



TAIKAN VERTICAL MACHINING CENTER

HIGH-END INTELLIGENT EQUIPMENT
INTEGRATED SOLUTIONS SERVICE PROVIDER



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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
Famous brand in Guangdong province.
Top 500 manufacturers in Guangdong province
Cultivating enterprises of strategic emerging industries in Guangdong province
Abide by the contract and credit enterprises in Guangdong province
Famous brand in Shenzhen

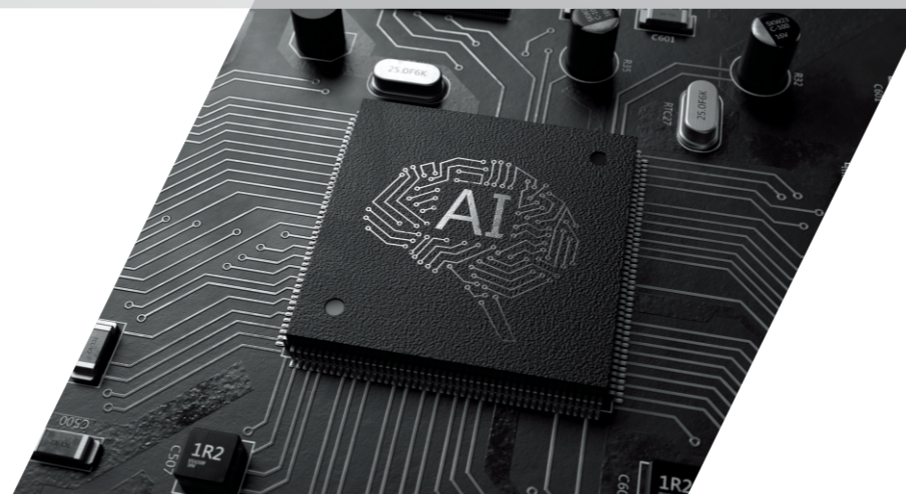
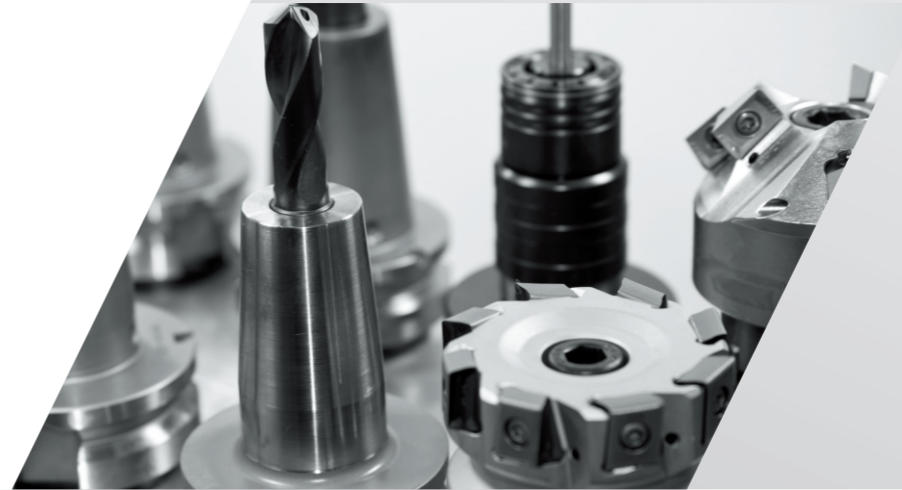
Shenzhen Mayor Quality Award
Top 100 quality enterprises in Shenzhen
2nd prize of science and technology progress award in Shenzhen
ISO9001: 2008 Quality Management System Certification
ISO14000 Environmental Management System Certification

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^{pcs}

3 modern production bases

300000⁺ m²

plant area of 300000 square meters

3000⁺

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.

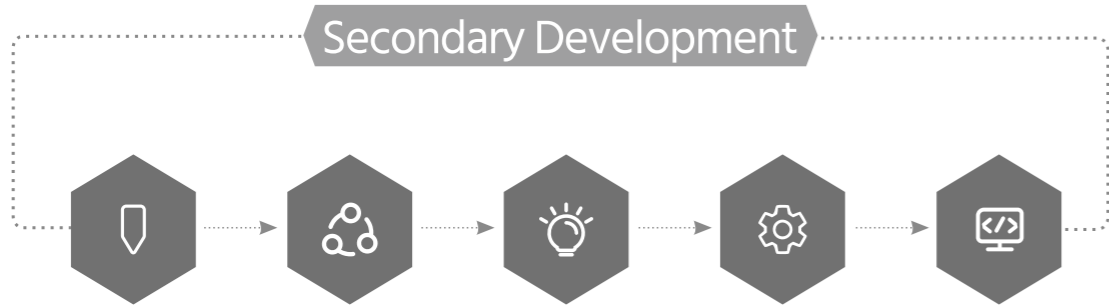
Service Aim

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

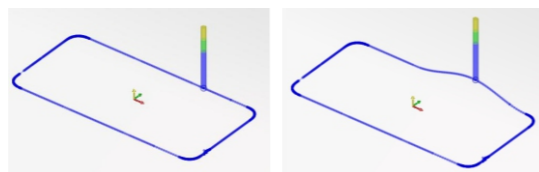
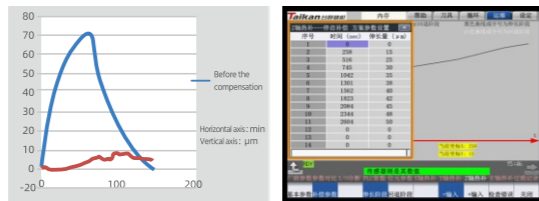
FEATURES OF CNC SYSTEM



- | | | |
|---|--|---|
| Tool
Fast tool changing Tool by hand
Life management Procedure sheet
Automatic tool Tool measurement | Operation and maintenance
I/O diagnosis PLC constant
Bit parametertem Temperature compensation
Machine tool debugging Tool magazine management | Help
PLC alarm information and solutions
G code M code
Macro definition
User screen definition |
| Setting
Functional form Rights management
Permission to login Machine information
(Model, name, factory number, parameter version, PLP version, etc.) | Programme
Common programming DXF programming
External interface Measuring group
Measure following | |

Real-time dynamic control of machine thermal extension (Patent registering)

Solve the machine thermal extension that can be controlled effectively without an engine to achieve stable continuous processing for long time and improve accuracy, yield and efficiency, reduce cost.



Programs can be slightly adjusted to ensure none quality issues during product processing

Fast dialog programming

Provide custom image that can generate quickly procedures of simple processing and probe calibration. Multiple program groups can be inserted to choose many processing modes. It makes processing more quickly and efficiently for users

Intelligent follow measurement control (Patent registering)

Solve differences of shape in processing parts and quality of chamfering to achieve on-machine measurement and real-time correction.

Intelligent Tool Management

[MDI Reset the programming] Achieve to set batch tool life management parameters by defining the script file to note the tool purpose, and add pictures to the specified folder to view the tool location



Select different tool numbers to display pictures of the machining position and wear conditions of each tool

Intelligent Tool Management

Fast tool change, manual fast tool setting, defining the script file to note the tool purpose, and add pictures to the specified folder to view the tool location



Taikan Machine Tool Cloud Device Management Platform

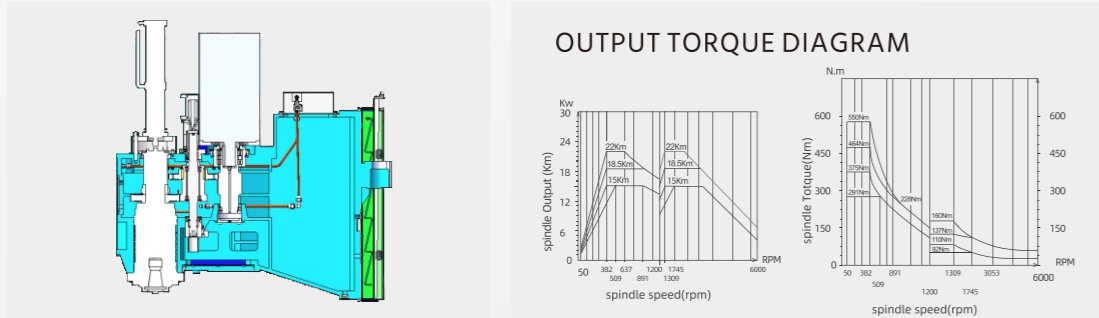
Connect internet to realize Machine Tool Cloud Device Management Platform on the workshop equipment



1. BT50 GEAR HEAD

The high and low gears are automatically switched by the cylinder driving the middle gear up and down. The high-grade spindle motor and spindle transmission ratio is 1:1, and the maximum spindle speed can reach 6000 rpm, while the low gear is 1:4, and the spindle is in a low-speed high-torque state, and the maximum torque can reach 464Nm.

