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CNC MACHINE TOOLS FOR DIE CASTING INDUSTRY

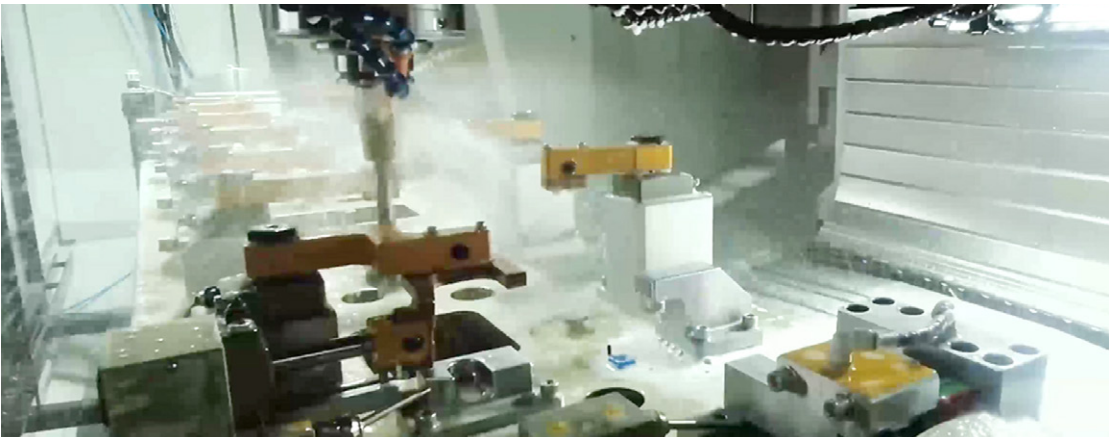
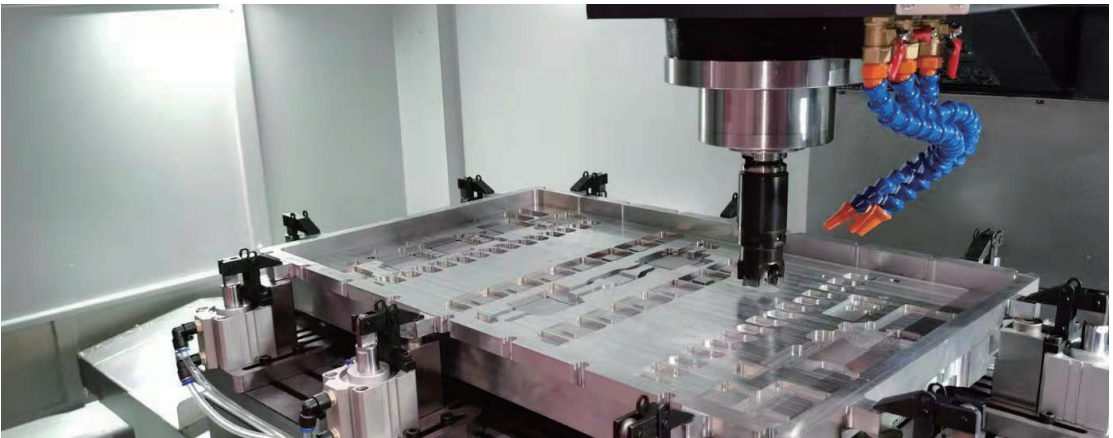
HIGH SPEED | HIGH EFFICIENCY | HIGH ACCURACY

CFV / CFV Lite / HPC II / BEL / BFL / CHM

HISION

INTRODUCTION

Haitian Precision has been keeping up with the pace of the market, devoting itself to the development and research of various types of CNC machine tools to be suitable for different industries and fields. With the increasing demand for lightweight development of automotive and the promotion and application of aluminum die-casting parts, Haitian Precision has flexibly used its own advantages in the machine tool industry and combined its experience in different industry applications to launch four series of high-efficiency processing equipment. CFV series vertical machining centers are mainly suitable for high-speed and high-precision machining of general automotive parts; HPC II series horizontal machining centers are mainly suitable for high-precision machining of general automotive parts and large die-casting parts. BEL/BFL series high efficiency gantry machining center is mainly suitable for high efficiency processing of large aluminum alloy structural parts; CHM long travel vertical machining center is mainly suitable for efficient processing of strip aluminum alloy.



CATALOGUE



CFV Vertical Machining Center

CFV600	[Page 05]
CFV900	[Page 05]
CFV1100	[Page 05]



CFV Lite Vertical Machining Center

CFV850 Lite	[Page 08]
CFV1000 Lite	[Page 08]
CFV1200 Lite	[Page 08]



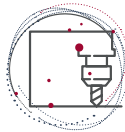
HPC II Horizontal Machining Center

HPC600 II	[Page 13]
HPC650 II	[Page 13]
HPC800 II	[Page 13]
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BEL / BFL Gantry High-Speed Milling Center for structural Parts

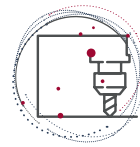
BEL2018	[Page 16]
BEL2030	[Page 16]
BFL2018	[Page 16]
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CHM Long Travel Vertical Machining Center

CHM55020	[Page 20]
CHM55025	[Page 20]
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CHM55025B	[Page 20]

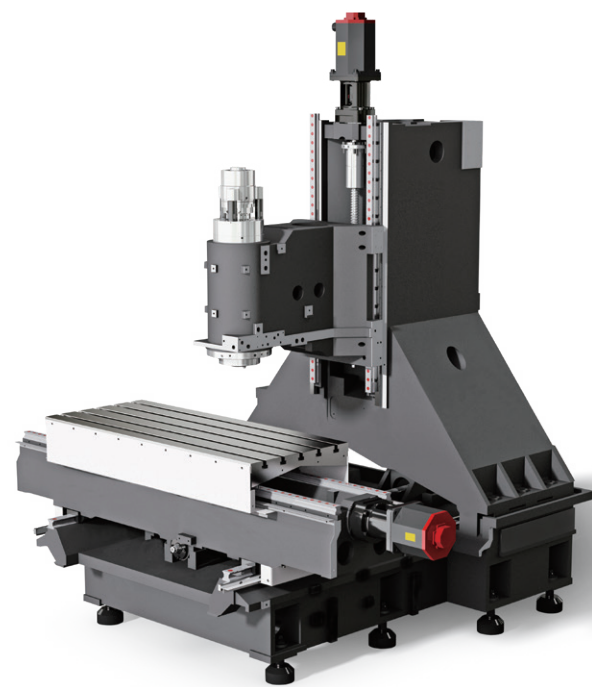




VERTICAL MACHINING CENTER

CFV

The CFV series innovative technology fully meets the needs of users, and its consistent aim is high efficiency, high precision, and high reliability; the new generation of CFV series vertical machining centers are equipped with advanced built-in spindle series and high dynamic response drive systems to enable processing Higher speed, high precision, and efficiency; and endows environmental protection and energy saving characteristics, which is widely used in the processing of components and mold markets.

