

High Speed Vertical Machining Centre

MF400 : Pallet size: 265 (mm)

Travel X / Y / Z: 680 / 610 / 510 (mm)

Max. ATC capacity:120

Pallet capacity: 40



Control: (F) FANUC (S) SIEMENS (M) MITSUBISHI (T) HEIDENHAIN

Technical Data		MF400C MF400U			
Spindle code		10C	12C	15C	20C*
Work range					
Table size (mm)		Ø320			
Travel	X / Y / Z (mm)	410 / 610 / 510 ⁽¹⁾			
	A (degree)	+30° ~ -120°			
	C (degree)	360° (Continuous)			
Max. swing (mm)		Ø400			
Table surface to spindle nose (mm)		20 ~ 530			
Spindle nose to tilting center (mm)		20 ~ 530			
Max. work piece size (mm)		Ø400 x 300			
Table load capacity (kg)		100 (11kg-m)			
Feed drive		5,760 / 5,760 / 10,472 (F) 6,283 / 6,283 / 15,708 (S) 6,283 / 11,781 / 11,781 (M) 6,283 / 6,283 / 11,519 (F) 9,267 / 11,310 / 16,965 (T)	5,760 / 5,760 / 10,472 (F) 6,283 / 6,283 / 15,708 (S) 6,283 / 11,781 / 11,781 (M) 6,283 / 6,283 / 11,519 (F) 9,267 / 11,310 / 16,965 (T)	6,283 / 6,283 / 11,519 (F) 6,283 / 6,283 / 15,708 (S) 6,283 / 6,283 / 11,519 (F) 9,267 / 11,310 / 16,965 (T)	
Feed force	X / Y / Z (N)				
Rapid movement	X / Y / Z (m/min.)	36 / 36 / 24			
	A / C (min ⁻¹)	A=25 / C=25			
Acceleration X / Y / Z (m/s ²)		3 / 3 / 2 (F; M; T) 3 / 2 / 2 (S)			
Accuracy Positioning / Repeatability					
ISO 230-2		0.008 / 0.004			
JIS 6338 (300 mm)		±0.003 / ±0.002			
VDI3441		0.008 / 0.004			
Main spindle					
Spindle taper		BBT40			

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Control: (F) FANUC (S) SIEMENS (M) MITSUBISHI (T) HEIDENHAIN

Technical Data		MF400C MF400U			
Spindle code		10C	12C	15C	20C*
Tool changer		Random			
Tool selection		Random			
Magazine positions		30 (std.) 48 / 60 / 120 (opt.)			
Max. tool diameter (mm)		76.2			
w/o adjacent tool (mm)		125			
Max. tool length (mm)		280			
Max. tool weight (kg)		7			
CTC time – ISO 10791-9 (sec.)		5 (F;M;T) 5.2 (S)			
Coolant system					
Coolant tank capacity (Liter)		300			
Pump capacity ⁽³⁾					
- Nozzle coolant		75L / min., 3 bar			
- Wash down		75L / min., 3 bar			
Machine size					
Height (mm)		3,070		3,140	
Floor space W x D (mm)		30 / 48ATC		2,020 x 2,820	
		60ATC		2,020 x 3,160	
Weight (kg)		7,300 (30ATC) 7,600 (48ATC) 7,800 (60ATC) 8,800 (120ATC)			
Connections					
Main power		220V / 60Hz or 400V / 50Hz			
Power consumption (KVA)		24 (F) 21 (S;M) 28 (F;T)	24 (F) 21 (S;M) 28 (F;T)	32.5 (F) 31(S) 34 (F) 32 (T)	31 (F) 32 (F)

Note: ⁽¹⁾Option 120 ATC Z axis travel 550 ⁽²⁾Option 120 ATC Z axis travel 620 ⁽³⁾At 60Hz* Only for FANUC control