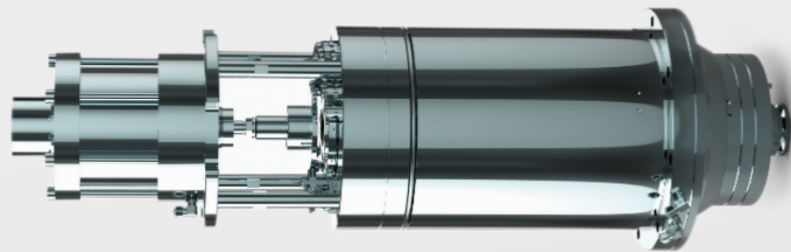
This set of gears is developed and produced in collaboration with professional OGIC in Japan, and independent oil cooler is used to lubricate and cool down the gears.



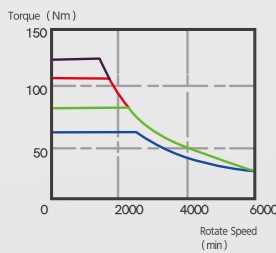
2. Motorized spindle

The 15,000rpm or 18,000rpm spindle with built-in motor structure minimizes vibration at high speeds and provides excellent performance when machining molds and other high-precision products. The spindle is designed with a built-in motor structure to minimize vibration at high speeds and to provide excellent performance when machining high-precision products such as dies and tools.

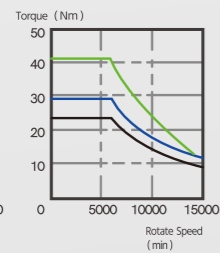
Adopting internal cooling design, the temperature can be fully controlled. Knife punching cylinder is external, which has lower failure rate than traditional motorized spindle and knife punching cylinder integrated design, and the knife punching adopts hydraulic knife punching (optional), which has higher reliability and will not pull the knife.



Torque characteristic diagram of low speed coil



Torque characteristic diagram of high speed coil



INTRODUCTION TO MAIN FUNCTIONAL PARTS



3. Tool magazine



Adopt encoder control ATC tool change, faster than normal tool changer, T to T is about 1.2s.



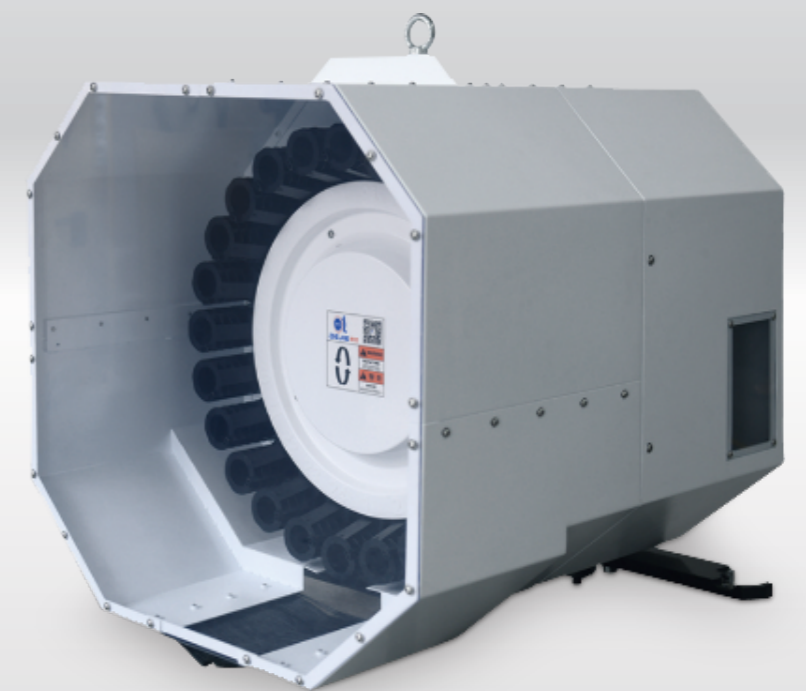
Fully enclosed design to prevent iron chips from splashing during processing



With big and heavy tool functions

The frequency converter is used to control the cutter wall and cutter head movement, and the angle encoder is used to feed back the position of cutter arm. Compared with the traditional contactor control mode, it has the following advantages.

- 01. The knife arm motor and knife motor do not need mechanical brake discs, eliminating the point of failure caused by the loss of brake pads with use.
- 02. The angle encoder signal is stable and can be assigned to advance loose clamping tool signal as needed, and the efficiency of tool change is improved.
- 03. The frequency converter can control the cutter wall to select the speed at will, so the standard has the function of automatic speed reduction of heavy cutter and automatic speed reduction + automatic separation of large diameter cutter





STANDARD VERSION

HIGH SPEED AND HIGH EFFICIENCY VERTICAL MACHINING CENTER



HIGH SPEED

Meet the needs of fast cutting and batch processing
 Suitable for 5G communication, toy products, hardware, valve body processing, especially the aluminum alloy parts processing effect and efficiency is particularly good

HIGH SPEED AND HIGH EFFICIENCY VERTICAL MACHINING CENTER

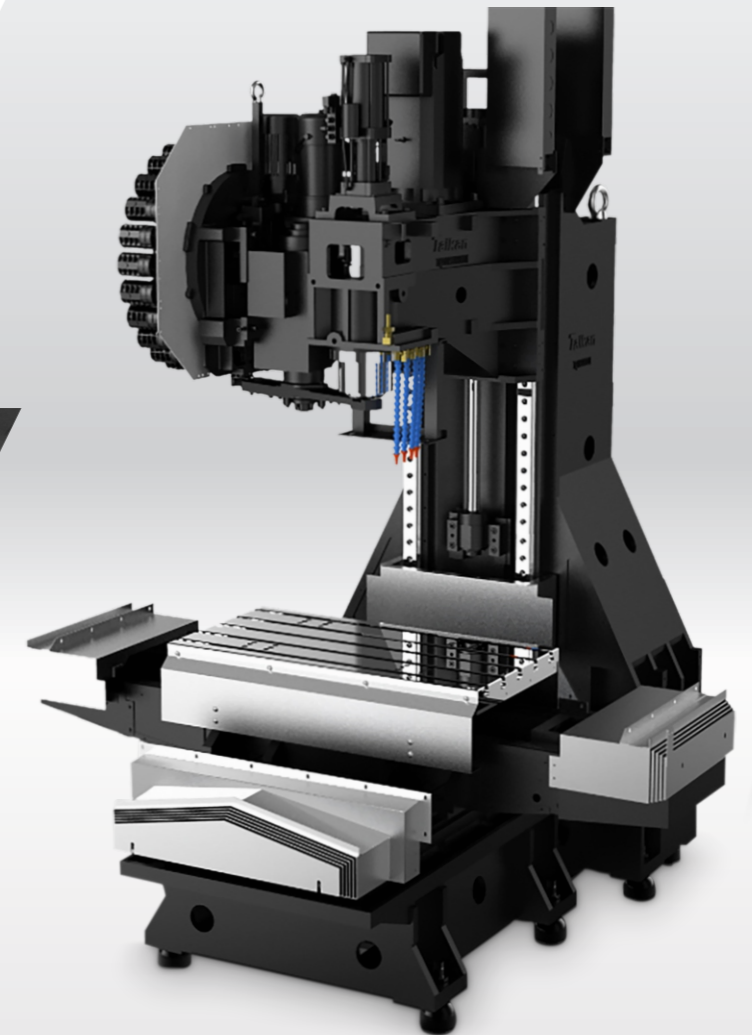
T-V856S

PRODUCT DESCRIPTION



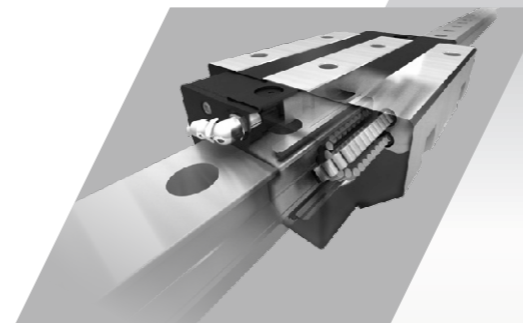
T-V856S line rail type vertical machining center is a small and medium size machine tool, the workpiece can be automatically and continuously finished after one clamping milling, drilling, boring, expanding, reaming, countersinking, tapping and other processes, the machine tool is suitable for small and medium box type, plate, disk, valve, shell type, mold and other complex parts of multi-

