

GENERAL CATALOGUE

HNK

Globalization through **Technology**

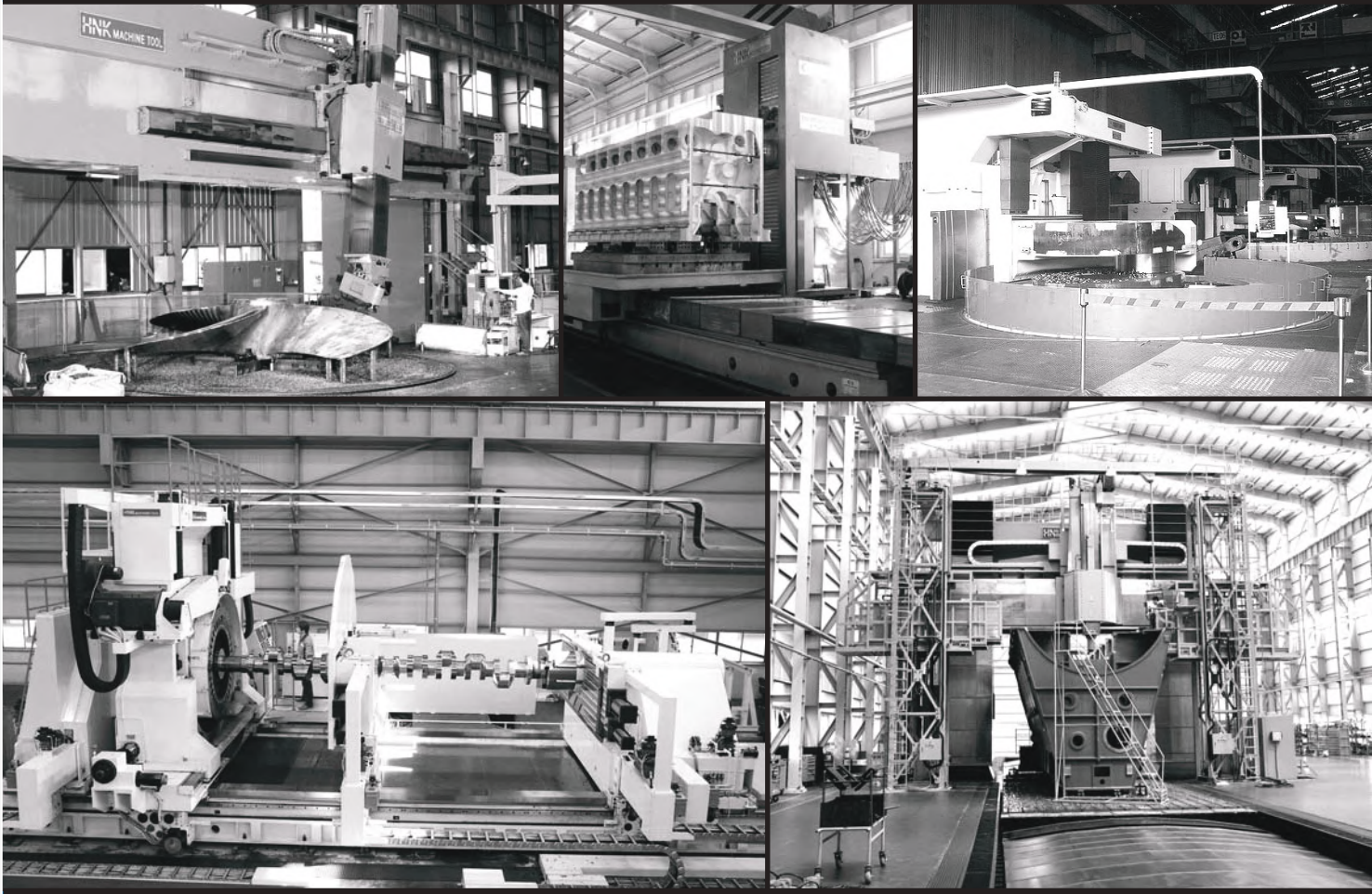


HNK MACHINE TOOL CO., LTD.

SINCE 1960

The world wide leader in Machine tools

HNK Machine Tool Co., LTD. has specialized in developing and producing machine tools for the development and restoration of machinery industry.



Introduction

HNK Machine Tool Co., Ltd. has been a pioneer in manufacturing large-sized machine tools in Korea.

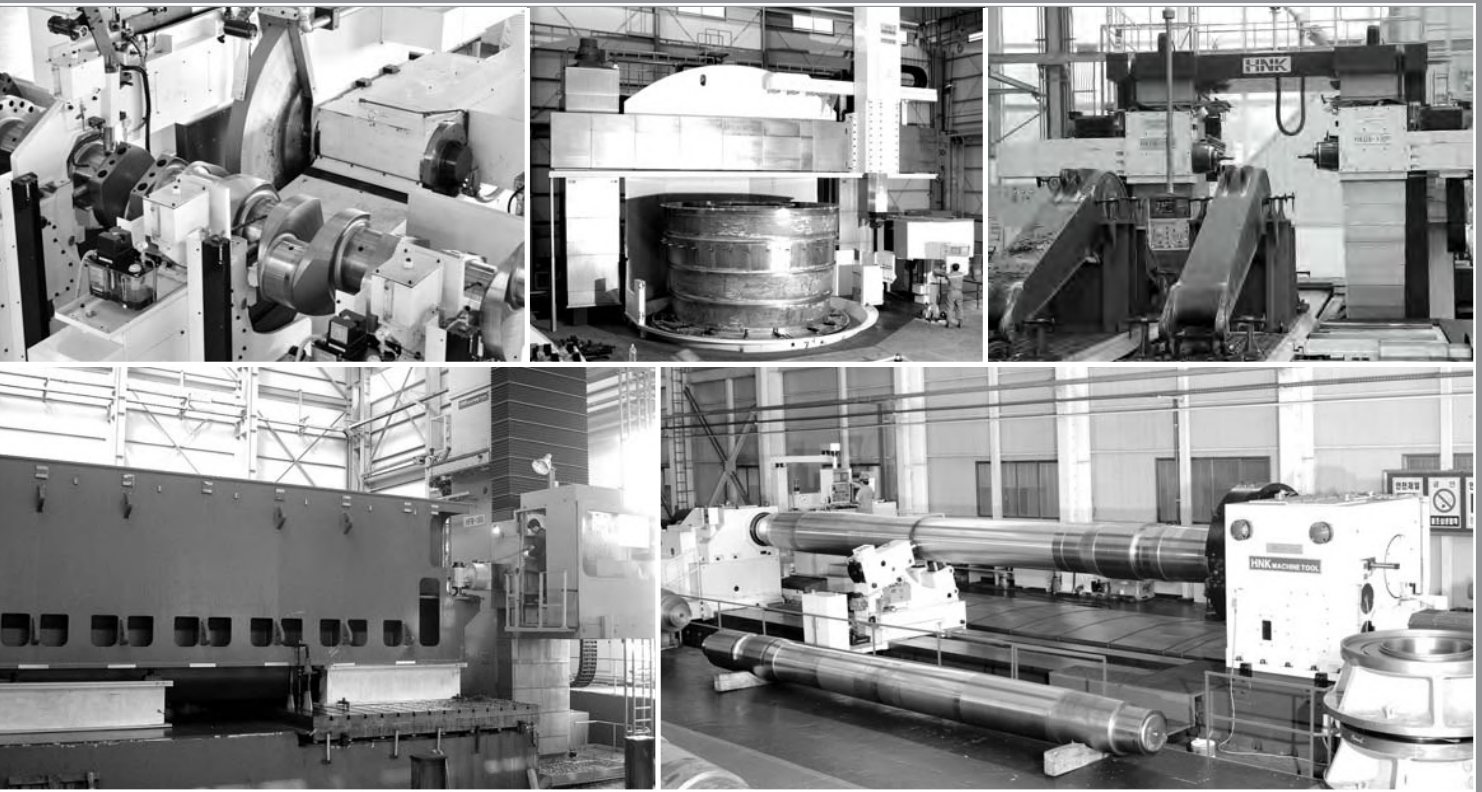
Based on 55 years of know-how and accumulated technology in the machine tool business, HNK has been supplying global customers with CNC Planomiller, CNC Horizontal Boring & Milling Machine, CNC Vertical Turning Lathes, CNC Duplex Boring Machine, Multi-spindle profiler, and other special purpose machine tools.

As a certified company of ISO 9001 and CE, HNK is committed to continuously devote its resources and efforts into developing and manufacturing quality machine tools.

Our commitment to producing quality products that exceed our customers' expectations has not changed.

Part of our efforts is for this purpose, we maintain a highly skilled workforce and adequate level of investment in updating its product line.

At the same time, we are reflecting to our product line what we have learned from our customers.