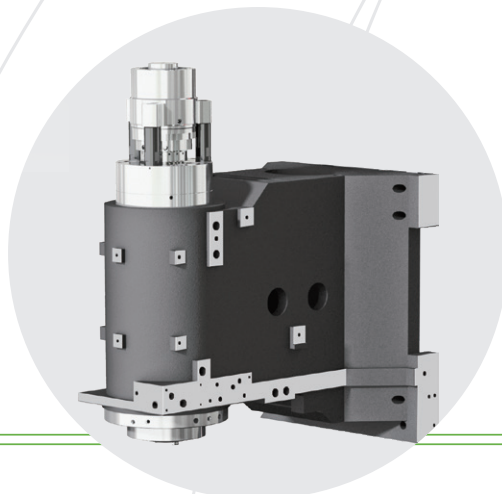


Optimized Component Design

- **High-rigid base components:** large-span bed base, thickened column.
- **Lightweight moving parts:** the total weight of the spindle box and built-in spindle 30% lower than the conventional machines.

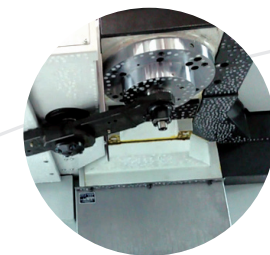
High Speed, High Precision Built-In Spindle

- **High precision:** built-in spindle direct drive, no other vibration source.
- **High torque:** two-speed automatic transmission, low speed and high torque, high speed and constant power.
- **Efficient start and stop:** zero drive chain, small inertia, starting from 0 to 8000 rpm in just 0.8 seconds.



24T Servo Tool Magazine

- **Intelligent preparation tool mode:** shorten non-machining time.
- Max.180mm dia. bridge type boring tool.
- Automatic protection door.
- Heavy tool mode: auto slow tool change in this mode.



Professional Automation Interface

- Automatic door.
- Automatic line communication interface.
- Tool automatic compensation & life management.
- Tool magazine broken tool detection.
- Workpiece detecting device.
- Option 4th axis & 5th axis.



CFV

	Technical Specification	Unit	CFV600	CFV900	CFV1100
Working Area	X axis travel	mm	600	900	1100
	Y axis travel	mm	430	430	540
	Z axis travel	mm	510	510	520
	Spindle nose to table surface	mm	150-660	150-660	150-670
Working Table	Table size	mm	900x430	1100x430	1300x550
	Max.table loading capacity	kg	500	700	1200
	T slot (slot number X width X distance)	mm	3x18x125	3x18x125	5x18x100
Spindle	Driving system		Built-in spindle	Built-in spindle	Built-in spindle
	Spindle speed	rpm	12,000	12,000	12,000
	Spindle power (continuous 30 minutes overload)	kW	7.5/11	7.5/11	7.5/11
	Spindle torque	N.m	71.6/105	71.6/105	71.6/105
	Spindle taper		ISO 7:24 NO.40(BT40)	ISO 7:24 NO.40(BT40)	ISO 7:24 NO.40(BT40)
Feed Speed	Pull stud specifications		MAS-P40T-1 (45°)	MAS-P40T-1 (45°)	MAS-P40T-1 (45°)
	Rapid feed X/Y/Z axis	m/min	36	36	36
	Max.working feed speed	m/min	20	20	20
	Guideway type		Linear guideway	Linear guideway	Linear guideway
Tool Magazine	Tool magazine capacity	T	24	24	24
	Tool change type		Tool change arm	Tool change arm	Tool change arm
	Max.tool dia.(with / without adjacent tools)	mm	Φ80/Φ150	Φ80/Φ150	Φ80/Φ150
	Max.tool length	mm	300	300	300
	Max.tool weight	kg	8	8	8
Others	Tool change time	s	1.5	1.5	1.5
	Power capacity	KVA	35	35	35
	Machine weight	t	6	7	8
	Machine size (LxWxH) (without conveyor)	cm	206x240x266	260x242x258	290x289x268

Standard Configuration

(Notes: “●” standard configuration, “◎” option configuration)

