

Horizontal Machining Centre



HX505 SERIES ISO 50

Technical Data	HX505				
	A / B				
Specification code	C	E	P		
Work range					
Pallet size (mm)	□ 500				
Max. work swing diameter (mm)	Ø800				
Max. work piece height	900				
Table load capacity (kg)	500				
Travel X / Y / Z (mm)	762 / 640 / 800				
B minimum indexing (degree)	1 / 0.001		1		
Table surface to spindle center (mm)	85 ~ 725				
Spindle nose to table center (mm)	115 ~ 915				
Surface configuration	24-M16@pitch100 mm grid				
Feed drive					
Feed force X / Y / Z (N)	6,911 / 12,566 / 6,911 (F) 7,539 / 12,566 / 7,539 (S)		11,519 / 11,519 / 11,519		11,519 / 11,519 / 11,519 (F) 14,137 / 18,849 / 14,137 (S)
Rapid movement X / Y / Z (m/min)	30		32		
B (sec. /90 degree)	2.5 / 1.5		2.5		
Acceleration X / Y / Z (m/s ²)	3 / 3 / 3 (F) 3 / 3 / 2 (S)		3 / 4 / 4 (F)		3 / 4 / 4 (F) (S)
Dia. & pitch of the ball screw (mm)	Ø45 / 10		Ø45 / 12		
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	BBT50				
Max. spindle speed	6,000	6,000	10,000	6,000	10,000
Spindle base speed F / S	818	750 / -	500 / -	750 / 1,000	500 / 2,000
Spindle output (kW) (S3-25%) F / S	15 / 20.9 ⁽¹⁾	35 / -	22 ⁽²⁾ / -	35 / 46.5 ⁽¹⁾	22 ⁽²⁾ / 46.5 ⁽¹⁾
Spindle torque (Nm) (S3-25%) F / S	194 / 244 ⁽¹⁾	446 / -	353 ⁽³⁾ / -	446 / 444 ⁽¹⁾	353 ⁽³⁾ / 222 ⁽¹⁾
Spindle transmission	Belt	Belt	Coupling	Belt	Coupling
Spindle bearing diameter (mm)	Ø100				

Continued »

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Technical Data	HX505			
	A / B			
Specification code	C	E	P	
Tool changer				
Tool selection	Random pocket, bidirectional election	Random pocket, bidirectional election (40 ATC) Address fixed, random method (60 & 120 & 150ATC)		
Magazine positions	30 (std.) / 40(opt.)	40 (std.) / 60 & 120 & 150 (opt.)		
Max. tool diameter w/o adjacent tool (mm)	Ø125 / Ø200	Ø110 / Ø220 (40 & 60 & 150ATC)	Ø125 / Ø400 (120ATC)	
Max. tool length (mm)	400			
Max. tool weight (kg)	15	15 (40 & 150ATC)	20 (60ATC)	30 (120ATC)
Max. tool weight moment <from spindle gauge line> (Nm)	25	30 (40 & 60ATC)	25 (150ATC)	50 (120ATC)
Tool to tool time (sec.) ⁽⁴⁾	3.4	3.4		
Chip to chip time (sec.) ⁽⁴⁾	7.7	7.3		
Pallet changer				
Number of pallet	2			
Method of pallet changer	ARM type			
Pallet change time (sec.)	10.5			
Pallet changing repeatability (mm)	0.01			
Coolant system				
Coolant tank capacity (Liter) ⁽⁴⁾	300 L	450 L		
- Nozzle coolant pump capacity	75 L / min, 3 bar			
- Through spindle coolant pump capacity	opt.	25 L / min, 20 bar		
- Ceiling & wash down pump capacity	opt.	75 L / min, 3 bar		
Machine size				
Height (mm)	3,030			
Floor space W x D (mm)	3,040 x 4,833 (30 ATC) 3,040 x 5,190 (40 ATC)	3,450 x 4,280 (40ATC) 3,620 x 6,750 (120ATC)	3,620 x 4,800 (60ATC) 4,300 x 6,630 (150ATC)	
Weight (kg)	13,000	13,500 (40ATC)	15,500 (60ATC)	17,000 (120ATC) 18,500 (150ATC)
Connections				
Main power	220 V / 60 Hz or 400 V / 50 Hz			
Power consumption (KVA)	27 (F) 28 (S)	44 (F)	48 (F)	44 (F)44 (S) 48 (F) 53 (S)

Note: ⁽¹⁾S6-25% ⁽²⁾S3-60% ⁽³⁾S3-40% ⁽⁴⁾At 60Hz.

