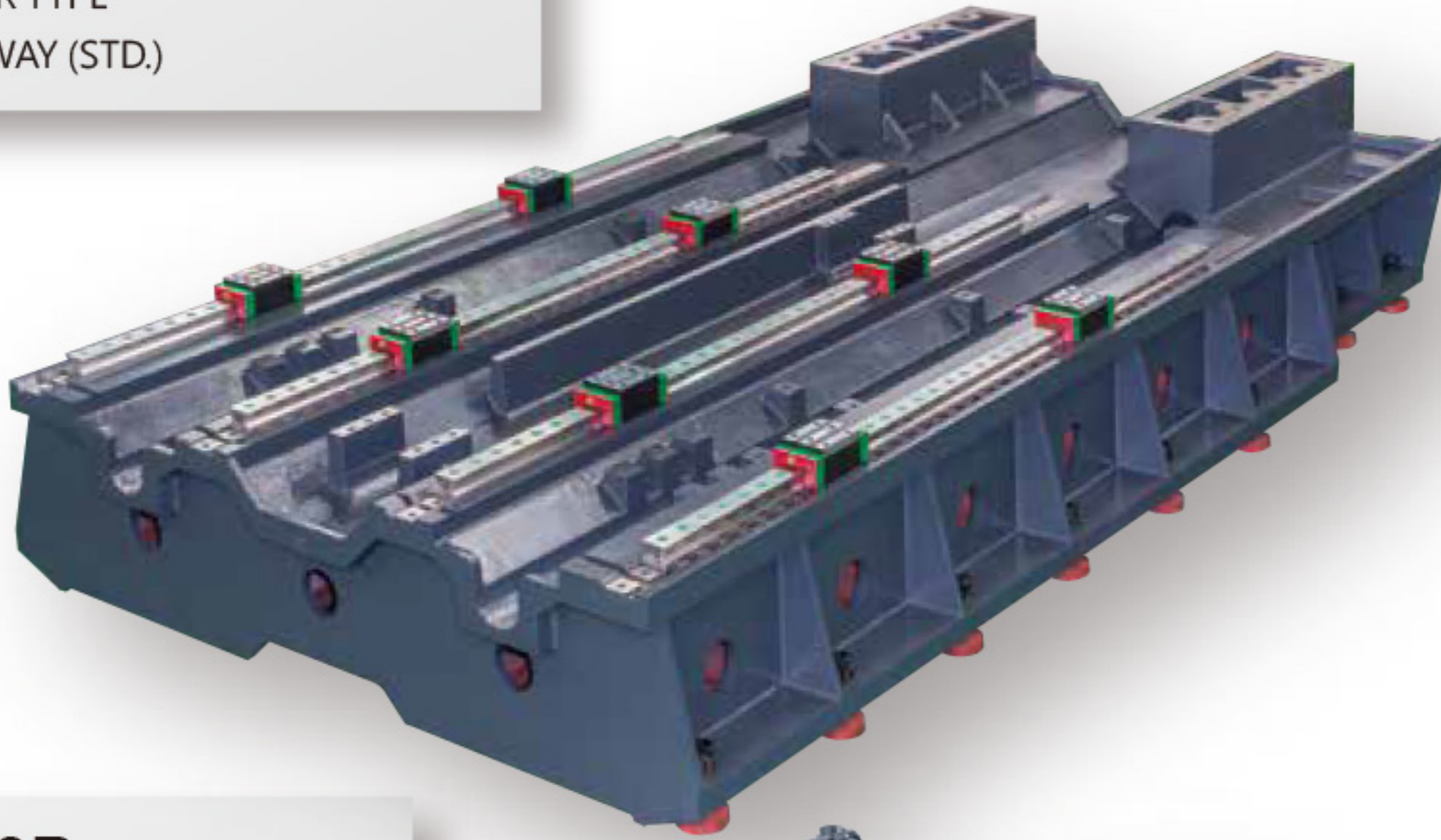
### / FEATURES | 特性

- The major structural parts are ladle and box type integrated construction to fully overcome the cutting "Blind Rigidity" problem.
- Three axes are mounted with heavy duty roller type linear guide ways, featuring heavy load resistance and rapid traverse.
- High precision rotary table with 0.001° ( LMH std. ) indexing makes machining more smoothing.
- Coolant through ball screws on 3 axes ensures long term machining accuracy and extends the service life of the ball screw . ( LMH std. )
- The advanced finite element analysis software is applied for simulating structural stress. This assures the best possible machine rigidity, stability and dampening capacity. rotary table with 0.001°



## / LMH - 800R / 1000R Base

- RIGIDITY ROLLER TYPE
- LINEAR GUIDE WAY (STD.)



