

# Horizontal processing center series products

## 卧式加工中心系列



 **新誉集团**  
New United Group

**SHINRI® 新瑞**

**江苏新瑞重工科技有限公司**  
JIANGSU SHINRI HEAVY INDUSTRY SCIENCE & TECHNOLOGY CO., LTD.

## Main Feature

### 主要特点

- ☑ 机床结构刚性强、行程大、精度高，适合于各领域、高精度加工场合；
- ☑ 机床总体设计为倒T型床身，龙门立柱，正挂箱式主轴箱结构；
- ☑ 整机床身结构经FEM有限元分析，可保证最佳的刚度与稳定性；铸件采用树脂砂铸造，经时效处理，可充分消除内应力，以保证良好的精度保持性；
- ☑ 采用高DN值双螺母丝杆副，既可以满足高速运动，又可以延长机床使用寿命；
- ☑ 采用高精度丝杆专用支撑轴承，并对滚珠丝杆进行预拉伸，确保丝杆传动精度；
- ☑ 三轴传动均采用进口日本FANUC公司的交流伺服电机，通过联轴器直接驱动滚珠丝杠，可确保机床在加工时的快速响应和平稳切削；
- ☑ 主轴箱采用两级齿轮变速，保证低速时大扭矩速出，主轴轴承采用角接触球轴承，满足了重切削的要求（选配）；
- ☑ 选配的主轴冷却恒温系统可使机床主轴得到更高的精度。

- ☑ With strong rigidity structure, large travel distance and high precision, the machine is suitable for various areas and high precision machining.
- ☑ The machine bed is T type, with gantry column and cabinet type spindle box.
- ☑ The machine bed is going through FEM finite element analysis, to ensure perfect rigidity and stability. Casting parts use resin bonded sand casting, conduct aging treatment to relieve internal stress, so that the machine accuracy is ensured.
- ☑ With high DN value double nut screw rod, we can realize high speed movement and extend the machine lifetime.
- ☑ We use high accuracy pre-stretching special screw support bearings to ensure drive accuracy.
- ☑ All three axis drive are using Japan FANUC AC servo motor, and by coupling directly drives the ball screw, we can ensure the quick response and stable cutting during machining.
- ☑ Spindle box adopts two stage gear to ensure the high torque output. The main shaft bearing use angular contact ball bearing, which can meet the requirements of the heavy cutting (optional).
- ☑ Optional spindle cooling system can ensure spindle accuracy.



