

客户的需求就是我们所做的一切

All We Do Are Clients Demand

Technical Document

YSH-500D HMC

Xiamen Yangsen NC Equipment Co., Ltd

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Content

1. Corporate Culture Introduction
2. Features of the whole machine
3. Optomechanical characteristics
4. Technical parameters
5. List of main accessories
6. Machine tool standard configuration
7. Machine tool selection and configuration
8. Attached tools and information list
9. Installation, commissioning, training and acceptance
10. After-sales service concept
11. Working conditions of machine tools



1. Corporate Culture Introduction

Yangsen CNC Equipment Co., Ltd. is a high-tech enterprise specializing in the development, design, production and manufacture of CNC machine tools and CNC machine tools. The company is based on Taiwan's manufacturing technology, and at the same time integrates many years of manufacturing experience from many equipment manufacturers, constantly absorbing domestic and foreign. With the advanced scientific research achievements in the same industry, it has developed into an exclusive manufacturer with complete production and assembly machining centers today.

The company's products include vertical machining center, high-speed machining center, high-speed drilling and tapping machine, gantry machining center, horizontal machining center, etc. The main customer groups are precision mold manufacturing, automobile manufacturing, electronic communication industry, precision parts Processing industry and aerospace industry, etc. The company has been operating with integrity. The business philosophy of sustainable innovation, with the most cost-effective products, perfect products and perfect services, provides customers with the best solutions, creates the greatest value for customers, and enhances the competitiveness of customers' products.

In the future, the company will continue to adhere to the high-quality policy of "customer first, market first; technology-based, quality wins: the concept, to create value for customers. Innovate research, keep improving, and wholeheartedly meet customer needs and expectations.

Main business: high-speed high-precision engraving and milling machine, vertical machining center series, high-speed drilling and tapping machine, gantry machining center series, horizontal machining center series. Enterprise service: To provide better products and services, we have been working hard and persevering forever. We aim to build a brand, be honest and trustworthy, and achieve mutual benefit and win-win. We help users use equipment better through continuous technological updates and perfect service system, because of our profession we keep improving.

Technical support: professional engineers come to solve equipment selection for customers. Solve the processing requirements of various products of customers, help users choose suitable and economical solutions, and make the products selected by users more cost-effective.

Quality control: Our products have passed ISO9001 quality system and ISO14000 environmental management system certification

After-sales service: The after-sales service network all over the country is the guarantee for our products to be sold all over the country.

2. YSH-500D Machine Features:

1. The X/Y/Z axis adopts high-strength high-speed linear roller guide rails, and the rapid feed can reach 36/36/36 (m/min); the guide rails of each axis adopt imported heavy-duty roller linear guide rails, and the preload is V3 Class, high load, stable precision;
2. The spindle motor is equipped with β iI12/12000 high-torque generalized motor as standard. The outer diameter is up to 150mm and the high rigidity Taiwan spindle has a unique labyrinth device and labyrinth blowing device at the nose of the spindle to effectively protect the spindle. The maximum speed of the spindle can reach 15000rpm, which has the characteristics of high rigidity and high precision;
3. Machine tool parts belong to famous brands of famous factories, with top-level configuration in the industry.



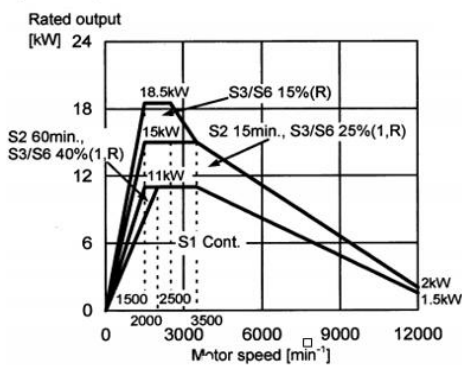
The machine tool parts belong to the famous brand of famous factory, and the top configuration in the industry.