● Standard ○ = Option × = N/A

Standard / Option accessories	MF400C /MF400U				MF500C /MF500U				MF630C /MF630U			
Spindle code	10C	12C	15C	20C	10C	12C	15C	20C	10C	12C	15C	20C
■ SIEMENS 828D (5 Faces)	○/×	○/×	○/×	×	○/×	○/×	○/×	×	○/×	○/×	○/×	×
■ QUASER mill i (5 Faces)	○/×	○/×	○/×	○/×	○/×	○/×	○/×	○/×	○/×	○/×	○/×	○/×
■ MITSUBISHI M830 (5 Faces)	○/×	○/×	×	×	○/×	○/×	×	×	○/×	○/×	×	×
■ FANUC 31iB5 (5 Axes) ⁽¹⁾	×/○	×/○	×/○	×/○	×/○	×/○	×/○	×/○	×/○	×/○	×/○	×/○
■ SIEMENS 840D (5 Axes)	×/○	×/○	×/○	×	×/○	×/○	×/○	×	×/○	×/○	×/○	×
■ HEIDENHAIN TNC640 (5 Axes)	×/○	×/○	×/○	×	×/○	×/○	×/○	×	×/○	×/○	×/○	×
■ ECO chiller	●	×	×	×	●	×	×	×	●	×	×	×
■ Spindle oil chiller	○	●	●	●	○	●	●	●	○	●	●	●
■ 10,000 min ¹ SC-4.1 coupling spindle	●/●	×	×	×	●/●	×	×	×	●/●	×	×	×
■ 12,000 min ¹ SC-4.1 coupling spindle	×	●/●	×	×	×	●/●	×	×	×	●/●	×	×
■ 15,000 min ¹ GC-4.0R ² or MC-4.1R coupling spindle	×	×	●/●	×	×	×	●/●	×	×	×	●/●	×
■ 20,000 min ¹ MC-4.0R coupling spindle	×	×	×	●/●	×	×	×	●/●	×	×	×	●/●
■ 30 position tool magazine	●	●	●	●	●	●	●	●	●	●	●	●
■ 48 / 60 / 120 position tool magazine	○	○	○	○	○	○	○	○	○	○	○	○
■ Pull stud for BT tooling system	○	○	○	○	○	○	○	○	○	○	○	○
■ Balance tooling for spindle warm up	○	○	●	●	○	○	●	●	○	○	●	●
■ ATC auto door	○	○	○	○	○	○	○	○	○	○	○	○
■ Work probe & position compensation	○	○	○	○	○	○	○	○	○	○	○	○
■ Tool length / breakage measurement (Laser)	○	○	○	○	○	○	○	○	○	○	○	○
■ X / Y / Z linear scale & C rotary encoder	○	○	○	○	○	○	○	○	○	○	○	○
■ Rotary encoder on A axes	○	○	○	○	○	○	○	○	○	○	○	○
■ Transformer	○	○	○	○	○	○	○	○	○	○	○	○
■ Coolant system	●	●	●	●	●	●	●	●	●	●	●	●
■ Coolant through spindle	F	×	○	○	×	○	○	○	×	×	○	○
	S	×	○	○	×	○	○	×	×	○	○	×
	M	×	○	×	×	○	×	×	×	○	×	×
	T	×	○	○	×	○	○	×	×	○	○	×
■ Coolant wash gun	●	●	●	●	●	●	●	●	●	●	●	●
■ Coolant wash down	●	●	●	●	●	●	●	●	●	●	●	●
■ External chip conveyor	○	○	○	○	○	○	○	○	○	○	○	○
■ Internal chip augers	●	●	●	●	●	●	●	●	●	●	●	●
■ Cutter air blast	●	●	●	●	●	●	●	●	●	●	●	●
■ Oil-mist collector	○	○	○	○	○	○	○	○	○	○	○	○
■ Bag filtration	○	○	○	○	○	○	○	○	○	○	○	○
■ Filtration unit	○	○	○	○	○	○	○	○	○	○	○	○
■ Documentation ⁽³⁾	○	○	○	○	○	○	○	○	○	○	○	○
■ Work light	●	●	●	●	●	●	●	●	●	●	●	●
■ Machine status light	●	●	●	●	●	●	●	●	●	●	●	●
■ CE	○	○	○	○	○	○	○	○	○	○	○	○

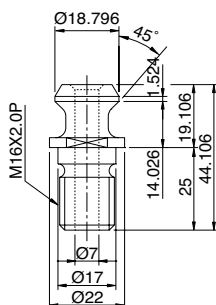
Note: ⁽¹⁾ The application process of 5-axis controller is complicated and the lead time is longer than 6 months.

