

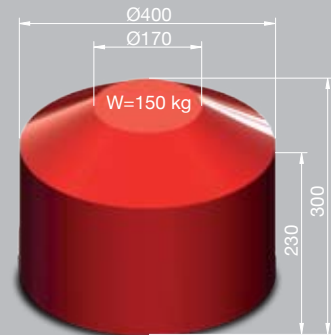
QUASER

we cut faster

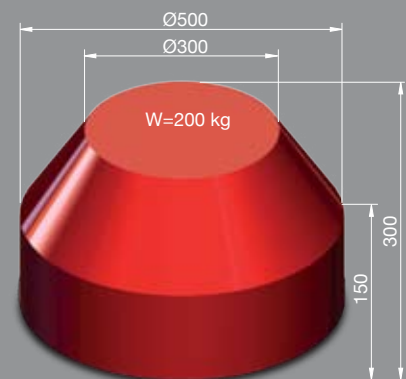
MF SERIES

01 - 02	<i>Workpiece size & Machine structure</i>
03 - 04	<i>Cutting area and interference</i>
05 - 06	<i>Application sample</i>
07	<i>Unique spindle technology</i>
08	<i>Two axes table (4/5 axis)</i>
09 - 10	<i>ATC system</i>
11 - 12	<i>Easy operation</i>
13 - 14	<i>Coolant & chip management</i>
15 - 16	<i>Technical data</i>
17	<i>Standard / Option accessories</i>
18 - 20	<i>Layout</i>
21 - 22	<i>We build machines in a hybrid way</i>