快速响应

☑ 性能**稳定**

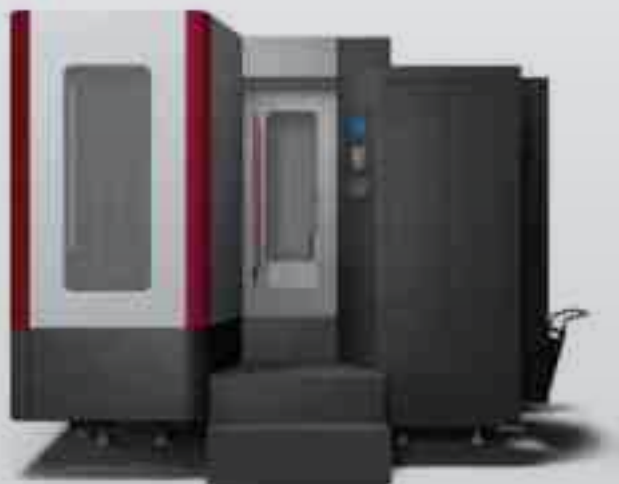
☑ 配套**先进**



国内外领先



安全保障



# HM Series Single Horizontal Maching Centwe(Single Working Station)

## Main Specifications 主要规格

规格	技术参数	单位	HM63	HM80
行程 Travel	X/Y/Z轴行程 X/Y/Z axis travel	mm	900/800/900	1600/930/1000
	工作台中心至主轴端面 Distance between worktable center&spindle nose	mm	100-1000	180-1180
	工作台表面至主轴中心 Distance between worktable &spindle center line	mm	50-850	0-930
托盘及工作台 Pallet and Worktable	托盘(工作台)尺寸 Pallet size	mm	630 × 630	800 × 800
	托盘(工作台)最大承重 Max.pallet load	kg	1000	1500
	工作台面与地面距离 Distance between worktable surface&ground floor	mm	1200	1280
	工作台最小分割度 Min.division accuracy of worktable	°	360 × 1°	360 × 1°
主轴 Spindle	标准主轴转速 Standard Spindle speed	r/min	6000	6000
	选配变速箱 Optional Spindle speed	r/min	4000	6000
	主轴电机功率 Spindle motor	kW	18.5/22	18.5/22
	主轴锥孔 Spindle taper		BT50	BT50
进给速度 Feeding speed	快速进给速度(X/Y/Z) Rapid feed rate(X/Y/Z)	m/min	24/24/24	12/12/12
	切屑进给速度 Feed rate	m/min	10	10
刀具装置 Tool magazine	刀具容纳数 Magazine capacity	把	24	24
	最大刀具重量 Max.weight of tool	kg	25	20
	换刀时间(刀-刀) Tool change time(Tool-To-Tool)		3.55	3.55
	刀具最大直径(满刀) Max.tool diameter(Adjacent full)	mm	φ 110	φ 125
	刀具最大直径(相邻空刀) Max.tool diameter(Adjacent empty)	mm	φ 220	φ 245
	刀具最大长度 Max.length of tool	mm	400	400
	刀柄型式 Shank type		MAS BT50	MAS BT50
拉钉型式 Pull stud type		MAS P50T-1	MAS P50T-1	
精度 Accuracy	定位精度 Positioning accuracy	mm	0.015	0.015
	重复定位精度 Repeatability	mm	0.008	0.008
	B轴定位精度 B axis positioning accuracy	"	6(齿盘)	6(齿盘)
	B轴重复定位精度 B axis repeatability	"	4(齿盘)	4(齿盘)
控制系统 Control system			FANUC Oi-MF	FANUC Oi-MF
机床动力源 Power supply	气源压力 Air source	MPa	0.5-0.8	0.5-0.8
	电源(三相AC380V, 50/60HZ) Power	KVA	50	60
机床重量 Machine weight		T	11	12

## Main Feature

### 主要特点

- ☑ 机床标准配置 $360 \times 1^\circ$  回转工作台，齿盘定位，分度精度高、刚性好，一次装夹后可对零件进行多面加工。可选配 $0.001^\circ$  连续回转工作台，实现四轴联动功能；
- ☑ 整个机床的五大铸件均经过有限元分析，加强筋布置合理、科学，能承受大的扭矩和冲击；
- ☑ 稳定坚固的整体铸造T型底座，机床刚性的稳定基础，加工时无振动；
- ☑ 各向移动导轨均选用高刚性四排滚柱线性导轨，摩擦小、寿命长、动态响应速度快等优点。

- ☑ A  $360 \times 1^\circ$  rotary table is a standard option, gear plate position with high division accuracy and rigidity. It can machine multi sides of a part at one fix. Optional  $0.001^\circ$  Continuous rotary table, 4 axis synchronous motion.
- ☑ The five castings are guide by finite element analysis, reasonable layout ensures the machine to endure high torque and high impact.
- ☑ With a T type machine base, the machine is in a high rigidity and with no vibration when machining.
- ☑ High quality guide ways, each axis has four high rigidity roller guide ways. Which is with low vibration, longevity and high speed movement.

