

**High Speed Vertical Machining Centre**

- |                               |                               |
|-------------------------------|-------------------------------|
| MF 400: Basic M/C: MF400U / C | MF 500: Basic M/C: MF500U / C |
| » 120 position tool magazine  | » 120 position tool magazine  |
| » 40 pallet storage           | » 28 pallet storage           |
| » Pallet loader               | » Pallet loader               |



Available NC: (F) FANUC 0iMD & 31iB5 (S) SIEMENS 828D & 840D (T) HEIDENHAIN TNC640

Technical Data		MF400C Cell MF400U Cell		
Spindle code		10C <sup>(2)</sup>	12C	15C
Work range				
Table size (mm)		□ 265		
Travel X / Y / Z (mm)		680 / 610 / 510		
A / C (degree)		+30° ~ -120° / 360° (Continuous)		
Max. swing (mm)		Ø300		
Table surface to spindle nose (mm)		-20 ~ 490		
Spindle nose to tilting center		20 ~ 530		
Max. work piece size (mm)		Ø300 x 300		
Table load capacity (kg)		100 (11 kg-m)		
Feed drive				
Feed force X / Y / Z (N)		5,760 / 5,760 / 10,472 (F) 6,283 / 6,283 / 15,708 (S) 9,267 / 11,310 / 16,965 (T)		6,283 / 6,283 / 11,519 (F) 6,283 / 6,283 / 15,708 (S) 9,267 / 11,310 / 16,965 (T)
Rapid movement X / Y / Z (m/min)		36 / 36 / 24		
A / C (min <sup>-1</sup> )		A=25 / C=25		
Acceleration X / Y / Z (m/s <sup>2</sup> )		3 / 3 / 2 (F; T) 3 / 2 / 2 (S)		
Dia. & pitch of the ball screw		Ø45 / P=12 / 12 / 12 (F) Ø45 / P=12 / 12 / 8 (S; T)		
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		
Max. spindle speed		10,000	12,000	15,000
Spindle bass speed		F / S / T 1,350* / 1,500 / 1,500	1,350* / 1,500 / 1,500	1,400* / 2,000 / 2,000
Spindle output (kW) (S6-25%)		F / S / T 15* / 13.3 / 17	15* / 13.3 / 17	26* / 27.7 / 27.7
Spindle torque (Nm) (S6-25%)		F / S / T 106* / 85 / 108	106* / 85 / 108	177* / 132 / 132
Spindle transmission		Coupling		
Spindle bearing diameter (mm)		Ø70		

Continued »

Available NC: (F) FANUC 0iMD &amp; 31iB5(S) SIEMENS 828D &amp; 840D(T) HEIDENHAIN TNC640

Technical Data	MF400C Cell	MF400U Cell
Spindle code	10C <sup>(2)</sup>	12C 15C
Tool changer	Fixed magazine, pot Random	
Tool selection		
Magazine positions	120 (std.)	
Max. tool diameter / w/o adjacent tool (mm)	76.2 / 125	
Max. tool length (mm)	280	
Max. tool weight (kg)	7	
CTC time – ISO 10791-9 (sec.) <sup>(1)</sup>	5 (F) 4.5 (S) 5 (T)	
Pallet changer (For Cell only)		
Number of pallet	40	
Method of pallet storage	Tower, Fixed position	
Coolant system		
Coolant tank capacity (Liter)	300	
Pump capacity <sup>(1)</sup>		
- Nozzle coolant	75L / min., 3 bar	
- Wash down	75L / min., 3 bar	
Machine size		
Height (mm)	3,200	
Floor space W x D (mm)	120ATC+40APC	6,100 x 4,655
Weight (kg)	20,000	
Connections		
Main power	220V / 60Hz or 400V / 50Hz	
Power consumption (KVA)	36 (F) 34 (S) 39 (F) 40 (T)	45 (F) 41 (S) 46 (F) 44 (T)

Note: \*(S3-25%)<sup>(1)</sup> At 60Hz<sup>(2)</sup> The std. for MF series is 10C + ECO

- Machine specification might be different from the catalogue if there is any specification update.