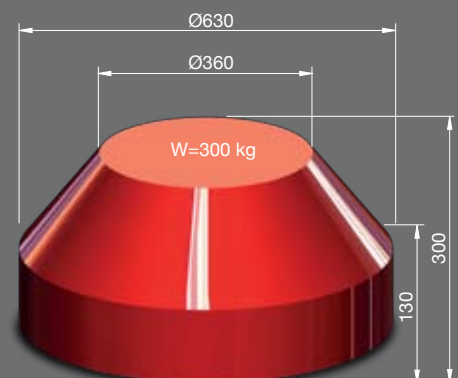
MF400C



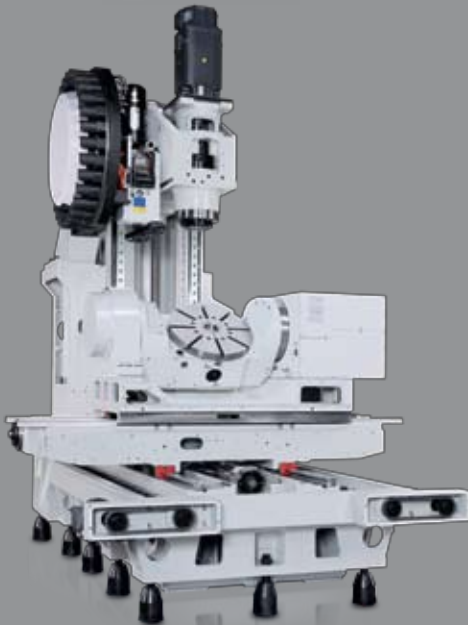
MF500C



MF630C

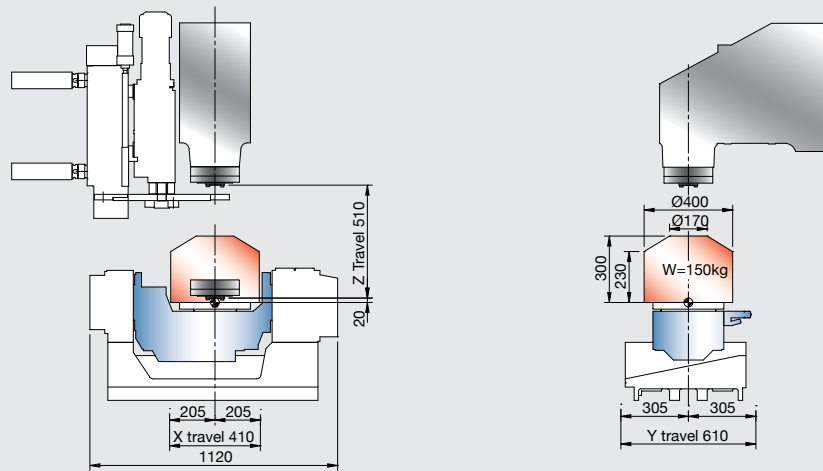


Machine structure

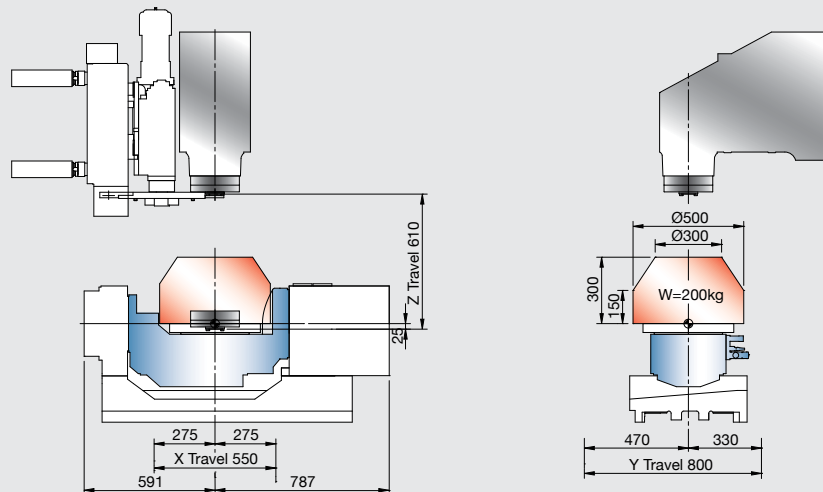


Cutting area and interference

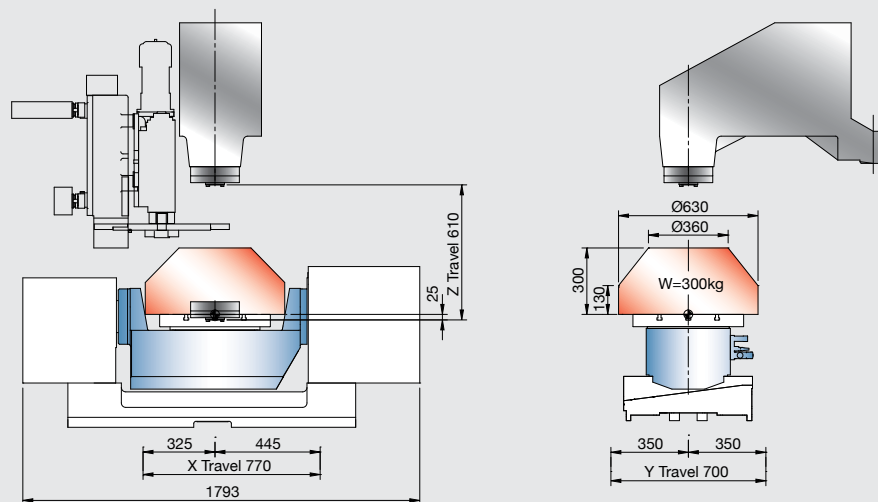
MF400C

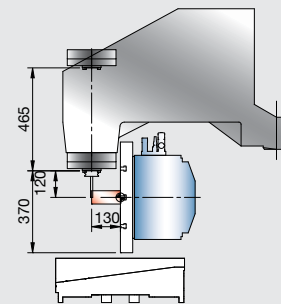
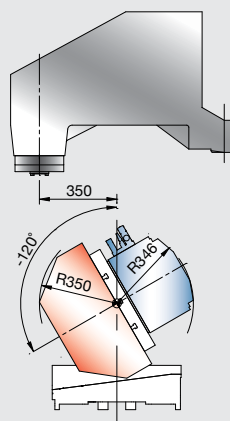
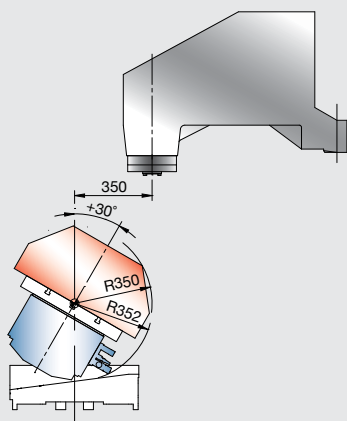
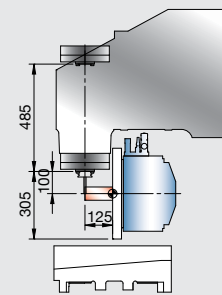
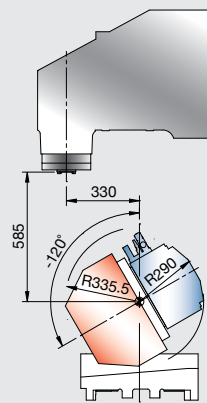
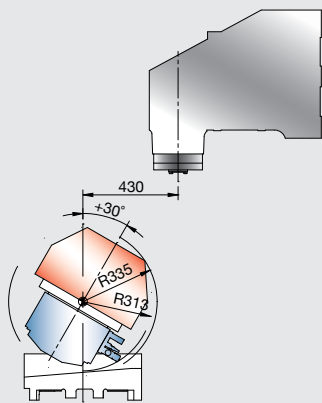
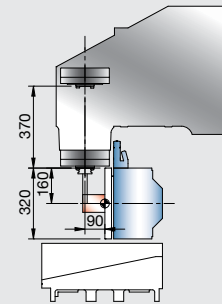
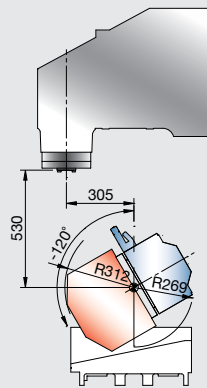
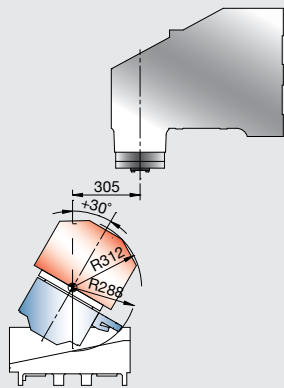


