

HX Series

HX 404

QUASER
we cut faster

Horizontal Machining Centre



HX404 SERIES ISO 40

Control: (F) FANUC

Technical Data	HX404		
	A / B		
Specification code	E	P	
Work range			
Pallet size (mm)	□ 400		
Max. work swing diameter (mm)	Ø630		
Max. work piece height	900		
Table load capacity (kg)	400		
Travel X / Y / Z (mm)	560 / 640 / 640		
B minimum indexing (degree)	1 / 0.001		
Table surface to spindle center (mm)	80		
Spindle nose to table center (mm)	70		
Surface configuration	M16@pitch80 mm grid		
Feed drive			
Feed force X / Y / Z (N)	8,638 / 8,638 / 8,638	6,911 / 9,425 / 9,425	
Rapid movement X / Y / Z (m/min)	48	60	
B (sec. /90 degree)	2.5 / 1.5		
Acceleration X / Y / Z (m/s ²)	7.8 / 9.8 / 9.8		
Dia. & pitch of the ball screw (mm)	Ø40 / 16	Ø40 / 20	
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	12,000	15,000 (std.)	20,000 (opt.)
Spindle base speed	1,500	1,400	1,500
Spindle output (kW) (S3-25%)	15	26	15 ⁽¹⁾
Spindle torque (Nm) (S3-25%)	96	177	96 ⁽¹⁾
Spindle transmission	Coupling		
Spindle bearing diameter (mm)	Ø70		

Continued »

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Technical Data	HX404	
	A	B
Specification code	E	P
Tool changer	Random pocket, bidirectional election	
Tool selection	60	
Magazine positions	76.2 / 125	
Max. tool diameter w/o adjacent tool (mm)	350	
Max. tool length (mm)	7	
Max. tool weight (kg)	10	
Max. tool weight moment (Nm)	1.3 (<6kg)	
Tool to tool time (sec.) ⁽²⁾	5	4
Chip to chip time (sec.) ⁽²⁾		
Pallet changer	2	
Number of pallet	ARM type	
Method of pallet changer	10.5	5.5
Pallet change time (sec.)	0.01	
Pallet changing repeatability (mm)		
Coolant system	650 L	
Coolant tank capacity (Liter)	60 L/min., 3 bar	
- Nozzle coolant pump capacity ⁽²⁾	25 L/min., 8 bar	25 L/min., 20 bar
- Through spindle coolant pump capacity ⁽²⁾	25 L/min., 1.5 bar	
- Ceiling & wash down pump capacity ⁽²⁾		
Machine size	2,895	
Height (mm)	2,365 x 4,915	
Floor space W x D (mm)	10,500	
Weight (kg)		
Connections	220 V / 60 Hz or 400 V / 50 Hz	
Main power	32	41
Power consumption (KVA)		

Note: ⁽¹⁾(S3-60%)⁽²⁾At 60 Hz

●=Standard ○=Option X=N/A

Standard / Option accessories	HX404			
	A	B	A	B
Specification code	E		P	
■ QUASER mill i	●	●	○	○
■ FANUC 3iB	○	○	●	●
■ Spindle oil chiller	○	○	●	●
■ Coolant through ball screw	○	○	●	●
■ Lubrication Auto lube	●	●	X	X
■ Lubrication Auto grease	X	X	●	●
■ 40 Taper 60 position tool magazine (Random)	●	●	●	●
61 position tool magazine (Address fixed)	○	○	○	○
■ 40 Taper BT tooling (QUASER SUPPLY)	●	●	●	●
DIN tooling (69872-A) / ISO tooling (7388-B)	○	○	○	○
■ Balance tooling for spindle warm up	●	●	●	●
■ Pull stud for BT tooling	●	●	●	●
■ Air pressure detector for pallet clamping	●	●	●	●
■ Hydraulic through pallet (5 ports)*	○	○	○	○
■ 2 pallet station	●	●	●	●
■ NC rotary table (0.001°) with rotary encoder	X	○	X	○
■ Linear encoder	○	○	○	○
■ Remote MPG	●	●	●	●
■ Transformer	●	●	●	●
■ Work probe	○	○	○	○
■ Tool length / breakage measurement (Laser)	○	○	○	○
■ 8 bar through spindle coolant	●	●	X	X
■ 20 bar through spindle coolant	○	○	●	●
■ 50 bar through spindle coolant	○	○	○	○
■ 70 bar through spindle coolant	○	○	○	○
■ Ceiling wash down coolant	●	●	●	●
■ Coolant wash gun (Pallet loading side and machine side)	●	●	●	●
■ Internal Chip augers	●	●	●	●
■ External chip conveyor	●	●	●	●
■ Drum type conveyor	○	○	○	○
■ Bag filter	○	○	●	●
■ Mist collector	○	○	○	○
■ Documentation (paper)	○	○	○	○
■ Work light	●	●	●	●
■ Machine status light	●	●	●	●
■ CE & EMC**/ GB	○	○	○	○

