

Horizontal Machining Centre



HX805 SERIES ISO 50

Technical Data			HX805							
			A				B			
Specification code			HT		HS		HT		HS	
Work range										
Pallet size (mm)			□ 800							
Max. work swing diameter (mm)			Ø1,200							
Max. work piece height			1,100							
Table load capacity (kg)			1,500							
Travel X / Y / Z (mm)			1,200 / 1,000 / 1,000							
B minimum indexing (degree)			1				0.001			
Table surface to spindle center (mm)			30 ~ 1,030							
Spindle nose to table center (mm)			100 ~ 1,100							
Surface configuration			24-M16 Tapped holes; pitch: 160							
Feed drive										
Feed force X / Y / Z (N)			11,780 / 14,920 / 11,780 (F) 14,137 / 18,850 / 14,137 (S)							
Rapid movement X / Y / Z (m/min)			40							
B (sec. /90 degree)			3				2.1			
Acceleration X / Y / Z (m/s²)			4 / 5 / 5 (F)(S)							
Dia. & pitch of the ball screw (mm)			Ø50 x 16							
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	7,500 (opt.)	10,000	15,000	6,000	7,500 (opt.)	10,000	15,000
Spindle base speed		F / S	300 / 400	375 / 400	460 / 2000	500	300 / 400	375 / 400	460 / 2000	500
Spindle output (kW) (S3-25%)		F / S	35 / 46.5 ⁽¹⁾	35 / 46.5 ⁽¹⁾	37 ⁽²⁾ / 46.5 ⁽¹⁾	30 ⁽¹⁾	35 / 46.5 ⁽¹⁾	35 / 46.5 ⁽¹⁾	37 ⁽²⁾ / 46.5 ⁽¹⁾	30 ⁽¹⁾
Spindle torque (Nm) (S3-25%)		F / S	1114 / 1110 ⁽¹⁾	891 / 888 ⁽¹⁾	350 ⁽²⁾ / 222 ⁽¹⁾	420 ⁽¹⁾	1114 / 1110 ⁽¹⁾	891 / 888 ⁽¹⁾	350 ⁽²⁾ / 222 ⁽¹⁾	420 ⁽¹⁾
Spindle transmission			Gear box+Belt		Coupling		Gear box+Belt		Coupling	
Spindle bearing diameter (mm)			Ø100							

Continued »

HX805 SERIES ISO 50

Technical Data	HX805			
	A		B	
Specification code	HT	HS	HT	HS
Tool changer				
Tool selection	Address fixed, random method			
Magazine positions	60 (std.) 120 & 150 (opt.)			
Max. tool diameter w/o adjacent tool (mm)	Ø125 / Ø230 (60 & 150ATC) Ø125 / Ø400 (120ATC)			
Max. tool length (mm)	600			
Max. tool weight (kg)	20 (60ATC) 30 (120ATC) 15 (150ATC)			
Max. tool weight moment <from spindle gauge line> (Nm)	30 (60ATC) 50 (120ATC) 25 (150ATC)			
Tool to tool time (sec.) ⁽³⁾	3.9			
Chip to chip time (sec.) ⁽³⁾	7.9			
Pallet changer				
Number of pallet	2			
Method of pallet changer	ARM type			
Pallet change time (sec.)	19			
Pallet changing repeatability (mm)	0.01			
Coolant system				
Coolant tank capacity (Liter) ⁽³⁾	1,200 L			
- Nozzle coolant pump capacity	60 L / min, 4 bar			
- Through spindle coolant pump capacity	25 L / min, 20 bar			
- Ceiling & wash down pump capacity	100 L / min, 2.6 bar			
Machine size				
Height (mm)	3,610			
Floor space W x D (mm)	4,800 x 7,220 (60ATC) 4,860 x 7,850 (120ATC) 5,350 x 7,570 (150ATC)			
Weight (kg)	25,000 (60ATC) 27,000 (120ATC) 30,500 (150ATC)			
Connections				
Main power	220 V / 60 Hz or 400 V / 50 Hz			
Power consumption (KVA)	50 (F) 59 (S)	53 (F) 59 (S)	50 (F) 59 (S)	54 (F) 59 (S)

