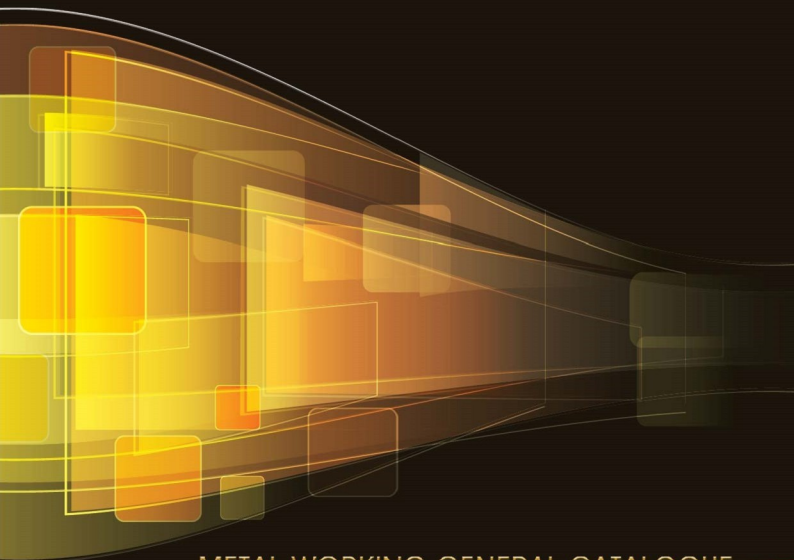




FREJOTH

CNC SERIES



METAL WORKING GENERAL CATALOGUE

FREJO TH DOUBLE COLUMN VERTICAL MACHINING CENTER :

1. FIXED CROSS RAIL (SD)
2. MOVING CROSS RAIL : (SDW)



MODEL INFO

SD - 42 90 - 5A
5 axis simultaneous head
X travel 9m
Between Columns 4250mm
Sliding Double Columns

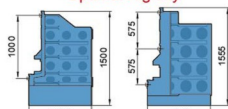


Column & Slider one piece casting



X travel by rack pinion servo control (2 pcs)

Optimal Rigidity



SD - 24 / 28 / 32
with 2 guideways

SD - 36 / 42 / 48 / 54 & GM
with 3 guideways

CROSS RAIL (BEAM)

- Box in box unity casting frame
- Optimum bending section modulus
- Optimum rigidity & damping design

MODEL INFO

SDW-48220

Sliding Double Columns
W type Moving Cross-Rail

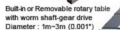
X travel 22m
Between Columns 4850 mm



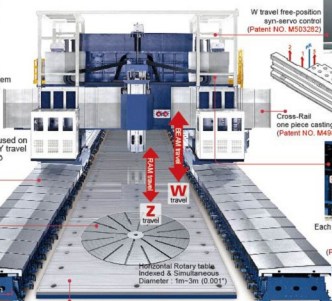
Free position ATC system
(Patent NO. M503282)



Rack-pinion used on
X travel and Y travel
SD-48 and up



Built-in or Removable rotary table
with worm shaft-gear drive
Diameter : 1m~3m (0.001°)



W travel free-position
syn-servo control
(Patent NO. M503282)

Cross-Rail one piece casting
(Patent NO. M459072)



Each column with 3 linear
guide-ways and
1 position rail (P.R.)
(Patent NO. M513309)

SDW



Heavy-large-base



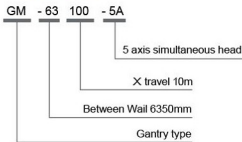
Horizontal Rotary table
Indexed & Simultaneous
Diameter : 1m~3m (0.001°)

Table height based on specific customization

SPECIFICATIONS

		SD(W)-24	SD(W)-28	SD(W)-32	SD(W)-36	SD(W)-42	SD(W)-48	SD(W)-54	
Between columns		mm	2450	2850	3250	3650	4250	4850	5450
Travel	X - travel	m	6 m ~ 36 m every 1 m add						
	Y - travel	mm	2400	2800	3200	3600	4200	4800	5400
	Z - travel	mm	SD : 1100 (1400) SDW : 1100						
	W - travel	mm	SD : 1100 (1400/1500) SDW : 1100 (1400/1500)						
Table	W - travel	mm	1500 / 2000 for SDW series						
	Table wide	mm	1600	2000	2400	2800	3400	4000	4600
	Table length	m	Table length = X travel						
Spindle nose to table		mm	SD : 1080 ~ 2180 (1020 ~ 2420) SDW : 800 ~ 800 + Z + W						
Power - speed		kw	22 / 26 - 6000 rpm						
X axis rack - pinion		-	O	O	O	O	O	O	O
Y axis rack - pinion		-	X	X	X	X	X	O	O
ATC capacity		pcs	32 pcs						
X / Y / Z / W feed rate G00		m/min	12 / 12 / 10 / 1			10 / 10 / 10 / 1			
Machine size	Length	m	13.5 m ~ 43.5 m every 1 m add						
	Width	m	6.5	6.9	7.3	7.7	8.1	8.5	8.9
	Height	m	SD : 6.5 / SDW : 7.2						
Machine weight (app.)		ton	50 + 2/m	53 + 2.3/m	56 + 2.5/m	60 + 3/m	65 + 3.3/m	70 + 3.5/m	75 + 3.8/m

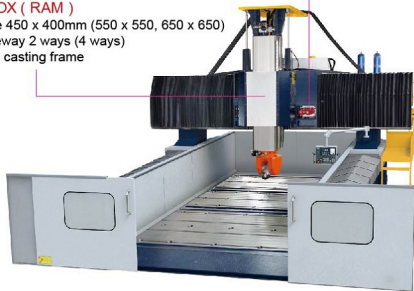
MODEL INFO



Y travel by rack pinion
SD(W) - 48 and up & GM - 45 and up

SPINDLE BOX (RAM)

- Section size 450 x 400mm (550 x 550, 650 x 650)
- Roller guideway 2 ways (4 ways)
- High rigidity casting frame



GM



Y travel by rack pinion
SD(W) - 48 and up & GM - 45 and up



SPECIFICATIONS

		GM-33	GM-39	GM-45	GM-51	GM-57	GM-63	GM-70
Between columns	mm	3350	3950	4550	5150	5750	6350	7050
Travel	X - travel	6 m ~ 36 m every 1 m add						
	Y - travel	2600	3200	3800	4400	5000	5600	6300
	Z - travel	1100 (1400 / 1500)						
	W - travel	N / A						
Table	Table wide	2800	3400	4000	4600	5200	5800	6500
	Table length	Table length = X travel 500 ~ 500 + Z						
Spindle nose to table	mm	22 / 26 - 6000 rpm						
Power - speed	kw	15 / 10 / 10						
X axis rack - pinion	-	O	O	O	O	O	O	O
Y axis rack - pinion	-	X	X	O	O	O	O	O
ATC capacity	pcs	32 pcs						
X / Y / Z / W feed rate G00	m/min	15 m ~ 45 m every 1 m add						
Machine size	Length	8.3						
	Width	8.9						
	Height	9.5						
Machine weight (app.)	ton	65 + 5/m	68 + 2/m	70 + 2.5/m	75 + 3/m	80 + 3.5/m	85 + 4/m	90 + 4.5/m

FREJOTH DOUBLE COLUMN MACHINING CENTER (MOVING CROSS TYPE)

Special Milling Head (Exchange Type)



TYPE	Automatic	Semi-Automatic	Manual
Head exchanger	Auto (hydraulic)	Manual (8 bolts)	Manual (8 bolts)
Head indexed	Auto (5°)	Auto (5°)	Manual (5° / free)
Tool clamped	Booster	Booster	Bolt



90° head



Extension head



Extension 90° head



AC swiveling head



Special Milling Head (Fixed Type)



Universal head



5 Face head
(dual tool shank)



5 Axis simultaneous head

Auto Head exChanger (AHC)



For Auto-Special Milling Head



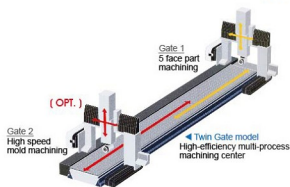
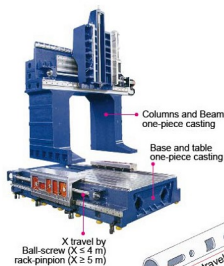
SPECIFICATIONS

Item	FDW-18					FDW-21					FDW-24				
Model - FDW	1822	1832	1842	1852	2122	2132	2142	2152	2432	2442	2452	2462	2472	2482	2492
Distance between columns (mm)	1850					2150					2450				
Table size	Length (mm) Width (mm)					Length (mm) Width (mm)					Length (mm) Width (mm)				
	2000	3000	4000	5000	2000	3000	4000	5000	3000	4000	5000	6000	2000	3000	4000
Max. table load (ton)	12	15	18	20	12	15	18	20	15	18	20	22	18	22	26
T - slot	Width x Pitch x No. (mm)					Width x Pitch x No. (mm)					Width x Pitch x No. (mm)				
	2200	3200	4200	5200	2200	3200	4200	5200	3200	4200	5200	6200	2200	3200	4200
Travel	X - axis (mm) Y - axis (mm) Z - axis (mm) W - axis (mm)					X - axis (mm) Y - axis (mm) Z - axis (mm) W - axis (mm)					X - axis (mm) Y - axis (mm) Z - axis (mm) W - axis (mm)				
	1800					2100					2400				
Spindle	Nose to table (mm) Ram size (mm) Taper / Power / Speed (rpm/kw) Cutting (m/min)					Nose to table (mm) Ram size (mm) Taper / Power / Speed (rpm/kw) Cutting (m/min)					Nose to table (mm) Ram size (mm) Taper / Power / Speed (rpm/kw) Cutting (m/min)				
	120 ~ 1920 □ 450 x 400 BBT 50 - 22 / 26 kw - 6000 rpm with + 2 stage gearbox					120 ~ 1920 □ 450 x 400 BBT 50 - 22 / 26 kw - 6000 rpm with + 2 stage gearbox					120 ~ 1920 □ 450 x 400 BBT 50 - 22 / 26 kw - 6000 rpm with + 2 stage gearbox				
Feedrate	X axis (m/min) Y / Z / W axis (m/min) Accuracy (mm)					X axis (m/min) Y / Z / W axis (m/min) Accuracy (mm)					X axis (m/min) Y / Z / W axis (m/min) Accuracy (mm)				
	15 15 12 10 15 15 12 10 15 15 12 10 15 15 12 10					15 15 12 10 15 15 12 10 15 15 12 10 15 15 12 10					15 15 12 10 15 15 12 10 15 15 12 10				
ATC & tool magazine	Capacity / dia (mm) Max. length / weight (mm/kg) Tool selection					Capacity / dia (mm) Max. length / weight (mm/kg) Tool selection					Capacity / dia (mm) Max. length / weight (mm/kg) Tool selection				
	32 tools / max. dia Ø 125 (Full tool) ; Ø 220 (Adjacent empty)					32 tools / max. dia Ø 125 (Full tool) ; Ø 220 (Adjacent empty)					32 tools / max. dia Ø 125 (Full tool) ; Ø 220 (Adjacent empty)				
Machine size	Length (m) Width (m) Height (m)					Length (m) Width (m) Height (m)					Length (m) Width (m) Height (m)				
	7.2	9.2	11.2	13.2	7.2	9.2	11.2	13.2	9.2	11.2	13.2	15.2	7.2	9.2	11.2
Machine weight (±10%) (ton)	40	44	48	52	40	44	48	52	40	44	48	52	40	44	48
Item	FDW-28					FDW-32					FDW-36				
Model - FDW	2832	2842	2852	2860	3232	3242	3252	3260	3642	3652	3660	4242	4252	4260	4270
Distance between columns (mm)	2850					3250					3650				
Table size	Length (mm) Width (mm)					Length (mm) Width (mm)					Length (mm) Width (mm)				
	3000	4000	5000	6000	3000	4000	5000	6000	4000	5000	6000	4000	5000	6000	7000
Max. table load (ton)	18	20	22	24	18	20	22	24	22	24	26	22	24	26	28
T - slot	Width x Pitch x No. (mm)					Width x Pitch x No. (mm)					Width x Pitch x No. (mm)				
	3200	4200	5200	6000	3200	4200	5200	6000	4200	5200	6000	4200	5200	6000	7000
Travel	X - axis (mm) Y - axis (mm) Z - axis (mm) W - axis (mm)					X - axis (mm) Y - axis (mm) Z - axis (mm) W - axis (mm)					X - axis (mm) Y - axis (mm) Z - axis (mm) W - axis (mm)				
	2800					3200					3600				
Spindle	Nose to table (mm) Ram size (mm) Taper / Power / Speed (rpm/kw) Cutting (m/min)					Nose to table (mm) Ram size (mm) Taper / Power / Speed (rpm/kw) Cutting (m/min)					Nose to table (mm) Ram size (mm) Taper / Power / Speed (rpm/kw) Cutting (m/min)				
	145 ~ 2245 □ 450 x 400 (opt. 550 x 550) BBT 50 - 22 / 26 kw - 6000 rpm with + 2 stage gearbox					145 ~ 2245 □ 450 x 400 (opt. 550 x 550) BBT 50 - 22 / 26 kw - 6000 rpm with + 2 stage gearbox					145 ~ 2245 □ 450 x 400 (opt. 550 x 550) BBT 50 - 22 / 26 kw - 6000 rpm with + 2 stage gearbox				
Feedrate	X axis (m/min) Y / Z / W axis (m/min) Accuracy (mm)					X axis (m/min) Y / Z / W axis (m/min) Accuracy (mm)					X axis (m/min) Y / Z / W axis (m/min) Accuracy (mm)				
	15 12 10 10 15 12 10 10 15 12 10 10 15 12 10 10					15 12 10 10 15 12 10 10 15 12 10 10 15 12 10 10					15 12 10 10 15 12 10 10 15 12 10 10				
ATC & tool magazine	Capacity / dia (mm) Max. length / weight (mm/kg) Tool selection					Capacity / dia (mm) Max. length / weight (mm/kg) Tool selection					Capacity / dia (mm) Max. length / weight (mm/kg) Tool selection				
	32 tools / max. dia Ø 125 (Full tool) ; Ø 220 (Adjacent empty)					32 tools / max. dia Ø 125 (Full tool) ; Ø 220 (Adjacent empty)					32 tools / max. dia Ø 125 (Full tool) ; Ø 220 (Adjacent empty)				
Machine size	Length (m) Width (m) Height (m)					Length (m) Width (m) Height (m)					Length (m) Width (m) Height (m)				
	9.2	11.2	13.2	15.0	9.2	11.2	13.2	15.0	11.2	13.2	15.0	17.2	9.2	11.2	13.2
Machine weight (±10%) (ton)	55	60	65	70	58	63	68	73	67	72	77	82	55	60	65

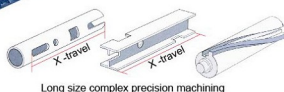


SPECIFICATIONS

Item	FD-14				FD-18				FD-21				FD-24A					
Model - FD	1422	1427	1432	1822	1827	1832	1842	1852	2122	2127	2132	2142	2152	2427A	2432A	2442A	2452A	
Distance between columns (mm)		1400				1850				2150				2450				
Table size	Length (mm)	2000	2500	3000	2000	2500	3000	4000	5000	2000	2500	3000	4000	5000	2500	3000	4000	5000
	Width (mm)	1200				1500				1800				2000				
T - slot	Max. table load (ton)	10 12 15				12 13 15 18 20				12 13 15 18 20				13 15 18 20				
	Width x Pitch x No. (mm)	22 x 150 x 7				22 x 150 x 9				22 x 150 x 11				22 x 150 x 13				
Travel	X - axis (mm)	2200	2700	3200	2200	2700	3200	4200	5200	2200	2700	3200	4200	5200	2700	3200	4200	5200
	Y - axis (mm)	1300				1800				2100				2400				
Spindle	Z - axis (mm)	800				800 (opt.1100)				800 (opt.1100)				800 (opt.1100)				
	Nose to table (mm)	30 ~ 830				180 ~ 980				180 ~ 980				75 ~ 875				
Feedrate	Center to column	430				BBT 50 - 6000 rpm - 22 / 26 kw + 2 stage gearbox				430				430				
	Taper / Speed / Power																	
	Cutting (m/min)	10				8				7				6				
	X axis (m/min)	22	20	20	22	20	20	20	18	15	20	18	18	15	12	18	18	15
ATC & tool magazine	Y / Z axis (m/min)	18 / 18				18 / 15				18 / 15				15 / 15				
	Accuracy (mm)	Positioning ± 0.015 / full travel / Repeatability ± 0.003																
	Capacity / dia (mm)	24 tools / max. dia $\varnothing 110$ (Full tool) ; $\varnothing 200$ (Adjacent empty)																
	Max. length / weight (kg/mm)	18 kg / 380 mm																
Machine size	Tool selection	Random shortest direction / M24 P3.0 - 45°																
	Length (m)	6.4	7.4	8.4	6.4	7.4	8.4	11.1	13.1	6.4	7.4	8.4	11.1	13.1	7.4	8.4	11.1	13.1
	Width (m)	4.00				4.55				4.85				5.15				
	Height (m)	4.10				4.57				5.47				5.47				
Machine weight (app.) (ton)		20	22	24	24	26	28	32	36	25	27	29	33	37	28	30	35	40
Item	FD-28				FD-32				FD-36				FD-42					
Model - FD	2832	2842	2852	2860	3232	3242	3252	3260	3642	3652	3660	4242	4252	4260				
Distance between columns (mm)		2850				3250				3650				4250				
Table size	Length (mm)	3000	4000	5000	6000	3000	4000	5000	6000	4000	5000	6000	4000	5000	6000			
	Width (mm)	2200				2600				3000				3000 (opt. 3400)				
T - slot	Max. table load (ton)	18 20 22 24				18 20 22 24				20 22 24 26				24 26 28 30				
	Width x Pitch x No. (mm)	28 x 180 x 13				28 x 200 x 13				28 x 200 x 15				28 x 200 x 15				
Travel	X - axis (mm)	3200	4200	5200	6000	3200	4200	5200	6000	4200	5200	6000	4200	5200	6000			
	Y - axis (mm)	2800				3200				3600				4200				
Spindle	Z - axis (mm)	1100 (opt.1400)				1100 (opt.1400)				1100 (opt.1400 / 1500)				1100 (opt.1400 / 1500)				
	Nose to table (mm)	180 ~ 1280				150 ~ 1250				260 ~ 1360				470				
Feedrate	Center to column	430				BBT 50 - 6000 rpm - 22 / 26 kw + 2 stage gearbox				430				430				
	Taper / Speed / Power																	
	Cutting (m/min)	6				6				6				6				
	X axis (m/min)	15	12	10	10	15	12	10	10	10	12	10	10	10	12	10	10	10
ATC & tool magazine	Y / Z axis (m/min)	15 / 12				15 / 12				12 / 12				12 / 12				
	Accuracy (mm)	Positioning ± 0.015 / full travel / Repeatability ± 0.003																
	Capacity / dia (mm)	32 tools / max. dia $\varnothing 125$ (Full tool) ; $\varnothing 220$ (Adjacent empty)																
	Max. length / weight (kg/mm)	20 kg / 400 mm																
Machine size	Tool selection	Random shortest direction / M24 P3.0 - 45°																
	Length (m)	9.4	11.4	13.4	15.4	9.4	11.4	13.4	15.4	11.4	13.4	15.4	11.4	13.4	15.4			
	Width (m)	6.00				6.40				6.80				7.40				
	Height (m)	5.2 (6.1)				5.2 (6.1)				5.55 (6.45)				5.55 (6.45)				
Machine weight (app.) (ton)		44	49	54	59	50	55	60	65	62	67	72	68	73	78			

