

MEGA-110

Heavy Duty Horizontal CNC Lathe



UTMOST CONVENIENCE & HIGH PRODUCTIVITY

HEAVY DUTY CNC LATHE

MEGA-110 has been specifically designed suitably for ship building, wind power and new energy, mining, oil as well as heavy-precision parts for aircraft industry. The machine offers special features such as 3-step gear box with cooling system, built-in type tailstock with rack & pinion moving system and large dimensioned special ball screw with driving nut for extreme strong support and precision.

- * High Rigid Flat Bed Structure
- * 3 Point Contacts with Cylinder Bearing + Angular Roller Bearing
- * Spindle Motor Power : 55.5 / 37 kW (74.4 / 50 HP)
- * Max. Loading Capacity : 12 ton
- * Built-In Tail Stock Ppindle
- * Portable / Fixed MPG Handle



Various Accessories

• Spindle Bore



Dia. 155mm (A2-15)



Dia. 255mm (A2-15)

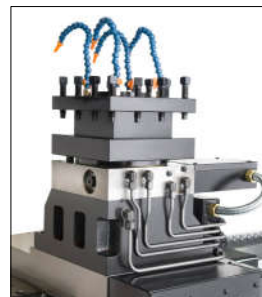


Dia. 320mm (A2-20)

• Turret



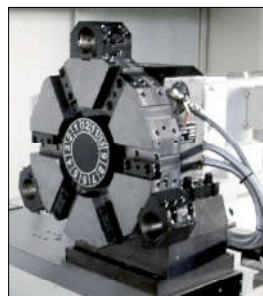
Curvic Coupling Toolpost



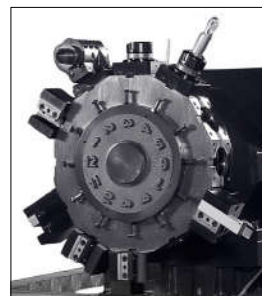
Hydraulic Toolpost (□250)



Hydraulic Toolpost (□350)



Electric Turret



Turnmill Turret(BMT-75)