species of small and medium batch processing. The machine tool adopts high precision linear rail and screw, the machine tool has better dynamic responsiveness, can achieve high speed cutting, low speed without crawling, in 5G, precision parts, hardware, auto parts, medical device industry is widely used.



HIGH SPEED AND HIGH EFFICIENCY VERTICAL MACHINING CENTER

T-V856S



PRODUCT ADVANTAGE

The layout of the whole machine continues to follow the form of T-V856, adopting the classic C-type structure of VMC, the working table realizes the left and right movement of x-axis, the saddle achieves the front and back movement of y-axis, and the spindle box achieves the up and down movement of z-axis. The bed adopts super large stable base, high rigid large span herringbone column, high-speed cutting without vibration and deformation.

New optimized structural design of the five basic castings, all made of high-quality resin sand molding and high-strength cast iron materials. In combination with heat treatment measures, they ensure high rigidity and stability of the machine tool. Through advanced design methods such as finite element analysis and modal analysis, the performance of the whole machine is improved by more than 20% compared with T-V856.

A new appearance of professional industrial design, full enclosed protection, simple and generous appearance, pleasant operation, convenient maintenance, and meets the requirements of ergonomics.

Wider working table design with 1000mm × 500mm, Y axis stroke is increased to 550mm, a large processing range, meeting the needs of customers for larger processing space, and the versatility is stronger.

For X / Y / Z axis support system , the original ball guide rails are all upgraded to roller guide rails with high rigidity and high bearing capacity; the roller guide rails are in line contact with the sliders and guide rails through rollers, which is superior to the point contact of ball guide rails. When they bear the same load, they achieve less elastic deformation and meet the high-precision application of heavy load machining.

The X/Y/Z axis drive system of the machine is upgraded from "fixed+support" to "fixed+pre-tension", which reduces the thermal displacement caused by the frictional heat of the screw and enables high-precision machining. Combined with the thermal displacement control module (option), the thermal displacement can be greatly reduced; it can reduce the warm-up time of the equipment and improve the utilization rate of the equipment.

The tool magazine adopts the 24 arm type tool magazine of the platform group, which is reliable in quality and stable in performance. The encoder and frequency converter is more stable and faster than the traditional tool magazine, and can realize 1.2sec rapid tool change.

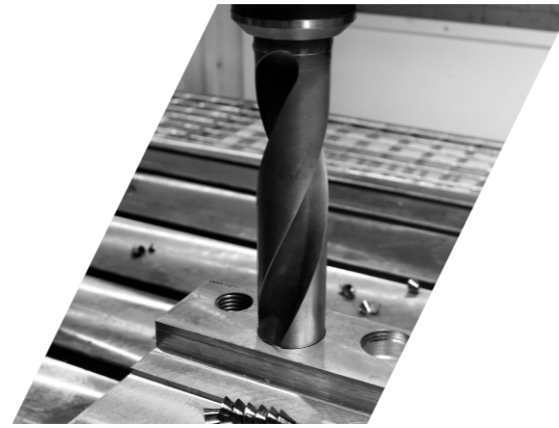
The main shaft adopts the high-speed main shaft unit of the platform group, with the standard BT40-12000r/min straight spindle. The front end of the main shaft adopts the labyrinth design, with the air curtain protection function, to prevent the cutting fluid from entering the main shaft bearing. Standard equipped with water cooler, give full play to the advantages of large specific volume of water-cooled medium (special water-based mixture), take more heat, better cooling effect, so as to achieve the maximum speed of spindle thermal extension within 0.01mm.

Bearings adopt Japan NSK/Germany FAG , electric components adopt Schneider, pneumatic components adopts SMC.

Equipped with positive displacement and forced lubricating oil system and optimized lubricating control method, it can not only ensure the good lubrication of all moving parts of the machine tool, but also increase the interval of oil filling under the standby state of the machine tool, realize energy conservation and environmental protection, and reduce maintenance costs.

CONFIGURATION TABLE

ITEM	T-V6	T-V856S	T-V1055S	T-V1165S	T-V1270S
BT40 belt type 8000rpm	/	OPT	OPT	OPT	OPT
BT40 belt type 10000rpm	/	OPT	OPT	OPT	OPT
BT40 direct type 12000rpm	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD
CTS 2MPa/3MPa/5MPa/7MPa	OPT	OPT	OPT	OPT	OPT
Mitsubishi M80B	STANDARD	STANDARD	STANDARD	OPT	STANDARD
FANUC 0I-MF(5)	OPT	OPT	OPT	OPT	OPT
SIEMENS 828D	OPT	OPT	OPT	OPT	OPT
HUAZHONG CNC	OPT	OPT	OPT	OPT	OPT
THE-4TH AXIS	OPT	OPT	OPT	OPT	OPT
Roller linear guide rail	/	STANDARD	STANDARD	STANDARD	STANDARD
24T ARM TYPE ATC	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD
30T ARM TYPE ATC	/	OPT	OPT	OPT	OPT
Rear chain chip conveyor	/	OPT	OPT	OPT	OPT
Tool setting gauge	OPT	OPT	OPT	OPT	OPT
Oil-water seperator	OPT	OPT	OPT	OPT	OPT
Spindle cooling	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD



CONFIGURATION TABLE

ITEM	T-V1375S	T-V1475S	T-V1585S	T-V1685S
BT50 belt type 6000rpm	STANDARD	STANDARD	STANDARD	STANDARD
BT40 direct type 12000rpm	OPT	OPT	OPT	OPT
CTS 2MPa/3MPa/5MPa/7MPa	OPT	OPT	OPT	OPT
FANUC 0I-MF(5)	STANDARD	STANDARD	STANDARD	STANDARD
MITSUBISHI M80B	OPT	OPT	OPT	OPT
The 4th axis	OPT	OPT	OPT	OPT
Roller linear guide rail	STANDARD	STANDARD	STANDARD	STANDARD
24T ARM type ATC	STANDARD	STANDARD	STANDARD	STANDARD
Double screw chip removal	STANDARD	STANDARD	STANDARD	STANDARD
Front chain chip conveyor	STANDARD	STANDARD	STANDARD	STANDARD
Oil-water seperator	OPT	OPT	OPT	OPT
Spindle cooling	STANDARD	STANDARD	STANDARD	STANDARD