## / LMH-1000R

- X, Y, Z : 1530 x 1250 x 1250 mm
- Work table : 1000 x 1000 mm ( 0.001° )
- Table loading : 2000 Kg
- Powerful Gear Head 6,000 rpm



- 主要機體結構採用高剛性的梯型箱型連體結構，可徹底克服切削之「剛性盲點」問題。
- 三軸採用重負荷型滾柱線軌，具耐負荷，高速位移特性。
- 0.001°高精密旋轉工作台，讓加工更為順暢。( LMH 標準 )
- 三軸滾珠螺桿中空油冷系統，長時間確保加工精度及延長螺桿壽命。( LMH標準 )
- 採用先進有限元素分析，以電腦模擬結構應力情況，確保最佳的機械剛性、穩定性及抗震能力。

**MILLSTAR**  
JIUH-YEH

**LMH**

滾柱型線軌臥式綜合加工機  
RIGIDITY HORIZONTAL ROLLER TYPE LINEAR GUIDE WAY



# BMH / LMH Series Outstanding Main Parts / MAGAZINE 刀庫



**/ ARM type 24T**  
BMH ( std. )



**/ CHAIN type 32T**  
BMH ( opt. )



**/ CHAIN type 40T**  
LMH-800R / LMH-1000R ( std. )

- 刀庫容量為：24支刀 ( BMH標準 ) 40支刀 ( LMH標準 )。
- 可使用BT-50或CAT-50刀柄規格。
- 選刀方式為雙向，任意選刀。

- The loading capacity for the ARM-type magazine is 24 tools ( BMH std. ) or 40 tools ( LMH std. )
- The magazine accepts BT-50 or CAT-50 tool shanks.
- Tool selection method is bi-directional and random.

## / BT-50 GEAR HEAD SPINDLE BT-50 齒輪式主軸



The spindle is directly transmitted by gears, featuring extraordinary rigidity that provides high torque during low speed range, suitable for heavy duty cutting. Low noise and low vibration.

## / COOLANT THROUGH BALL SCREW (LMH std.) 滾珠螺桿中空油冷系統



The coolant through ball screw effectively suppresses thermal expansion of ball screw, resulting in consistent accuracy.

## / RIGID ROLLER TYPE LINEAR WAY ( LMH only) 高剛性滾柱型線軌 (LMH-800R / LMH-1000R std.)



Mounted with the highly rigid roller type linear guide ways combined with the use of roller retainer. These special linear guide ways feature low friction coefficient, smooth movement and maintenance-free performance for long periods of operation.

## / VOLUMETRIC OIL DISTRIBUTOR 容積式注油器



The machine is equipped with an 8 liter large capacity volumetric oil distributor combined with uniform lubrication points to assure uniformity of slideway lubrication. Permits specific point lubrication for saving oil. Upon request, pressure sensor feedback is available.

## / 0.001° HIGH PRECISION ROTARY TABLE 0.001°高精密旋轉工作台 (LMH-800R / LMH-1000R std.)



Table Size :  
800 x 800 mm / 1000 x 1250 mm  
( LMH-800 / LMH-1000 )

