



## TAIKAN DRILLING AND TAPPING CENTER SERIES

HIGH-END INTELLIGENT EQUIPMENT  
INTEGRATED SOLUTIONS SERVICE PROVIDER



### SHENZHEN CREATE CENTURY MACHINERY CO.,LTD.

NO.152, Nanpu Road, Xinqiao Street, Bao'an District, Shenzhen City,  
Guangdong Province, China

Tel : +86 755-27255633/733/833

Fax : +86 755-27255933 E-mail : overseas@szccm.com

Http: // www.taikanmachine.com



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Taikan Sunshine Service



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16

Taikan was established in 2005  
16th anniversary

500

Shenzhen's top 500 enterprises ranked 226nd in 2020

100

Shenzhen Bao'an District  
Top 100 enterprises in added value  
Top 100 enterprises in output value  
Top 100 enterprises in paying tax  
Top 100 enterprises in innovation

HIGH-END INTELLIGENT EQUIPMENT  
INTEGRATED SOLUTIONS SERVICE PROVIDER

## COMPANY PROFILE

Based on the machine tool and supporting industry, Taikan will be bigger, stronger and more permanent. In the future, Taikan will develop in the direction of high precision, high efficiency, intelligence and complete sets, and vigorously develop the field of robots and intelligent equipment, products are widely used in 3C, 5G, automation equipment, energy, environmental protection and automobile industry etc. We are committed to promoting the upgrade of people's quality of life with product quality and bringing efficient, green and innovative processing applications and service experience to the world industry.

### Academician (Expert) workstation

The first academician expert workstation in Shenzhen

### Engineering lab

With an area of 1,300 square meters and a total investment up to 30 million yuan, it is equipped with material analysis room, functional component testing room, precision measurement room, comprehensive laboratory, vibration testing room, mechanical performance testing room and EMC testing room.

### Innovation base

Shenzhen Headquarters Innovation Direction: Intelligent Machine Tools, Automation Solutions  
Suzhou Innovation Direction: Parts Machine, Mold Machine, Double Column Machine、CNC lathe

### Qualification honor

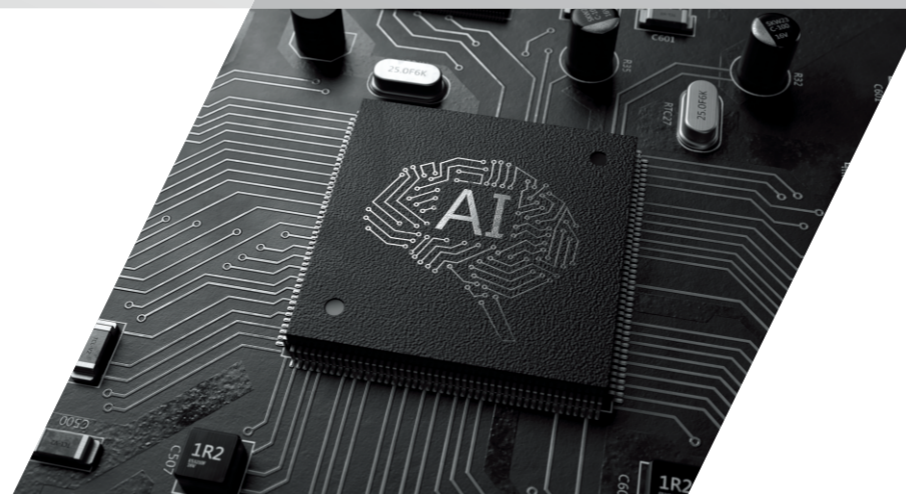
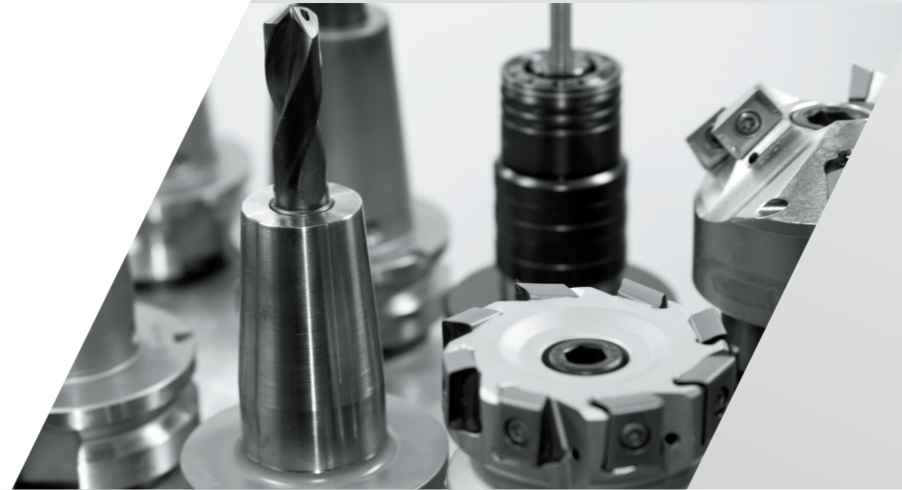
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|--|--|
| National high-tech enterprises   | Shenzhen Mayor Quality Award                                   |
| Famous brand in Guangdong province.  | Top 100 quality enterprises in Shenzhen                        |
| Top 500 manufacturers in Guangdong province                                    | 2nd prize of science and technology progress award in Shenzhen |
| Cultivating enterprises of strategic emerging industries in Guangdong province | ISO9001: 2008 Quality Management System Certification          |
| Abide by the contract and credit enterprises in Guangdong province             | ISO14000 Environmental Management System Certification         |
| Famous brand in Shenzhen   |  |

## TECHNOLOGY RESEARCH AND DEVELOPMENT

Taikan Precision Machinery always takes scientific and technological innovation, product upgrade and technical transformation as the key development goals, invests heavily in scientific and technological research and development projects, actively cooperates with domestic famous universities, colleges and research units in production, learning and research, and has achieved significant scientific and technological achievements and obtained more than 500 technical invention patents.

We have technical consultants consist of authoritative industry experts from Chinese Mainland, Taiwan, Korea, Malaysia , Gerny etc ,and industry leading more than 400 people R&D team. Through science and research activities, we have cultivated a group of researchers with both integrity and ability to establish strong foundation for company's long-term development.

**400+** R&D Staff    **500+** Patent Technology    **4** pcs R&D Center



### Casting technology for CNC machine bed

Make the machine maintain the geometric accuracy, movement precision and positioning accuracy in long-term by specially designed machine casting structure. Based on finite element analysis and modal analysis, through multiple optimizations, we designed high rigidity and superior vibration resistance machine structure. Applying symmetrical and heat balance design to improve the machine deformation, so as to make higher precision.

### Intelligent control technology

Through intelligent system design, Taikan machine can carry high speed and high precision control, such as preread 30 program segments to calculate route automatically, large preread content make sure accurate calculation. The system can calculate acceleration and deceleration time automatically during machining based on program route. According to calculated route angle, it can get best speed control on the corner. Before machining the corner, the system automatically calculates best machining speed to make sure the accuracy according to angular dimension and machining speed. During machining, the system automatically selects the smooth route generated by vector precision interpolation. By the use of feed-forward control, the system can reduce machining allowance by the control time delay, improve machining precision.

### AI tool life management technology

In the process of machining mechanical parts, it is very important to manage the tool life. Taikan has been engaged in developing the method of tool life management function for CNC machine tools by applying Mitsubishi, FANUC and Siemens macro programs, which involves automatic statistics, display and alarm of tool cutting time, and automatic clearing of alarm and related data. Take use of the tool life management to monitor the tool usage, and status, and launch the back up tool when the usage status reached the setting value, so as to prevent tool broken or other issues

### ATC tool change speed up technology

Taikan increases the action speed based on the conventional automatic tool changer, or adopts mechanisms and drive elements with faster action speed. Design the form and position of tool magazine and tool changer according to the structural characteristics of high-speed tool machines.

...  
SEIKO  
MANUFACTURING



...  
SUNSHINE SERVICE



3<sup>pcs</sup>

3 modern production bases

300000<sup>+</sup> m<sup>2</sup>

plant area of 300000 square meters

3000<sup>+</sup>

production output around 3000 units per month

PRECISION ASSEMBLY

Precision assembly is the most important step of the machining center. In order to ensure the accuracy of the product. Our company hold all the assembly 100% complete by ourselves to ensure the accuracy and quality of the product. To make sure the accuracy of each machine, we grasp every details of each steps, refine assembly all must undergo rigorous inspection and record for each step before continuing to the next process.