PARAMETER TABLE

Item	Des	单位	T-V6	T-V856S	T-V1055S	T-V1165S	T-V1270S	
Traveling	X axis	mm	600	800	1000	1100	1200	
	Y axis	mm	390	550	550	650	700	
	Z axis	mm	450	600	600	580	650	
	The distance from spindle end face to working table	mm	190-640	125-725	100-700	140-720	150-800	
Working table	Working table size	mm	700*400	1000*500	1100*500	1200*600	1300*650	
	Maximum loading	kg	250	500	500	800	1000	
Spindle	Max spindle speed	rpm	Direct type12000	Direct type12000	Direct type12000	Direct type12000	Direct type12000	
	Spindle power	kw	3.7/5.5	7.5/11	7.5/11	7.5/11	7.5/11	
	Spindle torque	N.m	23.6/35	35.8/70	35.8/70	35.8/70	35.8/70	
Guide	X axis	/	2-25	2-35	2-45	2-45	2-45	
	Y axis	/	2-30	2-45	2-45	2-45	2-45	
	Z axis	/	2-35	2-45	2-45	2-45	2-45	
	Tool magazine capacity	/	24	24	24	24	24	
Tool	Spindle taper	/	BT40	BT40	BT40	BT40	BT40	
	Maxi tool dia. (With/without adjacent tool)	mm	Φ75/Φ150	Φ75/Φ150	Φ75/Φ150	Φ75/Φ150	Φ75/Φ150	
	Maxi tool length	mm	250	250	250	250	250	
	Max tool weight	kg	7	7	7	7	7	
	Feeding rate	x/y/z rapid speed rate	m/min	48/48/48	48/48/48	48/48/48	36/36/36	36/36/36
x/y/z feeding rate		mm/min	1-10000	1-10000	1-10000	1-10000	1-10000	
Accuracy	Positioning accuracy	mm	0.006	0.008	0.008	0.010	0.010	
	Repeatability	mm	0.004	0.005	0.005	0.007	0.007	
Size	Machine size (length*width*height)	mm	2100*2580*2670	2240*3121*3026	2500*3141*3026	2700*3460*3000	3000*3569*3312	
	Machine weight	kg	3500	4600	4900	6450	7500	
Power source	Power supply(380VAC,50HZ)	KVA	15	25	25	30	30	
	Gas source	flow	L/min	280(ANR)	280(ANR)	280(ANR)	280(ANR)	280(ANR)
		pressure	MPa	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8

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.

PARAMETER TABLE

Item	Des	Unit	T-V1375S	T-V1475S	T-V1585S	T-V1685S	
Traveling	X axis	mm	1350	1400	1550	1650	
	Y axis	mm	750	750	850	850	
	Z axis	mm	650	650	850	850	
	The distance from spindle end face to working table	mm	100-750	100-750	120-970	120-970	
Working table	Working table size	mm	1400*750	1500*750	1700*850	1700*850	
	Maximum loading	kg	1250	1250	1600	1600	
Spindle	Max spindle speed	rpm	Belt type6000	Belt type6000	Belt type6000	Belt type6000	
	Spindle power	kw	15/18.5	15/18.5	15/18.5	15/18.5	
	Spindle torque	N.m	143/191	143/191	143/191	143/191	
Guide	X axis	/	2-45	2-45	2-45	2-45	
	Y axis	/	4-45	4-45	4-45	4-45	
	Z axis	/	2-55	2-55	2-55	2-55	
Tool	Tool magazine capacity	/	24	24	24	24	
	Spindle taper	/	BT50	BT50	BT50	BT50	
	Maxi tool dia. (With/without adjacent tool)	mm	Φ105/Φ210	Φ105/Φ210	Φ105/Φ210	Φ105/Φ210	
	Maxi tool length	mm	350	350	350	350	
	Max tool weight	kg	18	18	18	18	
Feeding rate	x/y/z rapid speed rate	m/min	30/30/20	30/30/20	30/30/20	30/30/20	
	x/y/z feeding rate	mm/min	1-10000	1-10000	1-10000	1-10000	
Accuracy	Positioning accuracy	mm	0.015	0.015	0.015	0.015	
	Repeatability	mm	0.008	0.008	0.008	0.008	
Size	Machine size(length*width*height) Chain row and pedals not included	mm	3690*2860*3285	3690*2860*3285	4200*3285*3650	4200*3285*3650	
	Machine weight	kg	11000	11500	11800	11800	
Power source	Power supply(380VAC,50HZ)	KVA	40	40	40	40	
	Gas source	flow	L/min	280(ANR)	280(ANR)	280(ANR)	280(ANR)
		pressure	MPa	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8

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ADVANCED VERSION

HIGH SPEED HIGH PRECISION VERTICAL MACHINING CENTER

HIGH SPEED

It can meet the needs of high accuracy and stable batch processing connections. It is suitable for small and medium-sized precision parts and mold processing, and is widely used in precision parts, auto parts, medical equipment, precision molds and other industries.

HIGH SPEED AND PRECISION VERTICAL MACHINING CENTER

T-V1165H

PRODUCT ADVANTAGE

The three-axis ballscrew adopts central oil cooling to reduce the thermal extension and backlash of the ball screw, thus improving the machining accuracy of the product. As the ball screw is fully cooled, the wear caused by heat generation is reduced, the service life of the ball screw is improved, and the stability of the machine is enhanced.

The three-axis adopts No. 45 roller linear guide way, which has high rigidity and good vibration absorption effect, can meet the needs of light tool surface for precision molds.

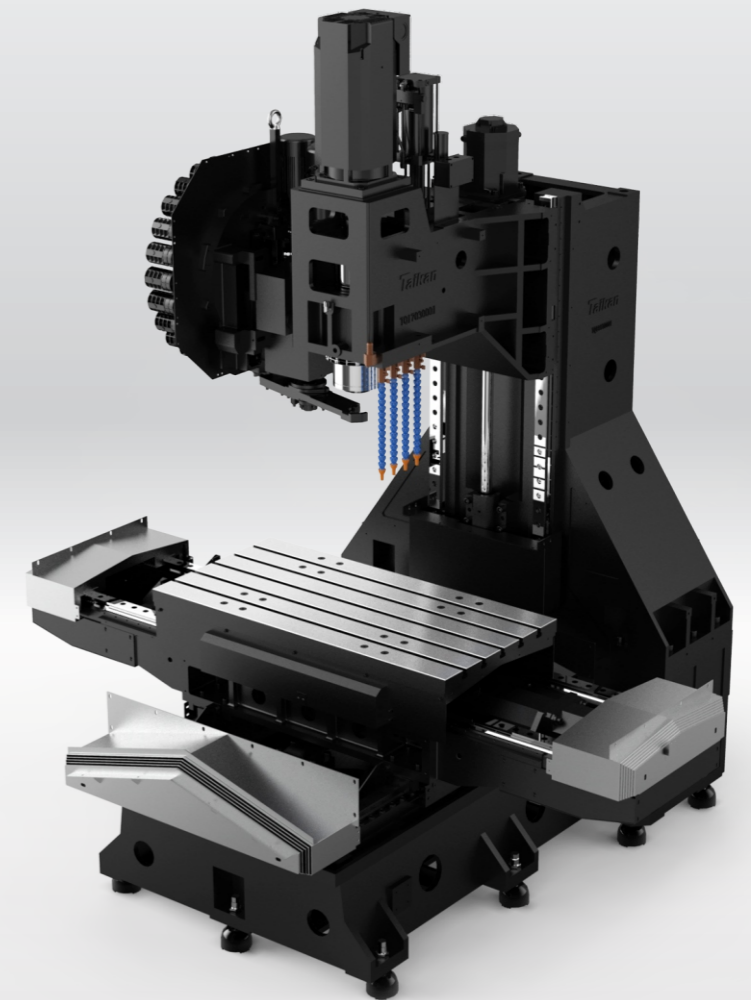
Constant temperature cooling design of nose end direct spindle, low temperature rise, good thermal extension.

Equipped with high-speed and high-precision M80A, or FANUC (package 3 or 1), with mold function, it can meet the requirements of complex surface machining.

The spindle adopts BBT form (optional), the end face and the radial force are simultaneously stressed, which increases the cutting rigidity of the tool.

Bearings adopt Japan NSK/Germany FAG, electric components adopt Schneider, pneumatic components adopts SMC.

The tool magazine is controlled by encoder and frequency converter, with stable performance and fast tool change speed, T to T is about 1.2s.