## / ROTARY TABLE 旋轉工作台 (BMH-2200 / BMH-2500 Opt.)



Table Size :  
1000 x 1000 mm , 0.001°



# / SPECIFICATIONS 規格表

| 型式            |      | MODEL   | BMH-2200                                       | BMH-2500                                       | LMH-800R                                 | LMH-1000R                                |
|---------------|------|---|--|--|--|--|
| Table         | 工作台  | 工作台尺寸<br>WorkTable                                    | 2400 x 1000 mm                                 | 2700 x 1000 mm                                 | 800 x 800 mm<br>(0.001" 分割)              | 1000 x 1250 mm<br>(0.001" 分割)            |
|               |      | T 型槽<br>T - Slot                                      | 22 x 160 x 6 (寬 x 間距 x 溝)                      | 22 x 160 x 6 (寬 x 間距 x 溝)                      | 22 x P100 x 7                            | 22 x P100 x 9                            |
|               |      | 最大負荷<br>Max. loading                                  | 3500 kg  | 3500 kg  | 2000 kg                                  | 2000 kg                                  |
| Travel        | 行程   | X/Y/Z 三軸行程<br>X/Y/Z Travel                            | 2200 / 1250 / 1250 mm                          | 2500 / 1250 / 1250 mm                          | 1270 x 1250 x 1050 mm                    | 1530 x 1250 x 1250mm                     |
|               |      | 主軸端面至工作台中心距離<br>Spindle nose to work table center     | 200 ~ 1450 mm                                  | 200 ~ 1450 mm                                  | 230 ~ 1280 mm                            | 230 ~ 1480 mm                            |
| Spindle       | 主軸   | 主軸中心至工作台距離<br>Spindle center to work table surface    | 250 ~ 1500 mm                                  | 250 ~ 1500 mm                                  | 50 ~ 1300 mm                             | 50 ~ 1300 mm                             |
|               |      | 主軸傳動方式<br>Method of spindle                           | 齒輪頭 (兩段變速)<br>Gear Head (Hi-Low 2 speed)       | 齒輪頭 (兩段變速)<br>Gear Head (Hi-Low 2 speed)       | 齒輪頭 (兩段變速)<br>Gear Head (Hi-Low 2 speed) | 齒輪頭 (兩段變速)<br>Gear Head (Hi-Low 2 speed) |
|               |      | 主軸錐孔<br>Spindle taper                                 | BT-50  | BT-50  | BT-50                                    | BT-50                                    |
|               |      | 主軸內徑<br>Spindle diameter                              | 100 mm   | 100 mm   | 100 mm                                   | 100 mm                                   |
| Feedrate      | 快速移動 | 主軸轉速<br>Spindle speed                                 | 6000 rpm (齒輪頭 - 高低檔)                           | 6000 rpm (齒輪頭 - 高低檔)                           | 6000 rpm (齒輪頭 - 高低檔)                     | 6000 rpm (齒輪頭 - 高低檔)                     |
|               |      | 三軸滑道<br>X/Y/Z 3 axis slide way                        | X, Z (硬軌 / Box Way)<br>Y (線軌 / Linear Way)     | X, Z (硬軌 / Box Way)<br>Y (線軌 / Linear Way)     | 三軸滾柱線軌<br>3 Axis Roller Type Linear Way  | 三軸滾柱線軌<br>3 Axis Roller Type Linear Way  |
|               |      | 三軸切削進給速率<br>X/Y/Z 3axis cutting feed rate             | 6 m/min  | 6 m/min  | 15 / 15 / 12 m/min                       | 15 / 15 / 12 m/min                       |
|               |      | 三軸快速移動率<br>X/Y/Z 3 axis rapid feed rate               | 12 (X),10(Y,Z) m/min                           | 12 (X),10(Y,Z) m/min                           | 6 m/min                                  | 6 m/min                                  |
| ATC           | 刀庫   | 換刀機構<br>ATC   | 凸輪   | 凸輪   | 鏈條式                                      | 鏈條式                                      |
|               |      | 刀具選擇<br>Tool select                                   | 刀臂式換刀 / ARM Type                               | 刀臂式換刀 / ARM Type                               | 鏈條式換刀 / CHAIN Type                       | 鏈條式換刀 / CHAIN Type                       |
|               |      | 相鄰刀最大直徑 x 長度<br>Max. tool dia x length                | Ø105 x 400 mm                                  | Ø105 x 400 mm                                  | Ø125 x 400 mm                            | Ø125 x 400 mm                            |
|               |      | 刀具最大重量<br>Max. tool weight                            | 15 kg  | 15 kg  | 15 kg                                    | 15 kg                                    |
|               |      | 刀具刀柄規格<br>Tool shank                                  | BT-50  | BT-50  | BT-50                                    | BT-50                                    |
|               |      | 刀柄容量<br>Tool magazine capacity                        | 24T  | 24T  | 40T                                      | 40T                                      |
| Motor         | 驅動馬達 | 主軸驅動馬達 (連續 / 30 分定格)<br>Spindle motor (con. / 30mins) | 18.5 / 22 kw                                   | 18.5 / 22 kw                                   | 15 / 18.5 kw                             | 15 / 18.5 kw                             |
|               |      | X/Y/Z 驅動馬達<br>X/Y/Z motor                             | 9 / 9 / 9 kw                                   | 9 / 9 / 9 kw                                   | 7 / 6 / 7 / 7 kw                         | 7 / 6 / 7 / 7 kw                         |
|               |      | X/Y/Z 滾珠螺桿<br>X/Y/Z ball screw                        | Ø50mm x P12 / Ø63mm x P12<br>Ø63mm P12 (X/Y/Z) | Ø50mm x P12 / Ø63mm x P12<br>Ø63mm P12 (X/Y/Z) | X/Z:Ø50 x P10, Y:Ø63 x P12               | X/Z:Ø50 x P10, Y:Ø63 x P12               |
|               |      | 切削水馬達<br>Water tank motor                             | 660 W  | 660 W  | 660 W                                    | 660 W                                    |
| Miscellaneous | 一般規格 | 外型尺寸 (長、寬、高)<br>External dimension (L * W * H)        | 6100 x 5982 x 4011 mm<br>(左右 x 前後 x 上下)        | 6100 x 5982 x 4011 mm<br>(左右 x 前後 x 上下)        | 6218 x 5646 x 3957 mm                    | 6218 x 5646 x 3957 mm                    |
|               |      | 淨重 / 毛重<br>N.W / G.W                                  | 27000 / 30000 kg                               | 29000 / 32000 kg                               | 17000 / 19500 kg                         | 19000 / 21500 kg                         |
|               |      | 護罩<br>Splash cover                                    | 半罩 / Half splash cover                         | 半罩 / Half splash cover                         | 半罩 / Half splash cover                   | 半罩 / Half splash cover                   |
|               |      | 水箱容量<br>Water tank                                    | 1000L  | 1000L  | 1000L                                    | 1000L                                    |
|               |      | 出貨建議<br>Shipment Require                              | 40" FR + 40"HQ                                 | 40" FR + 40"HQ                                 | 40" FR + 40"HQ                           | 40" FR + 40"HQ                           |

