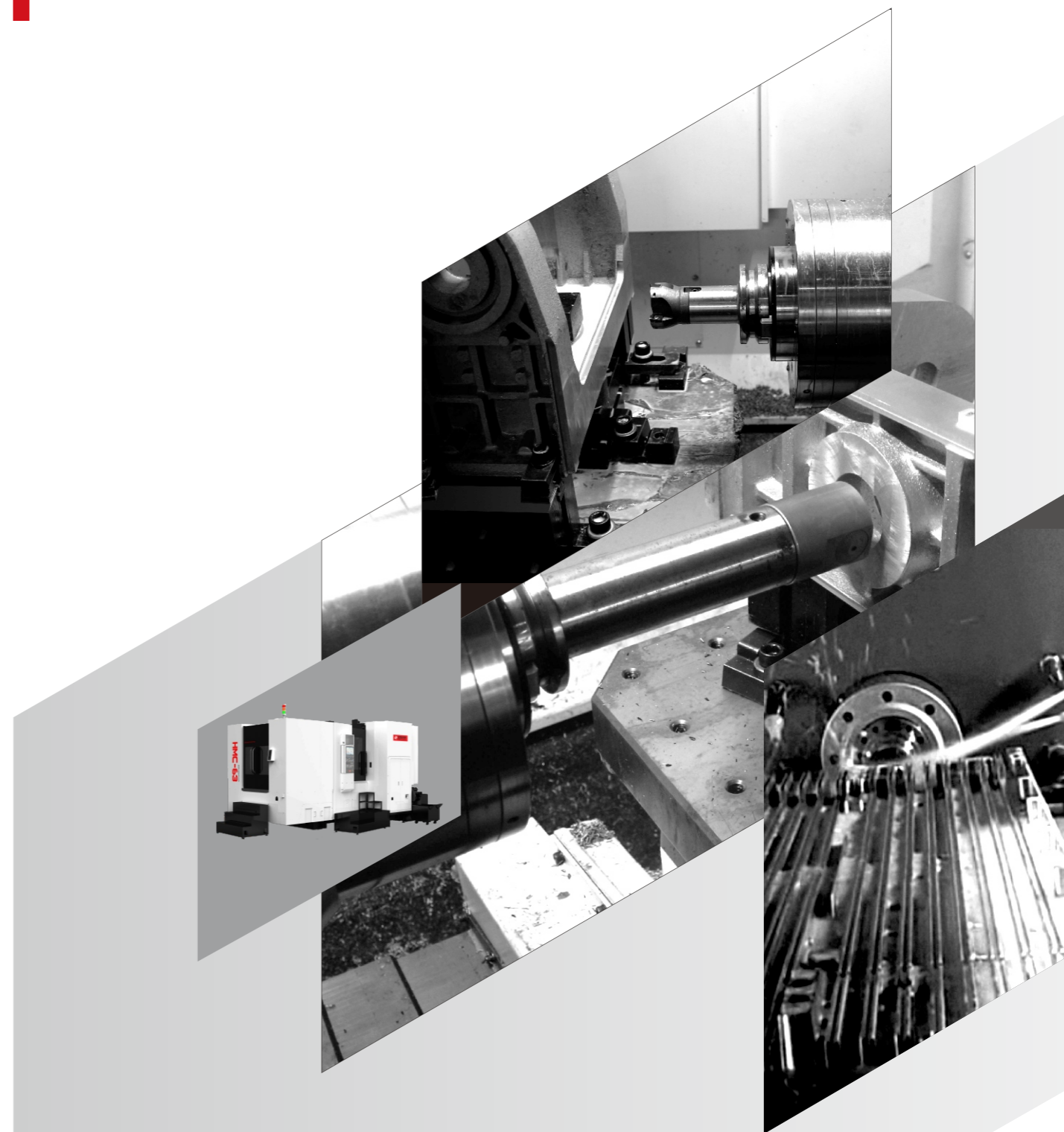




## TAIKAN HORIZONTAL MACHINING CENTER

HIGH-END INTELLIGENT EQUIPMENT INTEGRATED  
SOLUTIONS SERVICE PROVIDER



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

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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

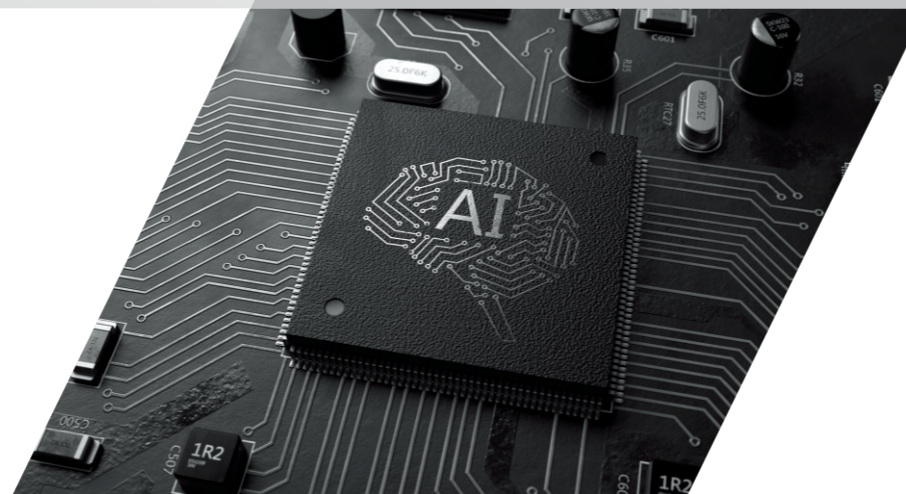
- |  |  |
|--|--|
| National high-tech enterprises   | Shenzhen Mayor Quality Award                                   |
| Famous brand in Guangdong province.  | Top 100 quality enterprises in Shenzhen                        |
| Top 500 manufacturers in Guangdong province                                    | 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-speed·High-precision horizontal machining center

