

Technical parameters

Items	unit	HMC 50H	HMC 63H	HMC 80H	HMC 100H	HMC 63S	HMC 80S
Work table							
Worktable size	mm	500×500	630×630	800×800	1000×1000	630×630	800×800
Worktable loading ability	Kg	600	1200	2000	2000	1200	2000
Number of worktable	Pcs	2	2	2	2	2	2
Change time	s	12	14	18	18	14	18
Working range							
Travel (X/Y/Z)	mm	800/700/800	1000/900/900	1350/1100/1100	1350/1100/1050	1000/900/900	1350/1100/1100
B-axis indexing		1°×360	1°×360	1°×360	1°×360	1°×360	1°×360
Max. rotation diameter of workpiece	mm	Φ700	Φ1000	Φ1250	Φ1250	Φ1000	Φ1250
Max. height of workpiece	mm	800	1000	1200	1200	1000	1200
Distance from spindle nose to worktable center	Max	mm	900	1000	1250	1250	1000
	Min	mm	100	100	150	200	100
Distance between spindle nose to worktable surface	Max	mm	750	1000	1150	1110	1000
	Min	mm	50	100	50	10	100
Spindle							
Taper hole of spindle (7: 24)		BT50	BT50	BT50	BT50	BT50	BT50
Maximum speed	rpm	6000	6000	6000	6000	6000	3500
Spindle motor power (continuous/S2)	kW	11/15	18.5/22	22/26	22/26	22/26	22/26
Maximum output torque(continuous/S2)	N·m	359/490(30min)	605/739(30min)	718/849(30min)	718/849(30min)	718/849(30min)	1652/1958(30min)
Tool magazine							
Tool magazine capacity	Pcs	40	40	40	40	40	40
Max. tool length	mm	500	500	500	500	500	500
Max. tool weight	kg	25	25	25	25	25	25
Max. tool diameter Full/Empty	mm	Φ125/Φ250	Φ125/Φ250	Φ125/Φ250	Φ125/Φ250	Φ125Φ/250	Φ125/Φ250
Tool change time (T-T)	s	3.5	3.5	3.5	3.5	3.5	3.5
Feed							
Maximum cutting feed speed(X/Y/Z)	mm/min	1-30000	1-30000	1-24000	1-24000	1-12000	1-12000
Rapid traverse (X/Y/Z)	m/min	30	30	24	24	24	24
Positioning accuracy							
X/Y/Z axis	mm	0.01	0.01	0.012	0.012	0.01	0.012
X/Y/Z axis(With encoder)	mm	0.008	0.008	0.008	0.008	0.008	0.008
B axis (1°×360)	"	8	8	8	8	8	8
Repetitive positioning accuracy							
X/Y/Z axis	mm	0.006	0.008	0.008	0.008	0.008	0.008
X/Y/Z axis(With encoder)	mm	0.005	0.005	0.006	0.006	0.005	0.006
B axis (1°×360)	"	3	3	3	3	3	3
NC Controller		FANUC 0i-MF	FANUC 0i-MF	FANUC 0i-MF	FANUC 0i-MF	FANUC 0i-MF	FANUC 0i-MF
Overall dimension (LxWxH)	mm	4500×3800×3250	5200×4000×3500	6200×4500×3850	6200×4500×3850	5200×4000×3500	6200×4500×3850
Floor space	mm	6300×5000	7000×5250	7850×5800	7850×5800	7000×5250	7850×5800

Standard

FANUC 0i-MF PLUS
6000rpm Mechanical spindle
BT50-40T ATC
1° Positioning double exchange worktable
Spindle taper hole cleaning, spindle air curtain

Optional

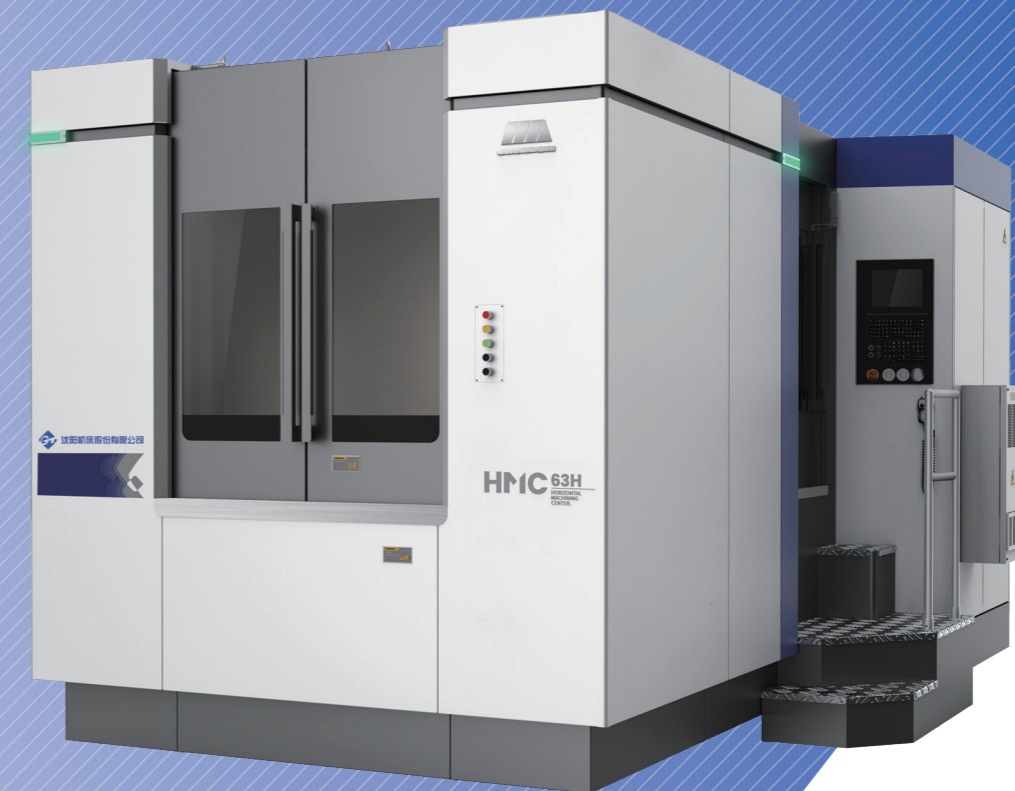
Encoder
8000rpm Motorized spindle
60/90/120T ATC
Hydraulic fixture interface
Spindle internal cooling
Water gun
Tool detection device
Spray cooling
Automatic Door
Rotary worktable