Note: *Factory mounted only. **Standard for EU area.

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

●=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	○	○	○	○	○	○

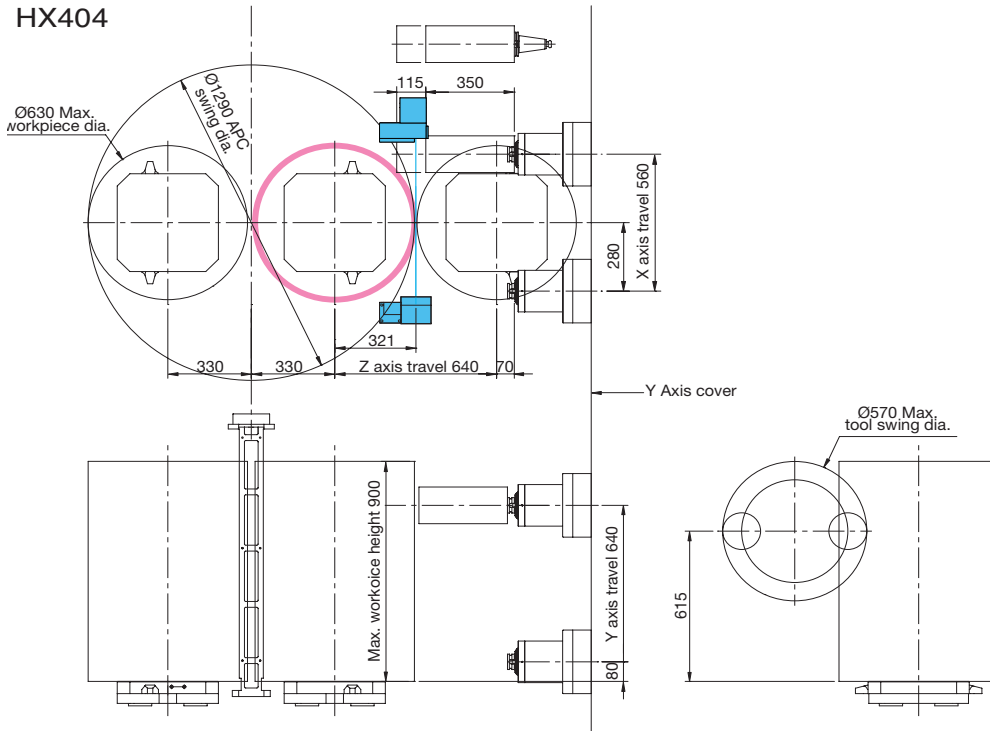
Note: *Standard for EU area except C type.