# T-H series/ H series



### T-H11

Spindle rotating speed: 50~12000r/min  
 Work table size: 500mm×500mm  
 Maximum worktable load: 500kg  
 Maximum work piece size: Φ1200×720



### T-H13

Spindle rotating speed: 50~6000r/min  
 Work table size: 630mm×630mm  
 Maximum worktable load: 1200kg  
 Maximum work piece size: Φ1450×950



### H-100

Spindle rotating speed: 80~8000r/min  
 Work table size: 1000mm×1250mm  
 Maximum worktable load: 5000kg  
 Maximum work piece size: Φ2000×1300

*Versatile lineup of series:*

*From single worktable to double worktables*

*Wide applying fields:*

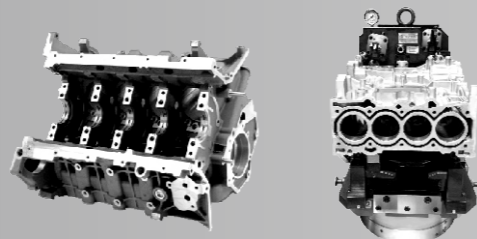
*From small parts to middle、large parts*

Automobile industry

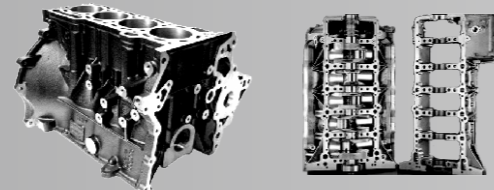


**Work piece:** small、large box body、box cover parts  
**Material:** cast iron、aluminum

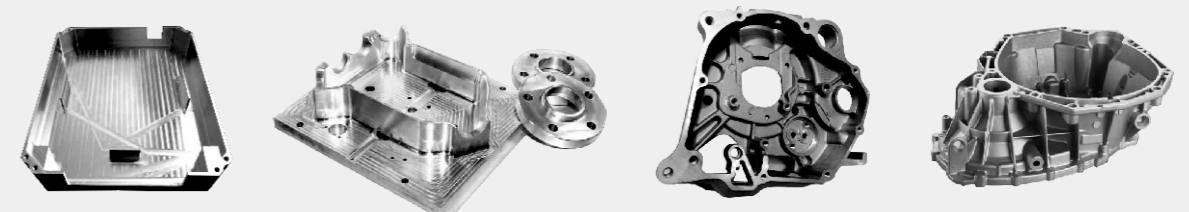
Construction machinery industry



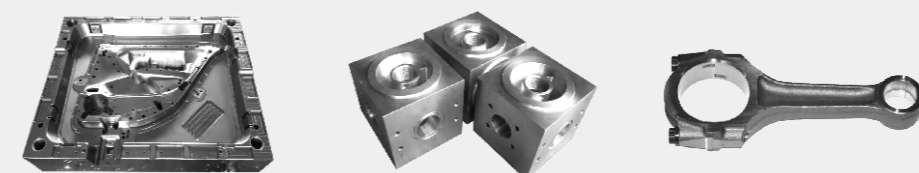
Information、energy industry



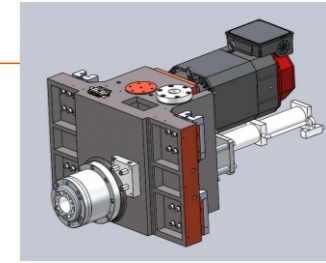
**Work piece:** Small and medium-sized shell parts, special-shaped complex parts  
**Material:** cast iron、aluminum



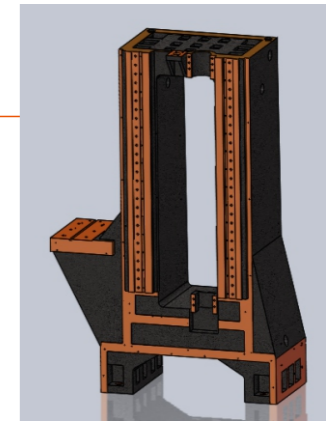
**Work piece:** Molds, special-shaped and complex parts  
**Material:** castiron、die steel



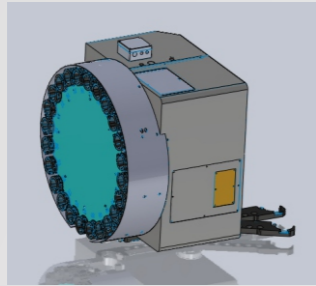
## Stable structure layout, exert powerful processing ability



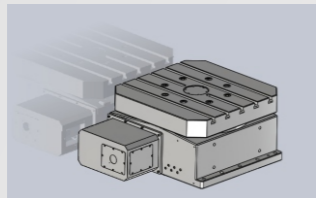
Servo spindle unit, low transmission noise, can realize high speed stepless variablespeed change. The spindle has a built-in labyrinth-type self-cooling circulation circuit, which effectively protects the spindle.