☑ 性能**稳定**

☑ 配套**先进**



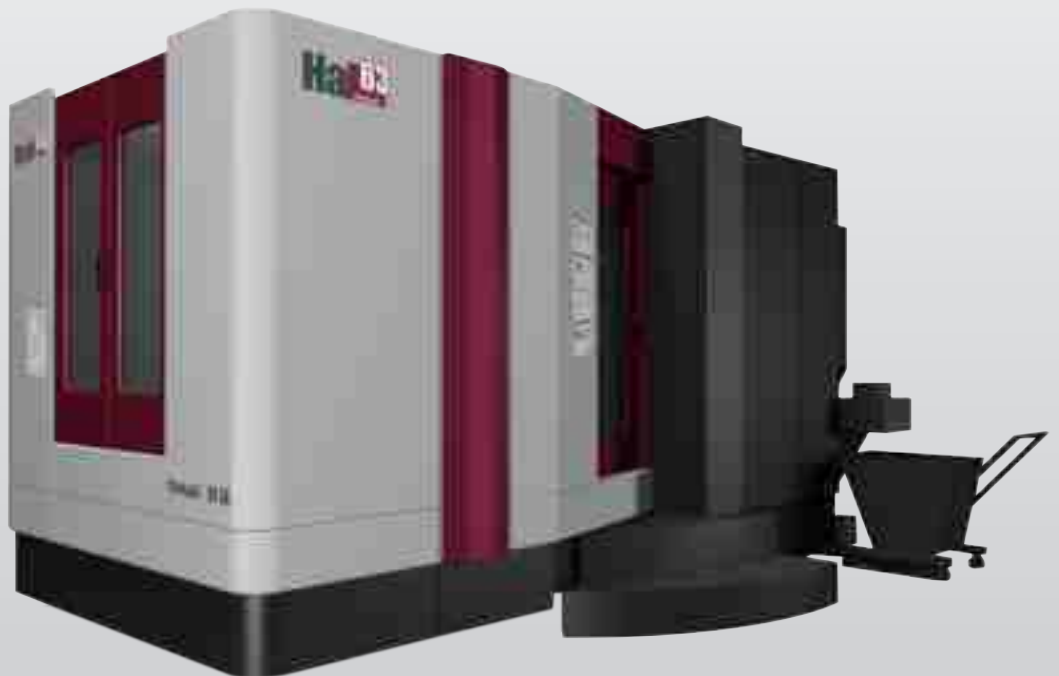
快速响应



国内外领先



安全保障





# H Series Horizontal Machining Center ( Double Working Station )

## Main Specifications 主要规格

规格	技术参数	单位	Ha63	H80	H100
行程 Travel	X/Y/Z轴行程 X/Y/Z axis travel	mm	900/800/900	1200/1100/1200	1500/1200/1300
	工作台中心至主轴端面 Distance between worktable center&spindle nose	mm	100-1000	200-1400	250-1550
	工作台表面至主轴中心 Distance between worktable &spindle center line	mm	50-850	100-1200	100-1300
托盘及工作台 Pallet and Worktable	托盘(工作台)尺寸 Pallet size	mm	630 × 630	800 × 800	1000 × 1000
	托盘(工作台)最大承重 Max.pallet load	kg	1000	2000	2000
	托盘(工作台)个数 No.of pallets	个	2	2	2
	托盘交换时间 Pallet change time	s	30	40	50
	工作台面与地面距离 Distance between worktable surface&ground floor	mm	1200	1455	1455
	工作台最小分割度 Min.divsion accuracy of worktable	°	360X1(选配0.001)	360X1(选配0.001)	360X1(选配0.001)
主轴 Spindle	标准主轴转速 Standard Spindle speed	r/min	6000	6000	6000
	选配电主轴转速 Optional Spindle speed	r/min	8000/12000	8000/12000	8000/12000
	主轴电机功率 Spindle motor	kW	18.5/22	18.5/22	18.5/22
	主轴锥孔 Spindle taper		BT50	BT50	BT50
进给速度 Feeding speed	快速进给速度(X/Y/Z) Rapid feed rate(X/Y/Z)	m/min	24/24/24	20/20/20	16/16/16
	切屑进给速度 Feed rate	m/min	10	10	10
刀具装置 Tool magazine	刀具容纳数 Magazine capacity	把	40	40	40
	最大刀具重量 Max.weight of tool	kg	20	20	20
	换刀时间 (刀-刀) Tool change time(Tool-To-Tool)		3.55	3.55	3.55
	刀具最大直径 ( 满刀 ) Max.tool diameter(Adjacent full)	mm	φ 125	φ 125	φ 125
	刀具最大直径 ( 相邻空刀 ) Max.tool diameter(Adjacent empty)	mm	φ 240	φ 240	φ 240
	刀具最大长度 Max.length of tool	mm	400	400	400
	刀柄型式 Shank type		BT50	BT50	BT50
拉钉型式 Pull stud type		MAS PT50T-1	MAS PT50T-1	MAS PT50T-1	
精度 Accuracy	定位精度 Positioning accuracy	mm	0.015	0.02	0.02
	重复定位精度 Repeatability	mm	0.008	0.012	0.015
	B轴定位精度 B axis positioning accuracy	"	10(齿盘)	10(齿盘)	10(齿盘)
	B轴重复定位精度 B axis repeatability	"	4(齿盘)	4(齿盘)	4(齿盘)
控制系统 Control system			FANUC Oi-MF	FANUC Oi-MF	SIEMENS828D
机床动力源 Power supply	气源压力 Air source	MPa	0.6	0.6	0.6
	电源 (三相AC380V, 50/60HZ) Power	KVA	80	80	80
机床重量 Machine weight		T	15	22	25