HIGH SPEED AND PRECISION VERTICAL MACHINING CENTER

T-V1165H



CONFIGURATION TABLE

ITEM	T-V856H	T-V1165H
BT40 direct type 12000rpm	STANDARD	STANDARD
BT40 direct type 15000rpm	OPT	OPT
Bt40 motorized spindle 15000 rpm	OPT	OPT
HSK-A63 motorized spindle 18000 rpm	OPT	OPT
CTS 2MPa/3MPa/5MPa/7MPa	OPT	OPT
Mitsubishi M80A	STANDARD	STANDARD
FANUC-Oi-MF(3 or 1)	OPT	OPT
Siemens828D	OPT	OPT
4th axis	OPT	OPT
Roller linear guide rail	STANDARD	STANDARD
24T DISC tool magazineBT40	STANDARD	STANDARD
30T DISC tool magazineBT40	OPT	OPT
Tool setting gauge	OPT	OPT
Oil-water seperator	OPT	OPT
Spindle cooling	STANDARD	STANDARD
Screw hollow cooling	STANDARD	STANDARD

PARAMETER TABLE

Item	Parameter	Unit	T-V856H	T-V1165H	
Traveling	X axis	mm	800	1100	
	Y axis	mm	550	650	
	Z axis	mm	600	580	
	The distance from spindle end face to working table	mm	125-725	140-720	
Working table	Working table size	mm	1000*500	1200*600	
	Maximum loading	kg	450	800	
Spindle	Max spindle speed	rpm	Direct type12000	Direct type12000	
	Spindle power	kw	7.5/11	7.5/11	
	Torque	N.m	35.8/70	35.8/70	
Guide	X axis	/	2-35	2-45	
	Y axis	/	2-45	2-45	
	Z axis	/	2-45	2-45	
Tool	Tool magazine capacity	/	24	24	
	Spindle taper	/	BT40	BT40	
	Maxi tool dia. (With/without adjacent tool)	mm	Φ75/Φ150	Φ75/Φ150	
	Maxi tool length	mm	250	250	
	Max tool weight	kg	7	7	
Feeding rate	x/y/z rapid speed rate	m/min	30/30/30	30/30/30	
	x/y/z feeding rate	mm/min	1-10000	1-10000	
Accuracy	Positioning accuracy	mm	0.008	0.010	
	Repeatability	mm	0.005	0.007	
Size	Machine size(length*width*height)	mm	2240*3121*3026	2700*3460*3000	
	Machine weight	kg	4600	6450	
Power source	Power supply(380VAC,50HZ)	KVA	25	30	
	Gas source	flow	L/min	280(ANR)	280(ANR)
		pressure	MPa	0.5~0.8	0.5~0.8



X、Y LINEAR GUIDE WAY, Z BOX WAY

HIGH PRECISION AND HIGH EFFICIENCY VERTICAL MACHINING CENTER



HIGH SPEED

It can meet the requirements of workpiece processing with high precision and large cutting amount, suitable for the processing of small and medium-sized precision parts and molds, and widely used in precision parts, auto parts, medical devices, precision molds and other industries.

HIGH PRECISION HIGH EFFICIENCY VERTICAL MACHINING CENTER

T-1585L

PRODUCT ADVANTAGE

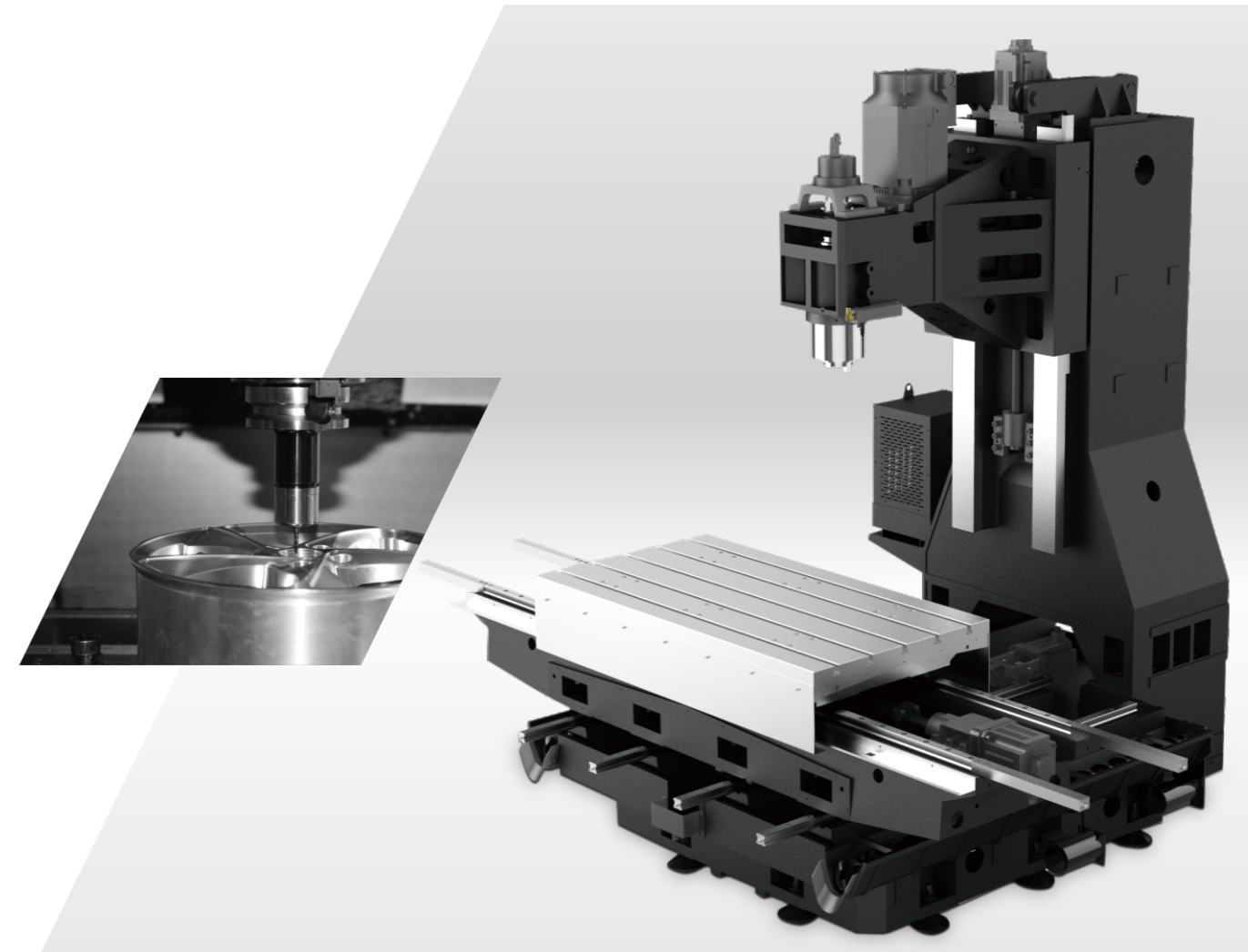
Z axis adopts rectangular box way, which has high cutting rigidity. Under heavy cutting condition, it still has good dynamic performance, good shock absorption effect and stable machining quality. X/Y axis adopts No.45 roller guide, Y axis 4-track and X axis 6-slide design, which effectively reduces the suspension deformation of the saddle, improves the load capacity and heavy cutting rigidity.

Three-axis screw adopts the central oil cooling and double nut configuration to reduce the hot extension and reverse clearance of the screw, so as to improve the processing accuracy of the product. As the screw is fully cooled, the wear caused by the heating is reduced, the service life of the screw rod is improved, and the long-term stability is maintained.

Equipped with high-speed and high-precision Mitsubishi M80A, or FANUC (package3 or 1), with mold function, it can meet the requirements of complex surface machining.

The spindle adopts BBT form (optional), the end face and the radial force are simultaneously stressed, which increases the cutting rigidity of the tool. Bearings adopt Japan NSK/Germany FAG , electric components adopt Schneider, pneumatic components adopts SMC.

The machine tool adopts double screw chip removal, which is automatic, humanized and efficient.