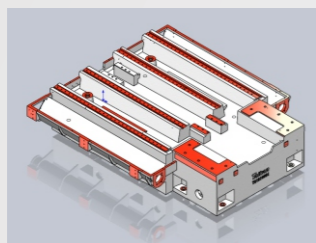
Reinforced straddle structure column, double wall design, high rigidity in high-position processing



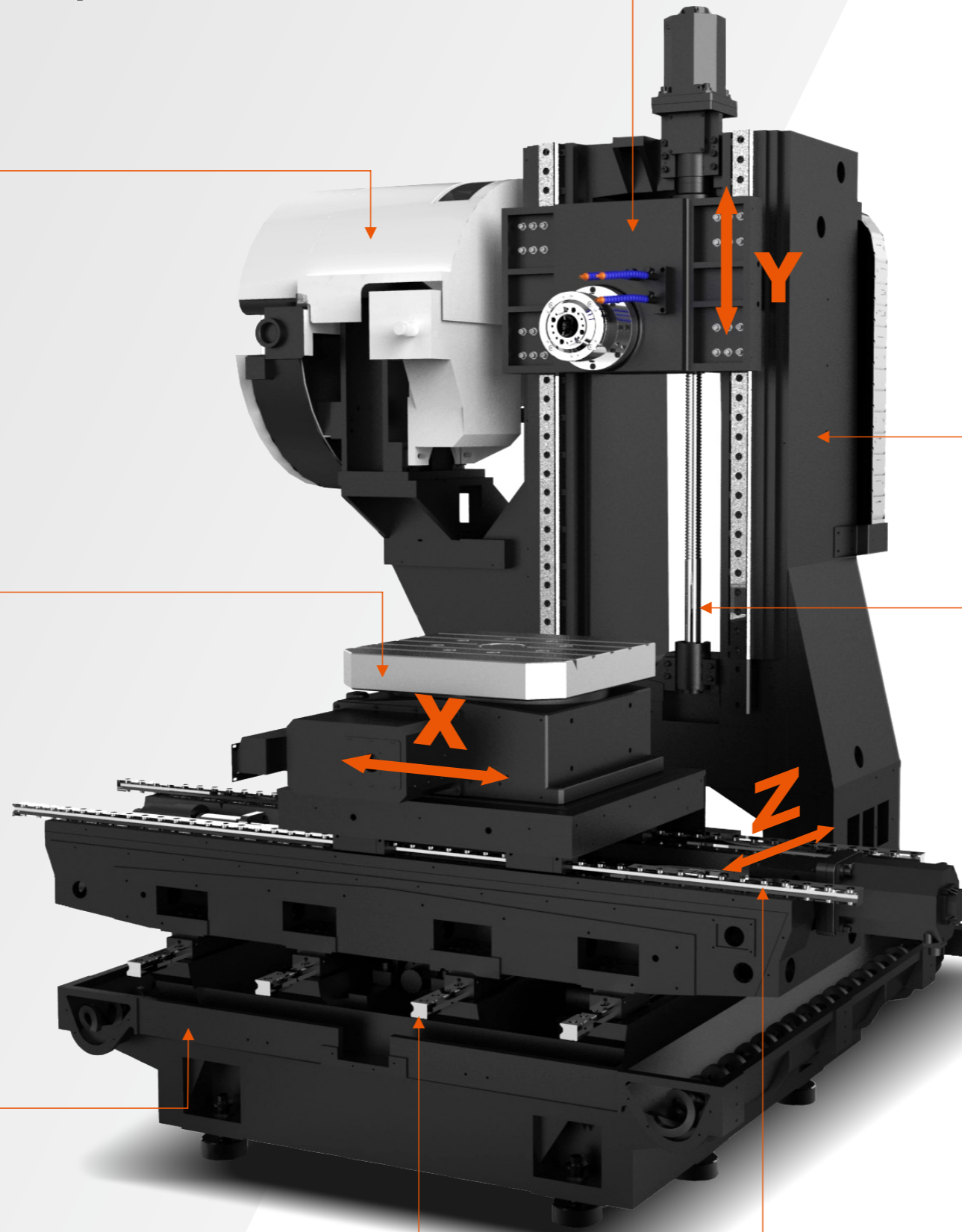
24T disc type tool magazine, mechanical cam drive, encoder positioning control, stable and reliable tool change



Computer numerical control turntable, gear index plate, minimum indexing 1°. The built-in hydraulic self-locking fixing mechanism ensures the stable and vibration-free worktable during the cutting process. The table surface is hardened by chromium alloy quenching, with high rigidity and strong load capacity. High positioning accuracy and repeat positioning accuracy



Widened super-large bed, z-axis four-rail support and guide design, high-speed processing is more stable



The shaft system is arranged with PMI/HIWIN screw rods, both ends are pre-tensioned structure design, and all-axis high-rigidity linear guides are arranged to realize heavy cutting and high-precision machining



## HORIZONTAL MACHINING CENTER SERIES

High-speed and high-precision---ingenious work

It is suitable for the processing of complex parts such as boxes, valves, shells, plates, etc.

It is widely used for parts processing in 5G, automobile, new energy, mold and other industries.

