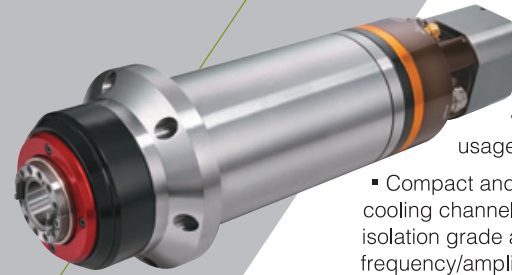


AF5040 5 Face CNC Vertical Machining Center

Features

- Uniquely patented design on vertical & horizontal dual-purpose spindle and with 90° indexing division C-axis rotary table.
- Spindle headstock adopts exceptional mechanism and hydraulic clamping system to boost cutting rigidity.
- Built-in spindle deploys European / Japanese precision bearings. Its max. torque reaches 107.6Nm (M80A; 8000rpm).
- X/Y/Z-axis uses 45mm width roller type linear guideways and Y-axis has 3 guideways to increase the rigidity and stability of mechanical structure.
- Cast iron base both sides have screw type chip conveyors can remove cutting chips to the rear coolant tank fast and effectively.
- To process 5 faces of work-piece on one setup can reduce loading/unloading frequency and save manpower, electricity, floor space to improve production efficiency.



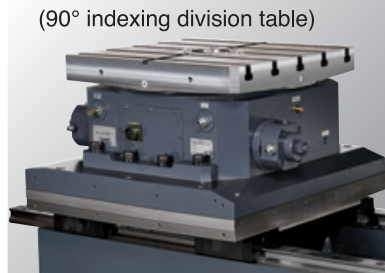
Built-in spindle

- 
- Rigorous labyrinth design equips air seal and special water-repellent ring to extend the usage life-span.
 - Compact and highly efficient design of helical cooling channel with careful testing on stator coil isolation grade and attentive measuring on frequency/amplitude response to guarantee optimum performance in noise, vibration, precision.