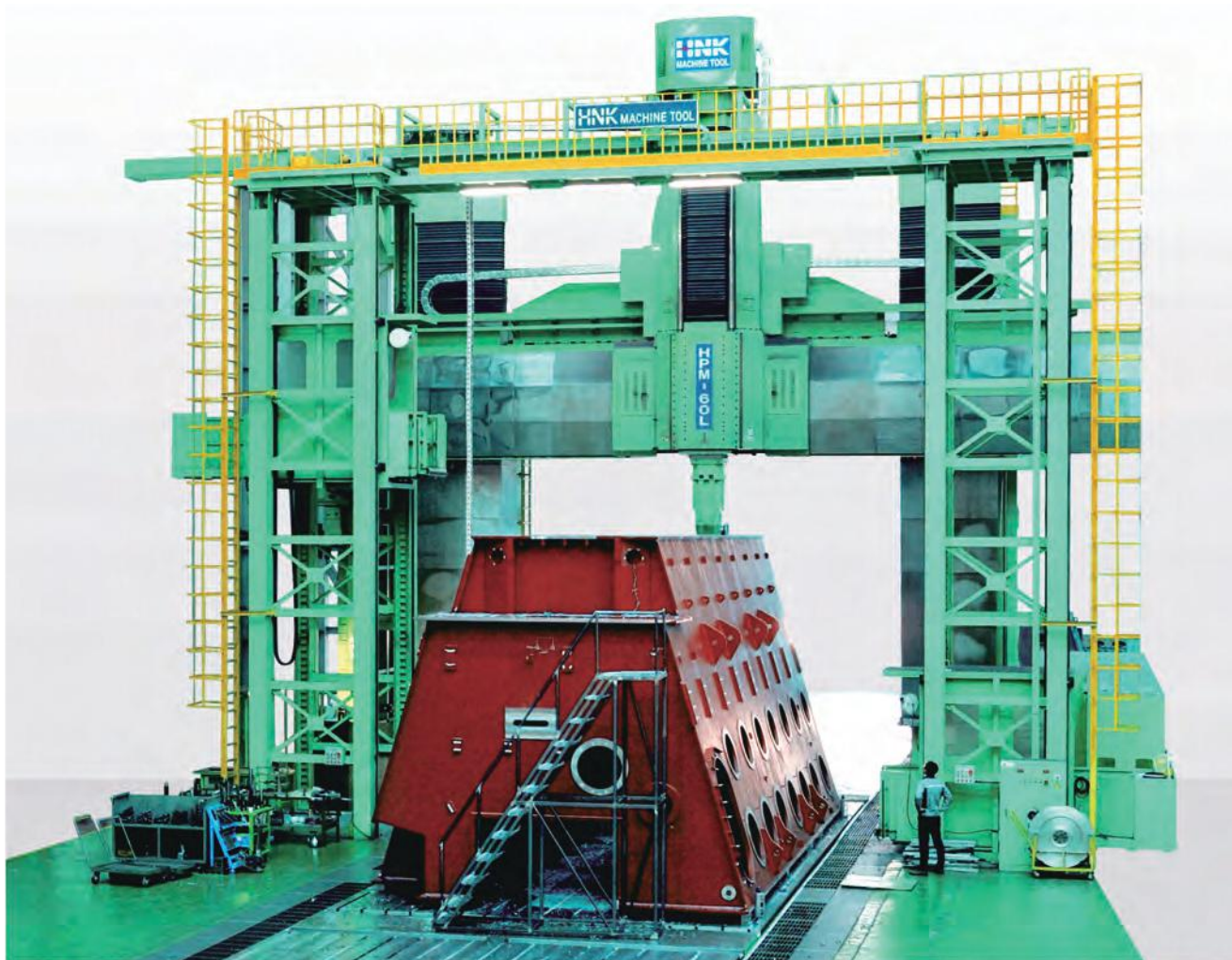
History

March in 1960	Hankook Metal & Machine Tool Co., Ltd(HNK) was founded in Masan, Gyeongnam province
March in 1961	Developed and Manufactured planer, lathe, radial machines
January in 1977	Manufactured Planomiller
December in 1991	Developed Double Column Type Machining Centers
March in 1992	Developed CNC Vertical Boring & Turning Centers
April in 1992	Relocated company to Haman-gun, Beobsoo, an agricultural and industrial zone
February in 1994	Manufactured CNC Horizontal Boring & Milling Machine
November in 1996	Developed CNC Duplex Boring Machine
November in 1997	Developed CNC Drilling & Routing Center (Spindle 24,000 rpm)
March in 1998	Developed CNC Floor Type Boring M/C(Φ180)
April in 1998	Changed the company name into HNK Machine Tool Co., Ltd.
November in 1998	Received ISO 9001 Certification
December in 1999	Acquired CE Certification
January in 2000	Established Chine Office in Beijing, China
December in 2001	Developed 5-Spindle Gantry Profiler
March in 2007	Developed Large-sized CNC Vertical Turning Lathe (Max Swing : Φ9,500mm)
April in 2007	Developed 5-axis Propeller Blade Surface Milling Machine (Max Swing / Load : Φ11,000mm / 130tons)
June in 2007	Developed Large-size CNC Double Column Machine Center(W56,000mm H62,000mm L17,000mm)
May in 2008	Developed CNC Horizontal Lathe (Φ27,000mm / 17,000mm / 120tons)
September in 2008	Developed CNC Crankshaft Rough Milling Machine (Φ850mm / 8,000mm / 20tons)
October in 2008	Developed CNC Crankshaft Finish Milling & Turning Machine (Φ1,000mm / 6,000mm / 10tons)
May in 2009	Made the stock market debut at KOSDAQ
October in 2009	Developed CNC Crankshaft Grinding Machine
March in 2010	Developed CNC Gear Hobbing Machine
December in 2011	Developed CNC Horizontal Lathe(Φ28,000mm/ 16,000mm/160 tons)
April in 2012	Developed Large-size CNC Double Column Machining Center(Table: 6,000 29,000 / H7500 / 400tons)
November in 2013	Developed CNC Gear Grinding Machine (Φ1,000mm)
March in 2014	Developed Large-size CNC Floor Boring (Φ250 / X-axis 25,000mm / Table load 200 tons)
Setember in 2014	GPM-60FX : Developed CNC 5-Axis Gantry Profiler (X/Y/Z : 12,000/6,300/4,250mm, Max. 24,000 RPM) HVM4-10 : Developed CNC Vertical Milling Machine(X/Y/Z : 1,700/1,000/1,600mm, Table size : 1,000 x 1,000mm)
March in 2016	HFM-15/40-50T-P : Developed CNC 5-Axis High Speed Milling Machine (Table size : 1,500 x 4,000mm / Max. 30,000 RPM) HIM-1500 : Developed CNC Horizontal Milling Machine (X/Y/Z : 8,000/3,000/1,500mm)

CNC Double Column Machining Center

HPM- L series

HPM-L series, CNC Large-sized Double Column Machining Center, offers wide range of machining capability and heavy duty machining jobs. Equipped with various optional attachments, HPM-L series is capable of diverse job applications at one set-up. Above all, its heavy duty structure is most suitable for the large-sized component cutting related to ship engines, power generators and steel mill facilities.



Specifications

{OPTION}

ITEM	UNIT	HPM-30L		HPM-40L		HPM-45L		HPM-50L		HPM-60L												
		30x80	30x100	40x100	40x120	45x100	45x120	50x170	50x200	60x240	60x300											
Effective distance between column	mm inch	3,850	151.6	4,850	191	5,000	196.9	5,600	220.5	7,500	295.3											
Distance between table surface and spindle end(Max.)	mm inch	3,000	{3,500}	4,000	{4,500}	5,000	{5,500}	6,200	244.1	7,800	307.1											
		118.1	{137.8}	157.5	{177.2}	196.9	{216.5}															
X-Axis (Table travel)	mm inch	8,250	324.8	10,250	403.5	10,250	403.5	12,000	472.5	17,000	669.3	20,000	787.4	24,000	944.9	30,000	1181.1					
Y-Axis (Spindle head travel)	mm inch	4,850	191	5,850	230.3	6,000	236.2	6,600	259.8	8,500	334.6											
W-Axis (Cross-rail travel)	mm inch	2,500	98.4	2,800	110.2	3,100	112	4,000	157.5	4,300	177.2											
Z-Axis (Ram travel)	mm inch	1,000	{1,200}	39.4	{47.2}	2,000	{2,200}	78.7	{86.6}	2,000	{2,200}	78.7	{86.6}	2,200	{2,500}	86.6	{98.4}	3,000	{3,500}	118.1	{137.8}	
Table	Width	mm inch	3,000	118.1	4,000	157.5	4,500	177.2	5,000	196.9	6,000	236.2										
	Length	mm inch	8,000	315	10,000	393.7	10,000	393.7	12,000	472.4	10,000	393.7	12,000	472.4	17,000	669.3	20,000	787.4	24,000	944.9	30,000	1181.1
	Max. Load on table	kg lbs	50,000	110,000	80,000	176,000	120,000	265,000	170,000	675,000	300,000	661,000	400,000	882,000								
Spindle head speed	rpm	5~2,000				5~1,000																
CNC Control System		FANUC 311B, {SIEMENS 840D}																				

HPM-M series

HPM-M series, Double Column Machining Center, is designed for precision and heavy-duty machining of wide range of workpieces. With its rigid body construction, HPM-M series offers unparalleled machine longevity and machining productivity.



Specifications

(OPTION)

ITEM	UNIT	HPM-15M		HPM-20M		HPM-25M		HPM-30M		HPM-35M		HPM-40M		
		15x30	15x40	20x60	20x80	25x60	25x80	30x80	30x100	35x80	35x100	40x80	40x100	
Effective distance between column	mm inch	2,200 86.6		2,700 106.3		3,200 126		4,000 157.5		4,500 177.2		5,000 196.9		
Distance between table surface and spindle end(Max.)	mm inch	1,500{1,800} 59.1{70.9}		1,850{2,350} 72.8{92.5}		2,350{2,850} 92.5{112.2}		3,250 {3,550} 128{139.8}		3,500{3,850} 139.8{151.6}		3,500{3,850} 139.8{151.6}		
X-Axis (Table travel)	mm inch	3,250 128	4,250 167.3	6,250 246.1	8,250 324.8	6,250 246.1	8,250 324.8	8,250 324.8	10,250 403.5	8,250 324.8	10,250 403.5	8,250 324.8	10,250 403.5	
Y-Axis (Spindle head travel)	mm inch	3,200 126		3,700 145.7		4,200 165.4		5,000 196.9		5,500 216.5		6,000 236.2		
W-Axis (Cross-rail travel)	mm inch	1,000 39.4		1,500 59.1		2,000 78.7		2,500 98.4		2,800 110.2		2,800 110.2		
Z-axis(Ram travel)	mm inch	800 31.5						1,000 39.4						
Table	Width	mm inch 1,500 59.1		2,000 78.7		2,500 98.4		3,000 118.1		3,500 137.8		4,000 157.5		
	Length	mm inch	3,000 118.1	4,000 157.5	6,000 236.2	8,000 315	6,000 236.2	8,000 315	8,000 315	10,000 393.7	8,000 315	10,000 393.7	8,000 315	10,000 393.7
	Max. Load on table	kg lbs	15,000 33,000		20,000 44,100		30,000 66,100		40,000 88,200		50,000 110,000		60,000 132,000	
Spindle head speed	rpm	5~3,000												
CNC Control System		FANUC 311B, {SIEMENS 840D}												

CNC Double Column Machining Center

HPF series Crossrail Fixed Type

Multi - purpose, High Efficient, Crossrail Fixed-type Machining Center
Optimum machining Center for LCD chamber and Die & Mold