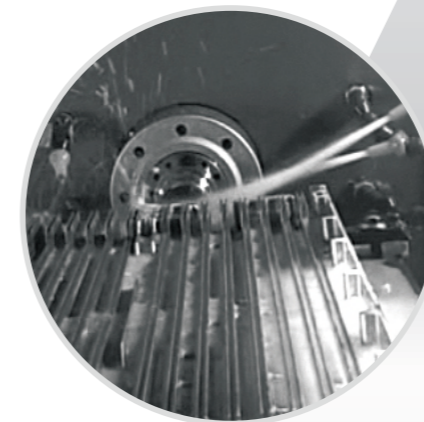
Horizontal machining center

# T-H SERIES

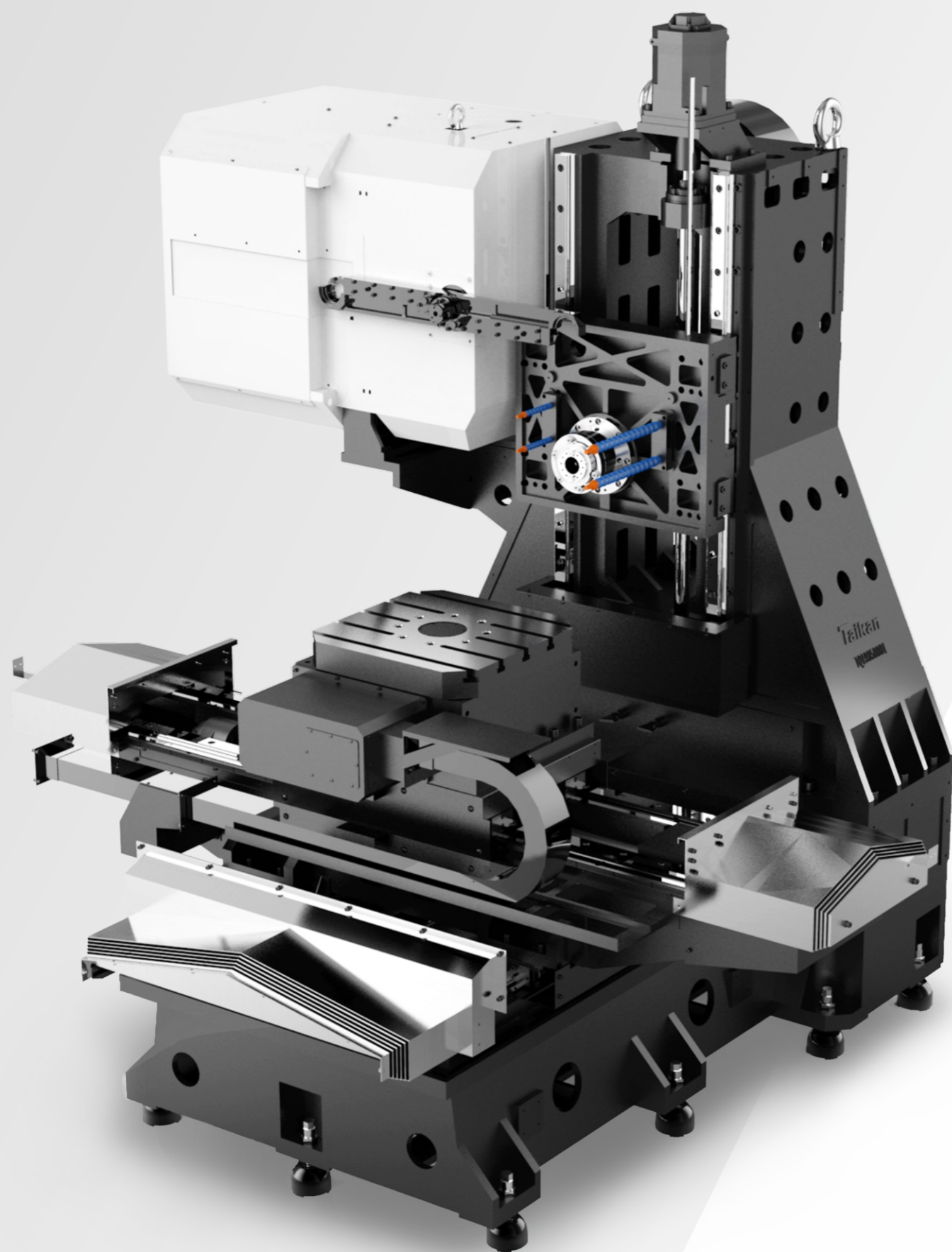
### PRODUCT ADVANTAGE



One-time clamping of parts can automatically complete the processing of multiple processes such as milling, drilling, boring, expanding, reaming, countersinking, and tapping of the four faces. Effectively improve processing efficiency and save costs, while reducing repeated installation errors and improving product processing accuracy. The machine tool adopts high-precision linear rails and screw rods. The machine tool has better dynamic response and can realize high-precision machining. Its performance indicators and accuracy indicators are in full compliance with national standards. With modular design, the products can be serialized and customized according to market demand. Its good performance-price ratio is the perfect choice for customers at home and abroad.







