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厦门扬森机械科技有限公司

Xiamen YANGSEN Machinery Technology Co., Ltd

Pre-sales technical information

**Five-Axis Machining Center CNC Machining
YS650-5AX**

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1、 Machine features



YS650-5AX machine features:

1. Equipped with German Siemens ONE system, five-axis linkage, powerful functions;
2. Equipped with Dechuan DTF-650H five-axis rotary table (DDM), which can realize high-speed cutting and processing, adopts direct drive mode, does not cause precision errors caused by worm gear transmission, and achieves high-precision positioning;
3. Using HSKA63 disc tool magazine, the tool change time is shortened to 2.2S, and the tool arm is controlled by a frequency converter, which effectively improves product processing efficiency;
4. The machine tool parts belong to the famous brand of famous factory, and the top configuration in the industry.



Japan SHOWA oiler SMC



Yede kind gas source treatment device



Ouyi heat exchanger



Double water pump system 55 meters lift



Schneider Electric Components



Japanese LED lighting



Gaogao LED warning light with peak beep



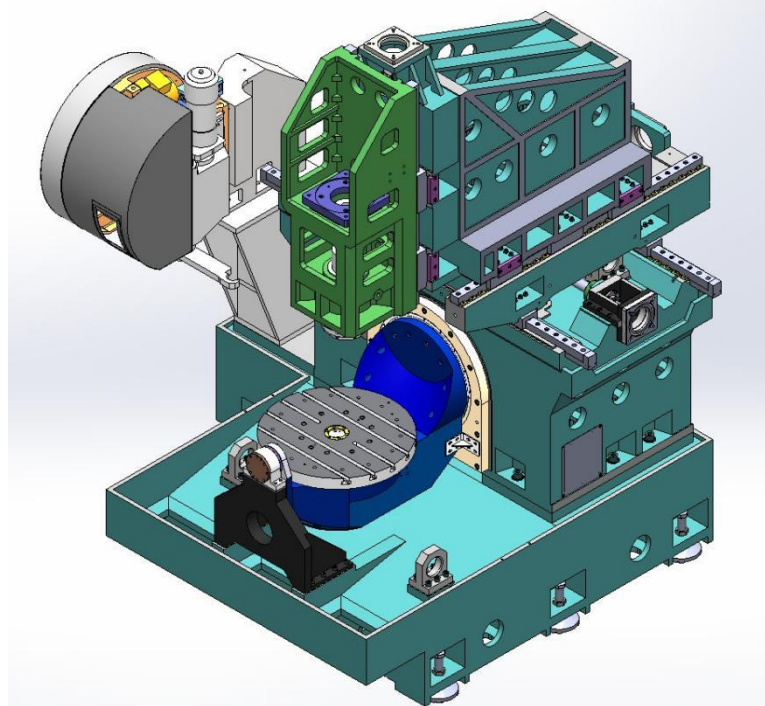
Frequency conversion tool magazine

Five-axis parameter table

型號	單位	DTF-650H	
旋轉台直徑	mm	650	
中心孔直徑	mm	Ø70H7	
工作台高度(臥式位置)	mm	250	
工作台T型槽寬度	mm	18H7	
導塊寬度	mm	-	
驅動方式/驅動壓力	Mpa	油壓 3.5	
蝨面最大轉速	min ⁻¹	R	T
		100	50
容許負載容量	在水平	kg	300
	在傾斜 (0-90°)	kg	300
容許工件不平衡量	WxL	Nm	300
容許切削力 (轉台夾緊時)	F	N	40000
	FxL	Nm	2500
	FxL	Nm	4500
容許負載容量	(W/D)	kg.m ²	9.4
最小設定單位	deg.	0.001	
分度精度	sec	10	20
重複精度	sec	4	4
可傾斜角度	deg.	+110 ~ -110	
淨重 (包含馬達)	kg	1200	
冷卻方500式		油冷式 (與機床共用冷卻)	



2. Optomechanical characteristics



YS650-5A X-ray machine features:

1. The bed castings are cast with HT300 resin sand, and after overall annealing, natural aging and two high-frequency shock aging treatments, it has high rigidity, high stability, and achieves the effect of no deformation for a long time;
2. Equipped with high-speed and high-precision HSK-A63 electric spindle, the maximum rotation speed is 18000 rpm;
3. The X, Y, and Z axes adopt high-precision ball screw pairs to ensure the machining accuracy of the machine tool. They have the characteristics of fast response, good stability, high transmission accuracy, high component rigidity, low friction and elimination of transmission gaps. ;
4. Five-axis linkage processing has high precision, fast processing speed, simple processing technology and strong adaptability. Changing the process only needs to change the program and does not need to change the equipment, saving the overall cost;