●=Standard ○=Option ×=N/A

Standard / Option accessories	HX504					
Specification code	AC	BC	AE	BE	AP	BP
■ QUASER mill i	○	○	●	●	×	×
■ FANUC 31iB	×	×	×	×	●	●
■ SIEMENS 828D	●	●	×	×	×	×
■ SIEMENS 840D	×	×	×	×	○	○
■ Spindle ECO cooler	●	●	×	×	×	×
■ Spindle oil chiller	○	○	●	●	●	●
■ Coolant through ball screw	×	×	●	●	●	●
■ BT tooling (QUASER SUPPLY)	●	●	●	●	●	●
DIN tooling (69872-A) / ISO tooling (7388-B)	○	○	○	○	○	○
■ ISO 40 48 position tool magazine (Chain type)	●	●	×	×	×	×
60 position tool magazine (Chain type)	○	○	×	×	×	×
60 position tool magazine (Disk type)	×	×	●	●	●	●
120 position tool magazine (Chain type)	×	×	○	○	○	○
240 position tool magazine (Pack type)	×	×	○	○	○	○
■ ISO 50 30 position tool magazine (Chain type)	×	×	×	×	×	×
40 position tool magazine (Chain type)	×	×	×	×	×	×
40 position tool magazine (Disk type)	×	×	×	×	×	×
60 position tool magazine (Chain type)	×	×	×	×	×	×
120 position tool magazine (Chain type)	×	×	×	×	×	×
150 position tool magazine (Pack type)	×	×	×	×	×	×
■ Balance tooling for spindle warm up	○	○	●	●	●	●
■ Pull stud for BT tooling	○	○	●	●	●	●
■ Air pressure detector for pallet clamping	○	○	●	●	●	●
■ Hydraulic through pallet (3 ports)***	○	○	○	○	○	○
■ 2 pallet station	●	●	●	●	●	●
■ NC rotary table (0.001°) with rotary encoder	×	○	×	○	×	○
■ Linear encoder	○	○	○	○	○	○
■ Panel MPG	●	●	×	×	×	×
■ Remote MPG	○	○	●	●	●	●
■ Transformer	○	○	●	●	●	●
■ Work probe	○	○	○	○	○	○
■ Tool length / breakage measurement (Laser)**	○	○	○	○	○	○
■ 20 bar through spindle coolant	○	○	●	●	●	●
■ 50 bar through spindle coolant	○	○	○	○	○	○
■ 70 bar through spindle coolant	×	×	○	○	○	○
■ Ceiling wash down coolant	○	○	●	●	●	●
■ Base, wash down coolant	×	×	×	×	×	×
■ Coolant wash gun	○	○	●	●	●	●
■ Internal Chip augers	●	●	●	●	●	●
■ Internal Chip conveyor	×	×	×	×	×	×
■ External Chip auger	●	●	×	×	×	×
■ External chip conveyor	○	○	●	●	●	●
■ Drum type conveyor	○	○	○	○	○	○
■ Bag filter	○	○	○	○	○	○
■ Mist collector	○	○	○	○	○	○
■ Documentation	○	○	○	○	○	○
■ Work light	●	●	●	●	●	●
■ Machine status light	●	●	●	●	●	●
■ CE & EMC* / GB	○	○	○	○	○	○