Examples of practically cutting performance

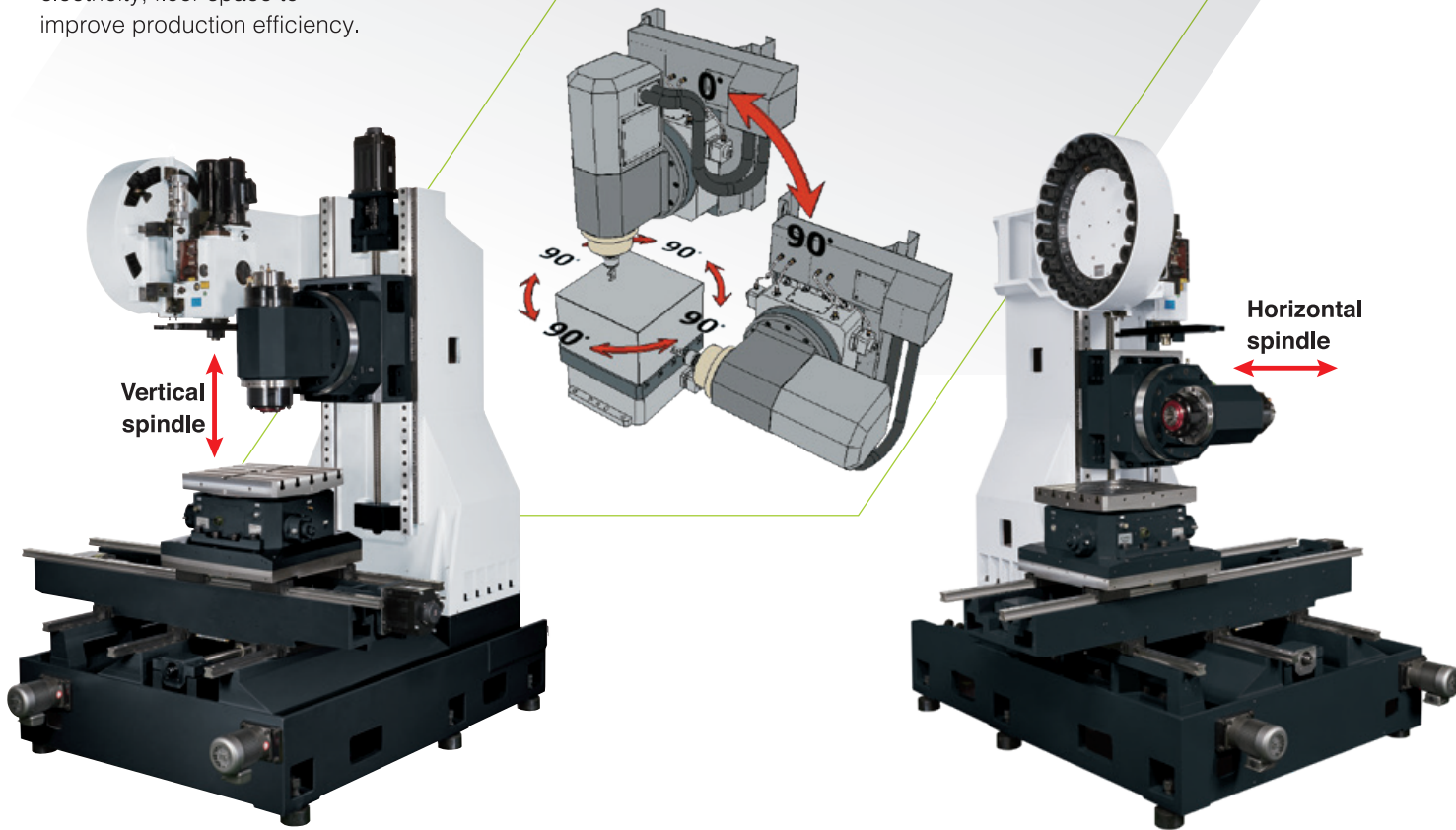
Vertical spindle / Mitsubishi M80A controller / Spindle speeds 8000rpm

	Workpiece material	Tool spec. mm	Cutting depth mm	Spindle speeds rpm	Feedrate mm/min	Removal rate cc/min
Face mill	S45C	Ø63	6	1800	2160	648
Drilling	S45C	Ø32.5	60	260	95	
Tapping	S45C	M27 x P3	50	300	900	
Slotting	S45C	Ø32	18	420	260	150



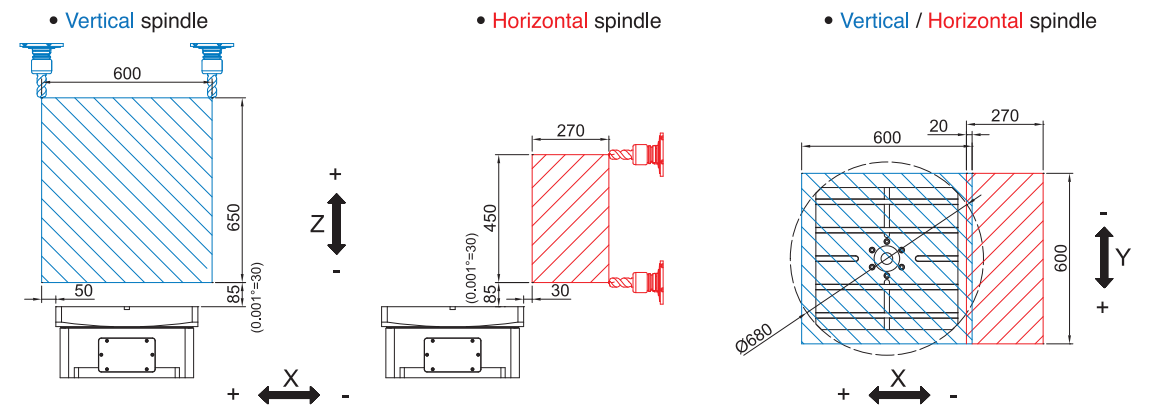
C-axis table

- (Standard) 90° indexing division rotary table employs three-piece clutch gear design with hydraulic driven system which can obtain superiorly mechanical structure and indexing accuracy.
- (Optional) 0.001° indexing division rotary table employs precision dual-head worm gear/shaft design with servo motor driven system, hydraulic clamping device which can gain excellently stable rotation and indexing accuracy.