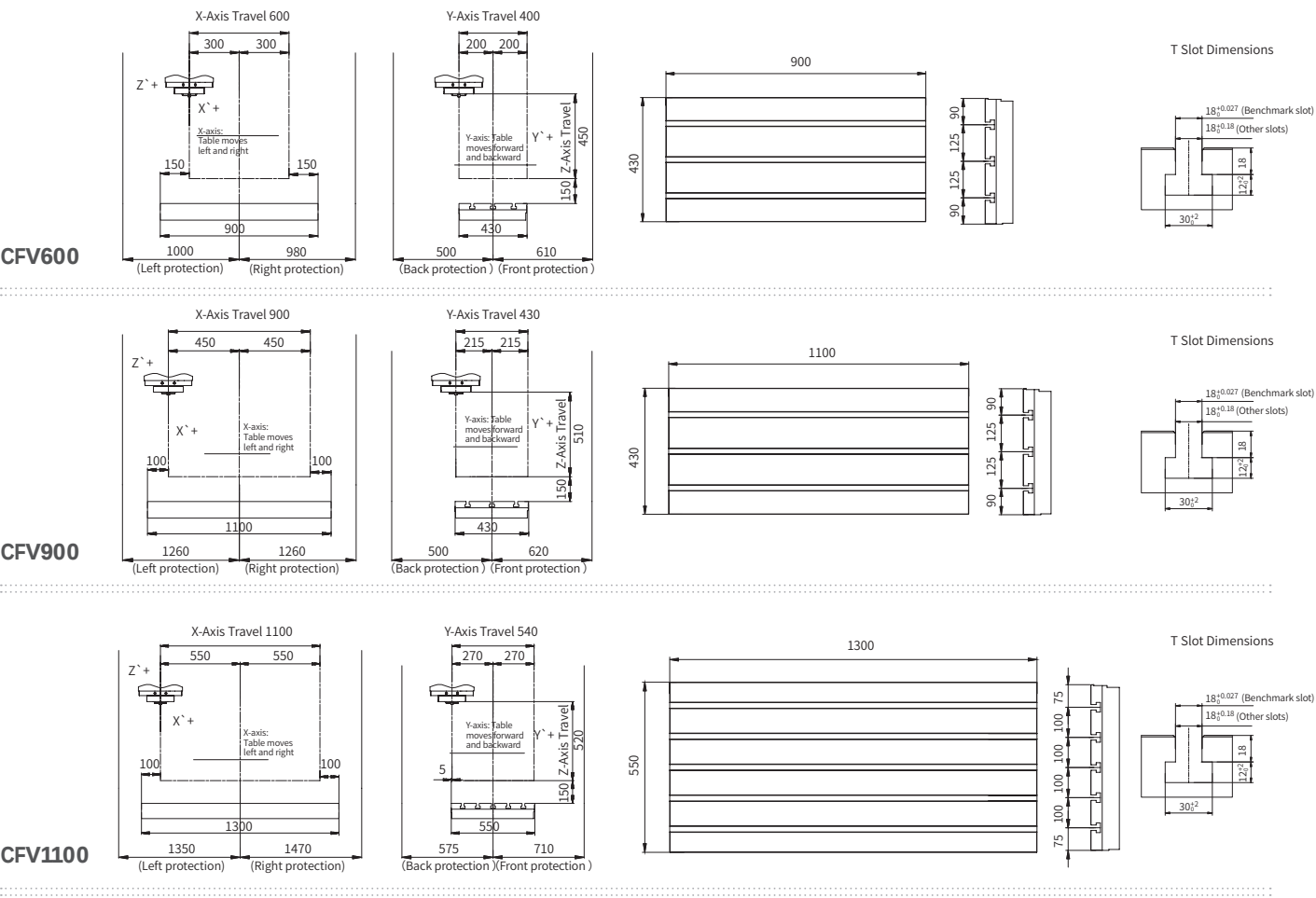
No.	Item	CFV600	CFV900	CFV1100
1	Controller: Mitsubishi M80A	●	●	●
2	12000rpm built-in spindle	●	●	●
3	Coolant system	●	●	●
4	Full enclosure with top cover	●	●	●
5	Internal flush chip system (rear)	◎	●	●
6	Internal screw chip conveyor	●	◎	◎
7	3 color signal lamp	●	●	●
8	Coolant gun	●	●	●
9	External chain type chip conveyor & trolley (left side)	◎	●	●
10	External chain type chip conveyor & trolley (rear)	●	◎	◎
11	24T servo ATC-arm type	●	●	●
12	ATC pneumatic door	●	●	●
13	Hydraulic & grease lubrication system	●	●	●
14	Spindle oil chiller	●	●	●

The company reserves the right to modify the parameters due to technical improvement.

Option Configuration

No.	Item
1	Controller: FANUC 0i
2	Air conditioner
3	Auto door
4	CNC rotary table (4th)
5	BLUM tool setter
6	BLUM workpiece probe
7	Tool detection in magazine
8	Air gun
9	Coolant through spindle (2-6MPa)
10	Spindle ring spray
11	Shower coolant
12	Oil mist collector
13	Oil skimmer
14	Internal screw chip conveyor (front)
15	Internal flush chip system (front)

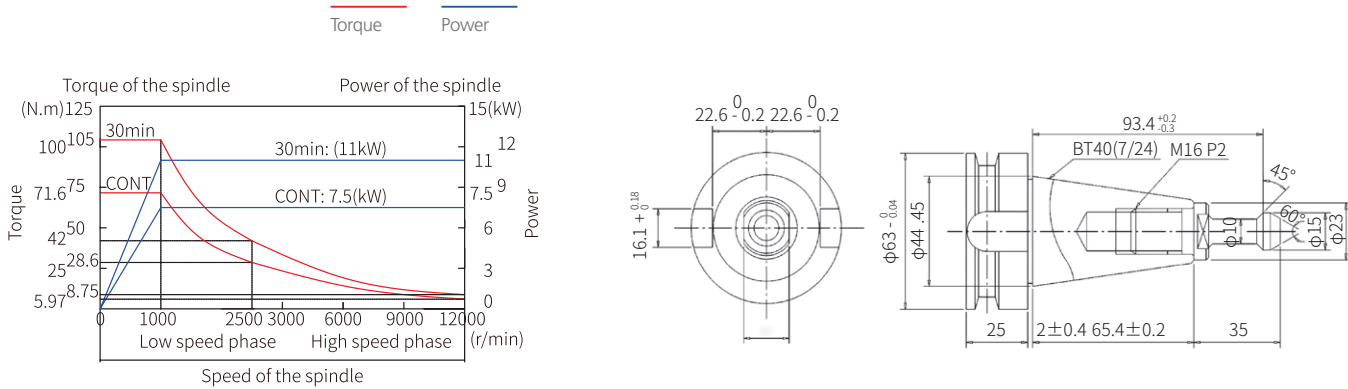
Processing Range



Power-Torque Diagram

Mitsubishi Electrical Spindle (12000rpm)