Note: ⁽¹⁾S6-25%⁽²⁾ S3-40%⁽³⁾At 60Hz

●=Standard ○=Option x=N/A

Standard / Option accessories	HX504					
Specification code	AC	BC	AE	BE	AP	BP
■ QUASER mill i	○	○	●	●	X	X
■ FANUC 31iB	X	X	X	X	●	●
■ SIEMENS 828D	●	●	X	X	X	X
■ SIEMENS 840D	X	X	X	X	○	○
■ Spindle ECO cooler	●	●	X	X	X	X
■ Spindle oil chiller	○	○	●	●	●	●
■ Coolant through ball screw	X	X	●	●	●	●
■ BTtooling (QUASER SUPPLY)	●	●	●	●	●	●
DIN tooling (69872-A) / ISO tooling (7388-B)	○	○	○	○	○	○
■ ISO 40 48 position tool magazine (Chain type)	●	●	X	X	X	X
60 position tool magazine (Chain type)	○	○	X	X	X	X
60 position tool magazine (Disk type)	X	X	●	●	●	●
120 position tool magazine (Chain type)	X	X	○	○	○	○
240 position tool magazine (Pack type)	X	X	○	○	○	○
■ ISO 50 30 position tool magazine (Chain type)	X	X	X	X	X	X
40 position tool magazine (Chain type)	X	X	X	X	X	X
40 position tool magazine (Disk type)	X	X	X	X	X	X
60 position tool magazine (Chain type)	X	X	X	X	X	X
120 position tool magazine (Chain type)	X	X	X	X	X	X
150 position tool magazine (Pack type)	X	X	X	X	X	X
■ Balance tooling for spindle warm up	○	○	●	●	●	●
■ Pull stud for BTtooling	○	○	●	●	●	●
■ Air pressure detector for pallet clamping	○	○	●	●	●	●
■ Hydraulic through pallet (3 ports)***	○	○	○	○	○	○
■ 2 pallet station	●	●	●	●	●	●
■ NC rotary table (0.001°) with rotary encoder	X	○	X	○	X	○
■ Linear encoder	○	○	○	○	○	○
■ Panel MPG	●	●	X	X	X	X
■ 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	X	X	○	○	○	○
■ Ceiling wash down coolant	○	○	●	●	●	●
■ Base, wash down coolant	X	X	X	X	X	X
■ Coolant wash gun	○	○	●	●	●	●
■ Internal Chip augers	●	●	●	●	●	●
■ Internal Chip conveyor	X	X	X	X	X	X
■ External Chip auger	●	●	X	X	X	X
■ 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.

