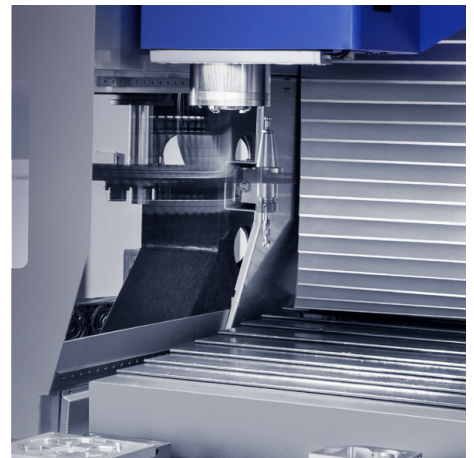
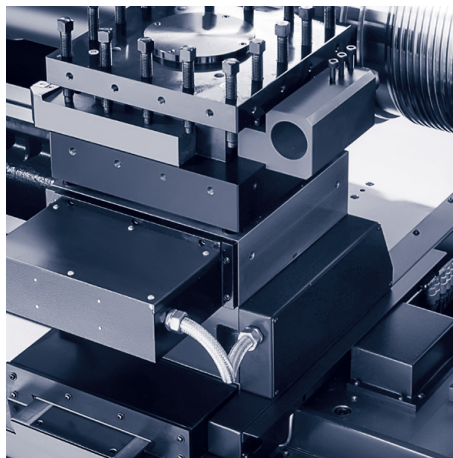
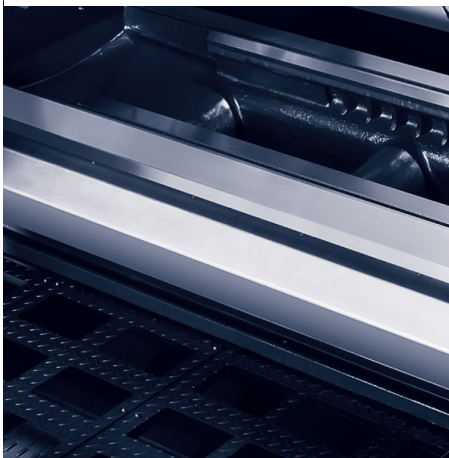
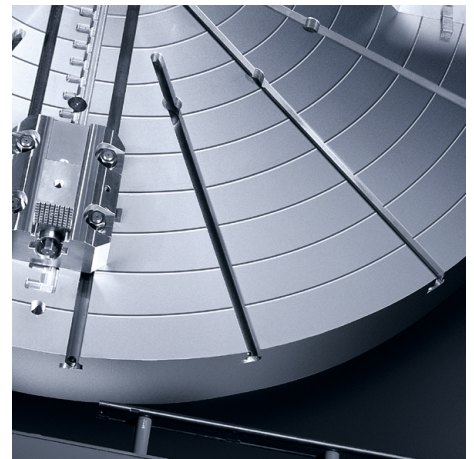
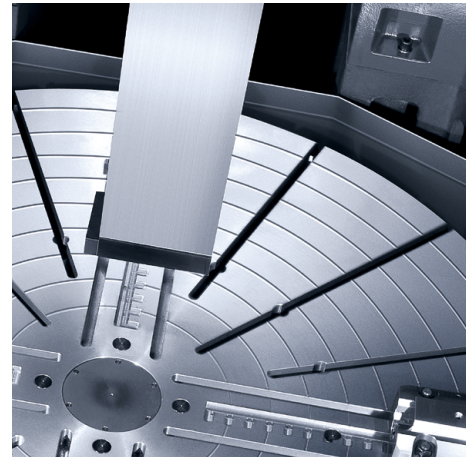
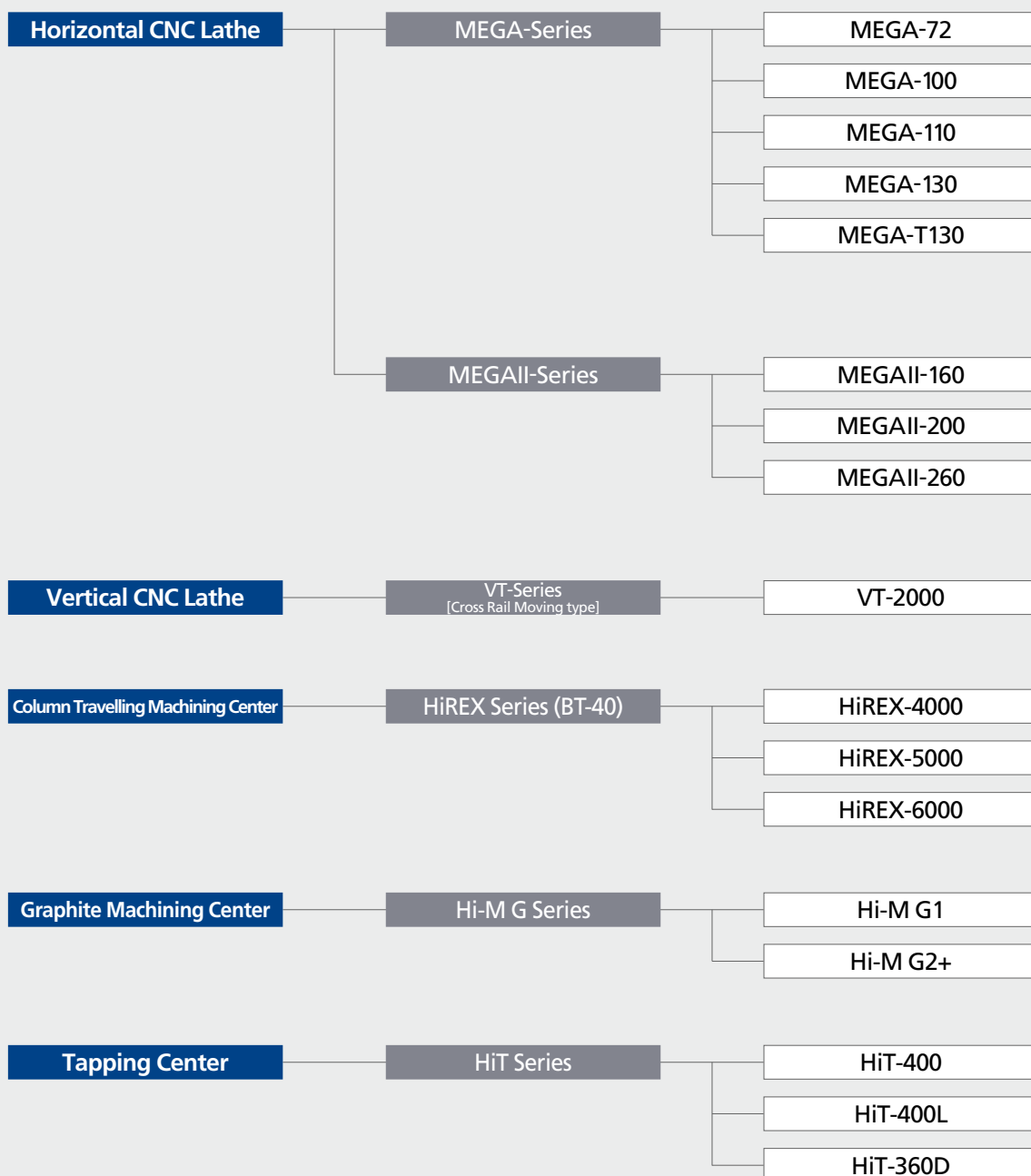