MF500C



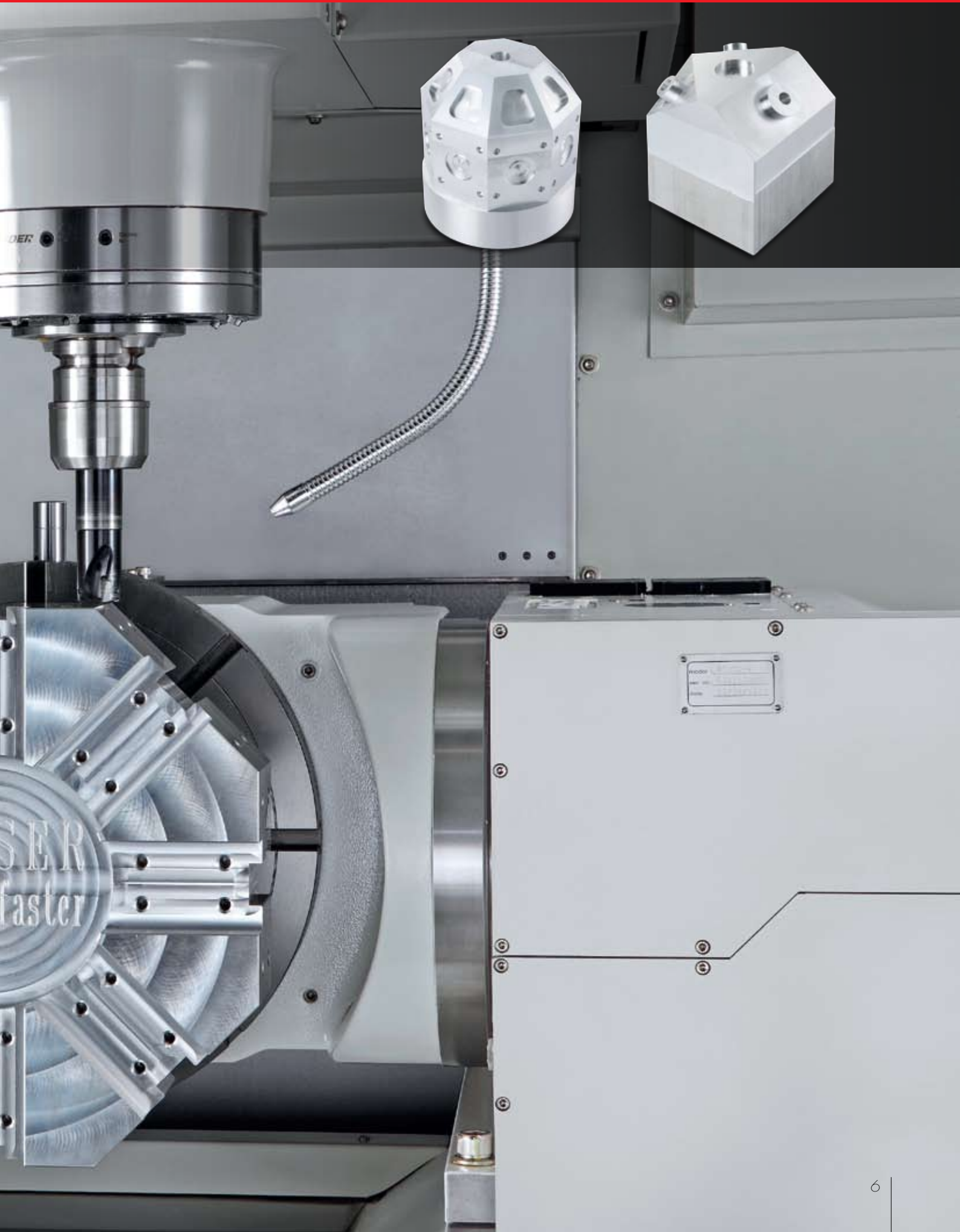
MF630C





Application sample



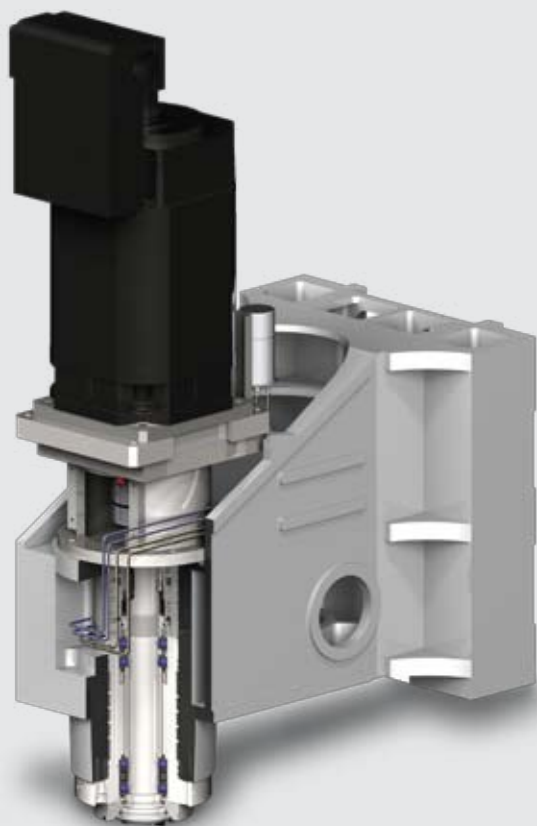


Unique spindle technology



Transmission: Coupling

- Speed range:
9,000 & 10,000 & 12,000 min⁻¹
- Lubrication:
Grease packed system
- 4 ball bearing



Transmission: Coupling

- Speed range:
15,000 min⁻¹
- Lubrication:
Re-grease system
- 4 ceramic ball bearing

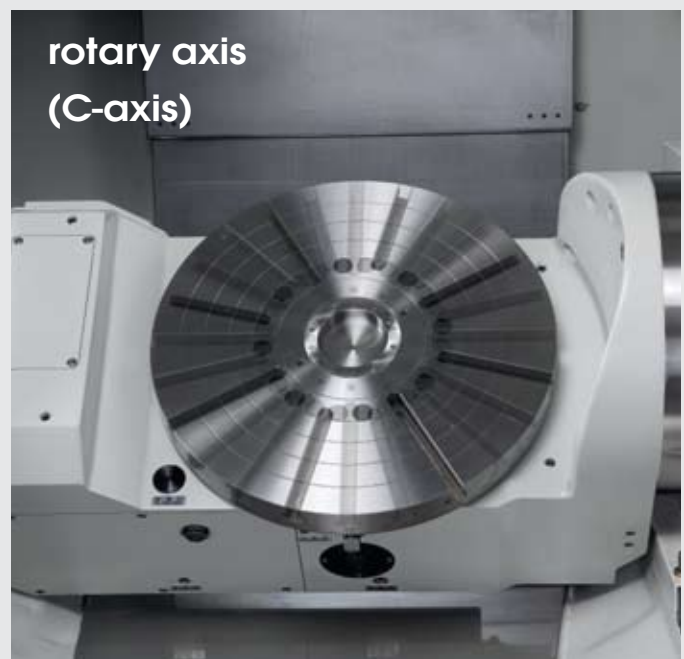
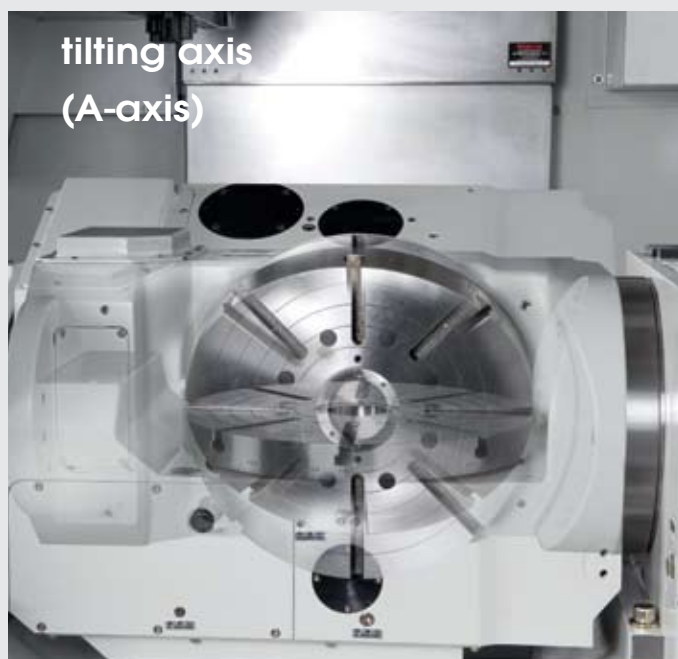
Two axes table (4/5 axis)

Torque transfer efficiency
The matching parts of alloy steel and aluminum bronze reduce friction co-efficiency.
This provides greater transmission efficiency than of other materials.

