

MEGA-100

Heavy Duty Horizontal CNC Lathe



UTMOST CONVENIENCE & HIGH PRODUCTIVITY

HEAVY DUTY CNC LATHE

MEGA-100 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 ultra-precision spindle bearing
- * Auto 3 step spindle speed range
- * Spindle motor power : 18.5 / 23 kW
- * Max. loading capacity : 5 ton (Opt. 8 ton)
- * Built-in tail stock spindle
- * Portable / Fixed MPG handle



Various Accessories

• Spindle Bore



Dia.155mm (A2-15)



Dia.255mm (A2-15)



Dia.320mm (A2-20)

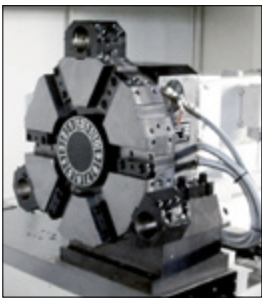
• Turret



Curvic Coupling Toolpost



Hydraulic Toolpost (□250)



Electric Turret



Turnmill Turret(BMT-75)

• Rest



Steady Rest

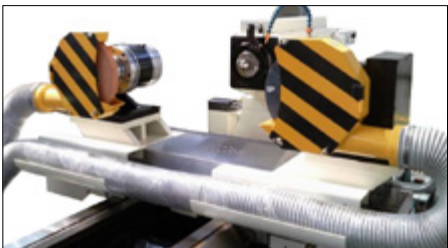


Follow Rest



Roller Support

• Others



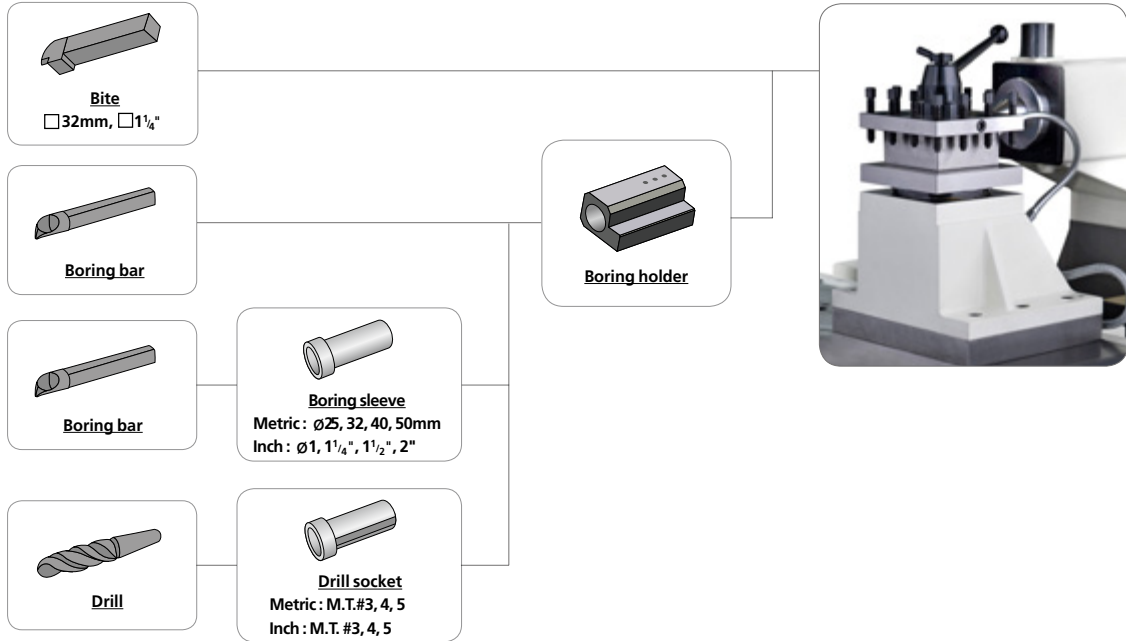
Grinding Attachment



Boring Bar Holder

Tooling System

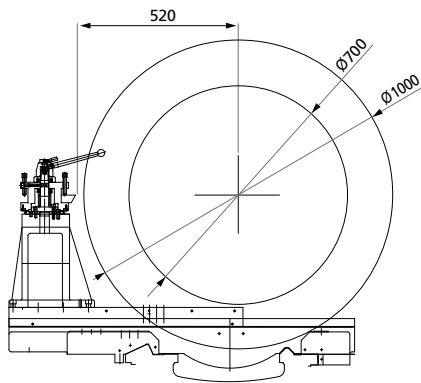
Curvic coupling toolpost (Std.)