Machine Tools Line-Up

Machine Tools Line-Up

CNC Lathe and Machining Center



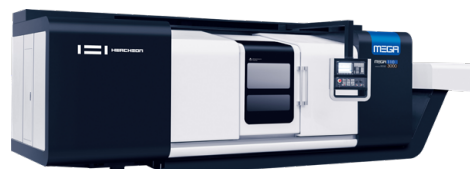
MEGA-Series



MEGA-72



MEGA-100



MEGA-110

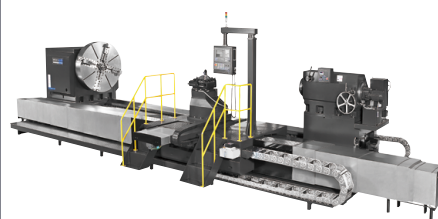


MEGA-130



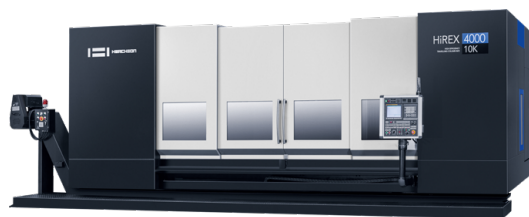
MEGA-T130

MEGAII-Series



MEGAII-160 / 200 / 260

HiREX-Series



HiREX-4000 / 5000 / 6000

VT-Series



VT-2000

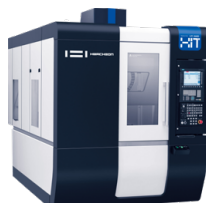
HiT-Series



HiT-400



HiT-400L



HiT-360D

Hi-M G-Series



Hi-M G1



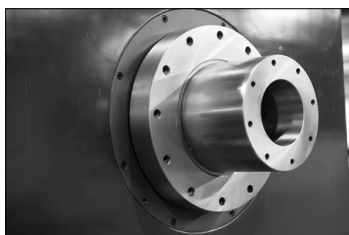
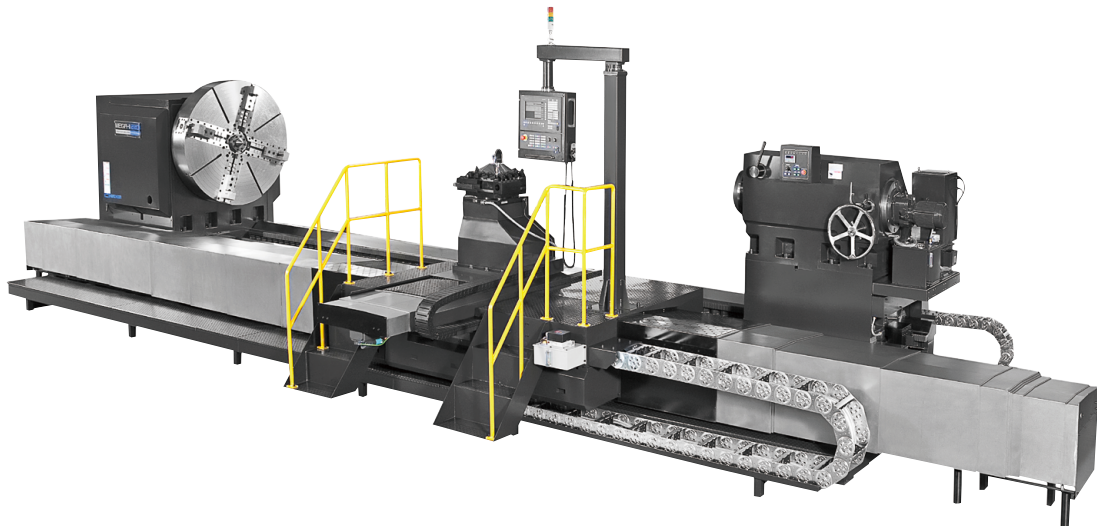
Hi-M G2+

MEGAII Series

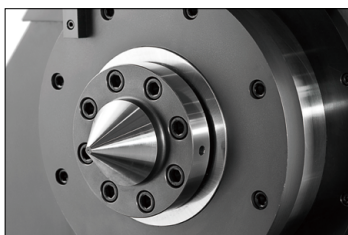
MEGAII-160 / 200 / 260

Heavy Duty CNC Lathe

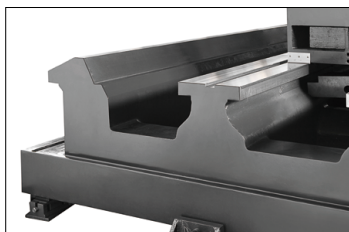
MEGA II series are specifically designed for ship building, wind power, mining, new & renewable energy as well as large & heavy duty precision parts for aircraft industries.



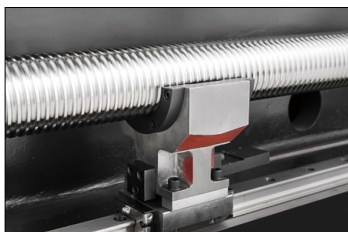
Special Spindle Nose



Built-in Tailstock



3 way Guide way Bed



Ball Screw Support



Electric Toolpost

Machine Specifications

Description		MEGAII-160	MEGAII-200	MEGAII-260
		6000/8000/10000/12000/17000	6000/8000/10000/12000/17000	6000/8000/10000/12000/17000
Capacity				
Swing Pver Bed	mm (inch)	Ø1,650 (64.96")	Ø2,050 (80.71")	Ø2,650 (104.33")
Swing Pver Cross Slide	mm (inch)	Ø1,250 (49.21")	Ø1,600 (62.99")	Ø2,200 (86.61")
Distance Between Centers	mm (inch)	6,000/8,000/10,000/12,000/17,000 (236.22"/314.96"/393.7"/472.44"/669.29")	6,000/8,000/10,000/12,000/17,000 (236.22"/314.96"/393.7"/472.44"/669.29")	6,000/8,000/10,000/12,000/17,000 (236.22"/314.96"/393.7"/472.44"/669.29")
Max. Load Capacity	ton	15 (Opt.25)	25 (Opt.40)	25 (Opt.40)
Bed				
Bed Length	mm (inch)	1,200	2,000	2,000
Bed Width	-	3-Way (1-Bed)	3-Way (1-Bed)	3-Way (1-Bed)
Spindle				
Spindle Nose	-	A2-15	Special (Ø300x280)	Special (Ø300x280)
Chuck Size	inch	40"	63"	-
Spindle Speed	rpm	1~325	1~130	1~130
Max. Torque	kgf.m	3,208	-	5,603
No. of Spindle Speeds	step	Auto 3-steps	Auto 2-steps	Auto 2-steps
Tool post				
Standard Tool Post Size	mm (inch)	□ 340 Electric 4 Position (13.39")	□ 440 Electric 4 Position (17.32")	□ 440 Electric 4 Position (17.32")
Tool Size	mm (inch)	□ 40 (opt. □ 50)	□ 40 (opt. □ 50)	□ 40 (opt. □ 50)
Rapid traverse				
X-axis / Z-axis	m/min (ipm)	4 / 6 (157.48" / 236.22")	4 / 6	4 / 6
Tail stock				
Quill Type	-	Built-in type	Built-in type	Built-in type
Quill Dia.	mm (inch)	Ø315 / opt. Ø450 (12.4" / opt. 17.72")	Ø450 / opt. Ø600 (17.72" / opt. 23.62")	Ø450 / opt. Ø600 (17.72" / opt. 23.62")
Quill Stroke	mm (inch)	250 (9.84")	300 (11.81")	300 (11.81")
Motor				
Main Spindle Motor	kW (HP)	77 / 51 (103 / 68)	136 / 92 (182 / 123)	136 / 92 (182 / 123)
Servo Motor (X/Z)	kW (HP)	9.7 / 22 (13 / 30)	11.6 / 28.3 (15.5 / 38)	11.6 / 28.3 (15.5 / 38)
Power Source				
Power Capacity	kVA	120	250	200
Power Specification	-	380V / 60Hz	380V / 60Hz	380V / 60Hz
Dimension				
Machine Size (W x H)	mm (inch)	2,780 x 2,820 (109.45" x 111.02")	4,200 x 3,425 (165.35" x 134.84)	4,200 x 3,725 (165.35" x 146.65")
Machine Lenght (L)	mm (inch)	11,500/13,500/15,500/17,500/22,500 (452.76"/531.5"/610.24"/688.98"/885.83")	13,500/15,500/17,500/19,500/24,500 (531.5"/610.24"/688.98"/767.72"/964.57")	13,500/15,500/17,500/19,500/24,500 (531.5"/610.24"/688.98"/767.72"/964.57")
Machine Weight	ton	-	75 / 80 / 85 / 90 / 102	81 / 86 / 91 / 96 / 110
NC System		SIEMENS 828D		

