

Nissin MAX i-Series
5-axis trunnion machining centers



A New Era in Multi-Face Machining

- aerospace
- aircraft
- medical
- mold & die
- automotive
- oil industries



5-Axis Machining

NISSIN, trusted manufacturer of crankshaft and camshaft turning machines, now offers a complete family of **5-axis** machining centers.

Contouring 5-Axis Models

- MAX 410i-F40
- MAX 710i-F40/F50

Positioning 5-Axis Models (Up to 4-Axis Simultaneous)

- MAX 410i P40
- MAX 710i P50

F - Contouring 5-Axis
P - NC Index

Direct Drive Motor

Rotary and Tilting axes are driven by a built-in Fanuc direct drive motor. There is no friction between a rotor and stator. This absence of friction provides higher rotating speed, better power transfer and better repeatability.



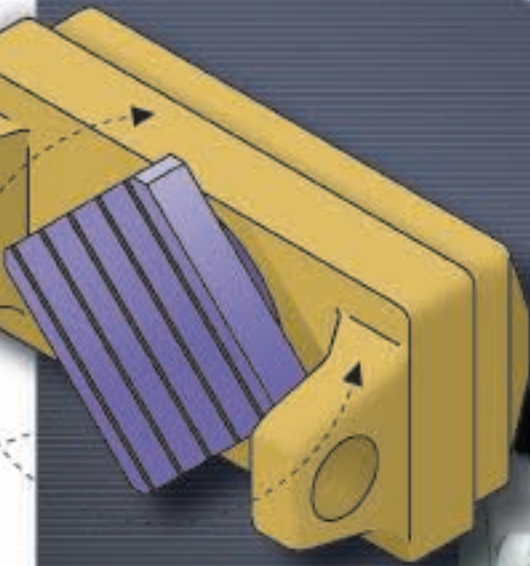
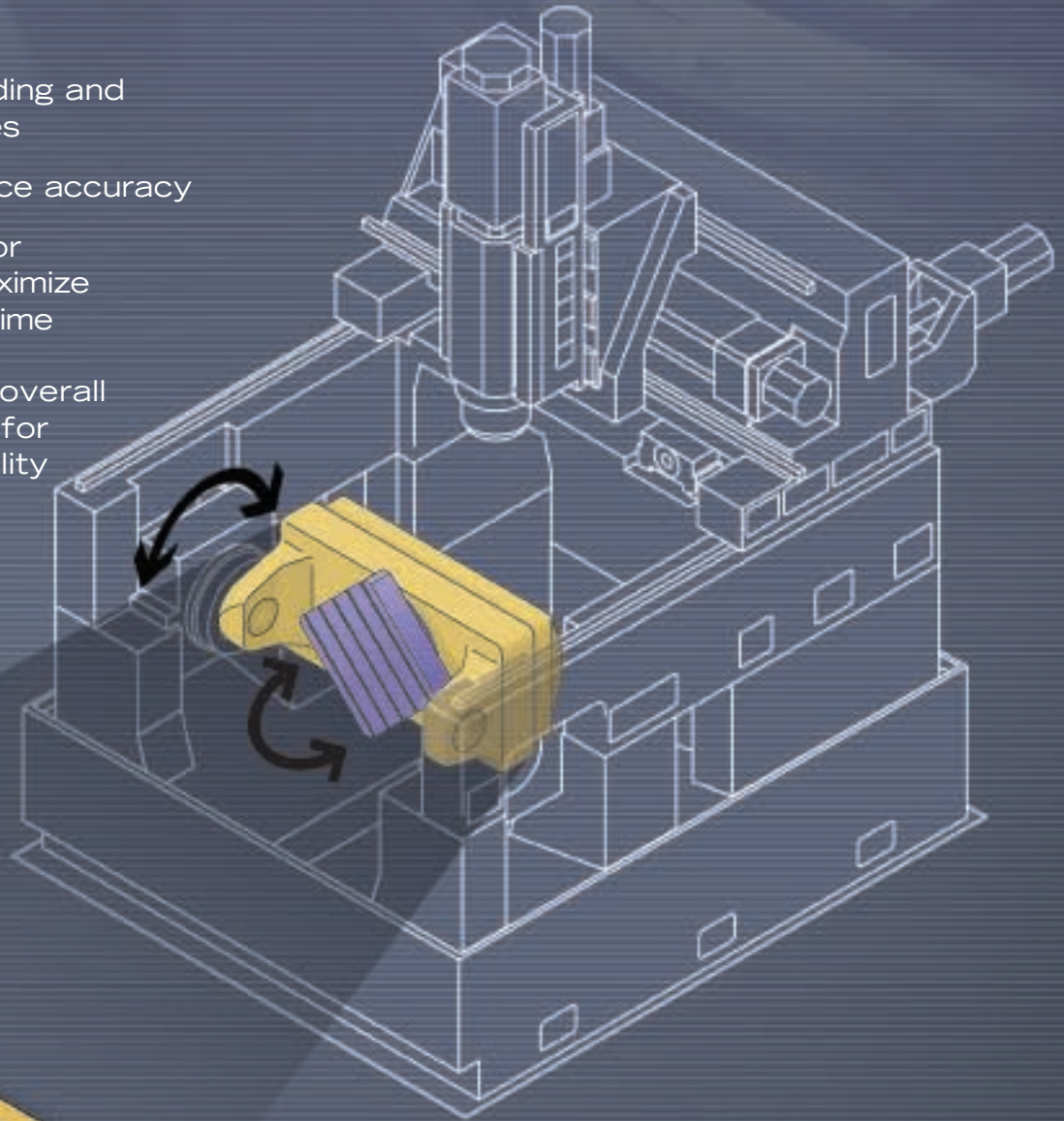
Large Work Envelope.
Rigid table design provides a generous swing area for accurate machining of larger parts.