## PRODUCT ADVANTAGE

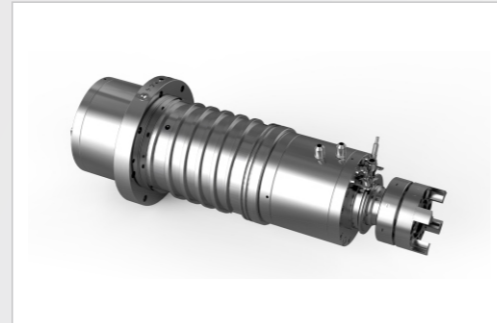


- ★ The structure of the whole machine adopts cross sliding table and fixed column structure. The fuselage adopts a super large stable base, a fixed-column, high-rigidity, large-span herringbone column, high-speed cutting without vibration or deformation;
- ★ The five major parts of the machine tool are all cast with high-quality resin sand modeling and high-strength cast iron materials. Cooperate with heat treatment measures to ensure high rigidity and high stability;
- ★ The whole machine adopts industrial design, new appearance, fully enclosed protective design, simple and generous appearance, pleasant operation, convenient maintenance, and meets the needs of ergonomics;
- ★ The model adopts a cam-type numerical control turntable. After the work piece is clamped once, the worktable can achieve any indexing rotation to realize four-sided processing;
- ★ The three-axis guide way adopts high-rigidity rolling guide, with low friction damping and low noise. It adopts special bearings supporting the screw rod, so that the transmission accuracy is high, the rigidity is high, the positioning accuracy is high, the accuracy is durable, the stability is good, and the movement of each component is sensitive. Excellent machine tool motion characteristics;
- ★ Large diameter C3 grade screw rod with pre-tensioned structure to eliminate part of thermal extension. The screw rod bearing adopts self-lubricating to extend the life of the bearing;
- ★ The tool magazine adopts the 24 tool arm type tool magazine of Taiwan Group, which is reliable in quality and stable in performance;
- ★ The bearing adopts Japanese NSK/German FAG, with strong rigidity, high precision and long bearing life. Increased the stability of machine tool processing;
- ★ The main electrical components use Schneider, which has good static and dynamic properties, good current carrying performance, and increases the reliability of the system;
- ★ The main pneumatic components adopt SMC brand with high filtration precision, light weight, simple installation and maintenance, high reliability and long use time;
- ★ Equipped with positive displacement and forced lubricating oil system to ensure good lubrication of all moving parts of the machine tool;
- ★ Optimized design of water tank, high efficiency, double-layer water tank filter system structure, provide good cutting fluid for work piece processing

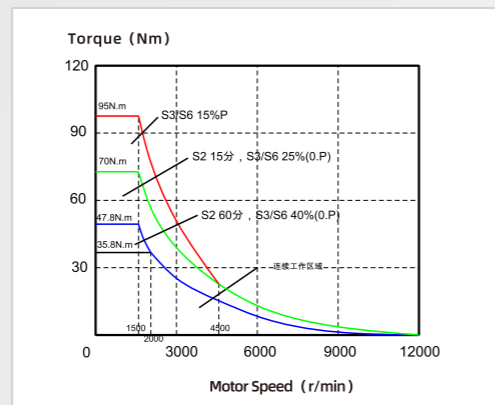
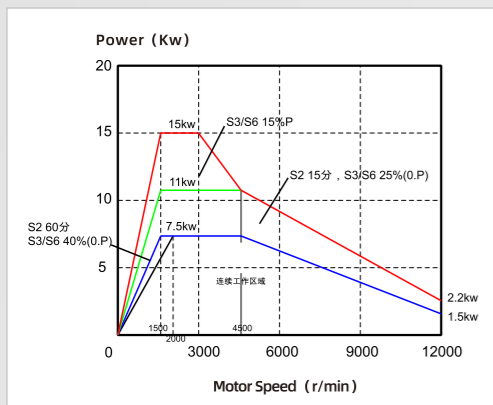
Core component features

Spindle

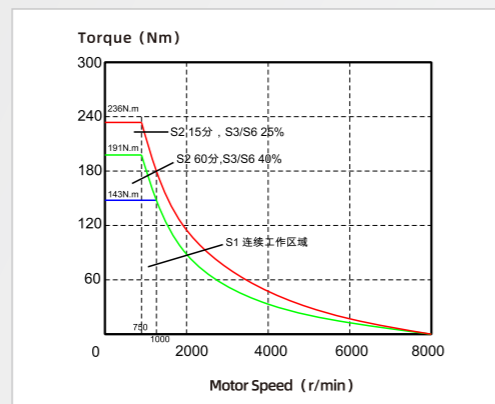
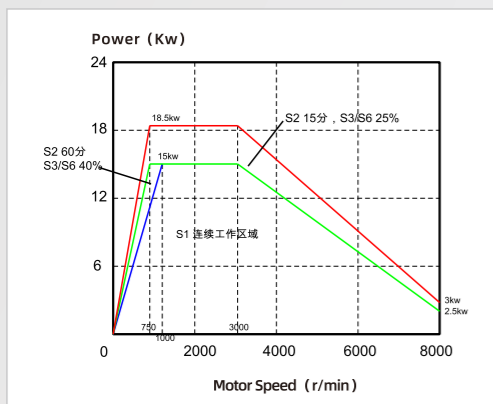
- ★ T-H11 adopts the standard BT40-12000rpm direct-connected spindle unit, and the spindle adopts oil cooling method to effectively maintain the stable temperature rise of the spindle; adopts a labyrinth design with air curtain protection function to effectively prevent Stop cutting fluid from invading the spindle bearing;
- ★ T-H13 adopts standard BT50-6000rpm belt spindle, and the spindle reduction ratio is 4:3. The main shaft adopts an oil-cooled internal circulation cooling method, which has a good cooling effect. The bearing adopts a '4+N' bearing structure, which has higher precision and rigidity.