Accessories

Standard Accessories	Optional Accessories	
• Automatic Coolant System	• Air Blow	• PCU 50 : Installed in Hard-Disc
• CNC System : SIEMENS-828D	• Blade Tool Post (Manual / Automatic)	(Only for SIEMENS-840Dsl)
• Hard Jaw (1 set)	• Coolant Gun	• Steady Rest
• Leveling Bolt & Plate	• Chip Conveyer (Hinge type)	• Roller Support
• Lubrication System	• CNC System : SIEMENS-840Dsl,	• Shop Turn (for SIEMENS System)
• Operation Manual & Part List	FANUC Oi-TF, FANUC 32i-B	• Spindle Cooler
• Signal Lamp (R/Y/G, 3 colors)	• Extra Bed	• Tail Stock Cooling Equipment
• Tool Block (Bite for Outer : 3ea / Bite for Inner : 1ea)	• Extra Operating Panel (Spindle / Tailstock)	• Tail Stock Load Meter (25ton / 40ton)
• Tool Box & Kits	• Linear Scale (X/Z)	• Tail Stock Hyd. Clamp (25ton / 40ton)
• Work Light	• Manual Guide i (for FANUC System)	• Transformer : MEGAII-200 (250kVA)
• 4 Jaw Independent Chuck (MEGA-II160 : 40" / MEGA-II200, 260 : 63")	• NC Cooler	MEGAII-160, MEGAII-260 (200kVA)
• 4 Position Electric Toolpost (□40mm)	• Oil Skimmer	• 4 Position Electric Tool Post (□50mm)
	• 4 Jaw Scroll Chuck : MEGAII-160 (32", 50", 60"), MEGAII-200 (70"), MEGAII-260 (70", 80", 90", 100")	

MEGA Series

MEGA-72 / 100 / 110 / 130 / T130

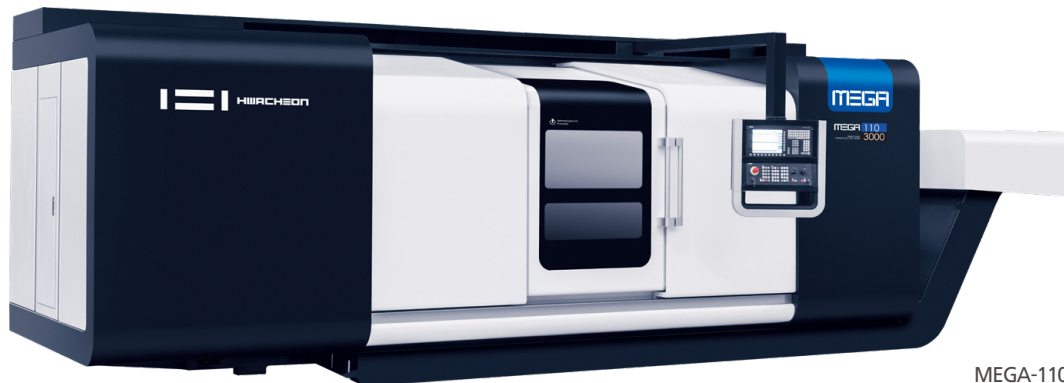
Heavy Duty CNC Lathe

MEGA I series 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 extreme strong support and precision.

- Oil & Gas Industry
- Ship Building Industry
- Mining Industry
- Power Plant
- Pulp & Paper Industry
- Windmill and New Energy Industry

MEGA Series offer a variety of optional accessories such as,

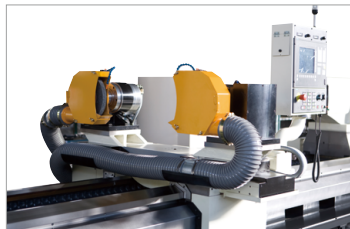
- Big Bore Spindle : Dia. 155mm(Std.) / 255mm(Opt.) / 320mm(Opt.)
- Variety of toolpost : 4Position Hyd. Toolpost, 12Position Electric Toolpost (8Position Electric for MEGA-72)
- Boring Bar Holder with Special Sizes
- Grinding Wheel Attachment