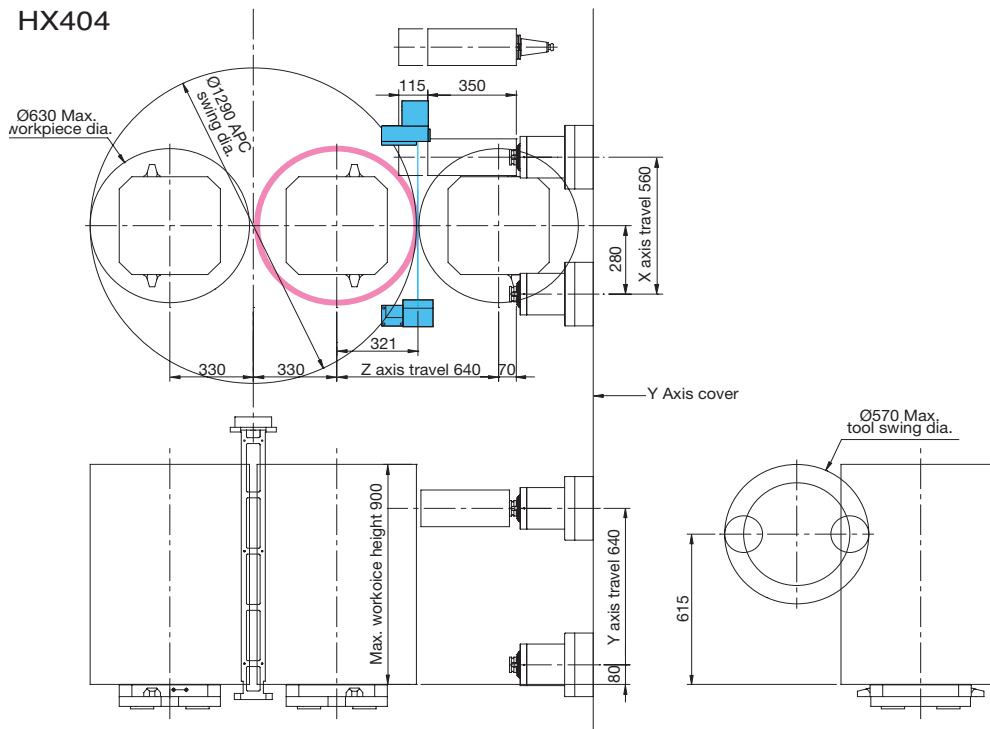
** HX504 / 505 / 635 / 805 only available for NC4S Renishaw.***Factory mounted only.

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

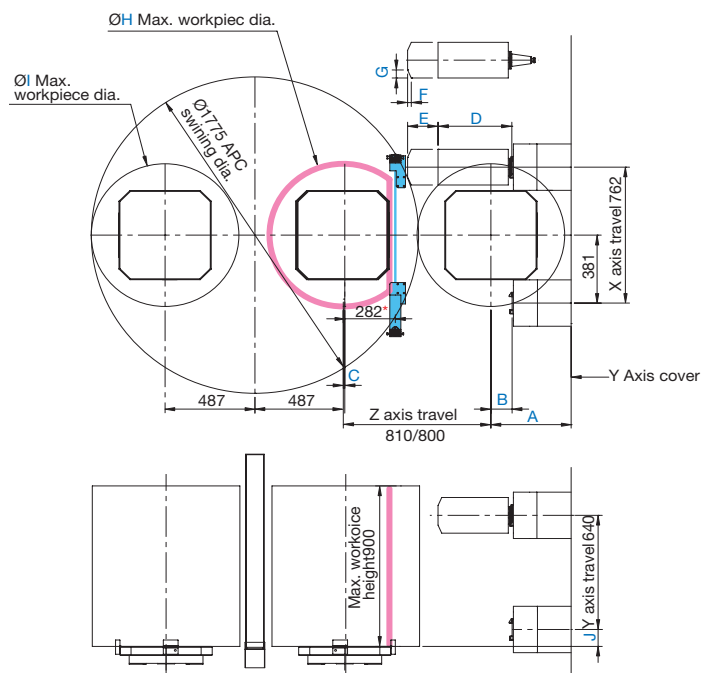
- Machine specification might be different form the catalog if there is any specification update.

HX505				HX635		HX805	
AC	BC	AE	AP	A	B	A	B
○	○	●	X	○	○	X	X
X	X	X	●	●	●	●	●
●	●	X	X	X	X	X	X
X	X	X	○	○	○	○	○
●	●	X	X	X	X	X	X
○	○	●	●	●	●	●	●
X	X	●	●	X	X	X	X
●	●	●	●	●	●	●	●
○	○	○	○	○	○	○	○
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X
●	●	X	X	X	X	X	X
○	○	X	X	X	X	X	X
X	X	●	●	●	●	X	X
X	X	○	○	○	○	●	●
X	X	○	○	○	○	○	○
X	X	○	○	○	○	○	○
○	○	●	●	●	●	●	●
○	○	●	●	●	●	●	●
○	○	●	●	●	●	●	●
○	○	○	○	○	○	○	○
●	●	●	●	●	●	●	●
X	○	X	X	X	○	X	●
○	○	○	○	○	○	●	●
●	●	X	X	X	X	X	X
○	○	●	●	●	●	●	●
○	○	●	●	●	●	●	●
○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○
○	○	●	●	●	●	●	●
○	○	○	○	○	○	○	○
X	X	○	○	○	○	○	○
○	○	●	●	●	●	●	●
X	X	X	X	●	●	●	●
○	○	●	●	●	●	●	●
●	●	●	●	●	●	●	●
X	X	X	X	X	X	●	●
●	●	X	X	X	X	X	X
○	○	●	●	●	●	●	●
○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
○	○	○	○	○	○	○	○

