

INSUNG

SPECIAL MACHINE TOOLS

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Tailored Solutions for Any Job Application

◆ Introduction

Since establishment in 1984, we, INSUNG Machinery Co., Ltd., Korea, have Manufactured large sized special purpose machine tools, which requires 'special Solutions for Special Job Applications' besides fulfilling general purpose of the machine.

1. Chemical	CNC Tube Sheet Drilling Machine / CNC Pipe Drilling Machine	Boiler Header Box Tube Sheet / Boiler Pipe Header Box
2. Bridge Construction	CNC Drilling Machine CNC Gantry Type Drilling Machine	Gussets Plate / Splice Plates
3. Marine Shipbuilding	CNC Double Column Machining Center / CNC Large Horizontal Lathe CNC Large Vertical Lathe / CNC 10-Axis Modeling Machine	Engine Box / Engine Shaft Frame Engine Crankshaft / Model Ship Modeling
4. Construction Machine	CNC Duplex Head Boring Machine CNC Gantry Type Machining Center CNC Vertical Lathe CNC Rotating Table Drilling Machine	Boom Frame / Middle Frame / Slewing Bearing Hard Turning Slewing Bearing, Drilling, Tapping
5. Car Tire Mold	CNC Rotating Table Type 5-Axis Machining Center CNC Indexing Table Type Twin Head Machining Center CNC Lettering Machine	Tire Mold and Container Machining Mold Base Square Face Drilling, Tapping Tire Mold Side Lettering
6. Alternative Energy	CNC Vertical Lathe / CNC Rotating Table Drilling Machine	Wind Power Bearing Hard Turning Wind Power Bearing Drilling, Tapping
7. Steel	CNC Heavy Duty Roll Lathe / CNC Heavy Duty Large Lathe	Roll Turning and Milling / Grooving / Large Workpiece Hard Turning

◆ Brief History

<ul style="list-style-type: none"> ● 1984. 04 Established Gigong Industry in Gwang-ju City, Korea ● 1991. 01 Developed CNC Gantry and Table Moving Type Drilling Machine 6 Models ● 1993. 02 Developed Education CNC Machining Center, CNC lathe, F.M.S Line 4 Models ● 1994. 01 Developed CNC Plano Miller Quill / Ram Type 2 Models ● 1995.08 Nominated as The Promising Company for Advanced Technology by The Ministry of Commerce Industry of Korea ● 1996. 05 Developed CNC Index Table Type 6 Models, Mold Tilting Table Type 2 Models ● 1997. 02 Supplied CNC Table Type Drilling Machine to Sumitomo Heavy Industry and TOMO Industry, Japan ● 1997. 06 Developed 5-Axis Tire Container Mold Machine, 4-Axis Lettering Machine, 5-Axis Engraving Machine 3 Models ● 1999. 01 Nominated as The Best Technology Company by The Small and Medium Business Administration of Korea ● 1999. 12 Optical Communication Business 	<ul style="list-style-type: none"> ● 2000. 04 Agreed for Joint R & D of Optical Technology with Gwang-ju Science Technology Institute ● 2001. 06 Completed Ferrule Production Line 1 Million set per month for PRIMEPOTEK, Korea ● 2002. 04 Exported Ferrule Production Line 2.5 Million set per month for YUNSHENG Group, China ● 2004. 02 Changed Name of "INSUNG MACHINERY" ● 2006. 01 Supplied CNC Chock Fit Roll Turning Lathe to POSCO, Korea ● 2007. 08 Developed special purpose CNC Vertical Turning Lathe for Wind Power Bearings ● 2008. 11 Developed CNC Floor Type Boring & Milling Machine ● 2009. 01 Developed Wind Power Bearing Hard Turning Vertical Lathe ● 2012. 03 Supplied Tire Mold 5-Axis Machining Center for HANKOOK Tire World Factory ● 2013. 06 Supplied Horizontal Twin Head Machine Center for SAMSUNG Mold Machining ● 2014. 08 Factory Expansion ● 2015. 09 Developed Diameter 3,500mm Twin Ram Vertical Lathe of 3.5G Wind Power Bearing 2 Face Hard Turning ● 2015. 10 Opened China Office and German Office
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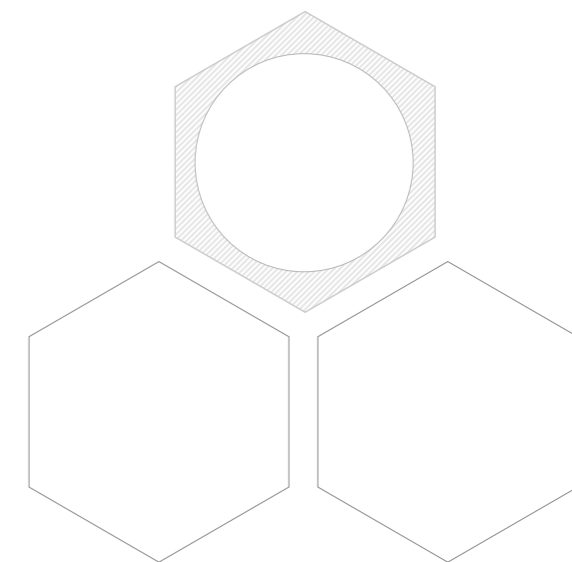
VERTICAL LATHE

CNC VERTICAL LATHE

- 1. Slewing Bearing, Wind Power Bearing Turning Type 3
- 2. Tire Container Mold Base Turning Type 4
- 3. Long Flange Turning and Grinding Type 5
- 4. Twin Ram + Two A.T.C Type 6
- 5. Wide Swing Table Type 7

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- 1 CNC VERTICAL LATHE
- 2 LARGE CNC LATHE / ROLL CNC LATHE
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- 4 DOUBLE COLUMN MACHINING CENTER
- 5 CNC BORING MACHINE
- 6 CNC MODELING MACHINE
- 7 CNC DRILLING MACHINE
- 8 CNC DRILLING MACHINE
- 9 SPECIAL MACHINE



CNC Vertical Lathe

Slewing Bearing, Wind Power Bearing Hard Turning

- The Best Solution for Slewing Bearing, Wind Power Pitch / Yaw Bearing
- Rolling Surface of Bearing by Hard Turning up to Ra 0.2~0.4μm
- Saddle of Special Under-rail System to Disperse Loads
- Special Chip Collection System Free From Chip Splash
- Cooling Control System Against Table Variation



■ Cross Rail Fixed Type (ISVTL, ISVTC FB Series)

ITEMS	UNIT	1216FB	1620FB	2025FB
Table Dia. / Turning Dia.	mm	1,200/1,600	1,600/2,000	2,000/2,500
Turning Height / Ram Stroke	mm	740/650	740/650	740/650
Load on Table	kg	8,000	10,000	12,000
Table Speed	rpm	350	200	160
Mill Spindle Speed[OP]	rpm	2,500	2,500	2,500
Mill Motor Power[OP]	kw	15/18.5	15/18.5	18.5/22
Ram Size / Tool Size	mm	210x210 / 32x32	210x210 / 32x32	210x210 / 35x35
Main Motor Power	kw	37/45	30/37	30/37

[OP] : ISVTC series

ITEMS	UNIT	2535FB	3545FB	4555FB
Table Dia. / Turning Dia.	mm	2,500/3,500	3,500/4,500	4,500/5,500
Turning Height / Ram Stroke	mm	800/740	800/740	800/740
Load on Table	kg	22,000	25,000	40,000
Table Speed	rpm	120	60	50
Mill Spindle Speed[OP]	rpm	2,000	2,000	2,000
Mill Motor Power[OP]	kw	18.5/22	22/26	22/26
Ram Size / Tool Size	mm	250x250 / 32x32	250x250 / 32x32	250x250 / 32x32
Main Motor Power	kw	45/55	60/75	A,C100

[OP] : ISVTC series

CNC Vertical Lathe

Tire Container Mold Base Turning

- Smooth Process of Circular Interpolation in Mold Machining
- Saddle of Special Under-rail System to Disperse Loads
- Wide Front Side for Chip Processing and Back Side for Chip Collection
- Cooling Control System against Table Variation



■ Cross Rail Fixed Type (ISVTL, ISVTC FM Series)

ITEMS	UNIT	1014FM	1216FM	1620FM	2025FM
Table Dia. / Turning Dia.	mm	1,000/1,400	1,200/1,600	1,600/2,000	2,000/2,500
Turning Height / Ram Stroke	mm	800/750	950/900	1,000/950	1,000/950
Load on Table	kg	4,000	8,000	10,000	12,000
Table Speed	rpm	500	350	250	200
Mill Spindle Speed[OP]	rpm	2,500	2,500	2,500	2,500
Mill Motor Power[OP]	kw	15/18.5	15/18.5	18.5/22	18.5/22
Ram Size / Tool Size	mm	210x210 / 32x32	210x210 / 32x32	210x210 / 35x35	250x250 / 32x32
Main Motor Power	kw	30/37	30/37	30/37	45/55

[OP] : ISVTC series

ITEMS	UNIT	2535FM	3545FM	4050FM	4555FM
Table Dia. / Turning Dia.	mm	2,500/3,500	3,500/4,500	4,000/5,000	4,500/5,500
Turning Height / Ram Stroke	mm	1,050/1,000	1,050/1,000	1,250/1,200	1,250/1,200
Load on Table	kg	20,000	30,000	50,000	50,000
Table Speed	rpm	150	100	80	60
Mill Spindle Speed[OP]	rpm	2,000	2,000	2,000	2,000
Mill Motor Power[OP]	kw	22/26	22/26	30/37	30/37
Ram Size / Tool Size	mm	250x250 / 32x32	250x250 / 40x40	300x300 / 40x40	300x300 / 40x40
Main Motor Power	kw	45/55	60/75	60/75	A,C100