## Main Feature

### 主要特点

- ☑ H100-S双面卧式加工中心是客户专门加工散热片的机床，是由两台卧式加工中心组成的对头镗，配备台面为1000X1000mm，可实现4X90°分度的数控转台，从而可以完成零件四个面的铣削、钻削、攻丝等工序；
- ☑ 整机床身结构经FEM有限元分析，可保证最佳的刚度与稳定性；铸件采用高强度铸铁材料和树脂砂工艺造型。通过合理的筋板布置以提高床身的刚度和强度，并经人工时效处理以消除应力。以保证良好的精度保持性；
- ☑ 各轴导轨副采用滚动直线导轨，动静摩擦力变化小，运动部件的灵敏度高，高速振动小，低速无爬行，定位精度高，伺服驱动性能优；同时承载能力大，切屑抗振性能好，可以改善机床的特性，提高机床的精度和精度稳定性，提高机床的使用寿命；
- ☑ 三轴均采用交流伺服电机直接驱动滚珠丝杠，减少传动链，提高可靠性和精度；
  - a)采用高精度轴承，并对滚珠丝杠进行预拉伸，以提高丝杠副的刚度和传动精度；
  - b)采用高精度的滚珠螺母丝杠副可以延长机床使用寿命；
  - c)三轴传动均采用交流伺服电机，通过联轴器直接驱动滚珠丝杠，可确保机床在加工时的快速响应和平稳切削。

- ☑ H100-S Two-sided horizontal machining center is specialized in processing heat sink machine tool for customer, is composed of two horizontal machining center head boring, equipped with 1000X1000mm mesa、4X90° degrees CNC turntable, in order to achieve the parts` four face milling、drilling、tapping and other processes.
- ☑ The bed structure of the whole machine tool was analyzed by FEM finite element method, the optimum stiffness and stability can be guaranteed. The casting is made of high strength cast iron and resin sand process modelling. The rigidity and strength of the bed can be improved by reasonable arrangement of ribbing board, and the stress can be eliminated by artificial aging treatment, so as to ensure good precision maintenance.
- ☑ The guide rail pair of each axis adopts rolling linear guide rail, small change in kinetic and static friction, high sensitivity of moving parts, low vibration at high speed, no creep at low speed, high positioning accuracy, excellent servo drive performance; at the same time, the carrying capacity is large, the cutting anti-vibration performance is good, it will be improve the characteristics of machine tools、the precision and precision stability of machine tools and the service life of machine tools.
- ☑ AC servo motor is used to drive ball screw directly in all three axes, it can reduce the transmission chain and improve the reliability and precision.
  - a) High precision bearing is adopted, and the ball screw is pre-stretched to improve the stiffness and transmission accuracy of the screw pair.
  - b) Using high precision ball nut screw pair can prolong the service life of the machine tool.
  - c) The three-axis drive adopts AC servo motor and drives the ball screw directly through the coupling, which can ensure the rapid response and smooth cutting of the machine during machining.