· 由於本公司不斷的研究改進，本型錄所示機械規格特性本公司有變更之權利，恕不另行通知。 · All specifications and designs are subject to change without prior notice.

## / STANDARD ACCESSORIES / 標準配件

- FANUC Oi MF controller + 8.4" LCD
- Gear Head Spindle
- Spindle speed 6,000 rpm , Gear Head
- Spindle oil cooler
- Spindle curtain coolant
- Coolant system
- Auto power off
- Heat exchanger for electric cabinet
- Auto lubrication system
- ATC:BMH 24T arm type  
LMH 40T chain type
- Rigid tapping
- Half cover
- M code air blasting
- Oil skimmer
- Double screw type chip conveyor with cart
- Quartz working light
- Tool box with tools
- Transformer (Export only)
- 發那科Oi MF控制器+8.4" LCD
- 主軸採齒輪頭
- 主軸轉速6,000rpm(齒輪頭)
- 主軸油冷機
- 主軸環狀噴水
- 切削液系統
- 自動斷電系統
- 電器箱熱交換器
- 自動潤滑單元
- 刀庫:BMH24刀臂式  
LMH40刀鏈條式
- 剛性攻牙
- 半罩钣金
- M碼吹氣
- 油水分離機
- 雙螺旋排屑裝置
- 工作石英燈
- 工具箱與工具
- 變壓器(外銷專用)

