

All We Do Are Clients Demand



Xiamen Yangsen CNC Equipment Co., Ltd.

Pre-sales Documents

U-400 Five-axis machining center

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1. Introduction to corporate culture

Yangsen CNC Equipment Co., Ltd. is a company specializing in the development, design, production and manufacture of CNC machine tools and CNC. The company is a high-tech enterprise for machine tools. It is based on Taiwan's manufacturing technology, and integrates the manufacturing experience of many equipment manufacturers for many years. It constantly absorbs the advanced scientific research results of the same industry at home and abroad, and has developed into today's complete production and assembly. A specialized manufacturer of machining centers.

The company's products include vertical machining centers, high-speed machining centers, high-speed drilling and tapping machines, gantry machining centers. The main customer groups of horizontal machining centers are precision mold manufacturing, automobile manufacturing, electronic communications, precision parts processing and aerospace industries. The company has always operated with integrity. The business philosophy of sustainable innovation is to provide customers with the best solutions and create the greatest value for customers with the most cost-effective products and perfect services. value and enhance 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 first, quality first" to create value for customers. Innovative research, excellence, and wholeheartedly meet customer needs and expectations.

Main products: high-speed and high-precision engraving and milling machines, vertical machining center series, high-speed drilling and tapping machines, gantry machining center series, Horizontal machining center series.

have been working hard to provide better products and services. We aim to build a brand, be honest and trustworthy, and achieve mutual benefit and win-win results. We help customers through continuous technological updates and a perfect service system. Users can use the equipment better because we are constantly improving our expertise.

Technical support: Professional engineers will come to customers to help them choose the right equipment. Solve the processing requirements of customers' various products, help users choose suitable and economical solutions, and make the products selected by users more cost-effective.

Quality Control: Our products are ISO9001 Quality system and ISO14000 Environmental management system certification after-sales service: The nationwide after-sales service network is the guarantee for our product sales across the country.

2. Features of the whole machine

Machine features:

1. The tool magazine is equipped with a variable frequency drive, and the tool arm is controlled by a frequency converter, which effectively improves product processing efficiency;
2. Configuration $\phi 150$ - HSKA 63-16000 rpm High frequency electric spindle has the advantages of high power and wide power range. Spring clamping and hydraulic release. The spindle is equipped with a coaxial ring encoder, which can synchronously feedback the instantaneous speed and rotation angle of the spindle, and high-speed continuous Good processing performance, strong overload capacity, and rigid tapping function.
3. The spindle bearing is lubricated with grease, and has good high-speed performance. The spindle tool is clamped by spring and released by hydraulic pressure.
4. The labyrinth seal at the front end of the spindle is equipped with air pressure protection, and the spindle taper hole is blown clean with pressurized air. Dust and chip protection.

3. Optical machine characteristics

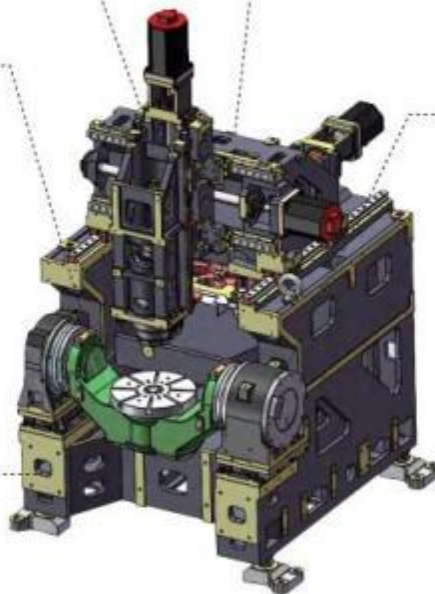
机床运动模组由动横梁、滑座、滑枕组成,重量轻,三轴驱动与重心接近,运动响应性、同步性优良

机床采用底座与桥架结合的一体式桥座结构,箱形结构的桥座重量轻、刚性强、稳定性好,结构刚性、热变形对称,具有良好的刚性和精度稳定性。

半开放式的摇篮转台安装结构,客户可方便地实现单驱双支撑、双驱双支撑、滚子凸轮驱动、DD马达驱动及不同的盘面与A轴中心高等摇篮模组配置要求。可满足复杂曲面和多面产品加工需求