Specifications

HPF-H Series		HPM-15H		HPM-20H		HPM-25H		HPM-30H		HPM-35H		HPM-40H		
ITEM	UNIT	15x30	15x40	20x40	20x60	25x50	25x60	30x60	30x80	35x60	35x80	40x80	40x100	
Effective distance between column	mm inch	2,200 86.6		2,700 106.3		3,200 126.0		4,000 157.5		4,500 177.2		5,000 196.9		
Distance between table surface and spindle end(Max.)	mm inch	1,000 39.4												
Travel	Table travel(X-Axis)	mm inch	3,250 128	4,250 167.3	4,250 167.3	6,250 246.1	5,250 206.7	6,250 246.1	6,250 246.1	8,250 324.8	6,250 246.1	8,250 324.8	8,250 324.8	10,250 403.5
	Spindle Head Travel(Y-axis)	mm inch	3,200 126		3,700 145.7		4,200 165.4		5,000 196.9		5,500 216.5		6,000 236.2	
	Ram travel(Z-axis)	mm inch	800 31.5											
Table	Table size, Width x Length	mm inch	1,500x3,000 59x118.1	1,500x4,000 59x157.5	2,000x4,000 78.7x236.2	2,000x6,000 98.4x196.9	2,500x5,000 98.4x196.9	2,500x6,000 98.4x236.2	3,000x6,000 118.1x236.2	3,000x8,000 118.1x314.9	3,500x6,000 137.8x236.2	3,500x8,000 137.8x315	4,000x8,000 157.5x315	4,000x10,000 157.5x393.7
	Max. allowable weight	kg lbs	10,000 22,046		15,000 33,070		20,000 44,090		25,000 55,115		30,000 66,140		35,000 77,160	
Spindle Head	Spindle taper	ISO	No. 50											
	Spindle diameter	mm inch	Ø100 4.0											
	Ram size	mm inch	380x380 15x15						400x400 15.8x15.8					
	Speed	rpm	6,000											
	Motor Power(30min/cont)	kw HP	25/22 34/30											
Feedrate	Rapid traverse(X,Y)	mm/min	20,000											
	(Z)	mm/min	15,000											
	Cutting Feed(X,Y&Z)	mm/min	1~10,000											
ATC	Magazine capacity	Q'ty	24/40/60/90/120											
	Tool shank/Pull stud		MAS BT50/MAS P50T-I(45°)											
	Max. tool diameter	mm inch	Ø135/Ø250 5.31/9.8											
	Max. tool length	mm inch	400 15.7											
	Max. tool weight	kg lbs	25 55											
CNC Control System		FANUC 31iB , (SIEMENS 840D)												

HPF-M Series		HPF-15M		HPF-20M		HPF-25M		HPF-30M		HPF-35M		HPF-40M		
ITEM	UNIT	15x30	15x40	20x40	20x60	25x50	25x60	30x60	30x80	35x60	35x80	40x80	40x100	
Effective distance between column	mm inch	2,200 86.6		2,700 106.3		3,200 126.0		4,000 157.5		4,500 177.2		5,000 196.9		
Distance between table surface and spindle end(Max.)	mm inch	1,200 47.2												
Travel	Table travel(X-Axis)	mm inch	3,250 128	4,250 167.3	4,250 167.3	6,250 246.1	5,250 206.7	6,250 246.1	6,250 246.1	8,250 324.8	6,250 246.1	8,250 324.8	8,250 324.8	10,250 403.5
	Spindle Head Travel(Y-axis)	mm inch	3,200 126		3,700 145.7		4,200 165.4		5,000 196.9		5,500 216.5		6,000 236.2	
	Ram travel(Z-axis)	mm inch	800						1,000					
Table	Table size, Width x Length	mm inch	1,500x3,000 59x118.1	1,500x4,000 59x157.5	2,000x4,000 78.7x236.2	2,000x6,000 98.4x196.9	2,500x5,000 98.4x196.9	2,500x6,000 98.4x236.2	3,000x8,000 118.1x315	3,000x10,000 118.1x393.7	3,500x8,000 137.8x315	3,500x10,000 137.8x393.7	4,000x8,000 157.5x315	4,000x10,000 157.5x393.7
	Max. allowable weight	kg lbs	15,000 33,070		20,000 44,090		30,000 55,115		40,000 66,140		50,000 88,185		60,000 110,231	
Spindle Head	Spindle taper	ISO	No. 50											
	Spindle diameter	mm inch	Ø130 5.1											
	Ram size	mm inch	380x380 15x15						400x400 15.8x15.8					
	Speed	rpm	3,000											
	Motor Power(30min/cont)	kw HP	37/30 (45/37) 50/40 (61/50)											
Feedrate	Rapid traverse(X,Y)	mm/min	10,000											
	(Z)	mm/min	6,000											
	Cutting Feed(X,Y&Z)	mm/min	1~3,600											
ATC	Magazine capacity	Q'ty	24/40/60/90/120											
	Tool shank/Pull stud		MAS BT50/MAS P50T-I(45°)											
	Max. tool diameter	mm inch	Ø135/Ø250 5.31/9.8											
	Max. tool length	mm inch	400 15.7											
	Max. tool weight	kg lbs	25 55											
CNC Control System		FANUC 31iB , (SIEMENS 840D)												

※ The items with star mark(*) can be changed according to the customer's requirements

HFB series

Powerful, high precision HFB-Series floor type CNC horizontal boring machine is designed for heavy duty machining of large workpieces. Its stabilized ram extension design provides superior accuracy by preventing thermal elongation and by compensating the Ram bending force.



Specifications

(OPTION)

ITEM		UNIT	HFB-130	HFB-150	HFB-160	HFB-180	HFB-200	HFB-250
X-axis(Column horizontal)		mm inch	4,000~ 157.5~	6,000~ 236.2~	6,000~ 236.2~	6,000~ 236.2~	6,000~ 236.2~	6,000~ 236.2~
Y-axis(Spindle head vertical)		mm inch	2,500-3,500 98.4-137.8	2,500-4,000 98.4-157.5	2,500-4,000 98.4-157.5	3,000-6,000 118.1-236.2	4,000-8,000 157.5-315	5,000-8,000 196.9-315
Z-axis(Ram travel)		mm inch	500{800} 19.7{31}	800{1,000} 31{39.4}	1,000{1,200} 39.4{47.2}	1,000{1,500} 39.4{59.1}	1,500{1,600} 59.1{63}	1,700{1,800} 67 {70.9}
W-axis(Spindle travel)		mm inch	500{700} 19.7{27.6}	700{800} 27.6{31.5}	800{1,000} 31{39.4}	1,000{1,200} 39.4{47.2}	1,300{1,400} 51.2{55.1}	1,500{1,600} 59.1{63}
Spindle Head	Spindle diameter	mm inch	ø130 5.1	ø150 5.9	ø160 6.3	ø180 7.1	ø200/ø220 7.9/8.7	ø250 9.84
	Speed	mm inch	10 ~ 2,000			15 ~ 1,500		
Table (Optional items)	Rotary table size	mm inch	2,500x3,000 98.4x118.1			3,000x4,000 118.1x157.4		5,000x6,000 196.8x236.2
	Max.Load on Table	kg lbs	40,000 88,187			50,000 110,233		200,000 440,924
	Table indexing(B-axis)	degree	0.001 every 90 indexing by locate pin					
CNC Control System			FANUC 31iB {SIEMENS 840D}					

CNC Horizontal Boring & Milling Machine

HB series

HB series is ideal for precision and heavy-duty boring and milling operation. Its long nose spindle head and wide table working area provide flexible machining capability while its ultra-precision paired spindle bearings ensure low thermal deformation and high machining accuracy.



Specifications

(OPTION)

ITEM	UNIT	Rotary table type						
		HB-110M	HB-110	HB-130S	HB-130	HB-130X	HB-150	
X-axis(Table longitudinal)	mm inch	1,600 63	1,600 63	2,000 78.7	3,000 118.1	3,000 118.1	3,000 118.1	
Y-axis(Spindle vertical)	mm inch	1,300 51.2	1,500 59.1	1,500 59.1	2,000 78.7	2,000 78.7	2,300 90.6	
Z-axis(Column cross)	mm inch	1,000 39.4	1,200 47.2	1,300 51.2	1,300 51.2	1,300 51.2	1,600 63	
W-axis(Spindle axial)	mm inch	350 13.8	500 19.7	700 27.6	700 27.6	700 27.6	700 27.6 {1,000}	
Table	Table size	mm inch	1,000x1,100 39.4x43.3	1,150x1,250 45.3x49.2	1,400x1,600 55.1x63	1,600x1,800 63x70.9	2,000x2,200 78.7x86.6	2,000x2,200 78.7x86.6
	Max.Load on Table	kg lbs	3,000 6,614	5,000 11,000	7,000 15,400	12,000 26,400	15,000 33,000	15,000 33,000
	Rotary table indexing(B-axis)	degree	0.001 every 90 indexing by locate pin					
Spindle Head	Spindle diameter	mm inch	ø110 4.3	ø110 4.3	ø130 5.1	ø130 5.1	ø130 5.1	ø150 5.9
	Speed	rpm	5 ~ 3,000	5 ~ 3,000	5 ~ 2,500	5 ~ 2,500	5 ~ 2,500	5 ~ 2,000
CNC Control System		FANUC 31iB, {SIEMENS 840D}						