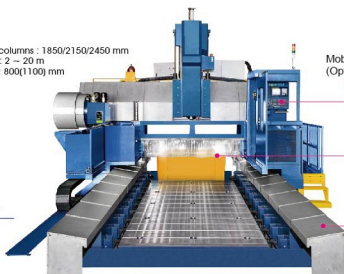


AHRP

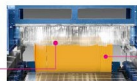


Between columns : 1350 mm
X - travel : 2 ~ 20 m
Z - travel : 800 mm

Between columns : 1850/2150/2450 mm
X - travel : 2 ~ 20 m
Z - travel : 800(1100) mm



Mobile control room
(Opt. for AHRP, AHD T)



▲ Coolant protection



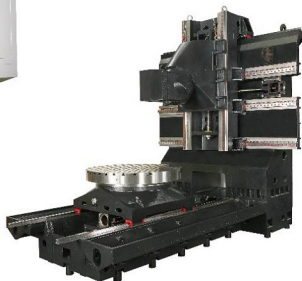
▲ X travel by Ball-screw (X ≤ 4 m)
Rack-pinion (X ≥ 5 m)

SPECIFICATIONS

		AHRP-13	AHD T-18	AHD T-21	AHD T-24
Travel	Between columns(mm)	1350	1850	2150	2450
	X - Travel (m)		2 M ~ 20 M Every 1m add		
	Y - Travel (mm)	1300	1800	2100	2400
	Z - Travel (mm)	800		800 (1100)	
	W - Travel (mm)			N / A	
Table	Table wide (mm)	1000	1200	1500	1800
	Table length (m)		Table length = X Travel		
Spindle nose to table (mm)		220 ~ 1020		555 ~ 1355	
Power - speed (kw)			18.5 / 22 - 6000 rpm		
X axis rack-pinion		x ≥ 5m	x ≥ 5m	x ≥ 5m	x ≥ 5m
Y axis rack-pinion		x	x	x	x
ATC capacity (pcs)			24 pcs		
X / Y / Z / W Feed rate G00 (m/min)			15 / 15 / 12		
Machine size	Length (m)		6.5m ~ 23.5m Every 1m add		
	Width (m)	4.5	5.9	6.2	6.5
	Height (m)	4.6		4	
Machine weight (app.) (ton)		18 + 2/m	20 + 1.5/m	22 + 2/m	24 + 2.5/m



UMC-1600

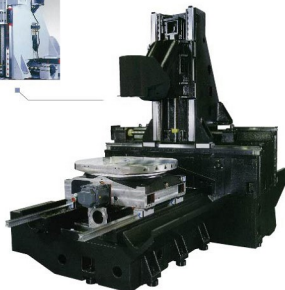
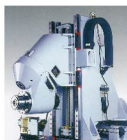


SPECIFICATIONS

		UMC-1600 (mill)	UMTC-1600 (mill turn)
Travel	X / Y / Z axis	1620 / 1260 / 1050 mm	
	Vertical to horizontal time	3 seconds	
Swivel head (B axis)	Transmission	DD torque motor	
	Rotary angle	0° / 180°	
Motor spindle	Maximum spindle speed	8,000 RPM	
	Spindle power S1 / S6	29.6 / 54.2 KW	42 / 53 KW
	Spindle torque S1 / S6	128 / 320 Nm	392 / 506 Nm
	Spindle taper	# 50 / HSK-A100	HSK-T100
	Front bearing diameter	100 mm	
Distances	V : spindle nose to table top	150 ~ 1200 mm	
	H : spindle center to table top	100 ~ 1150 mm	
	V : spindle nose to table center	-300 ~ 960 mm	
	H : spindle center to table center	-250 ~ 1010 mm	
	Spindle center to column	1105 mm	
Rotary table (C axis)	Table dimension	Ø 1320 mm	
	Table to floor	1085 mm	1110 mm
	Maximum loading	4000 KG	Mill / turn 4000 / 1500 KG
	Maximum rotation	30 RPM	300 RPM
	Transmission	DD torque motor	
	Indexing increment	0.001°	
Ball screw	T slots	13 x 18H x P100	
	X / Y / Z Diameter x pitch	Ø 55 / 55 / 63 mm x 16 / 12 / 12 mm	
X / Y / Z axis Roller guide	Number x width	4 / 2 / 2 slide ways x 55 mm	
	Runner blocks number	8 / 4 / 6	
Feed rate	Rapid feed X / Y / Z	24 / 24 / 24 m / min	
	Cutting feed	20 / 20 / 20 m / min	
ATC	Tools number	60 pieces	
	Maximum tool diameter	Ø 150 mm	
	Maximum tool length	350 mm	
	Maximum tool weight	20 kgs	
	Tools exchanging position	horizontal	
06 Weight	Before packing	32000 KG	33000 KG



UMC-1000



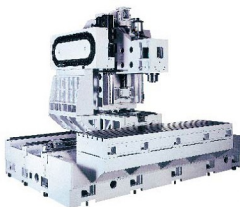
UMC-1000 / UMC-1000 mill-turn

OPTIONAL:

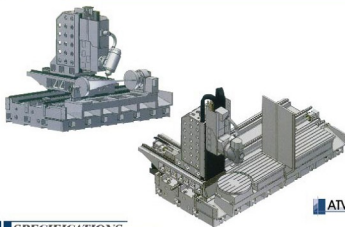
1000 mm diameter torque motor drive rotary table
with maximum rotation 60 RPM, 1820 Nm peak torque,
4000 Nm brake torque, 1200 kg load, +5° / +2.5°
positioning / repeatability accuracy, German made !

SPECIFICATIONS

		UMC-1000 Milling center	UMC-1000 Mill-turn center
Travel	Linear axis X / Y / Z	1000 / 800 / 700 mm	1000 / 800 / 610 mm
	Swivel head B axis	0° ~ 180°	
	Rotary table C axis	0.001 degree x 360,000	
Swivel head (B axis)	Maximum spindle speed	14000 (18000, 24000) RPM	12000 RPM
	Spindle power & torque	29.3 & 35 KW, 70 & 160 Nm (S1 & S6)	
	Spindle taper	BT (CAT/SK) 40, (HSK-A63)	KM 63
	Front bearings diameter	70 mm	
	Vertical spindle nose to table	100 mm ~ 800 mm,	29 mm ~ 729 mm,
	Hor. spindle center to table top	50 mm ~ 750 mm	9 mm ~ 709 mm
Rotary table (C axis)	Hor. spindle nose to table center	-230 mm ~ 570 mm	-262 mm ~ 538 mm
	Table dimension	800 x 1000 mm	Ø 800 mm
	Maximum loading	1500 kg	1000 kg
	Indexing increment	0.001 degree	
	T slots (size x No.x pitch)	18 mm x 7 x 100 mm	18 mm x 7 x 120 mm
Feed rate	Table top to floor	1000 mm	1036 mm
	Rapid linear axis X / Y / Z	24M / 24M / 24M	
	Rotary axis B / C	10 (60) RPM	500 RPM
Transmission	Cutting feed	20 m / min	
	Linear axis XYZ	Ø 50 mm C3 ball screw	
	Swivel head B axis	Torque motor	
Axis Accuracy (VDI3441)	Rotary table C axis	Worm wheel (Torque motor)	Torque motor
	Positioning linear axis XYZ / BC	12 microns / 10 "	
	Repeatability linear axis XYZ / BC	8 microns / 5 "	
ATC	Tools number	40 (52, 80) stations	
	Max. tool dia. / length / weight	120 mm / 300 mm / 7 kg	
	Tools exchanging	vertical position	
Weight	Net (before packing)	15 ton	16 ton


ATVMC-4000
SPECIFICATIONS

		ATVMC-2000	ATVMC-3000	ATVMC-4000	ATVMC-5000
X / Y / Z axis	BT - 40 spindle	2320 / 710 / 610 mm	3320 / 710 / 610 mm	4320 / 710 / 610 mm	5320 / 710 / 610 mm
	BT - 50 spindle	2320 / 680 / 610 mm	3320 / 680 / 610 mm	4320 / 680 / 610 mm	5320 / 680 / 610 mm
Table size / max. loading		2400 x 700 mm / 3 ton	3400 x 700 mm / 4 ton	4400 x 700 mm / 5 ton	5400 x 700 mm / 5.5 ton
Spindle nose to table / column ways		150 ~ 760 mm / 750 mm			
Spindle taper / speed		BT / CAT / SK40 or 50 / 10000 Rpm up to 24000 rpm			
Spindle motor		7.5 / 11 kw (up to 34 kw)			
Cutting feed rate		10 M / min.			
Rapid feed rate		30 / 30 / 30 m	24 / 30 / 30 m	24 / 30 / 30 m	18 / 30 / 30 m
ATC - type / No.		Swing arm type 24 / 32 / 40 tools			
X / Y / Z Ballscrew dia.		63 / 50 / 50 mm	70 / 50 / 50 mm	80 / 50 / 50 mm	80 / 50 / 50 mm
Net weight		21000 kgs	23500 kgs	28680 kgs	32620 kgs

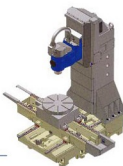
FREJOTH TRAVELLING COLUMN & FIXED TABLE VMC - 5 Axis Base on above ATVMC models

ATVMC-5XC

SPECIFICATIONS

	ATVMC-5XA	ATVMC-5XC
Rotary table - type	Worm wheel or DD motor	DD motor only
Rotary table size	250 ~ 800 mm dia	700 mm (opt. 1000 mm)
Rotary table loading capacity	up to 600 kgs with tailstock	500 kgs (opt. 1000 kgs)
Rotation speed	11.1 ~ 16.6 rpm	30 rpm
X / Y / Z linear travel - axis	2320 / 3320 / 4320 / 5320 mm / 760 / 760 mm	
A / B / C rotary axis	A / B : 0.001° x 360,000 ± 120°	B / C : ± 120° / 0.001° x 360,000
Swivel milling head - B axis spindle		
Spindle taper / speed	14000 rpm - BT40 / CAT40 / SK40 / HSK - A63	
Spindle motor	29.3 / 35 Kw	
B axis swivel spindle driven system - by DD motor		
ATC type and tool number	Swing arm type - 24 tools.	
Spindle - V to column way	891 mm	
Spindle - V to table surface	115 ~ 875 mm	
Floor to table surface	860 mm	
Net weight	from 22000 kg to 40000 kgs	



FHSM-5XC



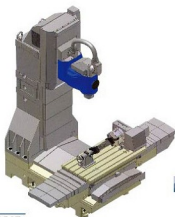
■ with optional Ø 610 mm torque motor rotary table integrated into 1100 mm x 600 mm plain table

SPECIFICATIONS

FHSM-5XC

X / Y / Z linear axis	1020 / 610 / 610 mm (opt. 1500 / 700 / 800 mm)
B-Rotary head axis	+30°-120°
C-rotary table	0.001° x 360,000
Rotary table type	integrated built in saddle
Rotary table-size / T slot / loading cap	Ø 610 mm (opt. Ø 700 mm) / 18H7 / 500 kgs
Rotary table speed / hydraulic pressure	10 rpm / 50 kg / cm ²
Rotary table center height / bore	50 H7
Spindle to column cover	629 mm
Spindle motor power & Torque	29.3 / 35 kw or 70/160 Nm
Spindle taper / speed	BT40-14000 rpm ~ 24000 rpm (opt.)
Rapid feed-cutting feed	36 / 36 / 24 m / min - 1-20000 mm / min
ATC-Type/No.of tool	Swing arm with 430 mm travel-32 tools (opt. 40 / 60 tools)
Machine net weight	9000 kgs

FREJOTH 5 AXES MACHINING CENTER - Swing milling head and rotary table tailstock design



FHSM-5XA



SPECIFICATIONS

FHSM-5XA

X / Y / Z linear axis	1020 / 610 / 810 mm
B-Rotary head axis	+30°-120°
A-rotary table	0.001° x 360,000
Rotary table type	add on main plain table
Rotary table-size / T slot / loading cap	250 ~ 320 mm Dia. / 12 H7 / 250 kgs with tailstock
Rotary table speed / hydraulic pressure	16.6 rpm / 50 kg / cm ²
Rotary table center bore	40 H7
Spindle to column cover	629 mm
Spindle motor power & Torque	29.3 / 35 kw or 70/160 Nm
Spindle taper / speed	BT40-14000 rpm ~ 24000 rpm (opt.)
Rapid feed-cutting feed	36/36/24 m/min - 1-20000 mm/min
ATC-Type/No.of tool	Swing arm with 430mm travel-32 tools (opt. 40 tools)
Machine net weight	9000 kgs

FREJOTH 5 AXES VERTICAL MACHINING CENTER (2 axis Trunnion table)



HSM-250U



HSM-400U



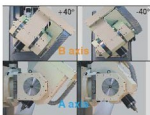
SPECIFICATIONS

	HSM-250U	HSM-400U
X / Y / Z linear axis	610 / 400 / 510 mm	800 / 610 / 510 mm
B axis tilting table	-30 deg. ~ +120 deg.	-42 deg. ~ +120 deg.
C axis rotary table	360 degree	
Spindle motor / taper / front bearing diameter	7.5 / 11 (~22/26) kw / BT# 40 / 70 mm	
Max. spindle speeds	8000 ~ 30000 rpm	8000 ~ 30000 rpm
Spindle nose to table top	72 ~ 582 mm	130 ~ 640 mm
Tilting rotary table - Dimension / loading (0°/tilting)	255 mm / 100 / 50 kgs	600 x 365 mm / 200 / 100 kgs
Indexing increment	0.001 degree	0.001 degree
Feed rate	X / Y / Z rapid/cutting feed	30 / 30 / 24 M / min - 8 M / min
	Rapid - B / C	25 / 25 rpm
Transmission - X / Y / Z - B / C	40, 40, 50 mm dia. C3 - worm gear	
ATC	24 (32, 40) arm type	
Net weight	5500 kgs	7800 kgs

FREJOTH 5 AXIS MACHINING CENTER : $\pm 40^\circ$ ultra High Speed Spindle (A,B axes)



CH5-3000



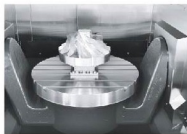
SPECIFICATIONS

	CH5-3000
X / Y / Z / A / B axis travel	3000 / 1000 / 750 mm A, B AXIS : - 40 + 40 DEGREE
Table size / T slot (no. x width x distance)	3250 x 800 mm / 5 x 18 x 150 mm
Table loading	3000 kgs
Spindle motor / taper / spindle speeds	25 / 30 kw, 7 / 24 Taper, no.50, 12000 rpm
Spindle rotating feed rate	2000 degree / min
Spindle nose to table	100 ~ 850 mm
Feed rate	X / Y / Z rapid / cutting feed
	Jog feed rate
Transmission - X / Y / Z	20 / 20 / 10 M/min / 1-10000 mm/min
ATC	1260 mm / min
Net weight	4 / 4 / 9 kw
	arm 32 pcs
	28000 kgs

FREJO TH 5 AXES MACHINING CENTER - Trunnion table



LU-1200



SPECIFICATIONS

	LU-1200
X / Y / Z axis	1100 / 1370 + 380 / 800 mm
Spindle nose to worktable	150 ~ 950 mm
Working table size / loading capacity	dia. 1150 x 900 W / 2000 kgs
Rapid feed rate - X / Y / Z	48 / 48 / 48 M / min
Cutting feed rate - X / Y / Z	0.001 - 20 M / min
Rapid feed rate - A / C axis	26 / 50 rpm
C axis rotating range	360 degree
A axis rotating range	±120 degree
Spindle drive method	Direct drive (opt. built-in)
Max spindle speed	8000 rpm
Spindle power	27 kw
Spindle taper / torque	BBT50 / 400 Nm
ATC system / number of tools	24 pcs Drum
Machine net weight	32000 kgs

FREJO TH 5 AXES MACHINING CENTER GANTRY TYPE



GVM-800



SPECIFICATIONS

		GVM-800 Milling	GVM-800 Milling turning
Travel	X / Y / Z axis	800 / 900+330 / 620 mm	
Rotary table tilt A axis	Maximum rotation	50 rpm	25 rpm
	Tilt angle	± 125°	± 135°
Rotary table tilt C axis	Table dimension	Ø800 mm	
	Maximum loading	1200 kg	
Motor spindle	Maximum spindle speed	18000 rpm	10000 rpm
	Spindle power S1 / S6	26 / 32 kw	27 / 31 kw
	Spindle taper	HSK - A63	HSK - T63
Ball screws	X / Y / Z diameter x pitch	Ø50 / 50 x 2 / 50 mm x 16 mm FDC, oil thru cooled	
X / Y / Z axis roller guide	Width	55 / 55 / 45 mm	
	Runner blocks number	4 / 4 / 4	
Feed rate	Rapid feed X / Y / Z	48 / 48 / 48 M / min.	
	Cutting feed	20 M / min.	
ATC	Tool holder type	HSK - A63	HSK - T63
	Tools number	32 (40, 64, 80, 120)	
Weight	Before packing	24 tons	25 tons