Cutting area interference

(Unit: mm)



Standard accessories

- | | | | | |
|--|--|---|--|---|
| <ul style="list-style-type: none"> • Spindle speeds (built-in) 8000 rpm • C-axis 90° indexing table • 10.4" TFT LCD • Spindle oil cooler | <ul style="list-style-type: none"> • Spindle air blow system • Auto. lubrication system • Tool coolant system • Auto. chip flush system • Screw type chip conveyor (2 sets) | <ul style="list-style-type: none"> • 3-axes with roller guideways • Full enclosed splash guard (with top cover) • Auto. door on ATC magazine | <ul style="list-style-type: none"> • External handwheel (MPG) • LED work light (2 sets) • Triple-color alarm light • Toolbox and tools | <ul style="list-style-type: none"> • Leveling bolts and pads |
|--|--|---|--|---|

Optional accessories

- | | | | | |
|--|---|---|---|--|
| <ul style="list-style-type: none"> ■ Spindle speeds (built-in) 10000 /15000 rpm ■ Spindle taper (HSK-A63) ■ C-axis 0.001° indexing table ■ Magazine capacity 30 & 40 pcs ■ 3-axes with ball guideways | <ul style="list-style-type: none"> ■ Coolant through spindle device (CTS) 20 & 70 bar ■ 200mm rising block on column ■ Workpiece air blow system ■ X/Y/Z-axis linear scales ■ CTS filtration | <ul style="list-style-type: none"> ■ Chain type chip conveyor with cart ■ Oil skimmer ■ Oil mist collector ■ Water gun ■ Air gun | <ul style="list-style-type: none"> ■ Auto. front door ■ Auto. tool length measurement ■ Damaged cutting tool sensor ■ M30 auto. power off | <ul style="list-style-type: none"> ■ Foundational J-shape bolts & nuts ■ Transformer & AVR stabilizer ■ Foot pedal (iron plate) ■ CE |
|--|---|---|---|--|