HB-130C series Combination Table Type HB-130P series Plane Table Type



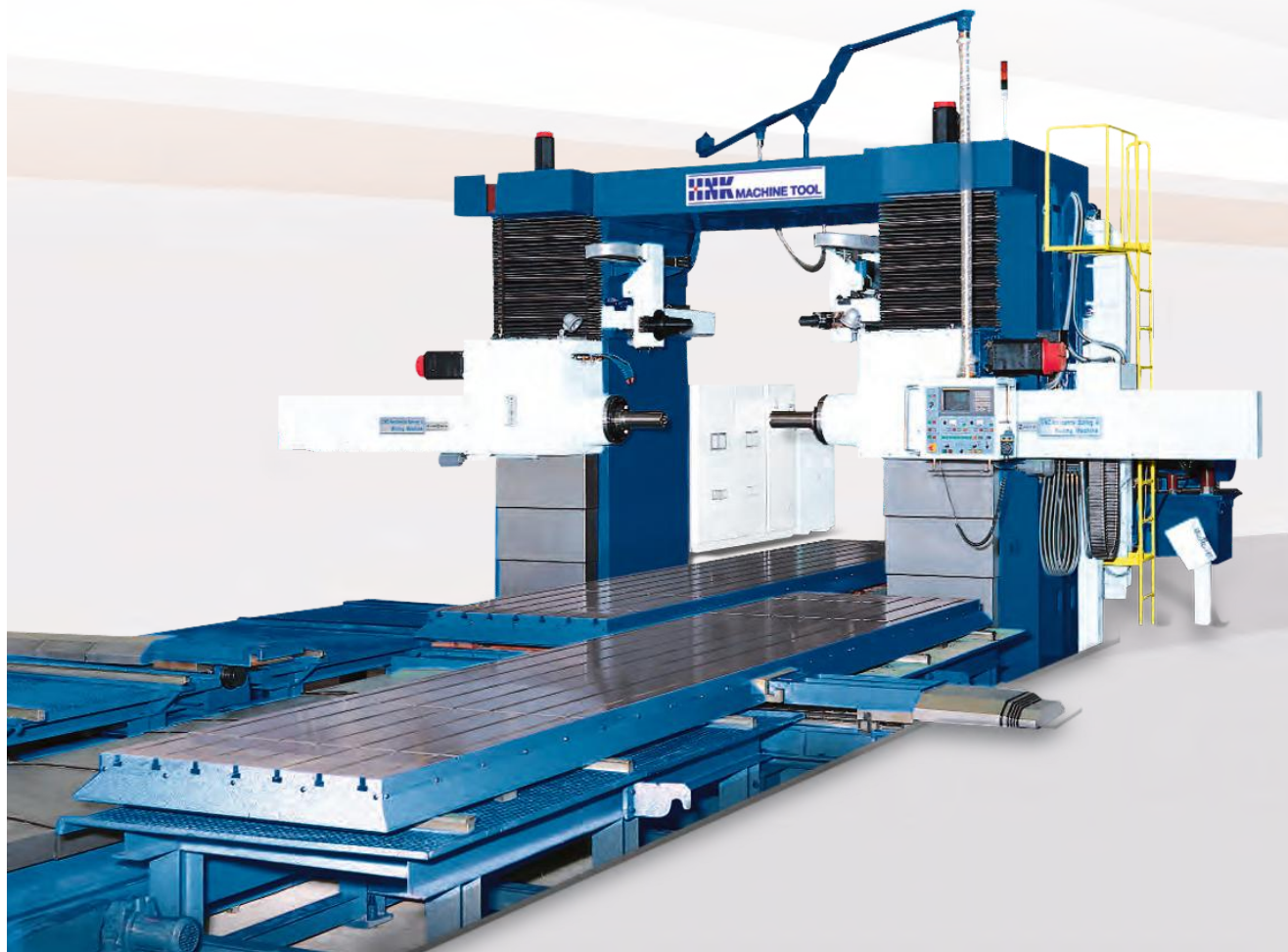
Specifications

(OPTION)

ITEM	UNIT	Combination table type		Plane table type		
		HB-130C	HB-130CX	HB-130P	HB-130PX	
X-axis(Table longitudinal)	mm inch	3,000 118.1	4,000 157.5	3,000 118.1	4,000 157.5	
Y-axis(Spindle vertical)	mm inch	2,000 78.7	2,300 90.6	2,000 78.7	2,300 90.6	
Z-axis(Column cross)	mm inch	1,300 51.2	1,300 51.2	1,300 51.2	1,300 51.2	
W-axis(Spindle axial)	mm inch	700 27.6	700 27.6	700 27.6	700 27.6	
Table (Optional items)	Table size	mm inch	1,400x3,000 55.1x118.1	1,600x4,000 63x157.5	1,400x3,000 55.1x118.1	1,600x4,000 63x157.5
	Rotary table size	mm inch	1,400x1,400 55.1x55.1	1,600x1,600 63x63	-	-
	Max.Load on Table	kg/lbs	10,000 22,000	20,000 44,000	12,000 26,400	20,000 44,000
	Max.Load on rotary Table	kg/lbs	7,000 15,400	15,000 22,000	-	-
	Rotary table indexing(B-axis)	degree	0.001 every 90 indexing by locate pin		-	-
Spindle Head	Spindle diameter	mm inch	ø130 5.1			
	Speed	rpm	5 ~ 2,500			
CNC Control System		FANUC 31iB (SIEMENS 840D)				

HKDB series Table Moving Type

The HKDB models are of the table moving type CNC boring with two spindle heads. They are designed to machine both side of workpiece simultaneously providing remarkable reduction of cycle time and precision symmetrical machining. Their automatic pallet changer eliminates machine idle time providing unparalleled productivity.



Specifications

(OPTION)

ITEM		UNIT	HKDB-130{HKDB-130P}			HKDB-150 {HKDB-150P}
X-axis(Table longitudinal)		mm inch	5,000 196.9	7,000 275.6	9,000 354.3	9,000 354.3
Y-axis(Spindle head vertical)		mm inch	1,000{2,000} 39.4{78.7}	2,000 78.7	2,000 78.7	2,000 78.7
Z-axis(Spindle axis)		mm inch	500 19.7	500 19.7	600 23.6	650{700} 25.6{27.6}
Table	Table size	mm inch	1,000x5,000 39.4x196.9	1,000x7,000 39.4x275.6	1,200x9,000 47.2x354.3	1,200x9,000 47.2x354.3
	Max.Load on Table	kg lbs	5,000 11,000	10,000 22,000	10,000 22,000	10,000 22,000
Spindle Head	No.of spindle head		2			2
	Spindle diameter	mm inch	ø130 5.1			ø150 5.9
	Spindle speed	rpm	5 ~ 2,500			5 ~ 2,000
	Spindle motor	kW HP	26 / 22 35 / 30			45 / 37 60 / 50
	Effective distance between spindles	mm inch	300 ~ 1,300 11.8 ~ 51.2	300 ~ 1,300 11.8 ~ 51.2	300 ~ 1,500 11.8 ~ 59.1	300 ~ 1,600 11.8 ~ 63
CNC Control System			FANUC 31iB {SIEMENS 840D}			

HKDB-F series Column Moving Type

The HKDB-F models, which are column Moving duplex boring machines, have two columns duplex boring machines, have two columns traveling along a fixed table. Two columns can travel along a fixed table simultaneously or Independently. The time for set-up can be minimized by extending the X-axis stroke (a fixed table), and their precise and rapid machining capability makes it possible to do the most difficult machining jobs with efficiency.



Specifications

(OPTION)

ITEM		UNIT	HKDB-130F		HKDB-150F	
X-axis(Table longitudinal)		mm inch	5,000 196.9	16,000 630	8,000 314.9	16,000 630
Y-axis(Spindle head vertical)		mm inch	1,500{2,000} 59.1{78.7}	2,000 78.7	2,000 78.7	2,000 78.7
Z-axis(Spindle axis)		mm inch	550 21.6		650{700} 25.6{27.6}	
Table	Table size	mm inch	1,000x5,000 39.4x196.9	1,000x16,000 39.4x630	1,300x8,000 51.2x315	1,300x16,000 51.2x630
	Max.Load on Table	kg lbs	20,000 44,000			
Spindle Head	No.of spindle head		2			
	Spindle diameter	mm inch	ø130 5.1		ø150 5.9	
	Spindle speed	rpm	5 ~ 2,500		5 ~ 2,000	
	Spindle motor	kW HP	26 / 22 35 / 30		45 / 37 60 / 50	
	Effective distance between spindles	mm inch	200 ~ 1,300 7.9 ~ 51.2		200 ~ 1,500 7.9 ~ 59.1	
CNC Control System			FANUC 31iB (SIEMENS 840D)			

NT series

HNK's state of the art CNC Vertical Turning Lathe Series delivers high speed and high precision turning operation in any turning applications. Its precision gears and rigid body construction design provide minimal machine vibration even at a high speed assuring greater machine performance and mechanical longevity.



Specifications

(OPTION)

ITEM		UNIT	NT-10/12F	NT-12/16	NT-12/16F	NT-16/20	NT-16/20F	NT-20/25
			[VTC-10/12F]	[VTC-12/16]	[VTC-12/16F]	[VTC-16/20]	[VTC-16/20F]	[VTC-20/25]
Machining capacity	Table diameter	mm inch	1,000 39.4	1,250 49.2	1,250 49.2	1,600 63	1,600 63	2,000 78.7
	Max. Swing	mm inch	1,250 49.2	1,600 63	1,600 63	2,000 78.7	2,000 78.7	2,500 98.4
	Max. Turning height	mm inch	800 31.5	1,300 51.2	900 35.4	1,660 65.4	900 35.4	1,800 70.9
Table	Max. Speed	rpm	450	360	360	250	250	200
	Max. Load on Table	kg lbs	4,500 9,920	8,000 17,640	8,000 17,640	10,000 22,050	10,000 22,050	12,000 26,460
	Min. Indexing(C-axis)	degree	[0.001°] VTC only					
	Motor power	kW HP	AC 30/37 40/50	AC 37/45 50/60	AC 37/45 50/60	AC 37/45 50/60	AC 37/45 50/60	AC 45/55 60/75
Max. Spindle Speed	rpm	[2,000]VTC only						
CNC Control System		FANUC 31iB {SIEMENS 840D}						

VTC series

VTC-Series is equipped with a live spindle and a C-axis indexing table. Therefore, this model is capable of not only turning operation but also other various machine operations such as drilling, tapping, and even light milling. Its multiple machining capability helps customers reduce job-change-over-time and improve overall productivity.



Specifications

(OPTION)

ITEM		UNIT	NT-25/30	NT-30/40	NT-40/50	NT-50/60	NT-60/70	NT-100/160
			[VTC-25/30]	[VTC-30/40]	[VTC-40/50]	[VTC-50/60]	[VTC-60/70]	[VTC-100/160]
Machining capacity	Table diameter	mm inch	2,500 98.4	3,000 118.1	4,000 157.5	5,000 196.9	6,000 236.2	10,000 393.7
	Max. Swing	mm inch	3,000 118.1	4,000 157.5	5,000 196.9	6,000 236.2	7,000 275.6	16,000 629.9
	Max. Turning height	mm inch	2,000 78.7	2,200 86.6	2,500 98.4	3,000 118.1	3,500 137.8	6,000 236.2
Table	Max. Speed	rpm	130	100	50	50	40	15
	Max. Load on Table	kg lbs	20,000 44,090	30,000 66,140	50,000 110,230	60,000 132,280	150,000 330,690	450,000 992,080
	Min. Indexing(C-axis)	degree	[0.001°] VTC only					
	Motor power	kW HP	AC 45/55 60/75	AC 60/75 80/100	AC 100 134	AC 155 208	AC 190 255	DC 265 355
Max. Spindle Speed		rpm	[2,000]VTC only				[1,000]VTC only	
CNC Control System			FANUC 311B {SIEMENS 840D}					

CNC Vertical Turning Center

VTC-R series

Compact design of Vertical Turning Lathe with rigid construction, high accuracy and reliability. It is designed for heavy workpiece loading and high precision machining.