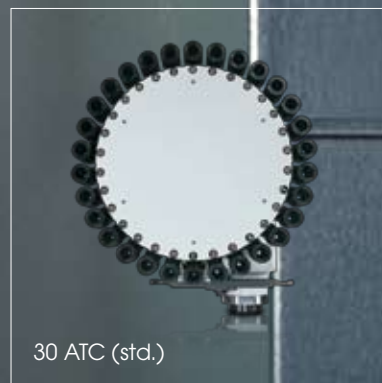
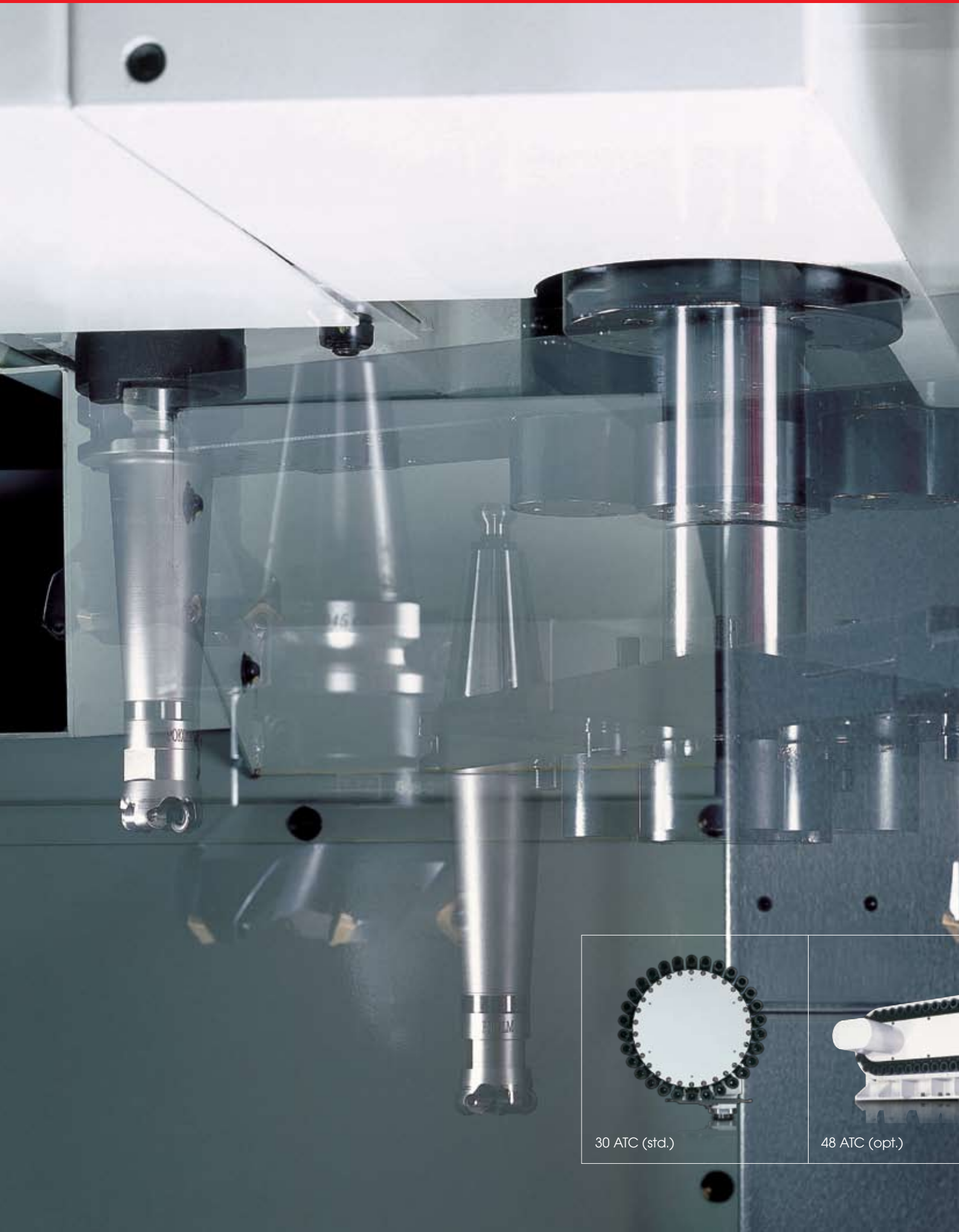


Work envelope	MF400C		MF500C		MF630C	
	Rotary Axis (C-axis)	Tilting Axis (A-axis)	Rotary Axis (C-axis)	Tilting Axis (A-axis)	Rotary Axis (C-axis)	Tilting Axis (A-axis)
Max. swing (mm)	Ø400		Ø500		Ø630	
Table load capacity (kg)	150 (12.2kg.m)		200 (19kg.m)		300 (30kg.m)	
Maximum R.P.M (min ⁻¹)	25	25	16.6	11.1	16.6	11.1
Indexing accuracy (sec.)	20 (12)	20 (12)	20 (12)	20 (12)	20 (12)	20 (12)
Repeatability (sec.)	10 (4)	10 (5)	10 (4)	10 (5)	12 (5)	12 (8)
Clamping torque (Nm)	686	1,372	1156.4	1156.4	2,450	2,450

Note: () with absolute rotary encoder



ATC system



30 ATC (std.)



48 ATC (opt.)



60 ATC (opt.)



ATC auto door (opt.)

Easy operation

- a** From center of table to operator door
 - MF400C: 607 mm
 - MF500C: 735 mm
 - MF630C: 543 mm
- b** Max. size when operator door open
 - MF400C: 870 mm
 - MF500C: 855 mm
 - MF630C: 1,400 mm
- c** Documentation & hand tool shelf
- d** Swivel type operation panel
- e** Hand held remote MPG





Coolant system & Chip management

- a** Coolant tank
 - MF400C / MF500C / MF630C: 300 / 350 / 600 Liter
 - Nozzle coolant: 3.5 bar
 - Wash down: 3.5 bar
- b** Chip conveyor (opt.)
- c** Dual augers
- d** Wash gun