Direct-drive spindle BT40-12000RPM



Belt Spindle BT50-6000RPM



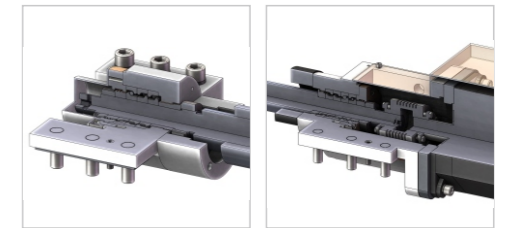
Rotating table

- ★ T-H11 comes standard with cam type numerical control, and the minimum index is 0.001%. The cam-type CNC turntable is driven by the constant velocity driving curved surface of the cambered cam and the needle roller bearing on the turret is preloaded in rolling contact transmission. It has the working characteristics of high precision, high speed, zero backlash and heavy load;
- ★ T-H13 standard power distribution brain numerical control gear indexing plate, the minimum index is 1°, high positioning rigidity, strong load capacity, high positioning accuracy and repeat positioning accuracy;
- ★ Hydraulic locking mechanism is adopted to ensure the clamping of the worktable and ensure the stability and vibration-free of the worktable during the cutting process.



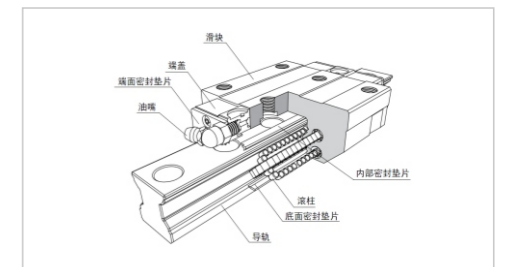
Three-axis screw

- ★ T-H11 three-axis screw adopts  $\phi 40$  diameter ball screw, equipped with (3+2,3+3) 16 bearing supports;
- ★ T-H13 three-axis screw adopts  $\phi 50$  diameter ball screw, all three axes are equipped with (4+3) 21 bearing supports, which improves the high load-bearing capacity and transmission rigidity of the machine tool, and maintains the machining accuracy and stability of the machine tool.



Three-axis linear rail

- ★ T-H11 three-axis guide rail adopts 45# high rigidity precision linear ball guide rail;
- ★ T-H13 X\Z axis adopts 45#, Y axis adopts 55# high rigidity roller guide. The Z-axis adopts a four-track guiding structure design to achieve low friction, low vibration, and high rigidity. It can improve the cutting rigidity, machining accuracy and stability of the spindle.



24T disc tool magazine

- ★ Adopt angle encoder to control ACT tool change, the signal is stable and reliable, and provide smooth and reliable tool change action;
- ★ Cam-driven tool magazine can ensure high-precision rotation, and it can run smoothly even with heavy-duty tools;
- ★ The fully enclosed design of the tool magazine avoids splashing of machining iron filings on the tool magazine tools, which will affect the machining accuracy and improve the stability of the machining.



Horizontal machining center

# H SERIES

 Large space open structure

Suitable for processing large and complex parts



The H series horizontal machining center is mainly suitable for the processing of large and medium-sized parts in the automobile, energy, engineering machinery, mold, and other industries. It is especially suitable for the processing of various special-shaped parts and box parts. One-time clamping of the workpiece can complete multi-faceted milling, drilling, boring, expansion, reaming, countersinking, tapping and other processes, which effectively improves processing efficiency and saves costs, while reducing repeated installation errors and improving product processing accuracy. Its performance indicators and accuracy indicators are in full compliance with national standards.

H series horizontal machining center adopts open structure design, simple protection and convenient maintenance. Provide sufficient space for the loading and unloading of various medium and large parts, making the operation more convenient for customers.



## PRODUCT ADVANTAGE



**Whole machine structure:** The machine tool has an inverted T-shaped bed structure layout, and the large basic parts are cast with high-quality resin sand modeling and high-strength cast iron materials, so that the machine tool has high rigidity and stable accuracy. The main castings have undergone finite element analysis, and the rib layout is reasonable, which fully meets the needs of high-torque cutting of machine tools.

**Spindle:** The machine is equipped with a high-speed and large-torque BT50 electric spindle, which has high speed, high precision and low noise, which fully meeting the requirements of boring, milling and drilling. The main shaft is equipped with an automatic constant temperature circulating cooling device to increase the service life of the bearing and reduce the impact of the thermal deformation of the main shaft on the machining accuracy.

**Guide rail:** workbench guide rail (X axis), column guide rail (Z axis) and headstock guide rail (Y axis) all adopt imported heavy-duty roller linear guides, which have low friction, strong load-bearing capacity, low high-speed vibration, low-speed no crawling, High positioning accuracy.

**Drive:** The three feed axes of X, Y and Z are all driven by FANUC-a feed motor, which has good stability and reliable operation. The X-axis, Y-axis and Z-axis adopt large-diameter ball screw drive structure, and the two ends of the pre-tension structure support design can effectively reduce the influence of the thermal elongation of the screw and improve the machining accuracy of the machine tool.

