

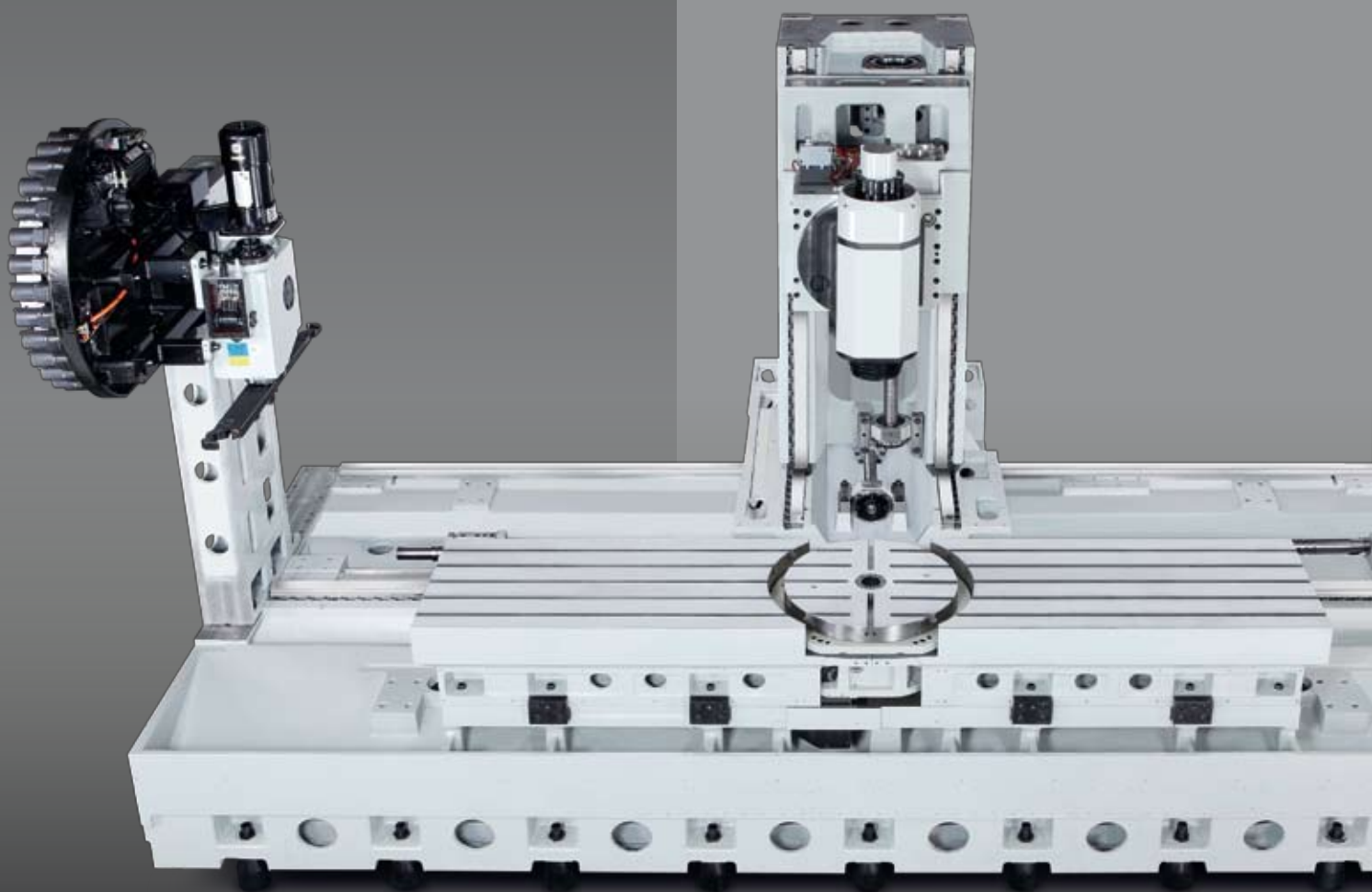
QUASER

we cut faster

MK5U SERIES

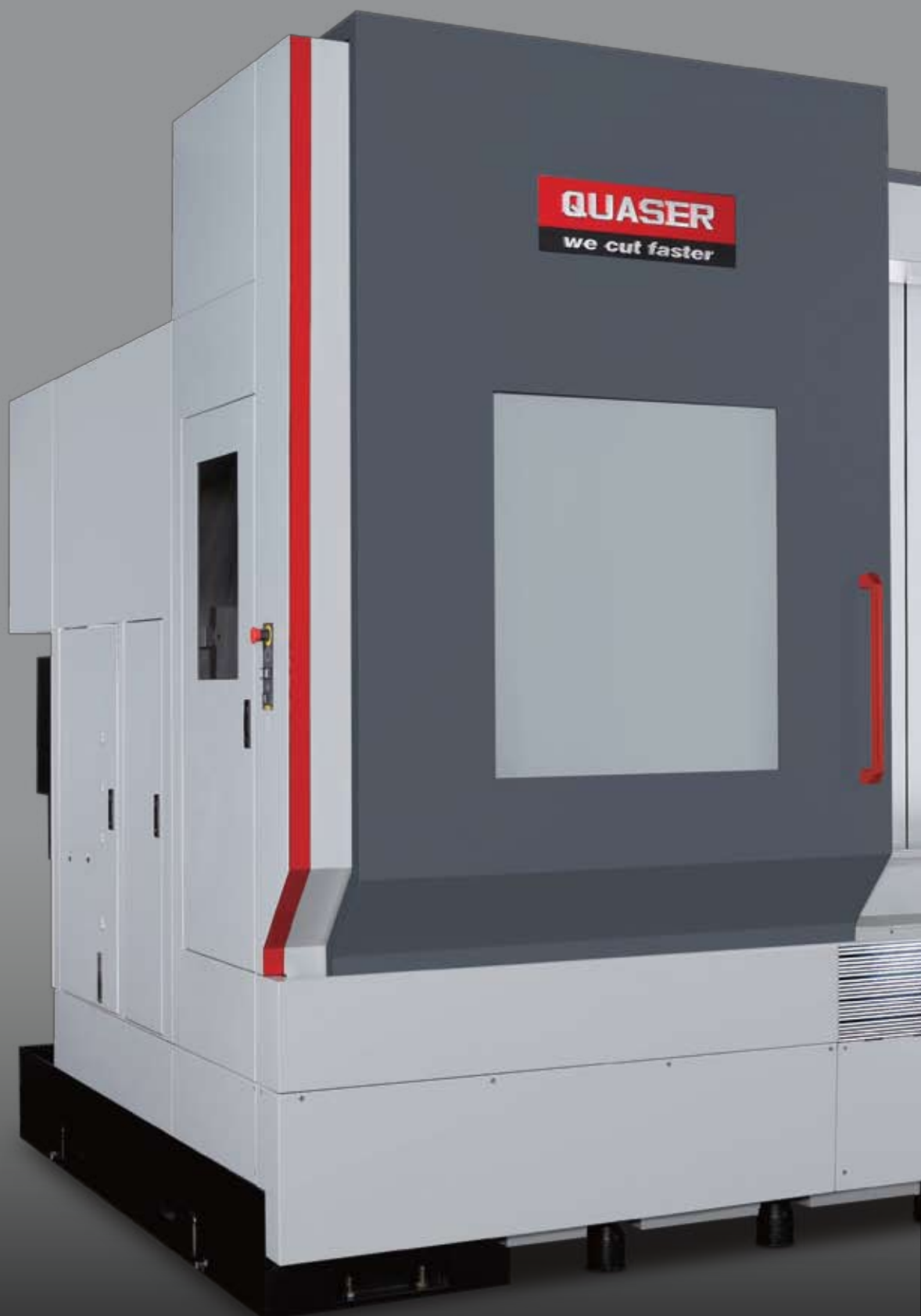
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Traveling Column Five Axes Machining