Trunnion Mounting
provides greater rigidity and control than the cantilever designs found on others.

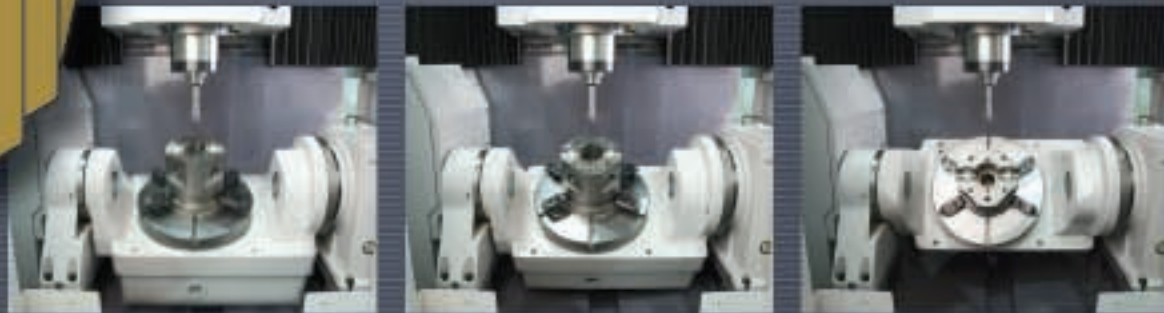


Nissin MAX i-Series | 5-axis trunnion machining centers

- Reduce workholding and fixturing expenses
- Improve workpiece accuracy
- Minimize operator involvement; maximize machine cutting time
- Provides faster overall production time for greater profitability