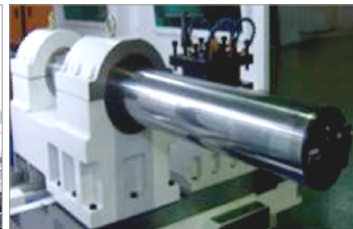
MEGA-110



Steady Rest / Follow Rest



Grinding Attachment



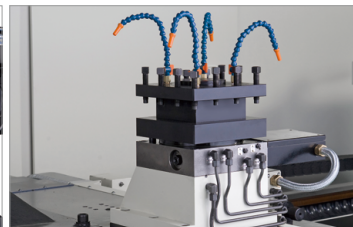
Boring bar holder



Turnmill Turret



Built-in Tailstock



Hydraulic Toolpost

Machine Specifications

Description		MEGA-72	MEGA-100	MEGA-110	MEGA-130	MEGA-T130
		2000/3000	3000/4000/5000/6000	3000/4000/5000/6000	3000/4000/5000/6000 /7000/8000/10000	
Capacity						
Swing over Bed	mm	Ø720	Ø1,080	Ø1,180	Ø1,300	Ø1,300
Swing over Cross Slide	mm	Ø480	Ø720	Ø820	Ø930	Ø910
Max. Turning Dia. over Cross Slide	mm	Ø470	Ø700	Ø800	Ø920	Ø900
Max. Turning Dia. over Bed	mm	Ø720	Ø1,000	Ø1,100	Ø1,300	Ø1,300
Distance Between Centers	mm	2,000 / 3,000	3,000 / 4,000 / 5,000 / 6,000	3,000 / 4,000 / 5,000 / 6,000	3,000 / 4,000 / 5,000 / 6,000 / 7,000 / 8,000 / 10,000	-
Spindle						
Spindle Nose	KS	A2-8	A2-15 (Ø155, Ø255) / A2-20 (/ Ø320)	A2-15 (Ø155, Ø255) / A2-20 (/ Ø320)	A2-15 (Ø155, Ø255 : 3000- 8000 type) / A2-20 (Ø320)	A2-15
Spindle Through Hole	mm	Ø90	Ø155 / Ø255 / Ø320	Ø155 / Ø255 / Ø320	Ø155 / Ø255 / Ø320	Ø155 / Ø255
Taper of Spindle Bore	M.T	No.7	No. 170 / 260 / 327	No. 170 / 260 / 327	No. 170 / 260 / 327	No. 170 / 260
Spindle Ranges	step	Manual 2 steps	Auto 3 steps	Auto 3 steps	Auto 3 steps	Auto 3 steps
Spindle Speed	rpm	30 ~ 1,500	40~750 (Ø155) / 30~650 (Ø255) / 20~400 (Ø320)	40~750 (Ø155) / 30~650 (Ø255) / 20~400 (Ø320)	40~630 (Ø155 : 3000- 8000type) / 30~650 (Ø255) / 20~400 (Ø320)	40~400 (Ø155) / 30~400 (Ø255)
Travel						
X-axis Travel	mm	400	520	570	720	670
Z-axis Travel	mm	1,900 / 2,900	3,000 / 4,000 / 5,000 / 6,000	3,000 / 4,000 / 5,000 / 6,000	3,000 / 4,000 / 5,000 / 6,000 7,000 / 8,000 / 10,000	1,100
X-axis Rapid Feedrate	mm/min	6,000	6,000	6,000	6,000	4,000
Z-axis Rapid Feedrate	mm/min	6,000	6,000 / 5,000 (6,000 type)	6,000 / 5,000 (6,000 type)	6,000	4,000
Tool Post						
Turret Type / No. of Tools	- / pcs	H4 / 4	H4 / 4	H4 / 4	H4 / 4	H4 / 4
Tail Stock						
Quill Type	-	Built-in type	Built-in type	Built-in type	Built-in type	-
Quill Dia. / Quill Stroke	mm	Ø90 / 150	Ø200 / 260	Ø200 / 260	Ø200 / 260, Ø250 / 260 (6000type)	-
Quill Bore Taper	M.T	No. 5	No. 6	No. 6	No. 6	-
Bed						
Bed Length	mm	3,652 / 4,652	5,370 / 6,370 / 7,370 / 8,370	5,370 / 6,370 / 7,370 / 8,370	5,670 / 6,670 / 7,670 / 8,670 / 9,670 / 10,670 / 12,670	3,720
Bed Width (Type of Bed)	mm	510 (1bed, 2ways)	700 (1bed, 2ways)	700 (1bed, 2ways)	810 (1bed, 2ways)	900 (1bed, 2ways)
Motor						
Spindle Motor	kW	18.5 / 15	23 / 18.5	55.5 / 37	55.5 / 37	23 / 18.5
Servo Motor (X/Z)	kW	1.86 / 4.29	3.3 / 5.24, 3.3 / 9.58 (6000type)	3.3 / 5.24, 3.3 / 9.58 (6000type)	3.3 / 5.24, 3.3 / 10.47 (6000type)	3.3 / 5.24
Coolant Pump	W	180	250	250	250	180
Bed Lubrication Pump	W	57	57	57	57	57
Spindle Lubrication Pump	W	200	200	200	200	200
Power						
Power Capacity	kVA	35	45	70	70	45
Power Specification	-	S : 380V / 60Hz ; F : 220V / 60Hz	S : 380V / 60Hz ; F : 220V / 60Hz	S : 380V / 60Hz ; F : 220V / 60Hz	S : 380V / 60Hz ; F : 220V / 60Hz	S : 380V / 60Hz ; F : 220V / 60Hz
Dimension						
Floor Space (L x W x H)	mm	2,000type : 4,250 x 2,147 x 1,920 3,000type : 5,250 x 2,147 x 1,920	3,000type : 6,200 x 2,350 x 2,150 4,000type : 7,200 x 2,350 x 2,150 5,000type : 8,200 x 2,350 x 2,150 6,000type : 8,200 x 2,350 x 2,150	3000type : 6,455 x 2,745 x 2,440 4000type : 7,455 x 2,745 x 2,440 5000type : 8,455 x 2,745 x 2,440 6000tyoe : 9,455 x 2,745 x 2,440	3,000type : 8,600x3,000x2,510 4,000type : 9,600x3,000x2,510 5,000type : 10,600x3,000x2,510 6,000type : 11,600x3,000x2,510 8,000type : 13,600x3,000x2,510 10,000type : 15,600x3,000x2,510	4,000 x 2,300 x 2,240
Machine Weight	kg	4,810 / 5,500	11,500 / 13,000 / 14,500 / 16,000	12,500 / 14,000 / 15,500 / 17,500	13,500 / 15,500 / 17,500 / 19,500 / 23,500 / 29,500	7,550 (Full Cover Type : 7,850)
Coolant Tank Capacity	ℓ	145 / 200	220 / 270 / 320 / 370	220 / 270 / 320 / 370	220 / 270 / 320 / 370 / 470 / 570	93

Accessories

Standard Accessories	MEGA-72	MEGA-100	MEGA-110	MEGA-130	MEGA-T130
Boring Holder	50mm	60mm	60mm	60mm	60mm
Boring Sleeve	25, 32, 40mm	25, 32, 40, 50mm	25, 32, 40, 50mm	25, 32, 40, 50mm	25, 32, 40, 50mm
Built-in Tailstock	-	○	○	○	-
Center Sleeve	M.T. No.7 x No.5	-	-	-	-
CNC System	SIEMENS-828D	SIEMENS-828D	SIEMENS-828D	SIEMENS-828D	SIEMENS-828D
Coolant Equipment	○	○	○	○	○
Dead Center	M.T. No. 5	M.T. No. 6	M.T. No. 6	M.T. No. 6	-
Drill Socket	M.T. No. 2, 3, 4	M.T. No. 3, 4, 5	M.T. No. 3, 4, 5	M.T. No. 3, 4, 5	-
Live Center	M.T. No. 5	-	-	-	-
MPG Handle (Portable)	○	○	○	○	○
NC Cooler	-	-	○	○	-
Operation Manual & Parts List	○	○	○	○	○
Signal Lamp (R, G, Y, 3-colors)	○	○	○	○	○
Spindle Through Hole	Dia. 90mm	Dia. 155mm	Dia. 155mm	Dia. 155mm	Dia. 155mm
Splash Guard	Semi Enclosed Splash Guard : 1door	Semi Enclosed Splash Guard : 1door	Semi Enclosed Splash Guard : 1door	Semi Enclosed Splash Guard : 1door	Semi Enclosed Splash Guard : 1door
Tool Box	○	○	○	○	○
Work Light	○	○	○	○	○
4-jaw Independent Chuck	14"	18"	18"	32"	-
4 Position Curvic Coupling Toolpost	○	○	○	○	○