Center

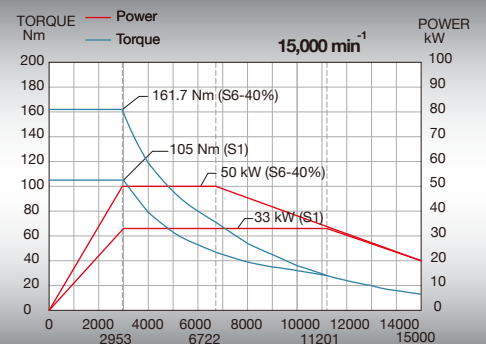
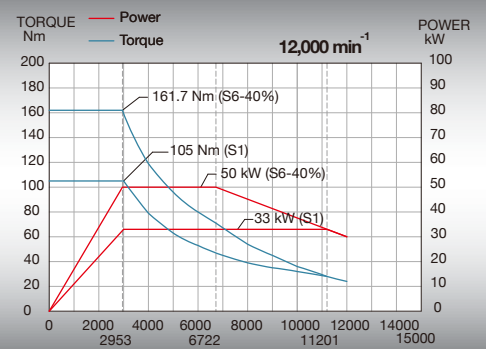


Spindle system



Motor spindle

- Spindle taper: BBT40
- Transmission: Build in
- Spindle speed: 12,000 / 15,000 min^{-1}
- Power / Torque: 50 (kW) / 161.7 (Nm)





Accuracy & B / C Axis

- ① Double ball bar measuring.
- ② Tilting accuracy (B) measuring.
- ③ Rotary table accuracy measuring.
- ④ Guide way straightness and parallel measuring.

MK5U	B - Axis
Max. swing (mm)	+110°~ -30°
Maximum R.P.M (min ⁻¹)	33.3
Indexing accuracy (sec.) w scale	10
Repeatability (sec.) w scale	5
Clamping torque (Nm)	2,500

MK5U	C - Axis
Table size (mm)	Ø550
Max. swing (mm)	Ø560 x H620
Table load capacity (kg)	600
Maximum R.P.M (min ⁻¹)	25
Indexing accuracy (sec.) w scale / without	10 / 20
Repeatability (sec.) w scale / without	5 / 10
Clamping torque (Nm)	3,500



ATC system

Left side magazine: 30 pockets (Std.) 48 / 60 pockets (Opt.)



Right side magazine: 40 pockets (Std.) 60 pockets (Opt.)



Coolant & chip management

Total solution on coolant & chip management:

- 1 Dual augers
- 2 Wash gun
- 3 Nozzle coolant
- 4 Coolant through spindle
- 5 Large capacity coolant tank & Lift up conveyor