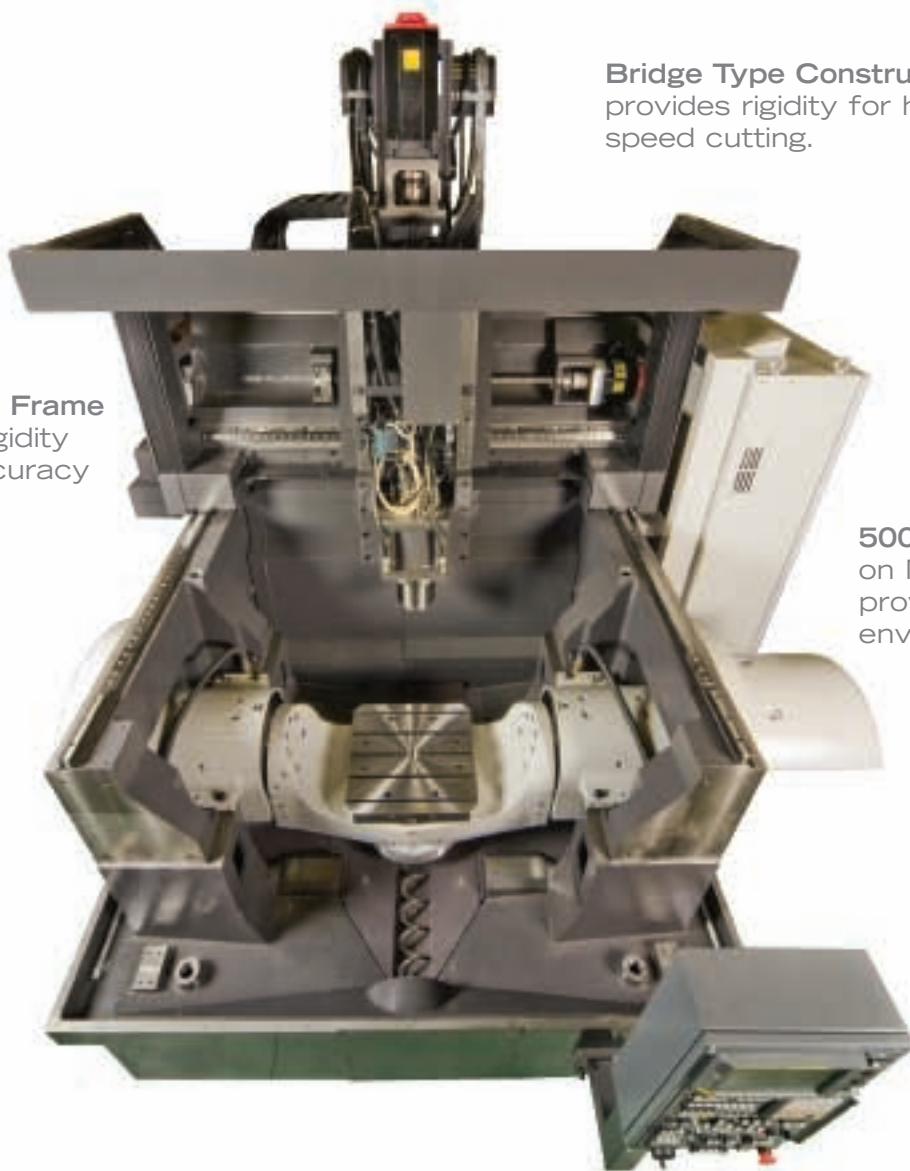


The MAX710i features a 500mm square worktable



Multidirectional Turntable – Keeps workpiece within reach and view.

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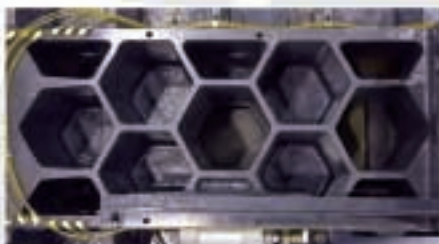


Bridge Type Construction provides rigidity for heavy high speed cutting.

Massive Cast Iron Frame provides added rigidity for repeatable accuracy and performance.

500mm Square Worktable on Max 710 models provides large work envelope.

Cast Iron Honeycomb (Max 410i) Pattern Design provides extra strength. Only from Nissin.



Cast Iron Frame (Max 410i) for added rigidity and accuracy.



Operator Friendly Controls conveniently placed, and easy to use.

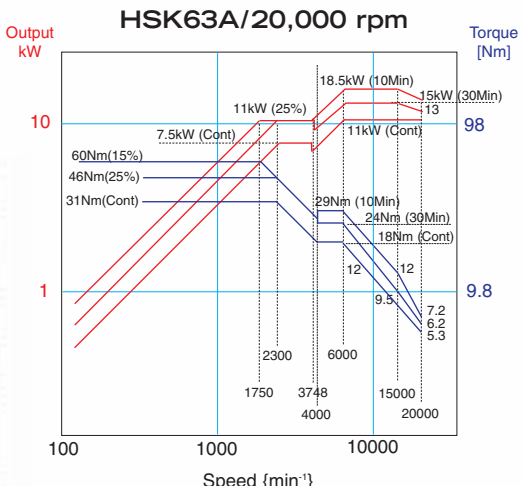




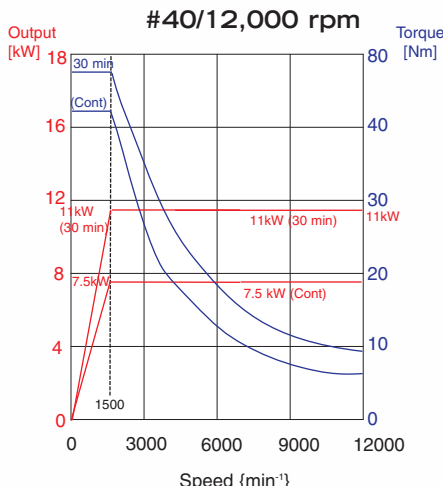
High Speed Precision reduces set-up and between-cut times.