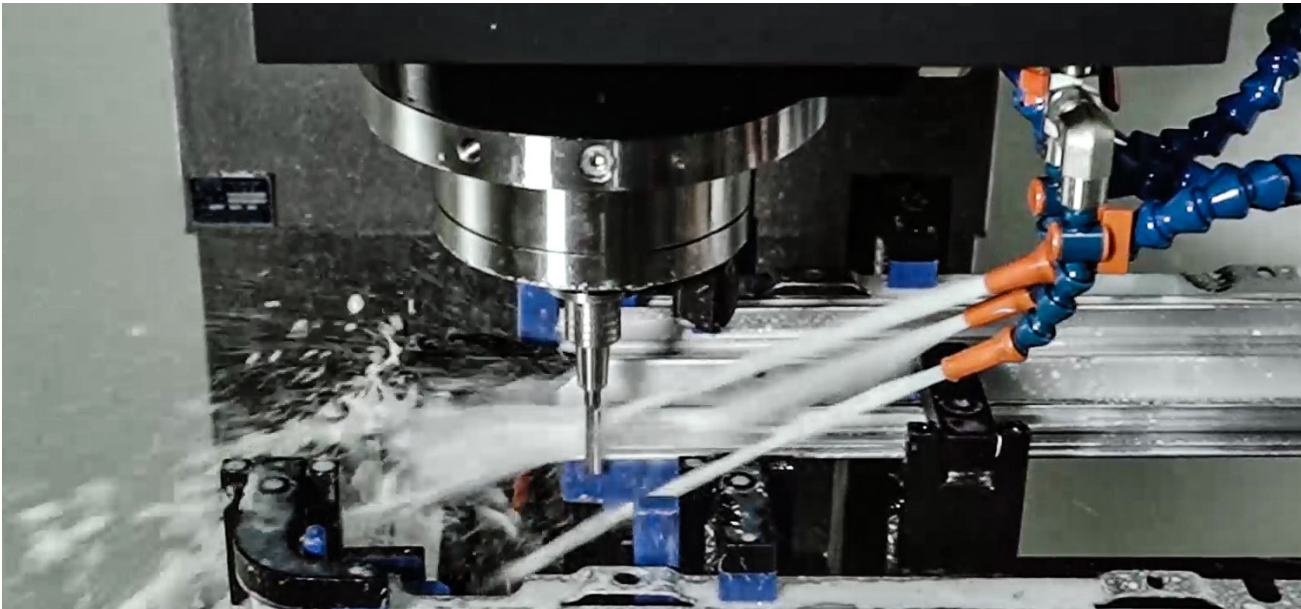
BT40(7: 24) Pull Stud Specification





VERTICAL MACHINING CENTER

CFV Lite



CFV Lite

Small volume, large stroke, spacious processing space, can cope with lightweight large parts, multiple workpiece



CFV Lite

	Technical Specification	Unit	CFV850Lite	CFV1000Lite	CFV1200Lite
Working Area	X/Y/Z axis travel	mm	850/500/500	1000/600/600	1200/600/600
	Spindle nose to table surface	mm	150-650	150-750	150-750
	Table size	mm	1000×500	1200×600	1300×600
Working Table	Max.table loading capacity	kg	300	400	400
	T slot (slot number X width X distance)	mm	5×18×80	5×18×100	5×18×100
Spindle	Spindle speed	rpm	18,000	18,000	18,000
	Spindle power	kW	7.5/18	7.5/18	7.5/18
	Spindle torque	N.m	11.9/17.9	11.9/17.9	11.9/17.9
Feed Speed	Rapid feed X/Y/Z axis	m/min	48/48/36	48/48/36	48/48/36
	Max.working feed speed	m/min	20/20/20	20/20/20	20/20/20
Tool Magazine	Tool magazine capacity	T	20	20	20
	Tool change time	s	0.8	0.8	0.8
	Power capacity	KVA	30	30	30
Others	Machine weight	t	5.7	6.2	6.7
	Machine size (LxWxH) (without conveyor)	cm	250x340x255	280x355x270	315x355x270

Standard Configuration

- 1 Controller: Mitsubishi M80
- 2 18000rpm built-in spindle
- 3 20T servo ATC-arm type
- 4 Spindle oil chiller and Coolant system
- 5 Spindle external cooling、workpiece air cooling
- 6 ATC pneumatic door
- 7 Internal flush chip system (rear)
- 8 External hopper type rear water tank
- 9 Full enclosure with top cover
- 10 Oil skimmer
- 11 3 color signal lamp
- 12 Air gun

Option Configuration

- 1 Controller: FANUC 0i
- 2 24T servo ATC-arm type
- 3 Internal screw chip conveyor
- 4 External chain type chip conveyor
- 5 Oil mist collector
- 6 Shower coolant
- 7 Coolant gun
- 8 Tool detection in magazine

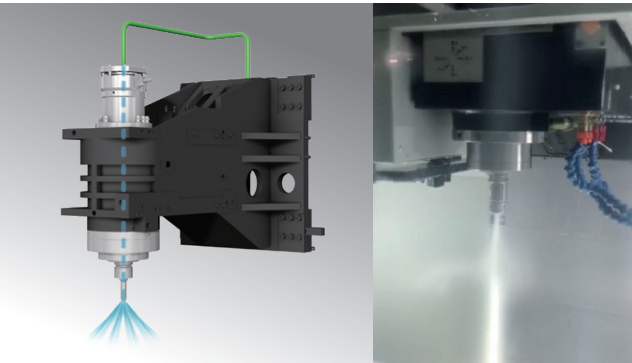
LIGHT WEIGHT LARGE ALUMINUM
PROCESSING NEW EDGE
CFV Lite SERIES MACHINING
CENTER

High Speed
High Rigidity



AS RIGID AS THE BT40
HAS THE EFFICIENCY OF DRILLING
AND TAPPING MACHINE

Built-In Spindle To Achieve Fast
Installation Center Water



Four Perimeter Perfect
Solution

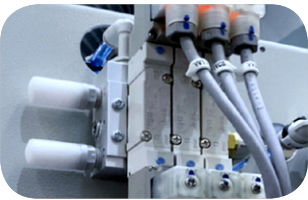


High-Speed Implementation

18000 BBT30-18000rpm built-in spindle 0-6000rpm only need 0.2s	18 Maximum spindle power 18kW	0.8 T-T Tool change time 0.8s (less than 1.5kg)	• Rapid traverse X/Y/Z 48/48/36m/min; • Separate tool magazine, realize the pre-prepared tool, ensure tool changing efficiency, the maximum can be extended to 30T, and does not affect the tool changing efficiency. To realize the sequential processing of lightweight large complex parts; • Standard Built-in spindle with Coolant through spindle, can be quickly installed to realize the center outlet, greatly improve the cutting efficiency and reduce tool loss
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High Rigidity Implementation

- Equipped with BT40 machining center of high rigid structure, wide bed, a type long span column, lightweight headstock;
- Spindle taper standard BBT double - sided restraint interface;
- The 18kW maximum power support beyond the BT40 spindle provides enough power for efficient machining;
- Super broach force design, with accumulator normally closed hydraulic punching mechanism, to achieve high efficiency and stability



4 Into 4 Out Pneumatic Valve
Group and M Code



Airtight Detection Set



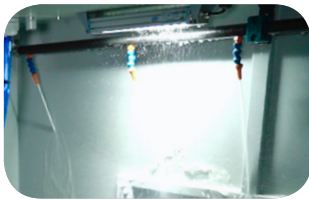
Oil Mist Collector



Angle Head



Spindle Ring Spray



Shower Coolant



Tool Setter



External Oil Mist Cooling Of The Tool



HORIZONTAL MACHINING CENTER

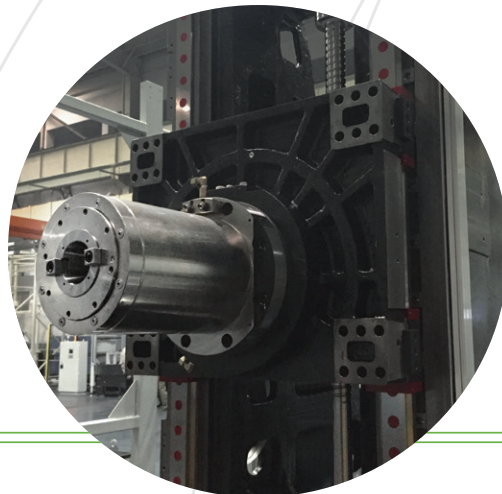
HPC II

The high-speed horizontal Machining center of HPC II series is a new high-end product integrated with the international advanced design concept. The structure of the rib cavity is optimized by analyzing and calculating the basic large components. The thick one-piece bed, combined with a three-axe heavy roller guide and an integrated high-speed motorized spindle, can handle a wide range of material processing from high-speed and high-precision to heavy processing and from aluminum and steel to castings. In addition, high-speed feed servo axes and fast-rotating APCs enable efficient processing to meet your cutting and production efficiency requirements. Product application areas: precision machining in automotive, aerospace, petroleum, electric power, locomotive, plastic machinery, construction machinery and other industries.