Technical Data		MF400C			
		9C	10C	12C	15C
Work range					
Table size (mm)		Ø320			
Travel	X / Y / Z (mm)	410 / 610 / 510			
	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 at 90°		20 ~ 530			
Max. work piece size (mm)		Ø400 x 300			
Table load capacity (kg)		150 (12.2 kg-m)			
Feed drive					
Feed force	X / Y / Z (N)	6,283/6,283/12,566(S)	5,760/5,760/10,472(F)	5,760/5,760/10,472(F)	6,283 / 6,283 / 11,519(F)
			6,283/11,781/11,781(M)	6,283/6,283/12,566(S)	6,283/11,781/11,781(M)
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) 4 / 3 / 2 (S)			
Dia. & pitch of the ball screw		Ø45 / P=12 / 12 / 12 (F:M) Ø45 / P=12 / 12 / 8 (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			
Max. spindle speed		9,000	10,000	12,000	15,000
Spindle base speed	F / S / M	- / 1,500 / -	1,350 / - / 1,500	1,350 / 1,500 / 1,500	1,400 / 2,000 / -
Spindle output kW (S6-40%)	F / S / M	- / 10.5 / -	15 ⁽¹⁾ / - / 11 ⁽²⁾	15 ⁽¹⁾ / 10.5 / 11 ⁽²⁾	22 / 21.9 / -
Spindle torque Nm (S6-40%)	F / S / M	- / 68 / -	106 ⁽¹⁾ / - / 70 ⁽²⁾	106 ⁽¹⁾ / 68 / 70 ⁽²⁾	150 / 105 / -
Spindle transmission		Coupling			
Spindle diameter (mm)		Ø70			
Tool changer					
Tool selection		Random			
Magazine positions		30 (std.) 48 / 60 (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) 4.5 (S) 4.8 (M)			
Coolant system					
Coolant tank capacity (Liter)		300			
Pump capacity		60L / min., 3.5 bar			
- Nozzle coolant		60L / min., 3.5 bar			
- Wash down		60L / min., 3.5 bar			
Machine size					
Height (mm)		3,070			
Floor space W x D (mm)	30 / 48ATC	2,500 x 2,820			
	60ATC	2,500 x 3,160			
Weight (kg)		7,300(30ATC) 7,600(48ATC) 7,800(60ATC)			
Connections					
Main power		220V / 60Hz or 400V / 50Hz			
Power consumption (KVA)		21(F) 21(S) 23(M)			

Note: ⁽¹⁾ (S3-25%) ⁽²⁾ (30 min.)

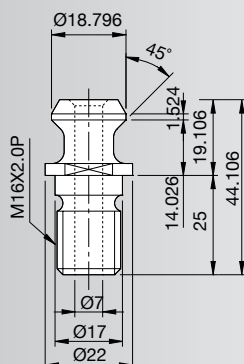
MF500C				MF630C		
9C	10C	12C	15C	10C	12C	15C
Ø410				Ø500		
550 / 800 / 610				770 / 700 / 610		
+30° ~ -120°				+30° ~ -120°		
360° (Continuous)				360° (Continuous)		
Ø500				Ø630		
-25 ~ 585				-25 ~ 585		
-25 ~ 585				-25 ~ 585		
Ø500 x 300				Ø630 x 300		
200 (19 kg-m)				300 (30 kg-m)		
6,283/14,137/12,566(S)	5,760/10,472/10,472(F) 6,283 / 11,781 / 11,781(M)	5,760/10,472/10,472(F) 6,283/14,137/12,566(S) 6,283 / 11,781 / 11,781(M)	6,283/6,283/11,519(F) 6,283/14,137/21,206(S)	11,519/11,519/17,279 (F) 11,519/11,519/17,279(M)	11,519/11,519/17,279(F) 14,137/14,137/21,206(S) 11,519/11,519/17,279(M)	11,519/11,519/17,279(F) 14,137/14,137/21,206(S)
36 / 36 / 24				32 / 32 / 16		
A=11.1 / C=16.6				A=11.1 / C=16.6		
3 / 3 / 2 (F; M) 4 / 3 / 2 (S)				3 / 3 / 2		
Ø45 / P = 12 / 12 / 12 (F; M) Ø45 / P=12 / 12 / 8 (S)				Ø45 / P = 12 / 12 / 8		
0.008 / 0.004						
±0.003 / ±0.002						
0.008 / 0.004						
BBT40						
9,000	10,000	12,000	15,000	10,000	12,000	15,000
- / 1,500 / -	1,350 / - / 1,500	1,350 / 1,500 / 1,500	1,400 / 2,000 / -	1,350 / - / 1,500	1,350 / 2,000 / 1,500	1,400 / 2,000 / -
- / 10.5 / -	15 ⁽¹⁾ / - / 11 ⁽²⁾	15 ⁽¹⁾ / 10.5 / 11 ⁽²⁾	22 / 21.9 / -	15 ⁽¹⁾ / - / 15 ⁽²⁾	15 ⁽¹⁾ / 21.9 / 18.5 ⁽²⁾	22 / 21.9 / -
- / 68 / -	106 ⁽¹⁾ / - / 70 ⁽²⁾	106 ⁽¹⁾ / 68 / 70 ⁽²⁾	150 / 105 / -	106 ⁽¹⁾ / - / 96 ⁽²⁾	106 ⁽¹⁾ / 105 / 96 ⁽²⁾	150 / 105 / -
Coupling						
Ø70						
Random						
30 (std.) 48 / 60 (opt.)				30 (std.) 48 / 60 (opt.)		
76.2				76.2		
125				125		
280				280		
7				7		
5 (F) 4.5 (S) 4.8 (M)				7		
350				600		
60L / min., 3.5 bar				60L / min., 3.5 bar		
60L / min., 3.5 bar				60L / min., 3.5 bar		
3,105				3,230		
2,640 x 3,225				3,705 x 2,530 (30ATC) 3,705 x 2,870 (48ATC)		
2,640 x 3,460				3,705 x 3,250		
7,750(30ATC) 8,050(48ATC) 8,250(60ATC)				8,750(30ATC) 9,050(48ATC) 9,250(60ATC)		
220V / 60Hz or 400V / 50Hz						
21 (F;M) 22 (S)				27 (F) 29 (S) 22.5 (M)		