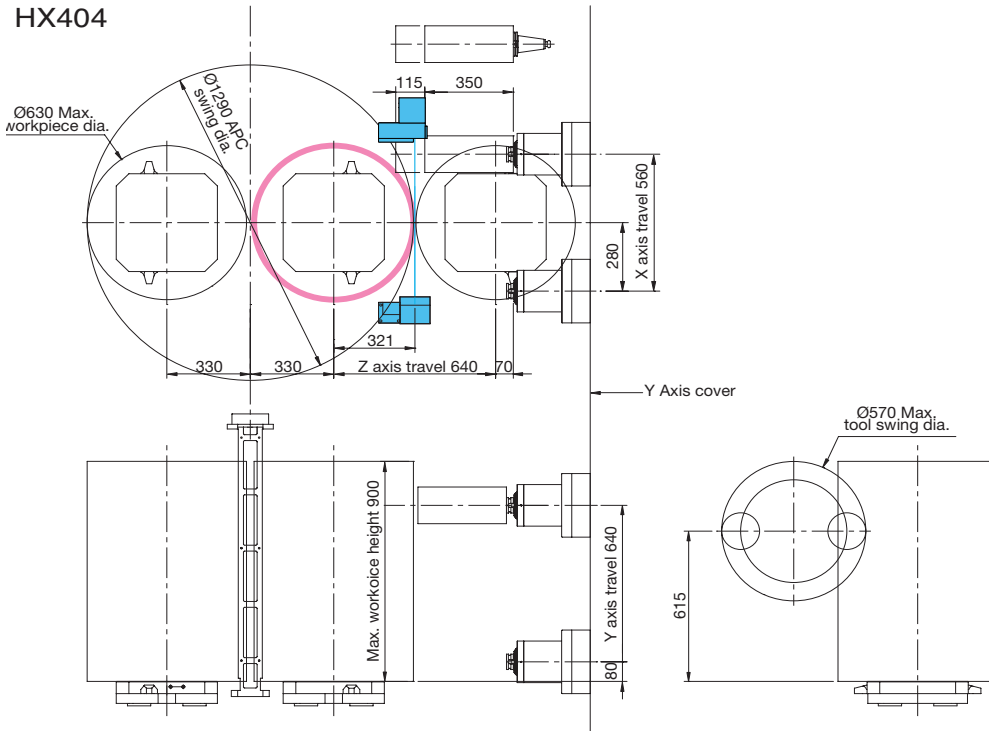
Note: *Standard for EU area except C type.

** HX504 / 505 / 635 / 805 only available for NC4S Renishaw.***Factory mounted only.

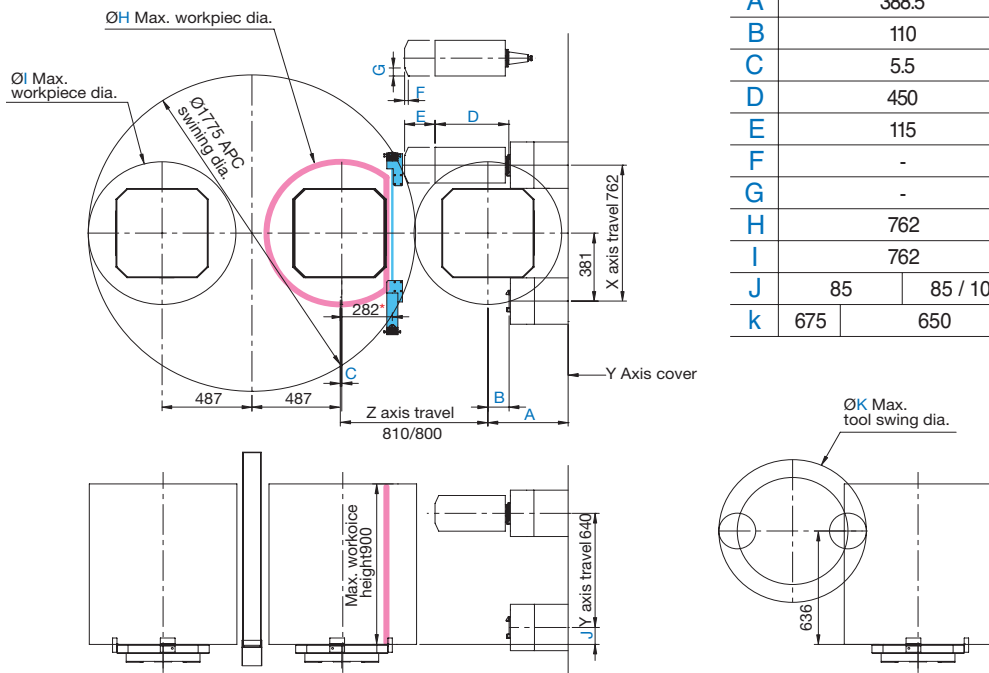
- For C series ambient temperature greater than 35°C the cabinet heat exchanger is required.