[OP] : ISVTC series

CNC Vertical Turning Center

Long Flange Turning and Grinding

- Cross rail up/down precision positioning
- Saddle of special under-rail system to disperse loads.
- Wide Space of Right / Left / Front Side for Chip Processing
- Micro-Filtering Cooling System, Oil and Water Separate Collection



■ Cross Rail Elevating Type (ISVTL, ISVTC Series)

ITEMS	UNIT	1014FM	1216FM	1620FM	2025FM
Table Dia. / Turning Dia.	mm	1,000/1,400	1,200/1,600	1,600/2,000	2,000/2,500
Work Height / Ram Stroke	mm	2,000/1,200	1,200/900	1,600/900	1,800/1,000
Load on Table	kg	4,500	8,000	10,000	12,000
Cross Rail Travel	steps	200x3	250x3	250x3	250x3
Table Speed	rpm	600	350	250	200
Mill Spindle Speed [OP]	rpm	2,500	2,500	2,500	2,500
Mill Motor Power [OP]	kw	15/18.5	15/18.5	18.5/22	22/26
Ram Size / Tool Size	mm	250x250 / 32x32	250x250 / 32x32	250x250 / 32x32	250x250 / 32x32
Main Motor Power	kw	37/45	30/37	30/37	30/37

[OP] : ISVTC series

ITEMS	UNIT	2535E	3545E	4555E	5060E
Table Dia. / Turning Dia.	mm	2,500/3,500	3,500/4,500	4,500/5,500	5,000/6,000
Work Height / Ram Stroke	mm	2,000/1,200	2,200/1,300	2,500/1,500	3,000/2,000
Load on Table	kg	20,000	30,000	50,000	60,000
Cross Rail Travel	steps	250x4	250x6	250x7	250x7
Table Speed	rpm	130	100	60	40
Mill Spindle Speed [OP]	rpm	2,000	2,000	2,000	2,000
Mill Motor Power [OP]	kw	30/37	30/37	30/37	30/37
Ram Size / Tool Size	mm	250x250 / 40x40	300x300 / 40x40	350x350 / 40x40	400x400 / 60x60
Main Motor Power	kw	45/55	60/75	A,C100	A,C100

[OP] : ISVTC series

CNC Vertical Lathe

Wind Power 2.5G/5G Bearing Two-Face Hard Turning

- Twin Ram and Two A.T.C Unit for High Efficiency
- Wide Space of Right / Left / Front Side for Chip Processing
- M.P.G for Slow Rotating Function of Table
- Automatic Door System and Wide Show Window



■ Cross Rail Fixed-FT & Elevating Type-ET (ISVTL, ISVTC Series)

ITEMS	UNIT	3040 FT/ET	3445 FT/ET	4050 FT/ET	4555 FT/ET
Table Dia. / Turning Dia.	mm	3,000/4,000	3,500/4,500	4,000/5,000	4,500/5,500
Turning Height / Ram Stroke	mm	2,200/1,300	2,200/1,300	2,500/1,500	2,500/1,500
Load on Table	kg	25,000	30,000	40,000	45,000
Cross Rail Travel	steps	250x6	250x6	250x7	250x7
Table Speed	rpm	100	80	60	40
Mill Spindle Speed [OP]	rpm	2,000	2,000	2,000	2,000
Mill Motor Power [OP]	kw	30/37	30/37	30/37	30/37
Ram Size / Tool Size	mm	250x250 / 40x40	300x300 / 40x40	350x350 / 40x40	400x400 / 60x60
Main Motor Power	kw	60/75	60/75	A,C100	A,C100

[OP] : ISVTC series

CNC Vertical Lathe Turning Center

Large Turning Work Range Wide Swing Table

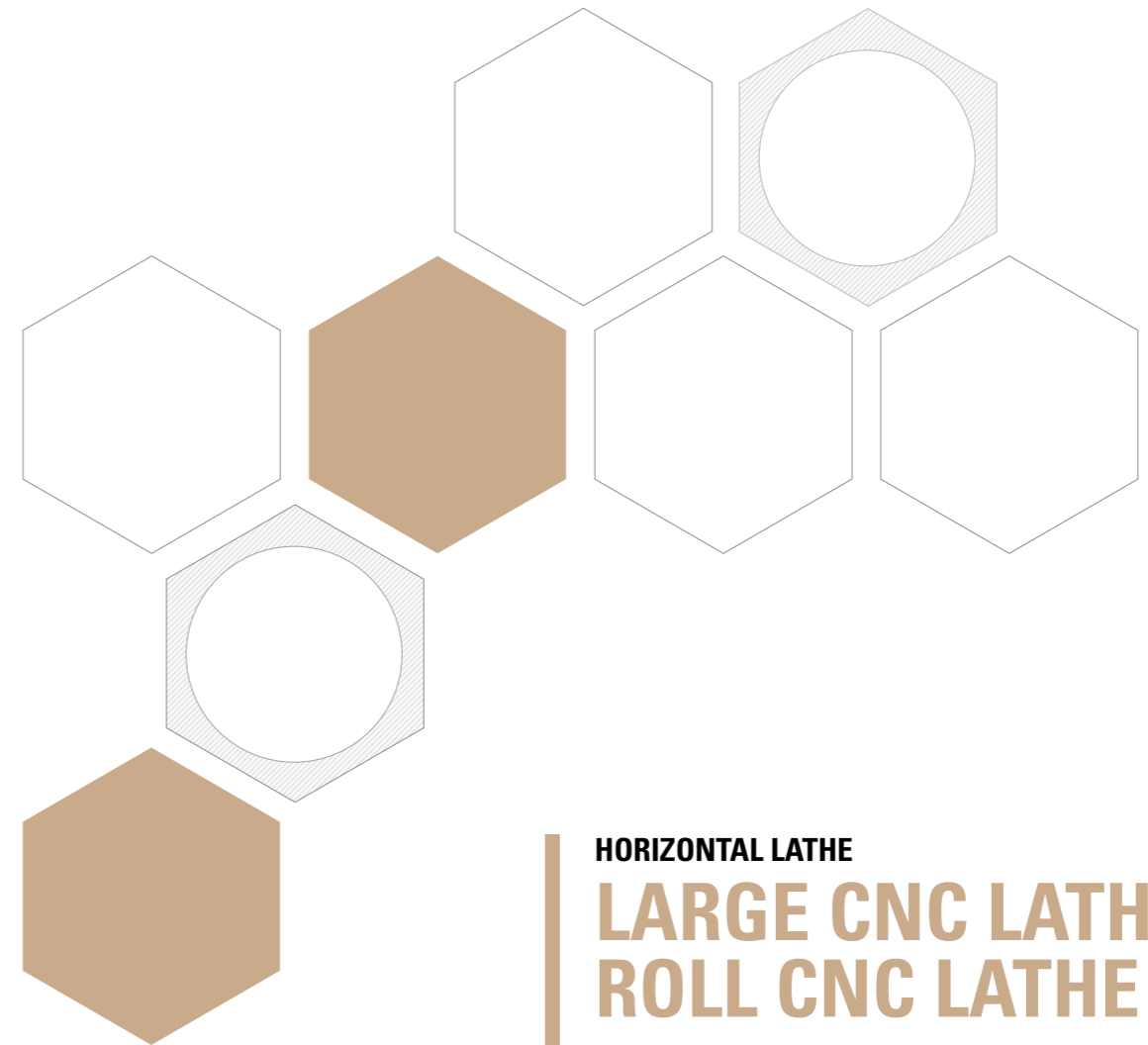
- Turning, Drilling, Milling and Grinding
- Sub Table : Round Type or Sub Block Type
- Turning Holder 2-Face Contact
- Table : High Torque Gear Box System



■ Cross Rail Fixed Wide Table Type (ISVTL, ISVTC FW Series)

ITEMS	UNIT	2040FW	3050FW	4060FW	5070FW
Table Dia. / Turning Dia.	mm	2,000/4,000	3,000/5,000	4,000/6,000	5,000/7,000
Turning Height / Ram Stroke	mm	1,000/1,020	1,000/1,000	1,200/1,200	1,200/1,200
Load on Table	kg	15,000	25,000	30,000	40,000
Table Speed	rpm	80	60	50	40
Mill Spindle Speed [OP]	rpm	2,000	2,000	2,000	2,000
Mill Motor Power [OP]	kw	22/26	30/37	30/37	30/37
Ram Size / Tool Size	mm	250x250 / 40x40	300x300 / 40x40	350x350 / 40x40	400x400 / 60x60
Main Motor Power	kw	45/55	45/55	60/75	A,C100

[OP] : ISVTC series



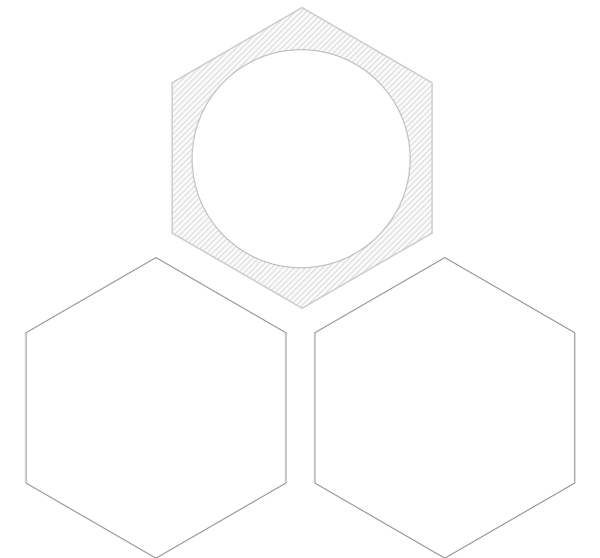
HORIZONTAL LATHE

LARGE CNC LATHE ROLL CNC LATHE

- 1. Heavy Duty Large CNC Lathe 09
- 2. Heavy Duty CNC Roll Lathe 10
- 3. Heavy Duty CNC Chock Roll Lathe 11