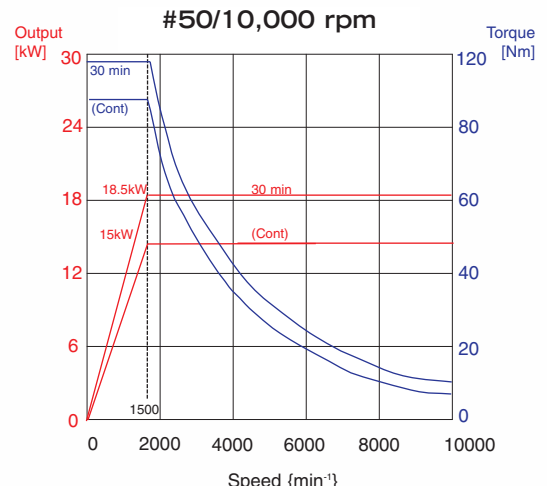
Spindle Power Drive



Power: 11/15/18.5 kW (Cont/30min./10min.)
Torque: 60Nm (S3 15%)

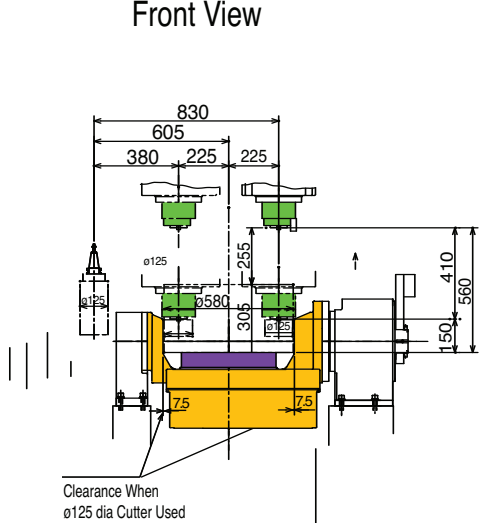
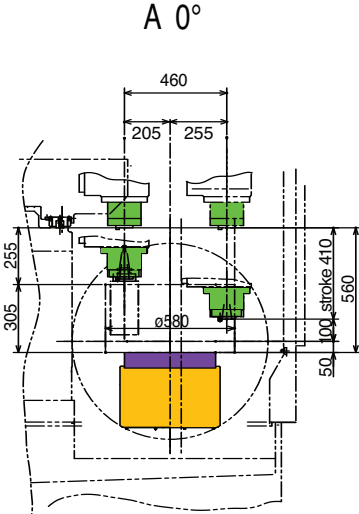
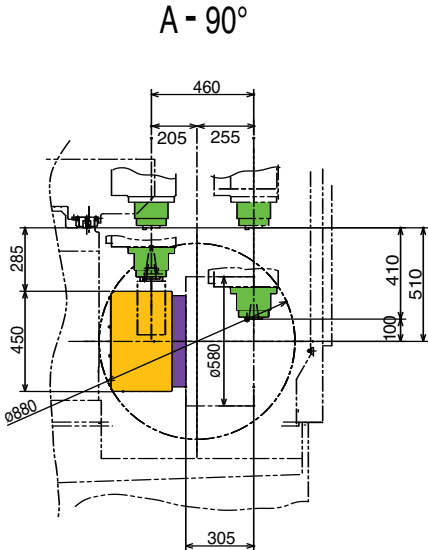
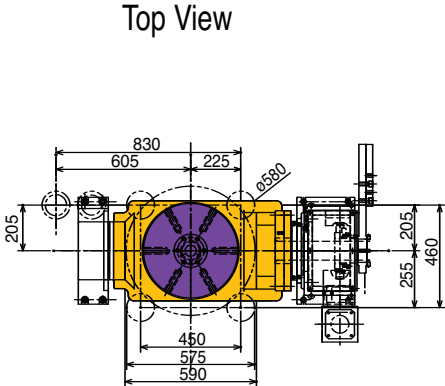
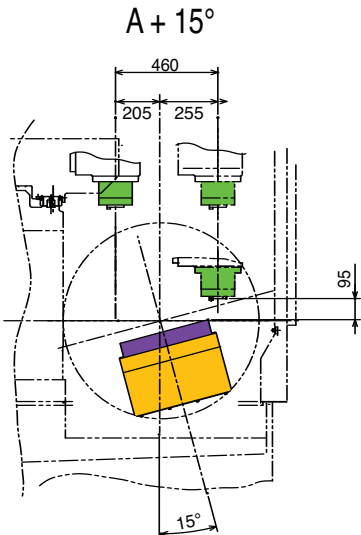
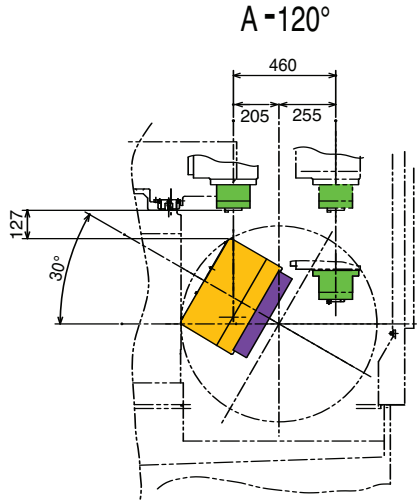