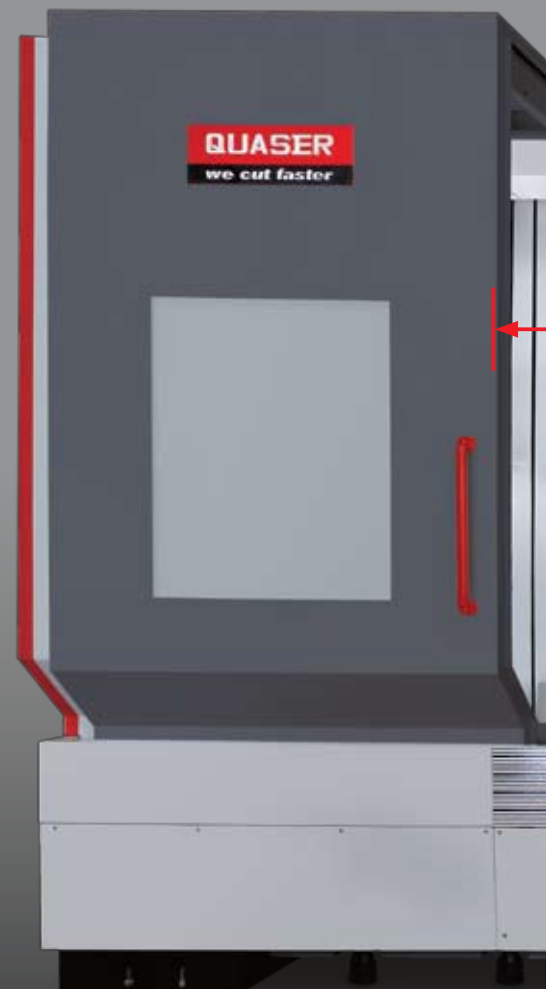


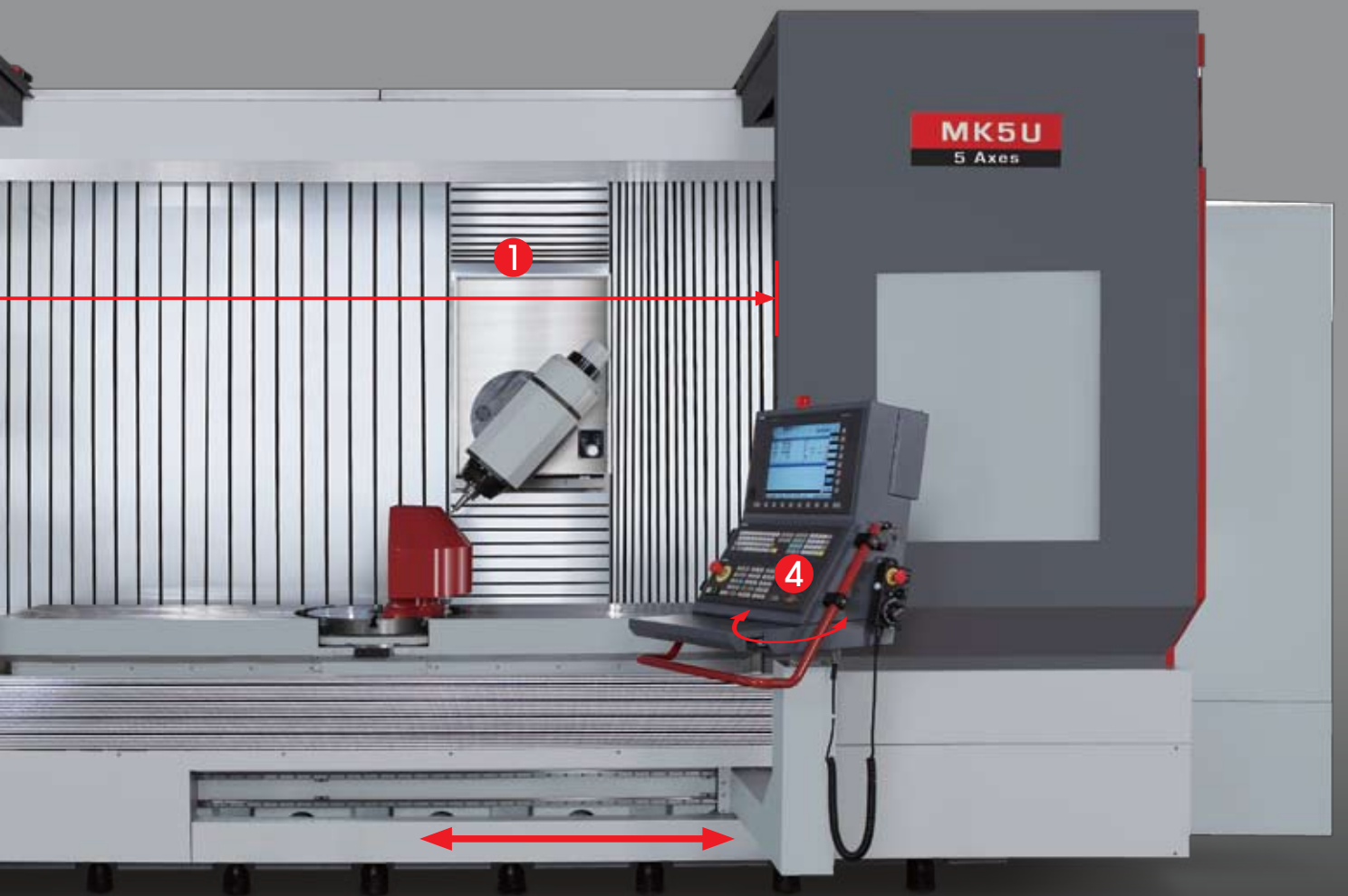


Easy operation



- 1 Max. operator door open: 2,760 mm.
- Easy loading of large workpiece.
- 2 Documentation & hand tool shelf.
- 3 Tool loading / unloading on magazine side.
- 4 Movable operator panel.
- Swivel type operation panel.
- 5 Spindle to front at a convenient: 251 mm(min.)
- Table front to operator: 251 mm.
- 6 From center of table to operator : 532 mm.





MK5U series

Technical data	MK5U	
	12K	15K
Work range		
Table size (mm)	2,800 x 560	
Rotary Table size (mm)	Ø550	
Travel	X (mm)	2,700
	Y (mm)	560
	Z (mm)	V=715 / H=850
	B (degree)	+110° ~ -30°
	C (degree)	360° (Continuous)
Max. work piece size (mm)	2,700 x 620 x 560	
Table surface to spindle nose (mm)	50~765	
Table surface to spindle center at 90° (mm)	200~1,050	
Max. swing (mm)	Ø560 x H620	
Table load capacity (kg)	2,000 (600 on Rotary table)	
Feed drive		
Feed force X / Y / Z (N)	14,660 / 14,137 / 25,132	
Rapid movement	X / Y / Z (m / min)	40 / 40 / 36
	B / C (min ⁻¹)	B=33 / C=25