HIGH PRECISION HIGH EFFICIENCY VERTICAL MACHINING CENTER

T-1585L



CONFIGURATION TABLE

ITEM	T-856L	T-1060L	ITEM	T-1375L	T-1585L
BT40 belt type 8000rpm	STANDARD	STANDARD	BT50 belt type 6000rpm	STANDARD	STANDARD
BT40 belt type 10000rpm	OPT	OPT	BT40 direct type 12000rpm	OPT	OPT
BT40 direct type 12000rpm	OPT	OPT	BT50 gear head	OPT	OPT
CTS 2MPa/3MPa/5MPa/7MPa	OPT	OPT	CTS 2MPa/3MPa/5MPa/7MPa	OPT	OPT
FANUC 0I-MF(3)	OPT	OPT	FANUC0I-MF(5)	STANDARD	STANDARD
FANUC 0I-MF(5)	OPT	OPT	Mitsubishi M80B	OPT	OPT
Mitsubishi M80B	STANDARD	STANDARD	Siemens828D	OPT	OPT
Siemens828D	OPT	OPT	4th axis	STANDARD	STANDARD
4th axis	OPT	OPT	Roller linear rail	OPT	OPT
Roller linear rail	STANDARD	STANDARD	24TDISC tool magazineBT50	STANDARD	STANDARD
24TDISC tool magazineBT40	STANDARD	STANDARD	Double screw chip removal	STANDARD	STANDARD
30TDISC tool magazineBT40	OPT	OPT	Front chain chip conveyor	STANDARD	STANDARD
Oil-water seperator	OPT	OPT	Oil-water seperator	OPT	OPT
Spindle cooling	STANDARD	STANDARD	Spindle cooling	STANDARD	STANDARD

PARAMETER TABLE

Item	Parameter	Unit	T-856L	T-1060L	T-1375L	T-1585L	
Travel	X axis	mm	800	1050	1300	1550	
	Y axis	mm	500	600	750	850	
	Z axis	mm	600	570	650	850	
	The distance from spindle end face to working table	mm	125-725	140-710	100-750	120-970	
Working table	Working table size	mm	1000*500	1200*600	1400*750	1750*850	
	Maximum loading	kg	450	800	1250	1600	
Spindle	Max spindle speed	rpm	Belt type8000	Belt type8000	Belt type6000	Belt type6000	
	Spindle power	kw	7.5/11	7.5/11	15/18.5	15/18.5	
	Torque	N.m	35.8/70	35.8/70	143/191	143/191	
Guide	X axis	/	2-35	2-45	2-45	2-45	
	Y axis	/	2-45	2-45	4-45	4-45	
	Z axis	/	Hard rail	Hard rail	Hard rail	Hard rail	
Tool	Tool magazine capacity	PC	24	24	24	24	
	Spindle taper	/	BT40	BT40	BT50	BT-50	
	Maxi tool dia. (With/without adjacent tool)	mm	Φ75/Φ150	Φ75/Φ150	Φ105/Φ210	Φ105/Φ210	
	Maxi tool length	mm	250	250	350	350	
	Max tool weight	kg	7	7	18	18	
Feeding rate	x/y/z rapid speed rate	m/min	36/36/24	30/30/20	24/24/15	24/24/15	
	x/y/z feeding rate	mm/min	1-10000	1-10000	1-10000	1-10000	
Accuracy	Positioning accuracy	mm	0.008	0.008	0.015	0.015	
	Repeatability	mm	0.005	0.005	0.008	0.008	
Size	Machine size(length*width*height)	mm	2240*3144*3033	2700*3481*3154	3690*2860*3285	4200*3285*3600	
	Machine weight	kg	4800	6700	11350	12000	
Power source	Power supply(380VAC,50HZ)	KVA	25	25	40	40	
	Gas source	flow	L/min	280(ANR)	280(ANR)	280(ANR)	280(ANR)
		pressure	MPa	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8

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HIGH-SPEED ENGRAVING & MILLING MACHINE

C-650/C-870

This series of machine tools is suitable for small and medium-sized mold finishing, plastic, copper, aluminum alloy product processing. Widely used in shoe mold manufacturing, metallurgy processing, clocks and glasses processing, electronic parts, hardware, advertising, handicraft products and other industries;

Processed samples



Main features

- The machine adopts a gantry structure and is cast by Mihana high-grade cast iron. The internal dragon skeleton is strengthened. All cast iron is annealed to ensure high stability and no deformation.
- The machine is heavier than the equivalent model. The sealed outer cover and the double-sided door facilitate product processing and installation of fixtures.
- A control system for high-speed engraving and milling machines developed using Taikan technology. Such as servo motors, linear guides, couplings, screw assembly and other major components are imported from Japan, Switzerland, Germany, Taiwan. This reinforces high precision and high efficiency characteristics.
- Steel, copper, aluminum, graphite, plexiglass and other materials can be precision processed.
- The spindle can be cooled by itself during high-speed operation to ensure that heat will not damage the characteristics of the spindle.
- The precision ball screw and linear guide, and the coupling have precise measurements to ensure stability during processing and zero clearance when returning.
- This model can be equipped with a tool magazine according to customer needs to improve production efficiency.



SERIES PARAMETER TABLE

Items		Unit	C-650	C-870
Travel	X-axis	mm	600	700
	Y-axis	mm	500	800
	Z-axis	mm	260	320
Working table size		mm	500×600	800×700
Max. load		kg	350	300
Distance from spindle nose to table		mm	120-380	140-460
Spindle speed		rpm	3000-24000	3000-24000
Spindle collet/Spindle taper		#	ER25/BT30(No keyway)	ER32/BT30(No keyway)
Spindle lock method		#	Manual/pneumatic	Manual/pneumatic
Spindle cooling		#	Oil cooling	Oil cooling
X, Y, Z axis servo motor		kw	0.85/0.85/0.85	1.3/1.3/1.3
Spindle motor		kw	5.5/7.5	5.5/7.5
Rapid feed rate (X/Y/Z)		mm/min	10	15
Cutting feed		m/min	7.5	8
CNC system resolution		mm	0.001	0.001
Positioning accuracy		mm	0.008/0.008/0.008	0.008/0.008/0.008
Repeatability		mm	0.005/0.005/0.005	0.005/0.005/0.005
Tool setter		#	Standard	Standard
Lubrication system		#	Automatic lubrication system	Automatic lubrication system
Weight		kg	3500	3500
Dimensions (length*width*height)		mm	2080×1910×2480	2460×1850×2500