Note: The parameters provided in the table are for reference only, changes will not be informed. If you need special configuration, please contact us.

The explanation, diagram and technical parameter are varying with continuous technology development, without further notice.

HMC H/S Series

Horizontal Machining Center



HMC H/S Series

Horizontal Machining Center

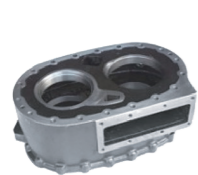
Excellent performance in various industries

HMC50H/63H/80H/100H
HMC63S/80S

Introduction

HMC-H series is a new machine tool with high production capacity. It is a high precision, high stability and high efficiency machine tool. Rich configurations and various automation forms are suitable for cutting high-precision aluminum, cast iron and steel parts, with wide cutting applicability and high cutting efficiency.

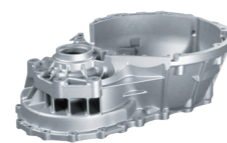
HMC-S series is designed to be the largest cutting capacity and the highest rigidity among the products of the same level, which can meet various needs of customers' production. Full steel rail structure, large torque output, especially suitable for cutting cast iron and steel parts with large metal removal, widely used in heavy cutting circumstance.



Bridge case
(Steel)

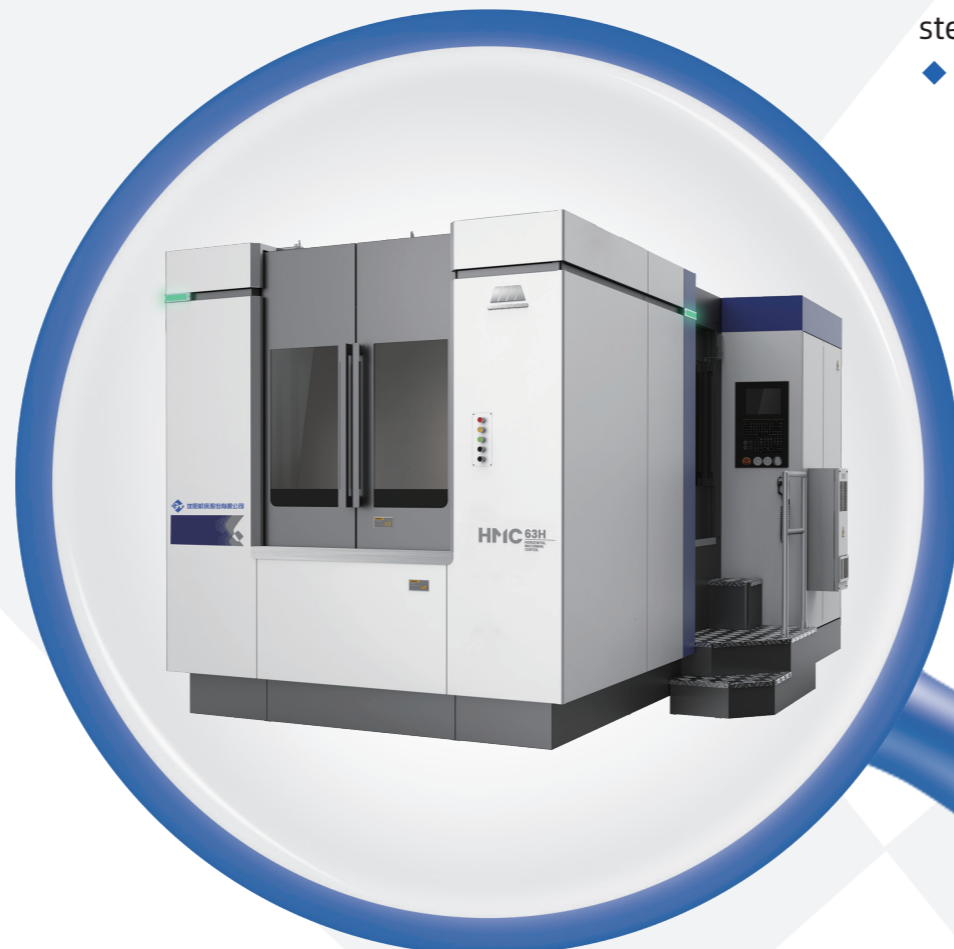


Steering knuckle
(Casting)