Specifications

(OPTION)

ITEM		UNIT	VTC-12/16R	VTC-16/20R
Machining capacity	Table diameter	mm inch	1,200 47.2	1,600 63
	Max. Swing	mm inch	1,600 63	2,000 78.7
	Max. Turning height	mm inch	1,200 47.2	1,600 63
Table	Max. Speed	rpm	330	250
	Max. Load on Table	kg lbs	7,000 15,400	8,000 17,600
	Min. Indexing(C-axis)	degree	0.001	
	Motor power	kW HP	30/37 40/50	37/45 50/60
Max. Spindle speed		rpm	2,000	
CNC Control System			Fanuc 31iB or Fanuc 0i-TD	

NT-65FS

NT-65FS is specially designed for machining aerospace engine parts, high alloy steel such as Inconel, titanium etc.

Automatic tool change of CAPTO system is available which makes more convenience for operation with full type splash guard.



Specifications

{OPTION}

ITEM		UNIT	NT-65FS
Machining capacity	Table diameter	mm inch	650 26
	Max. Swing	mm inch	750 29.5
	Max. Turning height	mm inch	840 33.1
Table	Max. Speed	rpm	800
	Max. Load on Table	kg lbs	1,000 2,204
	Motor power	kW HP	30/37 40/50
CNC Control System			FANUC 31iB {SIEMENS 840D}

CNC Vertical Lathe for Low Speed Crankthrow

HCT series

Vertical Lathe for Crankthrow has a structure of its high power, high rigidity, high accuracy maintenance free and improved productivity, and is also designed for specially efficient machining of crankthrows for large ship engines with the latest control system. HCT-TD models realize the maximized productivity by Double Tool Arms.



Specifications

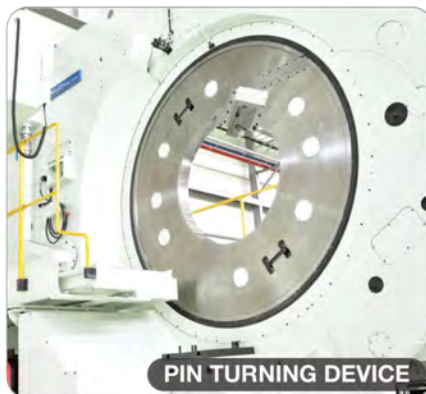
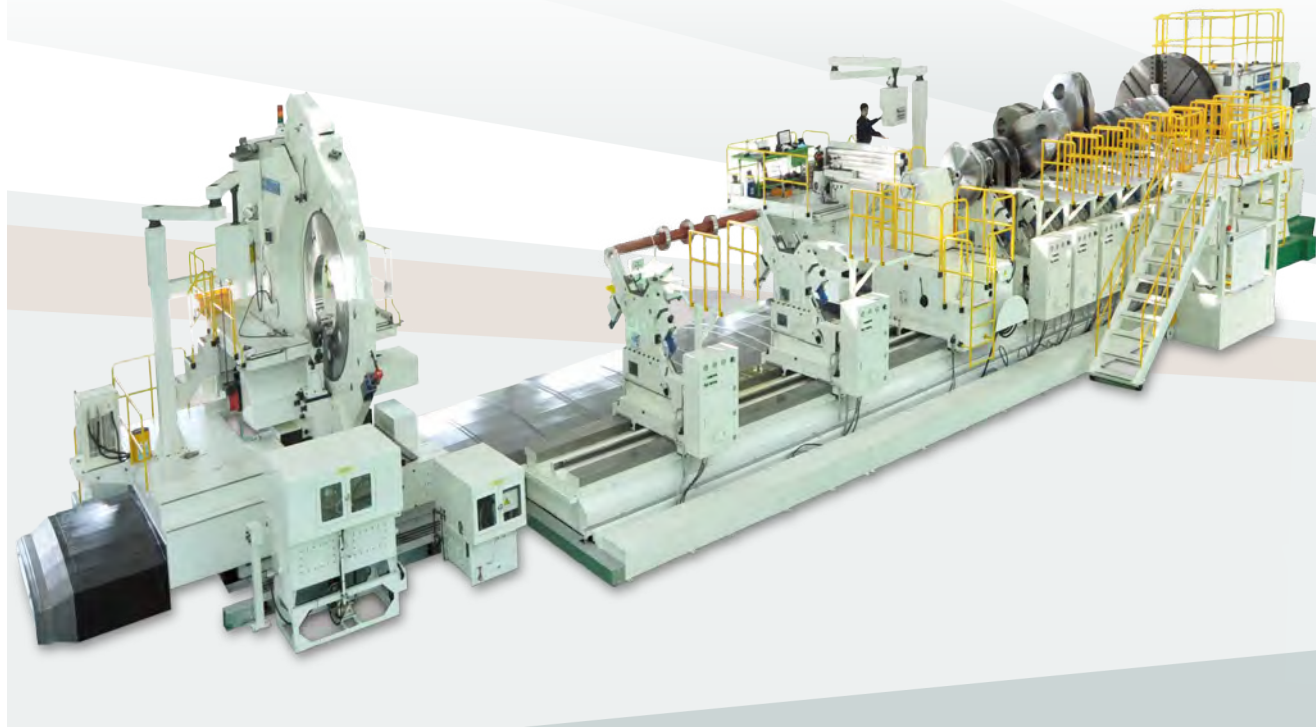
{OPTION}

ITEM		UNIT	HCT-40T	HCT-45T	HCT-50T	HCT-52T	HCT-55T
Machining capacity	Table diameter	mm inch	4,000 157.5	4,500 177.2	5,000 196.9	5,200 204.7	5,500 216.5
	Max. Swing	mm inch	4,500 177.2	5,000 196.9	5,400 212.6	5,600 220.5	6,000 236.2
Table	Speed	rpm	1 ~ 40	1 ~ 35	1 ~ 35	1 ~ 35	1 ~ 30
	Max. Load on Table	kg lbs	40,000 88,180	60,000 132,280	70,000 154,320	90,000 198,420	90,000 198,420
	Motor power	kW HP	122 164	121 162	121 162	171 229	171 229
X-Axis Travel (Tool arm horizontal)		mm inch	2,050 80.7	2,350 92.5	2,550 100.4	2,550 100.4	2,800 110.2
Z-Axis Travel (Tool arm vertical)		mm inch	1,200 47.2	1,300 51.2	1,400 55.1	1,450 57.1	1,500 59.1
CNC Control System			FANUC 31iB {SIEMENS 840D}				

Heavy-duty Crankshaft Lathe with Pin Turning Device

HCL series

Crankshaft Lathe with one carriage and crankpin turning device with hydrostatic bearing. Machining of journals and crankpins of semi-built crank-shafts for marine diesel engines.



Specifications

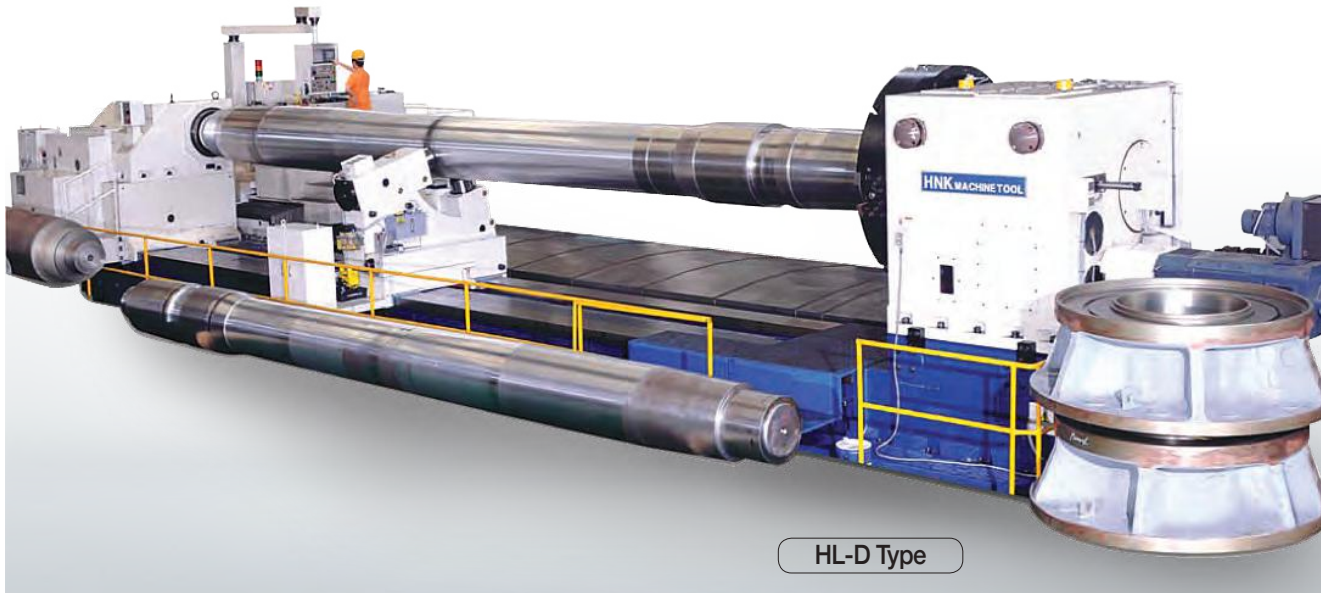
(OPTION)

ITEM	UNIT	HCL-35	HCL-41	HCL-50
Work piece diameter	mm inch	3,500 137.8	4,100 161.4	5,000 196.9
Work piece length	mm inch	10,000 393.7	14,000 551.2	17,000 669.3
Max. workpiece weight (with 10 steady rest)	kg lbs	70,000 154,324.5	160,000 352,739.6	300,000 661,386.8
Driving power	kW	141	100+100	130+130
CNC Controller system	Fanuc 31iB {Fanuc 30iB, Siemen 840D}			