Standard / Option accessories	MF400C				MF500C				MF630C			
	9C	10C	12C	15C	9C	10C	12C	15C	10C	12C	15C	
■ SIEMENS 828D (5 Faces)	●	✕	○	○	●	✕	○	○	●	○	○	
■ QUASER mill i (5 Faces)	✕	●	○	○	✕	●	○	○	●	○	○	
■ MITSUBISHI M720 (5 Faces)	✕	●	○	✕	✕	●	○	✕	●	○	✕	
■ ECO chiller	○	●	✕	✕	○	●	✕	✕	●	✕	✕	
■ Spindle oil chiller	○	○	●	●	○	○	●	●	○	●	●	
■ 9,000 min ⁻¹ NC40 coupling spindle	●	✕	✕	✕	●	✕	✕	✕	✕	✕	✕	
■ 10,000 min ⁻¹ NC40 coupling spindle	✕	●	✕	✕	✕	●	✕	✕	●	✕	✕	
■ 12,000 min ⁻¹ NC40 coupling spindle	✕	✕	●	✕	✕	✕	●	✕	✕	●	✕	
■ 15,000 min ⁻¹ NC40R coupling spindle	✕	✕	✕	●	✕	✕	✕	●	✕	✕	●	
■ 30 position tool magazine	●	●	●	●	●	●	●	●	●	●	●	
■ 48 / 60 position tool magazine	○	○	○	○	○	○	○	○	○	○	○	
■ Pull stud for BT tooling system	○	○	○	○	○	○	○	○	○	○	○	
■ Balance tooling for spindle warm up	○	○	○	●	○	○	○	●	○	○	●	
■ ATC auto door	○	○	○	○	○	○	○	○	○	○	○	
■ Work probe & position compensation	○	○	○	○	○	○	○	○	○	○	○	
■ Laser tool measuring system	○	○	○	○	○	○	○	○	○	○	○	
■ X / Y / Z linear scale & C rotary encoder	○	○	○	○	○	○	○	○	○	○	○	
■ Rotary encoder on A axes	○	○	○	○	○	○	○	○	○	○	○	
■ Coolant system	●	●	●	●	●	●	●	●	●	●	●	
■ Coolant through spindle	F	✕	✕	✕	○	✕	✕	✕	○	✕	✕	○
	S	✕	✕	○	○	✕	✕	○	○	✕	○	○
	M	✕	✕	○	✕	✕	✕	○	✕	✕	○	✕
■ Coolant wash gun	●	●	●	●	●	●	●	●	●	●	●	
■ Coolant wash down	●	●	●	●	●	●	●	●	●	●	●	
■ Chip conveyor	○	○	○	○	○	○	○	○	○	○	○	
■ Chip augers	●	●	●	●	●	●	●	●	●	●	●	
■ Cutter air blast	●	●	●	●	●	●	●	●	●	●	●	
■ Mist collector	○	○	○	○	○	○	○	○	○	○	○	
■ Documentation*	○	○	○	○	○	○	○	○	○	○	○	
■ Work light	●	●	●	●	●	●	●	●	●	●	●	
■ Machine status light	●	●	●	●	●	●	●	●	●	●	●	
■ CE	○	○	○	○	○	○	○	○	○	○	○	

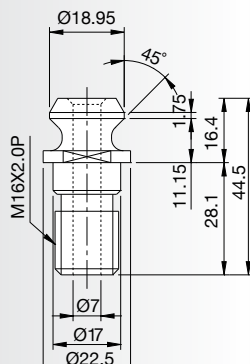
Note: * By CD-ROM version
 - Specifications are change without notice

Pull stud and applicable tools

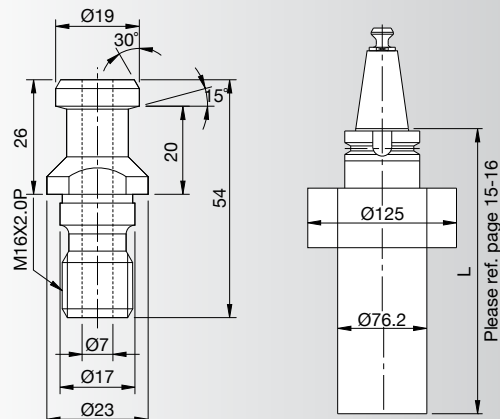
BT40 (QUASER SUPPLY)



ISO (7388-B)



DIN (69872-A)



Layout

Installation dimension

MF400C

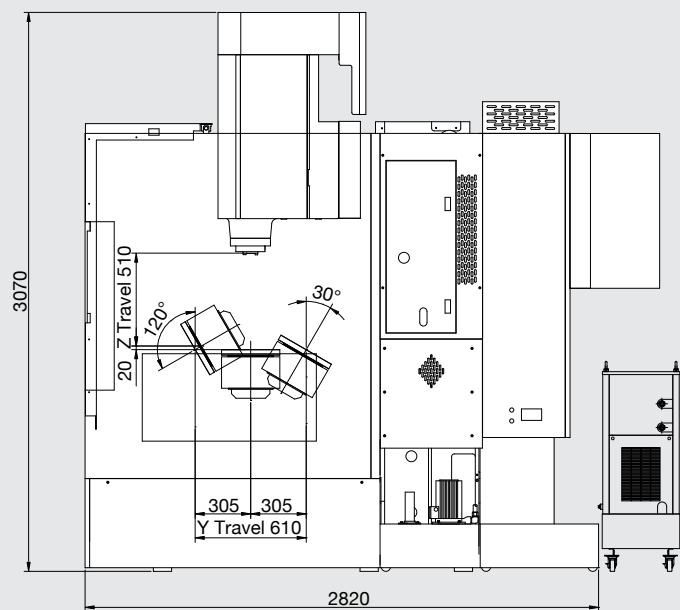
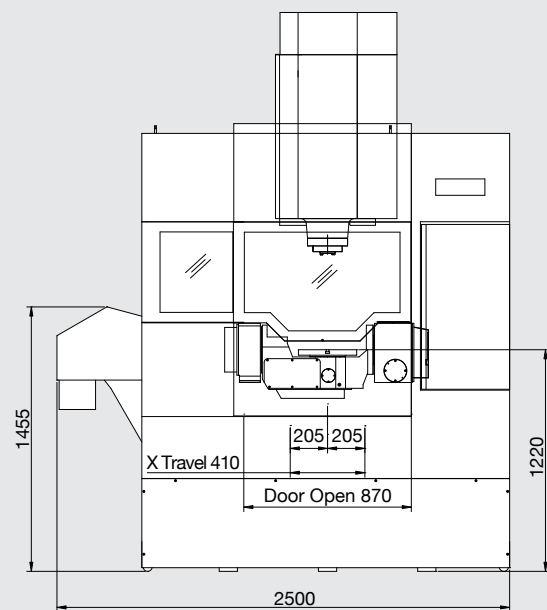
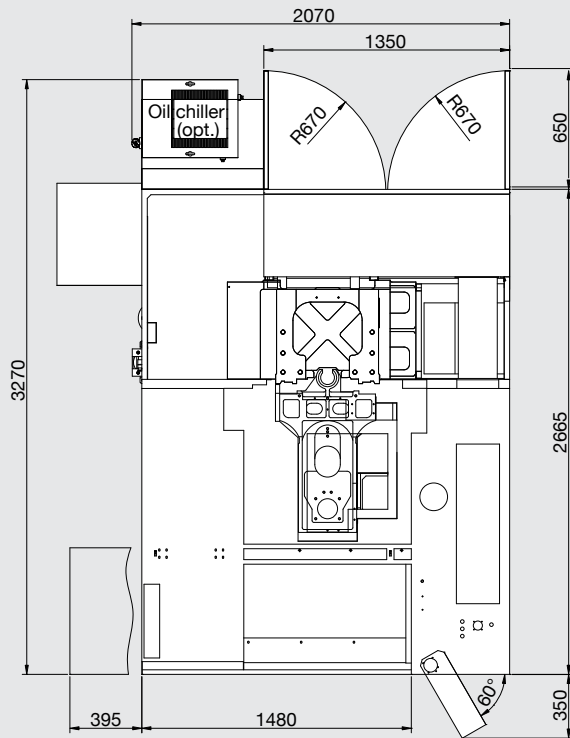
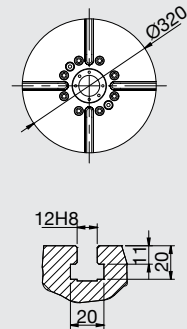