FREJOTH 5 AXES MACHINING CENTER-rotary table (B, C axis)



LU-800



SPECIFICATIONS

	LU-800A	LU-800B
X / Y / Z axis	800 / 900 + 330 / 620 mm	760 / 900 + 330 / 620 mm
Spindle nose to worktable	100 ~ 720 mm	75 ~ 695 mm
Working table size / loading capacity	800 mm dia. / 1000 kgs	
Rapid feed rate - X / Y / Z	48 / 48 / 48 M / min.	
Cutting feed rate - X / Y / Z	0.001 ~ 20 M / min.	
A Axis rotating range	+ / - 120 degree	
C Axis rotating angle	360 degree	
A / C Axis Max. speed	75 rpm / 100 rpm	
Spindle drive method	Direct drive : (Opt. Built-in)	Two stage gear box (Opt. Built-in)
Max spindle speed	12000 rpm	8000 rpm
Spindle power (Cont. / 30 min.)	17 / 20.4 kw	18 / 21 kw
Spindle taper / max torque	#40 BBT	#50 BBT
ATC system / number of tools	arm 32	arm 24
Machine net weight	21000 kgs	21000 kgs

FREJOTH 5 AXES MACHINING CENTER-rotary table (B, C axis)



LU-620



LU-400



SPECIFICATIONS

	LU-400	LU-620
X / Y / Z axis travel	400 / 350 / 350 mm	620 / 520 / 460 mm
Spindle nose to worktable	150 ~ 500 mm	150 ~ 610 mm
Working table size	450 mm dia.	650 mm dia.
Table loading capacity	150 / 200 kgs (90 degree / Horizontal)	200 / 300 kgs (90 degree / Horizontal)
Rapid feed rate - X / Y / Z	48 / 48 / 48 M / min.	36 / 36 / 36 M / min.
Cutting feed rate - X / Y / Z		1 ~ 20000 mm / min.
B Axis tilting range		-50° ~ +110°
C Axis rotating angle		360 degree
B / C Axis Max. speed		25 rpm / 25 rpm
Spindle drive method		Direct drive
Max spindle speed		12000 rpm
Spindle power (Cont. / 30 min.)	5.5 / 7.5 kw (Fanuc)	18 / 21 kw (Siemens)
Spindle taper	#40 BBT	#40 BBT
ATC system / number of tools	arm 30 T	arm 32 T
Machine net weight	6000 kgs	8800 kgs

FREJO TH 5 AXES MACHINING CENTER - Mill / Turn function



TM-2500



1st Turning Spindle + W-Axis Tailstock



1st Turning Spindle + 2nd Turning Spindle

SPECIFICATIONS

	TM-2500
Max rotating radius	ø 530 mm
Max machining dia / length	ø 500 / 500 mm
Max rod diameter	ø 65 mm
X / Y / Z / W axis travel	560 / ±125 / 560+93 / 910 mm
B / C axis rotating angle	-20° ~ 200° / 360°
X / Y / Z / W rapid feedrate	40 / 40 / 40 / 8 mm
B / C axis feed rate	25 / 250 rpm
Turning spindle speed / power	4500 rpm / 11 / 15 kw
Chuck / nose / hole diameter	8" / A2-6 / ø75 mm
Milling spindle speed / power	12000 rpm / 11 / 22 kw
B axis indexing angle	0.001°
Tool indexing angle / position	90° / 4 positions
Tool type / no.	HSK-63T / 36 pcs
Max. tool dia. / length / weight	ø 90 (125 mm no adjacent tool) / 250 mm / 8 kg
Quill type tailstock	MT 5
Machine height / occupancy / weight	2715 mm / 2947 x 2820 mm / 6500 kgs

FREJO TH 5 AXES HIGH SPEED DRILLING & TAPPING CENTER



ADT-A5X403



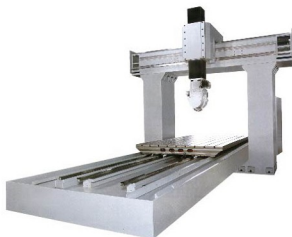
ADT-A5X404

SPECIFICATIONS

	ADT-A5X403	ADT-A5X404
Travel - X / Y / Z axis	400 x 500 x 400 mm	400 x 500 x 450 mm
Spindle nose to table	30 ~ 430 mm	40 ~ 490 mm
Spindle speed	BT30 10000 rpm	BT40 8000 rpm
Min. indexing precision of C axis rotary	0.001 degree	0.001 degree
Cumulative indexing precision of C axis	15 sec	15 sec
C axis repeatability accuracy	4 sec	6 sec
Slope angle of A axis	±110 degree	+120 / -40 degree
Cumulative indexing precision of A axis	60 sec	45 sec
A axis repeatability accuracy	8 sec	8 sec
Max. Speed for A, C axis	33.3 rpm	13.3 / 22.2 rpm
3 axes rapid traverse	48 / 48 / 48 m / min	48 / 48 / 48 m / min
Spindle motor	5.5 / 3.7 kw	7.5 / 5.5 kw
X / Y / Z / A / C motor	1.6 / 1.6 / 3 / 1.6 / 1 kw	1.6 / 1.6 / 3 / 4 / 1.6 kw
ATC - taper / No / type	BT30 20+1 Arm type	BT40 24+1 Arm type
Table size / loading cap	Ø255 mm / 50 kgs	Ø250 / Ø320(OP) mm / 75 kgs
Net weight	3900 kgs	4300 kgs



ADVM-4025



VH-5F



VH-1 / VH-2.5



ORT-2.5



HT



M21



M21U

SPECIFICATIONS

	ADVM-2017	ADVM-3017	ADVM-2021	ADVM-3021	ADVM-3025	ADVM-4021	ADVM-4025	ADVM-4030	ADVM-4035
X axis	2200 mm	3200 mm	2150 mm	3200 mm	3200 mm	4200 mm	4200 mm	4200 mm	4200 mm
Y axis	1750 mm	1750 mm	2200 mm	2200 mm	2600 mm	2200 mm	2600 mm	3100 mm	3600 mm
Z axis	700mm (Opt. 900/1100/1300mm)								
Between two column	1750 mm	1750 mm	2130 mm	2130 mm	2530 mm	2130 mm	2530 mm	3030 mm	3530 mm
Spindle nose to table	Standard long nose-130~830 mm (Opt. 130~1030/130~1230/130~1430 mm) Opt. short nose-240~940 mm (Opt. 240~1140/240~1340/240~1540 mm)								
Table size-mm	2000 x 1600	3000 x 1600	2000 x 1700	3000 x 1700	3000 x 2100	4000 x 1700	4000 x 2100	4000 x 2600	4000 x 3100
Max. loading cap.-ton	6 Ton	8 Ton	8 Ton	11 Ton	14 Ton	13 Ton	16 Ton	20 Ton	24 Ton
Ram size	380 mm x 380 mm (Opt. 420 mm x 420 mm)								
Spindle taper and power	BT50(DIN69817)-(CAT50)								
Rapid feed	15 / 15 / 10 (15) M / min.								
ATC-No. / dia. / length	Tools- 24 / 40 / 60 / 120 / 180-110 dia x 350 L								
Net weight	22 Ton	26 Ton	24 Ton	28 Ton	30 Ton	35 Ton	38 Ton	42 Ton	44 Ton
	ADVM-5021	ADVM-5025	ADVM-5030	ADVM-5035	ADVM-6030	ADVM-6035			
X axis	5200 mm	5200 mm	5200 mm	5200 mm	6200 mm	6200 mm			
Y axis	2200 mm	2600 mm	3100 mm	3600 mm	3100 mm	3600 mm			
Z axis	700 mm (Opt. 900/1100/1300 mm)								
Between two column	2130 mm	2530 mm	3030 mm	3530 mm	3030 mm	3530 mm			
Spindle nose to table	Standard long nose-130~830 mm (Opt. 130~1030/130~1230/130~1430 mm) Opt. short nose-240~940 mm (Opt. 240~1140/240~1340/240~1540 mm)								
Table size-mm	5000 x 1700	5000 x 2100	5000 x 2600	5000 x 3100	6000 x 2600	6000 x 3100			
Max. loading cap.-ton	15 Ton	18 Ton	21 Ton	25 Ton	23 Ton	28 Ton			
Ram size	380 mm x 380 mm (Opt. 420 mm x 420 mm)								
Spindle taper and power	BT50(DIN69817)-(CAT50)								
Rapid feed	10(12) / 10(12) / 10(12) M / min								
ATC-No. / dia. / length	Tools- 24 / 40 / 60 / 120 / 180-110 dia x 350 L								
Net weight	44 Ton	49 Ton	53 Ton	56 Ton	70 Ton	75 Ton			

FREJOTH ADM CNC DOUBLE COLUMN MACHINING CENTER (3 LINEAR GUIDE WAYS)

ADM - XX A XX B A (x 100 mm) : X Axis Travel
B (x 100 mm) : Distance Between Columns



ADM-4228

SPECIFICATIONS

() : As Option
*Specifications are subject to change without prior notice.

	ADM-4228	ADM-5228	ADM-6228	ADM-4232	ADM-5232	ADM-6232	ADM-7232	ADM-4236	ADM-5236	ADM-6236	ADM-7236
Table	Table size 4000 x 2500 mm/5000 x 2500 mm/6000 x 2500 mm/4000 x 2900 mm/6000 x 2900 mm/7000 x 2900 mm/4000 x 3000 mm/5000 x 3000 mm/6000 x 3000 mm/7000 x 3000 mm										
	T-slots 22 mm										
	Maximum load 16 tons 20 tons 24 tons 16 tons 20 tons 24 tons 24 tons 16 tons 20 tons 24 tons 24 tons										
Travel	X axis 4200 mm 5200 mm 6200 mm 4200 mm 5200 mm 6200 mm 7200 mm 4200 mm 5200 mm 6200 mm 7200 mm										
	Y axis 3200 mm 3200 mm 3200 mm 3200 mm 3200 mm 3200 mm 3200 mm 3200 mm 3200 mm 3200 mm 3200 mm										
	Z axis 800 (1000, 1200) mm 4000 mm										
Spindle	Spindle servo motor (Cont / 30 min) 15 / 18.5 (22 / 26) kw										
	speed 4000 (6000) mm										
	Taper 7/24 taper No.50, BT-50										
Distances	Between two Columns 2800 mm 3200 mm 3600 mm										
	Spindle nose to Table center 200 ~ 1000 (200 ~ 1200, 200 ~ 1400) mm										

FREJOTH ADM CNC DOUBLE COLUMN MACHINING CENTER (2 LINEAR GUIDE WAYS)

ADM - XX A XX B A (x 100 mm) : X Axis Travel
B (x 100 mm) : Distance Between Columns



ADM-3221

SPECIFICATIONS

() : As Option
*Specifications are subject to change without prior notice.

	ADM-2216	ADM-3216	ADM-4216	ADM-2221	ADM-3221	ADM-4221	ADM-5221	ADM-3226	ADM-4226	ADM-5226
Table	Table size 2000 x 1400 mm/3000 x 1400 mm/4000 x 1400 mm/2000 x 1800 mm/3000 x 1800 mm/4000 x 1800 mm/5000 x 1800 mm/3000 x 2200 mm/4000 x 2200 mm/5000 x 2200 mm									
	T-slots 22 mm									
	Maximum load 6 tons 9 tons 10 tons 8 tons 10 tons 12 tons 15 tons 12 tons 14 tons 18 tons									
Travel	X axis 2200 mm 3200 mm 4200 mm 2200 mm 3200 mm 4200 mm 5200 mm 3200 mm 4200 mm 5200 mm									
	Y axis 1600 mm 1600 mm 1600 mm 1600 mm 1600 mm 1600 mm 1600 mm 1600 mm 1600 mm 1600 mm									
	Z axis 800 (1000, 1200) mm 2100 mm 2600 mm									
Spindle	Spindle servo motor (Cont / 30 min) 15 / 18.5 (22 / 26) Kw									
	speed 4000 (6000) rpm									
	Taper 7/24 taper No.50, BT-50									
Distances	Between two Columns 1600 mm 2100 mm 2600 mm									
	Spindle nose to Table center 200 ~ 1000 (200 ~ 1200, 200 ~ 1400) mm									

FREJOTH ADM CNC DOUBLE COLUMN MACHINING CENTER



ADM-3212

SPECIFICATIONS

(): As Option
*Specifications are subject to change without prior notice.

	ADM-2212	ADM-3212
Travel	X axis 2200 mm	Y axis 1200 mm Z axis 760 mm
Distances	Spindle nose To table surface Between two column	200 ~ 960 mm 1300 mm
Table	Table size 2000 x 1100 mm	3000 x 1100 mm
	T - slots Maximum load 3500 kgs	22 mm 4500 kgs
Spindle	Spindle servo motor (Cont / 30 min) speed (gear type) taper	11 / 15 (22 / 26) kw 6000 rpm 7 / 24 Taper ISO 50, BT-50

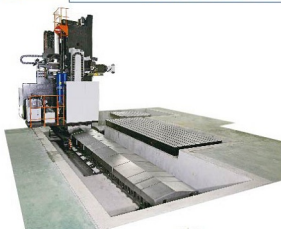
FREJOTH ADM CNC DOUBLE COLUMN MACHINING CENTER



ADM-1422/1432

SPECIFICATIONS

	ADM-1422	ADM-1432
Dis. Between column		1400 mm
Table size - length	2000 mm	3000 mm
Table size - width		1200 mm
Table loading capacity	8 Ton	10 Ton
Travels - X / Y / Z	2200 / 1300 / 800 mm	3200 / 1300 / 800 mm
Spindle taper		BT 40 (BT50)
Spindle power / speed	20Kw - BT40 / 15000 rpm	BT50 / 10000 rpm
Spindle nose to table top		100 ~ 900 mm
X / Y / Z rapid feed		25M / 25M / 25M / min
X / Y / Z cutting feed		15 M / min
ATC		Arm Type 24 Tools
Machine weight	20 Ton	25 Ton



CBFP-160CNC



- Range :
X – 4M ~ 20 M, every 2 M modular
Y – 2M ~ 4M, every 0.5 M modular
Z – 1.2 M
A – $\pm 180^\circ$
B – up to 3M rotary table
C – $\pm 360^\circ$
V – 1.5M ~ 3M, every 0.5 M modular
W – 0.7M or 1M

SPECIFICATIONS

CBFP-160CNC		
Axis Travel	X – column right & left	4M, 6M, 8M, 10M, 12M, 14M, 16M, 18M, 20M
	Y – spindle head up & down	2M, 2.5M, 3M, 3.5M, 4M
	Z – ram forward & backward	1.2M
	W – quill forward & backward	0.7M
Guide ways Dimension	X – column right & left	2 x 65 mm rails, total 10 runner blocks
	Y – spindle head up & down	2 x 65 mm + 2 x 45 mm rails, total 8 runner blocks
	Z – ram forward & backward	4 x 45mm rails, total 8 runner blocks
	W – quill forward & backward	2 x 20mm rails, total 4 runner blocks
Axis Transmission	X axis	Ball screw Rack pinion
	Y axis	Ball screw
	Z axis	Ball screw
	W axis	Ball screw
Feed rate	Rapid X / Y / Z / W axis	20M / 20M / 10M / 5M per minute
	Cutting X / Y / Z / W feed	10M / 10M / 8M / 5M per minute
	Minimum setting	0.001 MM
	X axis machine bed	X axis travel + 5300 mm / 1373 mm / 420 mm
Castings Dimension L / W / H	Y axis machine column	1200 mm / 1710 mm / Y axis travel + 3355 mm
	Z axis sliding ram	3500 / 460 / 520 mm
	Diameter	160 mm dia
	Taper & speed	BT#50 & 3000 RPM
Boring Spindle (W axis)	Power	37 & 45KW(Fanuc) / 37 & 51KW(Siemens)
	Torque (2 gearboxes)	3300 Nm maximum at 180 RPM
	Tools number	40, 60, 90, 120 stations
	Max. tool dia. / length / weight	$\varnothing$ 150 mm / 300 mm / 25 kg
Automatic tool changer (optional)	Location	fixed on traveling column
	Brands	Fanuc, Heidenhain, Siemens
CNC		Fanuc, Heidenhain, Siemens

Optional milling heads :

Various optional tables available :



EXT



EXT90



HF50



VAR3



VH2.5



ORT



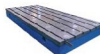
M21U



M21F



M21F with automatic head change



Floor plate



Angle plate



Rotary table



Sliding table



Rotary & sliding table



Rotary & sliding & tilting table



LB-110/LB-130



SPECIFICATIONS

	LB-110	LB-130
Boring spindle diameter	110 mm	130 mm
X axis travel (table longitudinal travel)	3000 mm	4000 (3000) (5000) mm
Y axis travel (spindle head travel)	2100 mm	2500 (3000) mm
Z axis travel (table cross travel)	1500 mm	1800 mm
W axis travel (spindle stroke)	500 mm	800 mm
Table size	1440 x 1600 mm	1800 x 2000 mm
Table loading	8 ton	15 ton
Table indexing	0.001 degree	0.001 degree
X Y Z rapid traverse	10 m / min	21 m / min
W rapid traverse	4 m / min	4 m / min
Spindle motor	22 / 26 kw	30 / 37 kw

FREJOTH CNC BED TYPE UNIVERSAL MILLING MACHINE



FBE-2600



Versatile various milling head :



VH-2



VH-90



ORT-2.5



VH-2.5



VH-1

SPECIFICATIONS

	FBE-1500	FBE-2000	FBE-2600	FBE-3000	FBE-4000
X axis	1500 mm	2000 mm	2600 mm	3000 mm	4000 mm
Y / Z axis	1000 mm / 950 mm (opt 1500 mm)				
Table size	1600 x 1050 mm	2100 x 1050 mm	2700 x 1050 mm	3100 x 1050 mm	4100 x 1050 mm
Table loading capacity	3000 kgs	5000 kgs	6000 kgs	8000 kgs	9000 kgs
T slot	22 H8 x 7 slots				
Horizontal spindle (W / O vertical heads VH - 5 / VH - 2.5 / VH - 1 heads)					
Taper and speed	DIN 69871 #50 / 3500 (5000) rpm				
output 40% duty cycle / constant output	25 kw / 17 kw				
Max. torque	650 Nm				
Universal milling head - standard manual head - B axis and C axis are manual					
Taper / speed	DIN 69871 #50 / 3500 rpm				
output 40% duty cycle / constant output	25 kw / 17 kw				
Max. torque	650 Nm				
Feedrate rapid / cutting	10 m / min / 1- 5000 mm / min				
24 station swing arm type ATC as option					
Net weight	11000 kgs	14000 kgs	15000 kgs	18000kgs	23600kgs