CUTTING PARAMETERS

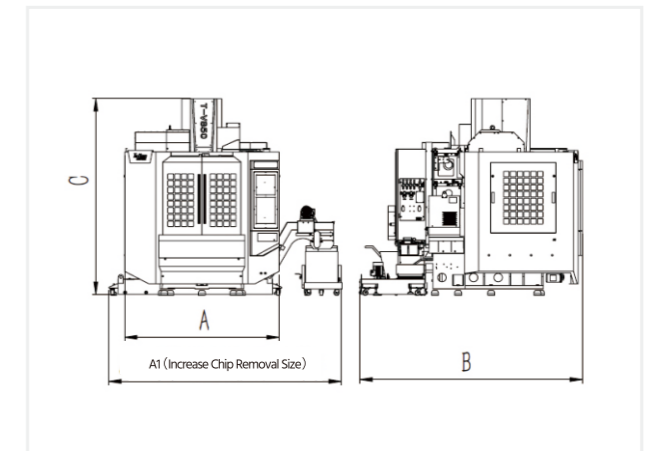
	Drilling	Tapping	Heavy cutting	
Spindle motor				
7.5/11KW (BT40)	Material (S45C) Tools: D45mmU drill Spindle speed: 1200r/min Feed rate: 100mm/min Cutting depth: 100mm Material removal rate: 450cm ³ /min	Material (S45C) Tools: M22XP2.5 Spindle speed: 200r/min Feed rate: 500mm/min Material removal rate: 40mm Material (AL6061) Tools: M27XP3 Spindle speed: 200r/min Feed rate: 600mm/min Material removal rate: 40mm	Material (S45C) Tools: D63mm Cutting width: 50.4mm Spindle speed: 1500r/min Material (AL6061) Tools: D80mm Cutting width: 64mm Spindle speed: 6000r/min	Feed rate: 800mm/min Material removal rate: 5mm Material removal rate: 201.6cm ³ /min Feed rate: 5000mm/min Material removal rate: 6mm Material removal rate: 1920cm ³ /min
11/15KW (BT40)	Material (S45C) Tools: D50mmU钻 Spindle speed: 1200r/min Feed rate: 100mm/min Cutting depth: 100mm Material removal rate: 500cm ³ /min	Material (S45C) Tools: M27XP3 Spindle speed: 200r/min Feed rate: 600mm/min Material removal rate: 40mm Material (AL6061) Tools: M33XP3.5 Spindle speed: 100r/min Feed rate: 350mm/min Material removal rate: 40mm	Material (S45C) Tools: D63mm Cutting width: 50.4mm Spindle speed: 1500r/min Material (AL6061) Tools: D80mm Cutting width: 64mm Spindle speed: 6000r/min	Feed rate: 800mm/min Cutting depth: 6mm Material removal rate: 2419cm ³ /min Feed rate: 5000mm/min Cutting depth: 7mm Material removal rate: 2240cm ³ /min
15/18KW (BT50Belt spindle)	Material (S45C) Tools: D60mmU drill Spindle speed: 1000r/min Feed rate: 80mm/min Cutting depth: 100mm Material removal rate: 480cm ³ /min	Material (S45C) Tools: M33XP3.5 Spindle speed: 100r/min Feed rate: 350mm/min Material removal rate: 40mm	Material (S45C) Tools: D100mm Cutting width: 80mm Spindle speed: 600r/min	Feed rate: 500mm/min Cutting depth: 10mm Material removal rate: 400cm ³ /min
B240MGS A0101B Motorized spindle	Material (S45C) Tools: D40mmU drill Spindle speed: 1000r/min Feed rate: 100mm/min Cutting depth: 100mm Material removal rate: 400cm ³ /min	Material (S45C) Tools: M16XP2 Spindle speed: 200r/min Feed rate: 400mm/min Cutting depth: 40mm	Material (S45C) Tools: D63mm Cutting width: 50.4mm Spindle speed: 1500r/min	Feed rate: 800mm/min Cutting depth: 4mm Material removal rate: 1613cm ³ /min
Bt50320 MGS-08A Motorized spindle	Material (S45C) Tools: D60mmU drill Spindle speed: 1000r/min Feed rate: 80mm/min Cutting depth: 100mm Material removal rate: 480cm ³ /min	Material (S45C) Tools: M36XP4 Spindle speed: 100r/min Feed rate: 400mm/min Cutting depth: 40mm	Material (S45C) Tools: D100mm Cutting width: 80mm Spindle speed: 580r/min	Feed rate: 500mm/min Cutting depth: 7mm Material removal rate: 280cm ³ /min

BRANDS OF MAIN PARTS

Item	Brands	Remark
System	Mitsubishi/FANUC/SIEMENS	Japan/Germany
Lead screw	PMI/HIWI/THK/INA	Taiwan/Japan/Germany
Guide	PMI/HIWI/THK/NSK	Taiwan/Japan
Spindle bearing	GMN/NSK/SKF/NTN	Japan/Germany
Spindle belt	UNITTA	Japan
Three-axis	NBK	Japan
Automatic lubrication pump	CHENYING	Taiwan
Pumps for CHIP fluid	CHENYING	China
Spindle oil cooler	Tongfei	China
Battery valve	SMC	Japan
Hydraulic station pump	Nachi	Japan
Bearing for screw	FAG/NSK	Germany/Japan
Pneumatic Components	SMC	Japan
Dryer	SMC	Japan
Isolation transformer	SuennLiang/Baojin	China
Wire	LAPP/Helukable	Germany
Connector	Mitsubishi/Fanuc/Saiyang	Japan/China
Heat exchanger	Tongfei	China
Operation panel	Saiyang	China
Band switch	Saiyang	China
Warning light	ONN/WERMA	China
Warning light	Saiyang	China
Contact and circuit breaker	Schneider	France

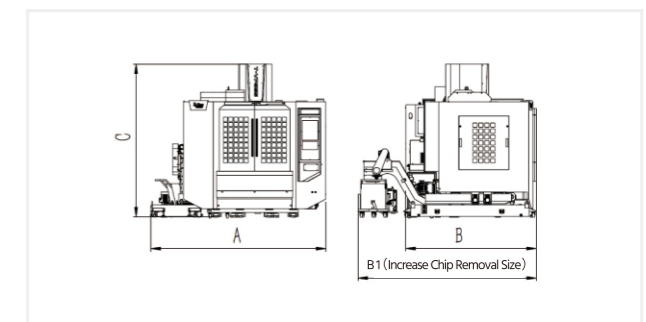
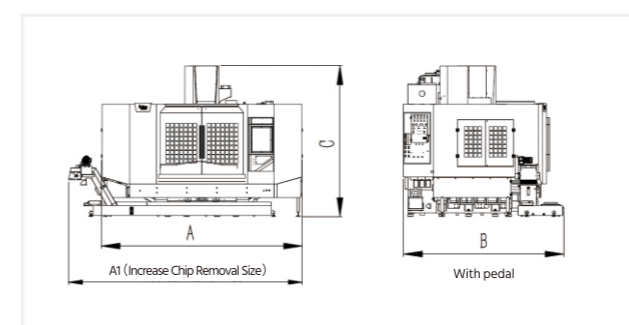
LIST OF MACHINE DIMENSIONS:

Model	T-V6	T-V856S T-V856H	T-V1055S	T-850L
A	2100	2240	2500	2200
B	2580	3121	3141	3165
C	2670	3026	3026	2900
A1		3500	3500	3300
机型	T-1060L	T-V1165S T-V1165H	T-V1265S	T-V1270S
A	2700	2700	3000	3000
B	3481	3460	3460	3569
C	3154	3000	2950	3312
A1		3400	3400	3500



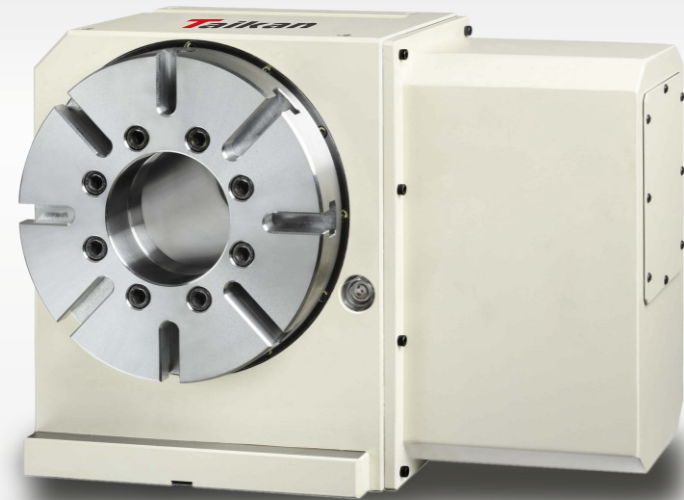
Model	T-V1375S T-V1375H	T-V1475S	T-V1585S T-V1585H
A	3690	3690	4200
B	2860 (3730)	2860 (3730)	3280 (4100)
C	3285	3285	3650
A1	5200	5200	5450
Model	T-V1685S	T-1375L	T-1585L
A	4220	3690	4200
B	3280 (4100)	2860 (3730)	3280 (4100)
C	3650	3270	3600
A1	5450	5200	5450

Model	C-650	C-870
A	2080	2460
B	1910	1850
C	2480	2500



TAIKAN FOUR-AXIS CAM TYPE CNC TURNTABLE NC200/250

Taikan cam type numerical control turntable has the characteristics of high precision, high speed, zero backlash and heavy load. The constant velocity driving curved surface of the cambered cam on the input shaft is in rolling contact with the needle bearing on the output shaft turret to achieve zero backlash and higher speed operation. Due to the almost zero frictional motion of the rolling transmission, The mechanism maintains long-lasting backlash-free transmission, high-precision positioning, and does not require regular calibration and adjustment work. Taikan cam type numerical control turntable, the output shaft is set on the outer wall of the shaft with a large bearing, and the two ends of the cam input shaft are set with double bearings, which further enhances the stability and load capacity of the turntable, and can better cope with the high speed during processing. With heavy cutting force, it can improve the accuracy, efficiency and cost of machining workpieces.