- Base scraping
- Guide rail correction
- Bearing seat correction
- Tailstock correction

PRODUCT TESTING

The manufacturing process including manufacturing, testing, inspection, performance test etc are strictly controlled in accordance with the highest standard, to ensure the perfect quality and performance.

- Spindle temperature test
- Inspection of spindle inspection rod
- Laser detection
- Spindle pull test
- Geometric accuracy test
- Spindle vibration detection
- Telescopic ballbar system roundness test

Sales Network

Taikan Precision Machinery has a worldwide sales and service network, with foreign networks covering Vietnam, Thailand, Malaysia, Philippines, Indonesia, Pakistan, India, Korea, Iran, Saudi Arabia, Mexico, Argentina, Brazil, Peru, Russia, Germany, France, Turkey, Spain, Czech Republic and other countries and regions. Domestically we have branches and offices in Beijing, Tianjin, Hebei, Shandong, Henan, Shaanxi, Sichuan, Chongqing, Zhejiang, Jiangsu, Shanghai, Hubei, Hunan, Guangdong, etc. With nearly 100 partners nationwide, we are dedicated to providing comprehensive, convenient and fast sales and service support to our customers.

Taikan provides professional after-sales service teams for customers with full network service, multiple after-sales repair methods to ensure timely and high- efficient service, 24-hour service hotline, sunshine service warranty platform. Whether after-sales timeliness or service attitude, we strive to do better.

Service Aim

Heart and soul, fast, efficient, cheap, value-added service to every customer forever!

Service Features

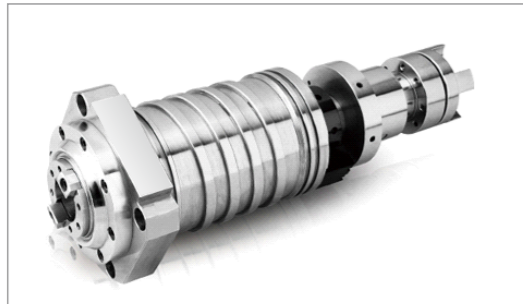
- 01 VIP 24-hour service
- 02 Within 10mins response to maintenance
- 03 All day factory tour service
- 04 Baby-sister type training
- 05 Quick repair service for precision parts

# HIGH PERFORMANCE SPINDLE

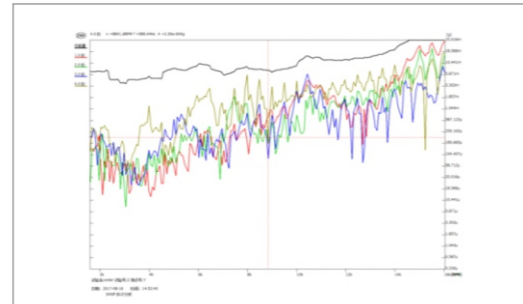
## High Performance Spindle

High precision spindle with direct driven, quick response, high efficiency and reliability. The spindle is direct driven by servo motor, transmit torque directly, to achieve better drilling and tapping effect. High speed spindle equipped with oil temperature control system, detect the temperature difference automatically, to make sure the spindle is running under the constant temperature, improve spindle precision and lifecycle.

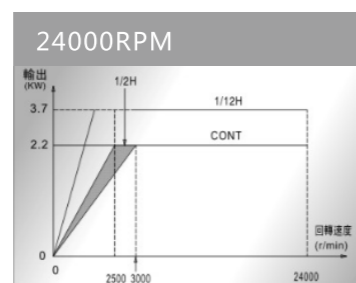
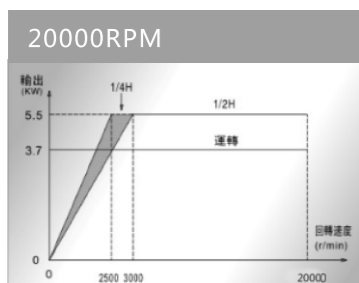
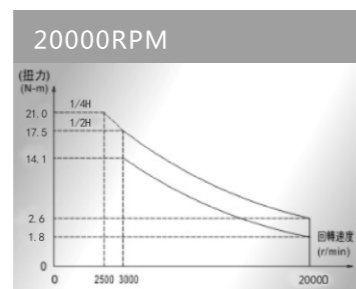
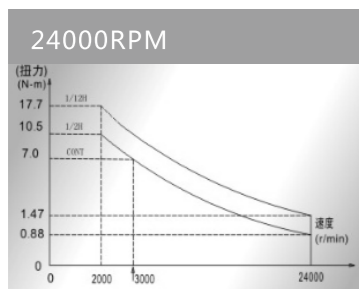
### Mechanical spindle



### Spindle speed detecting test



### Spindle power and torque



# HIGH PRECISION SPINDLE

## High precision motorized spindle

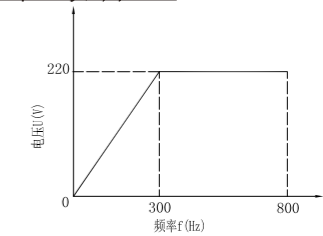
High precision motorized spindle introduces mouth ceramic ball bearing to increase rigidity, the highest speed, working voltage, torque and power are consistent with similar motorized spindle, stable and reliable quality and long service life. High precision motorized spindle when in high speed, the vibration still keeps low value, the noise is very low, and the rotating inertia is small, which ensures the accuracy of processing and makes the surface of workpiece achieve high gloss effect.

### Motorized spindle

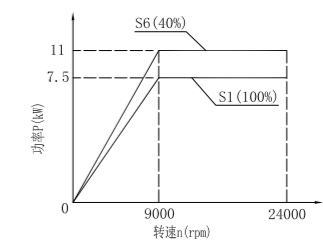


### Motor characteristics diagram of motorized spindle

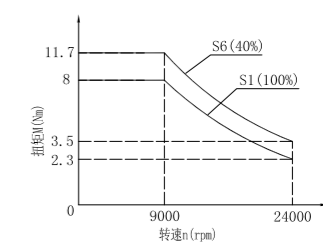
#### Voltage/Frequency (U/f) Curve



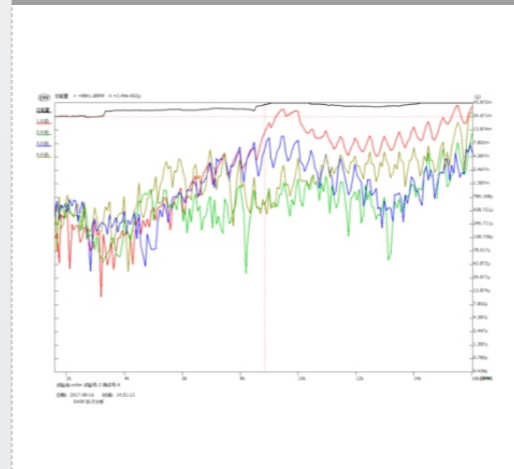
#### Power/Speed (P/n) Curve



#### Torque/Speed (M/n) Curve



### Spindle speed detecting test



## TAIKAN NEW KNIFE LIBRARY

Taikan newly researched and developed ,designed independently and produced new tool magazine with independent intellectual property rights.It adopts absolute value encoder with high precision to realize accuracy position of clamping knives.The guide plate is optimized to make clasping knife more smooth and stable.



21T- Adopt Mitsubishi servo motor, equipped with M80A system ,to improve response speed and stability of tool magazine .Tool changing is only 1S.



26T-Tool to Tool 1.35S,large capacity of tool magazine to satisfy a machine to complete all processes,and support Max 3Kg.



## STRICTLY CHECK ON EVERY DETAILS OF THE ASSEMBLY

Precision assembly is the most important step of the machining center. In order to ensure the accuracy of the product.