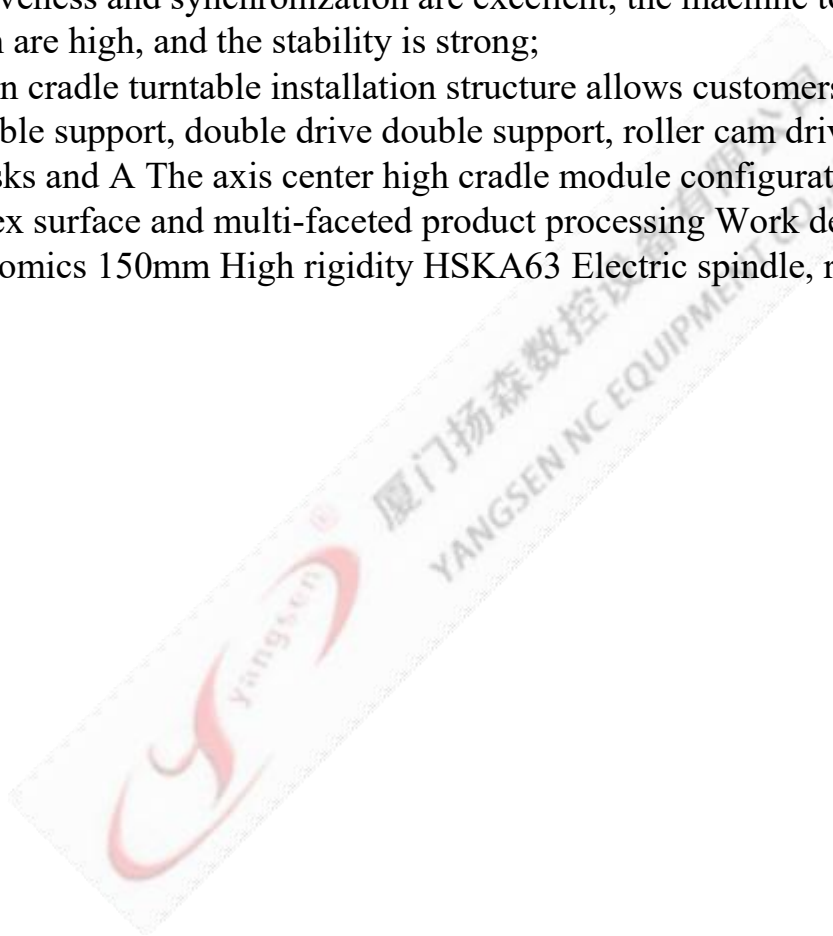
摇篮工作台固定于桥座上,旋转精度不受轴向运动影响,保证机床具有良好的五轴联动精度,机床加工精度、光洁度高,稳定性强

后向的冲水排屑系统,可满足不同的加工排屑要求,不需要插入式后向排屑器,减少排屑设备成本,同时缩短了机床使用、配置长度空间。加上出色紧凑的机床宽度,可实现最小化的生产线组成,使客户充分利用有限的工厂空间。



Optical machine features:

1. Use Taiwan PMI Roller rail, Taiwan PMIC3 Grade screw, Japan NACHI Original bearings, pre-tensioned to prevent thermal displacement;
2. The bed casting is made of HT300 Resin sand casting, after overall annealing, natural aging and two high-frequency vibration aging treatments, with high rigidity High stability, long-lasting and non-deformable effect;
4. Vertical gantry cradle 5 Axis machining center adopts U The type base is combined with the bridge-type upper structure into a complete box structure, forming a fully enclosed force flow circuit, so the structure has high rigidity and strong stability. The symmetrical structure makes the thermal deformation error small, the three-axis drive is close to the center of gravity, the motion responsiveness and synchronization are excellent, the machine tool processing accuracy , finish are high, and the stability is strong;
5. The semi-open cradle turntable installation structure allows customers to easily achieve single drive double support, double drive double support, roller cam drive, DD Motor drive and different disks and A The axis center high cradle module configuration requirements. Can meet the complex surface and multi-faceted product processing Work demand;
6. Foreign Economics 150mm High rigidity HSKA63 Electric spindle, ring spray design.