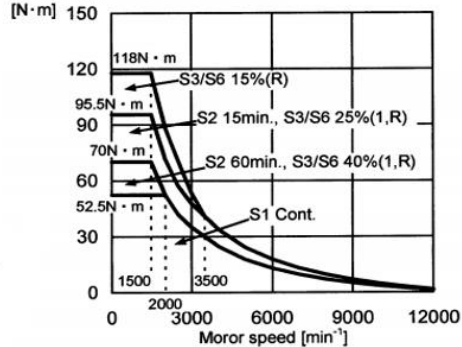
3. Three-axis motor torque diagram and spindle motor torque diagram

系统	0i-MF	额定功率kW	额定扭矩N.m	最大扭矩N.m
X轴	$\beta is 22/3000-B$	3	20	45
Y轴	$\beta is 22/3000-B$	3	20	45
Z轴	$\beta is 22/3000-B$	3	20	45
主轴SP	$\beta il 12/12000-B$	11	52.5	118

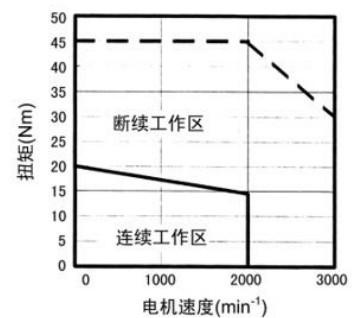
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Rated torque



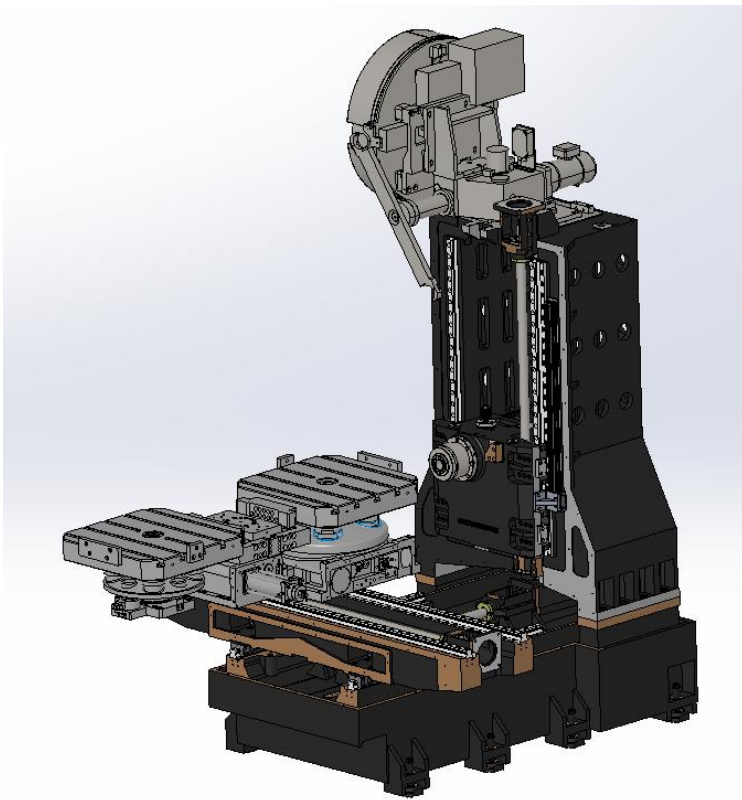
$\beta is 22/3000-B$



4. Turntable parameters

规格/型号		单位	CHI-500
盘面尺寸		Ømm	500*500
工作台高度	卧式	mm	417
中心高度	立式	mm	/
中心孔直径		Ømm	Ø50 ^{H7}
工作台T型槽宽度		mm	18 ^{H7}
最小设定单位		Deg.	1° *360
分割精度		Sec.	10"
重覆精度		Sec.	2"
伺服马达	发那科		βis22/2000
总减速比			1:180
盘面最高转数		.m	16.6
容许旋转切削力		Nm	/
刹车扭力		Nm	1000
最大工件负载	立式	kg	400
	卧式		
转台重量		kg	410

4. Optomechanical characteristics





The picture is for reference only, and the final product shall prevail

YSH-500D Optomechanical characteristics:

1. Adopt high-rigidity nickel alloy copper turbine, wear-resistant and durable, high split stability.
2. Double strong locking device, super large locking surface, heavy cutting resistance.
3. Three pieces of high-precision clutch teeth are used for positioning, and the repeat positioning accuracy reaches 2 arc seconds.
4. The wood mold of the casting adopts aluminum-wood combination, resin sand casting, and workbench HT300.