CBFK-110CNC

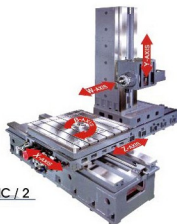
SPECIFICATIONS

	CBFK - 110CNC
Spindle diameter	110 mm
X axis	2000 mm (Opt. 3000 mm)
Y / Z axis	1500 / 1400 mm
W axis	550 mm
Table size / loading capacity	1500 x 1200 mm / 5000 kgs
T - slot	22H8 x No.7 x 150 mm
B axis	0.001 deg. / Every 90 deg. With locating Pin.
B axis rapid feed	2 rpm
Spindel nose to table center	-30 ~ 1520 mm
Spindle center to table top	0 ~ 1500 mm
Spindle taper	BT50
Spindle motor / Max. torque	22 / 26 kw / 135 kg - m
Spindle speed	L : 5 ~ 625 rpm H : 626 ~ 2500 rpm
Rapid feed - X / Y / Z / W axis	10 / 10 / 10 / 5M / min.
Feed rate - X / Y / Z axis	1 ~ 6000 mm / min.
Feed rate - W axis	1 ~ 4000 mm / min.
ATC	60 tools
X / Y / Z / B / W axis motor	6 / 6 / 6 / 7 / 7 kw
Net weight	24000 kgs

FREJOTH AHORIZONTAL BORING, MILLING & DRILLING MACHINE-Column Moveable type



CBFK-110CNC / 2



SPECIFICATIONS

	CBFK-110CNC / 2	CBFK-130CNC
Boring spindle diameter	110 mm	130 mm
X axis travel (table longitudinal)	2000 Opt. - 2500 / 3200 mm	3200 / 4200 mm
Y axis travel (spindle vertical)	2000 Opt. 2500 mm	2500 Opt. - 3000 mm
Z axis travel (table cross)	1700 mm	2000 mm
W axis travel (spindle axial)	550 mm	700 Opt. - 900 mm
Distance from table to spindle center	0 ~ 2000 Opt. - 2500 mm	0 ~ 2500 Opt. - 0 - 3000 mm
Table top profile	24 mm x 7 T - slot	28 mm x 9 T - slot
Table auto indexing	0.001 deg	0.001 deg
Rapid traverse-X-Y-Z	10 M / min	10 M / min
Rapid traverse-W	10 M / min	6 M / min
Cutting feedrate-X-Y-Z	1 ~ 5000 mm / min	
Spindle motor	15 / 18 kw Opt. 22 / 26 kw	



CBFT-110CNC/1

SPECIFICATIONS

	CBFT-110CNC/1
X / Y / Z axis	2000 / 1400 / 1150 mm
W axis	500 mm
Table size / loading capacity	1000 x 1000 mm / 3000 kgs
T - Slot	22 mm x No.9 x 100 mm
Table indexing	1 deg. x 360
Spindle nose to table center	-175 ~ 1475 mm
Spindle center to table top	0 ~ 1400 mm
Spindle diameter	110 mm
Spindle taper	BT50
Spindle motor / Max. torque	22 / 26 kw / 135 kg-m
Spindle speed	2 range - (auto) - L - 5 ~ 625 rpm / H - 626 ~ 2500 rpm
Rapid feed - X / Y / Z / W axis	15 / 12 / 15 / 5 M / min
Feed rate - X / Y / Z axis	1 - 6000 mm / min
Feed rate - W axis	1 - 4000 mm / min
ATC	60 tools
X / Y / Z / B / W axis motor	7 / 6 / 7 / 4 / 7 kw
Net weight	21000kgs

FREJOTH HORIZONTAL BORING, MILLING & DRILLING MACHINE - Table Type



CBFT-110CNC



SPECIFICATIONS

	CBFT-110CNC/2	CBFT-110CNC
X / Y / Z axis travel	2000 / 1800 / 1400 mm	2000 / 1800 / 1400 mm
W axis travel	400 mm (500 mm)	400 mm (500 mm)
Table size / loading capacity	1250 x 1250 mm / 5000 kgs	
T - Slot	22 x 7 mm	
Table indexing	360 deg	0.001 deg
Spindle center to table	0 ~ 1800 mm	
Spindle nose to table center	90 ~ 1890 mm	90 ~ 1890 mm
Spindle diameter	110 mm	110 mm
Spindle taper	7 / 24 taper ISO50 , BT50	
Spindle motor	15 / 18.5 kw (22 / 26 kw)	
Spindle speed	10 ~ 2500 rpm (3000 rpm)	
Rapid feed - X / Y / Z / W axis	12 / 12 / 12 / 10 M / min	
Cutting feedrate - X / Y / Z axis	1 - 5000 mm / min	
ATC -	40 tools (60 tools)	
X / Y / Z / B / W axis motor	4 / 4 / 4 / 4 / 4 kw	4 / 4 / 4 / 7 / 4 kw



EBM-2150



SPECIFICATIONS

	EBM-1000	EBM-2150	EBM-2600	EBM-3200
X / Z axis	1400 / 1000 mm	2150 / 1100 mm	2600 / 1100 mm	3250 / 1100 mm
Y axis	1200 (1400) mm	1400 mm	1400 mm	1400 mm
Table size	1500 x 710 mm	2200 x 1220 mm	2650 x 1220 mm	3250 x 1220 mm
Table Max. loading cap	1500 kgs	4000 kgs	4500 kgs	5000 kgs
T - slot	18 x 6 x 125 mm	22 x 7 x 125 mm	22 x 7 x 125 mm	22 x 7 x 125 mm
Spindle nose to table edge	246.5 ~ 1246.5 mm		- 249 ~ 930 mm	
Spindle nose to column surface	250 mm		249 mm	
Spindle center to table top	250 ~ 1450 mm		190 ~ 1590 mm	
Spindle taper and speed		BT50 - 4000 rpm (opt 6000 rpm)		
Spindle motor		15 kw		
X / Z axis motor - Nm	22 / 22 Nm	27 / 27 Nm	27 / 50 Nm	70 / 70 Nm
Y axis motor - Nm	22 Nm with brake		27 Nm with brake	
ATC type / number		swing arm type 32 tools (opt 40 / 60 tools)		
Net weight	15000 kgs	21000 kgs	23000 kgs	25000 kgs

FREJO TH HORIZONTAL MACHINING CENTER - without "W" axis



AHM-630



AHM-800



SPECIFICATIONS

	AHM-630	AHM-800
X / Y / X axis	1500 (1600) / 1200 / 1000 (1100) mm	2000 / 1500 (1800) / 1400 (1600) mm
Spindle nose to table center	225 ~ 1225 mm (175 ~ 1175 mm)	220 ~ 1620 mm (220 ~ 1820 mm)
Spindle center to table surface	0 ~ 1200 mm	0 ~ 1500 mm (1800 mm)
Table size / loading capacity	630 x 630 mm / 2000 (2500) kgs	800 x 800 mm / 4000 kgs
Table indexing unit	1 deg. / 360	1 deg. / 360
Spindle taper / speeds	BT 50 / 4000 rpm (6000 rpm)	
Spindle motor	11 / 15 kw (15 / 18.5 kw)	15 / 18.5 kw
Rapid feed rate	15 / 12 / 15 M / min.	
Cutting rate	1 ~ 5000 mm / min.	
ATC	40 tools (60 tools)	
Net weight	11000 kgs	14500 kgs



MH-1250B/1250P



SPECIFICATIONS

	MH-1250B	MH-1250P
Travel - X / Y / Z	2100 / 1235 / 1235 mm	
Spindle center to pallet surface / center	100 - 1335 / 280 - 1480 mm	
Rotary pallet size / number / loading	1250 x 1250 / 2 / 3500 kgs / 5000 kgs (for P)	
Pallet indexing / surface configuration	1 degree / 80 - M 20 tapped	
Max. work piece size - dia / height	dia 2000 / 1500 mm	
Spindle taper / speed	BT50 / 6000 rpm	
Max. torque with 2 speed gearbox	660 N/m	
ATC number	60 / opt 90 - 120	
Spindle bearing I.D	100 mm	
X / Y / Z rapid / cutting feed rate	24 m/min / 10 m/min	
Spindle motor	22 / 26 kw	
X / Y / Z / B axis motor	7 / 6 / 7 / 3 kw	
Net weight	32 ton	35 ton

FREJOTH HORIZONTAL MACHINING CENTER W / PALLET CHANGE



MH-800A

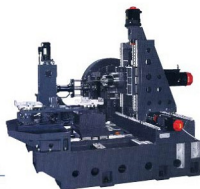


SPECIFICATIONS

	MH-550A	MH-550B	MH-800A	MH-800B	MH-1000B
Travel - X / Y / Z	700 / 650 / 650 mm		1000 / 850 / 950 mm		1300 / 1200 / 1200 mm
Spindle center to pallet surface / center	50 - 700 / 150 - 800 mm		60 - 910 / 150 - 1100 mm		80 - 1280 / 200 - 1400 mm
Rotary pallet size / number / loading	550 x 550 / 2 / 700 kgs		800 x 800 / 2 / 1000 kgs		1000 x 1000 / 2 / 2000 kgs
Pallet indexing / surface configuration	1 degree (opt 0.001 deg)		24 - M16 tapped		48 - M20 tapped
Max. work piece size - dia / height	dia. 700 / 800 mm		dia. 1000 / 1000 mm		dia. 1300 / 1300 mm
Spindle taper / speed	BT40 - 10000 rpm BT50 - 6000 rpm		BT40 - 10000 rpm BT50 - 6000 rpm		BT50 - 6000 rpm
Max. torque with 2 speed gearbox	660 N/m		660 N/m (opt)		660 N/m
ATC number	60 tools	40 (opt 60)	60 tools	40 (opt 60)	60 (opt 90 / 120)
Spindle bearing I.D	70 mm	100 mm	70 mm	100 mm	100 mm
X / Y / Z rapid / cutting feed rate	36 m/min / 10 m/min		32 m/min / 10 m/min		32 m/min / 10 m/min
Spindle motor	15 / 18.5 kw		22 / 26 kw		22 / 26 kw
X / Y / Z / B axis motor	7 / 7 / 4 / 1.6 kw		7 / 7 / 7 / 1.6 kw		7 / 6 / 7 / 3 kw
Net weight	15 ton	15 ton	18.5 ton	18.5 ton	28.5 ton



LH-300/300A



SPECIFICATIONS

	LH-300	LH-300A
Travel - X / Y / Z	460 / 460 / 350 mm	
Spindle center to worktable surface	60 ~ 520 mm	
Spindle nose to worktable center	60 ~ 410 mm	
Table size / loading cap. / number	300 x 300 mm / 250 kgs / 2 piece	
Workpiece height / worktable layout	475 mm / 8 - M12 Pitch 100	
Working table indexing	0.001 deg.	
Spindle taper / speed	BT30 - 15000 rpm	BT40 - 12000 rpm
Spindle transmission / torque	direct drive - 70 Nm	
Spindle motor	7.5 / 11 kw	
Rapid feed X / Y / Z	48 / 48 / 48 M / min	
Cutting feed	1 - 12000 mm / min.	
ATC	30 tools	30 tools
Net weight	6000 kgs	6300 kgs

FREJO TH VERTICAL MACHINING CENTERS - HEAVY CUTTING CAPACITY

- 4 box ways & gear head



FMV-1590



SPECIFICATIONS

	FMV-1170	FMV-1370	FMV-1470	FMV-1590	FMV-1790	FMV-2090
X / Y / Z axis	mm 1100 / 710 / 600	1300 / 710 / 600	1400 / 710 / 600	1500 / 900 / 850	1700 / 900 / 850	2000 / 900 / 850
Table size	mm 1300 x 700	1500 x 700	1600 x 700	1700 x 850	2000 x 850	2200 x 850
Table loading capacity	kgs 1000	1200	1500	2000	2500	3000
Spindle nose to table surface	mm 100 ~ 710	100 ~ 710	100 ~ 710	150 ~ 1000	150 ~ 1000	150 ~ 1000
Spindle taper / speeds	rpm ISO 50 (40) / 6000 (8000) Low Speed 40 ~ 1750, High Speed 1751 ~ 8000				11 / 15 (15 / 18.5)	
Spindle motor	kw 7.5 / 11 (11 / 15)					
Spindle transmission method				Gear (Belt)		
ATC	tools			Random 20 (24, 32)		
Rapid feed X / Y / Z	m/min	20 / 20 / 16			16 / 16 / 12	
Cutting feed	mm/min	10000			80000	
Net weight	kgs 9000	10000	11000	14000	15000	16000



ABM-1500



SPECIFICATIONS

		ABM-1000	ABM-1500	ABM-2000
Table	Overall size	1220 x 600 mm	1600 x 1000 mm	2100 x 1600 mm
	T - slot	18 x 5 x 100 mm	18 x 7 x 125 mm	22 x 9 x 180 mm
	Maximum loading	1500 kgs	3000 kgs	6000 kgs
Travel	X axis	1100 mm table in & out	1750 mm head left & right	2200 mm table in & out
	Y axis	600 mm head left & right	1000 mm table in & out	1750 mm head left & right
	Z axis	500 mm head up & down	750 mm head up & down	650 mm head up & down
			1750 mm	
Distance	Between 2 columns	700 mm		
	Spindle to table top	45 ~ 545 mm	107 ~ 857 mm	254 ~ 904 mm
	Motor	18 / 25 KW	26 / 32 KW	35 KW
Spindle (built - in motor spindle)	Taper	HSK-A63	HSK-A63 (BT#40)	
	Speed	24000 RPM	18000 RPM UP TO 24000 RPM	18000 RPM
	Cutting	UP TO 10 M / min	UP TO 20 M / min	
Feed rate	Rapid X / Y / Z	36 / 36 / 36 M / min	30 / 30 / 30 M / min	24 / 30 / 30 M / min
	Minimum setting		0.001 mm	
Accuracy	Machine net weight	11000 kgs	15000 kgs	20000 kgs

FREJOTH UNIVERSAL MACHINING CENTER ROTARY TABLE TYPE

Options :



- Vt-2.5 Head with automatic 2.5 degree index 2 axis milling head, total 144 x 144 positions.



- Ø2000 / 2500 / 3000mm rotary tables, with 3 jaw manual chuck & 3 extra loading tracks etc.



YZC-1650

SPECIFICATIONS

		YZC-1650
Y axis	milling head forward & backward by sliding ram	1000 mm
Z axis	milling head up & down by sliding saddle	952 mm
C axis	rotary table size / loading capacity	1650 mm dia / 8000 kgs
	indexing increment	0.001° x 360000 positions
	table T - slot	radial type 12 slots 22 mm H7
	Max. speed	3500 rpm
V / H milling head	spindle power S1 / S6	17 kw / 22 kw
	spindle taper	BT50
	front bearing diameter	90 mm
	V to H position time	12 seconds
Distance	vertical spindle nose to table top	0 ~ 952 mm
	vertical spindle nose to table center	1149 mm
	horizontal spindle center to table top	0 ~ 1002 mm
	horizontal spindle nose to table center	1099 mm
Y / Z / C rapid feed / cutting rate		10 / 10 m/min 4.16 rpm / 5 m/min
ATC - number of tools	type / number	BT50 / 24 tools
	tool dia / length / weight	Ø120 / 300 mm / 15 kgs
	tools exchange method	swing arm at vertical position
Net weight		16000 kgs

FREJO TH HEAVY DUTY VERTICAL MACHINING CENTER



AVMC-3200



SPECIFICATIONS

	AVMC-2150	AVMC-2600	AVMC-3200
X / Y / Z axis	2150 / 1100 / 900 mm	2600 / 1100 / 900 mm	3200 / 1100 / 900 mm
Table size / loading Cap	2200 x 1220 mm / 2500 kgs	2650 x 1220 mm / 3000 kgs	3250 x 1220 mm / 3500 kgs
Y Box way numbers	4	6	6
Spindle nose to table top		151~1051 mm (opt.186~1086 mm)	
Spindle taper and speed		BT#50-6000 rpm (BT40-10,000 rpm)	
Spindle motor		15 / 18.5 kw (opt. 30 / 37 kw)	
Feed rate-rapid / cutting		15 m / 15 m / 15 m per min. 8000 mm / min	
ATC		Arm Type 24 (Opt.32 / 40)	
X / Y / Z ball screw-grade/dia./pitch		63 / 63 / 63 mm dia. -C3 / 10 Pitch	
Net weight	21000 kgs	22000 kgs	24000 kgs

FREJO TH VERTICAL MACHINING CENTER



AVMC-1600



SPECIFICATIONS

	AVMC-1600
X / Y / Z axis	1600 / 815 / 700 mm
Table size / loading Cap	1700 x 815 mm / 2000 kgs
Y Box way numbers	4
Spindle nose to table top	200 ~ 900 mm
Spindle taper and speed	BT#50/6000 rpm (BT40/10,000 rpm)
Spindle motor	11 / 15 kw
Feed rate-rapid / cutting	10 m / 10 m / 10 m per min. 8000 mm / min
ATC	ARM 20 (OPT. 32 or 40)
X / Y / Z ball screw-grade/dia./pitch	50 / 50 / 50 mm.-C3/10 Pitch
Net weight	15000 kgs



AVMC-1200



AVMC-1400

SPECIFICATIONS

	AVMC-1200	AVMC-1400
X / Y / Z axis	1200 / 700 / 760 mm	1400 / 700 / 760 mm
Table size / loading Cap	1400 x 710 mm / 1500 kgs	1500 x 710 mm / 1500 kgs
Y Box way numbers	4	
Spindle nose to table top	125 ~ 885 mm	
Spindle taper and speed	BT#50-6000 rpm (BT40-10000 rpm)	
Spindle motor	11 / 15 kw	
Feed rate-rapid / cutting	15 m / 15 m / 12 m per min. / 8000 mm / min	
ATC	Carrousel 20 or Arm type 32 or 40	
X / Y / Z ball screw-grade/dia./pitch	45 / 45 / 50 mm dia. - C3-10 Pitch	
Net weight	12000 kgs	13000 kgs