• Rest



Steady Rest



Follow Rest



Roller Support

• Others



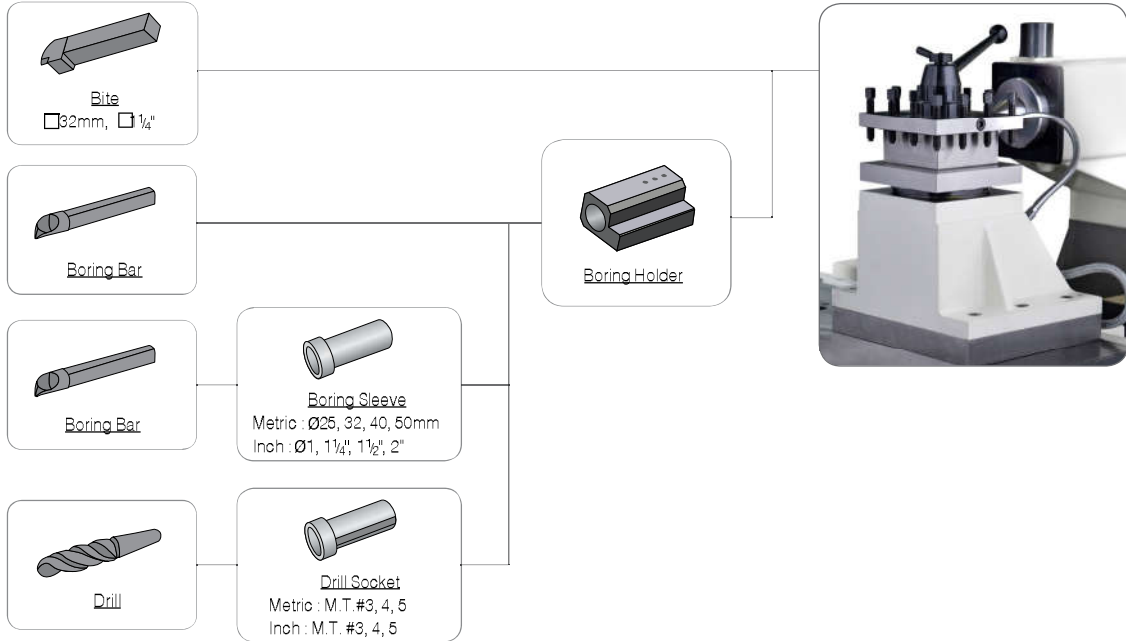
Grinding Attachment



Boring Bar Holder

Tooling System

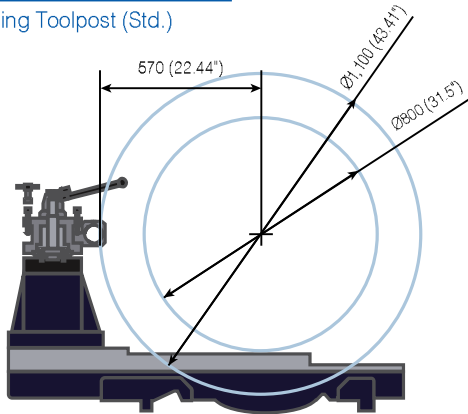
Curvic Coupling Toolpost (Std.)



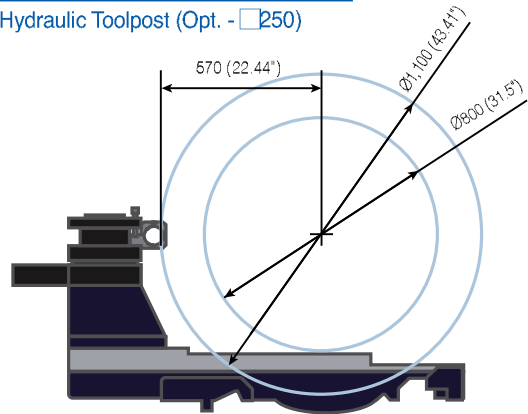
Turret Interference

* Unit: mm(inch)

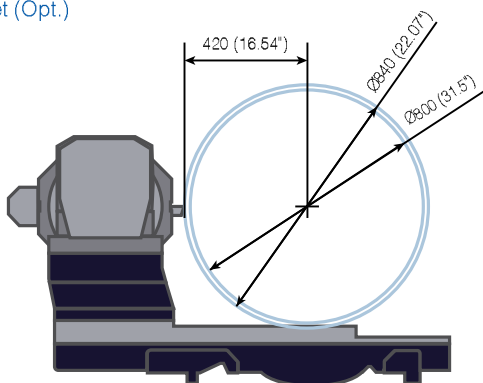
Curvic Coupling Toolpost (Std.)



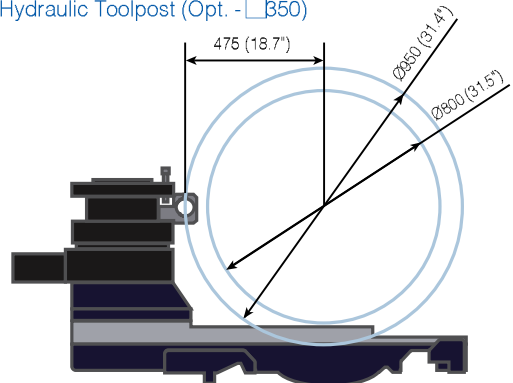
Hydraulic Toolpost (Opt. - □250)




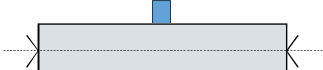

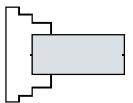
Electric Turret (Opt.)