Power: 7.5/11kW (Cont/30min.)
Torque: 70Nm (30 Min)

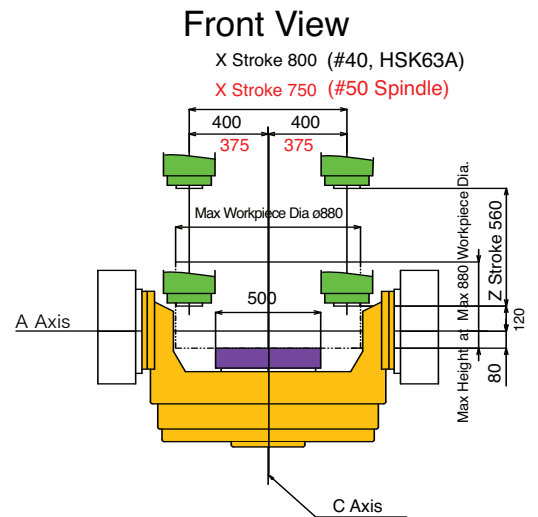
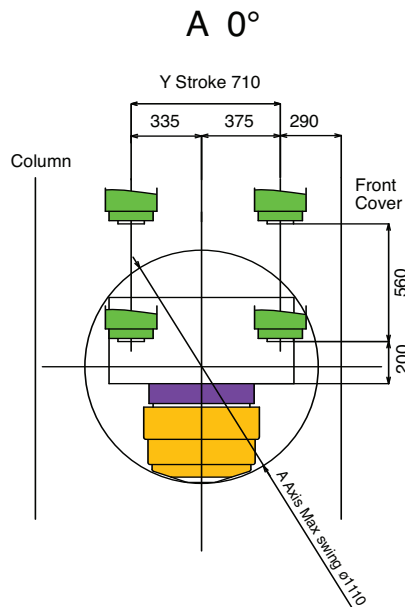
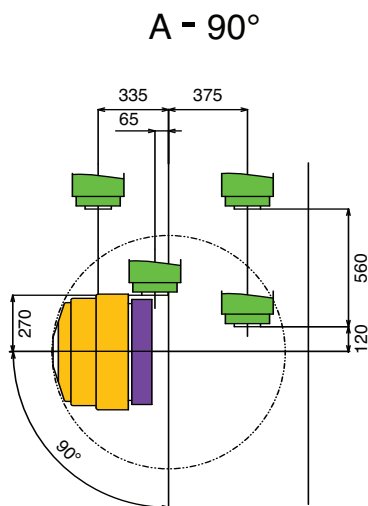
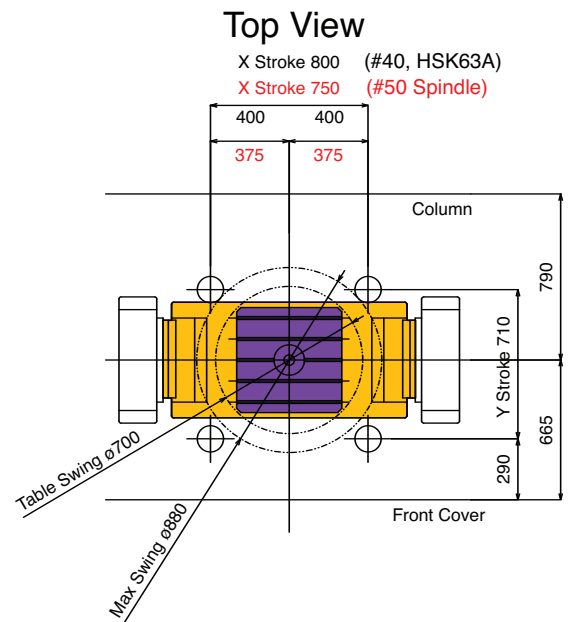
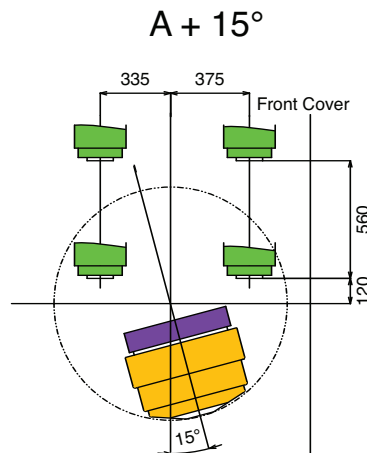
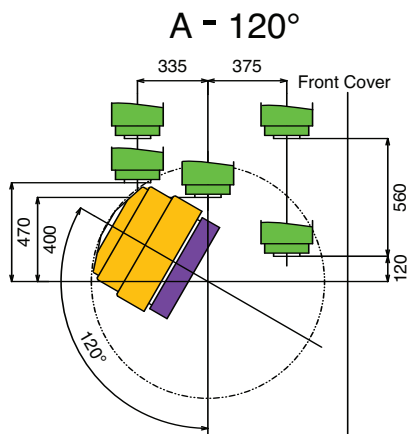