## / OPTIONAL ACCESSORIES / 選購配備

- M800 / Fanuc-31iMB  
Heidenhain / Siemens
- 10.4" LCD display
- CTS 20/50/70 BAR
- ATC:Chain type 60T (LMH)
- Chain type 32T (BMH)
- Direct drive spindle 8,000/10,000 rpm (BT50)
- 3 axis linear scale
- Work piece and tool length measuring device
- Air conditioner for electric cabinet
- Fully splash cover
- 4th axis preparation (LMH std.)
- 5th axis preparation
- CE Standard
- Chain type chip conveyor with cart
- 4th axis rotary table (LMH std.)
- M800 / Fanuc-31iMB  
海德漢 / 西門子
- 10.4" 彩色螢幕
- 主軸中心出水 20/50/70BAR
- 刀庫:鏈條式 60 (LMH)
- 刀臂式 32把刀 (BMH)
- 直結式主軸 8,000/10,000 rpm (BT50)
- 3軸光學尺
- 工件量測與刀長量測系統
- 電器箱冷氣機
- 全罩式钣金
- 第4軸預備 (LMH標準)
- 第5軸預備
- CE標準
- 鏈條式鐵屑輸送機含集屑車
- 第四軸工作台(LMH標準)



# JMH Series / SPECIFICATIONS

|                    | MODEL                                | 型號                   | UNIT   | JMH-400 (40)        | JMH-500 (40)          |
|--------------------|--------------------------------------|----------------------|--------|---------------------|-----------------------|
| TRAVEL<br>行程       | X axis travel                        | X軸行程                 | mm     | 630                 | 800                   |
|                    | Y axis travel                        | Y軸行程                 | mm     | 630                 | 725                   |
|                    | Z axis travel                        | Z軸行程                 | mm     | 630                 | 725                   |
|                    | Spindle center to work table surface | 主軸中心至工作台面距離          | mm     | 50 ~ 680            | 50 ~ 775              |
|                    | Spindle nose to work table center    | 主軸鼻端至工作台中心           | mm     | 130 ~ 760           | 150 ~ 875             |
| TABLE<br>工作台       | Table surface to floor               | 工作台面至地面距離            | mm     | 1100                | 1100                  |
|                    | Table size                           | 工作台面積                | mm     | (400 x 400) x 2pcs  | (500 x 500) x 2pcs    |
|                    | T - slot / Bolt Spec.                | 螺栓規格                 | mm     | 24 ~ M10 x P1.5 x20 | 24 - M16 x P2.0       |
|                    | Max. loading                         | 工作台最大荷重              | kg     | 400                 | 500                   |
|                    | Divide angle                         | 工作台最小分度              | deg    | 0.001°              | 1° (OPT. 0.001° / 5°) |
| SPINDLE<br>主軸      | Spindle taper                        | 主軸錐度                 |        | BT-40               | BT-40                 |
|                    | Method of spindle                    | 主軸型式                 |        | DDS (直結式)           | DDS (直結式)             |
|                    | Spindle diameter                     | 主軸軸承內徑               | mm     | Ø70                 | Ø70                   |
|                    | Spindle speed                        | 主軸轉速                 | rpm    | 10000               | 10000                 |
| FEEDRATE<br>快速進給   | Spindle motor (cont / 30 min)        | 主軸馬達(30分定格)          | kw     | 15 / 18.5 (α15)     | 15 / 18.5 (α15)       |
|                    | 3 - axes cutting feedrate            | 三軸切削進給率              | mm/min | 1 ~ 10000           | 1 ~ 10000             |
|                    | 3 - axes rapid feedrate              | 三軸快速進給率              | M/min  | 36 ( 48 opt. )      | 30 (36 opt.)          |
| ATC<br>自動換刀        | 3 - axes min. setting unit           | 三軸最小設定單位             | mm     | 0.001               | 0.001                 |
|                    | Tool selection                       | 刀具數量                 | pcs    | 40 ( 60 opt. )      | 40 ( 60 opt. )        |
|                    | Max. tool diameter x length          | 最大刀具直徑               |        | Ø80 x 300           | Ø85 x 300             |
|                    | Max. tool weight                     | 最大刀具重量               | kg     | 10                  | 10                    |
|                    | Tool shank                           | 刀柄                   | type   | P40T -1             | P40T -1               |
|                    | Tool change time ( t - t )           | 換刀時間/ 刀對刀            |        | 1.6 ( 60 HZ )       | 1.6 ( 60 HZ )         |
| APC<br>自動交換<br>工作台 | Number of pallets                    | 托板數量                 | PCS    | 2                   | 2                     |
|                    | Method of pallet change              | 交換方式                 | type   | ROTARY ( 迴轉式 )      | ROTARY ( 迴轉式 )        |
|                    | Pallet change time                   | 交換時間                 | sec    | 8 SEC               | 8 SEC                 |
| OTHER<br>其它        | Floor space ( L x W x H )            | 機器佔地面積 ( 長 x 寬 x 高 ) | mm     | 4713 x 3056 x 2735  | 4835 x 3227 x 2957    |
|                    | Machine weight ( N.W / G.W )         | 機器重量 ( 淨重 / 毛重 )     | kg     | 11500 / 13500       | 13500 / 16500         |
|                    | Power capacity require               | 電力需求                 | KVA    | 40                  | 40                    |
|                    | Shipment Require ( Suggest )         | 出貨建議                 | inch   | 40" HQ              | 40" HQ                |