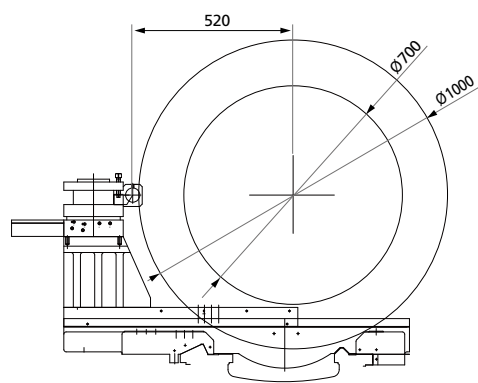
Turret Interference

* Unit: mm

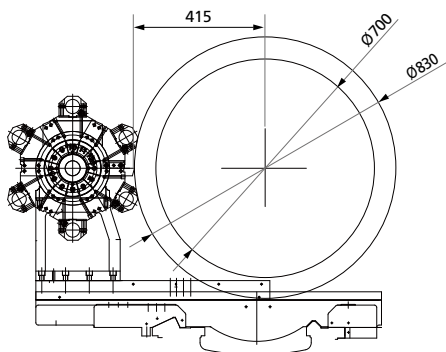
Curvic coupling toolpost (Std.)




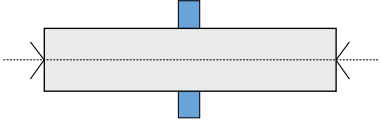
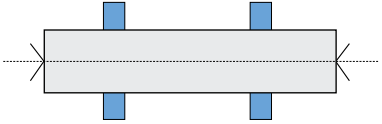
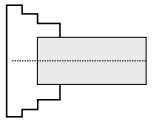
Hydraulic toolpost (Opt.)



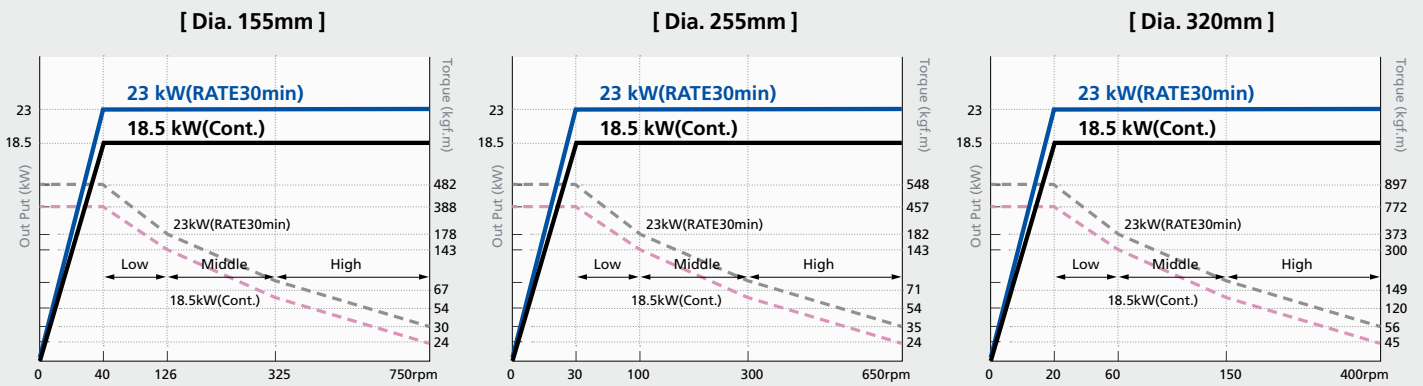
Electric turret (Opt.)



Loading capacity

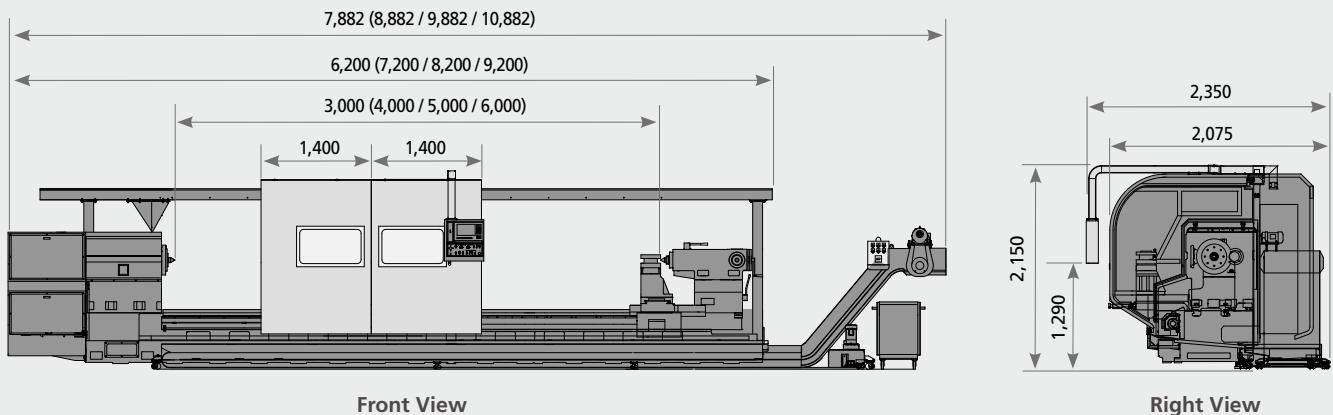
Description	Supporting method	Loading capacity
Chuck+Tailstock		5,000kgf
Steady rest(1EA)		6,500kgf
Steady rest(2EA)		8,000kgf
Chuck		1,000kgf