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

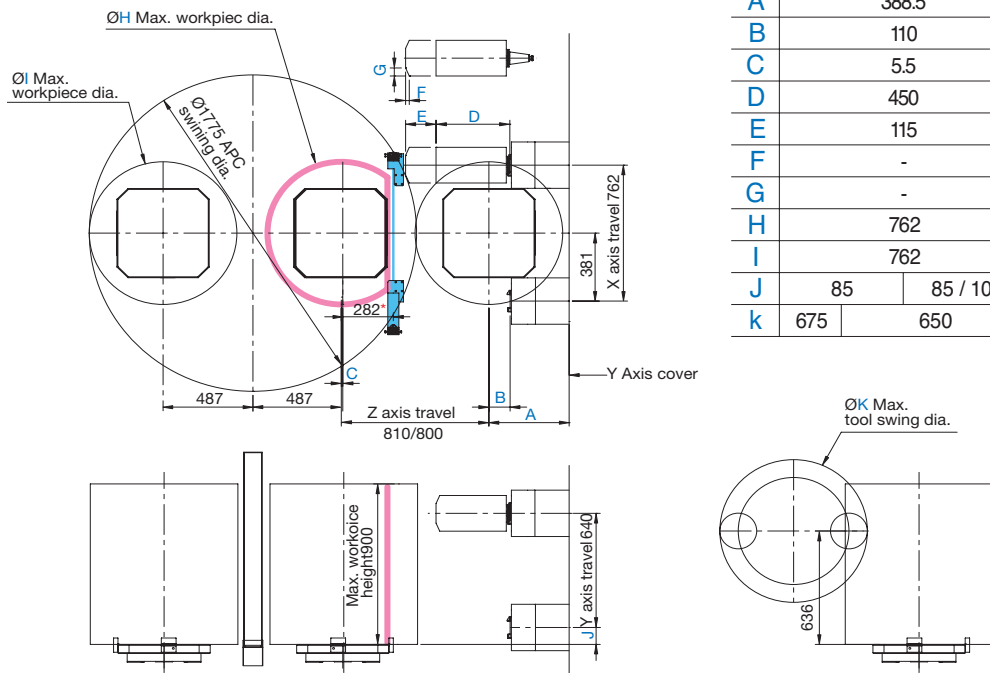
- For C series ambient temperature greater than 35°C the cabinet heat exchanger is required.