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

HX404



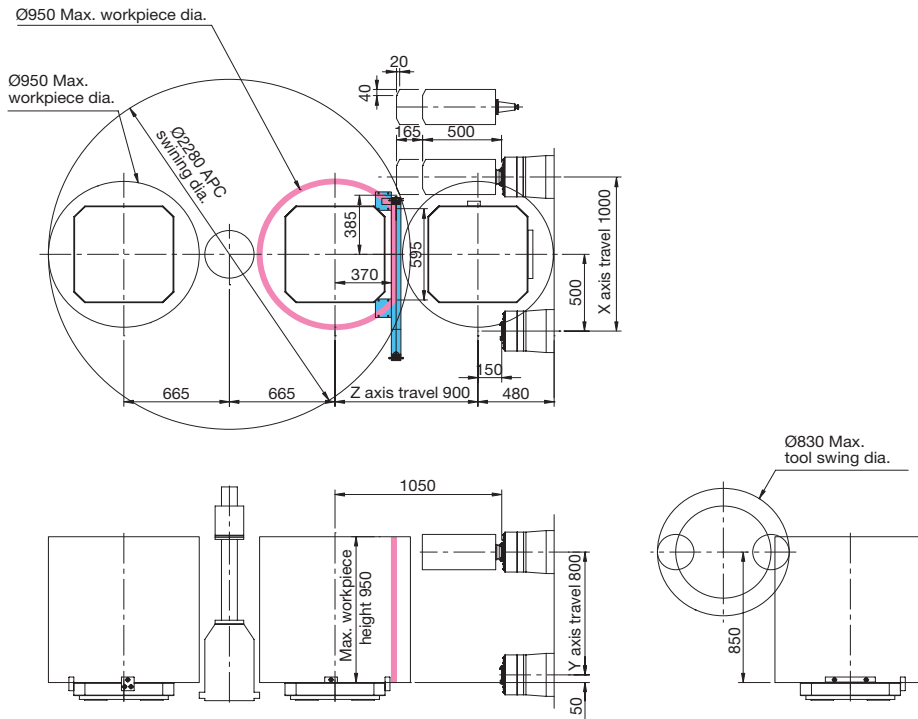
HX504 / HX505



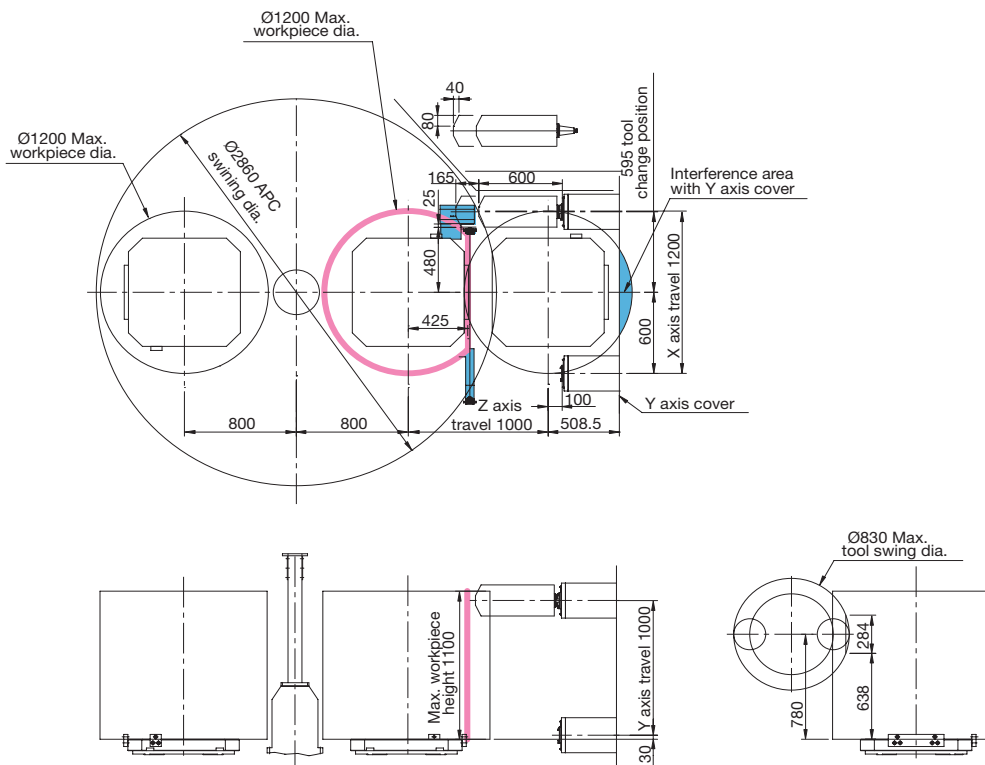
	HX504		HX505	
	C	E	P	P
	Belt		Belt / Coupling	
A	388.5		435	
B	110		115	
C	5.5		8	
D	450		400	
E	115		165	
F	-		20	
G	-		45	55
H	762		800	
I	762		800	
J	85	85 / 100		85 / 85
k	675	650		770