X = N/A

Standard / Option accessories		MF400C Cell / MF400U Cell		
		10C	12C	15C
■ Spindle code		10C	12C	15C
■ SIEMENS828D (5 Faces)		○ / ✕	○ / ✕	○ / ✕
■ QUASER mill i (5 Faces)		○ / ✕	○ / ✕	○ / ✕
■ FANUC31iB5 (5 AXES)		✕ / ○	✕ / ○	✕ / ○
■ SIEMENS840D (5 AXES)		✕ / ○	✕ / ○	✕ / ○
■ HEDENHAIN TNC640 (5 AXES)		✕ / ○	✕ / ○	✕ / ○
■ ECO chiller		●	✕	✕
■ Spindle oil chiller		○	●	●
■ 10,000 min <sup>-1</sup> SC-4.1 coupling spindle		● / ●	✕	✕
■ 12,000 min <sup>-1</sup> SC-4.1 coupling spindle		✕	● / ●	✕
■ 15,000 min <sup>-1</sup> GC-4.0R coupling spindle		✕	✕	● / ●
■ Dual magazine, 120 position tool magazine		●	●	●
■ Pull stud for BT tooling system		○	○	○
■ Balance tooling for spindle warm up		○	○	●
■ ATC auto door		●	●	●
■ Cell + Pallet tower (w 40 pallets)		●	●	●
■ Pallet ID - read only		●	●	●
■ Wash station		○	○	○
■ Work probe & position compensation		○	○	○
■ Laser tool measuring system		○	○	○
■ X / Y / Z linear scale & C rotary encoder		○	○	○
■ Rotary encoder on A axis		○	○	○
■ Transformer		○	○	○
■ Coolant through spindle	F	✕	○	○
	S	✕	○	○
	T	✕	○	○
■ Coolant wash gun		●	●	●
■ Coolant wash down		●	●	●
■ External chip conveyor		○	○	○
■ Internal chip augers		●	●	●
■ Cutter air blast		●	●	●
■ Mist collector		○	○	○
■ Documentation*		○	○	○
■ Work light		●	●	●
■ Machine status light		●	●	●
■ CE		○	○	○

Note: \* By CD-ROM version.

- Machine specification might be different from the catalogue if there is any specification update.
- For ambient temperature greater than 35°C, the cabinet heat exchanger is required.
- The std. spec. for MF series is 10C + ECO

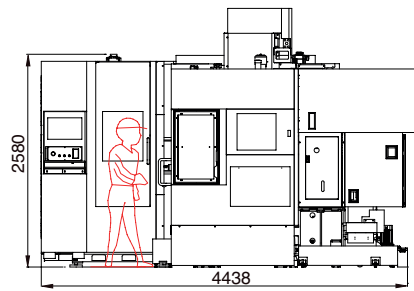
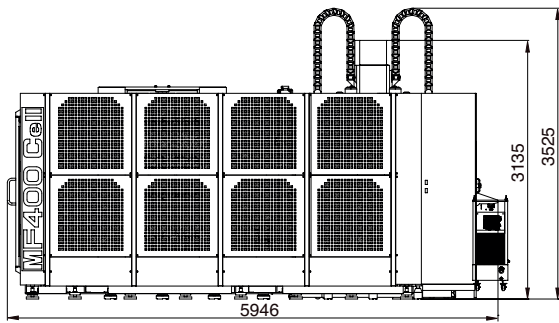
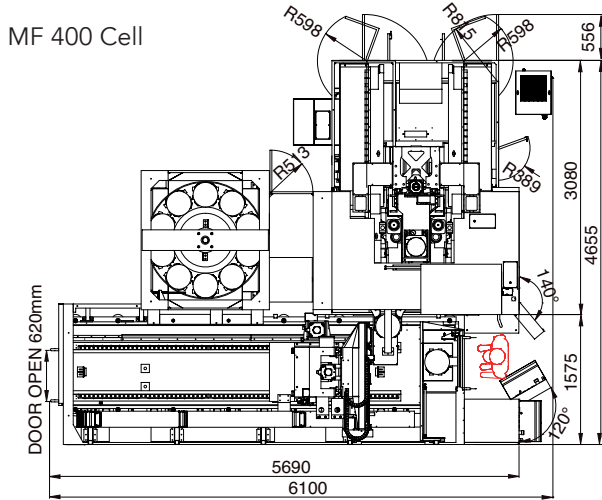
● = Standard ○ = Option × = N/A