Acceleration X / Y / Z (m/s ²)	3 / 5 / 4	
Dia. & pitch of the ball screw	Ø63 / Ø45 / Ø50 P = 30 / 16 / 12	
Accuracy Positioning / Repeatability		
ISO 230-2	0.008 / 0.004	
JIS 6338 (300 mm)	±0.003 / ±0.002	
VDI 3441	0.008 / 0.004	
Main spindle		
Spindle taper	ISO 40 / BBT 40	
Max. spindle speed	12,000	15,000
Spindle base speed	2,953	2,953
Spindle output kW (S6-40%)	50	50
Spindle torque Nm (S6-40%)	161.7	161.7
Spindle transmission	Motor	Motor
Spindle diameter (mm)	Ø70	Ø70
Tool changer		
Tool selection	Random	
Magazine positions	L:30 (std.) 48/60 (opt.); R:40 (std.) 60(opt.)	
Max. tool diameter (mm)	76.2	
w/o adjacent tool (mm)	125	
Max. tool length (mm)	300	
Max. tool weight (kg)	7	
CTC time -ISO 10791-9 (sec.)	7	
Coolant system		
Coolant tank capacity (Liter)	1,200	
Pump capacity *		
- Nozzle coolant	75 L / min., 3 bar	
- Through spindle coolant	25 L / min., 20 bar	
Machine size		
Height (mm)	3,090	
Floor space W x D (mm)	6,850 x 5,210	
Weight (kg)	23,000	
Connections		
Main power	220 V / 60 Hz or 400 V / 50 Hz	
Power consumption (KVA)	55 (S) 60 (T)	