Gearbox
(Aluminum)

Automobile industry



High Accuracy

- ◆ Precision ball screw drive system
- ◆ Y-axis motor base and double-wall column are casted together
- ◆ Gearshift headstock with thermally symmetrical structure high performance spindle

High rigidity and stability

- ◆ Large span X-axis guideway mounting surface, low center of gravity bed
- ◆ Equipped with heavy-duty roller linear guideway or inlaid steel guide rail
- ◆ Advanced manufacturing process

High efficiency

- ◆ Multi-spindle selection to meet different working conditions
- ◆ Modular interface ATC to improve efficiency
- ◆ Equipped with automation interface, best systematic solution



pump cover(Steel)



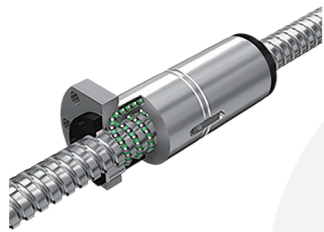
triplet(Steel)



Shell (Aluminum)

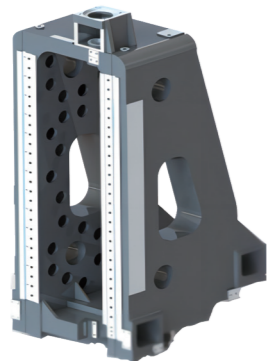
Pump & Valve industry

High Accuracy



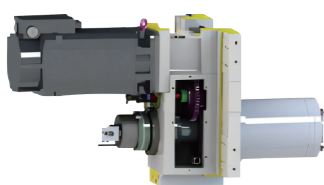
Precision ball screw drive system

The drive system of the machine adopts precision ball screw, reasonably bearing arrangement, reduce the heat of the screw and bearing, improve the machining accuracy.



Y-axis motor base and double-wall

Column is casted together Double-wall structure is adopted by the columns of this series, well stiffened, Y-axis motor base and column are casted together to improve the accuracy and stability of machine tool.

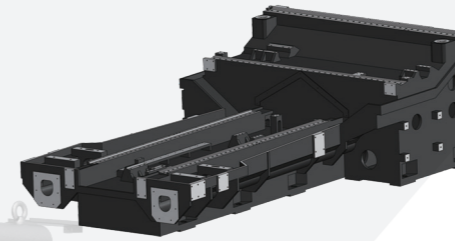


Gearshift headstock with thermally symmetrical structure high performance spindle

The H series headstock adopts two gears for speed change, which can achieve from high-speed machining to heavy cutting. Thermal symmetry structure, no thermal deformation. It enables the machine tool to achieve high precision machining.

In order to achieve large cutting volume machining, HMC80S adopts the patented three gear speed changing spindle transmission, with the maximum torque (S2) of 1958 Nm.

High rigidity and stability



Large span X-axis guideway mounting surface, low center of gravity bed

The installation surface of the X-axis guideway of the whole series is designed in the form of large span and low center of gravity to improve the overall rigidity of the machine tool. Through the low center of gravity drive, the machine tool can ensure high stability during processing.

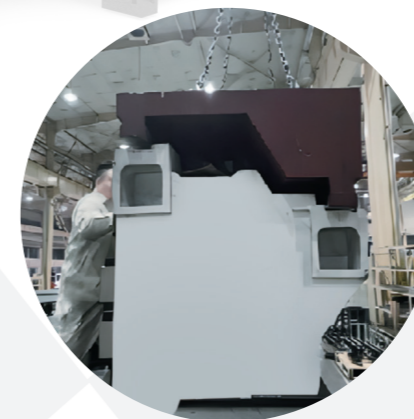
Equipped with heavy-duty roller linear guideway or inlaid steel guideway

H series adopts heavy-duty roller guideway, with strong bearing capacity and high accuracy and stability.

S series adopts hard steel rail design, which can maintain high rigidity and high stability during rapid cutting feed.

Advanced manufacturing process

The main castings of the machine tool are made of high-strength cast iron, which has undergone secondary aging and other heat treatment processes; Quantify the manufacturing process and improve product consistency; The key mounting surface adopts the low-stress assembly process to improve the accuracy and stability of the machine tool.

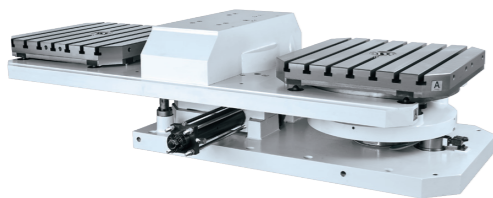
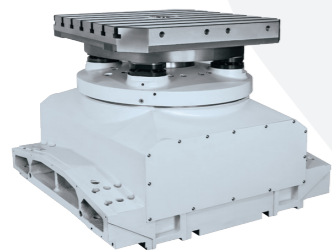
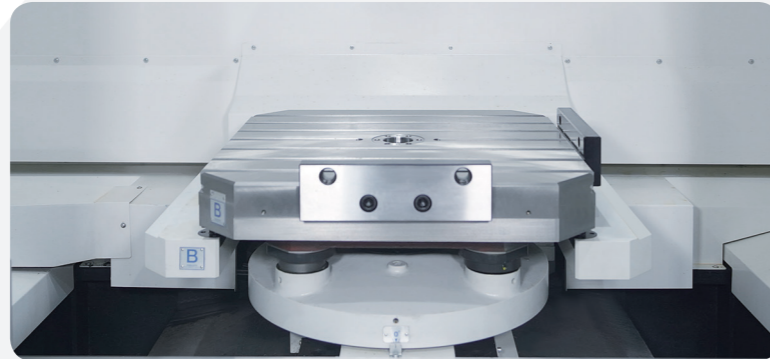