Spindle power-torque diagram



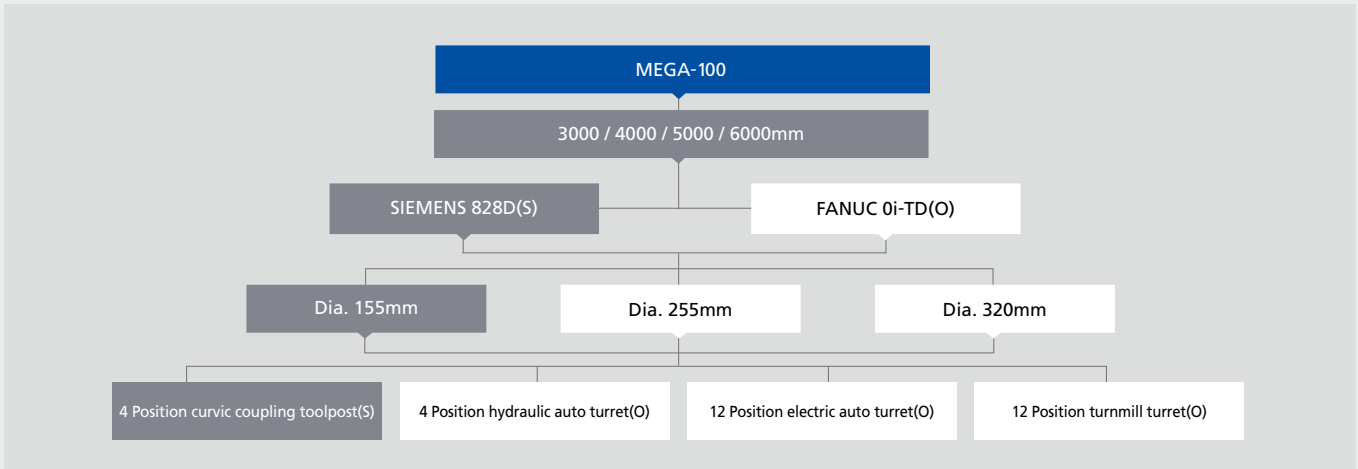
Machine size

* Unit: mm



Product Configuration

Each product can be configured to fit your application.



Machine Specifications

ITEM		MEGA-100			
Capacity					
Swing over bed	mm	Ø1,080			
Swing over cross slide	mm	Ø720			
Max. cutting dia. over bed	mm	Ø1,000			
Max. turning dia. on cross slide	mm	Ø700			
Distance between centers	mm	3,000	4,000	5,000	6,000
Bed					
Bed length	mm	5,370	6,370	7,370	8,370
Bed width	mm	700			
Bed way type	-	1 bed, 2 slide way			
Feed rates					
X-axis stroke	mm/min	520			
Z-axis stroke	mm/min	3,000	4,000	5,000	6,000
Rapid speed (X / Z)	mm/min	6,000 / 6,000			
Spindle					
Spindle nose	KS	A2-15 (Dia.155, 255) / A2-20 (Dia.320)			
Spindle through hole	mm	Dia.155 / Dia.255 / Dia.320			
Spindle bore taper	Metric Taper	No.170 / 260 / 327			
Spindle range	step	Auto 3 steps			
Spindle speed	rpm	40 ~ 750 (Dia.155) / 30 ~ 650 (Dia.255) / 20 ~ 400 (Dia.320)			
Tool post					
Type of toolpost	-	Curvic coupling			
Max. No. of tools	ea	4			
Standard tool size	mm	□32			
Tail stock (Built-in)					
Quill dia.	mm	200			
Quill bore taper	MT	No.6			
Quill travel	mm	260			
Motor					
Main motor	kW	18.5 / 23			
Servo motor (X / Z)	kW	3.3 / 5.24 (3000 ~ 5000 Type)		3.3 / 9.58 (6000 Type)	
Coolant pump	W	180			
Bed lubrication pump	W	53			
Spindle lubrication pump	W	200			
Coolant tank capacity	ℓ	220	270	320	370
Power (isolating)	kVA	45			
Machine size					
Length	mm	6,200	7,200	8,200	9,200
Width	mm	2,350			
Height	mm	2,150			
Weight	ton	11,500	13,000	14,500	16,000
CNC system		Siemens 828D			