Power: 15/18.5.kW (Cont/30min.)
Torque: 117.8Nm (30 Min)

MAX 410i Work Envelope



MAX 710i Work Envelope



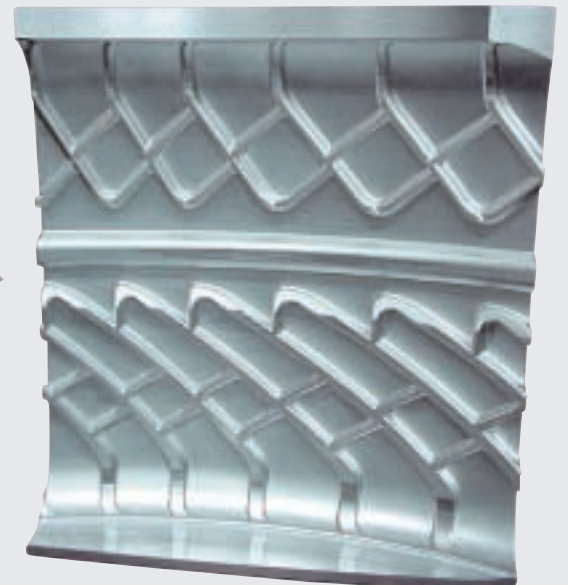
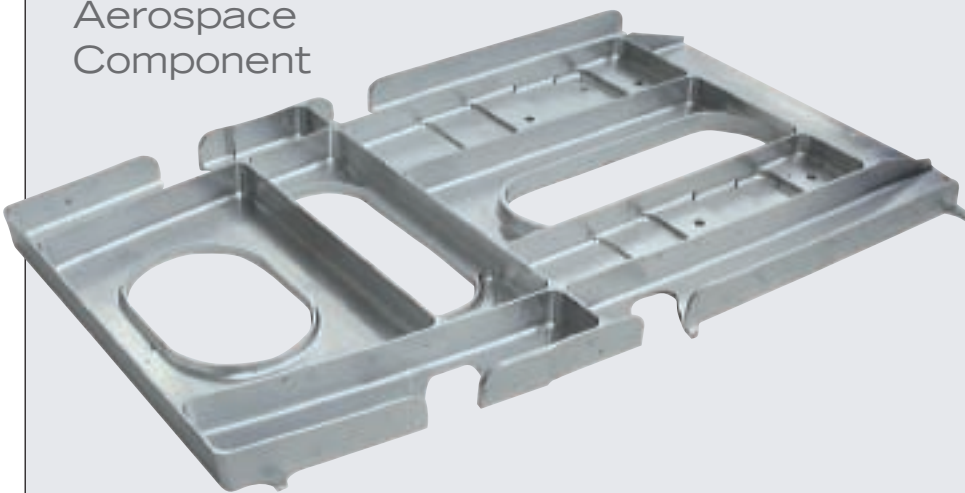
Quality You Can See

Sample 5-axis Workpieces.