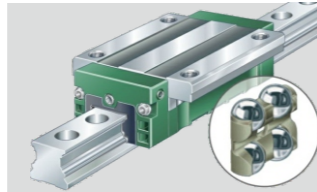
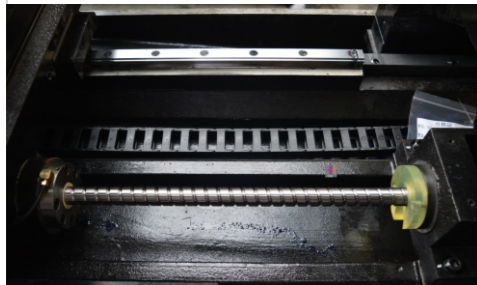
Our company hold all the assembly 100% complete by ourself to ensure the accuracy and quality of the product.

To make sure the accuracy of each machine, we grasp every detail of each step, refine assembly all must undergo a rigorous inspection an record for each step before continuing to the next process.



# INTRODUCTION TO MAIN FUNCTIONAL PARTS

The three-axis adopt precision-grade high-speed silent ball screw, with low friction resistance and high positioning accuracy to ensure transmission precision.

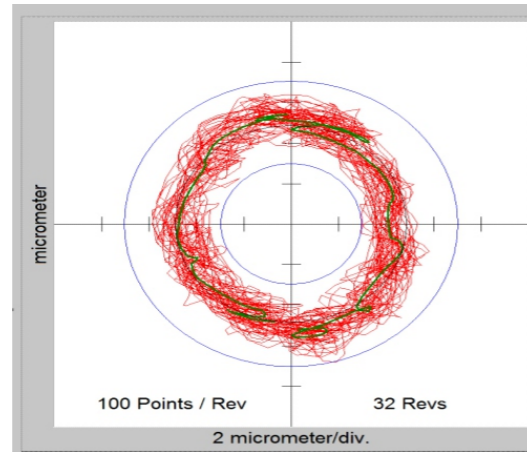
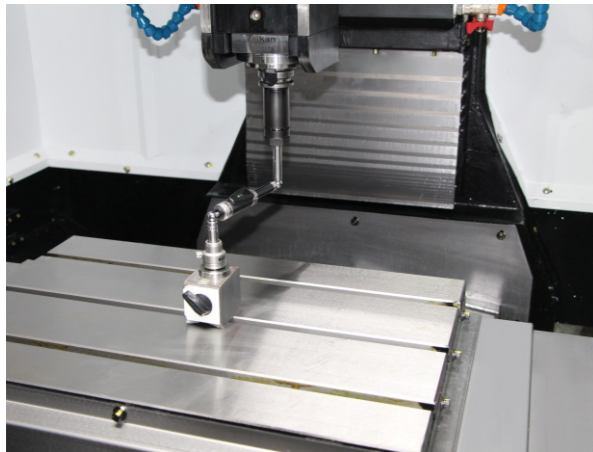


The three-axis adopt high rigidity extended slider, which can bear greater load, improve machining accuracy and service life, and meet the four-axis, fixture load and high-speed cutting processing.

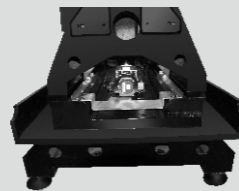
**Extra-wide base**  
Best slanting angle base and special designed chip deflector system, avoid the chip pile up, good for the cutting fluid counter flow smoothly.



High precise ball screw to ensure position accuracy. The roundness is within 0.015mm under ballbar test.



Cast iron material is HT300 with Meehanite casting technology, to ensure machine high rigidity and stability.



**Extra-wide span**  
Big span is good for dispersing gravity and cutting force, make the force line optimized and increase load.

**T-500  
SERIES**

## HIGH RIGIDITY HIGH PRECISION DRILLING AND TAPPING PROCESSING CENTER

### HIGH RIGIDITY HIGH PRECISION

Widely used in 3C industry, auto parts, small mold processing, Medical equipment and other industries in the small plate parts, disk-shaped parts, shell type processing. It is mainly used to process the middle frame and back cover of cell phones and some non-ferrous metals in 3C industry.



HIGH RIGIDITY HIGH PRECISION TAPPING CENTER

# T-500 SERIES

■ ■ ■



## PRODUCT ADVANTAGE

■ ■ ■

### 1. FEATURE:

TaikanDrilling and Tapping Machine Series: Integrates drilling, tapping, and milling processing. With high processing efficiency, high processing stability and high yield rate, the machine has won the praise of customers and good feedback from the market. The 60,000 units of the global industry are the best proof of Taikan's professionalism and advantages in the field of drilling and tapping machines.

### 2. APPLICATION

The machine tool is widely used in 3C industry, auto parts, small mold processing, medical equipment and other industries in the small plate parts, disk-shaped parts, shell type processing. It is mainly used to process the middle frame and back cover of cell phones and some non-ferrous metals in 3C industry.

### 3. DURABLE IN USE

Rigorous inner protective design makes sure three axis lead screw durable in use. Perfect alarm system to prevent potential equipment damage.

### 4. GOOD MACHINE ACCURACY

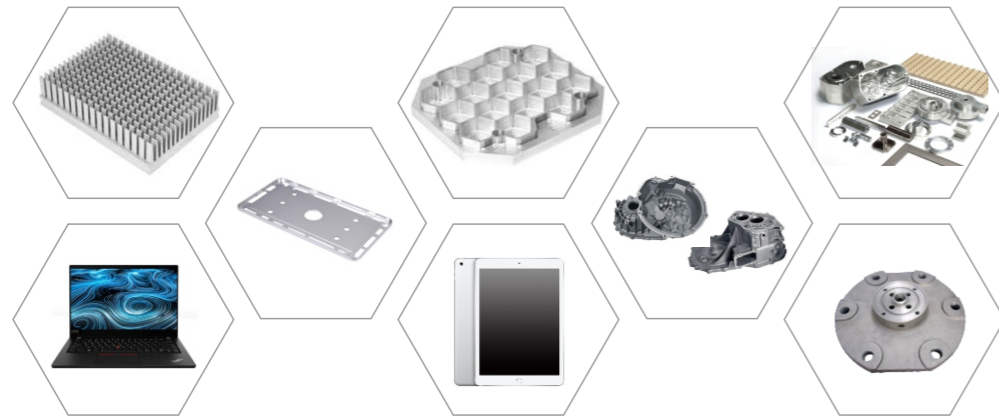
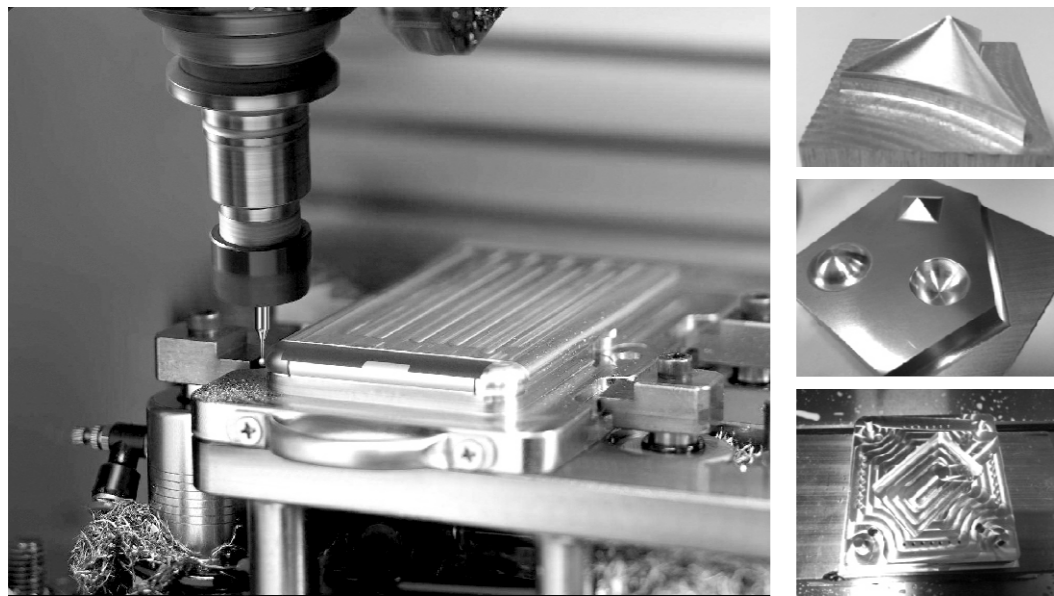
Meehanite cast iron with complete heat treatment, to eliminate internal stress, ensures the machine accuracy. X, Y and Z axis use high C3 level ball screw and P level precision linear guide.