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

HX404



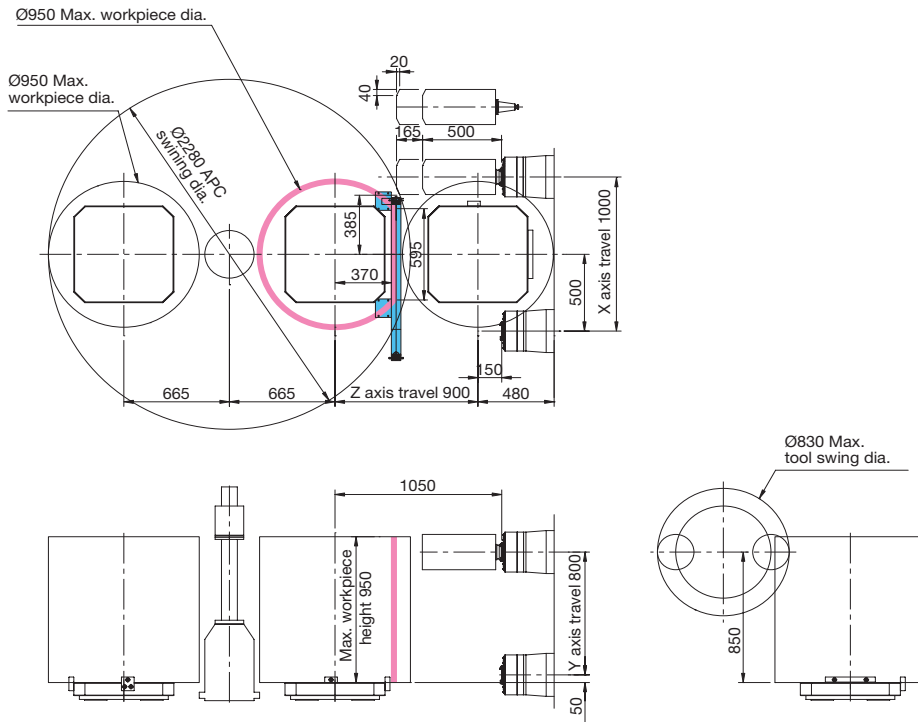
HX504 / HX505



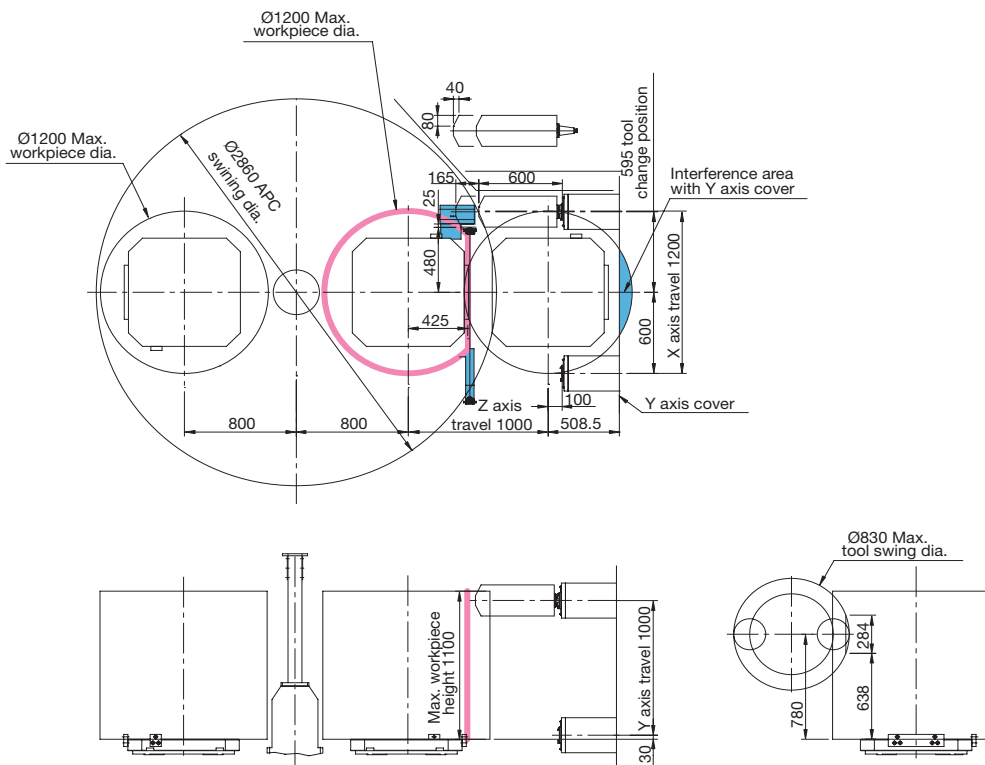
	HX504		HX505	
	C	E	P	P
	Belt		Belt / Coupling	
A	388.5		435	
B	110		115	
C	5.5		8	
D	450		400	
E	115		165	
F	-		20	
G	-		45	55
H	762		800	
I	762		800	
J	85	85 / 100		85 / 85
k	675	650		770