4. Technical Parameters

Travel	X/Y/Z axis	mm	460/460/400
	Distance from spindle nose to worktable	mm	140-540
	Track form		Roller Guide Rails
Turntable	Turntable table size	mm	φ400
	Table distance from rotation center	mm	25
	Maximum load-bearing capacity of the workbench (0 °/90 °)	Kg	200/100
	T Groove	No/mm	8-14x45 °
	Rotation Angle	Spend	A/C: ±110/360
	Spindle taper hole (model/installation dimensions)		HSKA63
Spindle	Spindle speed	rpm	16000
	Spindle drive mode		Electric spindle
Feed	X/Y/Z Axis rapid feed	m/min	36/36/36
	Maximum cutting feed	mm/min	10000
Tool Changing Device	Tool changing method		Translational
	Tool handle specifications	type	HSKA63
	Tool capacity	tools	18
	Maximum tool diameter (cutting tool)	mm	80
	Maximum tool diameter (without tool)	mm	80
	Maximum tool length	mm	250
	Maximum tool weight	kg	8
	Fastest tool change time	sec	4
motor	Spindle motor	kw	20
	Three-axis servo motor	kw	S08-AM28-30-F4/S08-A M28-30-F4/S08-AM 28-30B-F4
	Cutting water pump motor	m/hm	4-60
Accuracy	Positioning accuracy	mm	±0.005
	Repeat positioning accuracy	mm	±0.003
Power requirements	Power requirements	kv	20
	Air source requirements	Kg/cm	6~8
Machine size	Length*Width*Height	mm	2800x2200x2900
	Weight	T	5

**V. List of main accessories**

NO	name	QTY	Manufacture	Remark
1	number control Tie System	1 set	New Generation	220MA
2	Electric spindle	1 set	YANGSEN	20
3	X, Y, Z Servo Motor	each 1 set	New Generation	S08-AM28-30-F4/S08-AM28-30-F4/S08-AM28-30B-F4
4	Spindle front bearing	1 Group	NSK	
5	Spindle rear bearing	1 Group	NSK	
6	X, Y, Z Shaft screw bearings	each 1 Group	Japan NACHI	
7	X, Y, Z Shaft roller screw	each 1 Group	Taiwan PMI	Ø40*P12/Ø40*P12/Ø36*P12*C3
8	X Axis linear guide	2 strip	Taiwan PMI	Roller 35
9	Y Axis linear guide	2 strip	Taiwan PMI	Roller 45
10	Z Axis linear guide	2 strip	Taiwan PMI	Roller 35
11	Spindle unit	1 set	YANGSEN	HSK-A63/150
12	Tool magazine	1 set	YANGSEN	18T
13	Cutting fluid pump	1 set	YANGSEN	
14	Automatic lubrication system	1 set	YANGSEN	
15	Cylinder assembly	1 Group	Taiwan China and Japan	
16	Main pneumatic components	1 set	Japan SMC	
17	Main electrical components	1 set	Schneider	
18	X, Y, Z Shaft Coupling	each 1 set	Japan NBK	
19	Heat Exchanger	1 tower	OuYi	

If a supplier is unable to supply, we will replace it with a brand of equal quality.

6. Standard configuration of machine tools

No.	Name	No.	Name
1	18 Tool magazine	12	Warning Light (with buzzer)
2	Fully enclosed protective cover	13	Anchor blocks
3	Automatic lubrication system	14	Workpiece cooling system
4	work Tool box	15	Network transmission and CF Card Function
5	work do lamp	16	Rigid tapping
6	Electrical box heat exchanger	17	Door opening protection device (protective door)
7	Spindle air curtain dust protection system	18	Portable Chip Blowing Air Gun
8	Twin screw chip conveyor	19	Machine cleaning water gun
9	Spindle ring water outlet	20	Spindle nose labyrinth dust-proof air blowing
10	Iron chip disc and chip box		
11	M30 Automatic power off device		
12	Tool magazine	1 set	YANGSEN
13	Cutting fluid pump	1 set	YANGSEN
14	Automatic lubrication system	1 set	YANGSEN
15	Cylinder assembly	1 Group	Taiwan China and Japan
16	Main pneumatic components	1 set	Japan SMC
17	Main electrical components	1 set	Schneider
18	X, Y, Z Shaft Coupling	each 1 set	Japan NBK
19	Heat Exchanger	1 tower	OuYi
20	Water Cooler	1 set	Rico