### 5. EASIER FOR OPERATION

Mitsubishi cnc control is friendly human machine interface and simply operation. Extra-wide protective cover is convenient for work piece load and unload.

...  
**MACHINING WORKPIECE  
 DISPLAY** 

Suitable for parts and mold machining of multiple industries.  
 Excellent machining function and efficiency reflect good performance ratio.



HIGH SPEED DRILLING AND TAPPING CENTER

# T-500B

PRODUCT DESCRIPTION

**High stability**

Extra big span with six support feet, excellent mechanical property, ensure High stability during machining.

**Quick response**

Three axes adopt topological optimization design, improve modular structure and drive system rigidity, decrease movement parts inertia, realize each axis high dynamic response.



HIGH SPEED DRILLING AND TAPPING CENTER

# T-500C

Motorized spindle has the advantage of quick response, acceleration and deceleration within 0.3s.

**Equip with new technology-motorized spindle**

Motorized spindle break the combination of traditional mechanical spindle and motor. Motorized spindle has the advantage of quick response, acceleration and deceleration within 0.3s.

**Lower weight structure**

Motorized spindle makes the spindle box compact, lower weight, reduce inertia and improve response speed.

**Perfect machining surface**

High precision motorized spindle with high speed and quick response, make T-500C better machining surface comparing to other brand.



HIGH SPEED DRILLING AND TAPPING CENTER

# T-530

**Develop based on market requirement**

In-depth study of stainless steel material properties and parts processing technology; combined with years of technical accumulation, breakthrough industry Bottleneck, a new self-developed drilling and milling machine for stainless steel processing.

**New servo tool magazine**

Self-developed Taikan 21T new servo tool magazine, adopt high performance servo motor, realize tool changing fast and accurately. Innovate heavy and light tool double mode switch, improve tool change and reliability, Tool change speed T-T (tool-to-tool):1s

**Oil mist collection design**

The new inner and outer sheet metal protection and electrical box design completely isolate the harm of cutting oil mist to functional parts and electrical components. Optional with Taikan's self-developed high-efficiency oil mist collector to create a green workshop.

**Perfect customer supporting service**

For customer applications, a special experimental team is established to statistically analyze the test data of machining influencing factors such as cutting oil, cutting tools, cutting parameters and machining technology, and establish a perfect stainless steel machining application database.



DRILLING AND TAPPING MACHINE WITH PALLET CHANGE

# T-520-S

Double stations exchange worktable drilling and tapping machine

**Clamping & processings imultaneously**  
**High efficiency and high reliability**

Cam Mechanism + three-piece clutch teeth located double-station exchange worktable,time of exchange is 4.5S. New servo tool magazine ,26T is optional.

21T time of tool changing is 1S, and it is 1.5S for 26T.

X/Y axis is simultaneous with locating of additional axis and tool changing.  
Eliminating invalid actions and reducing non-processing time to realize continuous machining.



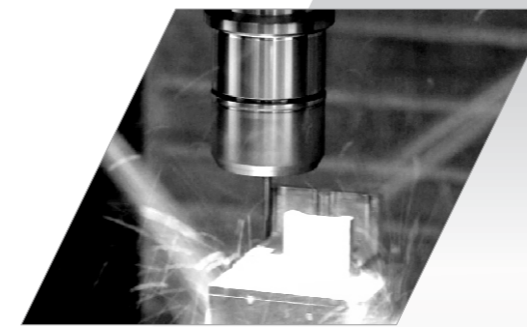
HIGH SPEED DRILLING AND TAPPING CENTER

# T-600B

High efficiency machining  
Tool changeover takes only 1 second

**X-axis 600mm machining travel**

Expand the machining field to meet more diversified needs of customers. Fast moving speed of 48m/min in three axes shortens processing time and improves processing efficiency.



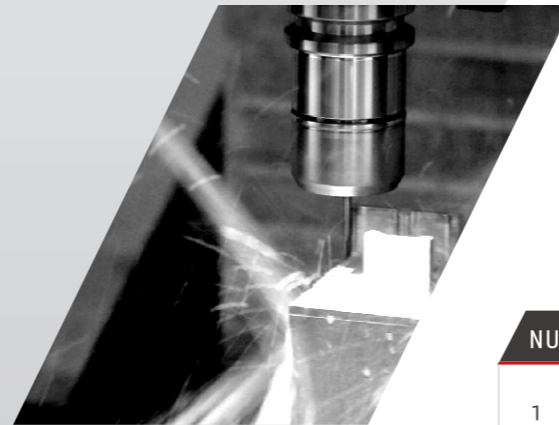
HIGH SPEED DRILLING AND TAPPING CENTER

# T-700B

High efficiency machining  
Tool changeover takes only 1 second

X-axis 700mm machining travel

Expanding the field of drilling and tapping machine processing to meet customers' requirements for large-sized parts.



## Mitsubishi M80A System



**FEATURES:**

- ★ Faster, smoother, more accurate, and easier
- ★ Minimize the user's production cycle cost
- ★ Mitsubishi Electric is the world's largest CNC dedicated CPU
- ★ High-precision circular core electrostatic capacitive touch screen
- ★ The world's fastest mobile controlled high-speed fiber network

**M80A SERIES ADVANCED DESIGN**

- ★ Improve machine design based on new hardware
- ★ It can realize the unique operation of the machine tool factory
- ★ 2 split multiscreen
- ★ Thin graphic design
- ★ Optional front or back installation