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Heavy Duty Large CNC Lathe

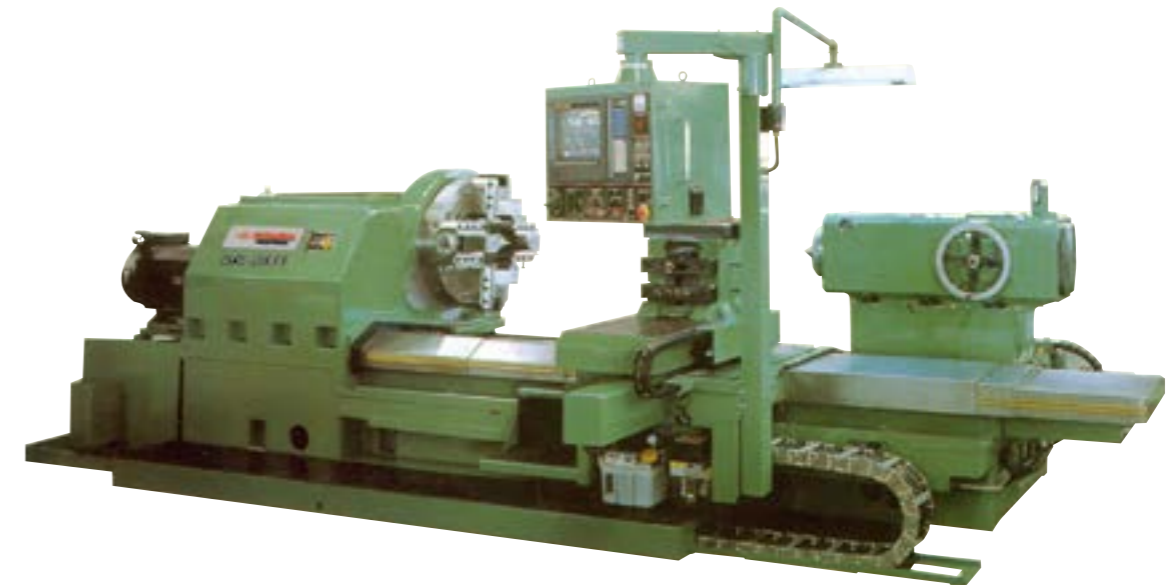
Large Workpiece Precise Powerful Cutting Force

- Hydraulic Automatic Turret for High Power Clamping
- One piece Wide Structure Bed
- Strong Tail Stock Quill Spindle for High Load Weight
- Strong Head Stock Spindle for Powerful Cutting Force



Heavy Duty CNC Roll Lathe

- No Vibration with Chilled Casting Hrc70 Workpiece
- Extra wide(1,350~2,540mm) One-piece Cast-iron bed
- Automatic 2-steps gear shifting
- Built-in tail stock Quill(ø250~ø350)
- Lamella Tool Post Type



■ Heavy Duty Large Lathe (ISHS Series)

ITEMS	UNIT	120	140	160	180	200	220	240	260
Swing Over Bed	mm	1,200	1,400	1,600	1,800	2,000	2,200	2,400	2,600
Swing Over Cross Slide	mm	820	1,020	1,220	1,420	1,600	1,800	2,000	2,200
Distance Between Center	mm	2,000-5,000		3,000-8,000		4,000-8,000		4,000-9,000	
Load Capacity Between Center	kg	8,000		12,000		18,000		25,000	
Spindle Speed	rpm	1-400		0.8-350		0.5-250		0.3-200	
Spindle Nose / Bore	mm	A2-15		A2-15		A2-15		1/12 MT/#120	
Turret Type	-	Hydraulic Clamping Automatic H-4							
Motor Power	kw	30/37		45/55		60/75		90	

■ Heavy Duty Large Lathe (ISHS Series)

ITEMS	UNIT	10T	12T	16T	25T	40T	70T
Max. Roll Turning Diameter	mm	800	1,000	1,000	1,200	1,200	1,400
Max. Spindle Torque	kgf.m	1,860	3,450	3,450	6,500	7,200	12,000
Distance Between Center	mm	2,000~4,000		2,000~5,000		3,000~6,000	
Load Capacity Between Center	ton	10~12		16		25	
Spindle Speed (2steps)	rpm	0.5~250		0.8~200		1~120	
Turret Type	-	Lamella		Lamella		Two-Lamella	
Bed Width	mm	1,350		1,750		2,540	
Spindle Motor Power	kw	45 / 55	60 / 75	60 / 75	A,C 90	A,C100	A,C130

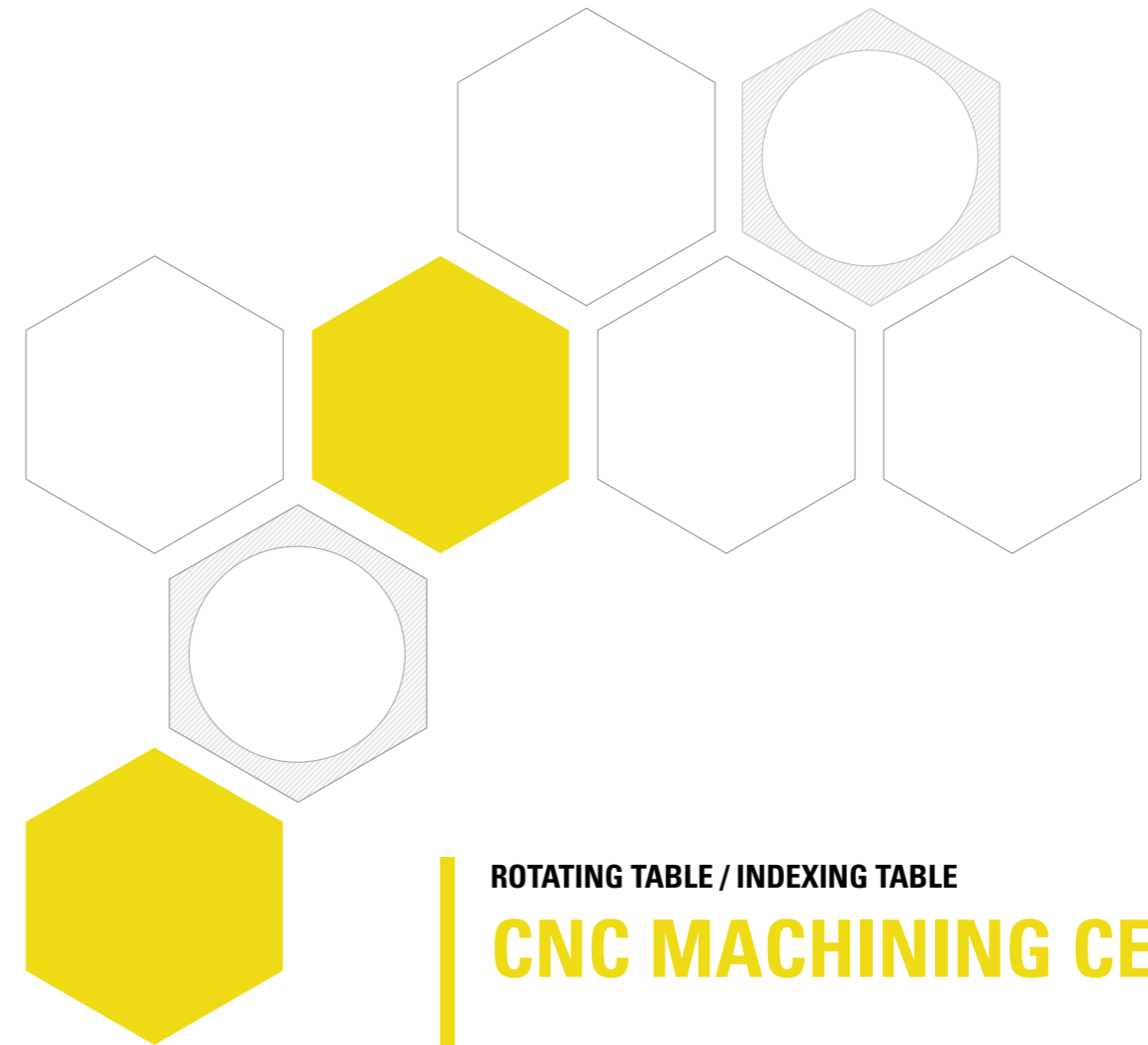
Heavy Duty CNC Chock Roll Lathe

- Automatic Chock Fit with Roller Unit
- Multi Axis(10-Axis) for Multi Job-Turning and Milling / Check Plate Grooving
- Indexable Spindle and Tool Post with Milling Device
- Safe Receipt Hydraulic Cushion System for High-Load Chock Fitting
- Lamella Tool Post in Left Side and Milling / Grooving Device in Right Side



■ Chock Fit & Groove Cut Roll Lathe (ISRL Series)

ITEMS	UNIT	40M / 50M		60M / 70M	
		1,000	1200	1400	1,600
Max. Roll Turning Diameter	mm	1,000	1200	1400	1,600
Max. Spindle Torque	kgf.	8,000		10,000	
Distance Between Center	mm	2,000-6,000		3,000-6,000	
Load Capacity Between Center	ton	40		60	
Spindle Speed [OP]	rpm	1-60		1-40	
Cutter Motor Power [OP]	kw	1.5		1.5	
C-Axis Travel	deg.	0.001/360		0.001/360	
Cutter Rotating Angle / Cutter Speed	deg./rpm	180/350		180/350	
Main Motor Power	kw	A,C100		A,C100	