· Specifications subject to change without prior notice.

## / STANDARD ACCESSORIES

- Rotary type automatic pallet changer
- 1° indexing rotary table (JMH-400 std. 0.001°)
- Mitsubishi or Fanuc control
- 40 tools chain type ATC
- BT-40, JMH-400 / JMH-500(40) 10,000 rpm Direct drive
- BT-50, JMH-500 : 6,000 rpm direct drive
- BT-50, JMH-630/800/1000 : 6,000 rpm Japan Gear head
- Rigid roller type linear guide way system
- Spindle curtain coolant
- Spindle oil cooler
- Heat exchanger for electrical cabinet
- 3 areas powerful chip flushing system
- Automatic lubrication system
- Fully enclosed splash guard
- Chain type chip conveyor with cart
- Leveling bolts and pads
- Tool box with tools
- Operation and maintenance manual
- Transformer (Export only) and Export packing

## / 標準配件

- 迴轉式自動交換工作台-APC
- 1°分割旋轉工作台(JMH-400標配0.001°)
- 三菱或發那科控制器
- 40刀鏈條式刀庫
- BT-40, JMH-400/JMH-500(40): 10,000 rpm 直結式主軸
- BT-50, JMH-500: 6,000 rpm 直結式主軸
- BT-50, JMH-630/800/1000: 6,000 rpm 日製齒輪式主軸
- 高剛性滾柱型線軌
- 主軸環狀冷卻系統
- 主軸油溫冷卻系統
- 電氣箱熱交換器
- 三區域強力沖屑系統
- 自動潤滑系統
- 全罩式鈹金
- 履帶式鐵屑輸送機與集屑車
- 水平調整螺栓與墊片
- 工具箱及工具
- 操作及維護保養手冊
- 變壓器(外銷專用)與外銷出貨裝箱