Impeller

Aerospace
Component



Tire Mold

Specifications

MAX 410i/MAX 710i			MAX 410i-F40	MAX 410i-P40	MAX710i-F40/F50	MAX710i-P50
			Contouring 5-axis	Positioning 5-axis	Contouring 5-axis	Positioning 5-axis
Work Area	X (longitudinal)	mm(inch)	450 (17.71)	450 (17.71)	800/750 (31.49/29.52)	750 (29.52)
	Y (across)	mm(inch)	460 (18.11)	460 (18.11)	710 (27.95)	710 (27.95)
	Z (vertical)	mm(inch)	410 (16.14)	410 (16.14)	560 (22.04)	560 (22.04)
Trunnion Table	Table size	mm(inch)	425 dia. (16.73)	425 dia. (16.73)	500 sq. (19.68)	500 sq. (19.68)
	Max swing bet.trunnions		580 (22.83)	580 (22.83)	880 (34.64)	880 (34.64)
	Max. load	kg (lbs)	250 (550)	250 (550)	500 (1,100)	500 (1,100)
	A (tilting)	deg	-120 ~ +15			
	C (rotating)	deg	360			
	Min. increment	deg	0.001			
	Surface	mm(inch)	14 (0.55) (T-slot size)			
Spindle	Spindle speed	rpm	20,000/12,000	12,000	20,000/10,000	10,000
	Spindle motor (30min./cont.)	kW (hp)	15/11, 11/7.5 (20/15, 15/10)	11/7.5 (15/10)	15/11, 18.5/15 (20/15), (25/20)	18.5/15 (25/20)
Feed	Rapid X,Y	m(in.)/min	40 (1,575)	40 (1,575)	40 (1,575)	40 (1,575)
	Rapid Z	m(in.)/min	32 (1,260)	32 (1,260)	32 (1,260)	32 (1,260)
	Rapid A	rpm	30	25	25	8
	Rapid C	rpm	150	40	125	30
	Feed X,Y,Z	m(in.)/min	10 (393.7)	10 (393.7)	10 (393.7)	10 (393.7)
	Feed A	rpm	30	25	25	8
	Feed C	rpm	150	40	125	30
ATC	Shank type		HSK63A/CAT40/BT40	CAT40/BT40	HSK63A/CAT50/BT50	CAT50/BT50
	Number of tools		28 (40)	28 (40)	30 (40)	30 (40)
	MAX tool dia.	mm(inch)	125 (4.92)	125 (4.92)	125/160 (4.92/6.29)	160 (6.29)
	Max. length	mm(inch)	280 (11.02)	280 (11.02)	280/350 (11.02/13.77)	350 (13.77)
	Max. weight	kg(lbs)	8 (17.6)	8 (17.6)	8/16 (17.6/35.2)	16 (35.2)
	Tool selection		bi/fixed			
PowerSource	Electrical power supply	kVA	55/50	35	70/75	50
	Compressed air supply	Mpa (psi)	0.5 (72.5)	0.5 (72.5)	0.5 (72.5)	0.5 (72.5)
Coolant	Tank capacity	liter(gal)	300 (78.94)	300 (78.94)	500 (19.68)	500 (19.68)
Machine size	Height	mm(inch)	3,006 (118.3)	3,006 (118.3)	2,950 (116.1)	2,950 (116.1)
	Floor space	mm(inch)	2,100 x 3,220 (82.67 x 126.7)	2,100 x 3,220 (82.67 x 126.7)	2,960 x 4,415 (116.5 x 173.8)	2,960 x 4,415 (116.5 x 173.8)
	Weight	kg (lbs)	7,500 (16,500)	7,500 (16,500)	18,000 (39,600)	18,000 (39,600)

MAX 410i Dimensions

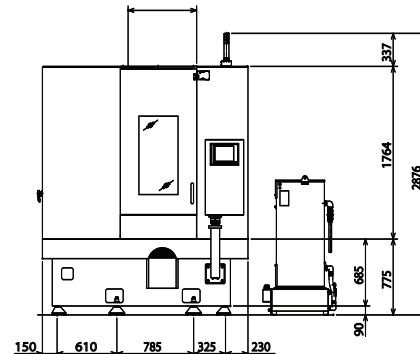
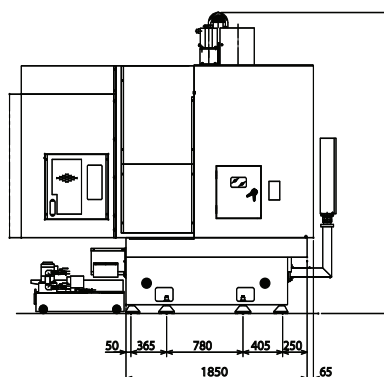
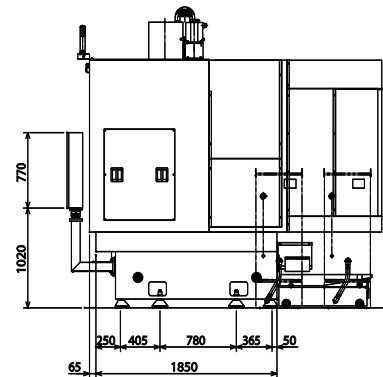
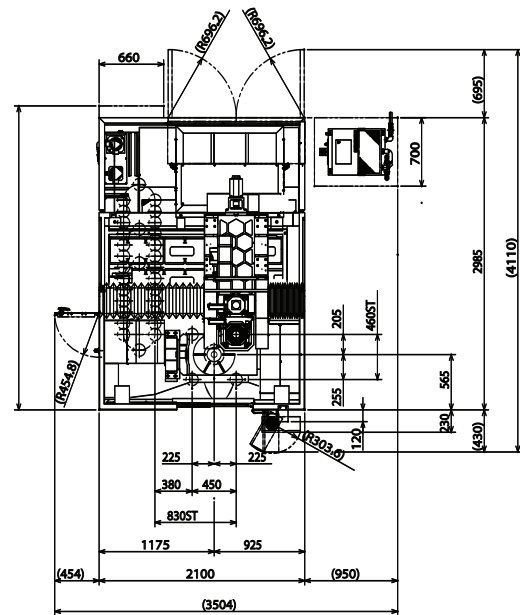
Standard Specifications and Equipment