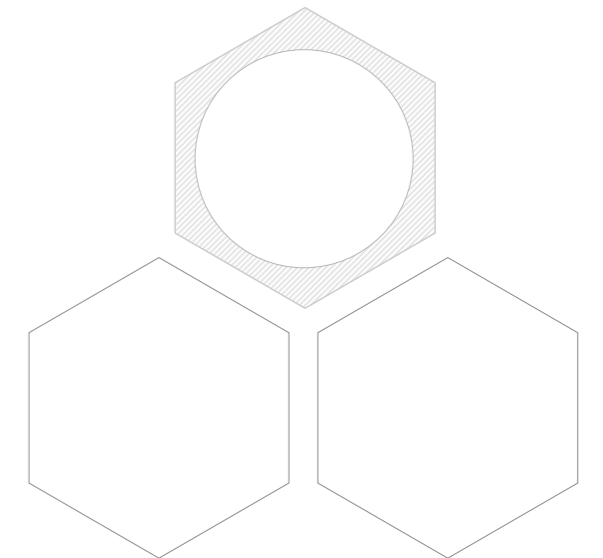
ROTATING TABLE / INDEXING TABLE

CNC MACHINING CENTER

- 1. Gantry Type Tilting + Rotating 5-AX 13
- 2. Gantry Type Rotating Table 4-AX 14
- 3. Column Moving Type Indexing Table 4-AX 15
- 4. Twin Head, Index Table Machine 16

Contents

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CNC Vertical Machining Center 5-AX

Tilting+Rotating Table Gantry Column Moving Type

- High Stiffness / High Torque Spindle
- Horizontal+Vertical Multi Head Stock
- Table Rotating and Tilting (360° / -15~75°)
- Horizontal A.T.C 20P+Vertical A.T.C 20P
- H+V Head Stock Spindle Thermal Error 0.01mm



■ Specification(ISTC 5-AX Series)

ITEMS	UNIT	120HV	140HV	160HV
C-Axis Rotating Table Travel	deg.	360° / 0.001°		
B-Axis Tilting Table Travel	deg.	-15~75°		
X-Axis Travel	mm	1,450	1,650	1,850
Y-Axis Trave	mm	1,300	1,500	1,800
Z-Axis Travel	mm	800	900	1000
Spindle Speed	rpm	2,000	2,000	2,000
Spindle Motor Power	kw	30/37	30/37	30/37
Table Diameter	mm	1,200	1,400	1,600
Table Loading Weight	kg	2,000	2,500	3,000

CNC Vertical Machining Center 4-AX

Rotating Table Gantry Column Moving Type

- High Stiffness / High Torque Spindle
- Horizontal+Vertical Multi Head Stock
- Rotating Table (360° /0.001°)
- Horizontal A.T.C 20P+Vertical A.T.C 20P
- H+V Head Stock Spindle Thermal Error 0.01mm



■ Specification(ISRC 4-AX Series)

ITEMS	UNIT	120HV	140HV	160HV
C-Axis Rotating Table Travel	deg.	360° / 0.001°		
X-Axis Travel	mm	1,450	1,650	1,850
Y-Axis Travel	mm	1,300	1,500	1,800
Z-Axis Travel	mm	1,000	1,000	1,000
Spindle Speed	rpm	2,000	2,000	2,000
Spindle Motor Power	kw	30/37	30/37	30/37
Table Diameter	mm	1,200	1,400	1,600
Table Loading Weight	kg	2,000	2,500	3,000

CNC Vertical Machining Center 4-AX

Rotating Table Column Moving Type

- High Stiffness / High Torque Spindle
- Horizontal+Vertical Multi Head Stock
- Rotating Table (360° /0.001°)
- A.T.C 30P / 40P
- H+V Head Stock Spindle Thermal Error 0.01mm



■ Specification(ISRM 4-AX Series)

ITEMS	UNIT	120HV	140HV	160HV
C-Axis Rotating Table Travel	deg.	360° / 0.001°		
X-Axis Travel	mm	750	850	950
Y-Axis Trave	mm	1,200	1,400	1,600
Z-Axis Travel	mm	1,000	1,000	1,000
Spindle Speed	rpm	2,000	2,000	2,00
Spindle Motor Power	kw	30/37	30/37	30/37
Table Diameter	mm	1,000x800	1,200x1000	1,400x1,200
Table Loading Weight	kg	2,000	2,500	3,000

CNC Horizontal Machining Center

Twin Head, Indexing Table and Auto Clamping, Measuring System

- Hydraulic Automatic Workpiece Clamping
- Curvic Coupling Indexing Table 1°
- Workpiece Measuring System
- Twin Head : Simultaneous Rigid Tapping M40mm
- A.T.C Right 30P / Left 30P



■ Specifications (ISTH Series)

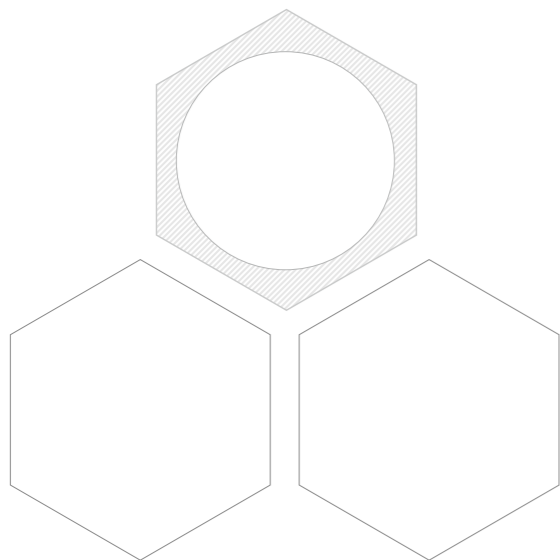
ITEMS	UNIT	600	800
X-Axis Travel	mm	1,800	2,000
Y-Axis Trave	mm	600	800
Z-Axis Travel	mm	350	450
Progress of Work	-	Dia. 40 U-Drill / M40 Rigid TAP / ø80 Face cut	
Index Table Size/Travel	mm/deg.	600x600 / 360°x1°	800x800 / 360°x1°
Spindle Speed	rpm	2,000	2,000
Spindle Motor Power	kw	15/18.5	15/18.5
Work Piece Size	mm	600x600x450H	800x800x450H
Table Load Weight	kg	1,500	1,500



TABLE MOVING TYPE / GANTRY TYPE

DOUBLE COLUMN MACHINING CENTER

- 1. Table Moving Machining Center 18
- 2. Gantry Type Column Moving Machining Center 19



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CNC Double Column Machining Center

Cross Rail Moving Type

- Cross Rail and Column : Box Type Ground Slider
- Square Ram : Box Type Ground Slider
- Table : Roller Linear Guide Type
- Carriage of Special Under-rail System to Disperse Loads
- W-Axis : Two Servo Motors of Direct connection and Synchronized Control



■ Specification (ISPM Series)

SPECIFICATIONS	UNIT	200M	250M	300M	350M
Distance Between Columns	mm	2,700	3,200	4,000	4,500
Distance Spindle Nose to Table	mm	1,850	1,850	2,350	2,350
X/Y-Axis Travel	mm	4,250/3,700	5,250/4,200	6,250/5,000	8,250/5,500
W/Z-Axis Travel	mm	1,500/800	1,500/800	2,000/1,000	2,000/1,000
Spindle Speed	rpm	3,000	3,000	3,000	3,000
Spindle Motor Power	kw	30/37	30/37	45/55	45/55
Working Table Size	mm	2,000x4,000	2,500x5,000	3,000x6,000	3,500x8,000
Load on Table	ton	15	20	30	40

Gantry Type Column Moving Machining Center

- Cross Rail : Roller Linear Guide
- Column Body : Roller Linear Guide
- X-Axis : Ball Screw Synchronous Control
- Y-Axis : Ball Screw Nut Rotating Type
- Z-Axis : Square Ram Slider Type
- A.T.C 12P / 16P