**System:** Configure the high-performance FANUCOi-MF CNC system to ensure the stability of the machine tool control, as well as the CNC machining functions and auxiliary functions required by the user.

**Lubrication:** The machine tool adopts a centralized automatic grease lubrication system, which performs periodic automatic lubrication according to the working time of the machine tool. The working environment of the machine tool is clean, the user's use cost is low, and the maintenance is convenient.

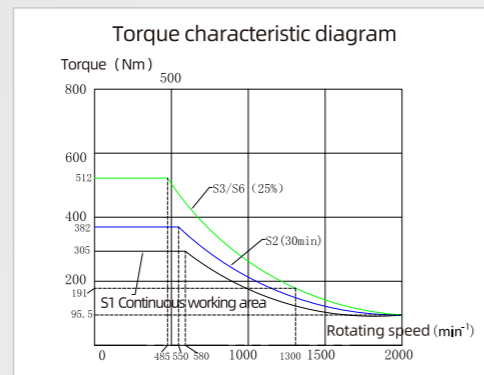
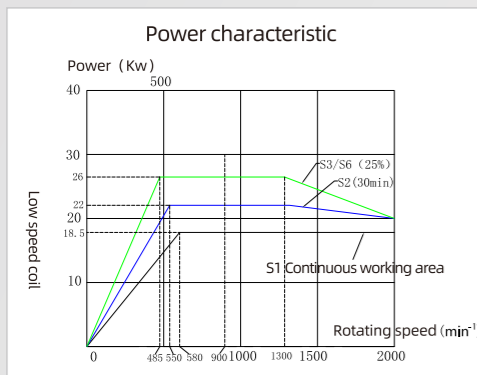
**Core component features**

**Built-in electric spindle BT50-8000RPM**

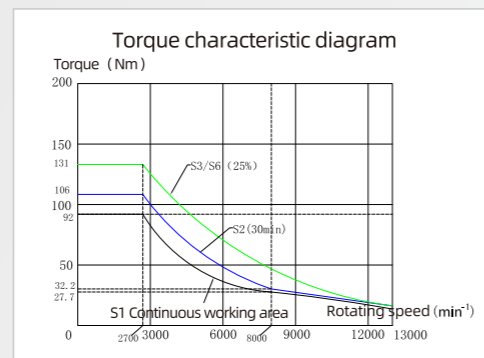
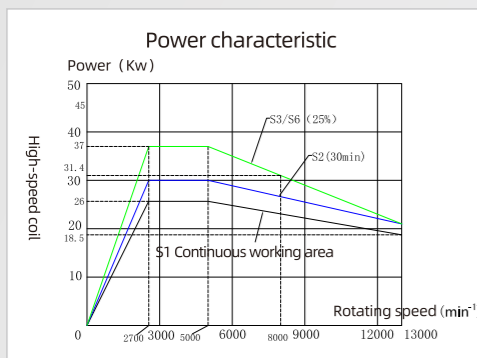
The use of high-power electric spindle, automatic switching of dual windings, can achieve different requirements of high speed and large torque, and high processing accuracy. Rough and fine processing can be completed in one clamping, which improves processing quality and production efficiency.



**Low gear**

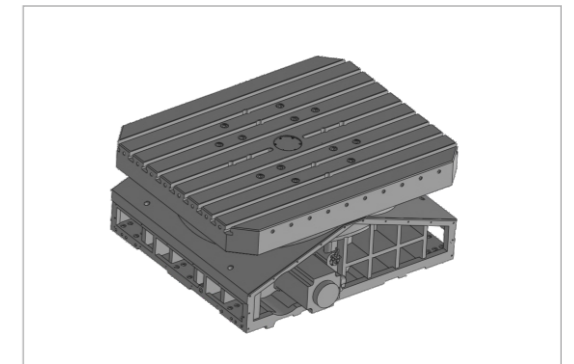


**High gear**



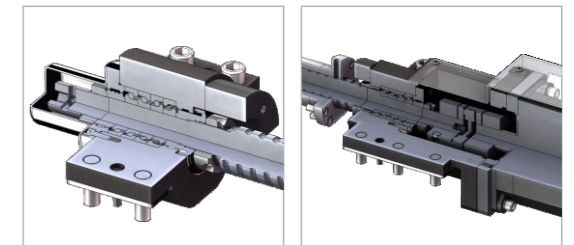
**High-precision cam turntable**

The cam structure turntable has the working characteristics of high precision, high speed, zero backlash and heavy load compared with the traditional worm gear turntable. The output shaft uses a large bearing set on the circular outer wall of the shaft, and the two ends of the cam input shaft adopt a double bearing design to enhance the stability and load capacity of the turntable and better deal with the heavy cutting force. Increase the table design and expand the machining range of the machine tool, which is suitable for the machining of medium and large parts.



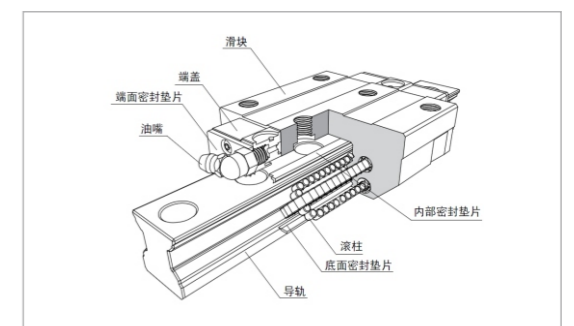
**Three-axis screw**

The three-axis screw adopts a large-lead ball screw and adopts (4+4) 24 bearing supports to improve the high load-bearing capacity and transmission rigidity of the machine tool, and maintain the machining accuracy and stability of the machine tool.