Hydraulic Toolpost (Opt. - □350)

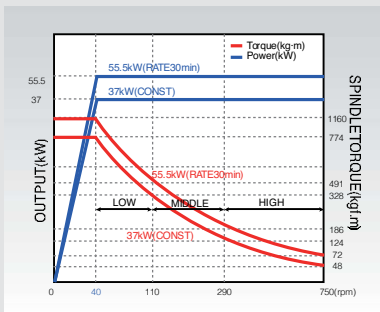


Loading Capacity

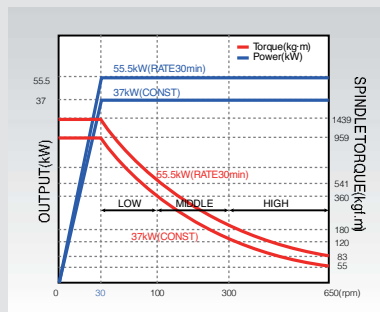
Description	Supporting Method	Loading Capacity
Chuck+ Tailstock		8,000 kg _f
Steady Rest (1ea)		10,000 kg _f
Steady Rest (2ea)		12,000 kg _f
Chuck		2,000 kg _f

Spindle Power-Torque Diagram

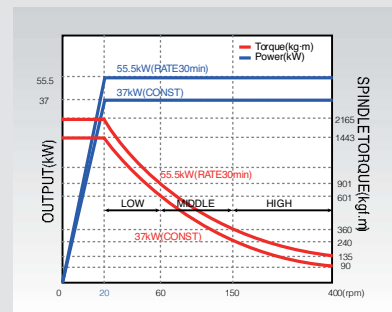
SIEMENS System [Dia. 155mm]



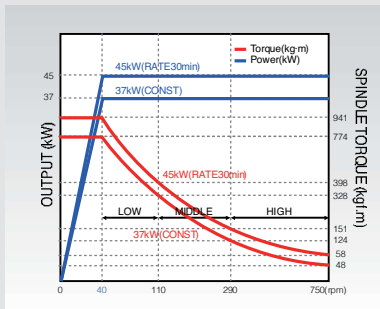
SIEMENS System [Dia. 255mm]



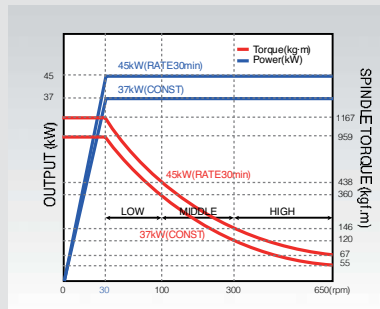
SIEMENS System [Dia. 320mm]



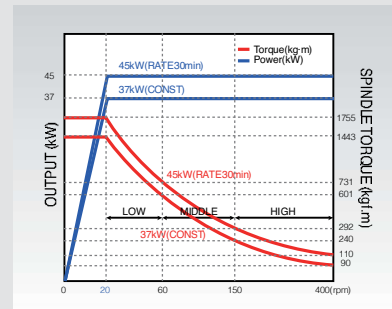
FANUC System [Dia. 155mm]



FANUC System [Dia. 255mm]



FANUC System [Dia. 320mm]



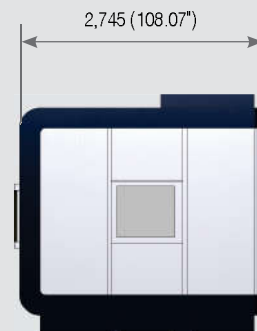
Machine Size

* Unit: mm(inch)

3000 type : 6,455 (254.13") / 4000 type : 7,455 (293.5")
 5000 type : 8,455 (332.87") / 6000 type : 9,455 (372.24")