Spindle box

- The whole series is equipped with integral built-in electric spindle, which greatly improves the transmission efficiency. Synchronous oil cooling circulation technology is equipped to prevent thermal deformation and ensure stable cutting accuracy.

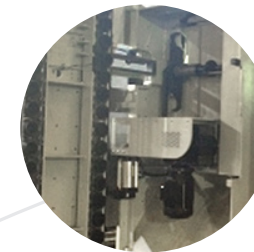


High rigidity Machine frame

- The design of positive T-shaped integrated high-strength bed and full closed frame symmetrical structure can effectively save the overall accuracy of the machine tool and achieve efficient tool change and work table exchange.

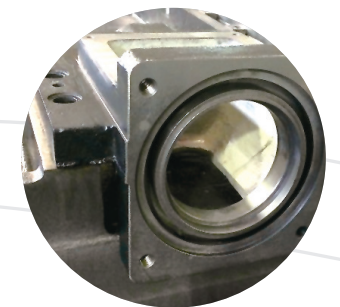
Gantry Frame Apc Rotating Structure

- Gantry frame exchange station, with high rigidity, adopts self-lubricating bearing structure, which makes the balance and reliability in the exchange process of plate.



Servo ATC

- The tool magazine is driven by servo motor, fixed-point tool change, and the tool magazine move with manipulator simultaneously to effectively shorten the tool change time.



Drive Cooling System

- The three-axis drive system is equipped with screw nut cooling and motor base circulating cooling to reduce the thermal deformation of the drive system and ensure the positioning accuracy.



HPC II

	Technical Specification	Unit	HPC600 II	HPC650 II	HPC800 II	HPC1000
Working Area	X-axis travel (column cross travel)	mm	800	1050	1400	1450
	Y-axis travel (spindle box vertical travel)	mm	800	900	1200	1250
	Z-axis travel (table longitudinal travel)	mm	850	1000	1050	1250
	Distance between spindle center and table surface	mm	100-900	100-1000	55-1255	140-1390
	Distance between spindle nose and table center	mm	150-1000	190-1190	200-1250	-200-1050
Working Table	Table size	mm	500x500	630x630	800x800	1250x1100
	Table indexing	degree	1° x360	1° x360	1° x360	0.001
	Max.table loading capacity	kg	1000	1300	2000	2000
Spindle	Driving system		Built-in spindle	Built-in spindle	Built-in spindle	Built-in spindle
	Electrical spindle motor	kW	26/45	26/45	26/45	26/45
	Spindle rotary speed	r/min	8000	8000	8000	8000
	Max.spindle	Nm	305/623	305/623	305/623	305/623
	Spindle taper hole		ISO7:24 NO.50	ISO7:24 NO.50	ISO7:24 NO.50	ISO7:24 NO.50
Feed Speed	Pull stud specification		P50T-2-MAS403	PT50T-2-MAS403	PT50T-2-MAS403	PT50T-2-MAS403
	Rapid feed X/Y/Z	m/min	60	60	50	60
	Cutting feed X/Y/Z	m/min	40	40	40	20
	Table 90° indexing time	s	2.5	2.5	3.5	3.5
Pallet	Exchanging mode		Direct rotary type	Direct rotary type	Direct rotary type	-
	Pallet exchanging time		10	12	15	-
	Tool magazine capacity	T	40	40	40	40
	Tool selection mode		Any shortest path	Any shortest path	Any shortest path	Any shortest path
Tool Magazine	Tool holder		BT50	BT50	BT50	BT50
	Max.tool length	mm	500	500	500	500
	Max.tool dia. (full/empty adjacent Positions)	mm	Φ125/250	Φ125/250	Φ125/250	Φ115/230
	Max.tool weight	kg	25	25	25	25
	Tool changing time (tool to tool)	s	2.5	2.5	2.5	2.5
Others	Power capacity	kVA	64	64	64	64
	Machine weight	t	15	19	25	30
	Machine size	cm	550x310x310	726x372x345	688x488x388	625x430x355

Standard Configuration

(Notes: “●” standard configuration, “◎” option configuration)

No.	Item	HPC600 II	HPC650 II	HPC800 II	HPC1000
1	Controller: FANUC Oi	●	●	●	●
2	40T ATC (BT50)	●	●	●	●
3	1° index pallet	●	●	●	◎
4	APC (Auto pallets changer)	●	●	●	◎
5	Full enclosure with top cover	●	●	●	●
6	Guideway cover	●	●	●	●
7	External chain type chip conveyor	●	●	●	●
8	Coolant system	●	●	●	●
9	Spindle oil chiller	●	●	●	●
10	BallscREW cooling system	●	●	●	●
11	Spindle air blow	●	●	●	●
12	Automatic power-off device	●	●	●	●
13	Diagnostic function	●	●	●	●
14	3-color signal lamp, working light	●	●	●	●
15	Standard accessories	●	●	●	●

The company reserves the right to modify the parameters due to technical improvement.