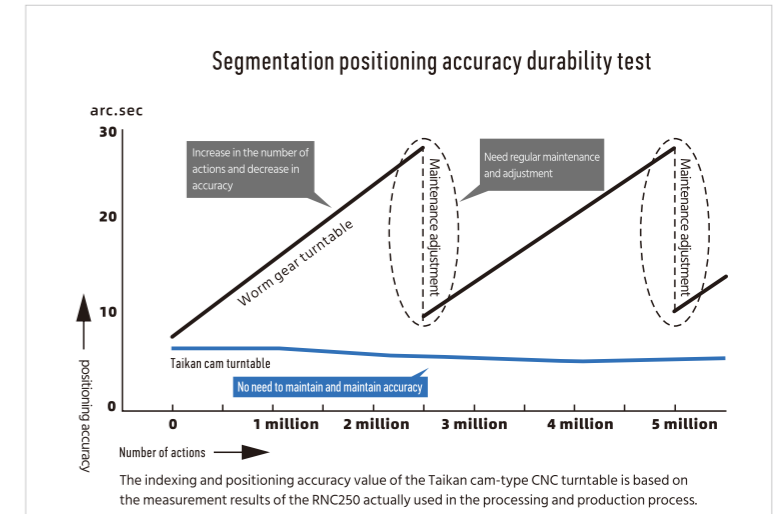
No need to adjust maintenance and cost-effective

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

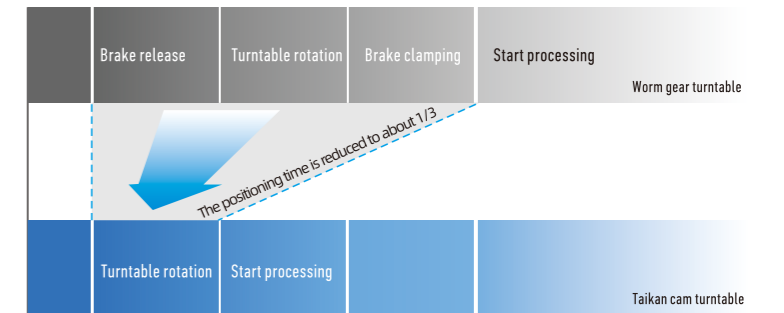
After the use time or number of times has increased to 5 million times, the initial accuracy can be maintained continuously without maintenance, and no mechanical adjustment and maintenance costs will be incurred.



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.

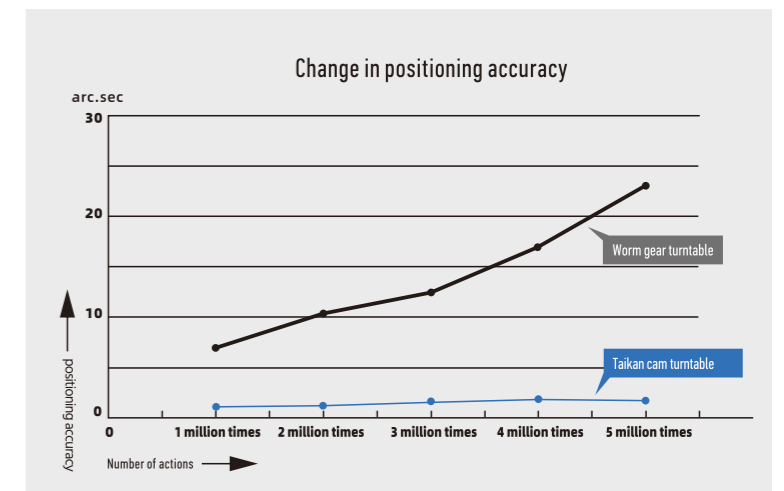


Maintain absolute repeat positioning accuracy

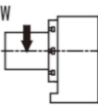
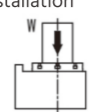
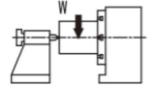
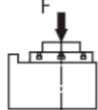
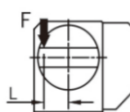
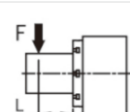
General worm wheel type turntable and taikan cam type turntable 5 million times segmentation test

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.

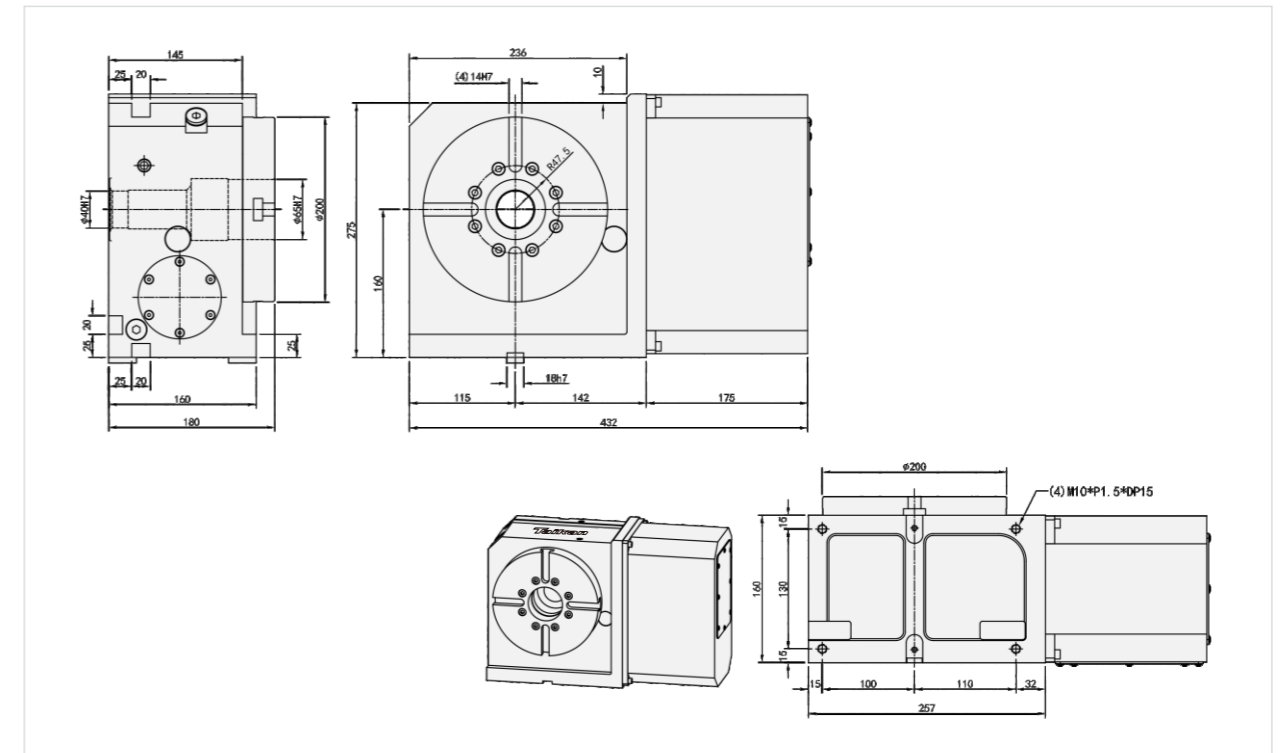


FOUR-AXIS TURNTABLE PARAMETER TABLE

Item		unit	NC200	NC250
Turntable diameter		mm	φ200	φ250
Center height		mm	160	210
Center aperture	front end	mm	φ65	φ100
	Tail end	mm	φ40	φ100
T-slot width		mm	14H7	14H7
Positioning key width		mm	18H7	18H7
Minimum angle setting unit		deg	0.001	0.001
Maximum number of revolutions		rpm	80	60
Total reduction ratio			1:40	1:50
Segmentation accuracy		arc.sec	25	25
Repeat accuracy		arc.sec	12	12
Locking method (oil pressure)		Mpa	3.0±0.5	3.0±0.5
Maximum cutting torque (when the brake is locked)		N.m	450	1300
product quality		kg	60	115
Allowable load	Vertical installation 	kg	120	180
	Horizontal installation 	kg	260	360
	Vertical installation with tailstock 	kg	220	360
Allowable load	F 	N	18500	20500
	FXL 	N.m	450	1300
	FXL 	N.m	1390	1800

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NC200



NC250