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

HX635

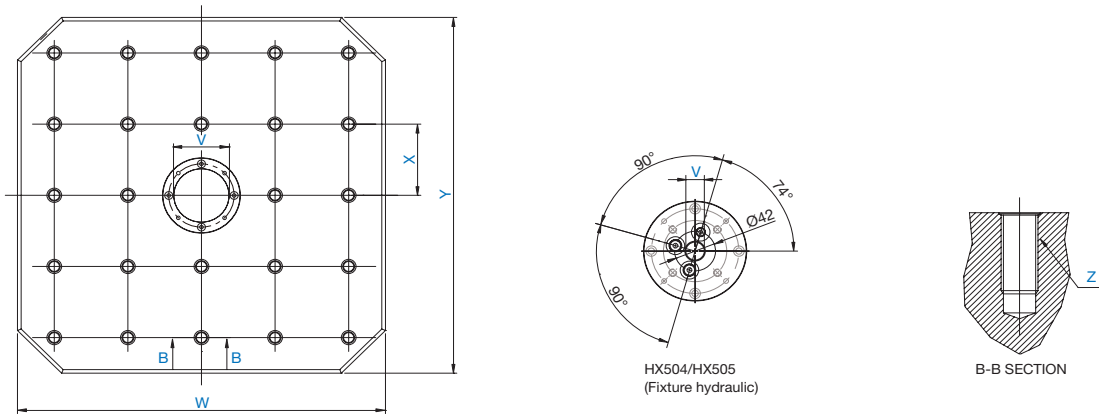


HX805



Pallet dimension

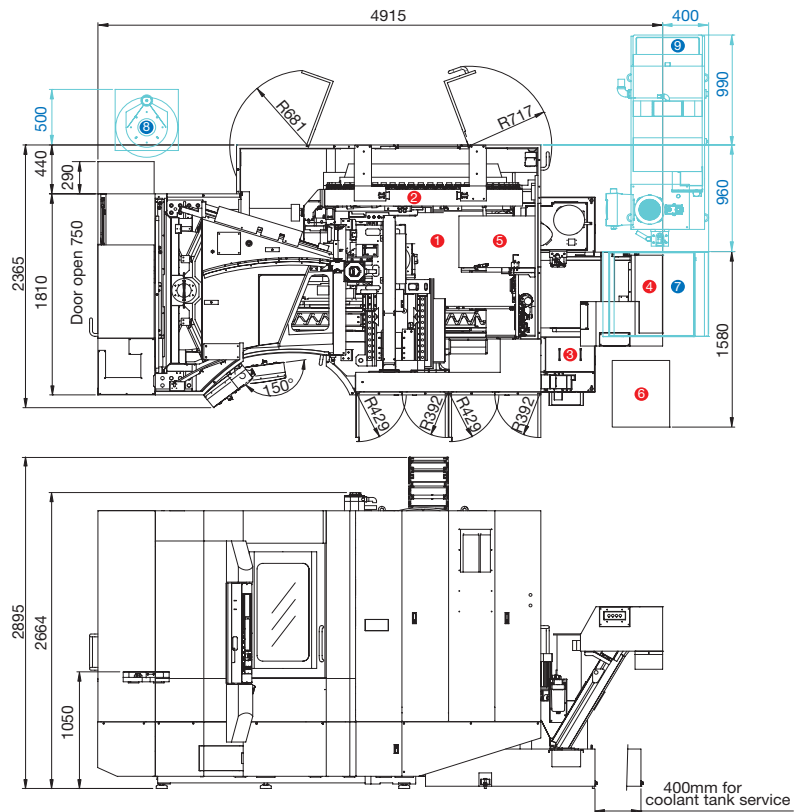
	HX404	HX504/HX505/8APC	HX504/HX505 (Fixture hydraulic)	HX635	HX805
V	$\varnothing 50^{+0.016}_0 \times D32$	$\varnothing 50^{+0.016}_0 \times D32$	$\varnothing 19^{+0.016}_0 \times D25$	$\varnothing 30^{+0.02}_0 \times D15$	
W	400	500	500	630	800
X	80	100	100	125	160
Y	400	500	500	630	800
Z	24-M16				



Installation dimension

HX404

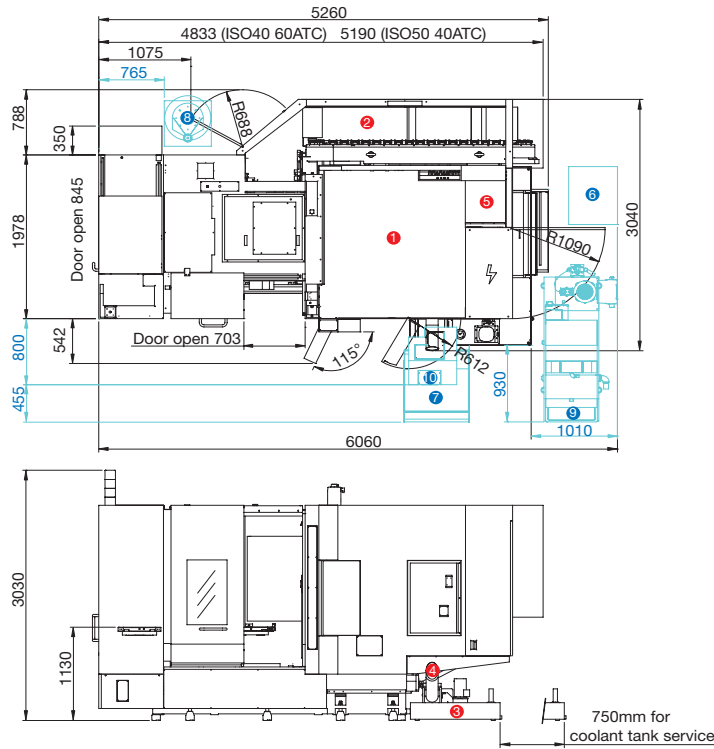
- 1 Standard Machine
- 2 Magazine unit
- 3 Coolant supply unit
- 4 Chip conveyor
- 5 Spindle cooling unit & Hyd. tank unit
- 6 Transformer
- 7 Chip bucket (Opt.)
- 8 Mist collector (Opt.)
- 9 Filtration unit (Opt.)