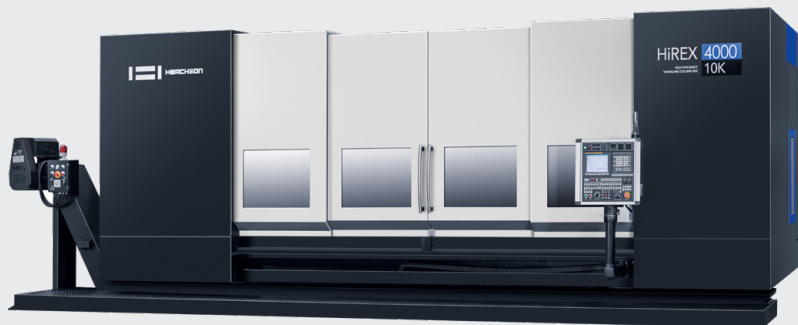
Optional Accessories	MEGA-72	MEGA-100	MEGA-110	MEGA-130	MEGA-T130
Boring Bar	○	○	○	○	-
Boring Bar Holder	○	○	○	○	-
C-axis Control	-	○	○	○	-
Chip Conveyor (Hinge)	○	○	○	○	-
CNC System	SIEMENS-840Dsl, Fanuc Oi-TF, Fanuc 32i	SIEMENS-840Dsl, Fanuc Oi-TF, Fanuc 32i	SIEMENS-840Dsl, Fanuc Oi-TF, Fanuc 32i	SIEMENS-840Dsl, Fanuc Oi-TF, Fanuc 32i	SIEMENS-840Dsl, Fanuc Oi-TF, Fanuc 32i
Face Plate	Dia. 635mm	Dia. 950mm	Dia. 950mm	Dia. 950, 1,200mm	Dia. 1,200mm
Follow Rest	Dia.39~127mm (Roller)	Dia. 60~240mm (Roller) / Dia. 60~250mm (Metal)	Dia. 60~240mm (Roller) / Dia. 60~250mm (Metal)	Dia. 60~250mm (Roller) / Dia. 60~250mm (Metal)	-
Grinding Attachment	○	○	○	○	-
Hydraulic Tailstock	○	○	○	○	-
Manial Guide i (for FANUC System)	○	○	○	○	○
MPG Handle (Fixed)	○	○	○	○	○
NC Cooler	○	○	-	-	○
Oversize Steady Rest	Dia. 50~450mm (Roller)	-	-	-	-
PCU 50 : Hard Disc (onlyt for SIEMENS-840Dsl)	○	○	○	○	○
Roller Support	-	Ø500~Ø700mm (Roller)	Ø500~Ø700mm (Roller)	Ø800~Ø1,000mm (Roller)	-
Shop Turn (for SIEMENS System)	○	○	○	○	○
Spindle Through Hole	-	Dia. 255, 320mm	Dia. 255, 320mm	Dia. 255, 320mm	Dia. 255mm
Splash Guard	Semi Enclosed Splash Guard : 2door / Full Cover	Semi Enclosed Splash Guard : 2door / Full Cover	Semi Enclosed Splash Guard : 2door / Full Cover	Semi Enclosed Splash Guard : 2door	-
Steady Rest	Dia. 50~250mm (Metal, Roller)	Dia. 50~350mm (Roller) / Dia. 300~600mm (Roller)	Dia. 50~350mm (Roller) / Dia. 300~600mm (Roller)	Dia. 50~350mm(Roller, 5/8 ton) / Dia. 300~600mm(Roller, 5/8 ton) / Dia. 600~800mm(Roller 5/8 ton)	-
Transformer	35kVA	45kVA	75kVA	60kVA	45kVA
3-jaw Hydraulic Chuck	10", 12", 15"	15", 21", 32"	15", 21", 32"	15", 21", 32"	15", 21", 32"(Dia.155)
3-jaw Scroll Chuck	12", 14"	18", 20", 21", 24", 25"	18", 21", 24"	18", 21", 24"	20", 25", 32", 40"
4-jaw Independent Chuck	16", 18", 24"	24", 28", 32", 40"	24", 28", 32", 40"	24", 28", 32", 40", 49"	40", 48"
4 Position Hydraulic Toolpost	○	○	○	○	○
8 Position Electric Auto Turret	○	-	-	-	-
12 Position Electric Auto Turret	-	○	○	○	○
12 Position Turnmill Turret	-	-	○	○	-

HiREX Series (BT-40)

HiREX-4000 / 5000 / 6000

Powerful Cutting and Precision Machining

HiREX-4000(BT40), a travelling column machining center, guarantees the quality of industrial components that require precision machining, including the parts for home appliances, semiconductors, automobiles, airplanes and pipes.



Machine Specifications

Description		HiREX-4000	HiREX-5000	HiREX-6000
Travel				
Stroke (X / Y / Z)	mm (inch)	4,000 / 520 / 570 (157.48" / 20.47" / 22.44")	5,000 / 520 / 570 (196.85" / 20.47" / 22.44")	6,000 / 620 / 570 (236.22" / 24.41" / 22.44")
Distance From Table Surface to Spindle Gauge Line	mm (inch)	150~720 (5.91"~28.35")	150~720 (5.91"~28.35")	150~720 (5.91"~28.35")
Table				
Working Surface (Width x Length)	mm (inch)	550 x 4,500 (21.65" x 177.17")	550 x 5,500 (21.65" x 216.54")	650 x 6,500 (25.59" x 255.91")
Max. Table Loading Capacity	kgf (lbf)	4,300 (9,480)	5,800 (12,787)	7,300 (16,094)
Spindle				
Max. Spindle Speed	rpm	10,000	10,000	10,000
Spindle Motor	kW (HP)	15 / 11 (20 / 15)	15 / 11 (20 / 15)	15 / 11 (20 / 15)
Spindle Taper	-	BT-40 (BBT-40) (7 / 24 Taper)	BT-40 (BBT-40) (7 / 24 Taper)	BT-40 (BBT-40) (7 / 24 Taper)
Spindle Inner Diameter	mm (inch)	Ø70 (2.76")	Ø70 (2.76")	Ø70 (2.76")
Method of Spindle Lubrication and Cooling	-	Grease Lubrication, Jacket Cooling	Grease Lubrication, Jacket Cooling	Grease Lubrication, Jacket Cooling
Feedrate				
Rapid Speed (X / Y / Z)	m/min (ipm)	30 / 36 / 36 (1,181.1" / 1,417.32" / 1,417.32")	30 / 36 / 36 (1,181.1" / 1,417.32" / 1,417.32")	20 / 30 / 30 (787.40" / 1,417.32" / 1,417.32")
Cutting Feedrate (X / Y / Z)	mm/min (ipm)	1~10,000 (0.04"~393.7")	1~10,000 (0.04"~393.7")	1~10,000 (0.04"~393.7")
ATC				
Type of Tool Shank	-	MAS-403 BT-40	MAS-403 BT-40	MAS-403 BT-40
Type of Pull Stud	-	MAS P40T-1 (45°)	MAS P40T-1 (45°)	MAS P40T-1 (45°)
Tool Storage Capacity	ea	24	24	24
Max. Tool Diameter (With / Without Adjacent Tools)	mm (inch)	Ø80 / Ø150 (3.15" / 5.91")	Ø80 / Ø150 (3.15" / 5.91")	Ø80 / Ø150 (3.15" / 5.91")
Max. Tool Length	mm (inch)	300 (11.81")	300 (11.81")	300 (11.81")
Max. Tool Weight (Including Pull Stud)	kg (lb)	8 (18)	8 (18)	8 (18)
Tool Changing Time (Tool To Tool)	sec	1.7	1.7	1.7
Motor				
Feed Motor (X / Y / Z)	kW (HP)	4 / 4 / 4 (5.4 / 5.4 / 5.4)	4 / 4 / 4 (5.4 / 5.4 / 5.4)	4 / 4 / 4 (5.4 / 5.4 / 5.4)
Coolant Motor (Spindle / Chip Flushing)	kW (HP)	1.1 / 1.1 (1.5 / 1.5)	1.1 / 1.1 (1.5 / 1.5)	0.9 / 0.9 (1.2 / 1.2)
Spindle Cooling Motor	kW (HP)	0.18 (0.24)	0.18 (0.24)	0.18 (0.24)
Power Source				
Electric Power Supply	kVA	30	30	30
Compressed Air Supply (Pressure x Consumption)	-	5 ~ 7kgf/cm ² x 690Nl/min	5 ~ 7kgf/cm ² x 690Nl/min	5 ~ 7kgf/cm ² x 690Nl/min
Power Specification	-	220V / 60Hz	220V / 60Hz	220V / 60Hz
Machine Size				
Height (Z-Axis Top Point)	mm (inch)	3,000 (118.11")	3,000 (118.11")	3,000 (118.11")
Floor Space (L x W)	mm (inch)	7,700 x 3,010 (303.15" x 118.5")	8,680 x 3,010 (341.73" x 118.5")	10,030 x 3,010 (394.88" x 118.5")
Weight	kg (lb)	20,000 (44,092)	22,000 (48,502)	30,000 (66,139)
NC Controller		FANUC 0i-MF		