FREJOTH HIGH SPEED VERTICAL MACHINING CENTER



AVMC-1100H



SPECIFICATIONS

	AVMC-1100H
X / Y / Z axis	1100 / 610 / 610 mm
Table size / loading Cap	1270 x 640 mm / 1200 kgs
Spindle nose to table top	BT40/100 ~ 710 mm BT50/110 ~ 720 mm
Spindle taper and speed	BT40/8000 ~ 15000 rpm : BT50/6000 ~ 10000 rpm
Spindle motor	7.5 / 11 kw (opt.11/15 kw)
Feed rate-rapid / cutting	24 / 24 / 24 m / min.(opt. 36 / 36 / 30 m / min.) / 5000 mm / min.(opt. 10000 mm / min.)
ATC	#40 carrousel 20 / #50 arm 24
X / Y / Z ball screw-grade/dia./pitch	40 / 40 / 40 mm dia. X C3 x 12 pitch
Net weight	7300 kgs / 8500 kgs



HSM-600



HSM-800



SPECIFICATIONS

	HSM-600	HSM-800	HSM-1000
X / Y / Z axis	600 / 430 / 460 mm	800 / 510 / 610 mm	1000 / 510 / 610 mm
Table size / loading Cap.	850 x 400 mm / 350 kg	870 x 500 mm / 500 kg	1070 x 500 mm / 500 kg
Spindle nose to table top	120 ~ 580 mm	110 ~ 720 mm	110 ~ 720 mm
Spindle taper and speed	BT40 / 8000 rpm	BT40 / 8000 rpm	BT40 / 8000 rpm
Spindle motor	5.5 / 7.5 kw	7.5 / 11 kw	7.5 / 11 kw
Feed rate - rapid / cutting	30 M / 30 M / 24 M per min.	1-8000 mm / min.	1-8000 mm / min.
Arm Tpe ATC	20 Tools	24 Tools	24 Tools
X / Y / Z Linear way width	30 / 30 / 35 mm	35 / 35 / 45 mm	35 / 35 / 45 mm
Ballscrew-X / Y / Z	32 / 32 / 32 mm x 16 pitch	40 / 40 / 50 mm x 12 pitch	40 / 40 / 50 mm x 12 pitch
Net weight	3400 kgs	5000 kgs	5500 kgs



HSM-1000L



HSM-1500L



HSM-1350



(Y axis 700 mm)

SPECIFICATIONS

	HSM-1000L	HSM-1350	HSM-1500L
X / Y / Z axis	1020 / 610 / 610 mm	1350 / 620 / 810 mm	1500 / 700 / 610 (800) mm
Table size / loading Cap.	1200 x 610 mm / 850 kgs	1560 x 620 mm / 1200 kgs	1600 x 700 mm / 2000 kgs
Spindle nose to table top	77 ~ 887 mm	80 ~ 890 mm	140 ~ 750 (150 ~ 950 mm)
Spindle taper and speed	BT40 - 8000 rpm	BT40 - 8000 rpm	BT#40 - 8000 ~ 30000 rpm
Spindle motor	7.5 / 11 kw	7.5 / 11 kw	7.5 / 11 kw (~26 / 32)
Feed rate-rapid / cutting	30 M / 30 M / 24 M per min.	1-8000 mm / min.	48 / 48 / 36M, 1-12 M / min
Arm Tpe ATC	24 Tools	24 Tools	24 (32 / 40 / 60) Tools
X / Y / Z Linear way width	35 / 35 / 45 mm	35 / 35 / 45 mm	45 / 55 / 55 mm
Ballscrew-X / Y / Z	40 / 40 / 50 mm x 12 pitch	40 / 40 / 50 mm x 12 pitch	55 / 50 / 50 mm x 16 pitch
Net weight	7000 kgs	9000 kgs	10500 kgs

FREJOTH VERTICAL MACHINING CENTER - BELT DRIVE SPINDLE / LINEAR GUIDEWAYS



FCV-1600B



FCV-2000B



SPECIFICATIONS

	FCV-1600B	FCV-2000B
X / Y / Z axis travel	1600 / 900 / 800 mm	2000 / 900 / 800 mm
Table size / loading Cap.	1700 x 850 mm / 2000 kgs	2100 x 850 mm / 3000 kgs
T - slot	18 mm x No.7 / 100 mm	18 mm x No.7 x 100 mm
Spindle nose to table top	100 ~ 900 mm	100 ~ 900 mm
Spindle taper and speed	BT / CAT - 50 / 6000 rpm	BT / CAT - 50 / 6000 rpm
Spindle motor	15 / 18.5 kw	15 / 18.5 kw
Feed rate - rapid / cutting	20 / 20 / 15 M / min / 8000 mm per min.	20 / 20 / 15 M / min / 8000 mm per min.
ATC	Arm type / 24 tools	Arm type / 24 tools
Tool - size / Dia. x L x weight	240 / 305 mm / 15 kgs	240 / 305 mm / 15 kgs
Net weight	19000 kgs	21000 kgs

FREJOTH VERTICAL MACHINING CENTER - BELT DRIVE SPINDLE / LINEAR GUIDEWAYS



FCV-1200B



FCV-1400

SPECIFICATIONS

	FCV-1200B	FCV-1400(NB)
X / Y / Z axis travel	1200 / 600 / 675 mm	1400 / 800 / 740 mm
Table size / loading Cap.	1200 x 620 mm / 1000 kgs	1500 x 850 mm / 1600 kgs
T - slot	18 mm x No.5 x 100 mm	18 mm x No.7 x 100 mm
Spindle nose to table top	100 ~ 775 mm	100 ~ 840 mm
Spindle taper and speed	BT / CAT - 50 / 6000 rpm	BT / CAT - 50 / 6000 rpm
Spindle motor	11 / 15 (opt.15 / 18.5) kw	15 / 18.5 kw
Feed rate - rapid / cutting	24 / 24 / 18 M / min / 10000 mm per min.	20 / 20 / 18 M / min / 8000 mm per min.
ATC	Arm type / 24 tools	Arm type / 24 tools
Tool - size / Dia. x L x weight	240 / 305 mm / 15 kgs	240 / 305 mm / 15 kgs
Net weight	8000 kgs	13000 kgs



FCV-600



FCV-800



FCV-1000



SPECIFICATIONS

	FCV-600	FCV-800
X / Y / Z axis travel	600 / 410 / 540 mm	800 / 500 / 540 mm
Table size / loading Cap.	700 x 400 mm / 350 kgs	910 x 500 mm / 500 kgs
T - slot	14 mm x No.5 x 63 mm	18 mm x No.5 x 100 mm
Spindle nose to table top	100 ~ 640 mm	80 ~ 620 mm
Spindle taper and speed	BT / CAT - 40 / 10000 rpm	BT / CAT - 40 / 10000 rpm
Spindle motor	5.5 / 7.5 kw	7.5 / 11 kw
Feed rate - rapid / cutting	36 / 36 / 24 M / min / 10000 mm per min	36 / 36 / 24 M / min / 10000 mm per min
ATC	Armless type / 16 tools	Drum type / 24 tools
Tool - size / Dia. x L x weight	80 / 200 mm / 6 kgs	(77 / 115) / 260 mm / 7 kgs
Net weight	4200 kgs	5300 kgs

FREJO TH VERTICAL MACHINING CENTER - BELT DRIVE SPINDLE / LINEAR GUIDEWAYS



SPECIFICATIONS

	FCV-1000	FCV-1200A
X / Y / Z axis travel	1020 / 560 / 600 mm	1200 / 600 / 675 mm
Table size / loading Cap.	1000 x 560 mm / 750 kgs	1200 x 620 mm / 1000 kgs
T - slot	18 mm x No.5 x 100 mm	18 mm x No.5 x 100 mm
Spindle nose to table top	80 ~ 620 mm	100 ~ 775 mm
Spindle taper and speed	BT / CAT - 40 / 10000 rpm	BT / CAT - 40 / 10000 rpm
Spindle motor	7.5 / 11 kw	11 / 15 kw
Feed rate - rapid / cutting	36 / 36 / 24 M / min / 10000 mm per min	24 / 24 / 18 M / min / 10000 mm per min
ATC	Drum type / 24 tools	Drum type / 24 pcs
Tool - size / Dia. x L x weight	(77 / 115) / 305 mm / 7 kgs	(77 / 115) / 305 mm / 7 kgs
Net weight	7000 kgs	8000 kgs

FREJOTH VERTICAL MACHINING CENTER - Built - in spindle



DM-600



SPECIFICATIONS

	DM-600	DM-800	DM-1000	DM-1200A
X / Y / Z travel	610 / 410 / 540 mm	800 / 500 / 540 mm	1020 / 560 / 600 mm	1200 / 600 / 675 mm
Rapid speed	36 / 36 / 24 M / min.	36 / 36 / 24 M / min.	36 / 36 / 24 M / min.	30 / 30 / 24 M / min.
Spindle speed	24000 rpm		18000 rpm	
Spindle motor	3.7 / 4.6 kw		7.5 / 11 kw	
Spindle taper	BT / CAT - 30		BT / CAT - 40	
Table size / loading Cap.	700 x 400 mm / 350 kgs	910 x 500 mm / 500 kgs	1000 x 560 mm / 750 kgs	1220 x 620 mm / 1000 kgs
ATC	Armless - 16 tools	Armless - 16 tools	Armless - 20 tools	
Machine net weight	4200 kgs	5300 kgs	7000 kgs	8500 kgs

FREJOTH VERTICAL MACHINING CENTER - Direct Drive Spindle



DV-800



SPECIFICATIONS

	DV-600	DV-800	DV-1000	DV-1200A	DV-1200B
X / Y / Z travel	600 / 410 / 540 mm	800 / 500 / 540 mm	1020 / 560 / 600 mm		1200 / 600 / 675 mm
Rapid speed		36 / 36 / 24 M / min.			24 / 24 / 20 M / min.
Spindle speed			10000 rpm		
Spindle motor	5.5 / 7.5 kw		7.5 / 11 kw		
Spindle taper		BT / CAT - 40			BT / CAT - 50
Table size / loading Cap.	700 x 400 mm / 350 kgs	910 x 500 mm / 500 kgs	1120 x 560 mm / 750 kgs		1220 x 620 mm / 1000 kgs
ATC		Drum - 16 tools		Drum - 20 tools	
Machine net weight	4200 kgs	5300 kgs	7000 kgs		8500 kgs

FREJO TH VERTICAL MACHINING CENTERS - HEAVY CUTTING CAPACITY

X / Y / Z axes use heavy loading 55 mm - 6 x 8 x 6 slide blocks & cross roller linear guide



FMV-2000



SPECIFICATIONS

	FMV-1600	FMV-1800	FMV-2000
X / Y / Z axis	1600 / 1000 / 800 mm	1800 / 1000 / 800 mm	2000 / 1000 / 800 mm
Table size / loading capacity	1700 x 1000 mm / 2200 kgs	1900 x 1000 mm / 2500 kgs	2100 x 1000 mm / 3000 kgs
Spindle nose to table surface	200 ~ 1000 mm	200 ~ 1000 mm	200 ~ 1000 mm
Spindle taper / speeds	ISO 50 - 6000 rpm (8000 / 10000 rpm)		
Spindle motor	15 / 18.5 kw (18.5 / 22 kw)		
Spindle transmission method	Belt (Gear, direct, ZF gear box.)		
ATC	Random - 24 Tools (32, 40 tools)		
Rapid feed X / Y / Z	20 / 20 / 15 M / min.		
Cutting feed	10000 mm / min		
Net weight	17000 kgs	18000 kgs	20000 kgs

FREJO TH VERTICAL MACHINING CENTERS - HEAVY DUTY CUTTING CAPACITY

Y axes - 4 Tracks & roller type linear guide



FMV



SPECIFICATIONS

	FMV-1160	FMV-1350	FMV-1500
X / Y / Z axis	1100 / 600 / 600 mm	1350 / 700 / 640 mm	1500 / 700 / 640 mm
Table size / loading capacity	1160 x 600 mm / 1000 kgs	1350 x 600 mm / 1200 kgs	1500 x 600 mm / 1500 kgs
Spindle nose to table surface	120 ~ 720 mm	120 ~ 760 mm	120 ~ 760 mm
Spindle taper / speeds	BT40 - 8000 rpm	BT40 - 8000 rpm	BT40 - 8000 rpm
Spindle motor	7.5 / 11 kw (11 / 15 Kw, or 15 / 18 Kw)		
Spindle transmission method	Belt drive (or direct or ZF gear box.)		
ATC	Random - 24 Tools (30 , 40 tools)		
Rapid feed X / Y / Z	30 / 30 / 24 M / min	24 (30 / 30 / 24) M / min	
Cutting feed		12000 mm / min	
Net weight	7300 kas	7400 kas	8100 kas

FREJOTH VERTICAL MACHINING CENTERS - HEAVY DUTY CUTTING CAPACITY

X / Y / Z axes roller type linear guideways



FMV



SPECIFICATIONS

	FMV-600	FMV-860	FMV-1100
X / Y / Z axis	610 / 500 / 500 mm	860 / 600 / 600 mm	1100 / 600 / 600 mm
Table size / loading capacity	650 x 500 mm / 300 kgs	910 x 560 mm / 800 kgs	1100 x 560 mm / 900 kgs
Spindle nose to table surface	90 ~ 590 mm	120 ~ 720 mm	
Spindle taper / speeds	BT40 - 10000 rpm	BT40 - 8000 rpm	
Spindle motor	5.5 / 7.5 kw	7.5 / 11 kw (11 / 15 Kw, or 15 / 18 Kw)	
Spindle transmission method	Belt drive	Belt drive (or direct, or ZF gear box.)	
ATC	Random - arm - 24 Tools	Random - 24 Tools (30, 36 tools)	
Rapid feed X / Y / Z	36 / 36 / 36 M / min	30 / 30 / 24 M / min. (36 / 36 / 30 M / min)	
Cutting feed	10000 mm / min	12000 mm / min	
Net weight	4300 kgs	6000 kgs	6400 kgs

FREJOTH VERTICAL MACHINING CENTER - TWIN APC



FMV-1100APC



SPECIFICATIONS

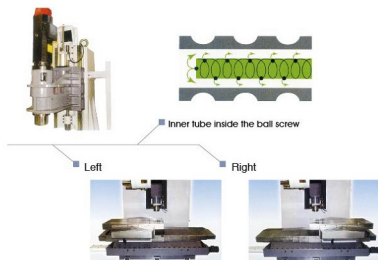
	FMV-600APC	FMV-860APC	FMV-1100APC
Table size / loading capacity	600 x 400 mm / 200 kgs	850 x 500 mm / 250 kgs	1000 x 500 mm / 300 kgs
Working area / T - slot	600 x 500 mm / 14 x 3 x 100	860 x 560 mm / 18 x 5 x 100	1100 x 560 mm / 18 x 5 x 100
X / Y / Z axis	610 / 500 / 500 mm	860 / 560 / 600 mm	1100 / 560 / 600 mm
Spindle nose to table surface	65 ~ 565 mm	110 ~ 710 mm (70 ~ 670 mm)	110 ~ 710 mm (70 ~ 670 mm)
optional	ISO - #40 - 8000 rpm (opt 10000 / 12000 / 15000 rpm)	ISO - #50 - 6000 rpm (opt 8000 / 10000 rpm)	
Spindle transmission method	belt (opt direct / ZF gear box)	belt (opt direct / ZF gear box)	
Spindle motor	5.5 / 7.5 kw (7.5 / 11 kw)	7.5 / 11 kw (opt 11 / 15 kw or 15 / 18.5 kw)	
ATC random method	ISO#40 - 24 tools (opt 30) (opt ISO#50 - 20 - 30 tools)	2.3 / 4.5 (OPT 1.8 / 3.8 second)	
T - T / C - C			
X / Y / Z cutting feedrate	10 m / min	12 m / min	
X / Y / Z rapid traverse	36 / 36 / 36 m/min	36 / 36 / 30 (48 / 48 / 36) m/min 30 / 30 / 24 (36 / 36 / 30) m/min	
Auto pallet changer	clamping force clamping method change cycle time lift force	hydraulic 50 liter - 50 kgs / cm ² 4 taper cone / pull stud 7 (±1) second 3600 kgs	
Net weight	6000 / 6500 kgs	8100 / 8500 kgs	8700 / 9100 kgs

FREJO TH VERTICAL MACHINING CENTER LINEAR GUIDE WAYS

FULL SUPPORT TABLE AND SADDLE AND AIR CYLINDER FOR COUNTER BALANCE



FEV-1886L



SPECIFICATIONS

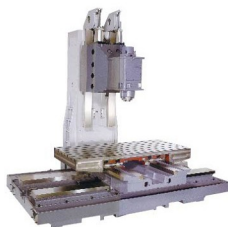
	FEV-2210L	FEV-1886L	FEV-1680L	FEV-1363L
X / Y / Z axis travel	2200 / 1000 / 900 mm	1800 / 860 / 700 mm	1600 / 800 / 700 mm	1300 / 630 / 600 mm
Table size / loading cap	2200 x 1000 mm / 3000 kgs	1800 x 860 mm / 2000 kgs	1600 x 800 mm / 2000 kgs	1450 x 600 mm / 1200 kgs
Distance between spindle nose to table top	125 ~ 1025 mm	170 ~ 870 mm	155 ~ 855 mm	140 ~ 740 mm
Distance between spindle center to column	1045 mm	950 mm	950 mm	710 mm
Spindle taper / speed		BT50 - belt driven - 8000 rpm. direct - 10000 rpm.		
Spindle motor	15 / 18.5 kw	15 / 18.5 kw	15 / 18.5 kw	11 / 15 kw
ATC		random- arm type BT50 - 24 tools (opt 32 tools)		
Feed rate rapid	16 / 16 / 12 m/min	20 / 20 / 20 m/min	20 / 20 / 20 m/min	30 / 30 / 30 m/min
Net weight	16500 kgs	13500 kgs	13200 kgs	9500 kgs

FREJO TH VERTICAL MACHINING CENTER BOX WAYS

FULL SUPPORT TABLE AND SADDLE AND AIR CYLINDER FOR COUNTER BALANCE



FEV-2210B



SPECIFICATIONS

	FEV-2210B	FEV-1886B	FEV-1680B	FEV-1363AB
X / Y / Z axis travel	2200 / 1000 / 900 mm	1800 / 860 / 700 mm	1600 / 800 / 700 mm	1300 / 630 / 635 mm
Table size / loading cap	2200 x 1000 mm / 3000 kgs	1800 x 860 mm / 2000 kgs	1600 x 800 mm / 2000 kgs	1450 x 600 mm / 1200 kgs
Distance between spindle nose to table top	155 ~ 1055 mm	190 ~ 890 mm	150 ~ 850 mm	150 ~ 785 mm
Distance between spindle center to column	1060 mm	930 mm	930 mm	690 mm
Spindle taper / speed		BT50 - gear box - 4000 / 6000 rpm		
Spindle motor	15 / 18.5 kw	15 / 18.5 kw	15 / 18.5 kw	11 / 15 kw
ATC		random- arm type BT50 - 24 tools (opt 32 tools)		
Feed rate rapid	12 / 12 / 12 m/min	18 / 18 / 15 m/min	18 / 18 / 15 m/min	24 / 24 / 20 m/min
Net weight	16500 kgs	14000 kgs	13500 kgs	9500 kgs



ADT-A12040



ADT-R12030

SPECIFICATIONS

*Specifications are subject to change without prior notice.