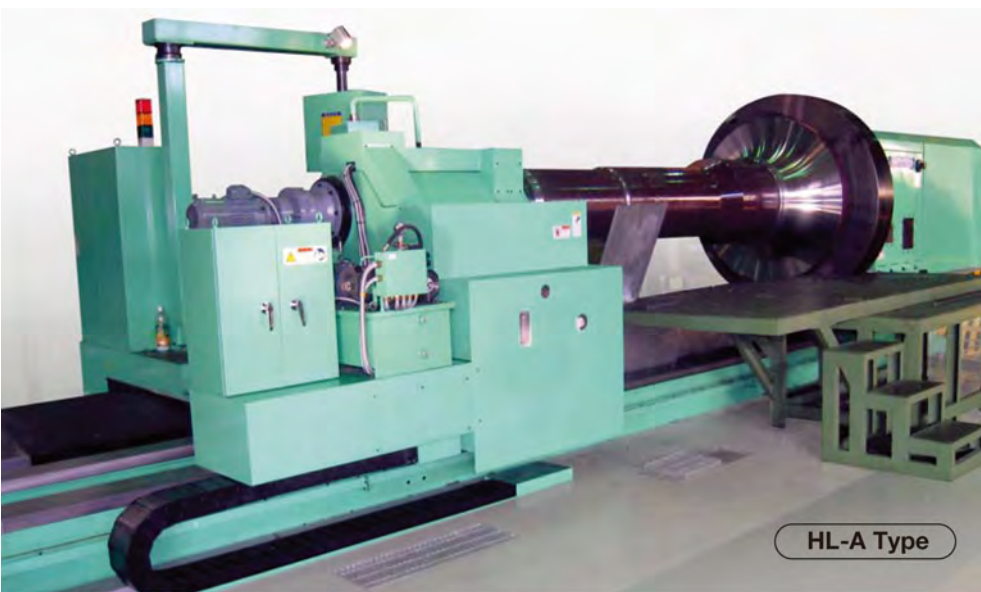
HL series

HL-series is suitable to diverse types of workpieces such as wind mill shafts, large-sized ship engine crankshafts, propeller shafts, and rudder stock in various industries.

This model has excellent machining capability covering precised and complicated to heavy cutting processes.



HL-D Type



HL-A Type



Specifications

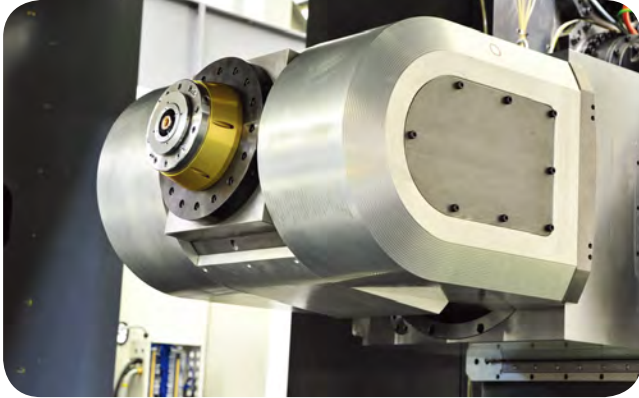
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ITEM	UNIT	HL-A series	HL-B series	HL-C series	HL-D series	HL-E series	HL-F series
Swing over bed	mm inch	1,400/1,800 55.1/70.8	1,400/1,800/2,000 55.1/70.8/78.7	2,000/2,500/3,000 78.7/98.4/118.1	2,500/3,000/3,500 98.4/118.1/137.8	3,000/3,500/4,000 118.1/137.8/157.5	3,500/4,000/4,500 137.8/157.5/177.1
Distance between centers	mm inch	4,000~20,000 157.5~787.4	4,000~20,000 157.5~787.4	4,000~20,000 157.5~787.4	6,000~20,000 236.2~787.4	6,000~20,000 236.2~787.4	6,000~20,000 236.2~787.4
Max. workpiece weight	kg lbs	15,000~30,000 33,069.3~66,138.6	40,000~80,000 88,184.9~176,369.8	100,000~120,000 220,462.2~264,554.7	150,000 330,693.4	250,000 551,155.6	350,000 7,716,181.4
Spindle motor power	kW/HP	55~110 75~148	75~150 100~202	110~220 148~295	140~300 190~405	170~300 230~405	200~400 270~540
CNC Control System		FANUC 31iB { FANUC 30iB, SIEMENS 840D }					

CNC 5-Axis High Speed Milling Machine

HFM series

High speed, high precision HFM-series are especially designed for Aircraft parts, Electronic parts, Automobile parts and Etc. With optimum pallet system, the work efficiency is improved. In addition, with the automatic universal head, HFM series can support the various surface machining job.



Specifications

(OPTION)

ITEM		UNIT	Compact Model			Grand Models		
			1x2	1x3	1.5x4	2x4	2x5	2x6
Table	Size	mm inch	2,000×1,000	3,000×1,000	4,000×1,500	4,000×2,000	5,000×2,000	6,000×2,000
			79.7×39.4	118.1×39.4	157.5×59.1	157.5×79.7	196.9×79.7	236.2×79.7
Distance between table surface - spindle nose		mm inch	500 19.7		550 21.7	650 25.6		
Spindle Speed		rpm	16,000{30,000}			30,000		
Spindle nose taper			HSK 63-A			HSK 63-A		
Travels	Table (X-axis)	mm inch	27,00 106.3	3,700 145.7	4,700 185	4,700 185	5,700 224.4	6,700 263.8
	Spindle Head Cross (Y-axis)	mm inch	1100 43.3		1600 63	2100 82.7		
	Spindle Head Vertical (Z-axis)	mm inch	550 21.7			700 27.6		
	A-axis	deg	±105{±120}			±120		
	C-axis	deg	±200			±200		
CNC Controller system			Siemen 840D {Fanuc 31iB}					

HIB series High Speed models

HIB-Series is particularly designed to perform high speed boring & milling operation in die/mold industry. Equipped with standard 12,000 rpm spindle and the state of the art linear motion guides, HIB-series can feed up to 12,000mm/min(472 ipm) providing unparalleled productivity and superior surface finish.



Specifications

(OPTION)

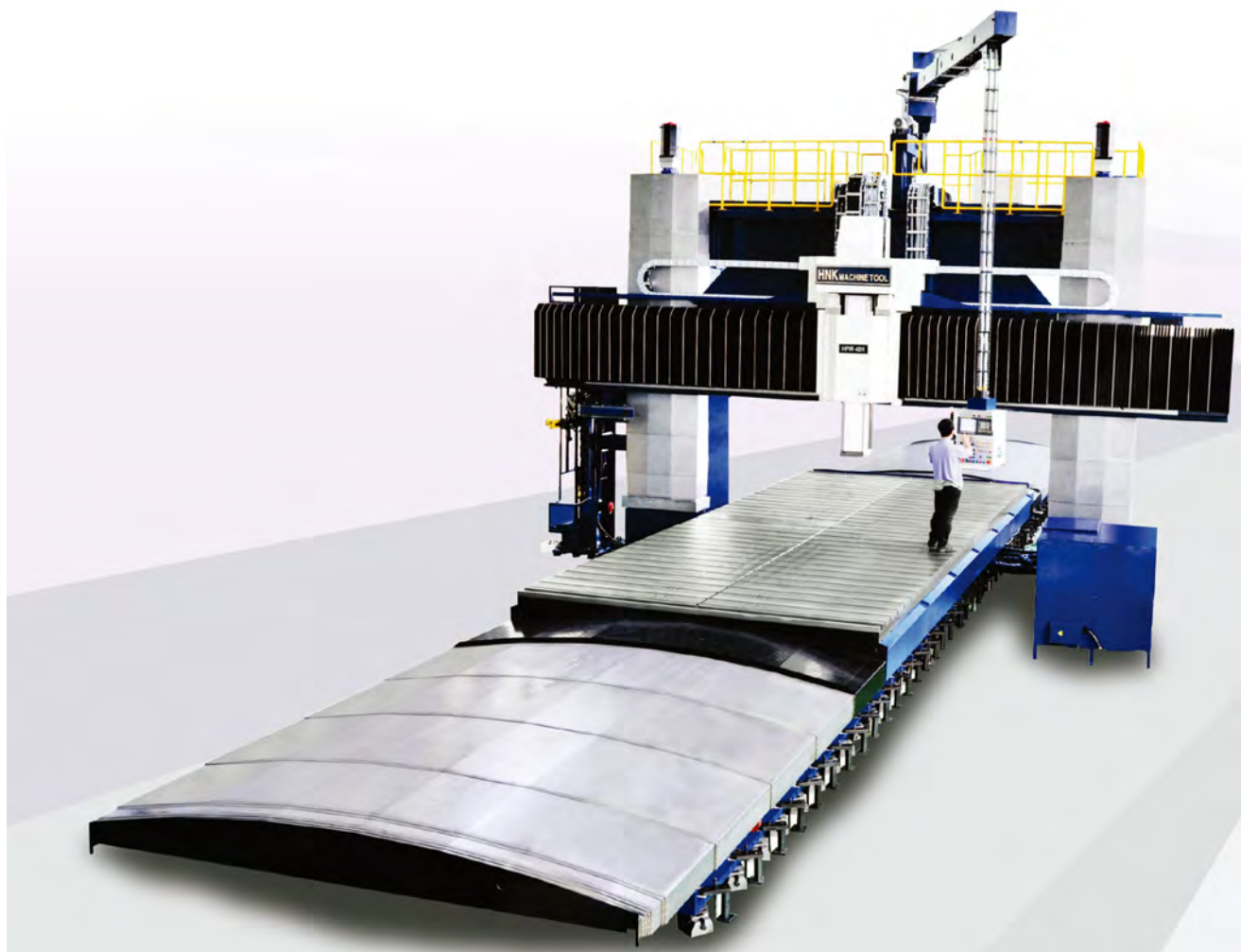
ITEM	UNIT	HIB-12	HIB-16	HIB-18	HIB-22
X-axis(Table longitudinal)	mm inch	1,600 63	2,000 78.7	3,000 118.1	3,000 118.1
Y-axis(Spindle vertical)	mm inch	1,500 59.1	1,500 59.1	2,000 78.7	2,000 78.7
Z-axis(Column cross)	mm inch	1,200 47.2	1,300 51.2	1,300 51.2	1,600 63
W-axis(spindle axial)	mm inch	400 15.7	400 15.7	400 15.7	400 15.7
Table	Table size	mm inch 1,150x1,250 45.3x49.2	1,400x1,600 55.1x63	1,600x1,800 63x70.9	2,000x2,200 78.7x86.6
	Max.Load on Table	kg lbs 5,000 11,000	6,500 14,300	12,000 26,400	15,000 33,000
	Table revolution	rpm 2	2	1.4	1
	Rotary table indexing(B-axis)	degree	0.001 every 90 indexing by locate pin		
Spindle Head	Spindle diameter	mm inch ϕ 200 7.9	ϕ 200 7.9	ϕ 200 7.9	ϕ 200 7.9
	Speed	rpm 50 ~ 12,000	50 ~ 12,000	50 ~ 12,000	50 ~ 12,000
CNC Control System		FANUC 31iB { FANUC 30iB, SIEMENS 840D}			

High-Speed CNC Double Column Machining Center

HPM-H High Speed models

Evolved from its heavy cutting structure, HPM-H series becomes the latest and advanced CNC machine tool model with its high speed spindle and feed rate.