Installation dimension

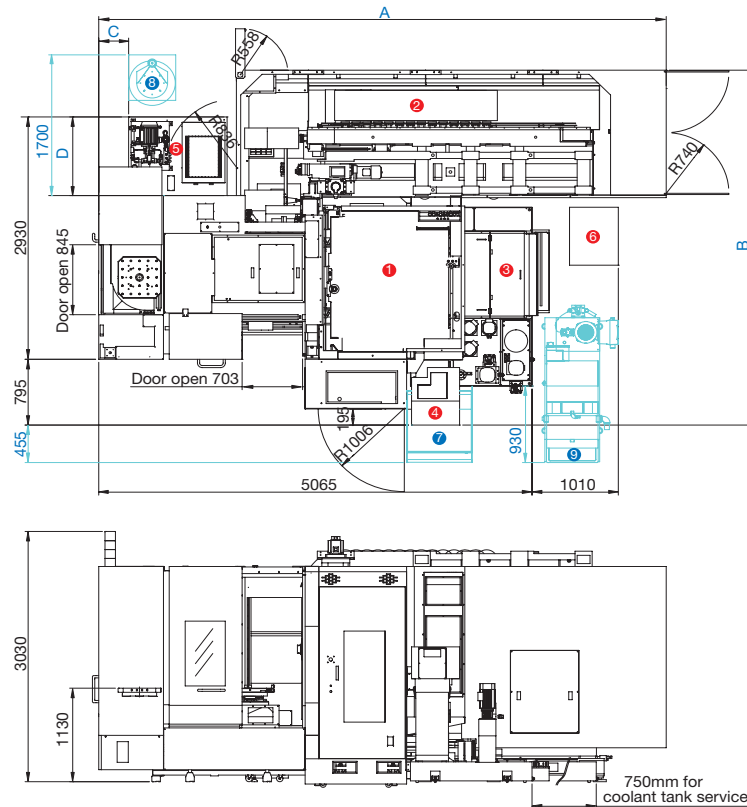
HX504C/HX505C

- 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.)

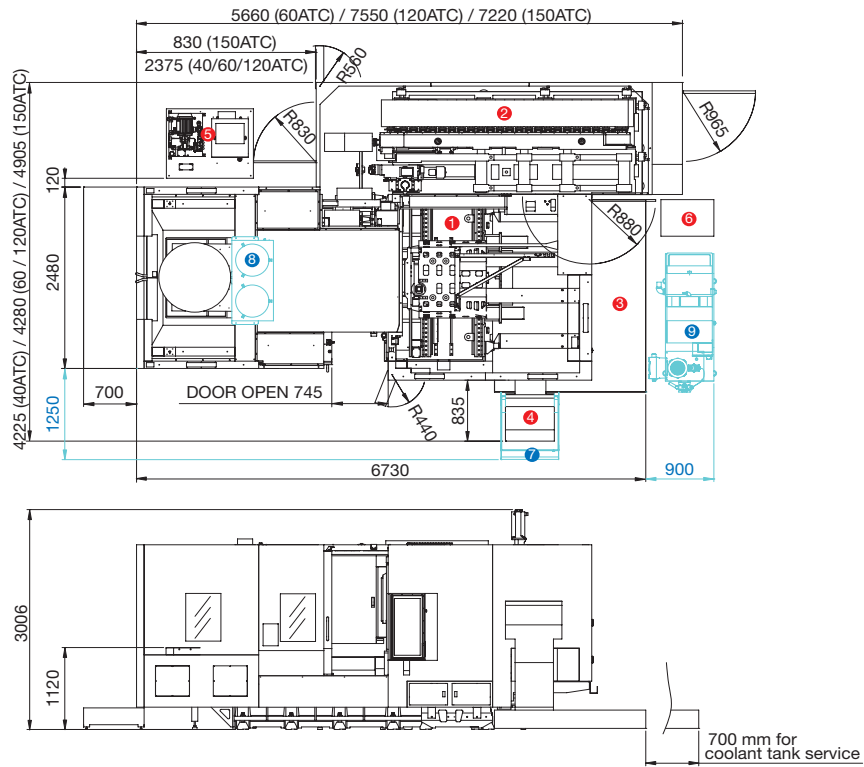


	HX504			
	A	B	C	D
60ATC	4,280	3,450	350	950
120ATC	4,800	3,620	350	950
240ATC	5,400	3,930	-	950

	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.)