High Efficiency

0.001° High-precision rotary table can be configured, Standardized module interface

High accuracy

High rigidity



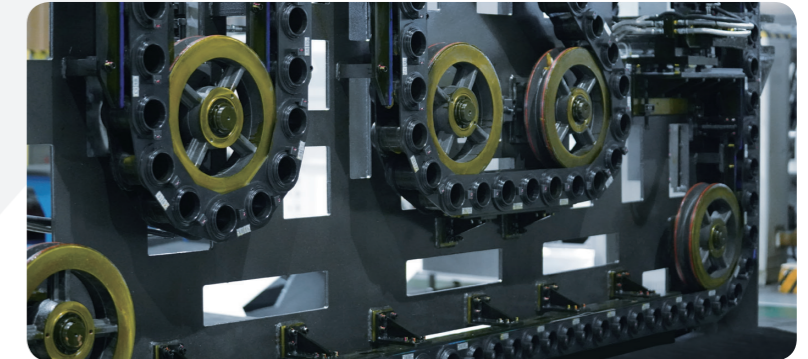
- ◆ 1° Indexing and positioning worktable is standard config.
- ◆ 0.001° rotary worktable is optional.
- ◆ Four high locating cone seats are adopted, which make it have high rigid.
- ◆ With air-tight detection function, accurate and reliable positioning.

Worktable specifications	Unit	HMC 50H	HMC 63H(S)	HMC 80H(S)	HMC 100H
Worktable size	mm	500×500	630×630	800×800	1000×1000
Worktable capacity	kg	600	1200	2000	2000
Min. index		1° /0.001°	1° /0.001°	1° /0.001°	1° /0.001°
Rotary speed	rpm	16	16	11	11
Tray exchange time	s	12	14	18	18

Multiple types of ATC configuration, unlimited expansion of ATC capacity, bringing higher processing efficiency

High Efficiency

Modularity

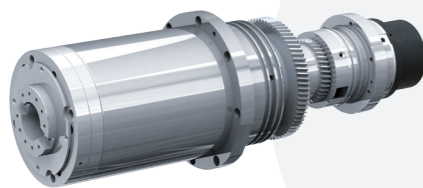
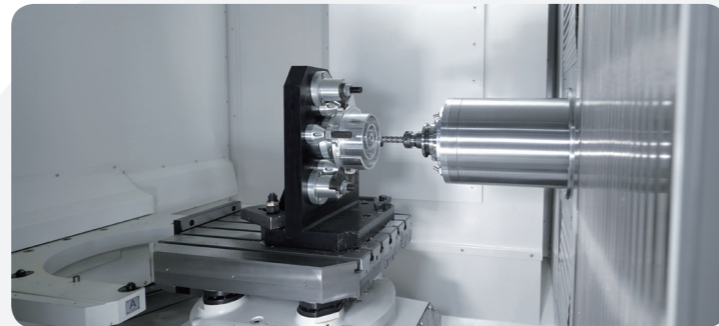


- ◆ Precise chain ATC is equipped with automatic tool change mechanism to achieve rapid tool change
- ◆ With tool preselection function, greatly reduce non-cutting time
- ◆ Servo ATC is optional to improve processing efficiency
- ◆ Cam tool change device ensures the reliability of tool change for long and large diameter tools

ATC specifications	Unit	HMC 50H	HMC 63H(S)	HMC 80H(S)	HMC 100H
ATC capacity	count	40/60/90/120	40/60/90/120	40/60/90/120	40/60/90/120
Max. tool length	mm	500	500	500	500
Max. tool weight	kg	25	25	25	25
Full/Adjacent empty	mm	Φ125/Φ250	Φ125/Φ250	Φ125/Φ250	Φ125/Φ250
Exchange time(T-T)	s	3.5	3.5	3.5	3.5

High efficiency

Multi-spindle selection to meet different working conditions



Mechanical spindle

- ◆ Gear transmission mode is adopted, Max. speed is 6000rpm; High torque cutting, H series maximum torque 849Nm (S2), S series maximum torque 1958 Nm (S2)
- ◆ Large-diameter spindle bearing with higher rigidity
- ◆ Spindle is designed with thermal symmetry structure, no thermal deformation

	Unit	HMC 50H	HMC 63H	HMC 80H (100H)(63S)	HMC 80S
Max. spindle speed	r/min	6000	6000	6000	3500
Spindle power (continuous/S2)	kW	11/15	18.5/22	22/26	22/26
Max. torque(S2)	N·m	490	739	849	1958
Spindle taper		BT50	BT50	BT50	BT50

Motorized spindle (optional)