Together with its high speed spindle and feed rate, the various attachments get HPM-H series to attain the widest job applications in range of industries such as automobile, plastic or press parts.



Specifications

{OPTION}

ITEM	UNIT	HPM-15H		HPM-20H		HPM-25H		HPM-30H		HPM-35H		HPM-40H		
		15x30	15x40	20x40	20x60	25x50	25x60	30x60	30x80	35x60	35x80	40x80	40x100	
Effective distance between column	mm inch	2,200 86.6		2,700 106.3		3,200 126		4,000 157.5		4,500 177.2		5,000 196.9		
Distance between table surface spindle end(Max.)	mm inch	1,500{1,800} 59.1{70.9}		1,800{2,000} 70.9{78.8}		1,800{2,000} 70.9{78.7}		2,000{2,350} 78.7{92.5}		2,000{2,350} 78.7{92.5}		2,000{2,350} 78.7{92.5}		
X-Axis (Table travel)	mm inch	3,250 128	4,250 167.3	4,250 167.3	6,250 246.1	5,250 206.7	6,250 246.1	6,250 246.1	8,250 324.8	6,250 246.1	8,250 324.8	8,250 324.8	10,250 403.5	
Y-Axis (Spindle head travel)	mm inch	3,200 126		3,700 145.7		4,200 165.4		5,000 196.9		5,500 216.5		6,000 236.2		
W-Axis (Cross-rail travel)	mm inch	1,000 39.4		1,200 47.2		1,200 47.2		4,700 185		1,500 59.1		1,500 59.1		
Z-Axis (Ram travel)	mm inch	800 31.5												
Table	Width	mm inch	1,500 59.1		2,000 78.7		2,500 98.4		3,000 118.1		3,500 137.8		4,000 157.5	
	Length	mm inch	3,000 118.1	4,000 157.5	4,000 157.5	6,000 236.2	5,000 196.9	6,000 236.2	8,000 315	6,000 236.2	8,000 315	8,000 315	10,000 393.7	
	Max. Load on table	kg lbs	10,000 22,000		15,000 33,000		20,000 44,100		25,000 55,100		30,000 66,100		50,000 110,000	
Spindle head speed	rpm	40 ~ 6,000 {8,000}												
CNC Controller system		FANUC 31iB {SIEMENS 840D}												

GPM-60 FX

GPM-60FX is ram type of 5-Axis gantry profiler.

Various processes for machining complicated shape of components can be achieved by this machine with 5-axis surface machining availabilities.



Specifications

{OPTION}

ITEM		UNIT	GPM-60FX
Working Area		mm inch	6,000 x 12,000 236.2 x 472.4
Spindle Head	Spindle Speed	rpm	24,000
	Vertical Position (A-Axis)	deg	±120°
	Supplying Position (C-Axis)	deg	±245°
Travels	Longitudinal (X-Axis)	mm inch	12,000 472.4
	Spindle Head Cross (Y-Axis)	mm inch	6,300 248.0
	Spindle Head Vertical (Z-Axis)	mm inch	4,250 167.3
CNC Control System			SIEMENS 840D

High-Speed Special Purpose Machines

5-Spindle Gantry Profiler

5S-GPM

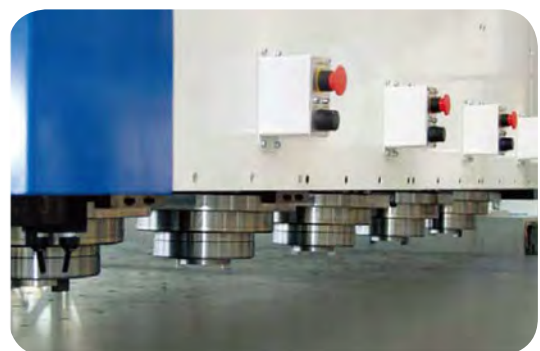
5S-GPM is specially designed for high speed machining of aircraft frame parts. Its five 12,000rpm spindles provide unconventional productivity and superior surface finish.



Specifications

(OPTION)

ITEM	UNIT	5S-GPM
X-axis travel(Gantry longitudinal)	mm inch	24,000 ~ 36,000 944.8 ~ 1,417.3
Y-axis travel(Spindle head horizontal)	mm inch	1,524 (762) 60" (±30")
Z-axis travel(Spindle head vertical)	mm inch	500 19.7
Spindle Speed	rpm	10,000 {12,000}
Spindle taper		ISO 50
Spindle power	kW HP	75 100
Number of spindle		5
CNC Control System		SIEMENS 840D {FANUC 31iB}



3-Spindle Profiler

HAP-V3

High Speed, high-precision 3-spindle table moving type profiling machine for machining aircraft parts.

(OPTION)

ITEM	UNIT	HAP-V3
Table size	mm inch	2,500x6,000 98.4x236.2
X-axis travel(Gantry longitudinal)	mm inch	6,200 244.1
Y-axis travel(Spindle head horizontal)	mm inch	2,800 110.2
Z-axis travel(Spindle head vertical)	mm inch	500 19.7
A-axis(Spindle tilting)	degree	-23° ~ +23°
Number of spindle		3
Spindle Speed	rpm	10,000 {12,000}
Spindle power	kW HP	50 67
CNC Control System		SIEMENS 840D {FANUC 31iB}



Drilling & Routing Center

HKRC series

This machine is designed for high speed drilling, riveting, and milling operations of complicated parts, such as aircraft parts which require greater accuracy and complexity.

Specifications

(OPTION)

ITEM	UNIT	HKRC-15	HKRC-20
Table width	mm inch	1,500 59	2,000 78.7
Table length	mm inch	4,000 157.5	6,000 236.2
Workpiece sheet stack(Max.)	mm inch	30 1.2	
Spindle speed(Max.)	rpm	24,000	
Rapid feedrates(X,Y)	min/min ipm	20,000 787.4	
CNC Control system		Fanuc 31iB	



CNC Gear Grinding Machine

HGG series

HGG-Series is Profile Grinding Type / Thread Wheel Grinding Type of gear grinding machine. It produces various types of gears with higher speed and more precisely, and minimizes dressing time with the double dressing system.

Diverse teeth are prepared by tooth-fix-program and various operative convenient devices such as Automatic Balancing, AE sensor and etc. In addition, more reliable gear machining results can be achieved with tooth calibration devices.



Thread Wheel Grinding Type

Profile Grinding Type

Specifications

[OPTION]

ITEM	UNIT	Profile Grinding Type				Thread Wheel Grinding Type	
		HGG-1000	HGG-2000	HGG-4000	HGG-6000	HGG-260H	HGG-550H
Gear outside diameter	mm/inch	1000 39.4	2000 78.7	4,000 157.4	4,000 157.4	260 10.2	560 22
Module of cutting	-	M1-M35	M1-M35	M1-M50	M1-M50	M0.5-M5	M8-M10
Helix angle	deg.	+45/-45				+45/-45	
Vertical working range	mm/inch	650 25.5	1,000 39.4	1,500 59	1,500 59	180 7.1	300 11.8
Grinding wheel diameter	mm/inch	Max.400 15.7	Max.400 15.7	Max.450 17.7	Max.450 17.7	Max.275 10.8	Max.300 11.8
Max. Wheel speed	rpm	Max.4,000		Max.3,500		Max.5,500	
CNC Control system		SIEMENS 840D				SIEMENS 840DSL	

HGH series

By using an inner gear tooth cutting attachment & an outer gear tooth cutting attachment alternately on the same machine, the cutting processes of yaw & pitch bearing can be completed at one set-up. With the biggest cutting capacity (table and swing size), its application with high speed steel hobber and hobbing cutters (involute insert) maximizes the productivity, operation and precision of huge gears for the large-sized turning tables.



HGH-2

HGH-20

Specifications

(OPTION)

ITEM	UNIT	HGH-20	HGH-40	HGH-60	HGH-80	HGH-2	HGH-5	
Table diameter	mm inch	1,500 59	2,000 78.7	3,000 118.1	4,000 157.5	240 9.4	450 17.7	
Max. Gear diameter	mm inch	2,000 78.7	4,000 157.5	6,000 236.2	8,000 314.9	200 7.9	500 19.6	
Max. Table Load Capacity	kg lbs	15,000 33,069.3	30,000 66,138.7	100,000 220,462.2	130,000 286,600.9	50 110.2	80 176.3	
Travels	Column Longitudinal (X-axis)	mm inch	1,000 39.4	2,000 78.7	2,600 102.3	3,100 122	220 8.6	500 19.6
	Hob Head Tangential (Y-axis)	mm inch	300 11.8	450 17.7	450 17.7	450 17.7	170 6.6	250 9.8
	Hob Head Vertical (Z-axis)	mm inch	1,000 39.4	1,500 59	2,000 78.7	2,000 78.7	350 13.7	400 15.7
	Hob Head Swivel (A-axis)	deg	-45° to +45°				-45° to +45°	
	Table Index (C-axis)	deg	0~360				0~360	
CNC Control System		SIEMENS 840D				SIEMENS 840D		

Propeller Blade Surface Milling Machine

HPMC-110

This machine is specially designed to process the large solid-type marine propeller with high efficiency by using NC. The propeller is placed on the rotary table and it is processed by table turning and milling cutter on the snout on the sideling RAM.