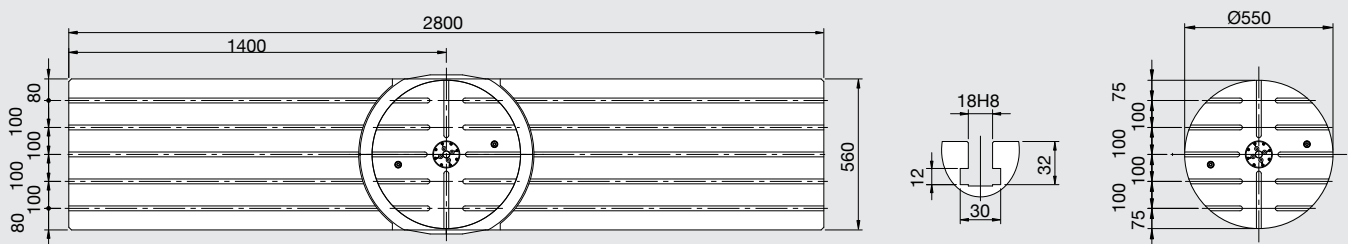
● = Standard ○ = Option × = N/A

Standard / Option accessories	MK5U	
	12K	15K
■ SIEMENS 840D	●	●
■ HEIDENHAIN iTNC530 (5 Axes) with Option2	○	○
■ Spindle oil chiller	●	●
■ 40 taper 12,000 min ⁻¹ motor spindle	●	×
■ 40 taper 15,000 min ⁻¹ motor spindle	×	●
■ 40 taper / L:30+R:40 position tool magazine	●	●
■ 40 taper / L:48+R:60 position tool magazine	○	○
■ 40 taper / L:60+R:60 position tool magazine	○	○
■ Pull stud for BT tooling system	●	●
■ X / Y / Z linear scale & C rotary encoder	○	○
■ Encoder on B axes (tilting head)	●	●
■ Thermal compensation	○	○
■ Coolant system	●	●
■ 20 bar through spindle coolant	●	●
■ 50 bar through spindle coolant	○	○
■ Coolant wash gun	●	●
■ Chip conveyor	●	●
■ Chip augers	●	●
■ Top guard	●	●
■ Work light	●	●
■ Machine status light	●	●
■ CE & EMC	●	●
■ Laser tool measuring system	○	○
■ Work probe	○	○
■ Pendular wall (Partition wall)	○	○