HX404



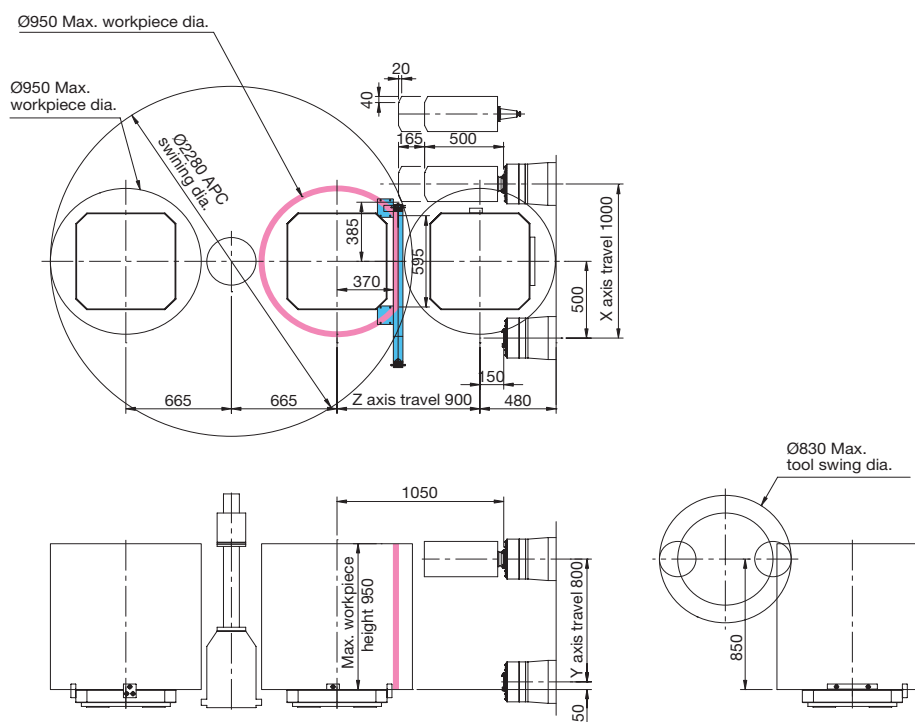
HX504 / HX505



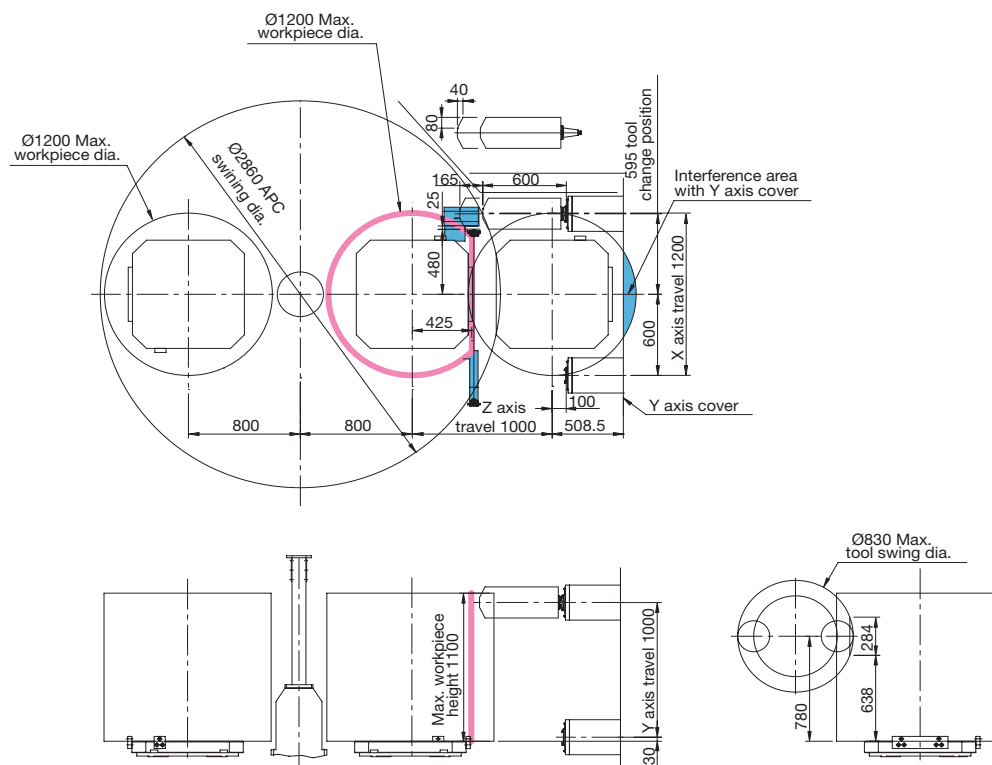
	HX504			HX505		
	C	E	P	C	E	P
	Belt		Belt / Coupling	Belt		Belt / Coupling
A	388.5			435		
B	110			115		
C	5.5			8		
D	450			400		
E	115			165		
F	-			20		
G	-			45	55	
H	762			800		
I	762			800		
J	85		85 / 100	85		85 / 85
k	675		650	800		770

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

HX635

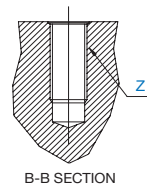
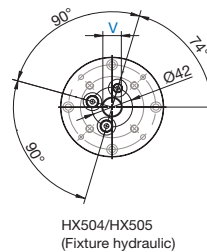
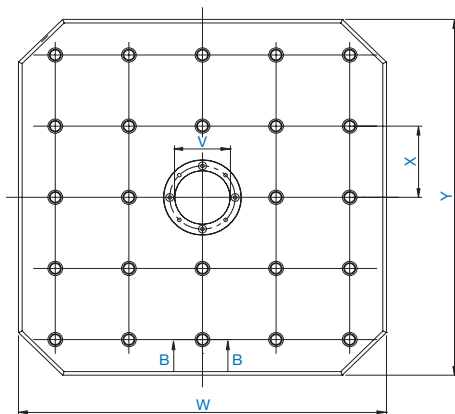