- HSK 63A 20,000 rpm or CAT40 12,000 rpm
- Flood Coolant
- *Coolant Through Spindle (I/F only)
- Splash Guard
- Splash Guard Safety Interlock
- ATC Guard Safety Interlock
- Manual Pulse Generator (stationary type)
- Work Light

* North American Market Only

Optional Specifications and Equipment

- ATC40 Magazine
- Coolant Through Spindle Equipment
- Chip Conveyor (various types available)
- Tool Length Measuring Device
- Workpiece Measuring Device
- Chip Air Blow
- BT40, 12,000 rpm Spindle



MAX 710i Dimensions

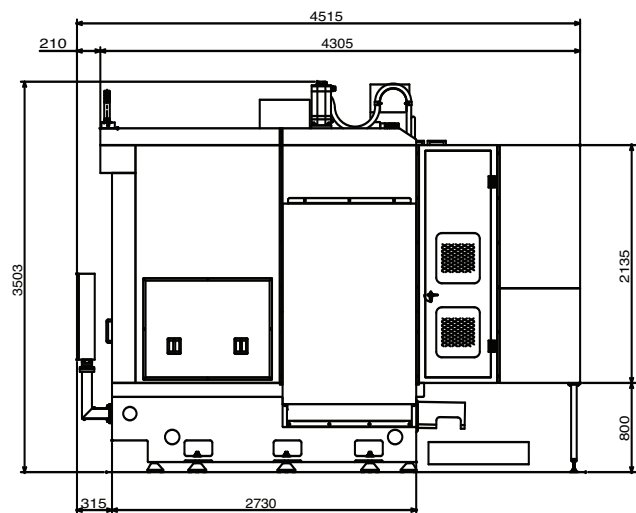
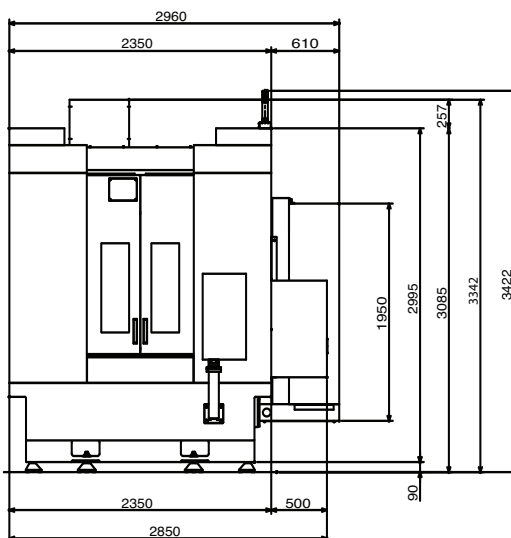
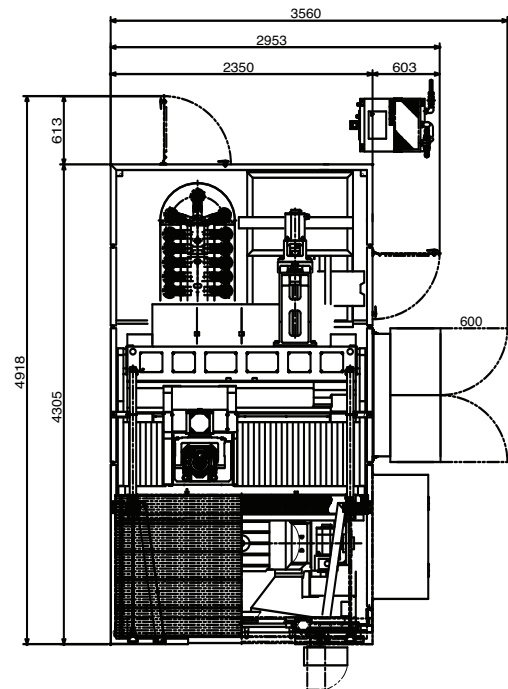
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 Chip Conveyor (various types available)
 Tool Length Measuring Device
 Workpiece Measuring Device
 Chip Air Blow





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