Specifications

ITEM	UNIT	HPMC-110	HPMC-85
Table diameter	mm inch	7,000 275.6	6,000 236.2
Max.machining diameter	mm inch	11,000 433.1	8,500 334.6
Max. Load on table	kg lbs	130,000 286,600	80,000 176,470
CNC Control System	Fanuc 31iB		



CNC 4-Axis Vertical Milling Machine

HVM-4

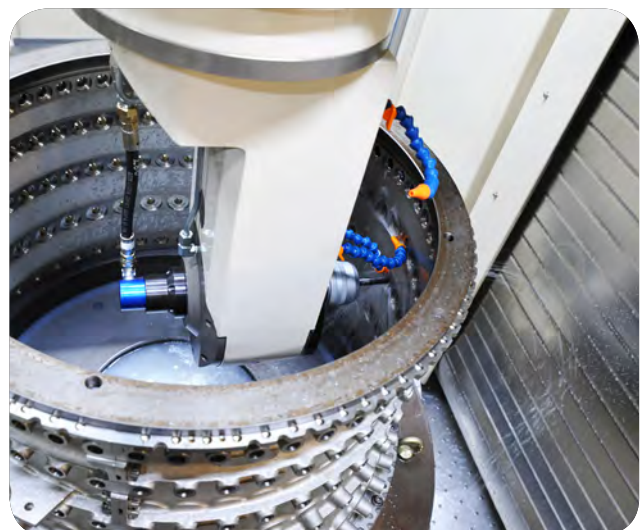
HVM-4 is specially designed for machining aerospace engine parts, highly alloy steel such as Inconel, titanium etc. Box way type of slide ways are adapted to offer higher dynamic stiffness and vibrational absorption.



Specifications

(OPTION)

ITEM	UNIT	HVM-4
Pallet Table Size	mm inch	1,000 x 1,000 39.4 x 39.4
Max. Workpiece Diameter	mm inch	ø 1,500 Φ59.1
Max. workpiece height	mm inch	1,650 65
Spindle Speed	rpm	6,000 236.2
Travels	Table Longitudinal	mm inch 1,700 67
	Table Cross	mm inch 1,100 43.3
	Spindle Vertical	mm inch 1,600 63
	Table Index	degree ∞
CNC Control System		Fanuc 31iB



CNC Horizontal Milling Machine

HIM-1500

Powerful & high precise HIM-1500 floor type CNC milling machine is designed for machining of more various types of work pieces by being able to apply various types of options. In addition, its stabilized ram design protects and compensates the ram extension caused by bending force and it gives superior accuracy.



Specifications

ITEM		UNIT	HIM-1500
X-axis (Column Horizontal)		mm inch	8,000 315
Y-axis (Spindle Head Vertical)		mm inch	3,000 118.1
Z-axis (Ram Travel)		mm inch	1,500 59.1
Spindle Head	Ram Size	mm inch	420x450 16.5x17.7
	Spindle Speed	rpm	3,000
Spindle speed		rpm	5~2,000
CNC Control System		Fanuc 31iB	

CNC Triple Milling Machine

HTM-30S

Rough and find cutting process on each side of a special purpose can be carried out and various cutting jobs such as milling, boring, drilling and tapping can be completed at one set-up on this model.



Specifications

ITEM		UNIT	HTM-30S
Effective distance between columns		mm inch	4,000 157.5
Distance between table surface & V-spindle end.		mm inch	Max. 2,450 96.5
Travel	X -Axis (Table Longitudinal)	mm inch	10,000 393.7
	Y1-Axis (Vertical Ram horizontal)	mm inch	5,800 228.3
	Z1 -Axis (Vertical Ram vertical)	mm inch	1,000 39.4
	Y2 -Axis, Y3 -Axis	mm inch	1,800 70.9
	Z2, Z3, W1, W2	mm inch	500 19.7
	Cross-rail elevation	mm inch	1,000 39.4
Table Size		mm inch	3,000x8,300 118.1x326.8
Maximum load on table		kg lbs	20,000 44,092.5
Spindle speed		rpm	5~2,000
CNC Control System		Fanuc 31iB	

Finger Slot Milling Machine

FSM-500

This machine is designed for machining the finger slots of turbine engine blades.



Specifications

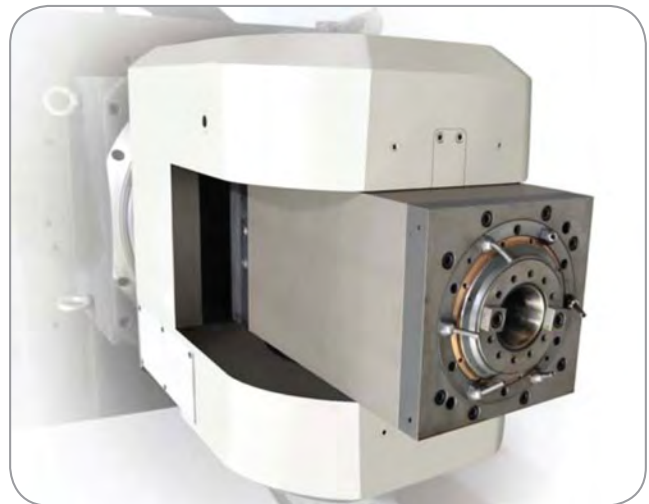
ITEM	UNIT	FSM-500
Number of station		3(1set-up+2 working)
Index table size	mm inch	ø 3,500 137.8
Spindle motor	kW HP	51/77 68/103
Spindle diameter	mm inch	ø 221.4 8.7

2-Axis Head

It makes it possible to control 5-axis, so that it cuts any complicated products such as Impellers, engine-intake, compressors and others requiring profiling process by using this 2-axis head.

Specifications

ITEM	UNIT	SPECIFICATION
Allowable speed	rpm	10,000
A-Axis Indexing	deg	-95° ~ +95°(infinite)
A,B-axis rotating torque	Nm	1,500
B-Axis Indexing	deg	-220° ~ +220°(infinite)
A,B-axis rotating speed	deg/min	1,800



Special Purpose Machine

CNC Tilting Rotary Table



HTR-25

CNC Portable Boring & Reaming M/C



HKBR-30

CNC Portable Milling M/C



PUM-110B

Tire Building Machine



TBM

Shop Floor for Medium Speed Crankshaft

HPF-15

HPF-15 reborn for medium speed crankshaft production process is especially designed mainly for measuring dimension of forged raw material, marking center of a job and marking angle of crankpin as well as facing side of a job, drilling and making holes on flange.



Specifications

ITEM	UNIT	HPF-15
Effective distance between columns	mm inch	2,150 84.6
Distance between table surface and spindle end(Max.)	mm inch	2,000 78.7
X-Axis (Table travel)	mm inch	8,250 324.8
Y-Axis (Spindle head travel)	mm inch	2,600 102.4
Z-Axis (Ram travel)	rpm	1,000 39.4
Table size	mm inch	1,500x8,000 59.1x315.0
Spindle speed	mm inch	3,000
CNC Control System		Fanuc 31iB

CRM-850

As a special purpose machine for rough cutting of medium speed crankshafts for medium speed vessel, this model has the specially designed internal milling cutter to increase cutting depth and cutting speed to maximize the productivity.



Specifications

ITEM	UNIT	CRM-850	
Length of the machine	mm inch	21,000 826.8	
Work piece	Diameter	mm inch	850 33.4
	Length	mm inch	8,000 314.9
	Weight	tons	20
Carriage & protal	Z-Axis travel	mm inch	8,280 325.9
	X-Axis travel	mm inch	±560 22
	Y-Axis travel	mm inch	±560 22
Cutter head	Speed	rpm	67.5(178m/min)
	Cutter (dia,width)	mm inch	ø850x87 33.4x3.4
		mm inch	ø850x102 33.4x4
		mm inch	ø1,250x128 49.2x5
CNC Control System		Fanuc 31iB	

HTM-12

HTM-12, the efficiency of its multifunctional design is verified on various machining processes of crankshaft such as fine cutting of main journal, pin journal and outside of flange plus cutting inside/ outside corner R of pin journal and drilling/tapping with special attachment.



Specifications

ITEM	UNIT	HTM-12
Max. Turning dia	mm inch	ø1,200 47.2
Max. Workpiece length	mm inch	8,000 315.0
Max.Weight	kg lbs	12,000 26,455.5
Spindle speed	rpm	3,000
CNC Control System		Fanuc 31iB

GPM-20F

All cutting process such as milling, boring, drilling, tapping for a medium speed crankshaft for medium speed vessel is completed at one set-up on this model.



Specifications

ITEM	UNIT	GPM-20F
Max. Workpiece	mm inch	ø1,300 x 12,000 51.2x472.4
Max. Workpiece weight	kg lbs	30,000 66,138.7
Spindle speed	rpm	Max. 2,000
Ram size	mm inch	380 x 380 15.0x15.0
X- Axis Travel	mm inch	15,000 590.6
Y- Axis Travel	mm inch	4,200 165.3
Z- Axis Travel	mm inch	1,000 39.4
X, Y, Z -Axis Feed rate	mm/min	1 ~ 3,600
CNC Control System		Fanuc 31iB

CDM-12

All cutting jobs such as milling, boring, drilling and tapping on medium speed crankshafts for medium speed vessel is completed at one set-up on this model.



Specifications

ITEM	UNIT	CDM-12
Max. Swing	mm inch	ø1,200 47.2
Max. Workpiece Length	mm inch	8,000 315.0
Max. Workpiece Weight	kg lbs	10,000 22,046
Milling unit spindle speed	rpm	0 ~ 1,000
Gun drill unit spindle speed	rpm	0 ~ 1,000
Index unit chuck diameter	mm inch	ø800 31.5
Indexing control	deg	0.001°
CNC Control System		Fanuc 31iB

HCG-12P

Specially designed for final grinding process on journal, pins and flange of a medium speed crankshaft, HCG-12P is capable of grinding the off-centered pin of a crankshaft along the trace of its eccentric rotation.



Specifications

ITEM	UNIT	HCG-12P
Swing over carriage	mm inch	ø 1,240 48.8
Max. Grinding length	mm inch	13,000 511.8
X -Axis Travel	mm inch	900 35.4
Z -Axis Travel	mm inch	14,400 566.9
Grinding wheel diameter	mm inch	ø 2,050 80.7
CNC Control System		Fanuc 31iB



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