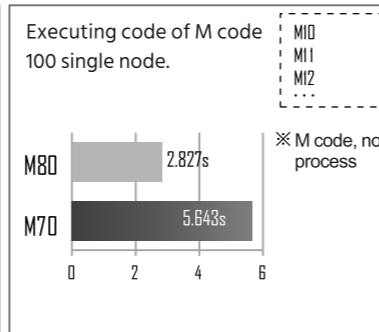
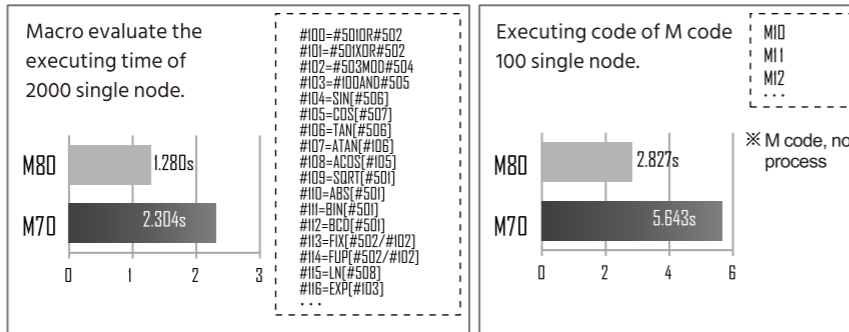
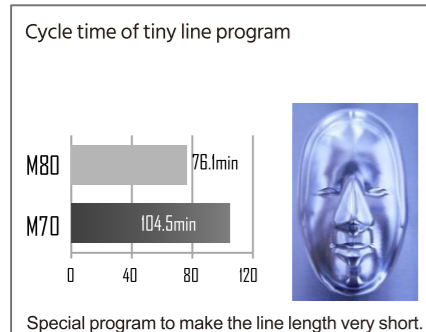
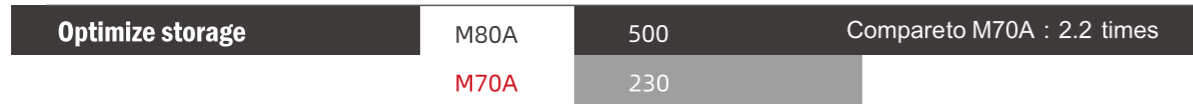
| NUM | M80A system main functions  | NUM | M80A system main functions                   |
|-----|---|-----|--|
| 1   | Maximum total control axes: 11 axes                                       | 38  | Digital and analog spindle available         |
|     | Maximum number of NC axes: 8 axes   | 39  | Spindle positioning                          |
|     | Maximum number of spindles to be controlled: 2 axes                       | 40  | Spindle synchronization control              |
| 2   | Maximum number of simultaneous contour control axes: 4 axes               | 41  | Tool compensation: 400 sets of offset groups |
| 3   | 8.4" LCD color touch screen   | 42  | G52~G59 Coordinate system: G52~G59           |
| 4   | 500K (1280m) Program capacity: 500K (1280m)                               | 43  | Coordinate rotation                          |
| 5   | High-speed machining mode 1   | 44  | G17,G18,G19Plane selection: G17,G18,G19      |
| 6   | High speed and high precision control                                     | 45  | Reference point 1,2,3,4 homing               |
| 7   | SSS control   | 46  | Select program segment to skip               |
| 8   | Tolerance control   | 47  | Single program segment                       |
| 9   | 0.0001 mm System can set the minimum unit: 0.0001 mm                      | 48  | Empty run                                    |
| 10  | Metric/Imperial conversion  | 49  | Mechanical locking                           |
| 11  | Decimal point input   | 50  | Auxiliary function lock                      |
| 12  | Positioning   | 51  | Graphical check                              |
| 13  | Linear interpolation  | 52  | Program restart                              |
| 14  | Circular interpolation  | 53  | Manual insertion, MDI insertion, etc.        |
| 15  | Helical interpolation   | 54  | Rigid tapping retraction                     |
| 16  | Polar interpolation   | 55  | Macro program                                |
| 17  | Polar coordinates   | 56  | Fixed cycle for hole                         |
| 18  | Automatic acceleration and deceleration control                           | 57  | Setting, external input mirroring            |
| 19  | High-speed rigid tapping  | 58  | R Arbitrary angle: chamfer/corner R          |
| 20  | Thread time constant switching  | 59  | Drawing size input                           |
| 21  | Manual rapid feed   | 60  | Programmable data input                      |
| 22  | JOG feed  | 61  | Automatic corner multiplier                  |
| 23  | Incremental feed  | 62  | Deceleration check                           |
| 24  | Handwheel feed  | 63  | Programming Wizard                           |
| 25  | Pause   | 64  | Pitch and backlash compensation              |
| 26  | Background editing  | 65  | Circular radius error compensation           |
| 27  | Operation input   | 66  | Dynamic accuracy compensation                |
| 28  | Absolute, incremental setting   | 67  | Tool life management                         |
| 29  | Screen saver  | 68  | Automatic power off                          |
| 30  | Parameter wizard  | 69  | Emergency stop                               |
| 31  | Alarm wizard  | 70  | Program and data protection                  |
| 32  | Screenshot  | 71  | Travel protection                            |
| 33  | Status, clock, run, edit, maintenance display                             | 72  | Interlocking                                 |
| 34  | Troubleshooting   | 73  | Operation history, data backup               |
| 35  | Multi-language display  | 74  | PLC position switch                          |
| 36  | Input and output of machining programs, parameters, tool deflection, etc. | 75  | PLC servo shutdown                           |
| 37  | Multiple connection interfaces, network port, USB transmission            | 76  | PLC axis removal                             |

# M80A CONTROL ADVANTAGE

Main function of control system

| System Specification   | M70A     | M70B     | M80A     | M80B     |
|------------------------|----------|----------|----------|----------|
| Normal NC control axis | 3        | 3        | 3        | 3        |
| Max. NC control axis   | 6        | 4        | 8        | 5        |
| Max. spindle           | 2        | 2        | 2        | 2        |
| Min. unit              | 0.0001mm | 0.0001mm | 0.0001mm | 0.0001mm |

| System Specification   | M70A     | M70B     | M80A     | M80B  |
|------------------------|----------|----------|----------|-------|
| Program storage        | 230KB    | 230KB    | 500KB    | 500KB |
| Max. pre-read capacity | 33m      | 16m      | 135m     | 16.8m |
| SSS function           | Standard | Standard | Standard | None  |
| Inner PLC capacity     | 30000    | 20000    | 64000    | 32000 |



# FANUC 0I-MF PLUS

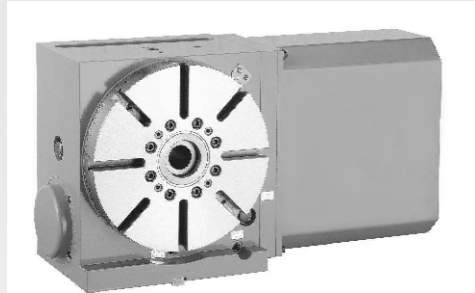
Has a powerful control function  
High-speed, high-quality processing



- ★ Precision calculations in nanometer units, with the most advanced servo technology nano-CNC system
- ★ Effective AI contour control for high-speed, high-precision machining
- ★ Easy to adjust the machining accuracy and tolerance control
- ★ Intelligent overlapping function that can shorten the processing cycle time of parts
- ★ High-speed and high-precision servo HRV control
- ★ Fast servo adjustment FANUC SERVO GUIDEWAY (Servo Wizard) for high-speed, high-precision machining

| NUM | FANUC 0I-MF Plus standard function                      | NUM | FANUC 0I-MF Plus standard function    |
|-----|---|-----|---------------------------------------|
| 1   | 10.4 inch color LCD display                             | 29  | Absolute/increment instructions       |
| 2   | Ethernet Web Interface (RJ45 Interface)                 | 30  | Plane selection                       |
| 3   | RS-232C interface                                       | 31  | Calling subroutine                    |
| 4   | Memory card interface                                   | 32  | Canned cycle                          |
| 5   | USB interface   | 33  | Selective single-hop                  |
| 6   | Program storage capacity 512KB                          | 34  | Workpiece coordinate system           |
| 7   | Number of login procedures: 400                         | 35  | Extra workpiece coordinate system     |
| 8   | Background editing                                      | 36  | Polar coordinate instruction          |
| 9   | Control axis number: 3 axes                             | 37  | Coordinate rotation                   |
| 10  | Axis of movement: 3 axes                                | 38  | G-code program mirroring function     |
| 11  | Minimum instruction unit: 0.001mm, 0.0001inch, 0.001deg | 39  | Any angle chamfer C, corner R         |
| 12  | Metric and Imperial conversions                         | 40  | Linear interpolation                  |
| 13  | Mechanical lock   | 41  | Circular interpolation                |
| 14  | Z axis lock   | 42  | Origin return                         |
| 15  | Software stroke limit setting                           | 43  | One-way positioning                   |
| 16  | Travel limit check before moving                        | 44  | Helical interpolation                 |
| 17  | Backlash compensation                                   | 45  | Spindle positioning                   |
| 18  | Interpolation pitch error compensation                  | 46  | Rigid tapping                         |
| 19  | DNC operation   | 47  | M-code                                |
| 20  | Single execution  | 48  | Automatic power-off                   |
| 21  | Manual Data Input (MDI)                                 | 49  | Tool radius correction C              |
| 22  | Manual feed   | 50  | Warning message display               |
| 23  | Manual feed override                                    | 51  | Warning message history display       |
| 24  | Trial operation   | 52  | Operation information display         |
| 25  | Rapid positioning                                       | 53  | Operation information history display |
| 26  | Fast moving percentage                                  | 54  | Automatic corner deceleration         |
| 27  | Chip feed command                                       | 55  | Linear acceleration and deceleration  |
| 28  | Chip Feed Rate Percentage                               | 56  |                                       |

4th axis: four axis linkage to machining complicated components.



Sensor: Measure the machining products



Tool setting: Reimburse tool abrasion, to ensure machining precision.



Water cooler: reduce coolant temperature and improve cooling effect

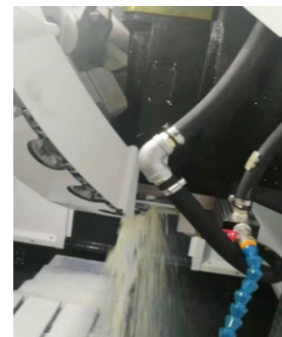


Control system: Equip with advanced three high speed control system.



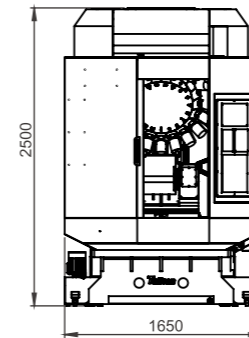
Mitsubishi Fanuc Siemens

Taper-shank cleaning: use coolants to clean the taper shank of the tool, to prevent cutting in the spindle taper hole from clamping to keep the stability of processing accuracy.