7. Customer Selection Configuration

No.	Option name and specification	QTY	Remark
1	Three-axis grating ruler	1	
2	Laser tool setting	1	
3	Workpiece online probe	1	
4			
5			
6			
7			
8			

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

8. List of tools and materials

NO.	Name	Specification	QTY	Remark
1	Hexagon wrench	1.5---10	1 set	
2	screwdriver	One word	1 PCs	
3	screwdriver	Cross	1 PCs	
4	Raw tape		2 roll	
5	Glass glue	Porcelain White	1 bottle	
6	Electronic handwheel		1 Each	
7	Card reader		1 Each	
8	Memory Card		1 Each	
9	Network cable	5m, 20m	2 PCs	
10	Clamping ring		1 Each	
11	Screw		1 Bag	
12	Machine tool ground		1 branch	
13	Bellows fittings		1 Each	
14	Toolbox		1 Each	
15	Footing		6 Each	
16	User Manual		1 PCs	
17	Certificate of Compliance		1 PCs	

IX. Installation, commissioning, training and acceptance

1. Installation and commissioning: After the machine tool arrives at the customer's factory, our service engineers will go to the customer's factory in time to install and commission it. Testing and on-site training.
2. Customers can choose to send operators to our company for preliminary training for about a week, and then our company will install and debug at the customer's place. Conduct on-the-spot training.
3. Acceptance: Precision acceptance, according to the factory precision inspection form provided by the supplier , the items that can be inspected at the customer's site will be inspected. For inspection items that do not have the inspection conditions, such as positioning accuracy, spindle taper hole precision inspection rod test, etc., no inspection will be carried out at the buyer's site , or the two parties will negotiate and the buyer will send personnel to the supplier's factory for inspection and acceptance.

10. After-sales service concept

1. Pres-sales service: Jansen's sales team will provide users with the best processing solutions, including machine tool selection, optional configuration, and tool We also provide a series of services such as fixture selection, lubricant, cutting fluid management, etc. We can also provide turnkey projects.
2. Repair response time: Our company has up to 100A service team of 100 people and fully equipped service vehicles are available to receive user reports of faults. After knowing, 2 Respond within hours.
3. Parts Inventory: Yangsen has a dedicated production workshop and parts inventory in Xiamen. It is strong and has a complete inventory. We have common spare parts in stock at all locations 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 be purchased at an economical and reasonable price. We can also plan equipment management and maintenance processes according to customer needs.
5. Repair charges after the warranty period: The charging standards are clearly marked, and only the cost is charged. We provide services with the concept of openness, fairness and justice. user.
6. Special service department for old users: closely follow up the use of machine tools and handle maintenance complaints in time.
7. Maintenance Supervision: The general manager also serves as the director of the after-sales service department, supervising the quality of maintenance services in real time and protecting the rights of customers.

11. Machine tool working conditions

1. Three-phase AC power supply: $380V \pm 10\%$, -15% ; $50\text{ Hz} \pm 1\text{ Hz}$
2. Ambient temperature: $8 \sim 40^{\circ}\text{C}$
3. Relative humidity: $\leq 80\%$
4. Gas source pressure: $0.6 \sim 0.8\text{ MPA}$

Xiamen Yangsen CNC Equipment Co., Ltd.

Our company's products are constantly being developed and improved, and specifications may change without notice. Some of the pictures in this document may include optional parts.

The pictures in this document are for reference only. Please refer to the actual product. We will try our best to be as accurate as possible, but we are not responsible for errors or omissions.