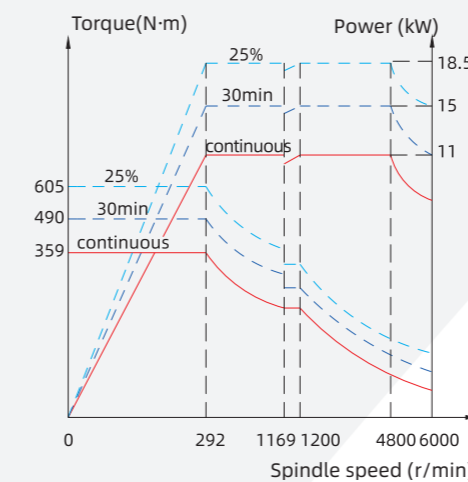


- ◆ 8000 rpm built-in motorized spindle, maximum torque 623Nm (15%)
- ◆ Widely used in high-speed and high-torque parts cutting, with wide applicability

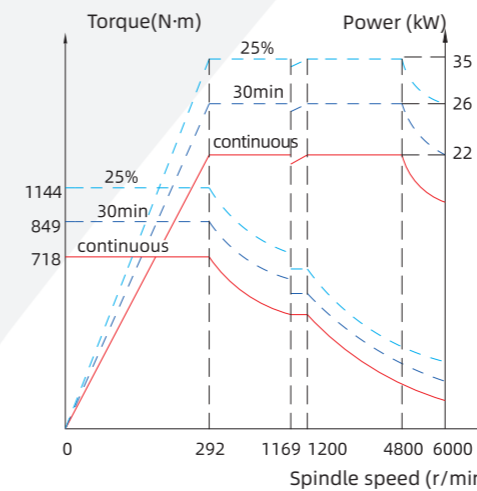
	Unit	HMC 50H	HMC 63H	HMC 80H(100H)
Max. spindle speed	r/min	8000	8000	8000
Spindle power (continuous/S2)	kW	14.7/40	14.7/40	14.7/40
Max. torque(S2)	N·m	623	623	623
Taper hole		BT50	BT50	BT50

Spindle power-torque diagram

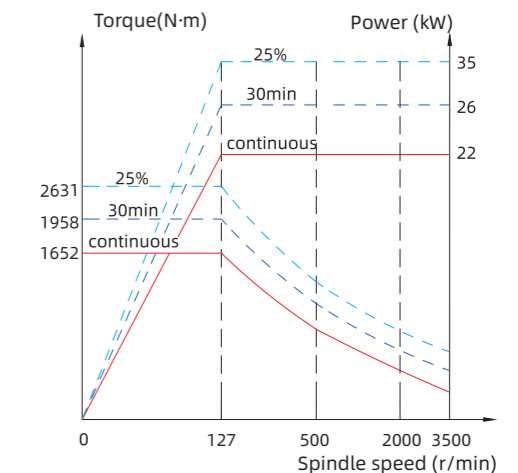
Mechanical spindle



HMC50H

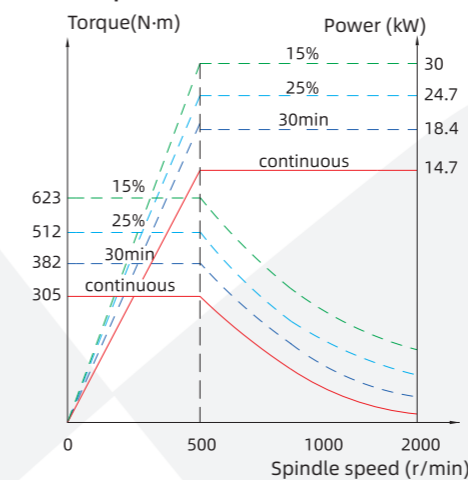


HMC63H

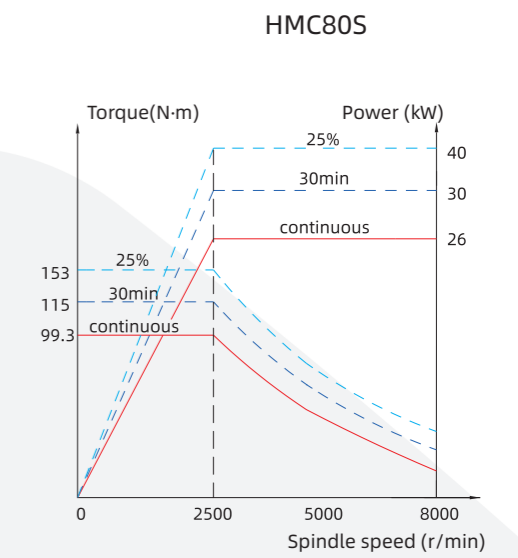


HMC80H/HMC100H/HMC63S

Motorized spindle



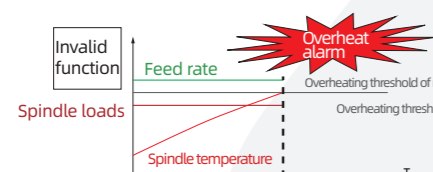
Y shape



△ shape

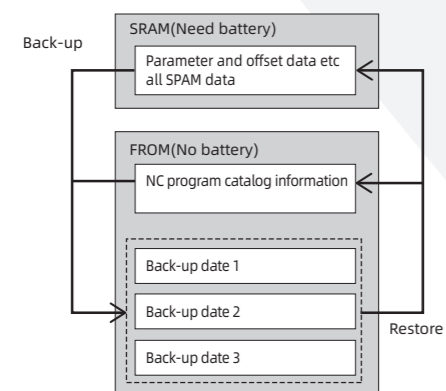
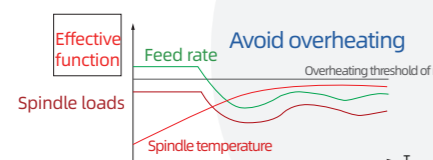
Convenience of operation

The newly developed operation interface can provide users with more convenient operation. At the same time, it is equipped with abnormal load detection, intelligent maintenance alarm and other prompt functions to make the operation simple.