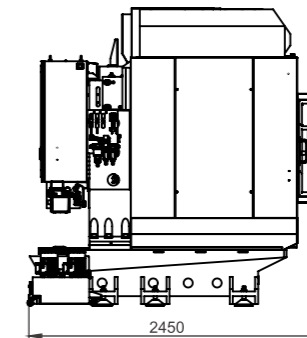


Machine dimension (Unit:mm)

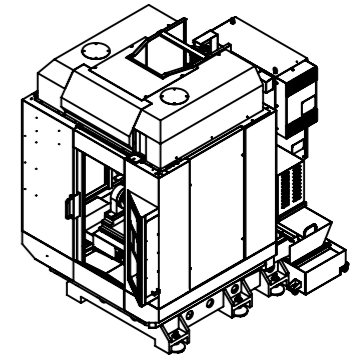
T-500B



Front view

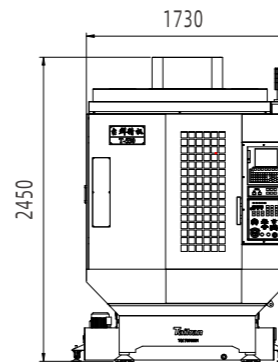


Left view

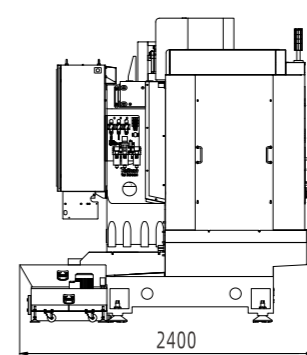


Axis view

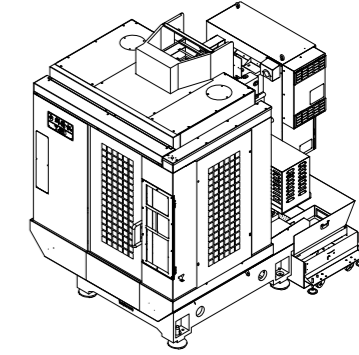
T-530



Front view

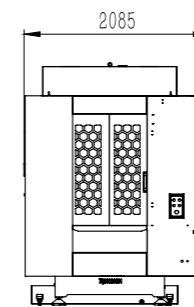


Left view

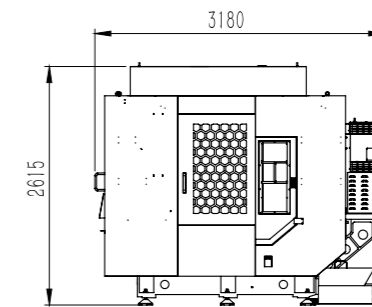


Axis view

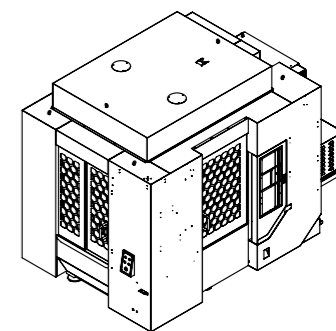
T-520-S



Front view



Left view



Axis view

Parameter Table

| Items                                       | Unit   | T-500B                         | T-500C                         | T-530                                  |
|---|--------|--------------------------------|--------------------------------|--|
| Working table size                          | mm     | 620×400                        | 620×400                        | 620×320                                |
| Travel                                      | X axis | 500                            | 500                            | 500                                    |
|   | Y axis | 400                            | 400                            | 300+100 (Loading and Unloading Travel) |
|   | Z axis | 460(21T)/450(26T)              | 320(21T)/310(26T)              | 300(21T)/290(26T)                      |
| T slot -Dimensions                          | mm     | 3-14×120                       | 3-14×120                       | 3-14×120                               |
| Dsitance from spindle nose to working table | mm     | 180-640 (21T)<br>180-630 (26T) | 160-480 (21T)<br>160-470 (26T) | 185-485 (21T)<br>185-475 (26T)         |
| Spindle center to body surface distance     | mm     | 445                            | 445                            | 350                                    |
| Spindle speed                               | rpm    | 20-20000 (24000)               | 20-24000                       | 20-20000 (24000)                       |
| Spindle taper                               | #      | BT-30                          | BT-30                          | BT-30                                  |
| Spindle power                               | kW     | 3.7/5.5                        | 7.5/11                         | 3.7/5.5                                |
| Spindle torque                              | N.m    | 14.1/21.0                      | 8.0/11.7                       | 14.1/21.0                              |
| X axis rapid traverse rate                  | m/min  | 48                             | 48                             | 48                                     |
| Y axis rapid traverse rate                  | m/min  | 48                             | 48                             | 48                                     |
| Z axis rapid traverse rate                  | m/min  | 48                             | 48                             | 48                                     |
| Cutting speed                               | mm/min | 1-30000                        | 1-30000                        | 1-30000                                |
| Three axes motor power                      | kW     | 1.5/1.5/2.2                    | 1.5/1.5/2.2                    | 1.5/1.5/2.2                            |
| Max Tool weight                             | kg     | 3                              | 3                              | 3                                      |
| Tool length                                 | mm     | 200                            | 200                            | 200                                    |
| The max diameter                            | mm     | 60/80                          | 60/80                          | 60/80                                  |
| Tank capacity                               | L      | 110                            | 110                            | 160                                    |
| Air pressure demand                         | MPa    | 0.6-0.8                        | 0.6-0.8                        | 0.6-0.8                                |
| Total power consumption                     | kVA    | 12                             | 12                             | 12                                     |
| Positioning accuracy                        | mm     | 0.006                          | 0.006                          | 0.006                                  |
| Repeatability                               | mm     | 0.004                          | 0.004                          | 0.004                                  |
| Max load                                    | kg     | 250                            | 250                            | 250                                    |
| Machine weight( estimated)                  | kg     | 3100                           | 3050                           | 2860                                   |
| Outline dimensions                          | mm     | 1650×2450×2500                 | 1700×2400×2300                 | 1730×2400×2450                         |
| Tool magazine capacity                      | T      | 21 (26)                        | 21 (26)                        | 21 (26)                                |

| Items                                       | Unit   | T-520-S  | T-600B                         | T-700B                         |
|---|--------|--|--------------------------------|--------------------------------|
| Working table size                          | mm     | 650×1000 ( double side )   | 700×400                        | 800×400                        |
| Travel                                      | X axis | 520  | 600                            | 700                            |
|   | Y axis | 340  | 390                            | 400                            |
|   | Z axis | 350(21T)/340(26T)  | 340 (21T) /330 (26T)           | 340 (21T) /330 (26T)           |
| T slot -Dimensions                          | mm     | 3-14×100 (Two sides)   | 3-18×125                       | 3-18×125                       |
| Dsitance from spindle nose to working table | mm     | 205-555(21T)/205-545(26T)<br>Option low chassis worktable :<br>255-605(21T)/255-595(26T) | 180-520 (21T)<br>180-510 (26T) | 180-520 (21T)<br>180-510 (26T) |
| Spindle center to body surface distance     | mm     | 445  | 445                            | 445                            |
| Spindle speed                               | rpm    | 20-20000 (24000)   | 20-20000 (24000)               | 20-20000 (24000)               |
| Spindle taper                               | #      | BT-30  | BT-30                          | BT-30                          |
| Spindle power                               | kW     | 3.7/5.5  | 3.7/5.5                        | 3.7/5.5                        |
| Spindle torque                              | N.m    | 14.1/21.0  | 14.1/21.0                      | 14.1/21.0                      |
| X axis rapid traverse rate                  | m/min  | 36   | 48                             | 48                             |
| Y axis rapid traverse rate                  | m/min  | 36   | 48                             | 48                             |
| Z axis rapid traverse rate                  | m/min  | 48   | 48                             | 48                             |
| Cutting speed                               | mm/min | 1-30000  | 1-20000                        | 1-20000                        |
| Three axes motor power                      | kW     | 2/2/2.2  | 1.5/1.5/2.2                    | 1.5/1.5/2.2                    |
| Max Tool weight                             | kg     | 3  | 3                              | 3                              |
| Tool length                                 | mm     | 200  | 200                            | 200                            |
| The max diameter                            | mm     | 60/80  | 60/80                          | 60/80                          |
| Tank capacity                               | L      | 145  | 110                            | 110                            |
| Air pressure demand                         | MPa    | 0.6-0.8  | 0.6-0.8                        | 0.6-0.8                        |
| Total power consumption                     | kVA    | 15   | 12                             | 12                             |
| Positioning accuracy                        | mm     | 0.006  | 0.006                          | 0.006                          |
| Repeatability                               | mm     | 0.004  | 0.004                          | 0.004                          |
| Max load                                    | kg     | 200 (Single side)  | 250                            | 250                            |
| Machine weight( estimated)                  | kg     | 5200   | 3100                           | 3150                           |
| Outline dimensions                          | mm     | 3200×2090×2620   | 1900×2450×2400                 | 2100×2450×2400                 |
| Tool magazine capacity                      | 位      | 21 (26)  | 21 (26)                        | 21 (26)                        |