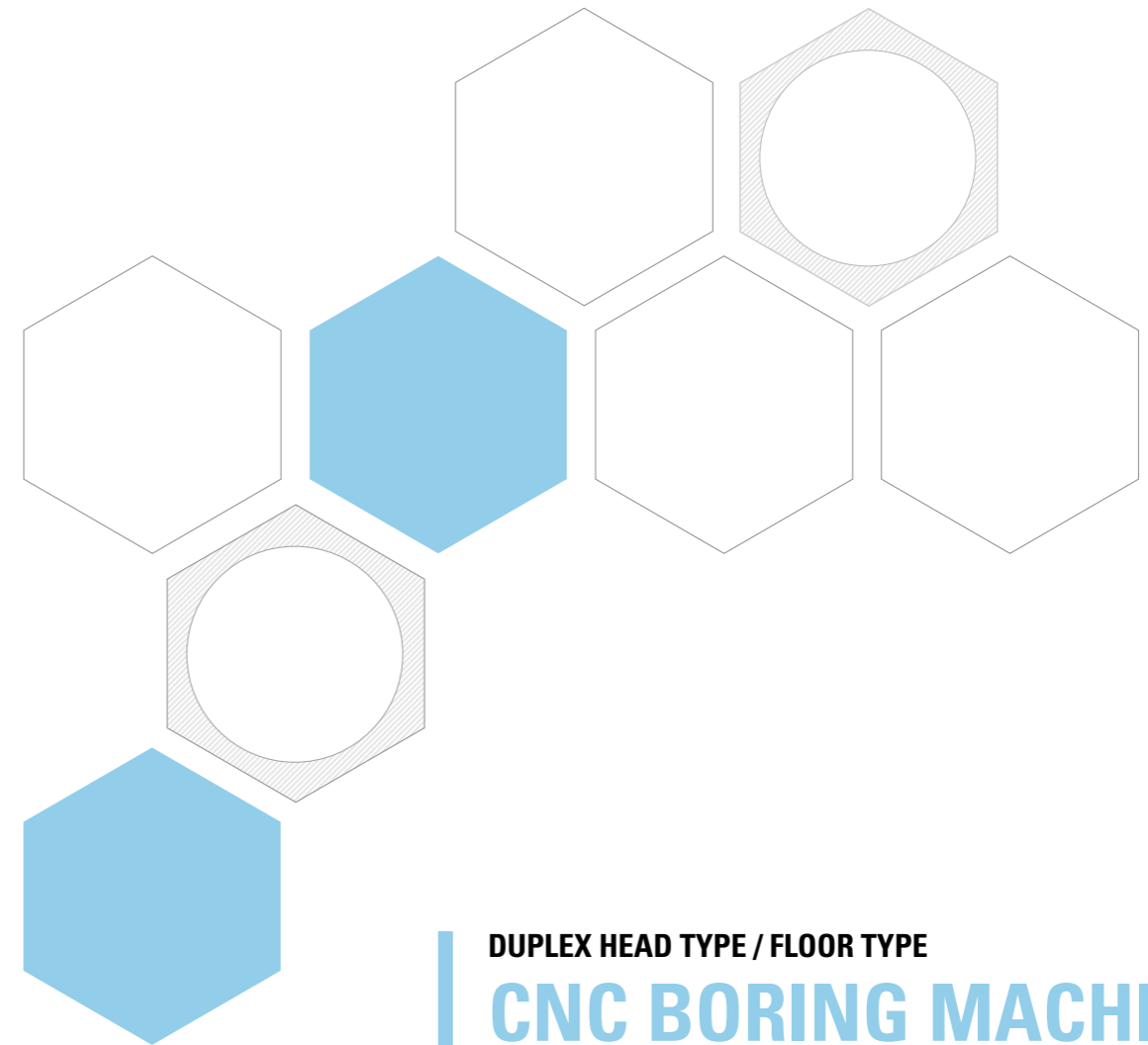


■ Cross Fixed Type (ISGM Series)

ITEMS	UNIT	300F	350F	400F	500F
Distance Between Columns	mm	4,000	5,000	6,000	8,000
Distance Spindle Nose to Table	mm	1,200	1,200	1,200	1,200
X/Y-Axis Travel	mm	6,500x3,500	6,500x4,000	8,500x4,500	8,500x5,500
Z-Axis Ram Travel	mm	1,000	1,000	1,000	1,000
Working Table Size	mm	3,000x6,000	3,500x6,000	4,000x8,000	5,000x8,000
Load on Table	ton	25	30	50	60
Spindle Speed	rpm	3,000	3,000	3,000	3,000
Main Motor Power	kw	30/37	30/37	30/37	30/37

■ Cross Rail Up / Down Moving Type (ISGM Series)

ITEMS	UNIT	200M	250M	300M	350M
Distance Between Columns	mm	2,900	3,200	3,700	4,200
Distance Spindle Nose to Table	mm	1,800	1,800	2,000	2,000
X/Y-Axis Travel	mm	4,250/3,700	6,250/4,000	8,250/4,500	10,250/5,000
W/Z-Axis Travel	mm	1,200/1,000	1,200/1,000	1,400/1,000	1,400/1,000
Spindle Speed	rpm	3,000	3,000	3,000	3,000
Main Motor Power	kw	30/37	30/37	30/37	30/37
Working Table Size	mm	2,000x4,000	2,500x6,000	3,000x7,000	3,500x8,000
Load on Table	ton	20	25	35	50



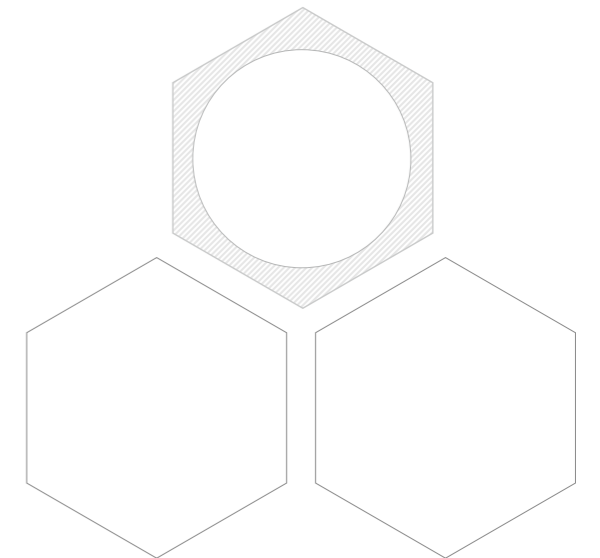
DUPLEX HEAD TYPE / FLOOR TYPE

CNC BORING MACHINE

- 1. CNC Duplex Boring Machine 21
- 2. CNC Floor Type Boring Machine 22

Contents

- 1. CNC VERTICAL LATHE
- 2. LARGE CNC LATHE / ROLL CNC LATHE
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- 4. DOUBLE COLUMN MACHINING CENTER
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- 6. CNC MODELING MACHINE
- 7. CNC DRILLING MACHINE
- 8. CNC DRILLING MACHINE
- 9. SPECIAL MACHINE



CNC Duplex Head Boring Machine

Excavator Boom Frame Boring

- Z-Axis : Square Ram (250x250) Slider
- Two Head : Simultaneous Boring, Tapping and Milling
- Two Head : Simultaneous Rigid Tapping
- A.T.C 20P / 30P / 40P
- Table Pallet change system [Option]



■ Specification (DBM Series)

ITMES	UNIT	100[P]		120[P]		140[P]	
Distance Between Spindle Ends	mm	300-1,500		300-1,600		300-1,700	
Table top and Spindle Center	mm	250-1,300		250-1,500		150-1,600	
X-Axis Travel	mm	5,000	7,000	7,000	9,000	8,000	9,000
Y-Axis Travel	mm	1,350		1,450		1,650	
Z-Axis Travel	mm	500		600		700	
Ram size	mm	250x250		250x250		250x250	
Spindle Speed	rpm	2,000		2,000		2,000	
Main Motor Power	kw	30/37		30/37		30/37	
Working Table Size	mm	1,000x5,000	1,000x7,000	1,200x7,000	1,200x9,000	1,400x8,000	1,400x9,000
Max. Load on Table	kg	7,000		8,000		10,000	

[P] : Pallet change option

CNC Floor Type Boring Machine

Face Mill, Angle Head Attachment

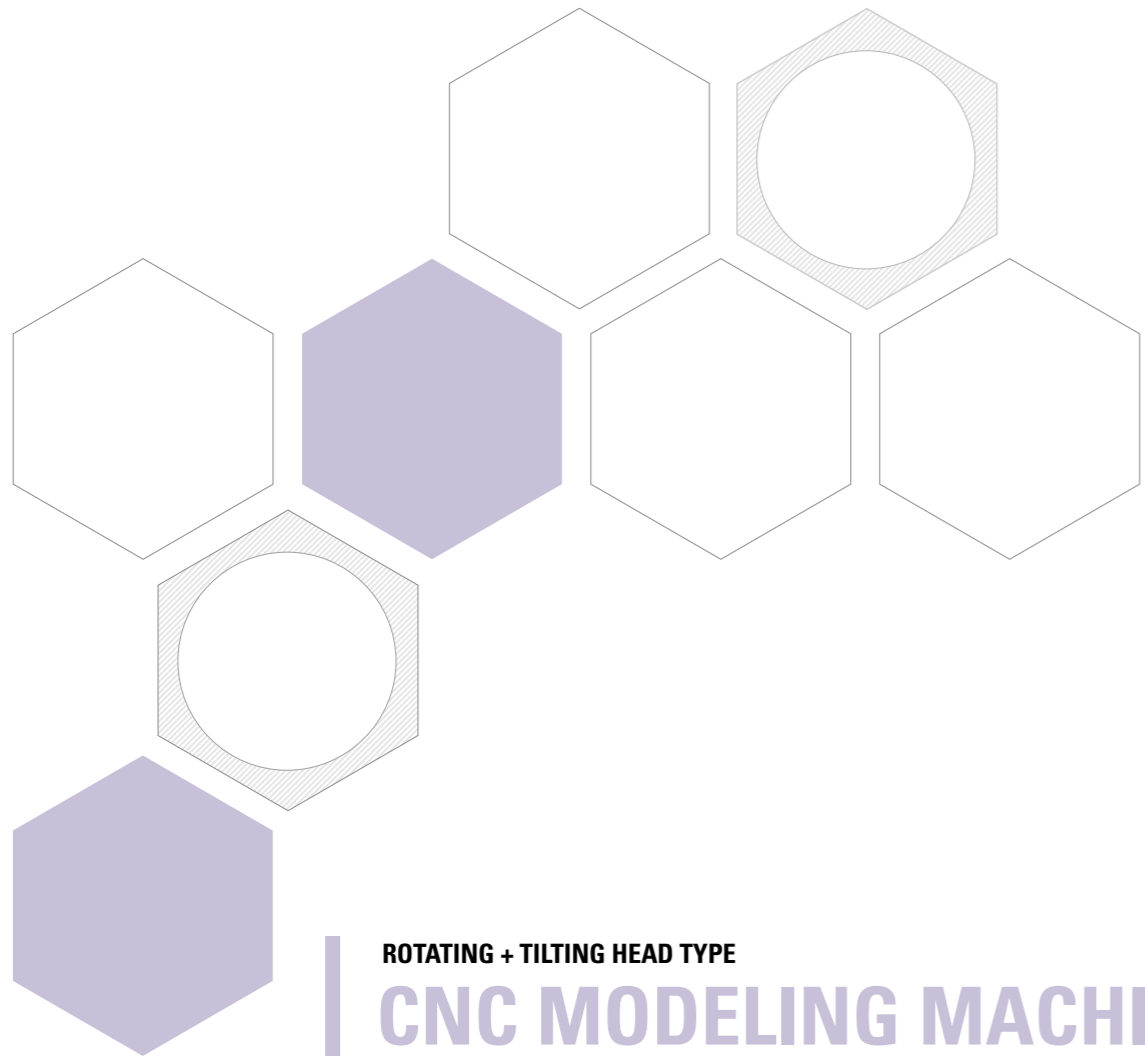
- Z-Axis : Square Ram (400x400) Slider
- Quill size : 130, 150, 160mm
- Face Mill Attachment (ø800-ø2,500) [Option]
- Angle Head BT50 [Option]
- Fixed Table or Indexing Table [Option]