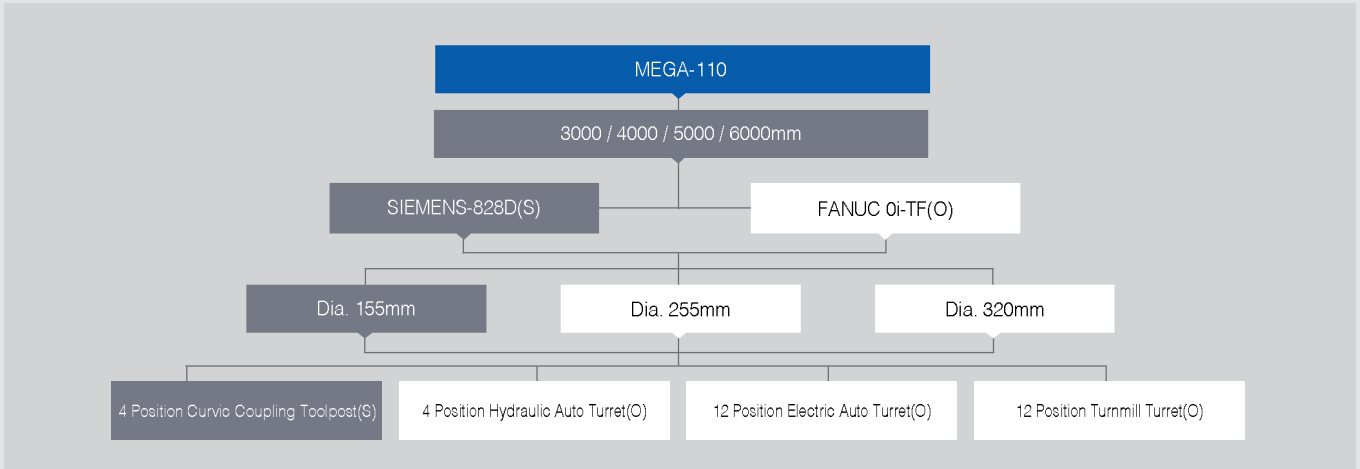
Front View



Right View

Product Configuration

Each product can be configured to fit your application.



Machine Specifications

ITEM		MEGA-110			
		3000 type	4000 type	5000 type	6000 type
Capacity					
Max. Swing Over Bed	mm(inch)	Ø1,180 (46.46")			
Max. Swing Over Cross Slide	mm(inch)	Ø820 (32.28")			
Max. Cutting Dia. Over Bed	mm(inch)	Ø1,100 (43.31")			
Max. Turning Dia. on Cross Slide	mm(inch)	Ø800 (31.5")			
Distance Between Centers	mm(inch)	3,000 (118.11")	4,000 (157.48")	5,000 (196.85")	6,000 (236.22")
Bed					
Bed Length	mm(inch)	5,370 (211.42")	6,370 (250.79")	7,370 (290.16")	8,370 (329.53")
Bed Width	mm(inch)	700 (27.56")			
Bed Way Type	-	1 Bed, 2 Slide Way			
Feed Rates					
X-Axis Stroke	mm/min(ipm)	570 (22.44")			
Z-Axis Stroke	mm/min(ipm)	3,000 (118.11")	4,000 (157.48")	5,000 (196.85")	6,000 (236.22")
Rapid Speed (X / Z)	mm/min(ipm)	6,000 / 6,000 (236.22" / 236.22")			6,000 / 5,000 (236.22" / 196.85")
Spindle					
Spindle Nose	KS	A2-15 (Dia. 155, 255) / A2-20 (Dia. 320)			
Spindle Through Hole	mm(inch)	Ø155 / Ø255 / Ø320 (6.1" / 10.04" / 12.6")			
Spindle Bore Taper	Metric taper	No. 170 / 260 / 327			
Spindle Range	step	Auto 3 Steps			
Spindle Speed	rpm	40 ~ 630 (Dia. 155) / 30 ~ 650 (Dia. 255) / 20 ~ 400 (Dia. 320)			
Tool Post					
Type of Toolpost	-	H4			
Max. No. of Tools	ea	4			
Standard Tool Size	mm(inch)	□32 (1.26")			
Tail Stock (Built-In)					
Quill Dia.	mm(inch)	Ø 200 (7.87")			
Quill Bore Taper	MT	No. 6			
Quill Travel	mm(inch)	260 (10.24")			
Motor					
Main Motor	kW(HP)	55.5 / 37 (74.4 / 50)			
Servo Motor (X / Z)	kW(HP)	3.3 / 5.24 (4.4 / 7)			3.3 / 9.58 (4.4 / 12.8)
Coolant Pump	W(HP)	250 (0.34)			
Bed Lubrication Pump	W(HP)	57 (0.08)			
Spindle Lubrication Pump	W(HP)	200 (0.27)			
Coolant Tank Capacity	ℓ (gal)	220 (58.12)	270 (71.33)	320 (84.54)	370 (97.74)
Power (Isolating)	kVA	70			
Machine Size					
Length	mm(inch)	6,455 (254.13")	7,455 (293.5")	8,455 (332.87")	9,455 (372.24")
Width	mm(inch)	2,745 (108.07")			
Height	mm(inch)	2,440 (96.06")			
Weight	ton	12,500	14,000	15,500	17,500
CNC System		SIEMENS-828D			