4. Technical parameters:

Items	Specification	Units	YSH-500D
Travel	X/Y/Z Axis	mm	1100/800/600
	X/Y/Z Axis	mm	100-700
	Spindle Center to Worktable	mm	-65-915
	Spindle Nose to table Center		Roller Linear Guideway
	Three-Axis Guideway	mm	∅ 900mm
Worktable	Table Size (L*W)	mm	500*500-2
	The Max. Load Capacity Of The Workbench	kg	400
	Table Indexing	No/mm	1°*360
Spindle	Spindle Taper Hole (Model/Installation Size)	mm	BBT40
	Spindle Speed	rpm	15000
	Spindle motor maximum speed	rpm	12000
	Spindle Drive Mode		Direct Connection
Feedrate	X/Y/Z Axis Rapid Feed	m/min	36/36/36
	Cutting Feed	mm/min	10000
Tool Changer	Tool Change Method		ARM Type (Servo Drive)
	Handle Specifications	type	BT40
	Tool Capacity	tools	24
	Max. Tool Diameter (Adjacent Tool)	mm	80
	Max. Tool Diameter (Without Adjacent Tool)	mm	120
	Tool Length	mm	300
	Fastest Tool Change Time	sec	1.8
Motor	Spindle Motor	kw	β iIII2/12000



	Three Axis Servo Motor + B Axis	kw	β iS22/3000+ β iS22B/3000+ β iS22/3000+ β iS22/2000
	Cutting Water Pump Motor	m/h-m	4-60
Accuracy	Positioning Accuracy	mm	± 0.005
	Repeatability	mm	± 0.003
Power Required	Power Requirements	kva	30
	Air Source Requirements	Kg/cm	6~8
External Dimensions	Length*Width*Height	mm	5120*3560*3212
	Weight	t	10

5. List of main accessories

No.:	Description	QTY	Brand	Specification
1	CNC System	1 Set	Japan FANUC	FANUC-0i-MF
2	Spindle Servo Motor	1 Set	Japan FANUC	BiII12/12000
3	X, Y, Z, A Servo Motor	1 Each	Japan FANUC	β iS22/3000+ β iS22B/3000+ β iS22/3000+ β iS22/2000
4	Main Shaft Front Bearing	1 Unit	Taiwan TPI	7014*3
5	Spindle Rear Bearing	1 Unit	Taiwan TPI	7014*2
6	X, Y, Z Axis Screw Bearings	1 Unit Each	Japan NSK	
7	X, Y, Z Axis Ball Screw	1 Unit Each	Taiwan PMI	$\varnothing 40 * P12 * C3$
8	X-Axis Linear Guide	2 Strip	Germany INA	45
9	Y-Axis Linear Guide	2 Strip	Germany INA	45
10	Z Axis Linear Guide	2 Strip	Germany INA	45
11	Spindle Unit	1 Set	YANGSEN	BT40/150
12	Tool Magazine (Standard)	1 Set	YANGSEN/Okada	24T
13	Cutting Fluid Pump	1 Set	YANGSEN	LDPB4V-60-1350W
14	CNC computer indexing plate	1 Set	YANGSEN/TJR	500*500*2
15	Tool Cylinder Assembly	1 Unit	Taiwan HINAKA	
16	Automatic Lubrication System	1 Set	Japan SHOWA /SKF	4L
17	Main Pneumatic Components	1 Set	Japan SMC	
18	Main Electrical Components	1 Set	Schneider	
19	Heat Exchanger	1 Set	Ouyi	
20	Hydraulic Station Components	1 Set	Taiwan	



21	Chip Removal Device	1 Set	YANGSEN/Quanguan	Chain Type Chip Conveyor
22	Oil Cooler	1 Set	Rucal	

If any supplier fails to supply, it will be replaced by the same quality brand.

6. Machine tool standard configuration

NO.:	Items	NO.:	Items
1	Workpiece Cooling System	13	Warning Light (With Buzzer)
2	Fully Enclosed Hood	14	Floor Pads
3	Automatic Lubrication System	15	Network Transmission and CF Card Function
4	Toolbox	16	Rigid Tapping
5	Working Lamp	17	24T Tool Magazine
6	Electrical Box Heat Exchanger		
7	Portable Chip Blowing Air Gun		
8	Iron Chipping Disc and Chip Storage Box		
9	M30 Automatic Power Off Device		
10	Machine Cleaning Water Gun		
11	Spindle Nose Labyrinth Dust Blower		
12	Spindle Oil Cooling		

7. Machine tool Optional configuration

NO.:	Items	NO.:	Items
1	Siemens and Mitsubishi CNC Systems	8	
2	Three-Axis Optical Ruler		
2	Electrical Cabinet Thermostat Control Device (Air Conditioner)		
3	Chip Liquid Water Cooling Device		
4	Automatic Tool Detection Device		
5	Oil Skimmer		
6	Oil Mist Collector		

If the user chooses other special configurations, please contact the technical department.