Table dimension



Layout

Installation dimension

MF500C

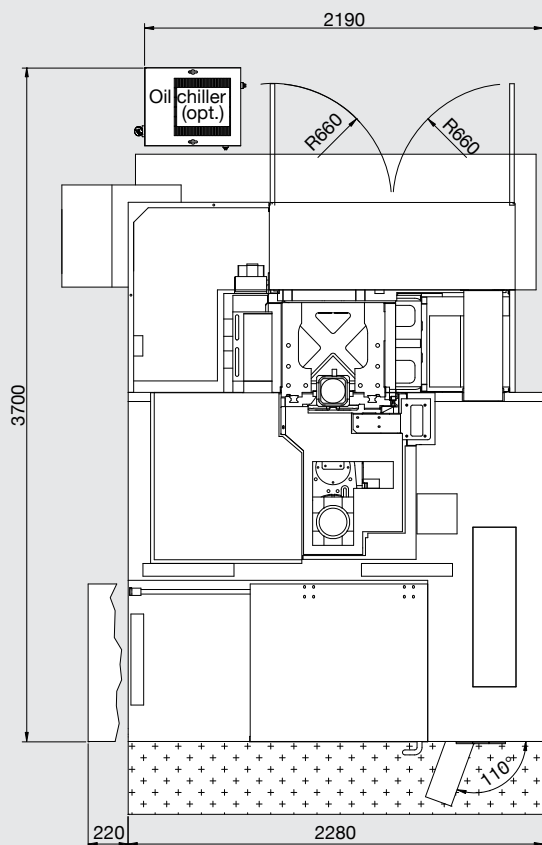
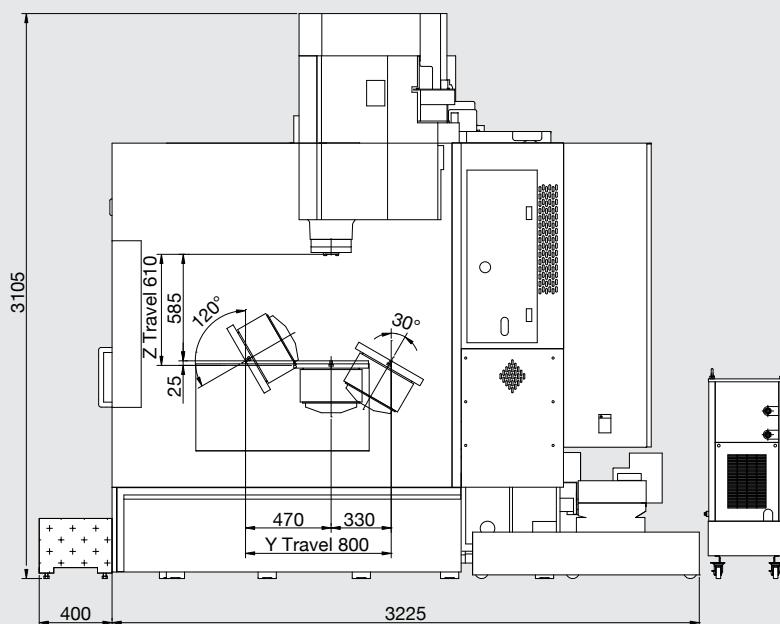
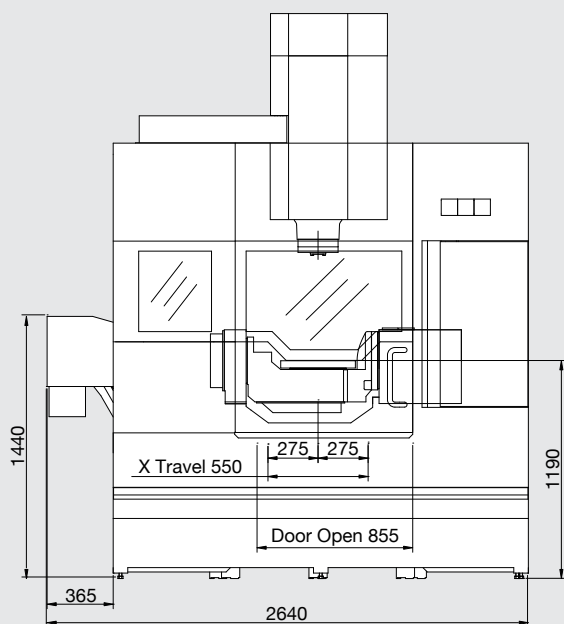
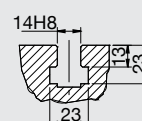
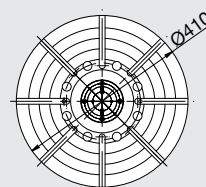