Accessories

Standard Accessories		Optional Accessories	
• Boring Holder (I.D. : 2.36")	• Work Light	• Boring Bar	• Shop Turn (for SIEMENS System)
• Boring Sleeve (I.D. : 1", 1¼", 1½", 2")	• 4 Jaw Independent Chuck (18")	• Boring Bar Holder	• Steady Rest [Dia. 50~350mm(Roller) / Dia. 300~600mm(Roller)]
• Built-In Tailstock	• 4 Position Curvic Coupling Toolpost	• C-Axis Control (0.001°)	• Spindle Through Hole (Dia. 255, 320mm)
• CNC System : SIEMENS-828D		• Chip Conveyor (Hinge type)	• Transformer (70KVA)
• Coolant Equipment		• CNC System : SIEMENS-840D sl	• 3 Jaw Hydraulic Chuck (Dia. 155mm Only : 15, 21, 32")
• Dead Center : M.T. No.6		FANUC Oi-TF, FANUC 32i	• 3 Jaw Scroll Chuck : 18", 21, 24"
• Drill Socket : M.T. No.3, 4, 5		• Face Plate (Dia. 950mm)	• 4 Jaw Independent Chuck : 24, 28, 32, 40"
• MPG Handle (Portable)		• Follow Rest [Dia. 60~240mm(Roller) / Dia. 60~250mm(Metal)]	• 4 Position Hydraulic Turret
• NC Cooler		• Full Cover	• 12 Position Electric Turret
• Operation Manual & Part List		• Grinding Attachment	• 12 Position Turnmill Turret with C-Axis (1, 5ton)
• Semi Enclosed Splash Guard : 1 Door		• Manual Guide i (For FANUC System)	
• Signal Lamp (R/Y/G, 3-colors)		• MPG Handle (Fixed)	
• Spindle Through Hole : Dia. 155mm		• Semi Enclosed Splash Guard : 2nd Door	
• Tool Box & Kits			

NC Specifications [SIEMENS-828D]