Standard / Option accessories		MF500C Cell / MF500U Cell		
		10C	12C	15C
■ Spindle code				
■ SIEMENS828D (5 Faces)		○ / ×	○ / ×	○ / ×
■ QUASERmill i (5 Faces)		○ / ×	○ / ×	○ / ×
■ FANUC31iB5(5 AXES)		× / ○	× / ○	× / ○
■ SIEMENS840D (5 AXES)		× / ○	× / ○	× / ○
■ HEIDENHAIN TNC640 (5 AXES)		× / ○	× / ○	× / ○
■ ECO chiller		●	×	×
■ Spindle oil chiller		○	●	●
■ 10,000 min <sup>-1</sup> SC-4.1 coupling spindle		● / ●	×	×
■ 12,000 min <sup>-1</sup> SC-4.1 coupling spindle		×	● / ●	×
■ 15,000 min <sup>-1</sup> GC-4.0R coupling spindle		×	×	● / ●
■ Dual magazine, 120 position tool magazine		●	●	●
■ Pull stud for BT tooling system		○	○	○
■ Balance tooling for spindle warm up		○	○	●
■ ATC auto door		●	●	●
■ Cell +Pallet tower (w 28 pallets)		●	●	●
■ Pallet ID - read only		●	●	●
■ Wash station		○	○	○
■ Work probe & position compensation		○	○	○
■ Laser tool measuring system		○	○	○
■ X / Y / Z linear scale & C rotary encoder		○	○	○
■ Rotary encoder on A axis		○	○	○
■ Transformer		○	○	○
■ Coolant through spindle	F	×	○	○
	S	×	○	○
	T	×	○	○
■ Coolant wash gun		●	●	●
■ Coolant wash down		●	●	●
■ External chip conveyor		○	○	○
■ Internal chip augers		●	●	●
■ Cutter air blast		●	●	●
■ Mist collector		○	○	○
■ Documentation*		○	○	○
■ Work light		●	●	●
■ Machine status light		●	●	●
■ CE		○	○	○

Note: \* By CD-ROM version.

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- For ambient temperature greater than 35°C, the cabinet heat exchanger is required.
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Installation dimensions:

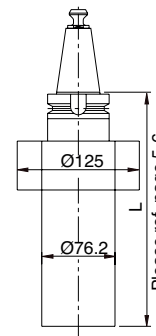
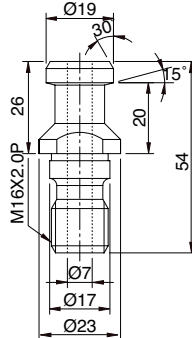
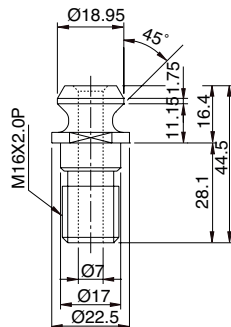
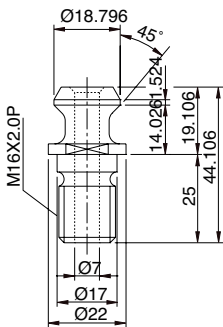


Pull stud and applicable tools:

BT40

ISO (7388-B)

DIN (69872-A)



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Installation dimensions:

MF500 Cell

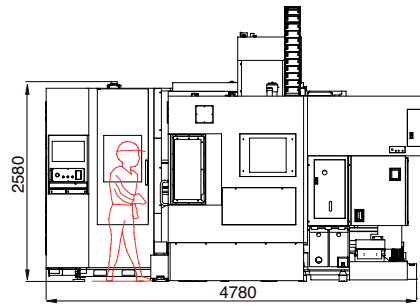
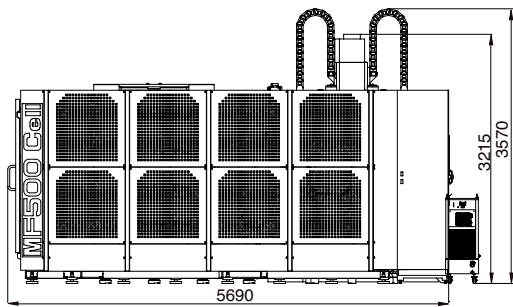
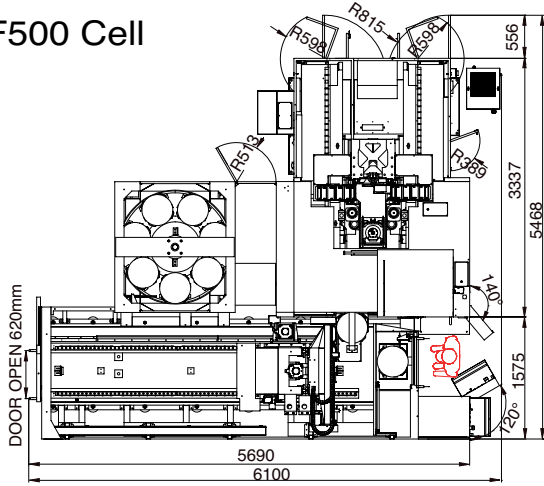
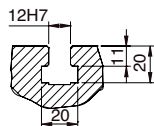
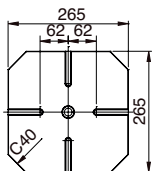


Table dimensions:

MF400 Cell



MF500 Cell