Note: *Maximum workpiece swing may impact "TOOL LENGTH MEASUREMENT" functionally.

HX635

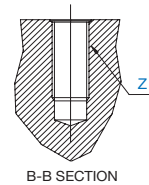
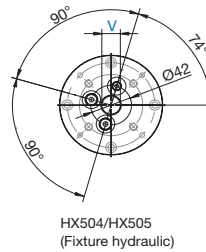
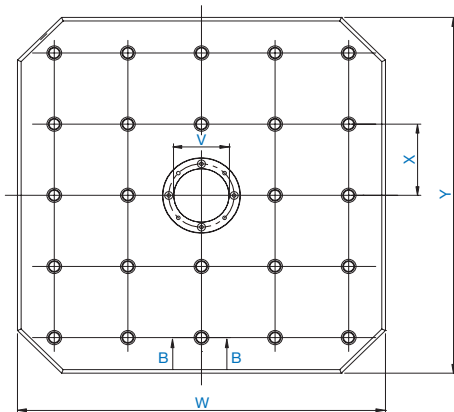


HX805



Pallet dimension

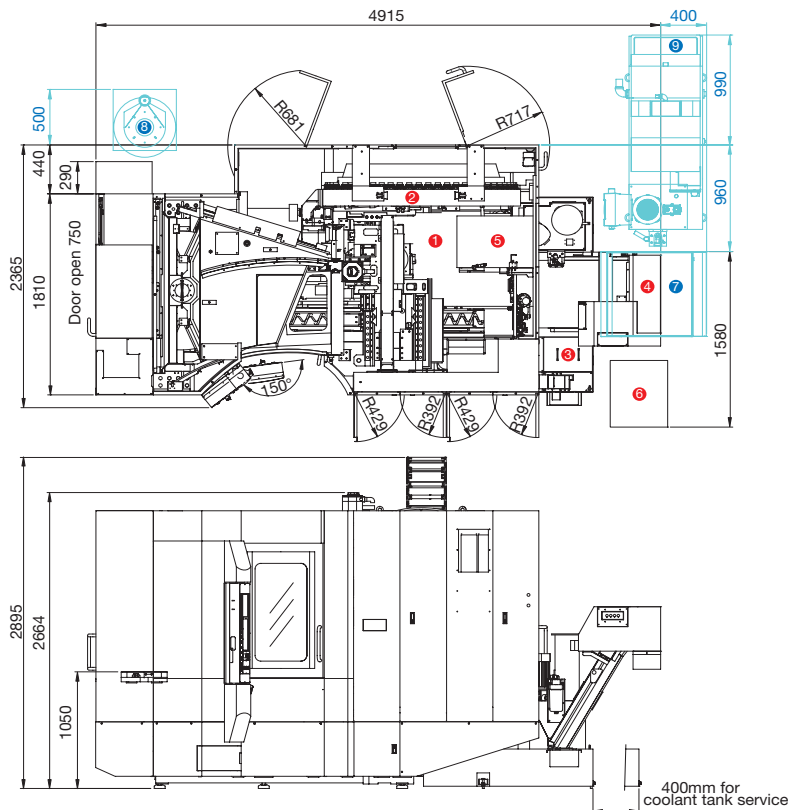
	HX404	HX504/HX505/8APC	HX504/HX505 (Fixture hydraulic)	HX635	HX805
V	$\varnothing 50^{+0.016}_0 \times D32$	$\varnothing 50^{+0.016}_0 \times D32$	$\varnothing 19^{+0.016}_0 \times D25$	$\varnothing 30^{+0.02}_0 \times D15$	
W	400	500	500	630	800
X	80	100	100	125	160
Y	400	500	500	630	800
Z	24-M16				