Accessories

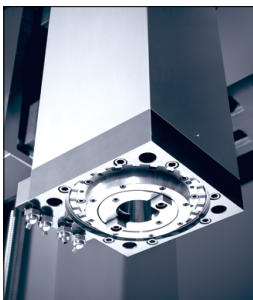
Standard Accessories		Optional Accessories	
• AI Contour Control System (20 Blocks)	• Linear Scale (X-Axis)	• Additional Axis Interface	• HTLD (Hwacheon Tool Load Detect System)
• ATC : 24ea	• Lubrication System	• AI Contour Control System I / AI Contour Control System II (40 / 200 Blocks)	• Linear Scale (Y / Z)
• Automatic Coolant System	• MPG Handle (1ea / Portable)	• Air Blow	• Manual Guide i (for FANUC System)
• Ball Screw Supporter (X-axis / 5000, 6000 type)	• Operation Manual & Part List	• Air Dryer	• Minimal Quantity Lubrication (Oil Mist)
• CNC Memory 512KB	• Pneumatic System	• Air Gun	• Mist Collector
• Door Interlock	• Rigid Tapping	• All-in-one Chip Conveyor Including Coolant Tank (Hinge / Scraper type)	• MPG Handle (3ea / Portable)
• Ethernet Interface	• Signal Lamp (R/Y/G, 3-Color)	• ATC : 30ea	• NC Cooler
• Full Cover	• Spindle Cooler (Fan Cooler)	• Automatic Door	• Oil Skimmer
• KCs Certification	• Tool Box & Kits	• Chip Box	• Rotary Table
	• Work Light	• Coolant Gun	• Spindle Cooler (Oil Chiller)
	• 10.4" LCD Monitor	• Coolant Through Spindle (30bar)	• Touch Probe
• Leveling Bolt & Block		• Data Server Interface (256MB/1,024MB/2GB)	• Transformer (30kVA)
			• Two Palette

VT Series

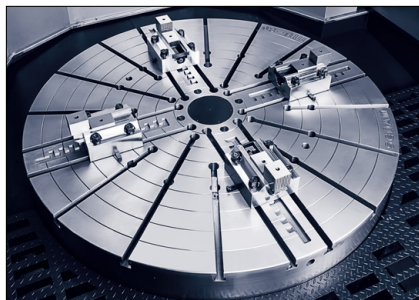
VT-2000

Heavy Duty CNC Vertical Lathe

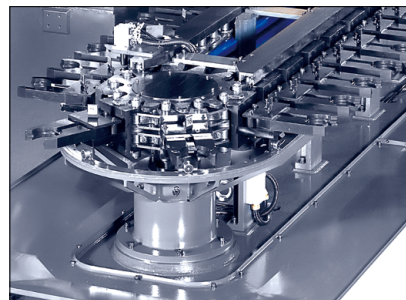
VT series with the specific movable crossrail is designed for precision machining including turning and milling as well as operations for boring and threading by providing a gear type high power transmission.



Ram



80" Chuck (Table)



14-Tool Magazine

Machine Specifications

Description		VT-2000	
		Long Type	Short Type
Capacity			
Swing Over Bed	mm(inch)	Ø2,650 (104.33")	
Max. Cutting Diameter	mm(inch)	Ø2,500 (98.43")	
Max. Cutting Length	mm(inch)	2,100 (82.68")	1,100 (43.31")
Travel			
X-Axis Stroke (Horizontal Movement of Ram)	mm(inch)	-315~ +1,435 (-12.4"~ +56.5")	
Z-Axis Stroke (Vertical Movement of Ram)	mm(inch)	1,000 (39.37")	
W-Axis Stroke (Vertical Movement of Cross Rail)	mm(inch)	1,100 (43.31")	600 (23.62")
Table			
Table Motor	kW(HP)	75 / 60 (100 / 80)	
Max. Table speed	rpm	1 ~ 55(Low Speed) / 56 ~ 240(High Speed)	
Max. Table torque	Nm(kg, m)	49,863 (5,085)	
Max. Loading Capacity	kgf(lbf)	15,000 (33,069) / C-Axis : 5,000 (11,023))	
Ram			
Milling Motor	kW(HP)	26 / 22 (35 / 30)	
Max. Milling Speed	rpm	3,000	
Table Indexing Angle (C-Axis)	°(deg)	0.001°	
Feedrate			
Rapid Speed (X / Z / W)	m/min(ipm)	10 / 10 / 7.5 (394 / 394 / 295)	
Feedrate (X / Z / W)	mm/min(ipm)	1 ~ 2,000 (0.04" ~ 78.74")	
ATC			
Tool Storage Capacity (Magazine)	ea	14 (Including 1 Dummy Cover)	
Tool Size (O.D Tool)	mm	□40 (1.57")	
Type of Milling Tool	-	7 / 24taper BT-50	
Max. Tools Dia. (Without Adjacent Tools Dia.)	mm(inch)	Ø180 / Ø350 (7.09" / 13.78")	
Max. Tool Length	mm(inch)	415 (16.34")	
Max. Tool Weight	kg(lb)	60 (132.28)	
Motor			
Feed Motor	kW(HP)	5.5 / 5.5 / 5.5 / 5.5 (7.5 / 7.5 / 7.5 / 7.5)	
Coolant Motor (Ram)	kW(HP)	2.2 (3)	
Tank			
Lubrication	ℓ (gal)	12 (3.17) x 2ea	
Coolant	ℓ (gal)	770 (203.41) / Opt.820 (216.62)	
Hydraulic	ℓ (gal)	200 (52.83)	
Spindle Cooling	ℓ (gal)	50 (13.21)	
Power Source			
Power Capacity	kVA	160	
Power Specification	-	380V (3phase) / 60Hz	
Compress Air (Pressure x Consumption)	-	5~7 kgf/cm ² x 690 N ℓ / min	
Machine Size			
Height	mm(inch)	6,694 (263.54")	5,510 (216.93")
Floor Space (L x W)	mm(inch)	5,560 x 5,030 (218.9" x 198.03")	
Weight	kg(lb)	41,000 (90,390)	34,500 (76,059)
NC Controller		FANUC 31i-B	