快速响应



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☑ 性能**稳定**  
☑ 配套**先进**



# H100-S Two-sided horizontal machining center

## Main Specifications 主要规格

规格	技术参数	单位	H100-S
行程 Travel	X/Y/Z轴行程 X/Y/Z axis travel	mm	1000/600/550
	工作台中心至主轴端面 Distance between worktable center&spindle nose	mm	100-1000
	工作台表面至主轴中心 Distance between worktable &spindle center line	mm	125-725
	两主轴端面最小距离 minimum distance between two spindle faces	mm	300
托盘及工作台 Pallet and Worktable	托盘(工作台)尺寸 Pallet size	mm	1000 × 1000
	托盘(工作台)最大承重 Max.pallet load	kg	1000
	托盘(工作台)个数 No.of pallets	个	1
	工作台面与地面距离 Distance between worktable surface&ground floor	mm	1000
	工作台最小分割度 Min.division accuracy of worktable	°	4 × 90°
主轴 Spindle	标准主轴转速 Standard Spindle speed	r/min	50-30000
	主轴电机功率 Spindle motor	kW	8.5
	主轴锥孔 Spindle taper		HSK-E40
进给速度 Feeding speed	快速进给速度(X/Y/Z) Rapid feed rate(X/Y/Z)	m/min	30/30/30
	切屑进给速度 Feed rate	m/min	25
刀具装置 Tool magazine	刀具容纳数 Magazine capacity	把	16X2
	最大刀具重量 Max.weight of tool	kg	3
	换刀时间 (刀-刀) Tool change time(Tool-To-Tool)		5.5
	刀具最大直径 (满刀) Max.tool diameter(Adjacent full)	mm	φ 50
	刀具最大直径 (相邻空刀) Max.tool diameter(Adjacent empty)	mm	φ 90
	刀具最大长度 Max.length of tool	mm	110
	刀柄型式 Shank type		HSK-E40
精度 Accuracy	定位精度 Positioning accuracy	mm	0.02
	重复定位精度 Repeatability	mm	0.01
	B轴定位精度 B axis positioning accuracy	"	12(齿盘)
	B轴重复定位精度 B axis repeatability	"	8(齿盘)
控制系统 Control system			FANUC Oi-MF
机床动力源 Power supply	气源压力 Air source	MPa	0.5-0.8
	电源 (三相AC380V, 50/60HZ) Power	KVA	60
机床重量 Machine weight		T	9



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## 江苏新瑞重工科技有限公司

JIANGSU SHINRI HEAVY INDUSTRY SCIENCE AND TECHNOLOGY CO.,LTD.

## 原江苏多棱数控机床有限公司

FORMERLY KNOWN JIANGSU DUOLENG CNC MACHINE TOOL CO.,LTD.

中国江苏常州市武进高新技术产业开发区凤栖路20号 邮编：213166

电话：0519-68886200 68886274

传真：0519-83261312

E-mail: sales@shinri.cn

Intl. Business Dept.: export@shinri.cn

No.20 Fengqi Road, Wujin Hi-Tech Industrial Zone,

Changzhou, Jiangsu, China, 213166

Tel: 0519-68886200 68886274

Fax: 0519-83261312

E-mail: sales@shinri.cn

Intl. Business Dept.: export@shinri.cn

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## 宁夏新瑞长城机床有限公司

SHINRI CHANGCHENG MACHINE TOOL CO.,LTD.

中国宁夏银川市西夏区宝湖西路505号 邮编：750021

电话：0951-2139208

传真：0951-2139158

Address: No.505 Baohu Xi Road, Xixia District, Yinchuan City, Ningxia, China, 750021

Tel: 0951-2139208 Fax: 0951-2139158

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24小时服务热线：400-828-5508

[www.shinri.cn](http://www.shinri.cn)