HX805



Pallet dimension

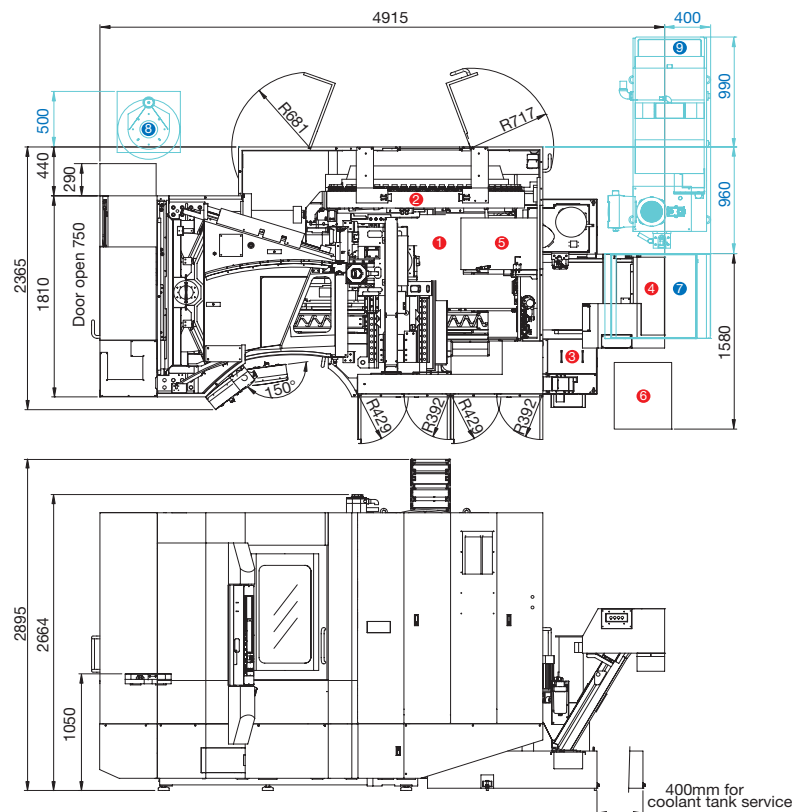
	HX404	HX504/HX505/8APC	HX504/HX505 (Fixture hydraulic)	HX635	HX805
V	$\varnothing 50^{+0.016}_0 \times D32$	$\varnothing 50^{+0.016}_0 \times D32$	$\varnothing 19^{+0.016}_0 \times D25$	$\varnothing 30^{+0.02}_0 \times D15$	
W	400	500	500	630	800
X	80	100	100	125	160
Y	400	500	500	630	800
Z	24-M16				



Installation dimension

HX404

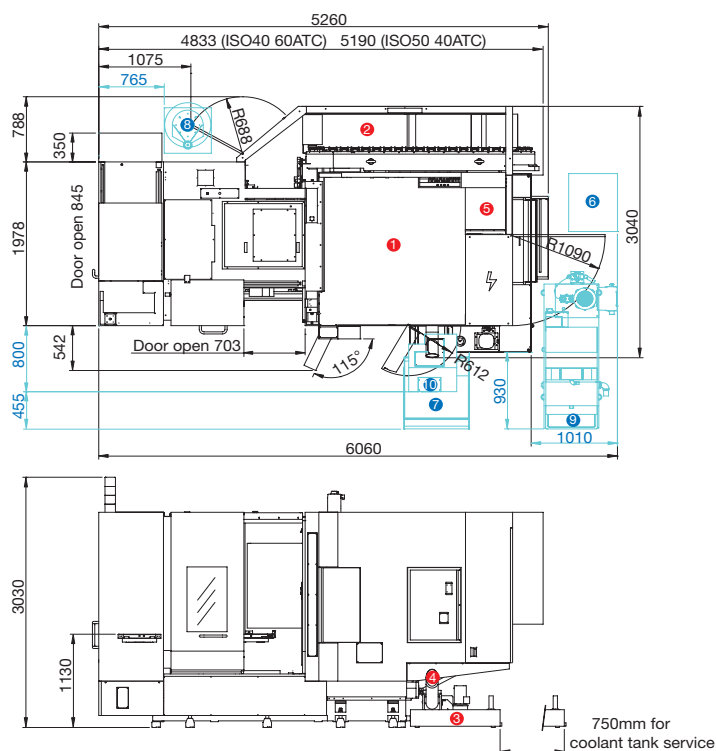
- ① Standard Machine
- ② Magazine unit
- ③ Coolant supply unit
- ④ Chip conveyor
- ⑤ Spindle cooling unit & Hyd. tank unit
- ⑥ Transformer
- ⑦ Chip bucket (Opt.)
- ⑧ Mist collector (Opt.)
- ⑨ Filtration unit (Opt.)



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.)