MACHINE SPECIFICATIONS

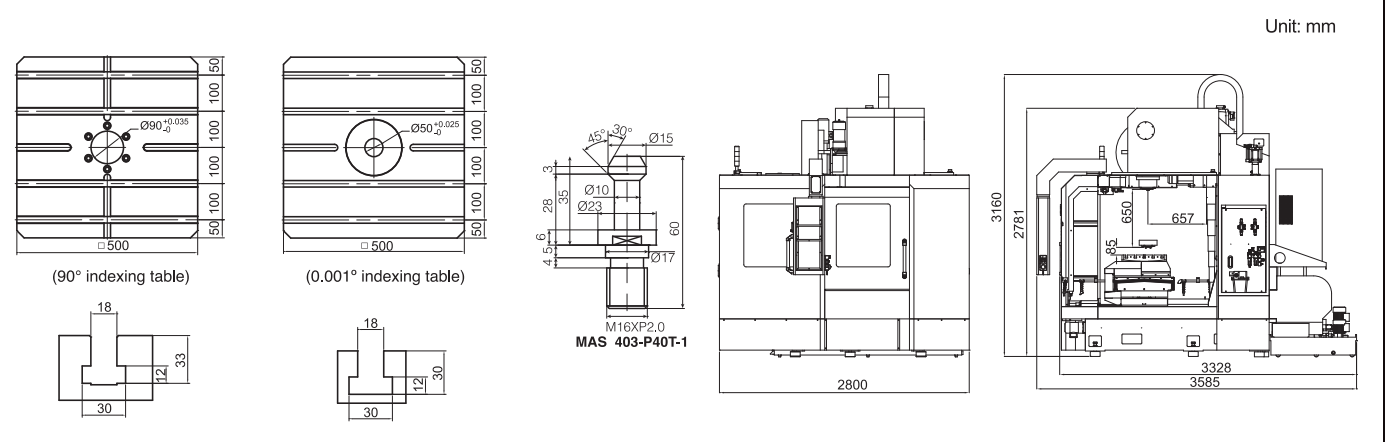
			Unit	AF5040			Unit	AF5040
Table size			mm	500 x 500				
C-axis table indexing angle			deg.	90° / 0.001° (OP)	X / Y / Z-axis	Mitsubishi	kw	3.5 / 3.5 / 7.0
Table load			kg	600	servo motor	Siemens		3.3 / 3.3 / 8.2
X-axis travel			mm	1150		Fanuc		4.5 / 4.5 / 9.0
Y-axis travel			mm	600	C-axis servo motor	Mitsubishi		3.5
Z-axis travel			mm	Vertical spindle 650 / Horizontal spindle 950	0.001° indexing	Siemens	kw	4.9
Vertical spindle nose to table surface			mm	85~735 / 30~680 (0.001° C-axis table)	table (OP)	Fanuc		4.5
Horizontal spindle nose to table edge			mm	30 ~ 300	X / Y / Z-axis rapid traverse		m/min	36 / 36 / 30
Horizontal spindle center to table surface			mm	85~535 / 30~480 (0.001° C-axis table)	Max. cutting feedrate		m/min	10
Spindle type				Built-in spindle	Tool magazine capacity		pcs	24
Spindle speeds		Mitsubishi		8000	Max. tool weight		kg	7
		Siemens	rpm	8000	Max. tool length		mm	300
		Fanuc		4000(Low) / 8000(High)(H / L-speeds)	Max. tool dia. (w/ adjacent tool)		mm	Ø80
Spindle power	½H / Cont.	Mitsubishi		29.3 / 24.5	Max. tool dia. (w/o adjacent tool)		mm	Ø120
	¼H / Cont.	Siemens		29.3 / 24.5	LED work light		pcs	2
		Fanuc	kw	15 / 11 (Low-speed winding)	Hydraulic oil tank		set	1 (2hp x 30L x 40 kg/cm²)
Spindle torque	½H / Cont.	Mitsubishi		107.6 / 90.2	Spindle oil cooler		set	1
	¼H / Cont.	Siemens	Nm	107.6 / 90.2	Screw type chip conveyor		set	2
		Fanuc		59.7 / 45.7 (Low-speed winding)	Tank volume		L	270
Spindle taper				BBT40	Power consumption		kva	45
					Net weight		kg	7800
					Floor space (L x W x H)		mm	2800 x 3585 x 3160

CONTROLLER SPECIFICATIONS

O: Standard OP: Optional

	Mitsubishi M80A	Siemens 828D	Fanuc Oi-MF		Mitsubishi M80A	Siemens 828D	Fanuc Oi-MF
Max. simultaneous axis	4	4	4	Multi-language display	O	O	O
Standard controlled axis	3	3	3	ABS servo motor	O	O	O
Program storage length	500kb	5MB	512kb	Tool length compensation	O	O	O
Workpiece coordinates	54	100	54	Tool radius compensation	O	O	O
Inclined surface machining	O	O	O	On-screen drafting	O	O	O
Max. variable number	700	300	600	High speed data server & ethernet	O	O	OP
Tool offset pairs	400	128 / 256	400	High speed & high accuracy machining control mode	G05 P20000	CYCLE832	G05.1 Q1
Conversational programming	NAVI	Program guide / ShopMill (OP)	Manual guide Oi	Interface	RS232 / RJ45	RJ45	RS232/RJ45
Monitor	10.4" TFT LCD			Memory card input / output	O	O	O
				USB input / output	O	O	O

MACHINE DIMENSIONS



※ The company reserves the right to modify the specifications / design, subject to change without further notice. Actual specifications, based on order content.

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