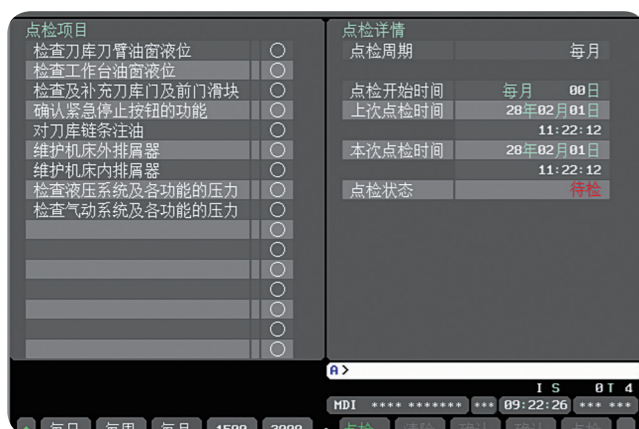
Spindle intelligent load control (optional)

According to the load and temperature of the spindle, it can automatically control the feed speed, improve efficiency and protect the tool. At the same time, it can shorten the processing cycle and prolong the tool life.



Automatic data backup

The data of all SRAM packages such as parameters and offset data are saved in FROM, and are automatically updated at a fixed period. Once lost, they can be retrieved to achieve automatic data backup.



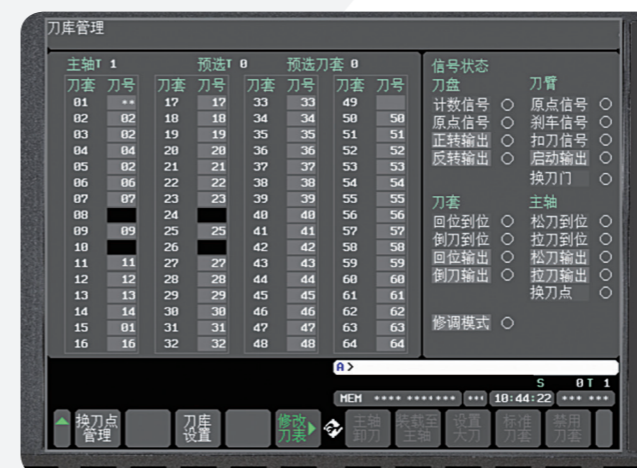
Intelligent check and maintenance plan

Customized daily inspection, weekly inspection, monthly inspection, 1500-hour inspection or 3000-hour inspection. Maintenance visualization.



Intuitive display of switching station status

- ◆ Customized interface for switching station
- ◆ Status information of the switching station and the tray position in real time
- ◆ Fast recovery in case of abnormal stops



Simple ATC management and signal diagnosis

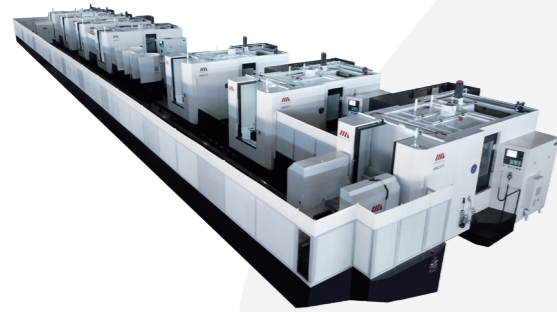
- ◆ One-click initialization to achieve rapid config. and update
- ◆ One-click set tool change position, easy to operate
- ◆ One-click to set the large dia.tool and fixed position for tool exchange to avoid operation error



Standard automatic line interactive signal display

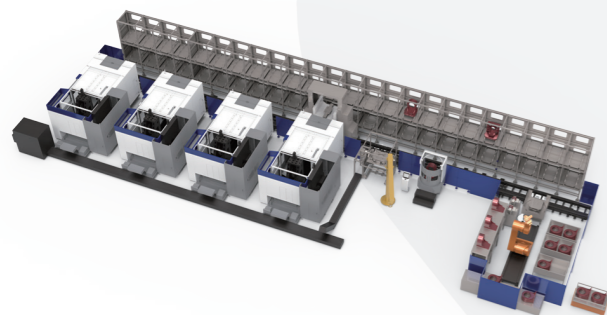
- ◆ One-click call, convenient for debugging, help the machine tool to quickly merge into automation line
- ◆ Automation line, load&unload mechanism information displays in real time
- ◆ Automated docking signals are customizable and suitable for various industries