Table dimension

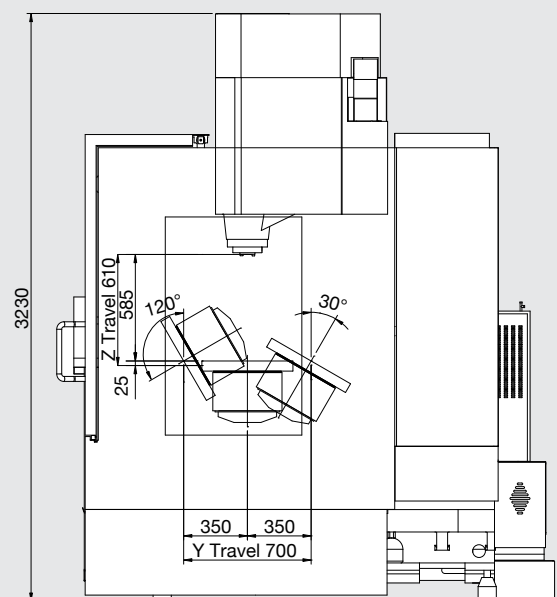
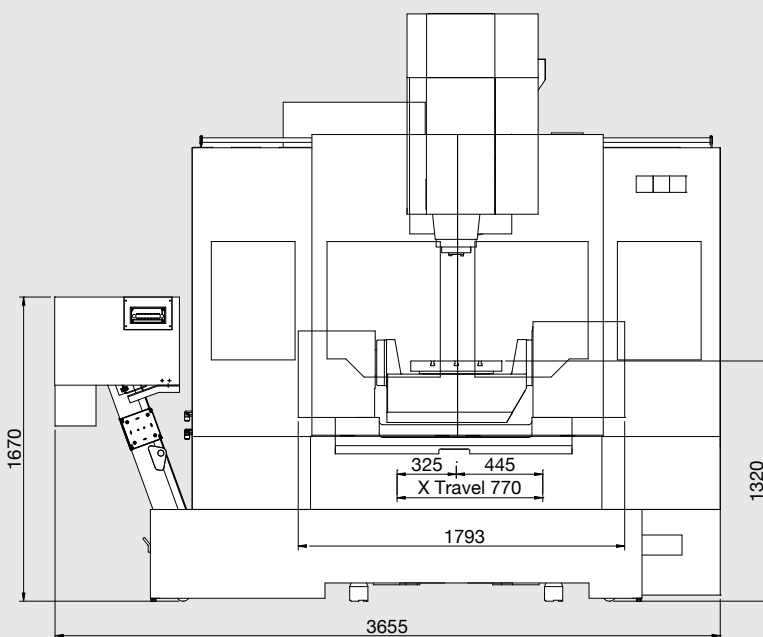
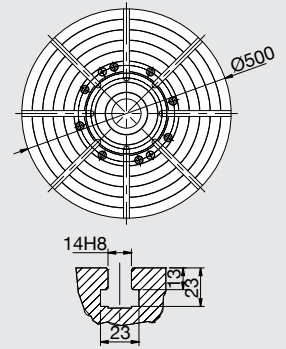
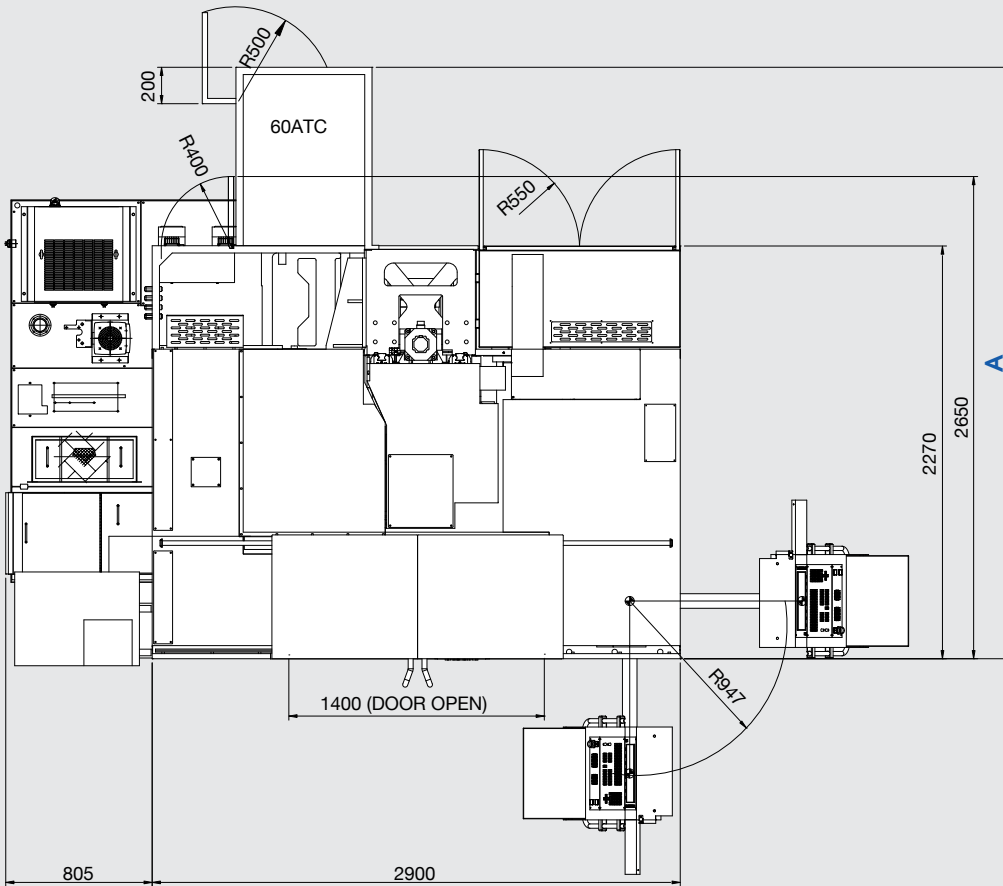


Installation dimension

MF630C

		40Taper	
A	30ATC	2,530	
	48ATC	2,870	
	60ATC	3,250	

Table dimension



We build machines in a hybrid way

Very classic craftsmanship combined with most advanced modern equipments in a clean environment

Address: No. 3, Gong 6th Rd., Youshih Industrial Park,
Dajia Township, Taichung County 437, Taiwan
Tel: +886 4 26821277
Fax: +886 4 26822045
E-mail: sales@qmt.com.tw



QUASER EUROPE TECHNIC CENTER - SWITZERLAND

Address: Unterlettenstrasse 16 Postfach
162 CH-9443 Widnau Switzerland
Tel: +41 71 722 43 43
Fax: +41 71 722 43 08
Mobile phone: +41798229029





www.quaser.com

Fold here for filing!

11070402/MaCHS-TEL 04-2473326