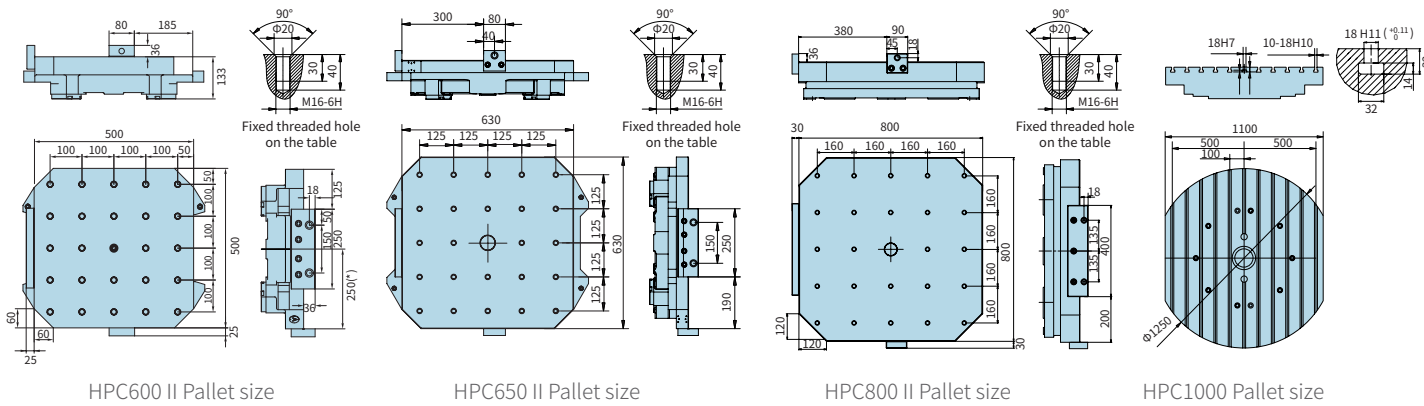
Option Configuration

No.	Item
1	Controller: FANUC 31i
2	X/Y/Z linear scale axis
3	Built-in spindle 12000rpm BT40
4	CNC rotary table (0.001°)
5	T-slot,enlarge table
6	60/90/120T ATC
7	Workpiece probe
8	Tool setter
9	Coolant through spindle
10	Shower coolant
11	Water gun
12	Oil skimmer
13	Air conditioner
14	Air gun

Workpiece Clamping Range

	HPC600 II	HPC650 II	HPC800 II	HPC1000
Exchange pallet size	500x500mm (630x630 Option)	630x630mm (800x800 Option)	800x800mm	1250x1100
Max.workpiece size	Φ900x1000mm	Φ1100x1170mm	Φ1450x1320mm	Φ1920x1500mm
Max.table loading capacity	1000kg	1300kg	2000kg	2000kg

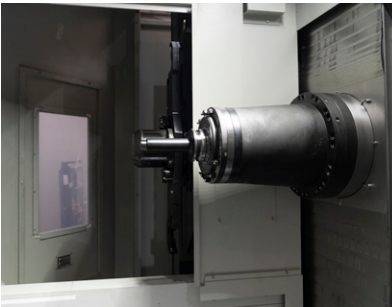
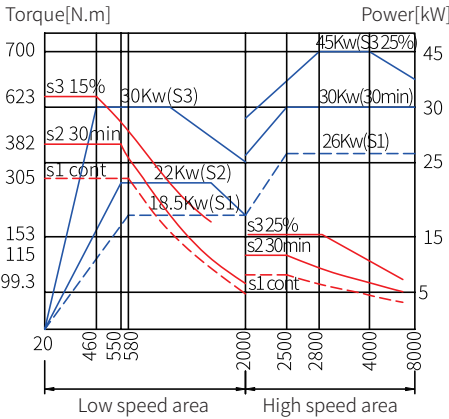
Worktable Size



Power-torque Drawing

HPC II Power Torque Diagram

Spindle torque
Motor power





GANTRY HIGH-SPEED MILLING CENTER FOR
STRUCTURAL PARTS

BEL / BFL



BEL

The equipment is suitable for processing large aluminum alloy parts, mainly suitable for new energy vehicles, rail transit, general machinery and other profiles, frames, flat parts processing, such as battery tray, door frame and so on.

BFL (3+2)

This equipment is suitable for the processing of complex large aluminum alloy parts, mainly suitable for the multi-angle processing of large die-cast aluminum alloy parts and structural parts such as battery tray, door frame, instrument panel bracket of new energy vehicles.



BEL/ BFL

	Technical Specification	Unit	BEL2018	BEL2030	BFL2018	BFL2030
Working Area	X-axis travel	mm	1800	3000	1800	3000
	Y-axis travel	mm	2000	2000	2000	2000
	Z-axis travel	mm	700	700	700	700
	Rotation range of axis A	°	-	-	±90°	±90°
	Rotation range of axis C	°	-	-	±180°	±180°
	Distance between columns	mm	2050	2050	2050	2050
	Gantry passing height	mm	750	750	750	750
	Distance from spindle vertical end face to work table	mm	50-750	50-750	50 ~ 750	50 ~ 750
Working Table	Distance from spindle horizontal center line to work table	mm	-	-	312 ~ 1012	312 ~ 1012
	Table size	mm	2000×1800	2000×3000	2000×1800	2000×3000
	Table load	t	3.5	6	3.5	6
	T slot		18×250×7	18×250×12	18×250×7	18×250×12
Feed Speed	Cutting feedrate (X/Y/Z)	m/min	20/20/20	20/20/20	20/20/20	20/20/20
	Rapid traverse (X/Y/Z)	m/min	40/40/36	30/40/36	40/40/36	60/40/36
Spindle	Drive type		Built-in spindle	Built-in spindle	Built-in spindle	Built-in spindle
	Spindle speed	rpm	10-12000	10-12000	24000	24000
	Spindle power	kW	11/22	11/22	15/18	15/18
	Spindle torque	N·m	63.7/118	63.7/118	19.1/20.9	19.1/20.9
	Spindle taper		BT40	BT40	HSK-A63	HSK-A63
	Tool magazine capacity	T	16/24	16/24	16/24	16/24
Tool Magazine (Option)	Tool magazine type		BT40	BT40	HSKA63	HSKA63
	Max.tool dia. (Adjacent vacant)	mm	Φ63/Φ80	Φ63/Φ80	Φ63/Φ80	Φ63/Φ80
	Max.tool length	mm	300	300	300	300
	Max.tool weight	kg	6	6	6	6
	Power capacity	kVA	50	50	60	60
Others	Controller		FANUC Oi	FANUC Oi	SIEMENS 828D	SIEMENS 828D
	Machine weight	t	21	23	21	23
	Machine size (L×W×H)	cm	665×500×400	750×480×400	665×500×400	750×480×400