Installation dimension

HX404

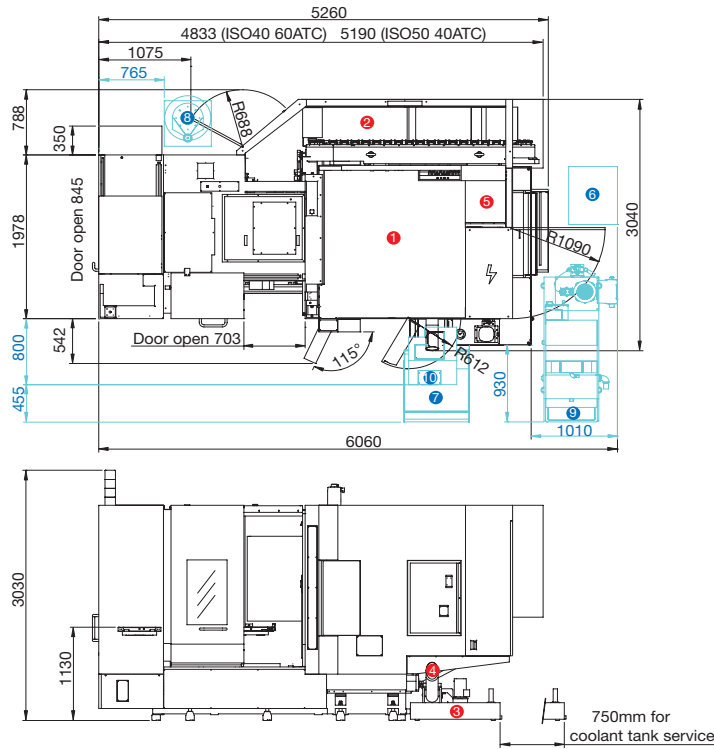
- 1 Standard Machine
- 2 Magazine unit
- 3 Coolant supply unit
- 4 Chip conveyor
- 5 Spindle cooling unit & Hyd. tank unit
- 6 Transformer
- 7 Chip bucket (Opt.)
- 8 Mist collector (Opt.)
- 9 Filtration unit (Opt.)



Installation dimension

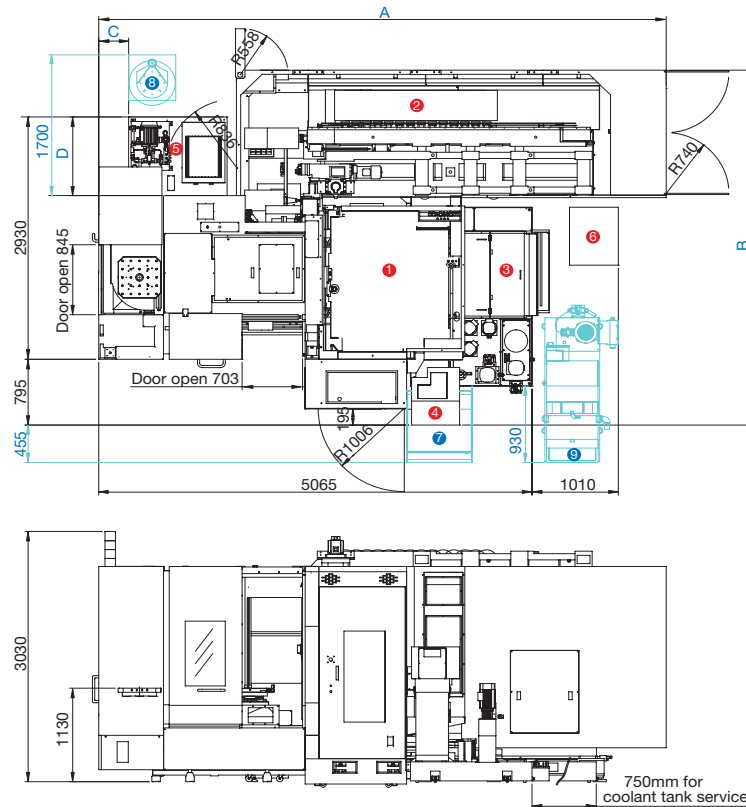
HX504C/HX505C

- ① Standard Machine
- ② Magazine unit
- ③ Coolant supply unit
- ④ Spiral type chip auger
- ⑤ Spindle cooling unit & Hyd. tank unit
- ⑥ Transformer (Opt.)
- ⑦ Chip bucket (Opt.)
- ⑧ Mist collector (Opt.)
- ⑨ Filtration unit (Opt.)
- ⑩ Chip conveyor (Opt.)