# 規格表

| JMH-500 (50)          | JMH-630 (50)                            | JMH-800 (50)                            | JMH-1000 (50)                           |
|-----------------------|---|---|---|
| 800                   | 1020                                    | 1270                                    | 1530                                    |
| 725                   | 850                                     | 1050                                    | 1250                                    |
| 725                   | 890                                     | 1050                                    | 1200                                    |
| 50 ~ 775              | 70 ~ 920                                | 50 ~ 1100                               | 50 ~ 1300                               |
| 200 ~ 925             | 200 ~ 1090                              | 230 ~ 1280                              | 270 ~ 1470                              |
| 1100                  | 1300                                    | 1320                                    | 1360                                    |
| (500 x 500) x 2pcs    | (630 x 630) x 2pcs                      | (800 x 800) x 2pcs                      | (1000 x 1000) x 2pcs                    |
| 24 - M16 x P2.0       | 24-M16 x P2.0                           | 24-M16 x P2.0                           | 24-M16 x P2.5                           |
| 500                   | 1200                                    | 2000                                    | 2000                                    |
| 1° (OPT. 0.001° / 5°) | 1° (OPT. 0.001° / 5°)                   | 1° (OPT. 0.001° / 5°)                   | 1° (OPT. 0.001° / 5°)                   |
| BT-50                 | BT-50                                   | BT-50                                   | BT-50                                   |
| DDS (直結式)             | Gear Head (齒輪式)                         | Gear Head (齒輪式)                         | Gear Head (齒輪式)                         |
| Ø100                  | Ø100                                    | Ø100                                    | Ø100                                    |
| 6000                  | 6000                                    | 6000                                    | 6000                                    |
| 15 / 18.5 (α15)       | 15 / 18.5 (α15) /<br>22 / 26 (α22 opt.) | 15 / 18.5 (α15) /<br>22 / 26 (α22 opt.) | 15 / 18.5 (α15) /<br>22 / 26 (α22 opt.) |
| 1 ~ 10000             | 1 ~ 6000                                | 1 ~ 6000                                | 1 ~ 6000                                |
| 30 (36 opt.)          | 24 (30 opt.)                            | 15 / 15 / 12                            | 15 / 15 / 12                            |
| 0.001                 | 0.001                                   | 0.001                                   | 0.001                                   |
| 40 (60 opt.)          | 40 (60 / 90 / 120 opt.)                 | 40 (60 / 90 / 120 opt.)                 | 40 (60 / 90 / 120 opt.)                 |
| Ø125 x 400            | Ø125 x 500                              | Ø125 x 600                              | Ø125 x 600                              |
| 20                    | 20                                      | 20                                      | 20                                      |
| P50T -1               | P50T -1                                 | P50T -1                                 | P50T -1                                 |
| 2.9 (60 HZ)           | 2.9 (60 HZ)                             | 2.9 (60 HZ)                             | 2.9 (60 HZ)                             |
| 2                     | 2                                       | 2                                       | 2                                       |
| ROTARY (迴轉式)          | ROTARY (迴轉式)                            | ROTARY (迴轉式)                            | ROTARY (迴轉式)                            |
| 8 SEC                 | 10 SEC                                  | 12 SEC                                  | 18 SEC                                  |
| 4835 x 3227 x 2957    | 6664 x 4175 x 3632                      | 7500 x 4200 x 3800                      | 8320 x 4230 x 5665                      |
| 16000 / 19000         | 27000 / 31000                           | 29000 / 33000                           | 31000 / 35000                           |
| 40                    | 50                                      | 50                                      | 50                                      |
| 40" HQ                | 40" FR + 40" HQ                         | 40" FR + 40" HQ                         | 40" FR + 40" HQ                         |

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## / OPTIONAL ACCESSORIES

- 0.001° or 5° indexing rotary table (JMH-400, 0.001° std.)
- 60,90,120 tools chain type magazine
- BT-40, 10,000~24,000 rpm direct drive (JMH-400/JMH-500)
- BT-50, 8,000~12,000 rpm direct drive (JMH-500)
- BT-50, 8,000 or 10,000 rpm direct drive (JMH-630~JMH-1000)
- Coolant through spindle (CTS-20/30/50/70 bar)
- 3 axes linear scales
- Oil skimmer
- Air conditioner for electrical cabinet
- Automatic tool length measuring device
- Automatic workpiece measuring device
- Coolant through tool holder 20/50 bar (without tool holder)
- CE Standard
- SIEMENS, HEIDENHAIN, FAGOR controller
- Pallet automation system (Flexible Manufacture System)
- High torque Gear box (JMH-400/JMH-500)
- Ball screw coolant system (JMH-630/JMH-800/JMH-1000 std.)

## / 選購配備

- 0.001° or 5° 分割旋轉工作台 (JMH-400, 0.001° 標準)
- 60刀, 90刀, 120刀, 鏈條式刀庫
- BT-40, 10,000 ~ 24,000 rpm 直結式主軸 (JMH-400 / JMH-500)
- BT-50, 8,000 ~ 12,000 rpm 直結式主軸 (JMH-500)
- BT-50, 8,000 或 10,000 rpm 直結式主軸 (JMH-630 ~ JMH-1000)
- 主軸中心出水 (CTS-20/30/50/70 bar)
- 三軸光學尺
- 油水分離機
- 電氣箱空調冷卻機
- 自動刀長量測裝置
- 自動工件量測裝置
- 油路刀把冷卻系統 (不含刀把)
- CE標準
- 西門子, 海德漢, 發格控制器
- 工作台自動化系統
- 高扭力齒輪箱 (JMH-400 / JMH-500)
- 螺桿中空冷卻系統 (JMH-630 / JMH-800 / JMH-1000 標準)



# MILLSTAR

JIUH-YEH

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JMH-400/500/630/800/1000



BMH-2200/2500



LMH-800R/1000R

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