Standard Configuration

BEL	BFL
1 Controller: FANUC Oi	Controller: SIEMENS 828D
2 HISION 12000rpm built-in spindle	24000rpm HSD five axis head
3 Spindle oil chiller	Spindle oil chiller
4 Centralized lubrication system	Centralized lubrication system
5 Pneumatic system	Pneumatic system
6 hydraulic system	Cutting tool cooling system and large capacity water tank
7 Cutting tool cooling system and large capacity water tank	Internal helix chip conveyor
8 Internal helix chip conveyor	External chain type chip conveyor
9 External chain type chip conveyor	3-color signal lamp, working light
10 3-color signal lamp, working light	Portable operating cell box
11 Portable operating cell box	Full enclosure
12 Full enclosure	Protective door Safety electronic door lock
13 Protective door Safety electronic door lock	Common maintenance tools and related documents
14 Common maintenance tools and related documents	Floor installation
15 Floor installation	X axis rack and pinion drive
16	1MPa external cooling

Option Configuration

BEL	BFL
1 Controller: SIEMENS 828D	Air conditioner
2 Air conditioner	16/24T parallel servo tool magazine
3 16/24T parallel servo tool magazine	X axis rack and pinion drive
4 X axis rack and pinion drive	Automatic door
5 Automatic door	BLUM tool setter
6 BLUM tool setter	BLUM workpiece probe (2D)
7 BLUM workpiece probe (2D)	Water gun
8 Water gun	Air gun
9 Air gun	Tool break detection in tool magazine
10 Coolant through spindle (2MPa)	Oil skimmer
11 Coolant through spindle (3-6MPa)	Airtight detection
12 Spindle ring spray	Oil mist cooling(central/external)
13 Tool break detection in tool magazine	Guard left/right door open
14 Oil skimmer	Regulated power supply
15 Airtight detection	External chain type chip conveyor
16 Oil mist cooling(central/external)	
17 Guard left/right door open	
18 HSKA63 built-in spindle	
19 External chain type chip conveyor	

BEL / BFL GANTRY HIGH-SPEED MILLING CENTER FOR STRUCTURAL PARTS

Working Area

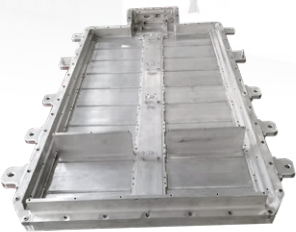
	BEL2018	BEL2030	BFL2018	BFL2030
Table (mm)	2000x1800	2000x3000	2000x1800	2000x3000
Travel (mm)	1800x2000x700	3000x2000x700	1800x2000x700	3000x2000x700



Car Door Frame



Thin Wall Panel



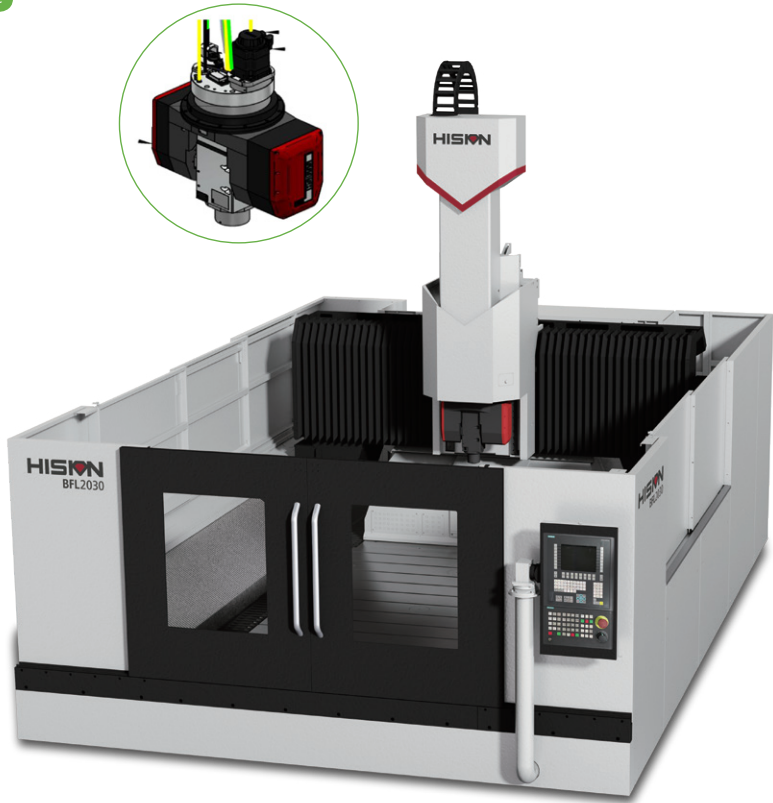
New Energy Battery Pack Chassis



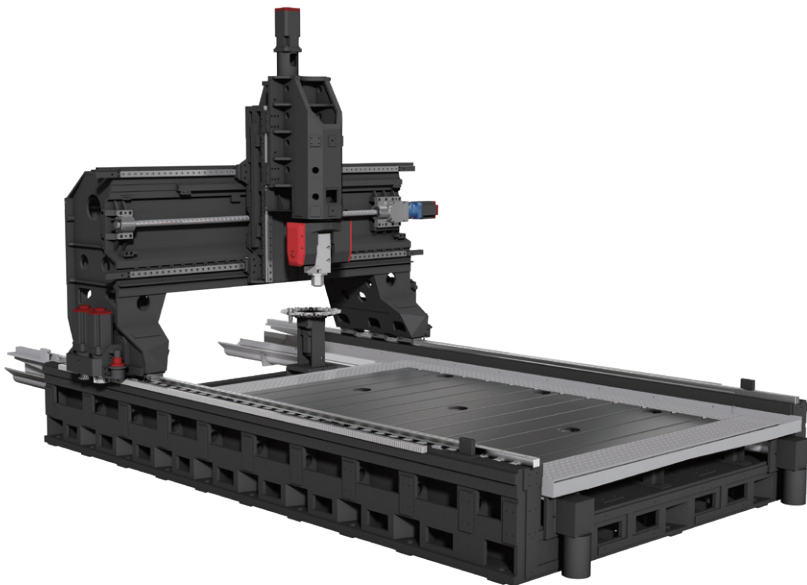
Car Rack



Car Front and Rear Rail



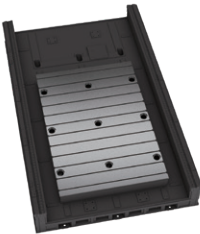
Technical Advantages of BEL/BFL



A/C head can be retracted into the sliding saddle to shorten the height of the column beam and improve the rigidity of the machine tool.