⁽²⁾ The GC-4.0R expect upgrade as GC-4.1R from Q3.2017 shipment . ⁽³⁾ By CD-ROM version.

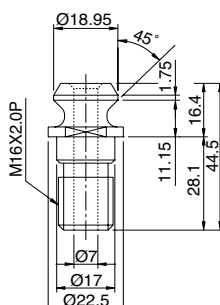
- Machine specification might be different from the catalogue if there is any specification update.
- It is necessary to install cabinet heat exchanger if ambient temperature is higher than 35°C.
- The standard specification for MF series is 10C + ECO

Pull stud and applicable tools:

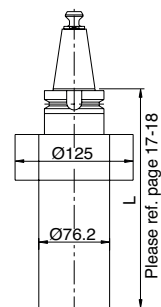
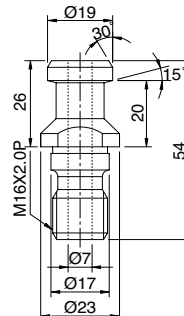
BT40



ISO (7388-B)

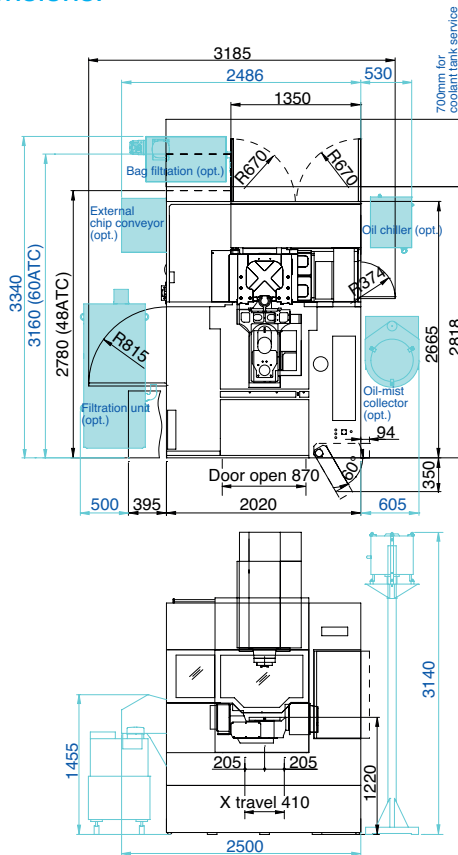


DIN (69872-A)

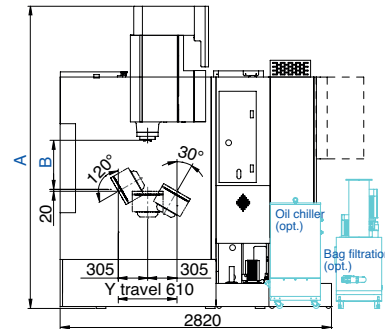


Installation dimensions:

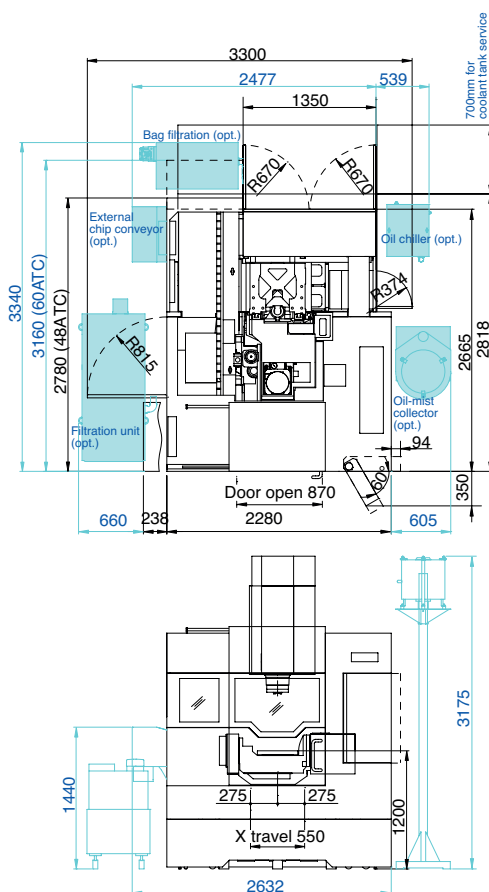
MF400



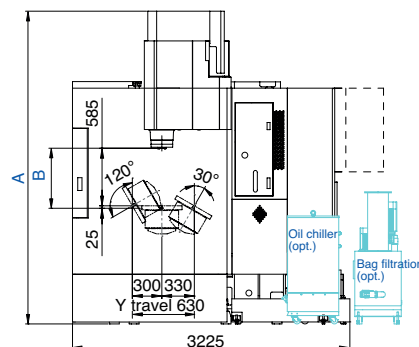
ATC	A	B
30 ~ 60	3140	510
120	3180	550



MF500

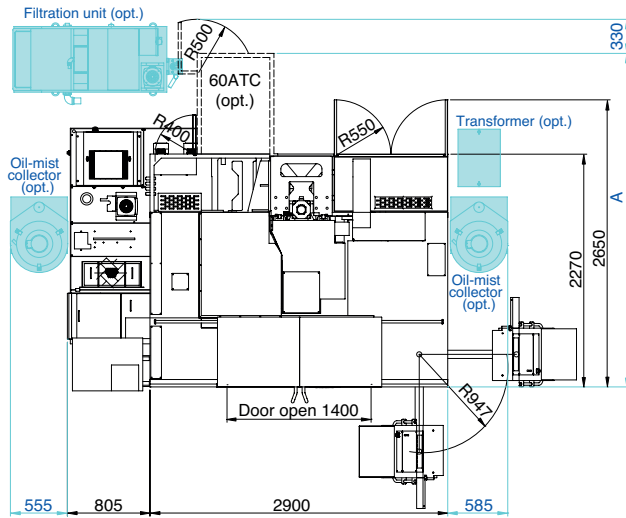


ATC	A	B
30 ~ 60	3175	610
120	3185	620



Installation dimensions:

MF630



A	30ATC	2,530
	48ATC	2,870
	60ATC	3,250

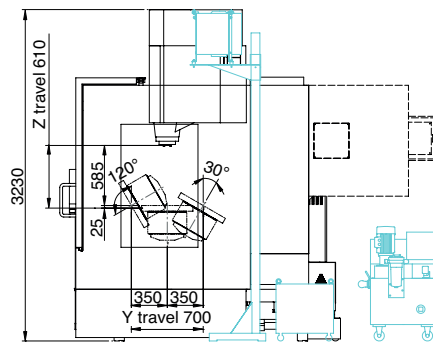
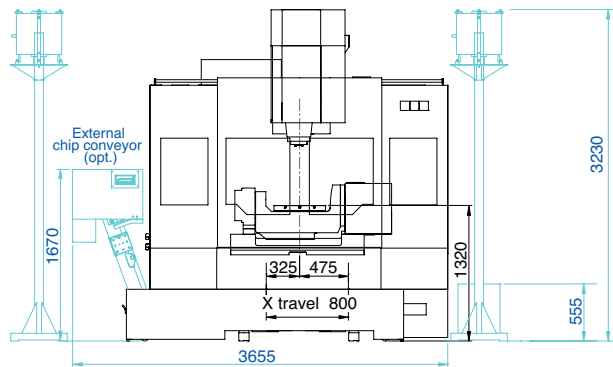
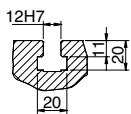
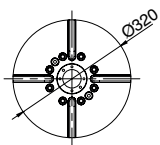
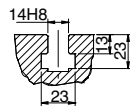
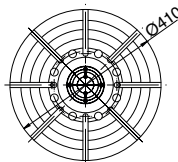


Table dimensions:

MF400



MF500



MF630