Accessories

Standard Accessories		Optional Accessories	
• ATC : 14ea	• Operation Manual & Part List	• Air Gun	• NC Cooler
• Automatic Coolant System	• Safety Cover	• Angle Head	• Oil Skimmer
• Automatic Lubrication Equipment	• Signal Lamp (R/Y/G, 3-Color)	• ATC : 20ea	• Tooling System : CAT-50 ATC
• Auto Transmission (2-steps)	• Tool Box & Kits	• Boring holder (C.T.S available)	• Tooling System : SK-50 ATC
• CNC System : FANUC 31i-B	• Tool clamp monitoring system	• CF Memory Card (2GB, FANUC)	• Tool Life Management (FANUC System)
• Door Interlock	• Tooling System : BT-50 & BBT-50 ATC	• CF Memory Card (8GB, SIEMENS)	• Tool presetter
• Dummy Cover	• Work Light	• Chip Conveyor (Hinge Type)	• Transformer (160kVA)
• Hard Jaw (1 Set)	• 15" LCD Monitor	• Coolant Gun	• Turning holder (C.T.S available)
• High Pressure Coolant Pump (6bar)		• Coolant Through Spindle (30bar)	• Turning holder, inch (C.T.S available)
• Hydraulic Unit		• High Pressure Pump (15bar)	• Turning holder long type, inch
• Jacket Cooling		• HTLD (Hwacheon Tool Load	(C.T.S available)
• Leveling Bolt & Block		Detect system)	• Turning holder long type (for C.T.S)
• Manual Table (Chuck) : 80"		• Linear Scale (X/Z/W)	• Turning holder long type (for C.T.S)
• Milling Function (C-Axis, 0.001°)		• Manual Guide i (for FANUC System)	• Work Probe

Hi-M G Series

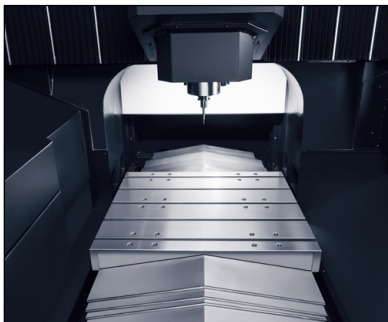
Hi-M G1 / G2+

Graphite Machining Center

Hi-M G1/G2+ delivers high-speed, high-precision machining for dry cutting of graphite electrodes used in aluminum die casting process. It delivers quality machining by applying the highly dustproof and waterproof spindle and the optimum dust reduction system. This system blocks the dust scattering and entry of fine dust created during the machining process. Hi-M G1/G2+ is easy to use due to its various add-on functions and enhanced user convenience.



Hi-M G1



Table



Auto Tool Changer



Tool & Spindle Head

Machine Specifications

Description		Hi-M G1	Hi-M G2+
Travel			
X/Y/Z axis Travel	mm(inch)	750 / 600 / 350 (29.53" / 23.62" / 13.78")	1,200 / 800 / 500 (47.24" / 31.5" / 19.69")
Table Top to Spindle Nose	mm(inch)	100 ~ 450 (3.94" ~ 17.72")	80 ~ 580 (3.15" ~ 22.83")
Table			
Table Size(W x L)	mm(inch)	750 x 620 (29.53" x 24.41")	1,300 x 800 (51.18" x 31.5")
Max. Loading Capacity	kgf(lbf)	400 (882)	400 (882)
T-Slot(Size x Space – ea)	mm(inch)	16 x 125 (0.63" x 4.92") - 5ea	16 x 125 (0.63" x 4.92") - 5ea
Spindle			
Max. Spindle Speed	rpm	24,000	20,000
Spindle Power	kW(HP)	9.5 (12.7)	20 (26.8)
Feedrate			
Rapid Traverse (X / Y / Z)	m/min(ipm)	25 / 25 / 20 (984.25" / 984.25" / 787.4")	25 / 25 / 20 (984.2" / 984.2" / 787.4")
Feed Rate (X / Y / Z)	mm/min(ipm)	1 ~ 10,000 (0.04" ~ 393.7")	1 ~ 10,000 (0.04" ~ 393.7")
ATC			
Tool Type	-	HSK-E40 (opt. BT-30)	BT-40
No. of Tools	ea	16	16 (opt.24)
Max. Tool Diameter	mm(inch)	Ø16 (0.63")	Ø26 (1.02")
Max. Tool Size	mm(inch)	200 (7.87")	200 (7.87")
Max. Tool Weight	kg(lb)	3 (7)	3 (7)
Tool Change Time(T to T / C to C)	sec	15 / 20	15 / 20
Motor			
Servo Motor (X / Y / Z / Q)	kW(HP)	1.86 / 1.86 / 1.86 (2.5 / 2.5 / 2.5)	3.14 / 3.14 / 3.14 (4.2 / 4.2 / 4.2)
Power Source			
Electric Power Supply	kVA	35	50
Compressed Air	kgf/cm ²	5~7	5~7
Power Specification	-	S : 380V / 60Hz ; F : 220V / 60Hz	S : 380V / 60Hz ; F : 220V / 60Hz
Machine size			
Machine Height (H)	mm(inch)	2,600 (102.36")	3,000 (118.11")
Floor Space (L x W)	mm(inch)	2,140 x 2,430 (83.26" x 95.67")	2900 x 2900 (114.17" x 114.17")
Machine Weight	kg(lb)	4,800 (10,582)	9,500 (20,944)
NC Controller		SIEMENS-828D	

Accessories

Standard Accessories (Hi-M G1)	Optional Accessories (Hi-M G1)	Standard Accessories (Hi-M G2+)	Optional Accessories (Hi-M G2+)
• Air Combination Set	• Air Dryer	• Air Combination Set	• Air Dryer
• CNC System : SIEMENS-828D	• CF Memory Card (2GB, FANUC)	• CNC System : SIEMENS-828D	• ATC : 24 tools
• Dust Collector System	• CF Memory Card (8GB, SIEMENS)	• Dust Collector System	• CF Memory Card (2GB, FANUC)
• Full cover	• CNC System : FANUC 0i-MF	• Full Cover	• CF Memory Card (8GB, SIEMENS)
• Work Light	• Touch Probe	• Leveling Bolt & Block	• CNC System : FANUC 0i-MF
• Leveling Bolt & Block	• Transformer (35kVA)	• Operation Manual & Part List	• Touch Probe
• Operation Manual & Part List		• Signal Lamp (R/Y/G, 3-color)	• Transformer (50kVA)
• Signal Lamp (R/Y/G, 3-color)		• Tool Box	
• Tool Box		• Water Chiller	
• Water Chiller		• Work Light	

HiT Series

HiT-400 / 400L / 360D

Tapping Center that Delivers High Productivity and Efficiency

HiT series use direct high speed spindle which enable stable rigid tapping and drilling during prolonged machining. Its quick tool change and fast feed minimize non-cutting time to yield high productivity.