Suitable for different automatic production forms



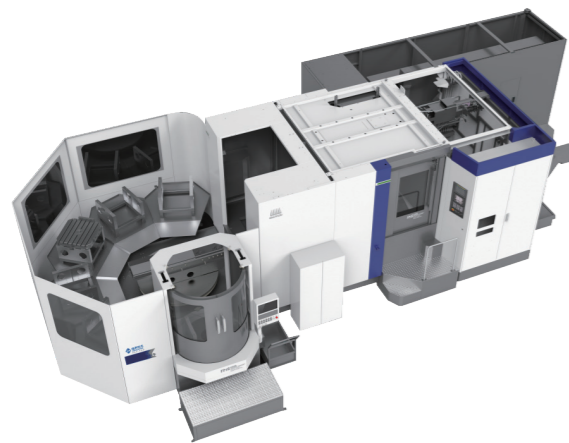
Production line tray

- ◆ Multi-type combined automatic flexible manufacturing system, suitable for different automatic production forms
- ◆ PC-based automatic operation control, safe and reliable
- ◆ Modular manufacturing of flexible manufacturing system, tray line, RGV and load& unload station, easy to achieve unlimited expansion of machine tools and systems



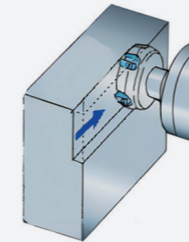
Multi-tray automation system

- ◆ High flexibility: suitable for automatic flexible processing of multiple varieties and small batches of workpieces, can be operated unattended for a long time
- ◆ Convenience: the flexible system is easy to install and maintain, convenient on-site modification
- ◆ Integration: the machine tool is highly integrated with the automation system, saving space and improving work efficiency



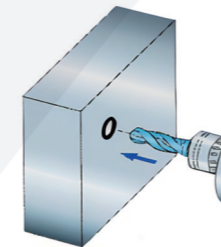
Excellent performance

Milling



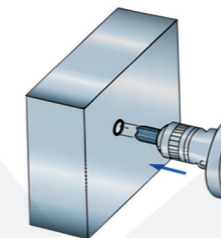
Model No.	HMC 50H	HMC 63H	HMC 80H	HMC 63S	HMC 80S
Workpiece	HT250	HT250	HT250	HT250	HT250
Tool	D125 Face mill	D160 Face mill	D160 Face mill	D160 Face mill	D160 Face mill
Spindle speed r/min	293	279	279	279	169
Feed speed mm/min	726	1114	1365	1365	812
Cutting depth/width mm	6/100	6/128	6/128	6/128	8/128
Removal rate cm ³ /min	435	668	818	818	831

Drilling



Model No.	HMC 50H	HMC 63H	HMC 80H	HMC 63S	HMC 80S
Workpiece	HT250	HT250	HT250	HT250	HT250
Tool	D70	D80	D90	D90	D100
Spindle speed r/min	U drill	U drill	U drill	U drill	U drill
Feed speed mm/min	291	290	294	294	137
Cutting depth/width mm	87	107	94	94	82
Removal rate cm ³ /min	505	798	896	896	967

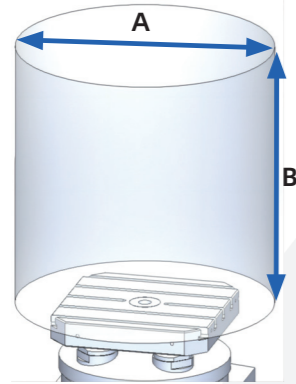
Tapping



Model No.	HMC 50H	HMC 63H	HMC 80H	HMC 63S	HMC 80S
Workpiece	HT250	HT250	HT250	HT250	HT250
Tool	M30×3	M36×4	M42×4.5	M42×4.5	M42×4.5
Type	Cutting tap	Cutting tap	Cutting tap	Cutting tap	Cutting tap
Spindle speed r/min	159	133	114	114	114
Feed speed mm/min	557	531	512	512	512

Note: The table is only for reference. Due to the differences in the environment and cutting conditions during the processing, the actual results will be different