	ADT-A12030	ADT-A12040	ADT-R12030	ADT-R12040
Table size / loading cap.	1300 x 530 mm / 400 kgs			
X / Y / Z travel	1200 / 500 / 350 mm	1200 / 500 / 550 mm	1200 / 500 / 300 mm	1200 / 500 / 400 mm
Spindle taper / speed	BT30 - 10000 rpm	BT40 - 8000 rpm	BT30 - 10000 rpm	BT40 - 8000 rpm
Spindle motor	fanuc	7.5 / 5.5 kw	3.7 / 2.2 kw	7.5 / 5.5 kw
	mitsubishi	5.5 / 3.7 kw	5.5 / 3.7 kw	7.5 / 5.5 kw
X / Y / Z rapid traverse	48 / 48 / 48 m/min			
Atc No. / T - T second	20 / 2.2	24 / 2.4	14 / 3.0	14 / 3.5
Net weight	4570 kgs	4700 kgs	4500 kgs	4620 kgs

FREJOTH CNC TAPPING CENTER - A SERIES



ADT-A7030

ADT-A7040



SPECIFICATIONS

*Specifications are subject to change without prior notice.

	ADT-A7030	ADT-A7040
Table size / loading cap.	800 x 430 mm / 250 kgs	800 x 430 mm / 250 kgs
X / Y / Z travel	700 / 400 / 350 mm	700 / 400 / 550 mm
Spindle taper / speed	BT30 - 10000 rpm	BT40 - 8000 rpm
Spindle motor	fanuc	7.5 kw
	mitsubishi	5.5 kw
X / Y / Z rapid traverse	48 / 48 / 60 m/min	48 / 48 / 48 m/min
Atc No. / T - T second	20+1 / 2.2	24+1 / 2.2
Net weight	3810 kgs	3980 kgs

FREJO TH CNC TAPPING CENTER - A / R SERIES



ADT-A6040



ADT-R6040



SPECIFICATIONS

*Specifications are subject to change without prior notice.

	ADT-A6030	ADT-R6030	ADT-A6040	ADT-R6040
Table size / loading cap.	700 x 410 mm / 200 kgs	700 x 410 mm / 250 kgs	700 x 410 mm / 250 kgs	700 x 410 mm / 250 kgs
X / Y / Z travel	600 / 400 / 350 mm	600 / 400 / 300 mm	600 / 400 / 600 mm	600 / 400 / 400 mm
Spindle taper / speed	BT30 - 10000 rpm		BT40 - 8000 rpm	
Spindle motor	fanuc		7.5 / 5.5 kw	
	mitsubishi		7.5 / 5.5 kw	
X / Y / Z rapid traverse	48 / 48 / 60 m/min		48 / 48 / 48 m/min	
Atc No. / T - t second	20 + 1 / 2.2	14 / 2.6	24 + 1 / 2.2	14 / 3.2
Net weight	3200 kgs	3100 kgs	3700 kgs	3550 kgs

FREJO TH CNC TAPPING CENTER - R SERIES



ADT-R5030



ADT-R5630



SPECIFICATIONS

(): As Option
*Specifications are subject to change without prior notice.

	ADT-R4530	ADT-R5030	ADT-R5630	ADT-R6030
Table size / loading cap.	500 x 320 mm / 200 kgs	550 x 320 mm / 200 kgs	650 x 410 mm / 200 kgs	700 x 410 mm / 200 kgs
X / Y / Z travel	450 / 300 / 300 mm	500 x 300 x 300 mm	560 x 400 x 300 mm	600 / 400 / 300 mm
Spindle taper / speed	BT30 / 10000 rpm		BT30 / 60 - 10000 rpm	
Spindle motor	fanuc		3.7 / 2.2 kw	
	mitsubishi		5.5 / 3.7 kw	
X / Y / Z rapid traverse	48 / 48 / 60 m/min		48 / 48 / 60 m/min	
Atc No. / T - t second	12 / 2.5	14 / 2.5	14 / 2.6	14 / 2.6
Net weight	2100 kgs	2200 kgs	2600 kgs	3100 kgs

FREJOTH HORIZONTAL TAPPING CENTER



H4030

H4040P

HM4040

SPECIFICATIONS

	H4030	H4040P	HM4040
Table size / loading cap	400 x 400 mm / 200 kgs	400 x 400 mm x 2 pcs / 300 kgs	400 x 400 mm / 400 kgs
Min. indexing precision of table		0.001 sec	
Table repeatability accuracy		4 sec	
X / Y / Z axis travel	400 / 450 / 380 mm	500 / 450 / 450 mm	560 / 500 / 560 mm
X / Y / Z rapid feed	48 / 60 / 48 M / min	48 / 48 / 48 M / min	48 / 48 / 48 M / min
Spindle taper / speed	BT30 / 10000 rpm	BT40 / 8000 rpm	BT40 / 10000 rpm
Spindle center to table surface	90 ~ 540 mm	100 ~ 550 mm	105 ~ 605 mm
Spindle nose to table center	190 ~ 570 mm	160 ~ 610 mm	100 ~ 660 mm
Spindle motor	5.5 / 3.7 kw	7.5 / 5.5 kw	15 / 11 kw
ATC	24 + 1 tools	30 + 1 tools	40 + 1 tools
Net weight	3700 kgs	5700 kgs	8150 kgs

FREJOTH SUPER HIGH SPEED DRILLING & TAPPING CENTER

RAPID FEED X/Y/Z -60 m/min CUTTING FEED- 20000 mm/min



ATV-500

SPECIFICATIONS

	ATV-500	ATV-700
Travel-X / Y / Z axis	500 x 400 x 330 mm	700 x 400 x 330 mm
Spindle nose to table	150 ~ 480 mm	150 ~ 480 mm
Spindle speed		12000 rpm
Spindle motor		3.7 / 5.5 kw
X / Y / Z motor		1.5 / 1.5 / 2.2 kw
ATC - taper / No / type		BT - 30 / 16 / disc type
Table size / loading cap	650 x 400 mm / 250 kgs	850 x 400 mm / 250 kgs
Net weight	2500 kgs	3000 kgs



ADT-S3030



ADT-S500



ADT-S6040



SPECIFICATIONS

*Specifications are subject to change without prior notice.

	ADT-S3030	ADT-S500	ADT-S6040
Table size	400 x 250 mm / 2 pcs	600 x 400 mm / 2 pcs	700 x 400 mm / 2 pcs
Table loading cap.	100 kgs	250 kgs	250 kgs
X / Y / Z travel	300 / 250 / 250 mm	500 x 400 x 350 mm	600 x 400 x 500 mm
Spindle taper / speed	BT30 - 10000 rpm	BT30 - 10000 rpm	BT40 - 8000 rpm
Spindle motor	fanuc	3.7 / 2.2 kw	7.5 / 5.5 kw
	mitsubishi	5.5 / 3.7 kw	7.5 / 5.5 kw
X / Y / Z rapid traverse	48 / 48 / 48 m/min	36 / 36 / 48 m/min	36 / 36 / 48 m/min
Atc No. / T - t second	14 - 2.6	20+1 - 2.2	24+1 - 3.1
Net weight	3300 kgs	5250 kgs	6600 kgs

SPEEDER CNC SAW BLADE SHARPENING MACHINE



A
For grinding
Copper pipe
and Aluminum
pipe.



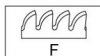
BW
For grinding
Curved teeth.
Grinding and
Chamfering.



C
For the C type
teeth with
high-low
difference.



ECO
For grinding
ECO teeth
type of Friction
Saw Blade.



F
For grinding F
teeth type of
Friction
Saw Blade.



O
For whole
cutting off teeth
could be ground
off in one circle.

SPECIFICATIONS

	CSG-500 3A	CSG-500 4A	CSG-650 3A	CSG-650 4A
Grinding range	Ø 95 ~ 500 mm	Ø 95 ~ 500 mm	Ø 100 ~ 630 mm	Ø 100 ~ 630 mm
Teeth number	10 ~ 998 teeth	10 ~ 998 teeth	10 ~ 998 teeth	10 ~ 998 teeth
Saw blade thickness (Max.)	8 mm	8 mm	8 mm	8 mm
Cutting angle	0 ~ 30°	0 ~ 30°	0 ~ 30°	0 ~ 30°
Grinding speed	1 ~ 60 teeth/min	1 ~ 60 teeth/min	1 ~ 60 teeth/min	1 ~ 60 teeth/min
Wheel diameter	Ø200	Ø200	Ø200	Ø200
Wheel bore	Ø32	Ø32	Ø32	Ø32
Wheel thickness (Max.)	8 mm	8 mm	8 mm	8 mm
Wheel motor	4.0 kw	4.0 kw	4.0 kw	4.0 kw
Wheel speed	2500 ~ 6000 rpm	2500 ~ 6000 rpm	2500 ~ 6000 rpm	2500 ~ 6000 rpm
X / Z / B axis motor	-	AC servo motor	-	AC servo motor
Y axis motor for 4A	-	AC servo motor	-	AC servo motor
Net weight	1264 kgs	1342 kgs	1362 kgs	1425 kgs

MORTON FLAT BED CNC LATHE - Bed width 725 mm



FCH-4600CNC

SPECIFICATIONS

	FCH-4600CNC
Swing over bed	1150 mm
Swing over cross - slide	700 mm
Between centers	2200 / 3200 / 4200 / 5200 / 6200 / 7200 mm
Spindle motor	Alpha 40i (60 / 50 HP)
Spindle bore / nose / speed	181 mm / A2 - 15, 6 ~ 650 rpm, 375 mm / A2 - 20, 4 ~ 500 rpm, 530 mm / A2 - 28, 2 ~ 300 rpm
Turret	Standard V8, OD tool - 32 x 32 mm, ID tool - 60 mm dia.
X axis travel	560 mm
Z axis travel	2100 / 3100 / 4100 / 5100 / 6100 / 7100 mm
Rapid traverse - X / Z	6 M / min.
X / Z servo motor	X - Alpha 22i (5.3HP) Z - Alpha 40i (8HP)
Tailstock Quill dia.	240 mm
Tailstock / travel x Taper	180 mm x MT#6
Machine net weight	13260 / 15110 / 16980 / 18850 / 20730 / 24000 kgs
Cf axis (option)	181 mm : Fanuc α22is, 11 rpm, 1530 Nm ; 258 mm : Fanuc α22is, 11 rpm, 1530 Nm ; 375 mm : Fanuc α22is, 8 rpm, 1910 Nm

MORTON FLAT BED CNC LATHE - Bed width 1000 mm



FCH-6000CNC

SPECIFICATIONS

	FCH-6000CNC	FCH-8000CNC	FCH-10000CNC
Swing over bed	1500 mm	2000 mm	2500 mm
Swing over cross - slide	900 mm	1400 mm	1900 mm
Between centers	2210 / 3210 / 4210 / 5210 / 6210 mm		
Spindle motor	Alpha 40i (60 / 50 HP)		
Spindle bore / nose / speed	181 mm / A2 - 15, 6 ~ 650 rpm, 255 mm / A2 - 15, 6 ~ 650 rpm, 375 mm / A2 - 20, 4 ~ 500 rpm, 530 mm / A2 - 28, 2 ~ 300 rpm		
Turret	Standard V8 OD tools - 32 x 32 mm, ID tools - 60 mm dia.		
X axis travel	735 mm		
Z axis travel	2095 / 3095 / 4095 / 5095 / 6095 mm		
Rapid traverse - X / Z	6 M / min.		
X / Z servo motor	X - Alpha 22i (5.3HP) Z - Alpha 40i (8HP)		
Tailstock Quill dia.	240 mm		
Tailstock / travel x Taper	180 mm x MT#6		
Machine net weight	FCH - 6000 CNC - 14260 / 16110 / 17980 / 19850 / 21730 kgs		
Cf axis (option)	181 & 258 mm : Fanuc α22is, 11 rpm, 1530 Nm ; 375 mm : Fanuc α22is, 8 rpm, 1910 Nm		

MORTON CNC FLAT BED LATHE - Bed Width 460 mm



FCH-2680CNC

SPECIFICATIONS

	FCH-2640CNC	FCH-2660CNC	FCH-2680CNC	FCH-26120CNC	FCH-26160CNC
Swing over bed			660 mm		
Swing over cross - slide			370 mm		
Between centers	1155 mm	1655 mm	2155 mm	3435 mm	4385 mm
Spindle motor	Alpha P40i (30 / 25 HP)				
Spindle bore / nose / speed	120 mm / A2 - 11, 6 ~ 1600 rpm ; 186 mm / A2 - 15, 3 ~ 1000 rpm				
Turret	Standard V8 OD tool - 25 mm x 25 mm, ID - 40 mm dia.				
X axis travel			540 mm		
Z axis travel	950 mm	1450 mm	1950 mm	3220 mm	4170 mm
Rapid traverse - X / Z	10 M / min.				
X / Z servo motor	X - Alpha 12is (3.6HP) Z - Alpha 22iF (5.4HP)				
Tailstock Quill dia.	150 mm dia.				
Tailstock / travel x Taper	220 mm x MT#5				
Machine net weight	6400 kgs	6800 kgs	7400 kgs	8400 kgs	10100 kgs

MORTON CNC FLAT BED LATHE - Bed Width 560 mm



FCH-3600CNC

SPECIFICATIONS

	FCH-3600CNC	FCH-4800CNC
Swing over bed	900 mm	1200 mm
Swing over cross - slide	520 mm	820 mm
Between centers	1115, 2115, 3395, 4345, 5625, 6430 mm	
Spindle motor	Alpha P40i (30 / 25 HP)	
Spindle bore / nose / speed	120 mm / A2 - 11, 6 ~ 1600 rpm ; 186 mm / A2 - 15, 3 ~ 1000 rpm ; 258 mm / A2 - 15, 3 ~ 650 rpm ; 375 mm / A2 - 20, 4 ~ 500 rpm	
Turret	Standard V8 OD tool - 32 mm x 32 mm, ID - 50 mm dia.	
X axis travel	520 mm	
Z axis travel	950 / 1950 / 3220 / 4170 / 5360 / 6165 mm	
Rapid traverse - X / Z	10 M / min.	
X / Z servo motor	X - Alpha 12is (3.6HP) Z - Alpha 22is (5.4HP)	
Tailstock Quill dia.	150 mm dia.	
Tailstock / travel x Taper	220 mm x MT#5	
Machine net weight	8150 / 9200 / 10800 / 11800 / 13200 / 14500 kg	
Cf axis (option)	186 mm : Fanuc α12is, 11 rpm, 940 Nm ; 258 mm : Fanuc α22is, 11 rpm, 1530 Nm ; 375 mm : Fanuc α22is, 8 rpm, 1910 Nm	

MORTON CNC FLAT BED LATHE - Bed Width 346 mm



FCH-1740ENC

SPECIFICATIONS

	FCH-1740ENC	FCH-1760ENC	FCH-2140ENC	FCH-2160ENC
Swing over bed	430 mm		530 mm	
Swing over cross slide	185 mm		285 mm	
Between centers	1067 mm	1667 mm	1067 mm	1667 mm
Width of bed		346 mm		
Spindle bore		78 mm		
Spindle nose		A2 - 6		
Spindle speed		3 ~ 1650 rpm		
Spindle motor		10 HP		
Travel of X axis		240 mm		
Travel of Z axis	910 mm	1510 mm	910 mm	1510 mm
Rapid traverse (X / Z axis)		8 m / min		
Travel of tailstock quill		185 mm		
Diameter of tailstock quill		60 mm		
Taper of tailstock quill		MT 4		
Weight of machine	2700 kgs	3100 kgs	2800 kgs	3200 kgs

MORTON CNC FLAT BED LATHE - Bed width 400 mm



FCH-2600CNC / B

SPECIFICATIONS

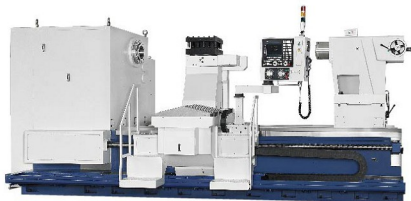
	FCH-2600CNC / B
Swing over bed	660 mm
Swing over cross slide	370 mm
Between centers	1350 / 2100 mm
Spindle motor	15 HP (11 Kw)
Spindle bore / nose / speed	90 or 104 mm / A2 - 8 / 3 ~ 1600 rpm
Turret	V8 - OD - 25 x 25 mm, ID - 40 mm dia.
X axis travel	280 mm
Z axis travel	1260 / 2060 mm
Tailstock - Quill dia.	112 mm
Tailstock - travel x Taper	150 mm x MT#5
Machine net weight	4200 / 5200 kgs


FEL-6300ENC / B
SPECIFICATIONS

	FEL-4700ENC / B	FEL-5500ENC / B	FEL-6300ENC / B
Swing over bed	1190 mm	1385 mm	1584 mm
Swing over cross - slide	740 mm	940 mm	1140 mm
Bed width		800 mm (32")	
Between centers		2000 ~ 10000 mm	
Spindle bore / nose	230 mm / A2 - 15 (260 mm - A2 - 15, 310 / 360 mm - A2 - 20, 535 mm - A2 - 28)		
Spindle speeds (4 steps)	230 / 260 mm - 4 - 600 rpm / 310 / 360 mm - 3 - 400 rpm / 535 mm - 2 - 300 rpm		
Max. X / Z travel		X - 800 mm / Z - 1750 - 9750 mm	
Rapid feed		X / Z - 5 m / min	
Tailstock - dia / travel / taper		Ø200 / 300 mm / MT#7, (opt. rotary quill - Ø290 mm dia)	
Spindle motor		30 kw (opt. 37 kw)	