■ Specification (ISFBM Series)

ITMES	UNIT	130	150	160
X-Axis Travel	mm	5,000	600	8,000
Y-Axis Travel	mm	2,000	2,500	3,000
Z-Axis+Quill Travel	mm	300+500	300+600	300+800
Ram size	mm	420x420	420x420	450x500
Quill Diameter	rpm	130	150	160
Quill Speed	rpm	2,000	1,500	1,500
Spindle Motor Power	kw	37/45	45/55	45/55
Rotary Table Size [OP]	mm	2,500x3,200	2,500x3,200	2,500x3,200
Max. Load on Table [OP]	kg	40,000	40,000	50,000
Indexing Table(B-Axis) [OP]	deg.	90°pin	90°pin	90°pin

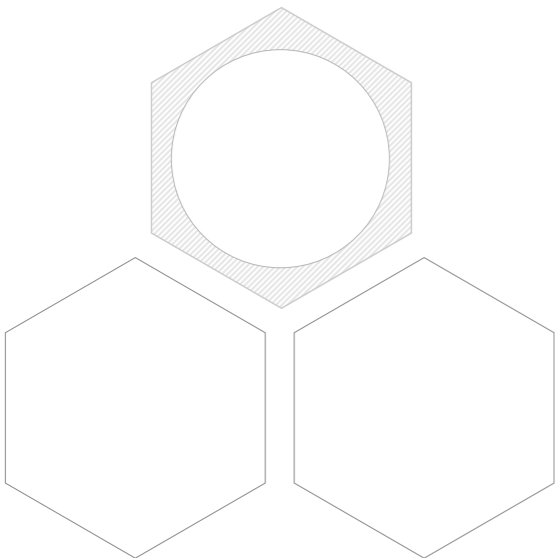
[OP] : Option



ROTATING + TILTING HEAD TYPE

CNC MODELING MACHINE

- 1. Model Ship Modeling, Aircraft Parts 5-Axis Machining Center 24
- 2. Model Ship, Model Car 10-Axis Machining Center 25
- 3. Tire Mold Lettering 4-Axis Machine 26



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- 9 SPECIAL MACHINE

CNC 5-Axis Modeling Machine

Model Ship Modeling, Aircraft Parts Machining

- Cross Rail : Roller Linear Guide Type
- Column Body : Roller Linear Guide Type
- A-Axis and C-Axis : D.D Motor Type or Worm Gear Type
- Column Body : Rack-Pinion or Ball Screw Type
- Column Body : Synchronous Control by Two Servo Motors
- A. T. C 8P / 12P / 16P



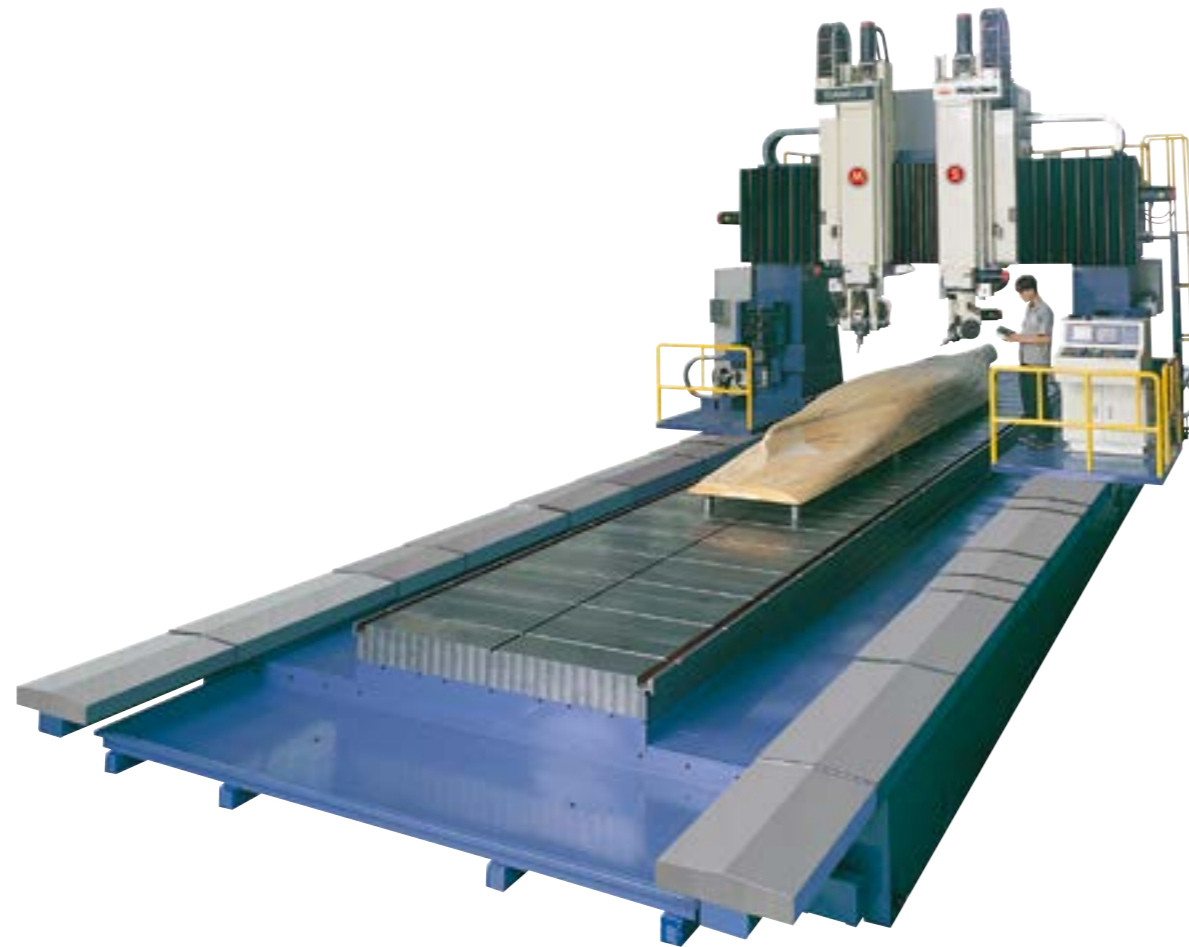
Specifications (ISMS Series)

ITMES	UNIT	153-5AX
A/C-Axis Travel	deg.	±110° / ±270°
X/Y/Z-Axis Travel	m	16m x 4m x 2m
Working Table Size(L x W)	m	14m x 3m
Spindle Speed	rpm	50-25,000rpm
Spindle Type	-	BT40, HSK63 / BT50, HSK-100
CAD/CAM Program	-	3-Dimensional Geometric Modeling Software

CNC Modeling Machine 10-Axis

Model Ship, Model Car Modeling

- Cross Rail : Roller Linear Guide Type
- Column Body : Roller Linear Guide Type
- A-Axis and C-Axis : D.D Motor or Worm Gear Type
- Column Body : Rack Pinion or Ball Screw Type
- Column Body : Synchronous Control by Two Servo Motors
- A.T.C 8P / 12P / 16P



■ Specifications (ISMS Series)

ITMES	UNIT	153-5AX
A/C-Axis Travel	deg.	±110° / ±270°
X/Y/Z-Axis Travel	m	14m 3.5m x 1.8m
Working Table Size(L x W)	m	12m x 2.5m
Spindle Speed	rpm	50-25,000rpm
Spindle Type	-	BT40, HSK63 / BT50, HSK-100
CAD/CAM Program	-	3-Dimensional Geometric Modeling Software