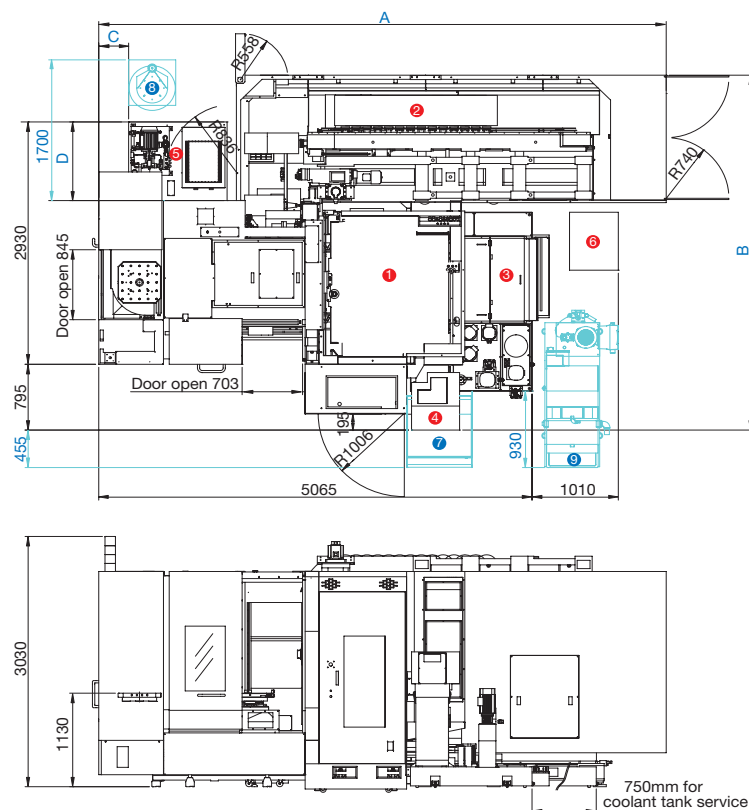


HX504/HX505

- 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.)

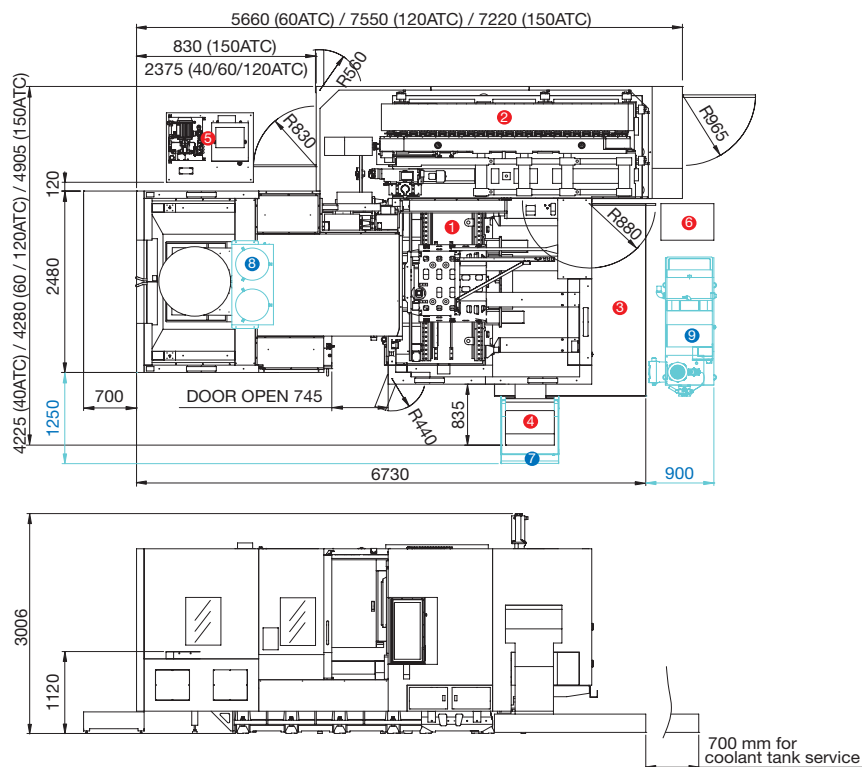
HX504				
	A	B	C	D
60ATC	4,280	3,450	350	950
120ATC	4,800	3,620	350	950
240ATC	5,400	3,930	-	950

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.)