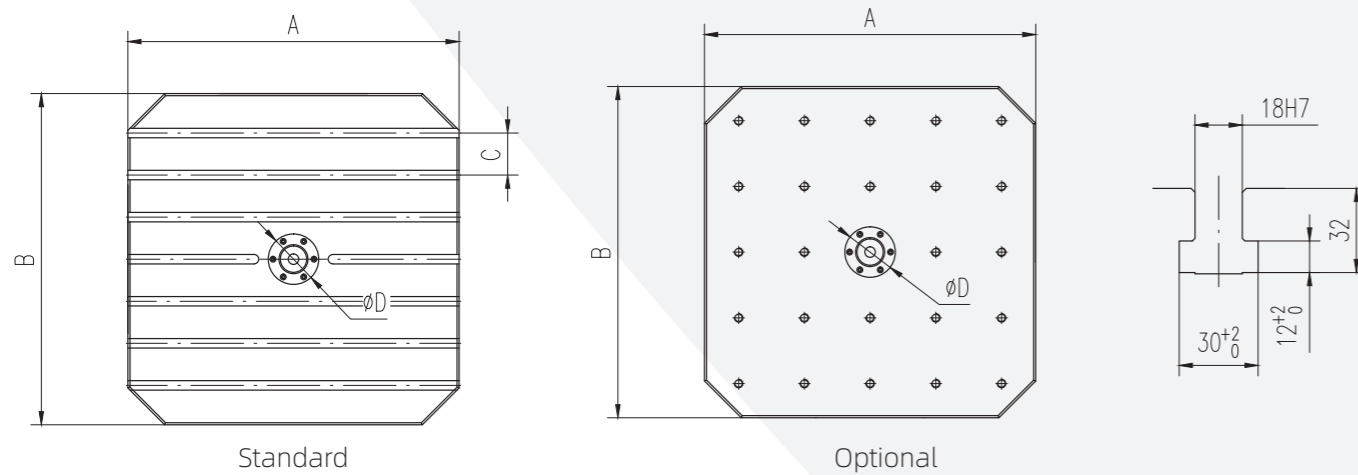
Working range



Unit: mm

Model No.	A Max. Dia.	B Max. Height
HMC50H	Φ700	800
HMC63H	Φ1000	1000
HMC80H	Φ1250	1200
HMC100H	Φ1250	1200
HMC63S	Φ1000	1000
HMC80S	Φ1250	1200

Worktable size

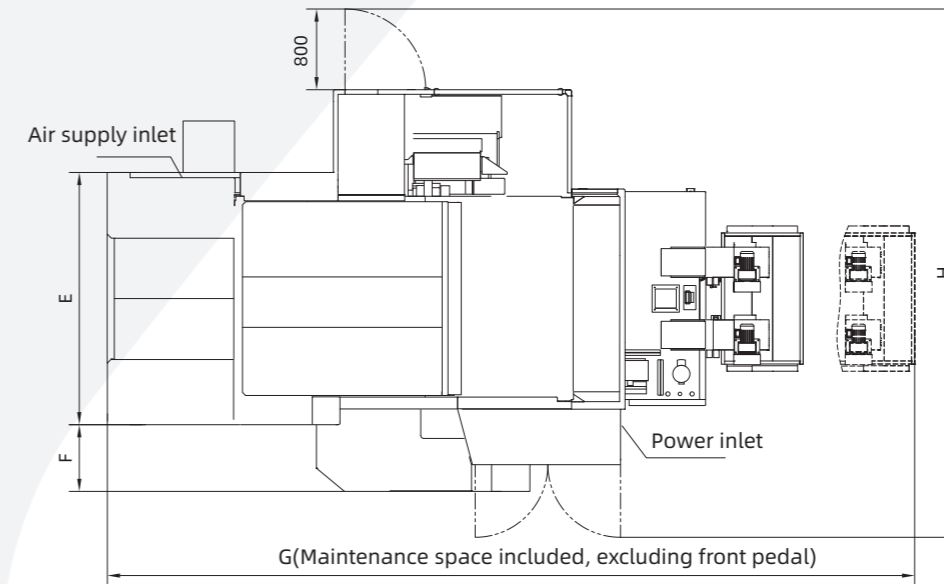
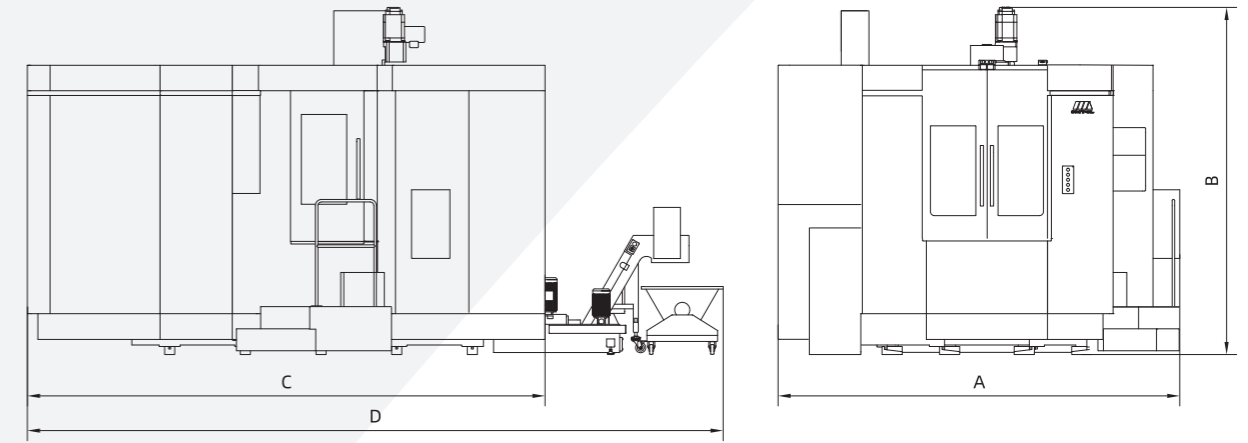


Unit: mm

Model No.	A	B	C	D
HMC50H	500	500	100	40
HMC63H	630	630	80	55
HMC80H	800	800	80	50
HMC100H	1000	1000	80	50
HMC63S	630	630	80	55
HMC80S	800	800	80	50

Note: The threaded hole on the worktable can be customized according to your needs

Machine layout



Unit: mm

Model No.	A	B	C	D	E	F	G	H
HMC50H	3800	3250	4500	6300	2200	750	7300	5000
HMC63H	4000	3500	5200	7000	2500	650	8000	5250
HMC80H	4500	3850	6200	7850	3150	650	8850	5800
HMC100H	4500	3850	6200	7850	3150	650	8850	5800
HMC63S	4000	3500	5200	7000	2500	650	8000	5250
HMC80S	4500	3850	6200	7850	3150	650	8850	5800

Note: C Length includes front and rear machine cover