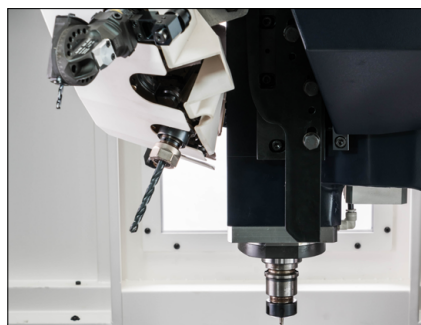
▲ HiT-400



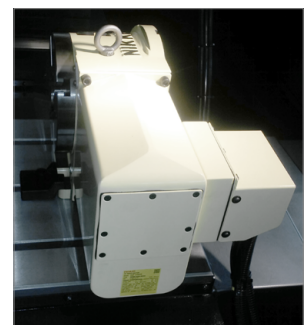
▲ HiT-360D



Auto Pallet Changer (HiT-360D)



Auto Tool Changer



Additional Axis

Machine Specifications

Description		HiT-400	HiT-400L	HiT-360D
Travel				
Travel (X / Y / Z)	mm (inch)	520 / 400 / 300 (20.47" / 15.75 " / 11.81')	700 / 400 / 300 (27.56" / 15.75" / 11.81")	520 / 360 / 300 (20.47" / 14.17" / 11.81")
Distance from table surface to spindle nose	mm (inch)	150 ~ 450 (5.91" ~ 17.72")		190 ~ 490 (7.48" ~ 19.29")
Distance from column to spindle center	mm (inch)	454 (17.87")		
Table				
Size (LxW)	mm (inch)	600 x 400 (23.62" x 15.75")	800 x 400 (31.5 x15.75)	2 - 650 x 400 (25.59" x 15.75")
Max. Loading Capacity	kgf (lbf)	200 (441)		2 - 150 (4.4 - 331)
T-Slot (Size x Space - ea)	ea	24 x 125 (0.94 x 4.92) – 3ea	24 x 125 (0.94 x 4.92) – 3ea	24 x 100 (0.94 x 3.94) – 2 x 3ea
Table Change Time (HiT-360D)	sec	-		2.9
Table Change Type (HiT-360D)	type	-		Up / Down Type
Spindle				
Max. Spindle Speed	rpm	S : Max.15,000 (Opt.24,000), F : Max.12,000 (Opt.24,000)		
Spindle Power	kW (HP)	S : 6.2 / 5.2 (8.3 / 7), F : 7.5 / 5.5 (10 / 7.5)		
Feedrate				
Rapid Traverse (X/Y/Z)	m/min (ipm)	60 / 60 / 60 (2362.2 / 2362.2 / 2635.2)		50 / 50 / 60 (1968.5 / 1968.5 / 2362.2)
ATC				
Tool Type	-	BBT 30		
No. of Tools	ea	21		
Max. Tool Diameter	mm (inch)	Φ80 (3.15")		
Max. Tool Size	mm (inch)	200 (7.87")		150 (5.91")
Max. Tool Weight	kg (lb)	2.5 (6)		
Chip To chip	sec	1.6 (Total Mass 15kg / 21ATC)		
Servo Motor				
Servo Motor (X/Y/Z)	kW (HP)	S : 2.6 / 2.6 / 2.6 (3.5 / 3.5 / 3.5), F : 1.8 / 1.8 / 3.0 (2.4 / 2.4 / 4)		S : 3.3 / 3.3 / 3.3 (4.4 / 4.4 / 4.4), F : 3.0 / 3.0 / 3.0 (4 / 4 / 4)
Power Source				
Power Capacity	kVA	25		
Power Specification	-	S : 380V / 60Hz ; F : 220V / 60Hz		
Coolant Motor	W (HP)	900 (1.2)		
Compressed Air	kgf/cm²	20		
Machine size				
Height	mm (inch)	2,530 (99.61")	2,442 (96.14")	2,530 (99.61")
Floor Space (LxW)	mm (inch)	1,734 x 2,115 (68.27"x 83.27")	2,184 x 2,093 (85.98" x 82.4")	1,784 x 2,940 (70.24" x 115.75")
Weight	kg (lb)	2,500 (5,512)	2,600 (5,732)	3,500 (7,716)
CNC System				
Model	-	SIEMENS-828D / FANUC 0i-MF		
Display	-	10.4" LCD		
Memory	-	S : 5MB, F : 512kB		

Accessories

Standard Accessories		Optional Accessories	
• Absolute Servo Motor	• Pneumatic System	• Air Blow	• Index Interface
• ATC : 21ea	• Signal Lamp (R/Y/G, 3-color)	• Air Gun	• Manual Guide i (For FANUC System)
• Automatic Lubrication Unit	• Spindle Air Blast	• Automatic Door	• Oil Cooler
• Bed Shower Coolant	• Tool Box & Kits	• Auto Power Off	• Oil Mist (Minimal Quantity Lubrication)
• CNC System : FANUC 0i-MF	• USB Port	• Buzzer Signal Lamp (R/Y/G, 3-Colors)	• Oil Skimmer
• Coolant Tank and Chip Tray	• Water Insoluble Coolant	• CF Memory Card (2GB, FANUC)	• Semi Dry Unit
• Full Cover	(HiT-400, HiT-400L)	• CF Memory Card (8GB, SIEMENS)	• Sub Top Cover
• Front Door Interlock	• Work Light	• Chip Conveyor (hinge / scraper)	• Tool Taper Washing Unit
• Hwacheon Software System		• Chip Conveyor Interface	• Top Cover
– Cutting Feed Optimization System (OPTIMA)		• Coolant Gun	• Touch Probe
– Hwacheon Efficient Contour Control System (HECC)		• Coolant Through Spindle (20, 30bar)	• Touch / Work Probe Interface
– Hwacheon Tool Load Detect System (HTLD)		• Counter	• Transformer (25kVA)
• Leveling Bolt & Block		• High Column (150mm/HiT-400, HiT-400L)	• Rotary Table Interface
• MPG Handle (Portable)		• Jet(Niagara) Coolant	• Rotary Table (4-Axis)
• Operation Manual & Part List		• Jig & Fixture Interface	• Work Light (Addition)
		• Hwacheon Software System	• Work Probe
		– Hwacheon Thermal Displacement Control System (HTDC)	
		– Hwacheon Spindle Displacement Control System (HSDC)	
		– Hwacheon Frame Displacement Control System (HFDC)	

Hwacheon Global Network

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HWACHEON

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www.hwacheon.com

The product structure, machine design and specifications and design can be changed without notice for improvements.
Written specifications are standard type.

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