Accessories

Standard Accessories		Optional Accessories	
• 4 jaw independent chuck : 18"	• Spindle through hole : Dia. 155mm	• 3jaw hyd. chuck(Dia.155only) : 15,21,32"	• Grinding unit
• 4 position curvic coupling toolpost (Manual type)	• Tool kits & box	• 3jaw scroll chuck :18,20,21,24,25"	• Manual guide i (for Fanuc system)
	• Work light	• 4jaw indepentent chuck : 24,28,32,40"	• NC cooler
• Boring holder(I.D) : 60mm		• 4position hydraulic turret	• Semi enclosed splash guard : 2door
• Boring sleeve(I.D) : 25,32,40,50mm		• 12position electric turret	• Shop turn (for Siemens system)
• Built-in tailstock		• 12position turnmill turret	• Spindle through hole : Dia.255 / 320mm
• CNC system : Siemens-828D		• Boring bar	• Steady rest
• Coolant equipment		• Boring bar holder & sleeve	: Dia.50~350mm (Roller)
• Dead center : M.T. No.6		• C-axis indexing(0.001")	: Dia.300~600mm (Roller)
• Drill socket : M.T. No.3, 4, 5		• Chip conveyor (Hinge type)	• Transformer(isolating) : 45kVA
• Flicker lamp (R/Y/G, 3colors)		• CNC system : Fanuc 0iT-D	
• Operation manual & part list		• Face plate : Dia.950mm	
• Portable MPG handle		• Fixed MPG handle	
• Semi enclosed splash guard : 1door		• Follow rest : Dia.60~240mm(Roller) / Dia.60~250mm(Metal)	

NC Specifications [SIEMENS 828D]

※ — : Not available S : Standard O : Option

ITEM	SPECIFICATION		ITEM	SPECIFICATION	
Controlled axis			Program input		
Controlled axis	2-axis	S	Programmable mirroring	Mirror, Amirror	S
Interpolation axis	2-axis	S	No. of zero offset	100ea(G54..)	S
Least input increment	0.001mm, 0.001deg, 0.0001inch	S	Manual measurement of zero offset	Scratch funtion	S
Working area limit		S	Subroutine call	11levels	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 funtion		S
Reference positon 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	Repos, Reposa	S	Spindle orientation	M19	S
Program execution from RS 232C interface		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	G01		No. of tool/cutting edges	128 / 256ea	S
- straight line with angle	ANG	S	Tool nose radius compensation		S
Circular interpolation	G02, G03		Tool geometry/wear compensation		S
- polar coordinates	AP, RP	S	Manual tool offset calculator		S
- tangential transition	CT		Tool data backup		S
Dwell (Per seconds)	G04	S	Editing operation		
Thread cutting			Part program storage size	CNC User memory 3MB	S
- with constant lead	G32	S	Text editor with editing funtions	Select, Copy, Delete..	S
- with variable lead	G33, G34		Dual editor		S
Polar coordinates	G110, G111, G112	S	Write protection for lines		S
Chamfer, rounding	CHF, CHR, RND ...	S	Suppression of line in the display		S
Approaching a fixed point	G75	S	Screen saver		S
Helical, involute interpolation		O	Cyclical alarm display		S
Feed function			Timer & counter funtion		S
Rapid traverse override	0 - 120%	S	Graphic simulation		S
Feed per minute (mm/min)	G94	S	Pocket calculator mode		S
Feed per revolution (mm/rev)	G95	S	Easy program selection		S
Feedrate for positioning axis	FA, FPR ...	S	Multi-language display		
Jog feed velocity (X, Z)	0 - 2,000 mm/min	S		English, German, French, Italian, Chinese, Spanish, Japanese, Korean, Portuguese, Polish, Hungarian, Swedish, Russia	S
Rapid velocity (X, Z)	0 - 6,000 mm/min	S	Data input/output		
Separate override control	2 Channels	S	Interface devices	USB, CF Card	S
Program input			Memory card		O
G-code system	Siemens G-code (DIN66025)	S	Ethernet connection		S
ISO-dialect mode	ISO-A	S	Others		
Separate operating mode	2 Channels	S	Machine step programming	Shop Turn	O
Absolute/Incremental dimension	G90, G91	S	Extended operation		S
Working area limitation	G25, G26	S	Shopmill HMI funtions		S
Exact stop	G60, G9 ...	S	Service Planner	Maintenance scheduler	S
Programmable rotation	Rot, Arot	S	Easy extend	Managing machine unit	S
Programmable scale factor	Scale, Ascale	S	Display unit	10.4" color LCD	S

Hwacheon Global Network

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HWACHEON

Please contact us for product inquiries.

www.hwacheon.com

The product design and specifications may change without prior notice.

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