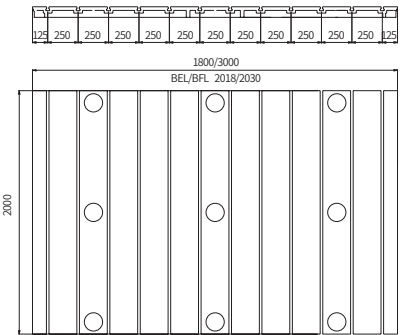
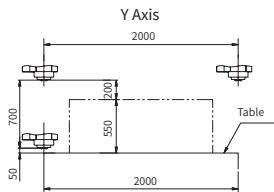
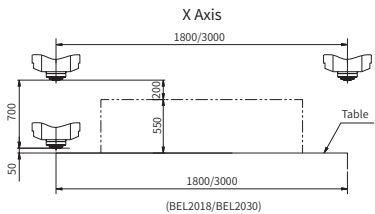
High speed moving structure of beam column integrated gantry frame



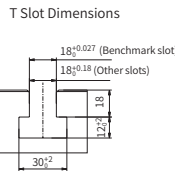
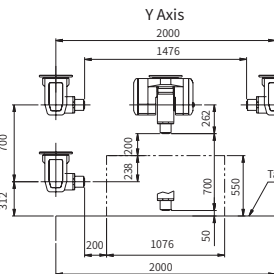
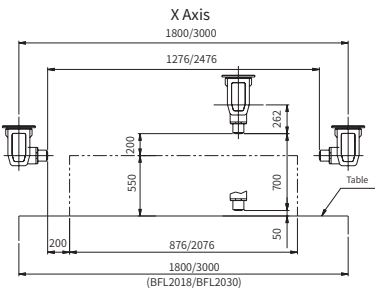
Integral worktable bed

Processing Range

BEL2018/BEL2030



BFL2018/BFL2030





LONG TRAVEL VERTICAL MACHINING CENTER

CHM



CHM

Three-axis machine tool with fixed table and moving spindle. Easier access to workstations. The equipment can be equipped with four axis turntable, suitable for hole and surface processing of strip parts.

CHM-B

Three axis + rotating spindle head (B pendulum) machine tool with fixed table and moving spindle. The equipment can be equipped with four axis turntable, suitable for aluminum alloy strip parts arc surface and tilt Angle of the hole, surface processing.



CHM

	Technical Specification	Unit	CHM55020	CHM55025	CHM55020B	CHM55025B
Working Area	X-axis travel	mm	2050	2550	2050	2550
	Y-axis travel	mm	550	550	550	550
	Z-axis travel	mm	520	520	520	520
	B axis rotation range	°	--	--	±100°	±100°
	Distance from spindle vertical end face to work table	mm	250-770	250-770	330-850	330-850
	Distance from spindle horizontal center line to work table	mm	--	--	556-1076	556-1076
	B axis rotation speed	r/min	--	--	10	10
Working Table	Table size(A×B)	mm	550×2500	550×3000	550×2500	550×3000
	Table load	kg	1000	1000	1000	1000
	T slot(slot number × width × distance)	mm	5×18×100	5×18×100	5×18×100	5×18×100
Spindle	Drive type		Built-in spindle	Built-in spindle	Built-in spindle	Built-in spindle
	Spindle speed	rpm	12, 000	12, 000	15, 000	15, 000
	Spindle power(continuous 30 minutes overload)	kW	11/19	11/19	11/18.5	11/18.5
	Spindle torque(continuous 30 minutes overload)	N.m	69/109	69/109	15/29	15/29
	Spindle taper	--	BT40	BT40	BBT30	BBT30
	Pull stud specifications	--	MAS-P40T- I	MAS-P40T- I	MAS P30T-I(45°)	MAS P30T-I(45°)
Feed Speed	Rapid traverse (X/Y/Z)	m/min	40/36/36	36/36/36	40/36/36	36/36/36
	Cutting feedrate (X/Y/Z)	m/min	20/20/20	20/20/20	20/20/20	20/20/20
Tool Magazine	Tool magazine capacity	T	24	24	24	24
	Tool magazine type	--	Arm type	Arm type	Arm type	Arm type
	Tool holder	--	BT40	BT40	BT30	BT30
	Max.tool dia. (Adjacent vacant)	mm	Φ63/Φ80	Φ63/Φ80	Φ63/Φ80	Φ63/Φ80
	Max.tool length	mm	300	300	250	250
	Max.tool weight	kg/T	7	7	5	5
	Tool change time (T-T)	s	1.5	1.5	--	--
	Controller	--	SIEMENS 828D	SIEMENS 828D	SIEMENS 828D	SIEMENS 828D
Others	Air pressure	MPa	0.5 ~ 0.7	0.5 ~ 0.7	0.5 ~ 0.7	0.5 ~ 0.7
	Machine size (L×W×H)	mm	5500×3425	6500×3425	5500×3425	6500×3425

Standard Configuration

CHM	CHM-B
1 Controller:Siemens 828D	Controller:Siemens 828D
2 HISON built-in spindle	HISON built-in spindle
3 24T servo tool magazine	Haitian self-made B-axis pendulum head
4 X/Y/Z triaxial protective pull plate	24T servo tool magazine
5 Spindle cooling system	X/Y/Z triaxial protective pull plate
6 Pneumatic, hydraulic andlubrication system	Spindle cooling system
7 Cutting cooling	Pneumatic, hydraulic and lubrication system
8 Artifacts air-cooled	Cutting cooling
9 3-color signal lamp, working light	Artifacts air-cooled
10 Pneumatic tool change protective door	3-color signal lamp, working light
11 Full enclosurewith top cover	Pneumatic tool change protective door
12 The water inside the machine sends chip	Full enclosurewith top cover
13 External chain type chip conveyor	The water inside the machine sends chip
14 Platen foundation	External chain type chip conveyor
15 Standard accessories	Platen foundation
16	Standard accessories

Option Configuration

CHM	CHM-B
1 Controller:FANUC 0I	Air conditioner
2 Air conditioner	30T servo tool magazine
3 Increase the distance from work table to main shaft by 150(z-axis stroke remains unchanged)	Automatic door
4 30T servo tool magazine	Nc rotary table
5 Automatic door	Workpiece probe (2D)
6 Nc rotary table	Tool setter
7 Workpiece probe(2D)	Water gun
8 Tool setter	Coolant through spindle (2MPa)
9 Water gun	Tool break detection in tool magazine
10 Coolant through spindle (2MPa)	Oil mist collector
11 Coolant through spindle (3-6MPa)	Oil skimmer
12 Spindle ring spray	Airtight detection
13 Tool break detection in tool magazine	The roller outside the machine recoils water for chip removal
14 Oil mist collector	Fixture flush
15 Oil skimmer	
16 Airtight detection	
17 The roller outside the machine recoils water for chip removal	
18 Fixture flush	