MORTON CNC FLAT BED LATHE-Bed width 1345 mm/1575 mm with auxiliary guideway

Giant Heavy Duty


FEL-7900ENC
SPECIFICATIONS

	FEL-7100ENC	FEL-7900ENC	FEL-8800ENC	FEL-9800ENC
Swing over bed	1800 mm	2000 mm	2250 mm	2500 mm
Swing over cross slide - half length	1325 mm	1510 mm	1745 mm	1985 mm
Swing over cross slide - full length (OPT)	1240 mm	1440 mm	1690 mm	1940 mm
Between centers		3000 ~ 12000 mm (Per 1000 mm increment)		
Spindle motor		45 Kw (75Kw) + inverter		
Spindle bore / nose		210 mm / A2 - 15 or A2 - 20		
Spindle speeds		5 ~ 460 rpm		
Turret		H4 - OD / 50 x 50 mm, V8 - OD / 32 x 32 mm / ID - 50 mm		
X axis - Half / full cross slide travel		720 / 1250 mm		
Z axis - Half / full travel		3000 ~ 12000 / 2600 ~ 11600 mm		
Rapid traverse - X / Z		5 / 5 M / min.		
Tailstock Quill dia.		290 mm Rotary quill		
Tailstock travel x Taper		300 mm x MT#7		

FREJOTH CNC FLAT BED LATHE 2 AXES DRIVEN BY AC MOTOR INVERTER



FEL-3300ENC / B

SPECIFICATIONS

	FEL-2300ENC	FEL-2600ENC	FEL-3000ENC	FEL-2600ENC / B	FEL-3000ENC / B	FEL-3300ENC / B
Swing over bed	600 mm	670 mm	770 mm	670 mm	770 mm	840 mm
Swing over cross slide	310 mm	380 mm	480 mm	380 mm	480 mm	550 mm
Bed Width		400 mm			460 mm	
Between centers	1500 / 2000 / 3000 mm			1500 / 2000 / 3000 / 4000 / 5000 mm		
Spindle bore / nose	80 mm / A1 - 8 or D1 - 8 (opt. 104 mm / A2 - 11)			104 mm / A2 - 11 (156 mm / A2 - 11, 230 mm / A2 - 15)		
Spindle speeds (4 steps)	80 mm bore - 16 - 1500 rpm, 104 mm bore - 13 - 1200 rpm			At 104 mm bore-13-1200 rpm, at 156 mm bore-11-800 rpm, at 230 mm bore-4-800 rpm		
Max. X / Z travels	X - 350 mm, Z - 1300 / 1800 / 2800 mm			X - 410 mm Z - 1300 / 1800 / 2800 / 3800 / 4800 mm		
Rapid feed	X - 5 m / min. Z - 5 m / min			X - axis - 5 m / min. Z - axis - 5 m / min		
Tailstock - dia / travel / taper	95 mm / 230 mm / MT#5			105 mm / 230 mm / MT#5		
Spindle motor	15 HP (opt. 20 HP)			15 HP (opt. 20 HP)		

FREJOTH CNC OIL COUNTRY LATHE



FEL-3800ENC / B

SPECIFICATIONS

	FEL-3800ENC / B	FEL-4200ENC / B
Swing over bed	960 mm	1060 mm
Swing over cross slide	530 mm	630 mm
Bed width	560 mm (22")	
Between centers	1500 ~ 6000 mm (60" ~ 240")	
Spindle bore / nose	156 mm / A2 - 11, (230 / 260 mm - A2 - 15, 310 / 360 mm - A2 - 20)	
Spindle speeds (4 steps)	at bore - 156 mm - 6 - 800 rpm / 230 / 260 mm - 4 - 600 rpm / 310 / 360 mm - 3 - 400 rpm	
Max. X / Z travels	X - 600 mm / Z - 1250 - 5750 mm	
Rapid feed	X / Z - 5 m / min	
Tailstock - dia / travel / taper	125 / 300 mm MT#6	
Spindle motor	22 kw (opt. 30 kw)	

FREJO TH FLAT BED CNC LATHES - WITH GEAR BOX SPINDLE



FEL-1840ENC



FEL-2160ENC

SPECIFICATIONS

	FEL-1840ENC	FEL-1860ENC	FEL-2140ENC	FEL-2160ENC	FEL-2180ENC	FEL-21120ENC
No. of control axis	2 AXIS					
Swing over bed	Ø460 mm		Ø533 mm			
Width of bed	Ø305 mm		Ø345 mm			
Max. turning dia.	Ø260 mm		Ø305 mm			
Max. turning length (4 way tool post)	750 mm	1250 mm	620 mm	1120 mm	1620 mm	2620 mm
Max. turning length (Hyd. P8 turret)	600 mm	1100 mm	530 mm	1030 mm	1530 mm	2530 mm
Spindle speed	2 step - L / 27 ~ 830 rpm, H / 831 ~ 2500 rpm			4 step - inf. Variable 20 ~ 2000 rpm		
Spindle motor	7.5 / 11kw			AC servo 9 / 11 kw		
Spindle bore / nose / taper	69 mm A2 - 6 / 1 / 20		Ø80 mm / D1 - 8 (A2 - 8) 1 / 19.18			
Bar capacity	65 mm (60 mm)		Ø68 mm			
Travel - X / Z axis	230 mm / 850 mm	230 mm / 1350 mm	300 mm / 720 mm	300 mm / 1220 mm	300 mm / 1720 mm	300 mm / 2720 mm
Servo motor - X / Z axis	1.2 kw / 1.2 kw		1.8 kw / 2.5 kw			
Rapid feed - X / Z axis	7.5 / 10 m / min					
Type of turret	4 way tool post (Hydraulic P8)					
Tool size	OD - 25 x 25 mm I.D - 20 mm		Ø25 mm (Ø25 mm / Ø32 mm)			
Tailstock - Quill dia. / travel / taper	Ø68 mm x 153 mm / MT#4		Ø85 mm / 178 mm / MT#5			
Net weight	2350 kgs	2600 kgs	4050 kgs	4400 kgs	4800 kgs	5300 kgs

FREJO TH FLAT BED CNC LATHES WITH BELT DRIVEN SPINDLE



FEL-22120ENC

SPECIFICATIONS

	FEL-2240ENC	FEL-2260ENC	FEL-2280ENC	FEL-22120ENC
No. of control axis	2 AXIS			
Swing over bed	Ø550 mm			
Width of bed	Ø345 mm			
Max. turning dia.	Ø325 mm			
Max. turning length (4 way tool post)	680 mm	1180 mm	1680 mm	2680 mm
Max. turning length (Hyd. P8 turret)	590 mm	1090 mm	1590 mm	2590 mm
Distance between centers	870 mm	1370 mm	1870 mm	2870 mm
Spindle speed	Inf. Variable 35 ~ 3500 rpm			
Spindle motor	AC servo - 9 / 11 kw			
Spindle bore	Ø91 mm			
Spindle nose / taper	A2 - 8 / 1 / 20			
Bar capacity	Ø78 mm			
Travel - X axis	300 mm			
Travel - Z axis	780 mm	1280 mm	1780 mm	2780 mm
Servo motor - X / Z axis	1.8 kw / 2.5 kw			
Rapid feed - X / Z axis	7.5 / 10 m / min			
Type of turret	4 way tool post (Hyd. VDI V8, Hydraulic P8)			
Tool size	Ø25 mm / Ø40 mm / Ø32 mm			
Tailstock - Quill dia. / travel / taper	Ø85 mm / 178 mm / MT#5			
Net weight	4050 kgs	4400 kgs	4800 kgs	5300 kgs

FREJO TH FLAT BED CNC LATHES - WITH GEAR BOX SPINDLE



FEL-1440ENC



FEL-1660ENC

SPECIFICATIONS

	FEL-1440ENC	FEL-1640ENC	FEL-1660ENC
No. of control axis		2 AXIS	
Swing over bed	Ø360 mm		Ø410 mm
Width of bed		260 mm	
Max. turning dia. (4 way tool post)	Ø170 mm		Ø220 mm
Max. turning dia. (hyd. P8 turret)	Ø160 mm		Ø210 mm
Max. turning length (4 way tool post)		750 mm	1260 mm
Max. turning length (hyd. P8 turret)		630 mm	1140 mm
Spindle speed (2 steps)		L : 25 ~ 480 rpm H : 481 ~ 3000 rpm	
Spindle motor		AC servo 5.5 / 7.5 kw	
Spindle bore / nose / taper		Ø52.5 mm / D1 - 6 (A1 - 6) / MT#6	
Bar capacity		Ø40 mm	
Travel - X / Z axis	205 mm / 815 mm		205 mm / 1325 mm
Servo motor - X / Z axis		0.75 kw / 1.2 kw	
Rapid feed - X / Z axis		7.5 / 10 m / min	
Type of turret		4 way tool post (Electric H4, Hydraulic P8)	
Tool size		Ø20 mm / Ø20 mm	
Tailstock - quill dia. / travel / taper		Ø58 mm / 140 mm / MT#4	
Net weight	2100 kgs	2150 kgs	2250 kgs

FREJO TH FLAT BED CNC LATHES - WITH BELT DRIVEN SPINDLE



FEL-1640ENC / B



FEL-1660ENC / B

SPECIFICATIONS

	FEL-1440ENC / B	FEL-1640ENC / B	FEL-1660ENC / B
No. of control axis		2 AXIS	
Swing over bed	Ø360 mm		Ø410 mm
Width of bed		Ø260 mm	
Max. turning dia. (4 way tool post)	Ø170 mm		Ø220 mm
Max. turning dia. (hyd. P8 turret)	Ø160 mm		Ø210 mm
Max. turning length (4 way tool post)		700 mm	1210 mm
Max. turning length (hyd. P8 turret)		680 mm	1190 mm
Spindle speed		40 ~ 5000 rpm	
Spindle motor		A.C. servo - 5.5 / 7.5 (7.5 / 11) kw	
Spindle bore / nose / taper		Ø46 mm / A2 - 5 / 1 / 19.18	
Bar capacity		Ø36 mm	
Travel - X / Z axis (4 way tool post)		205 mm / 865 mm	
Travel - X / Z axis (hyd. P8 turret)	167 mm / 710 mm	178 mm / 710 mm	178 mm / 1220 mm
Servo motor - X / Z axis		0.75 kw / 1.2 kw	
Rapid feed - X / Z axis		7.5 / 10 m / min	
Type of turret		4 way tool post (Electric H4, Hydraulic P8)	
Tool size		Ø20 mm / Ø20 mm	
Tailstock - quill dia. / travel / taper		Ø58 mm / 140 mm / MT#4	
Net weight	2100 kgs	2150 kgs	2250 kgs



ALT-400M



SPECIFICATIONS

	ALT-400M	ALT-520M
Bar capacity	52 mm	78 mm
Swing over bed / cross slide	400 / 320 mm	520 / 400 mm
Center distance	645 mm	845 mm
Max. turning dia / length	215 / 530 mm	275 / 710 mm
Spindle nose and chuck size	A2 - 6 - 8"	A2 - 8 - 10"
Front bearing diameter	100 mm	130 mm
Live turret spec	2 - 20 mm	
Max. cutting length	570 / 1200 mm	539 / 1169 mm
Tool holder size OD SQ / ID dia	OD-SQ 25 mm / ID-dia-40 mm	
Turret station/no. of live tools	12 / 12	12 / 12
Milling motor power / torque/speed	3.7 / 5.5 kw-35 N/m 10 - 5000 rpm	
Exchange time - second	0.6 (next tools) / 0.8 oppsite	
X / Z axis travel	190 / 530 mm	220 / 710 mm
X / Z rapid feed rate	20 / 24 m/min	20 / 20 m/min
Spindle motor	7.5 / 11 kw	15 / 18.5 kw
X / Z - axis motor	1.5 / 3.0 kw	1.5 / 3.0 kw
Tailstock travel	435 mm	580 mm
Tailstock - quill dia. / travel / taper	90 / 100 / MT5	110 / 150 / MT5
Net weight	4300 kgs	5000 kgs

FREJO TH CNC SLANT BED LATHE - LINEAR GUIDEWAY



ALT-350



SPECIFICATIONS

	ALT-350	ALT-400	ALT-520
Bar capacity	45 mm	52 mm	78 mm
Swing over bed / cross slide	350 / 280 mm	400 / 320 mm	520 / 400 mm
Center distance	455 mm	645 mm	845 mm
Max. turning dia / length	240 / 350 mm	320 / 530 mm	400 / 710 mm
Spindle nose and chuck size	A2 - 5 - 6"	A2 - 6 - 8"	A2 - 8 - 10"
Front bearing diameter	80 mm	100 mm	130 mm
Turret type / servo motor	V - 12 / 0.75 kw	V - 12 / 1.2 kw	V - 10 / 1.2 kw
Tool holder size OD (SQ) / ID dia	20 / 32 mm	25 / 40 mm	25 / 50 mm
X / Z axis travel	140 / 350 mm	180 / 530 mm	220 / 710 mm
X / Z rapid feed rate	24 / 30 m/min	20 / 24 m/min	20 / 20 m/min
Spindle motor	5.5 / 7.5 kw	7.5 / 11 kw	15 / 18.5 kw
X / Z - axis motor	1.2 / 1.8 kw	1.2 / 2.5 kw	1.2 / 2.5 kw
Tailstock travel	290 mm	435 mm	580 mm
Tailstock - quill dia. / travel / taper	75 / 100 / MT4	90 / 100 / MT5	110 / 150 / MT5
Net weight	3500 kgs	4300 kgs	5000 kgs



ASL-52

ASL-80 / 1100

SPECIFICATIONS

	ASL-52	ASL-80 / 580	ASL-80 / 1100
Swing over bed		590 mm	
Max. turning diameter		450 mm	
Swing over carriage		380 mm	
Between centers	580 mm		1180 mm
Spindle bore / nose	62 mm / A2 - 6		91 mm / A2 - 8
Bar capacity	52 mm		80 mm
Spindle speed	3200 rpm		2200 rpm
Hydraulic chuck size	8"	10"	10" / 12"
Tool station (Random)	Vertical V - 10 station Servo turret - OD tool / 25 x 25 mm, ID tools - 40 mm dia.		
X axis travel		245 mm (235 + 10)	
Z axis travel	520 mm		1100 mm
Rapid feed X / Z	X - 16 M / min. Z - 20 M / min.		
Main spindle power	25 HP		25 HP
X / Z axis motor	2.4 / 3.4 HP		2.4 / 3.4 HP
Tailstock - stroke	480 mm		1000 mm
Tailstock - Dia. x Taper x Travel	75 mm dia. x MT# 4 x 100 mm		112 mm dia. x MT# 4 x 100 mm
Net weight	3450 kgs	3500 kgs	5500 kgs



ASL-90 / 1100

ASL-115 / 2000

SPECIFICATIONS

	ASL-90 / 600	ASL-90 / 1100	ASL-115 / 2000
Swing over bed		550 mm	
Max. turning diameter		470 mm (Driven tool system - 300 mm)	
Swing over carriage		380 mm	
Max. cutting length	580 mm	1080 mm	2060 mm (1990 mm)
Spindle bore / nose	101 mm / A2 - 8		130 mm / A2 - 11
Bar capacity		90 mm	90 mm / 115 mm
Spindle speed		25 ~ 2000 rpm	20 ~ 2000 rpm
Hydraulic chuck size		12"	12" / 15"
Tool station (Random)	V10 or V12 Driven tool system - OD tool - 25 mm x 25 mm, ID tool - 40 mm dia.		
X axis		240 mm (Driven tool system - 265 mm)	
Z axis	590 mm	1090 mm	2070 / 2000 mm
Rapid feed X / Z		20 M / min. 20 M / min.	
Main spindle power		Fanuc - aP40i, 30 HP (22 Kw)	
X / Z axis motor		X - 3.6 HP (2.7 Kw) Z - 5.4 HP (4 Kw)	
Tailstock - stroke	460 mm	960 mm	1960 mm
Tailstock - Dia. x Taper x Travel		112 mm dia. x MT# 4 x 100 mm	
Net weight	5500 kgs	6500 kgs	8950 kgs

FREJO TH CNC SLANT BED LATHE - 2 AXES BOX WAY



ASC-52



SPECIFICATIONS

	ASC-52	ASC-65
Bar capacity	52 mm (2.04")	65 mm (2.56")
Max. turning diameter	300 mm for H10, 340 mm for H12, 250 mm for V12	
Swing over bed	630 mm	
Max. working length	580 mm for H10, 600 mm for H12, 590 mm for V12	
Spindle motor	9 / 11 kw (opt. 11 / 15 kw)	11 / 15 kw (opt. 15 / 18.5 kw)
Spindle speeds	45 ~ 4500 rpm	35 ~ 3500 rpm
Spindle bore / power chuck size	A2 - 6 / 210 mm	A2 - 6 / 254 mm
Travel - X / Z axis	190 / 590 mm for H10, 207 / 610 mm for H12, 220 / 600 mm for V12	
X / Z - servo motor	1.6 / 3 kw	
X / Z - rapid feed	15 / 20 m / min	
Turret type	H10, H12 or V12 (VDI 30)	
Tool shank size	H10, 25 mm / H12, 20 mm / V12, 20 mm	
Tailstock - quill dia. / travel / taper	programmable 85 / 120 / MT4	
Net weight	5200 kgs	5500 kgs

FREJO TH GANG TYPE CNC LATHE



ACL-10



ACL-12

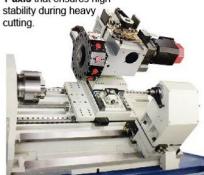
SPECIFICATIONS

	ACL-10	ACL-12
No. of control axis	2 AXIS	
Machine type	Box way	
Swing over bed	Ø320 mm	
Standard turning dia.	Ø150 mm	
Standard turning length	100 mm	
Spindle speed	80 ~ 4000 rpm	60 ~ 3000 rpm
Spindle motor	15 HP	
Spindle bore / nose	Ø55 mm / A2 - 5	Ø75 mm / A2 - 6
Bar capacity	Ø45 mm	Ø65 mm
Travel - X / Z axis	480 mm / 250 mm	
Servo motor - X / Z axis	1.2 kw / 1.2 kw	
Rapid feed - X / Z axis	10 / 8 m/min	
Type of turret	Gang bed fixed on cross slide	
Tool size	Ø20 mm / Ø32 mm	
Net weight	2100 kgs	2200 kgs

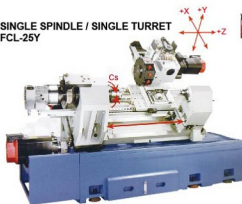


FCL-20TTT

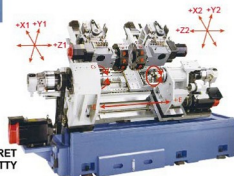
Roller linear guideways on Y axis that ensures high stability during heavy cutting.