8. List of attached tools and materials

No.:	Item	Specification	QTY	Remarks
1	Allen Wrench	1.5-10	1 Set	
2	Screwdriver	Slotted	1 Each	
3	Screwdriver	Phillips	1 Each	
4	Raw Tape		2 Rolls	
5	Glass Glue	Porcelain white	1 Bottle	
6	Electronic Handwheel		1 PCs	
7	Card Reader		1 PCs	
8	Memory Card		1 PCs	
9	Cable	5 Meters, 20 Meters	2 Pieces	
10	Snap Ring		1 PCs	
11	Screw		1 Package	
12	Machine Tool Ground		1 Stick	
13	Bellows Connector		1 PCs	
14	Toolbox		1 PCs	
15	Floor Mat		1 Set	
16	Operation Manual		1 PCs	
17	Certification		1 PCs	

9. Installation, commissioning, training and acceptance

1. Installation and commissioning: After the machine tool arrives at the customer's factory, our service engineer will go to the customer's factory in time to carry out installation and commissioning and on-site training.

2. Customers can choose to send operators to our company to be responsible for the preliminary training for



about a week, and then our company will conduct on-site training at the customer's place during installation and commissioning.

3. Acceptance: Accuracy acceptance, according to the ex-factory accuracy inspection table provided by the supplier, inspect the items that are conditionally inspected at the customer's place, and test the inspection items that do not meet the inspection conditions, such as positioning accuracy, spindle taper hole accuracy inspection stick test etc., no testing shall be carried out at the buyer's place, or the buyer shall send personnel to the supplier's factory for inspection and acceptance through negotiation between the two parties.

10 Xiamen Yangsen NC Equipment After-sales Commitment Letter

1. Pre-sales service: Janssen's sales team will provide users with the best processing solutions, including machine tool selection, option configuration, tool and fixture selection, lubricating oil, cutting fluid management and other series of services. And can provide turnkey projects.
2. Maintenance response time: Our company has a service team of up to 50 people and is equipped with a complete service vehicle. After receiving the user's notification of failure, we will respond within 8 hours.
3. Parts inventory: Janssen has a special production workshop and parts inventory in Xiamen, with strong strength and complete inventory. There are commonly used parts inventories in each office to provide users with the fastest repair parts.
4. Machine tool maintenance: All machine tools within the warranty period enjoy free maintenance services, and machine tools outside the warranty period can purchase maintenance services at an economical and reasonable price. And PCs can plan equipment management and maintenance processes according to customer needs.
5. Maintenance charges after the warranty period: The charging standard is clearly marked and the real price is charged, only the cost is charged, and the user is served with the concept of openness, fairness and fairness. After the maintenance period, our company is responsible for providing spare parts at preferential prices for a long time, and the maintenance service fee time is not more than 48 hours;
6. Ad hoc old user service department: closely track the use of machine tools, and deal with maintenance complaints in a timely manner.
7. Maintenance supervision: the general manager also serves as the director of the after-sales service department, supervises the quality of maintenance services in real time, and protects the rights of customers.



8. Warranty: From the date of acceptance of the equipment, a one-year warranty period is provided. During the warranty period, our company is responsible for free maintenance for equipment failures caused by users. If the fault is caused by improper use by the user, the cost fee will be charged after the service.

11. Machine Tool Working Conditions

1. Three-phase AC power supply: 380V±10%, -15%; 50Hz±1Hz
2. Ambient temperature: 8 ~ 40C°
3. Relative humidity: ≤80%
4. Air pressure: 0.6 ~ 0.8 MPA

Xiamen Yangsen NC Equipment Co., Ltd

The company's products are constantly being developed and improved, and specifications may be changed without notice. Some images in this document may contain optional items.

The pictures in this document are for reference only, and the actual product shall prevail.