CNC Lettering Machine 4-Axis

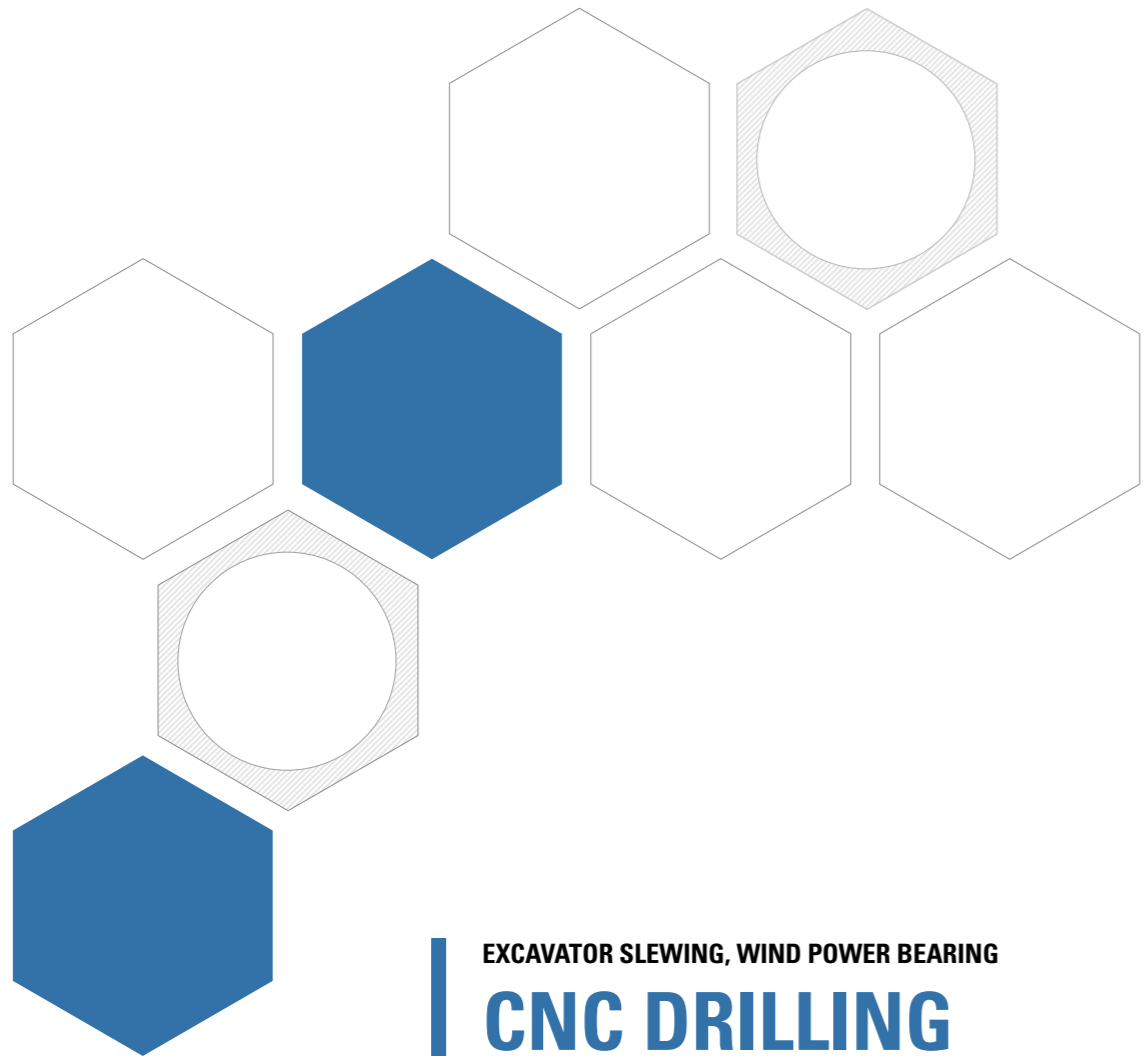
Tire Mold Lettering, Block Machining

- Y-Axis and Z-Axis : Linear Guide Slider Type
- Tilting Spindle ±60° D.D. Motor
- Rotating Table 360° D.D. Motor
- Table Load Weight 2,000kg
- A.T.C 30P / 40P / 60P



■ Specification(ISLM Series)

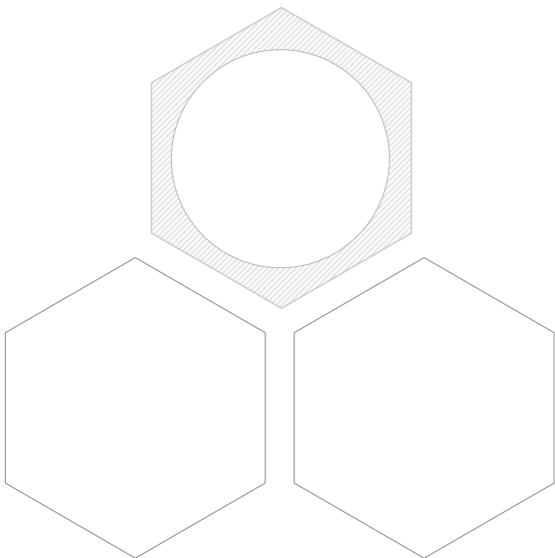
ITMES	UNIT	400-4AX	630-4AX
C / B-Axis Travel	deg.	±360° / ±60°	
X / Z-Axis Travel	mm	520 / 520	520 / 680
Chuck Dia. / Work Plate Dia	mm	Ø 400 / Ø 1,000	Ø 630 / Ø 1,300
Spindle Speed	rpm	40,000	40,000
Spindle Motor Power	kw	2~8	2 ~ 8
Spindle Type	-	HSK-E32	HSK-E32
C / B-Axis Type	-	D.D. Motor	D.D. Motor



EXCAVATOR SLEWING, WIND POWER BEARING

CNC DRILLING MACHINE

- 1. Excavator Slewing Bearing, Flange Parts Drilling Tapping Machine **28**
- 2. Wind Power Bearing, Flange Parts Drilling Tapping Machine **29**



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CNC Drilling Machine

Slewing Bearing, Flange Parts Drilling and Tapping

- Y-Axis and Table : Hydraulic Clamping System
- Twin Head : Simultaneous Rigid Tapping Function
- Rotating Table (360° /0.001°)
- Hydraulic Workpiece Centering [Option]
- Hydraulic Workpiece Up/Down Clamping [Option]
- Easy Programming, Searching and Operating for P.C.D Hole



Specifications (ISRT Series)

ITEMS	UNIT	1620	1822	2225TW(TWIN HEAD)
C-Axis Travel	deg.	360° / 0.001°	360° / 0.001°	520 / 680
Y-Axis Travel	mm	1,100	1,200	1,400
Z-Axis Travel	mm	650	650	650
Spindle Speed	rpm	3,000	3,000	3,000
Spindle Motor Power	kw	18.5/22	18.5/22	22/26
Table / Swing Diameter	mm	1,600/2,000	1,800/2,000	2,200/2,500
Max. Load on Table	kg	2,000	3,000	3,200

CNC Drilling Machine

Wind Power Bearing, Flange Parts Drilling and Tapping

- Y-Axis and Table : Hydraulic Clamping System
- Twin Head : Rigid Tapping, U-Drilling
- Rotating Table (360° /0.001°)
- Hydraulic Workpiece Centering [Option]
- Hydraulic Workpiece Clamping [Option]
- Easy Programming, Searching and Operating for P.C.D Hole



Specifications (ISRT Series)

ITMES	UNIT	3036TWM	3545TW	4550TW
C-Axis Travel	deg.	360°/ 0.001°	360°/ 0.001°	360°/ 0.001°
Y-Axis Travel	mm	600	-	-
X1, X2-Axis	mm	1,500L/R	1,750L/R	2,500L/R
Z-Axis Travel	mm	650	650	650
Spindle Speed	rpm	3,000	3,000	3,000
Spindle Motor Power	kw	30/37	30/37	30/37
Table Dia. / Swing Dia.	mm	3,000/3,600	3,500/4,500	4,500/5,000
Load on Table		4,000	6,000	8,000