● Standard ○ Option ▲ Need Advise △ Not Supported

|  | T-500B | T-500C | T-530 | T-520-S | T-600B | T-700B |
|--|--------|--------|-------|---------|--------|--------|
| Taikan-21T NEW                           | ●      | ●      | ●     | ●       | ●      | ●      |
| Spindle speed 12000rpm                   | ○      | ○      | ○     | ○       | ○      | ○      |
| Spindle speed 15000rpm                   | ○      | ○      | ○     | ○       | ○      | ○      |
| Spindle speed 20000rpm                   | ●      | ○      | ●     | ●       | ●      | ●      |
| Spindle speed 24000rpm                   | ○      | ●      | ○     | ○       | ○      | ○      |
| Oil coolant                              | ○      | ●      | ○     | ○       | ○      | ○      |
| CTS                                      | ▲      | ▲      | ▲     | ▲       | ▲      | ▲      |
| Blow equipment                           | ●      | ●      | ●     | ●       | ●      | ●      |
| Rigidity function                        | ●      | ●      | ●     | ●       | ●      | ●      |
| Mitsubishi control                       | ●      | ○      | ●     | ●       | ●      | ●      |
| Fanuc control                            | ○      | ●      | ○     | ○       | ○      | ○      |
| Arm type (26T)                           | ○      | ○      | ○     | ○       | ○      | ○      |
| BT-30                                    | ●      | ●      | ●     | ●       | ●      | ●      |
| 4th axis                                 | ○      | ○      | ○     | ○       | ○      | ○      |
| Cutting fluid coolant system             | ●      | ●      | ●     | ●       | ●      | ●      |
| Circular sprinkle                        | ▲      | ▲      | ▲     | ▲       | ▲      | ▲      |
| Full closed cover                        | ●      | ●      | ●     | ●       | ●      | ●      |
| Tool box and adjustment tool             | ●      | ●      | ●     | ●       | ●      | ●      |
| System manual                            | ●      | ●      | ●     | ●       | ●      | ●      |
| Operation manual                         | ●      | ●      | ●     | ●       | ●      | ●      |
| Work light                               | ●      | ●      | ●     | ●       | ●      | ●      |
| Warning light                            | ●      | ●      | ●     | ●       | ●      | ●      |
| Electrical cabinet heat exchanger system | ○      | ○      | ○     | ○       | ○      | ○      |
| Column increase 100mm                    | ▲      | ▲      | ▲     | ▲       | ▲      | ▲      |
| Column increase 200mm                    | ▲      | ▲      | ▲     | ▲       | ▲      | ▲      |
| Hand wheel                               | ●      | ●      | ●     | ●       | ●      | ●      |
| Back flush                               | ○      | ○      | ○     | ○       | ○      | ○      |
| Automatic door                           | ○      | ○      | ○     | ○       | ○      | ○      |
| Oil skimmer                              | ○      | ○      | ○     | ○       | ○      | ○      |
| Sensor                                   | ○      | ○      | ○     | ○       | ○      | ○      |
| Tool setting                             | ○      | ○      | ○     | ○       | ○      | ○      |
| Taper-shank cleaning                     | ○      | ▲      | ○     | ○       | ○      | ○      |
| 5th axis rotary                          | ○      | ○      | ○     | ○       | ○      | ○      |

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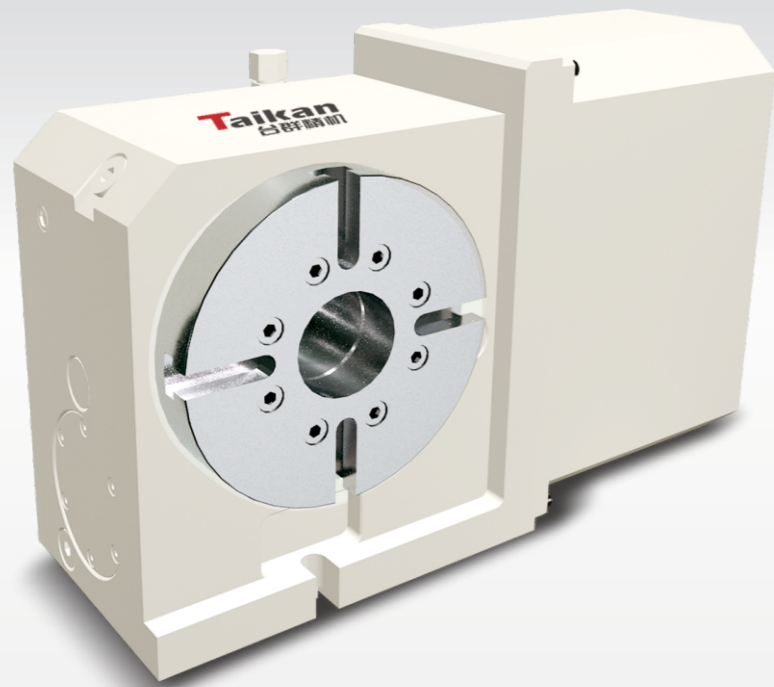
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# TAIKAN FOUR-AXIS CAM TYPE CNC TURNTABLE

HIGH-END INTELLIGENT EQUIPMENT  
INTEGRATED SOLUTIONS SERVICE PROVIDER

Taikan four axis group of CAM type product inside the roller CAM nc rotary table drive structure, CAM and needle bearing preloading no clearance rolling transmission, no sliding friction, keep no clearance features, is the reverse movement repeat precision is high, without regular calibration and adjustment, and has the characteristics of high rigidity, heavy load, high efficiency, product is not bad accuracy caused by temperature rise.



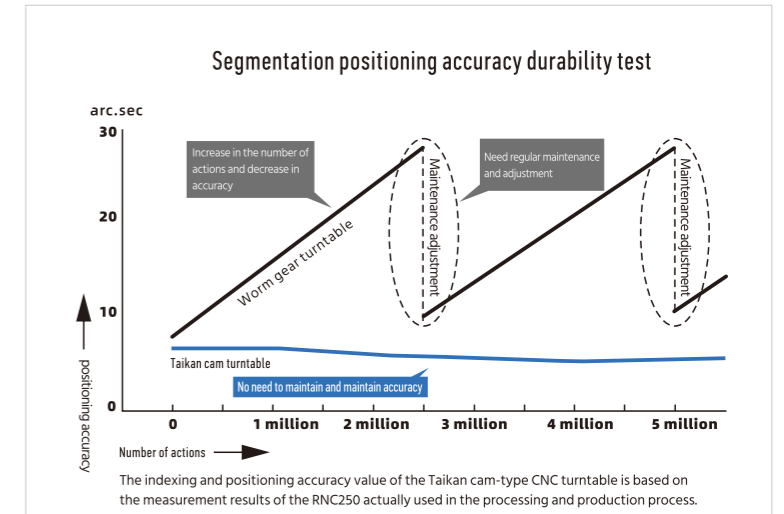
## No need to adjust maintenance and cost-effective

### General worm wheel and worm type turntable

After the use time or number of times increases, the accuracy is obviously reduced. In order to reach or close to the initial accuracy, regular maintenance and adjustment are required, and mechanical adjustment and maintenance costs are incurred 1-2 times a year.