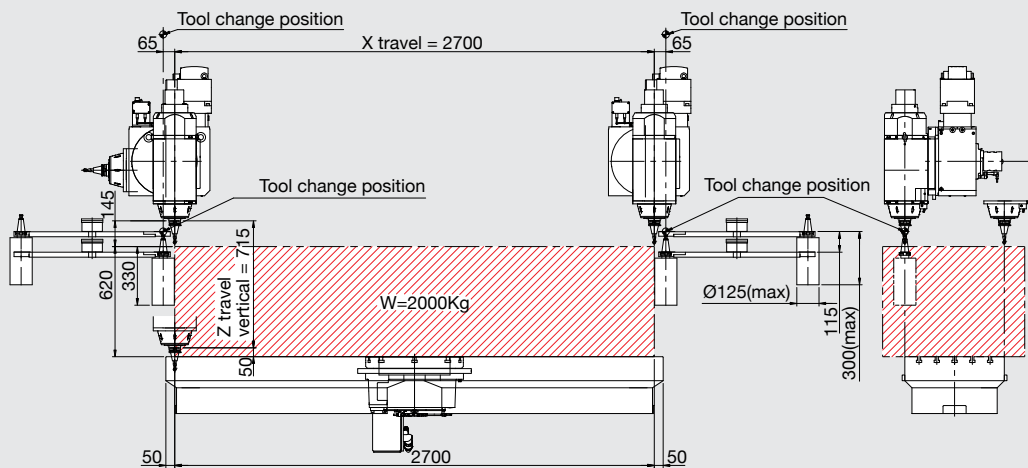
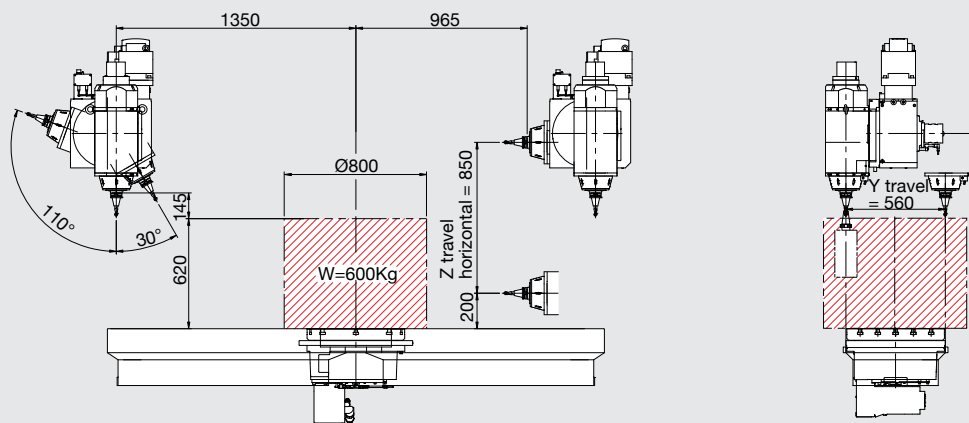
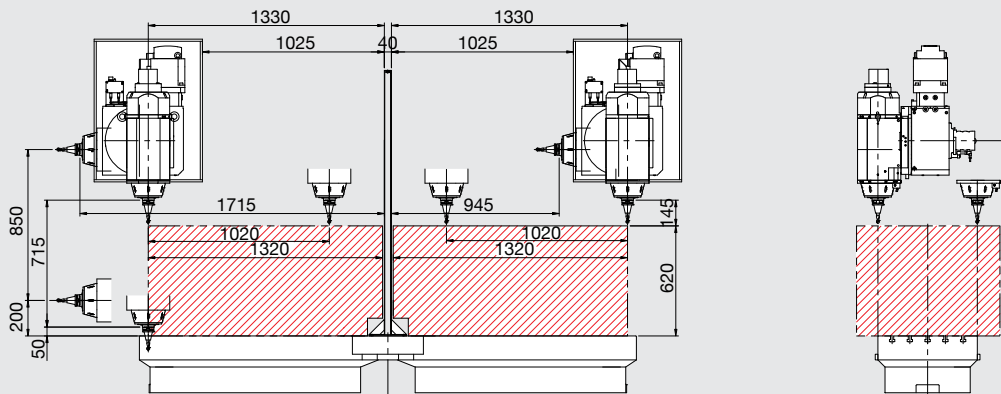
Note: *At 60 Hz

- Machine spec. might be different from the catalog if there is any spec. update.