HX504/HX505

- ① Standard Machine
- ② Magazine unit
- ③ Coolant supply unit
- ④ Chip conveyor
- ⑤ Spindle cooling unit & Hyd. tank unit
- ⑥ Transformer
- ⑦ Chip bucket (Opt.)
- ⑧ Mist collector (Opt.)
- ⑨ Filtration unit (Opt.)

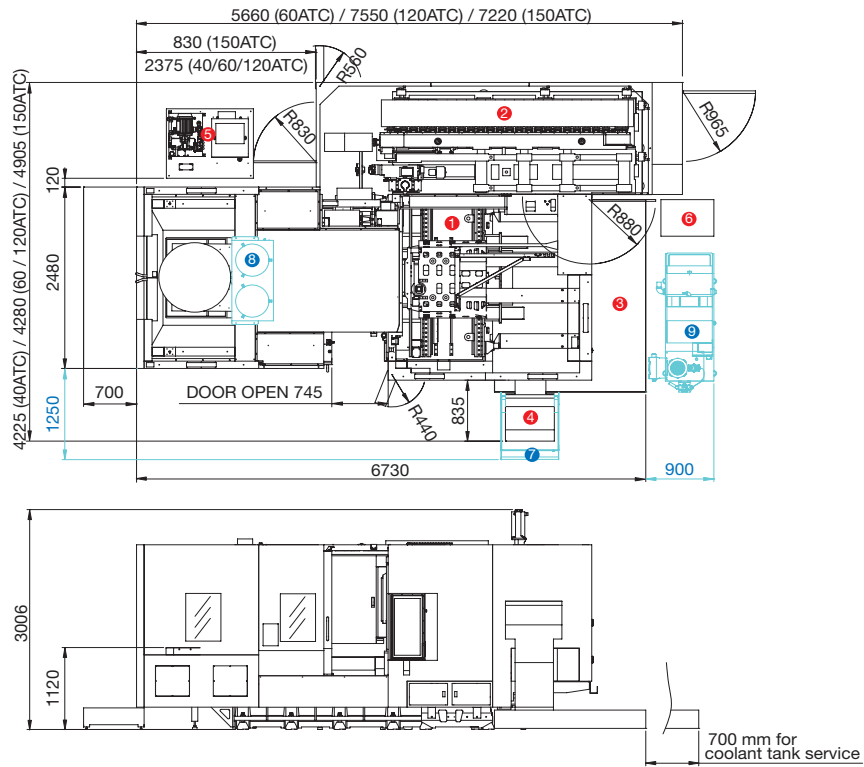


	HX504			
	A	B	C	D
60ATC	4,280	3,450	350	950
120ATC	4,800	3,620	350	950
240ATC	5,400	3,930	-	950

	HX505			
	A	B	C	D
40ATC	4,280	3,450	350	950
60ATC	4,800	3,620	350	950
120ATC	6,750	3,620	350	950
150ATC	6,630	4,300	-	950

HX635

- 1 Standard Machine
- 2 Magazine unit
- 3 Coolant supply unit
- 4 Chip conveyor
- 5 Spindle cooling unit & Hyd. tank unit
- 6 Transformer
- 7 Chip bucket (Opt.)
- 8 Mist collector (Opt.)
- 9 Filtration unit (Opt.)



HX805

- 1 Standard Machine
- 2 Magazine unit
- 3 Coolant supply unit
- 4 Chip conveyor
- 5 Spindle cooling unit & Hyd. tank unit
- 6 Transformer
- 7 Chip bucket (Opt.)
- 8 Mist collector (Opt.)
- 9 Filtration unit (Opt.)