### Taikan cam turntable

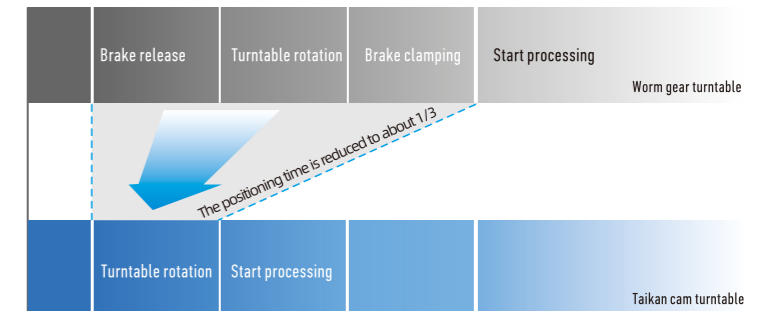
After the use time or number of times has increased to 5 million times, the initial accuracy can be maintained continuously without maintenance, and no mechanical adjustment and maintenance costs will be incurred.



## Different processing modes to improve efficiency

### Taikan cam turntable

The built-in hydraulic brake device can cope with higher-strength processing heavy cutting forces; when performing general positioning processing (non-heavy cutting), due to the high rigidity of the cam stick structure itself, the processing can be guaranteed without the use of brake auxiliary positioning Accuracy, at this time, about 2/3 of the rotation positioning time can be saved, and the processing efficiency can be improved.

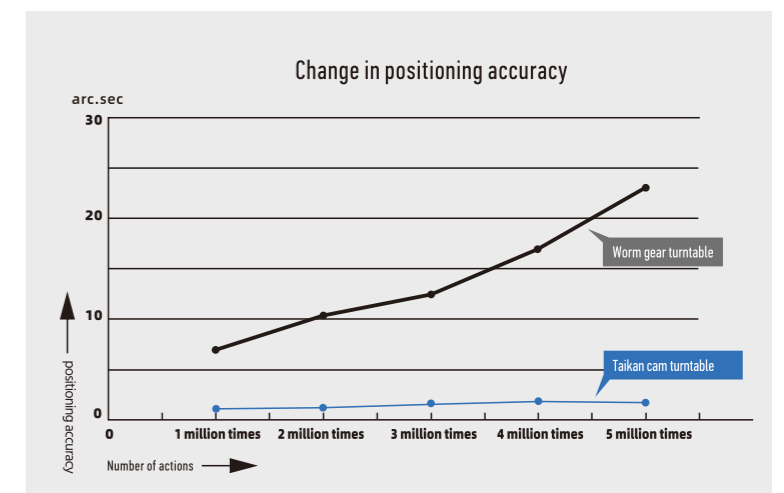


## Maintain absolute repeat positioning accuracy

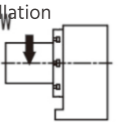
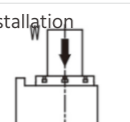
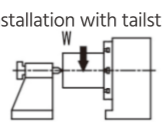
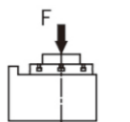
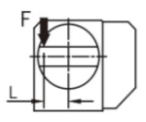
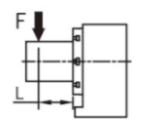
### General worm wheel type turntable and taikan cam type turntable 5 million times segmentation test

#### Test Conditions:

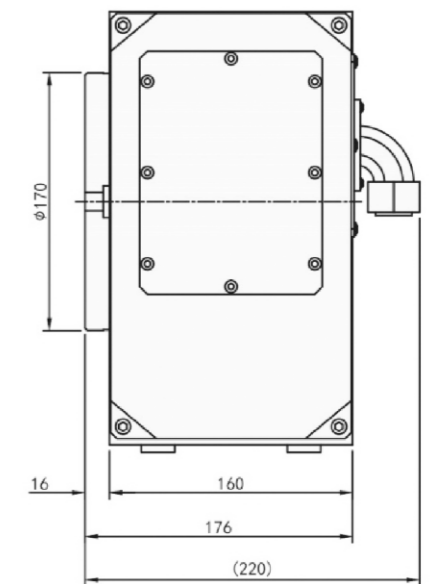
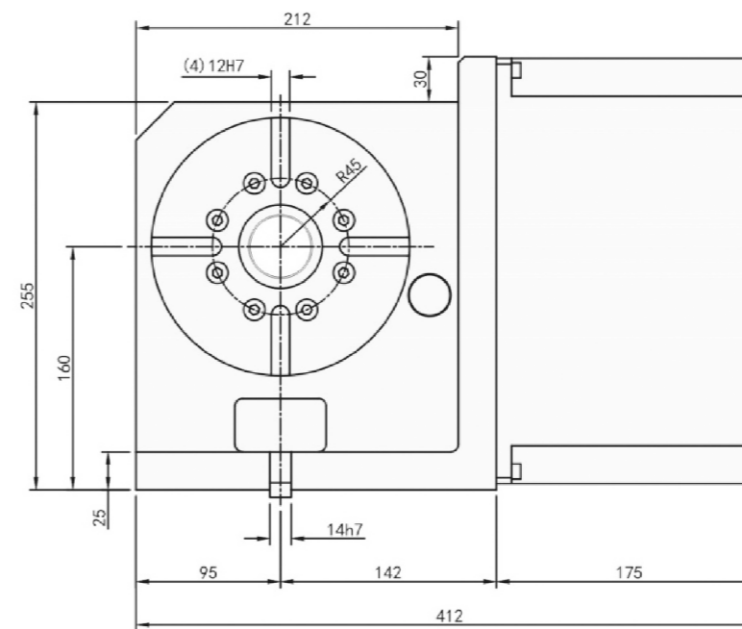
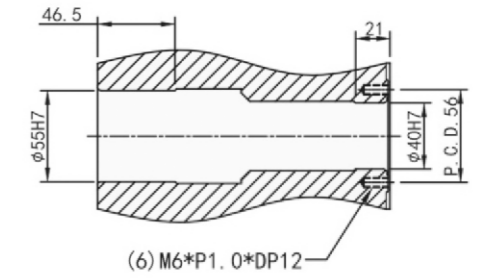
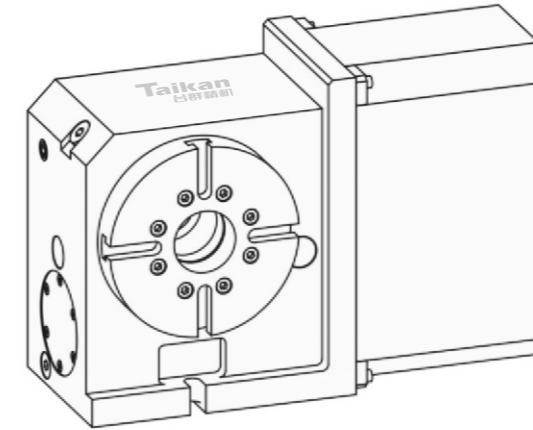
- RNC250, the diameter of the turntable is 250mm.
- The turntable has a load of 2 kg, and the distance from the center of rotation is 100 mm.
- The single indexing angle is 30°.
- A single indexing time is 0.3 seconds.



NC170 PARAMETER TABLE

| Item  |   | unit | Model parameters |
|---|---|------|------------------|
| Turntable diameter                                |   | mm   | φ170             |
| Center height                                     |   | mm   | 160              |
| Center aperture                                   | front end   | mm   | φ55              |
|   | Tail end  | mm   | φ40              |
| T-slot width                                      |   | mm   | 12H7             |
| Positioning key width                             |   | mm   | 14H7             |
| Minimum angle setting unit                        |   | deg  | 0.001            |
| Maximum number of revolutions                     |   | rpm  | 80               |
| Total reduction ratio                             |   |      | 1:40             |
| Segmentation accuracy                             |   | sec  | ±15"             |
| Repeat accuracy                                   |   | sec  | ±5"              |
| Locking method (oil pressure)                     |   | MPa  | 3.0±0.5          |
| Maximum cutting torque (when the brake is locked) |   | N.m  | 330              |
| product quality                                   |   | kg   | 52               |
| Allowable load                                    | Vertical installation<br>                | kg   | 100              |
|   | Horizontal installation<br>              | kg   | 200              |
|   | Vertical installation with tailstock<br> | kg   | 200              |
| Allowable load                                    | F<br>                                    | N    | 15500            |
|   | FXL<br>                                  | N.m  | 330              |
|   | FXL<br>                                  | N.m  | 1100             |

# NC170



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