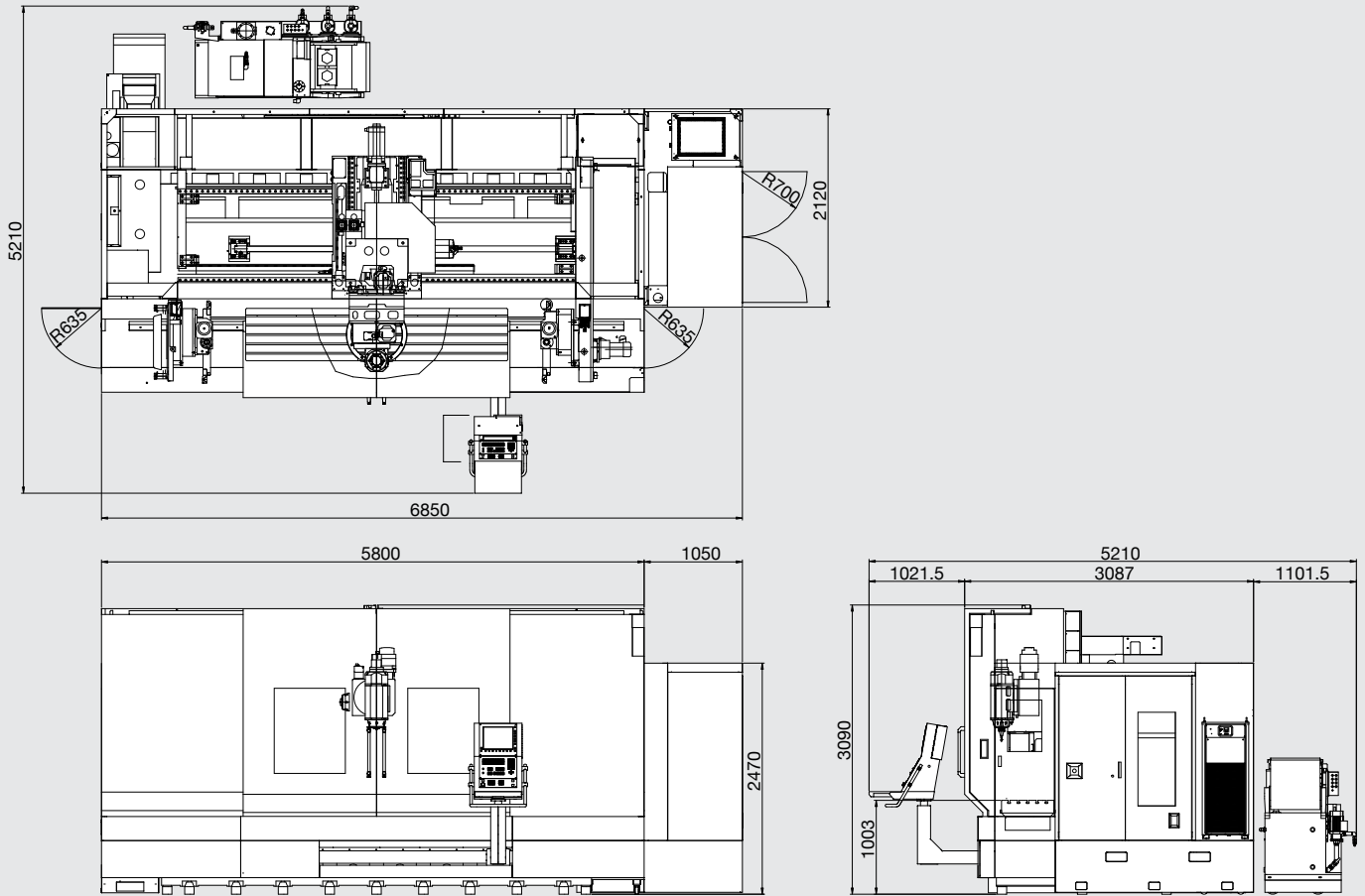
Table dimension



Cutting area interference

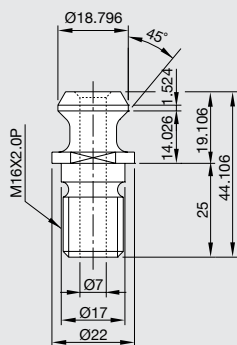


Machine dimension

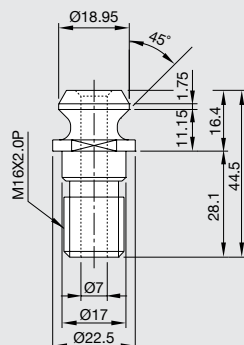


Pull stud and applicable tools

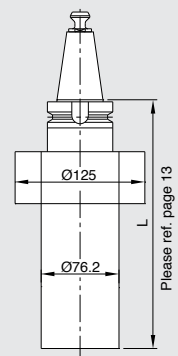
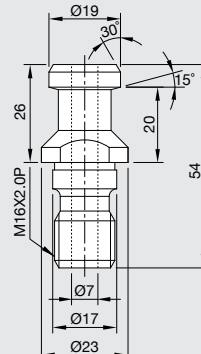
BT 40



ISO (7388-B)



DIN (69872-A)



We build machines in a hybrid way

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

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