3.YS650-5AX specifications

Subject	Specification	unit	YS650-5AX
Travel	X/Y/Z axis	mm	700/450/450
	Spindle nose to the worktable surface	mm	160-560
	Spindle center to column	mm	
Worktable	worktable (L*W)	mm	Ø650
	Worktable max load	kg	200
	T SLOT	mm	5*18*100
Spindle	Spindle type	mm	HSK-A63
	Spindle speed	rpm	18000
	Spindle delivery type		Build-In
Feed rate	Feed rate (X/Y/Z)	m/min	30/30/30
	The max cutting feed rate	mm/min	10000
Motor	Spindle motor	kw	1FK7084-3BC71-1RG1*2 1FK7101-2AC71-1RH12.2
	x/y/z axis motor	kw	20KW
Accuracy	Positioning	mm	±0.005
	Repeatability	mm	±0.003
Power requirement	Power requirement	kva	60
	Air pressure requirement	Kg/cm	6~8
others	L*W*H	mm	3000*3000*3500
	Weight	t	12
	Container (Stander casing)		1*40HQ



4.Detail main specification list

No.	Product name	Q'ty	Manufacture	specification
1	Controller	1 pcs	Siemens	840D/ONE
2	Spindle servo motor	1 pcs	Haozhi (china)	20KW
3	X、 Y、 Z servo motor	1set	Siemens	1FK7084-3BC71-1RG1*2 1FK7101-2AC71-1RH12.2
4	Spindle bearing (Front)	1set	FAG	7016*3
5	Spindle bearing (Back)	1set	FAG	7016*3
6	X、 Y、 Z bearing of ball screw	1set	NSK (Japan)	50TAC100CSUHPN7C
7	X、 Y、 Z ball screw	1set	HIWIN (Taiwan)	X: 6310 Y: 5010 Z: 5010
8	X linear guide way	2 pcs	HIWIN (Taiwan)	RG45HA
9	Y linear guide way	2pcs	HIWIN (Taiwan)	RG45HA
10	Z linear guide way	2pcs	HIWIN (Taiwan)	RG45HA
11	spindle	1set	YANGSEN (TAIWAN/OEM)	HSK-A63
12	Magazine (option)	1set	YANGSEN (TAIWAN/OEM)	24
13	Coolant pump	1 set	YANGSEN (TAIWAN/OEM)	4-60-1350W
14	Auto lubricate	1 set	SHOWA (JAPAN)	2L
15	Pneumatic tool cylinder	1set	Haocheng (Taiwan)	7.5T
16	Main pneumatic components	1 set	SMC(Japan)	
17	Main electric components	1set	Schneider(Germany)	
18	Telescoping cover	1set	Pair (China)	
19	Heat exchanger	1set	(China)	
20	5 th -axis rotary table	1set	Detron (Taiwan)	DD motor (φ650)
21	Oil cooler	1set	Rucol	

Note: The manufacture preserves the rights to exchange parts at equivalent values.



5. Standard Accessories:

- * Fully Enclosed Guard
- * Auto Lubrication System
- * Volumetric Type Automatic lubricator
- * RS 232 code
- * Air Gun
- * Rigid tapper
- * Leveling Bolts and Leveling Block
- * Repair Stairs
- * Handwheel
- * Swiveling Control Box
- * Low Energy working light
- * Transformer
- * Spindle oil Coolant
- * Auto power off
- * Tool Box
- * Operation Manual
- * Dual Screw Chip Conveyor With One chip conveyor
- * Mechanical oil coolant separator

6. Optional parts

- ◎ CTS
- ◎ Spindle RPM
- ◎ Extended Head
- ◎ Controller upgrade option (FAUNC 31iB / SINUMERIK 840D)
- ◎ X/Y/Z Axis HEIDENHAIN Linear scale
- ◎ ZF Gear box or Full Gear
- ◎ Spindle Taper (HSK/ISO/CAT/BT)
- ◎ 90 Degree head
- ◎ Fourth Axis Pre-wire
- ◎ Arm/Umbrella/Chain Type automatic tool changer
- ◎ Fourth Axis