**Three-axis rail**

The three-axis guideway adopts high-rigidity precision linear roller guideway to achieve low friction, low vibration and high rigidity. It can improve the cutting rigidity, machining accuracy and stability of the spindle.



**T-H series parameters** PRODUCT TECHNICAL PARAMETERS

Items		Unit	T-H11	T-H13	
Processing	X axis	mm	1100	1350	
	Y axis	mm	600	850	
	Z axis	mm	650	750	
	Distance from spindle end surface to spindle center	mm	175~825	90~840	
	Distance from spindle center to work table	mm	50~650	50~900	
	Max work piece size	mm	φ1200×720	φ1450×950	
Work table	Work table size	mm	500×500	630×630	
	Max load	Kg	500	1200	
	T-slot(number-width*spacing)	mm	5-18×100	5-18×100	
	Min division unit	Deg(°)	0.001	1°	
Spindle	Motor power(rated/max.)	KW	7.5/11	15/18.5	
	Motor torque(rated/max.)	N·m	35.8/95.5	143/191	
	Rotational speed range	r/min	50~12000	50~6000	
	Reduction ratio		1 : 1	4 : 3	
	Spindle diameter	mm	φ150	φ190	
	Tool holder specification		BT40	BT50	
Guide rail	X axis	mm	2-45 ball screw	2-45 Roller screw	
	Y axis	mm	2-45 ball screw	2-55 Roller screw	
	Z axis	mm	2-45 ball screw	4-45 Roller screw	
Drive	lead screw X/Y/Z	mm	X/Y/Z:40/12	X/Z:50/12;Y:50/10	
	Motor power X/Y/Z/C	KW	1.8/3/3/3	3/3/3/2.5	
Speed	cutting feed speed range	mm/min	0-8000	0-10000	
	X、Y、Z rapid moving speed	m/min	36/36/36	20/20/20	
Accuracy	positioning accuracy(X/Y/Z)	mm	0.01 B:20"	0.012 B:8"	
	Repeatability(X/Y/Z)	mm	0.007 B:10"	0.008 B:2"	
Tool magazine	Capacity		24	24	
	Weight	Kg	7	15	
	Length	mm	320	400	
	Max diameter (full/adjacent empty)	mm	φ78/φ150	φ110/φ200	
Others	CNC system		Fanuc-0i-MF (5)	Fanuc-0i-MF (5)	
	Air source	flow	L/min	500	500
		Pressure	MPa	0.6~0.8	0.6~0.8
	Equipment capacity	KW	25	40	
	Cooling tank capacity	L	300	340	
	Machine dimensions (L*W*H)	mm	3400×3000×3000	4242×3008×3340	
	Machine weight (approx.)	Kg	6800	11000	

All pictures in this catalog are for reference only, subject to the actual machine; the company's products are continuously improved. If the above information is changed, we will not notify you.

**H series parameters** PRODUCT TECHNICAL PARAMETERS

Items		Unit	H-100	
Processing	X axis	mm	2000	
	Y axis	mm	1300	
	Z axis	mm	1200	
	Distance from spindle end surface to spindle center	mm	350-1550	
	Distance from spindle center to work table	mm	150-1450	
	Max work piece size	mm	Φ2000×1300	
Work table	Work table size	mm	1000×1250	
	Max load	Kg	5000	
	T-slot(number-width*spacing)	mm	9-22×100	
	Min division unit	Deg(°)	0.001	
Spindle	Motor power(rated/max.)	KW	26/37	
	Motor torque(rated/max.)	N·m	305/512	
	Rotational speed range	r/min	80~8000/80-10000 Optional	
	Reduction ratio		1 : 1	
	Spindle diameter	mm	Φ300	
	Tool holder specification		BT50	
Guide rail	X axis	mm	2-55 Roller screw	
	Y axis	mm	2-55 Roller screw	
	Z axis	mm	2-55 Roller screw	
Drive	lead screw X/Y/Z	mm	5016/5012/5008	
	Motor power X/Y/Z/C	KW	7/6/6/3	
Speed	cutting feed speed range	mm/min	0~10000	
	X、Y、Z rapid moving speed	m/min	24	
Accuracy	positioning accuracy(X/Y/Z)	mm	0.016 B:10"	
	Repeatability(X/Y/Z)	mm	0.008 B:8"	
Tool magazine	Capacity		40	
	Weight	Kg	18	
	Length	mm	500	
	Max diameter (full/adjacent empty)	mm	125/230	
Others	CNC system		Fanuc-0i-MF(3)	
	Air source	flow	L/min	500
		Pressure	MPa	0.6~0.8
	Equipment capacity	KW	85	
	Cooling tank capacity	L	600	
	Machine dimensions (L*W*H)	mm	6880×4765×3560	
	Machine weight (approx.)	Kg	19000	

All pictures in this catalog are for reference only, subject to the actual machine; the company's products are continuously improved. If the above information is changed, we will not notify you.