*TWM : Table Moving Type

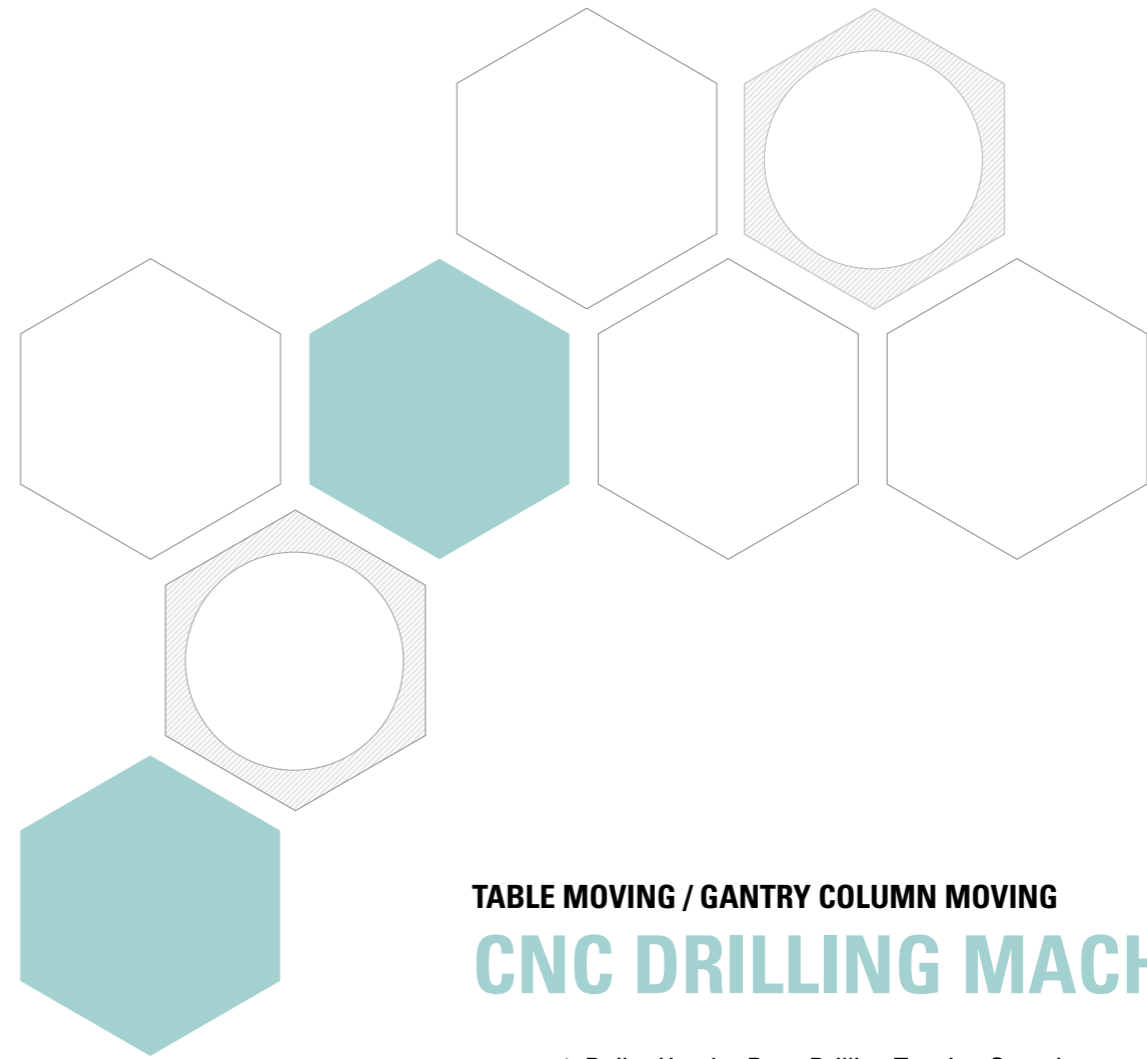


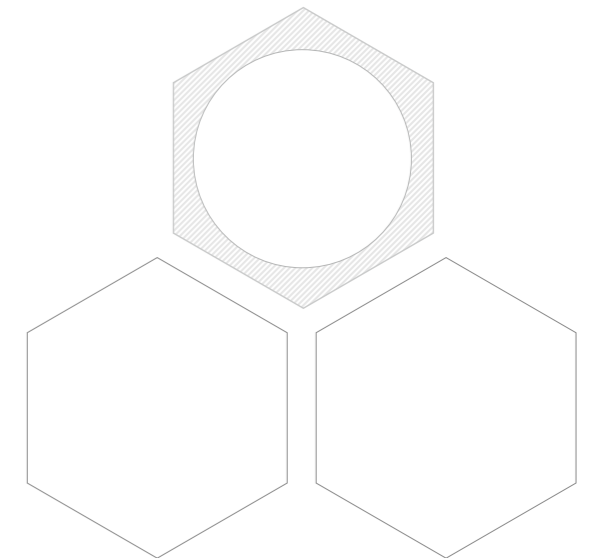
TABLE MOVING / GANTRY COLUMN MOVING

CNC DRILLING MACHINE

1. Boiler Header Box : Drilling Tapping Grooving 31
2. Tub Sheet Condenser : Drilling Reaming Grooving
3. Steel Tower Angle : Drilling 32
4. Excavator Side Frame : Drilling Tapping
5. Textile Needle Plate : Small Drilling 33
6. Boiler Header Pipe : Drilling Chamfering
7. Gusset Splice Plate : Drilling

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- 9 SPECIAL MACHINE



Boiler Header Box CNC Drilling Machine

- Boiler Header Box Drilling, Tapping, Grooving
- Twin Spindle with 2 A.T.C System
- Hydraulic Workpiece Clamping System



ITMES	UNIT	ISHB-402
X-Axis Travel	deg.	4,200
Y-Axis Travel	mm	2,200
Z-Axis Travel	mm	350
Drill / Tap Size	mm	ø16-ø36 / M30
Workpiece Size	rpm	350x400x650H

Steel Tower Angle CNC Drilling Machine

- Steel Tower Angle Drilling
- Twin Head Drilling System



ITMES	UNIT	ISAD-121
X-Axis Travel	mm	16,000
Y-Axis Travel	mm	1,200
Z-Axis Travel	mm	460
Spindle Speed	rpm	2,000
Spindle Motor Power	kw	15/18.5
Angle Size/Length	mm	50-250/7,500x2piece

Tube Sheet Condenser CNC Drilling Machine

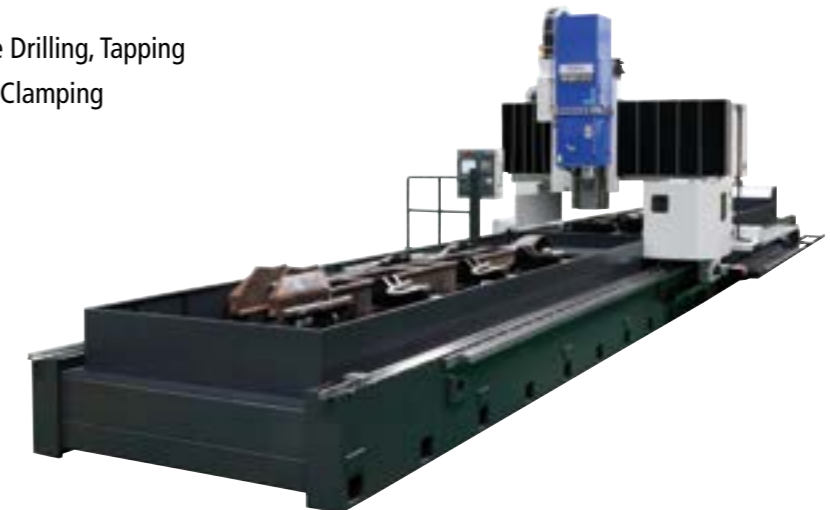
- Tube Sheet Condenser for Large Vessels or Power Generation
- Drilling, Reaming, Tapping, Milling
- Angle Head Attachment [Option]



ITMES	UNIT	ISGD-504	ISGD-605	ISGD-706
X-Axis Travel	mm	5,500	6,500	7,500
Y-Axis Travel	mm	4,500	5,500	6,500
Z-Axis Travel	mm	800	800	800
Spindle Speed	rpm	3,000	3,000	3,000
Spindle Motor Power	kw	30/37	30/37	30/37
Working Table Size	mm	4,000x5,000	5,000x6,000	6,000x7,000

Excavator Side Frame CNC Drilling Machine

- Excavator Side Frame Drilling, Tapping
- Hydraulic Workpiece Clamping



ITMES	UNIT	ISES-121
X-Axis Travel	mm	12,000
Y-Axis Travel	mm	1,200
Z-Axis Travel	mm	500
Drill and Tap Size	mm	16-26 / M24
Spindle Speed	rpm	2,000
Spindle Motor Power	kw	11/15

Small Hole CNC Drilling Machine

Textile Needle Plate Small Hole Drilling Machine



ITMES	UNIT	ISND-421
X-Axis Travel	mm	4,200
Y-Axis Travel	mm	1,600
Z-Axis Travel	mm	450
Drill Size	mm	ø1-ø5
Table Size	mm	1,600x4,000

Pipe CNC Drilling Machine Boiler Header Pipe Drilling, Tapping



ITMES	UNIT	ISPD-250
X-Axis Travel	mm	5,200
Y-Axis Travel	mm	1,500
Z-Axis Travel	mm	450
Drill Size	mm	ø16-ø36
Pipe Size	mm	ø250x5,000

Splice Plate CNC Drilling Machine Gusset Splice Plate Drilling



ITMES	UNIT	ISTD-122
X-Axis Travel	mm	2,200
Y-Axis Travel	mm	1,500
Z-Axis Travel	mm	450
Drill Size	mm	ø16-ø36
Table Size	mm	1,500x2,000

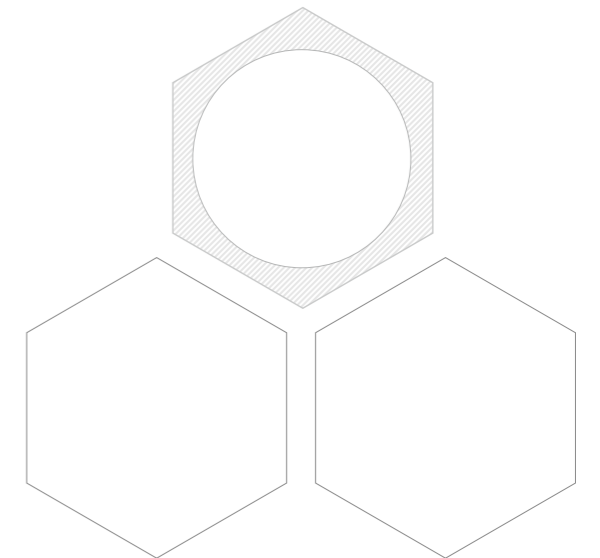


SPECIAL MACHINE

- 1. Large Rotating CNC Table 35
- 2. Wind Power Bearing
Soft Zone Groove Grinding Machine
- 3. Diff-Case Multi Tapping Machine 36
- 4. Two of Three-Head Type Axle Boring Machine

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5. CNC BORING MACHINE

CNC Rotating Table

High Load Rotating Table

- Rotating Table 360° /0.001°
- Rotating Table Accuracy ±5 Sec
- Double Pinion Gear Type
- High Load Table Bearing



ITMES	UNIT	ISR-250	ISR-300	ISR-400	ISR-500
Rotating Table Travel	deg.	360	360	360	360
Accuracy	sec	±5	±5	±5	±5
Table Speed	rpm	2.5	2	1	1
Rotating deg. of angle	deg.	0.001			
Table Diameter	mm	2,500	3,000	4,000	5,000
Max. Load on Table	kg	4,000	6,000	8,000	12,000

6. CNC MODELING MACHINE

7. CNC DRILLING MACHINE

Soft Zone Groove Grinding Machine

Wind Power Bearing Soft Zone Groove Grinding

- Soft Zone Groove Grinding of Wind Bearing Inner and Outer Groove Holes
- Head ±25° Tilting Grinding
- Automatic Dressing
- Hydraulic Workpiece Pushing
- Micro-centric Filtering Coolant System



ITMES	UNIT	ISG-502
B-Axis Tilting Travel	deg.	±25
X/Y/Z-Axis Travel	mm	700/1,000/430
Work size	mm	ø2,500~ø5,000
Spindle Speed	rpm	2,500
Spindle Motor	kw	5.5/7.5
Dressing	-	Automatic

8. CNC DRILLING MACHINE

SPECIAL MACHINE

DIFF-CASE Multi Tapping Machine

Diff-Case Tapping

- Multi Tapping Head Type
- Workpiece Clamping By Air
- Multi Head Type 8P, 10P, 12P



5. CNC BORING MACHINE

6. CNC MODELING MACHINE

7. CNC DRILLING MACHINE

Two of Three-Spindle Type Axle Shaft Boring Machine

- Right-3 Head and Left-3 Head
- Right Left 3-Spindle Simultaneous Work
- Hydraulic Axle Shaft Clamping Jig System



8. CNC DRILLING MACHINE

SPECIAL MACHINE