※— : Notavailable S: Standard O: Option

ITEM	SPECIFICATION		ITEM	SPECIFICATION	
Controlled Axis			Program Input		
Controlled Axes	2-Axis (X, Z)	S	Programmable Scale Factor	Scale, Ascale	S
Linear Interpolation Axis	2-Axis (X, Z)	S	Programmable Mirroring	Mirror, Amirror	S
	0.001mm, 0.001deg, 0.0001inch	S	Number of Zero Offset	100ea (G54.)	S
Least Input Increment		S	Manual Measurement of Zero Offset	Scratch Function	S
Working Area Limit		S	Subroutine Call	11 Levels	S
Software Traverse limit 1, 2		S	Custom Macro		S
Measuring System Error Compensation		S	User Parameter	R-Parameters (300ea)	S
Backlash Compensation		S	Turning Cycle	Cycle 93 ~ 97	S
Operation			Drilling Cycle	Cycle 81 ~ 82	S
Number of Channels	1 Channels	S	Contour Programming		S
Number of Mode Groups	1 Mode Groups	S	Compare and Logic Operations		S
Inch / Metric Conversion	G70, G71	S	Arithmetic and Trigonometric Function		S
Reference Position Approach	G74	S	Spindle Speed Function		
Dry Run, Single Block		S	Constant Surface Speed Control	G96 / G97	S
Block Search With / Without Calculation		S	Spindle Override	50 - 120%	S
Repositioning On The Contour - With Operator Command - Program-Controlled	Repos, Reposa	S	Spindle Orientation	M19	S
Program Execution From Memory Card	USB, Flash Card	S	Digital Load Meter		S
Program Execution From Network Drive	Network Manager	S	Spindle Synchronous Control		-
Interpolation Function			Tool Function / Compensation		
Positioning	G00	S	Tool Function	T-Number	S
Linear Interpolation - Straight Line With Angle	G01 ANG	S	No. of Tool / Cutting Edges	256 / 512 ea	S
Circular Interpolation - Polar Coordinates - Tangential Transition	G02, G03 AP, RP CT	S	Tool Nose Radius Compensation		S
Dwell (Per Seconds)	G04	S	Tool Geometry / Wear Compensation		S
Thread Cutting - With Constant Lead - With Variable Lead	G32 G33, G34	S	Manual Tool Offset Calculator		S
Polar Coordinates	G110, G111, G112	S	Tool Data Backup		S
Chamfer, Rounding	CHF, CHR, RND	S	Editing Operation		
Approaching A Fixed Point	G75	S	Part Program Storage Size	CNC User Memory 5MB	S
Helical Interpolation		S	Text Editor With Editing Functions	Select, Copy, Delete	S
Feed Function			Dual Editor		S
Rapid Traverse Override - With Feed Rate Override	0 - 120%	S	Write Protection for Lines		S
Feed Per Minute (mm/min)	G94	S	Suppression of Line In The Display		S
Feed Per Revolution (mm/rev)	G95	S	Screen Saver		S
Feed-Rate for Positioning Axis	FA, FPR	S	Cyclical Alarm Display		S
Jog Feed Velocity	0 - 2,000 mm/min	S	Timer & Counter Function		S
Rapid Velocity	0 - 6,000 mm/min	S	Graphic Simulation		S
Program Input			Pocket Calculator Mode		S
G-Code System	SIEMENS G-Code (DIN66025)	S	Easy Program Selection		S
ISO-Dialect Mode	ISO-A	S	Multi-Language Display	English, German, French, Italian, Chinese, Spanish, Korean, Portuguese	S
Absolute / Incremental Dimension	G90, G91	S	Data Input / Output		
Working Area Limitation	G25, G26	S	Interface Devices	USB, CF Card	S
Exact Stop	G60, G9	S	Memory Card		O
Programmable Rotation	Rot, Arot	S	Ethernet Connection		S
			Others		
			Machine Step Programming	Shop Turn	O
			Extended Operation		S
			Shopmill HMI Functions		S
			Service Planner	Maintenance Scheduler	S
			Easy Extend	Managing Machine Unit	S
			Display Unit	10.4" color LOD	S

Hwacheon Global Network

🌐 Hwacheon Headquarters 🇺🇸 Hwacheon USA 🇩🇪 Hwacheon Europe 🇸🇬 Hwacheon Asia



HWACHEON

Please contact us for product inquiries.

www.hwacheon.com

The product design and specifications may change without prior notice.

HEAD OFFICE

HWACHEON MACHINERY CO., LTD
46, BANGBAE-RO, SECHO-GU, SEOUL, 137-85 1,
KOREA
TEL: +82-2-523-7766 FAX: +82-2-523-2867

USA

HWACHEON MACHINERY AMERICA, INC.
555, BOND STREET, LINCOLNSHIRE, ILLINOIS,
60069, USA
TEL: +1-847-573-0100 FAX: +1-847-573-9900

GERMANY

HWACHEON MACHINERY EUROPE GMBH
JOSEF-BAUMANN-STR, 25, 44805 BOCHUM, GERMANY
TEL: +49-234-912-8160 FAX: +49-234-912-816-60

SINGAPORE

HWACHEON ASIA PACIFIC PTE. LTD.
21 BUKIT BATOK CRESCENT #08-79, WCEGA
TOWER,
SINGAPORE 658065
TEL: +65-6515-4357 FAX: +65-6515-4358