SINGLE SPINDLE / SINGLE TURRET
FCL-25Y



TWIN SPINDLE / SINGLE TURRET
FCL-20TSY



TWIN SPINDLE / TWIN TURRET
FCL-20TTT

SPECIFICATIONS

	FCL-20Y/25Y/30Y single spindle/single turret	FCL-15TSY/20TSY/30TSY twin spindle/single turret	FCL-15TTY/20TTY/25TTY twin spindle/twin turret
No. of control axis	4 axis (X, Z, C, Y)	7 axis (X, Z, B, C1, C2, Y, TD)	11 axis (X1, X2, C1, B, Y1, TD1, X2, Z2, C2, Y2, TD2)
Machine type	Linear guide (X / Z axis)	Linear guide (X / Z axis), Boxway (B axis)	Linear guide (X / Z axis), Boxway (B axis)
Swing over bed	780 mm	780 mm	780 mm
Max. turning dia.	300 / 300 / 250 mm	300 / 300 / 250 mm	300 mm
Max. turning length	332 / 587 / 520 mm	231 / 500 / 470 mm	290 mm
Spindle nose	A2-6 / A2-6 / A2-8		
Spindle bore	61 / 77 / 90 mm		
Bar capacity	52 / 65 / 77 mm		
Spindle nose - main		A2-5 / A2-6 / A2-8	A2-5 / A2-6 / A2-6
Spindle bore - main		56 / 61 / 90 mm	56 / 61 / 77 mm
Bar capacity - main		45 / 51 / 77 mm	45 / 51 / 65 mm
Spindle nose - sub		A2-5 / A2-5 / A2-6	A2-5 / A2-5 / A2-6
Spindle bore - sub		56 / 56 / 61 mm	56 / 56 / 61 mm
Bar capacity - sub		45 / 45 / 51 mm	45 / 45 / 52 mm
Spindle motor	9/11, 11/15, 15/18 kw		
Spindle motor - main		5.5/7.5, 9/11, 11/15 kw	5.5/7.5, 9/11, 11/15 kw
Spindle motor - sub		5.5/7.5, 5.5/7.5, 7.5/11 kw	5.5/7.5, 5.5/7.5, 7.5/11 kw
Travel : X axis	180 / 180 150 mm	180 / 180 / 150 mm	
Travel : Z axis	410 / 685 / 610 mm	339 / 560 / 540 mm	
Travel : B axis		231 / 500 / 490 mm	520 / 500 / 465 mm
Travel : Y axis	40 / 40 / 60 (± mm)	40 / 40 / 60 (±mm)	
Travel : X1, X2 axis			150 ~ 180 mm
Travel : Z1, Z2 axis			334 mm
Travel : Y1, Y2 axis			40 (±mm)
Rapid (X, Z axis)	30 m/min	30 m/min	
Rapid (B axis)		20 m/min	20 m/min
Rapid (Y axis)	7 m/min	7 m/min	
Rapid (X1, X2, Z1, Z2 axis)			20 m/min
Rapid (Y1, Y2 axis)			7 m/min
Turret	VDI 30 / 30 / 40	VDI 30 / 30 / 40	VDI 30*2 sets
Turret station	12 tools	12 tools	12 tools
Net weight	5500 / 6320 / 7000 kgs	5480 / 6640 / 6830 kgs	7670 / 7800 / 8000 kgs

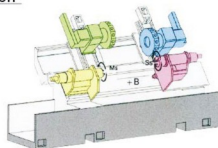
FCL-15TT/20TT/25TT (twin spindle, twin turret)
FCL-15TS/20TS/25TS (twin spindle, single turret)



FCL-20TS



FCL-20TT



SPECIFICATIONS

	FCL-15TT	FCL-20TT	FCL-25TT	FCL-15TS	FCL-20TS	FCL-25TS
No. of control axis (axis)	5,opt.7(c axis)	5,opt.7(c axis)	5,opt.7(c axis)	3,opt.5(c axis)	3,opt.5(c axis)	3,opt.5(c axis)
Machine type	Linear way			Linear way		
Swing over bed	mm 620	620	620	600	630	650
Max. turning diameter	mm 440	440	440	250	490	470
Max. working length	mm 310	290	270	260	500	470
Spindle speed (main, sub)	rpm 10-6000, 10-6000	10-4200, 10-6000	10-3500, 10-4200	10-6000, 10-6000	10-4200, 10-6000	10-3500, 10-4200
Spindle motor (main, sub)	kw 5.5/7.5, 5.5/7.5	9/11.5, 5.5/7.5	11/15, 7.5/11	5.5/7.5, 5.5/7.5	9/11.5, 5.5/7.5	11/15, 7.5/11
Spindle bore / nose (main, sub) mm	dia.56(A2-5) /56(A2-5)	dia.61(A2-6) /56(A2-5)	dia.77(A2-6) /61(A2-6)	dia.56(A2-5) /56(A2-5)	dia.61(A2-6) /56(A2-5)	dia.90(A2-8) /61(A2-6)
Bar capacity (main, sub)	mm dia.45/45	dia.52/45	dia.65/52	dia.45/45	dia.52/45	dia.77/52
Travel X1 / X2 axes	mm 245	245	245	-	-	-
Travel Z1 / Z2 axes	mm 342	342	342	-	-	-
Travel X / Z / B axes	mm -	-	-	165/310/260	280/560/500	280/540/470
X1.X2 / Z1.Z2 / B axes motor	kw 1.6x2/1.6x2/1.6	1.6x2/1.6x2/1.6	3x2/1.6x2/1.6	-	-	-
X / Z / B axes motor	kw -	-	-	1.6/1.6/1.6	1.6/1.6/1.6	3/3/1.6
X / Z / B axis rapid feed	m/min -	-	-	30/30/20	30/30/20	30/30/20
X1.X2 / Z1.Z2 / B axis rapid feed	m/min 20	20	20	-	-	-
Turret type	Servo-VDI30-12T			Hyd.LS-200-12T	Hyd.LS-240-12T (opt.Servo type)	
Tool size	mm 20x20	20x20	20x20	20x20	20x20	25x25
Net weight	kgs 7160	7300	7400	5280	6440	6630

FREJOTH CNC SLANT BED LATHE - 2 AXIS BOX WAY



ATC-135

SPECIFICATIONS

	ATC-35	ATC-40	ATC-45	ATC-50
Bar capacity	89.opt.110.116 mm	89.opt.110.116.160 mm	opt.115.135.205 mm	115.opt.135.205 mm
Max. turning diameter	500 mm	710 mm	850 mm	1020 mm
Swing over bed	660 mm	850 mm	970 mm	1100 mm
Max. working length	820 / 1580 / 2315 / 3100 mm	820 / 1580 / 2315 / 3100 mm	1118 / 1700 / 2200 / 3200 mm	2280 / 3280 / 4280 / 5280 mm
Spindle motor	22 / 26 kw	22 / 26 kw	30 / 37 kw	37 / 45 kw
Spindle speed	2500 / 625 rpm	2500 / 550 rpm	2 ~ 1500 rpm (3 stages)	2 ~ 1200 rpm (4 stages)
Spindle bore / power chuck size	105 mm / 12 inch	105 mm / 12 inch	160 mm / opt.18.24.32 inch	160 mm / opt.18.24.32 inch
Travel X axes	250 + 25 mm	355 + 25 mm	425 + 25 mm	510 + 25 mm
Travel Z axes	885 / 1645 / 2250 / 3165 mm	885 / 1645 / 2250 / 3165 mm	1250 / 1750 / 2250 / 3250 mm	2200 / 3200 / 4200 / 5200 mm
X / Z servo motor	5.4 / 5.4 kw	5.4 / 5.4 kw	5.4 / 9.4 kw	5.4 / 9.4 kw
X / Z - Rapid feed	12 / 15 m / min	12 / 15 m / min	12 / 16 m / min	12 / 15 m / min
Turret type	Vertical 10 (opt.12) hydraulic driven system		Vertical 12 hydraulic driven system	
Tool size	32 mm	32 mm	32 mm	32 mm
Tailstock travel	780 / 1540 / 2250 / 3060 mm	780 / 1540 / 2250 / 3060 mm	850 / 1450 / 1950 / 2950 mm	2000 / 3000 / 4000 / 5000 mm
Tailstock - quill dia. / travel	110 / 100 mm	110(opt.160 mm) / 100 mm	200 mm / 200 mm	200 mm / 200 mm
Tailstock taper	MT5	MT5	MT6	MT6
Net weight	10030 / 11300 / 13700 / 16300 kg	12500 / 14100 / 15600 / 17900 kg	14200 / 14950 / 15700 / 18400 kg	18000 / 23000 / 27000 / 32000 kg

FREJOTH CNC SLANT BED LATHE - LINEAR GUIDEWAY



FCL-30



SPECIFICATIONS

	FCL-20	FCL-25	FCL-30
Bar capacity	52 mm	65 mm	77 mm
Swing over bed	480 mm	600 mm	630 mm
Working length	462 / 700 / 1000 mm	430 / 690 / 1000 mm	700 / 1000 mm
Max. turning dia	280 mm	300 mm	442 mm
Spindle bore and chuck size	A2-6 8 inch	A2-6 10 inch	A2-8 10 inch.opt.12inch
Turret type	hydraulic 8 direct	hydraulic 12 direct	
Tool holder size OD (SQ) / ID dia	25 x 25 mm / 32 mm	25 x 25 mm / 40 mm	25 x 25 mm / 40 mm
X / Z axis travel	X : 142 mm / Z : 475 / 700 / 1000 mm	X : 180 mm / Z : 460 / 700 / 1000 mm	X : 250 mm / Z : 700 / 1000 mm
X / Z rapid feed rate	30 m / min	30 m / min	30 m / min
Spindle motor	9 / 11 kw	11 / 15 kw	15 / 18.5 kw
X / Z axis motor	1.8 kw / 1.6 kw	1.6 kw / 1.6 kw	3 kw / 3 kw
Tailstock travel	395 / 650 / 1000 mm	390 / 650 / 1000 mm	650 / 1000 mm
Tailstock - quill dia. / travel / taper	75 mm / 80 mm / MT4	75 mm / 80 mm / MT4	90 mm / 100 mm / MT5
Net weight	4550 / 6120 / 7000 kgs	5050 / 6120 / 7000 kgs	6230 / 7000 kgs



ATL-1118CNC

SPECIFICATIONS

	ATL-1118CNC
Maximum swing	Ø380 mm
Maximum turning diameter	Ø150 mm (Ø6")
Distance between centers	457 mm
Bar stock diameter (5C collet)	Ø27 mm (Ø1 - 1/16")
Hole through spindle	Ø31.75 mm (Ø1 - 1/4")
CNC controller	FANUC (standard)
Spindle speeds (variable)	50 ~ 4000 rpm (3 HP) / 50 ~ 6000 rpm (5 HP) - OPT.
Spindle nose I.D / O.D.	5C (10") / 4" taper
Chuck Diameter	Ø150 mm (Ø6")
Maximum X axis travel	220 mm
Maximum Z axis travel	340 mm
Rapid traverse	20 m / min
Inverter spindle motor	3 HP / 5 HP - OPT.
X, Z axis servo motor	X : Ø2 Z : Ø2
Coolant pump	1/4 HP
Tallstock spindle taper	MT No.2
Tallstock spindle travel	95 mm
Machine dimensions (L x W x H)	2050 x 1000 x 1650 mm (81" x 40" x 65")
Machine weight	1200 kgs (2640 lbs)

FREJO TH HIGH - SPEED AND HIGH PRECISION CNC LATHE



AT-A70CNC



AJ-27CNC

SPECIFICATIONS

AT-A70CNC			AJ-27CNC			
Capacity	Swing over bed dia	270 mm	Capacity	Swing over bed	230 mm	
	Swing over cross slide dia	130 mm		Collet	Max diameter (5C Collet)	27 mm
	Collet	5C / YB 32			Collet type	5C
	Max bar diameter	27 / 32 mm			I.D.	27 mm
Headstock	Spindle hole	31.75 mm (5C) / 39 mm (YB 32)	Bore			Square
	Max speed	4000 / 6000 r.p.m		Hexagon		22 mm
	Max rating	2.2 kw (3HP) / 3.7 kw (5HP)		Spindle	Spindle speed	50 - 4000 r.p.m
	Coolant pump	0.18 kw (1/4HP)	Hole through spindle		31.75 mm	
Axis	X - Axis travel	400 mm	Travel of tool slide		X - Axis travel	100 mm
	Z - Axis travel	200 mm			Z - Axis travel	100 mm
	X Axis ball screw dia x pitch	20 x 5 mm	Motor	Main motor	1.5 kw (2HP)	
	Z Axis ball screw dia x pitch	20 x 5 mm		Feed motor (X / Z)	0.4 KW	
Machine size	Machine size (L x W x H)	227 x 88 x 176 cm	Machine dimensions		1120 x 620 x 1580	
	Machine weight	920 kg	Machine weight		500 kg	
			Height of machine		1580 mm	
			Tool		12 mm	



ATT40

SPECIFICATIONS

	ATT40	ATT60	ATT85	ATT100	ATT120
Max. weight of work with steadies	360 / 1200 kgs	2000 / 4000 kgs	4000 / 6000 kgs	7000 / 8000 kgs	12000 kgs
Max. weight of work center to center	360 kgs / 600 kgs	1200 / 3000 kgs	1500 / 4000 kgs	1800 / 6000 kgs	2400 / 6000 kgs
Min / Max. grinding diameter	400 mm	600 mm	850 mm	1000 mm	200 ~ 1200 mm
Max. diameter of crown grinding	5 mm diameter			10 mm diameter	
Distance between centers	1 ~ 3 meters	2 ~ 6 meters	2 ~ 6 meters	2 ~ 6 meters	2 ~ 6 meters
Headstock	power of workdrive work speeds	2.25 or 3.75 kw 15 ~ 150 rpm	7.5 or 11.25 kw 8 ~ 80 rpm	11.25 or 15 kw 6 ~ 60 rpm	15 kw 5 ~ 50 rpm
Wheel head	power of wheel drive spindle speed traverse X axis Max. rapid feed rate grinding wheel dimension micro feed	7.5 kw 600 ~ 1500 rpm 290 mm 1000 mm/min 510 x 50 x 152.4 mm	22.5 kw 500 ~ 1400 rpm 315 mm 1500 mm/min 760 x 75 x 304.8 mm	30 kw 400 ~ 1200 rpm 510 mm 1500 mm/min 915 x 100 x 304.8 mm or 915 x 100 x 508 mm	30 kw 400 ~ 1200 rpm 620 mm 0.001 mm / p
Machine table	spindle lubrication system slide traverse Z axis feed rate of Z axis	combination of hydrodynamic & hydrostatic 1200 ~ 3200 mm 10 ~ 3000 mm/min	2200 ~ 6200 mm 10 ~ 4500 mm/min	2200 ~ 6200 mm 10 ~ 4500 mm/min	10 ~ 4500 mm/min
Tailstock	quill travel moving method	50 mm manual	100 mm air floating	150 mm air floating	180 mm air floating
Net weight	5.6 ~ 10.6 ton	10.3 ~ 19 ton	12 ~ 26 ton	12 ~ 26 ton	21 ~ 38 ton

Remark weight of work piece standard roller / heavy duty roller weight

FREJOTH NC (PLC) EXTERNAL GRINDING MACHINES



APT100

SPECIFICATIONS

	APT40	APT60	APT85	APT100	APT120
Max. weight of work with steadies	600 / 1200 kgs	2000 / 4000 kgs	4000 / 6000 kgs	6000 kgs	10000 kgs
Max. weight of work center to center	360 / 600 kgs	1200 / 3000 kgs	1500 / 4000 kgs	3600 kgs	6000 kgs
Max. grinding diameter	400 mm dia	600 mm dia	850 mm dia	1000 mm dia	1200 mm dia
Distance between centers	1 ~ 3 meters	1 ~ 5 meters	2 ~ 6 meters	2 ~ 8 meters	2 ~ 8 meters
Headstock	power of work drive work speeds var. speed spindle taper	2.25 or 3.75 kw 15 ~ 150 rpm MT5	7.5 or 11.25 kw 8 ~ 80 rpm MT6	11.25 or 15 kw 6 ~ 60 rpm MT6	15 kw 6 ~ 60 rpm MT6
Wheel head	slide loading kg / length power of work drive work speeds var speed travel hand feed per graduation gliding wheel dimension long travel	50 kgs / 150 mm 7.5 kw 600 ~ 1500 rpm 290 mm ø2 mm (0.005) 510 x 50 x 152.4 mm	100 kgs / 150 mm 22.5 kw 500 ~ 1400 rpm 315 mm ø2 mm (0.005) APT60: 760 x 75 x 304.8 mm	200 kgs / 150 mm 30 kw 400 ~ 1200 rpm 510 mm ø2 mm (0.005) APT85: 915 x 100 x 304.8 mm	200 kgs / 150 mm 20 ~ 40 kw 500 ~ 1000 rpm 630 mm 2 mm (0.005) 1200 ~ 5200 mm
Machine table	table feed rate min auto traverse	10 ~ 3000 mm/min 30 mm	2200 ~ 5200 mm 30 mm	2200 ~ 6200 mm 30 mm	10 ~ 6000 mm/min 30 mm
Tailstock	quill travel / taper	50 mm / MT5	100 mm / MT6	150 mm / MT6	180 mm / MT6
Net weight	5.6 ~ 10.6 ton	8 ~ 17 ton	12 ~ 26 ton	12.5 ~ 26 ton	25 ton

FREJO TH EXTERNAL GRINDING MACHINE - CNC SERIES



AEG-1424CNC

SPECIFICATIONS

	AEG-1124CNC	AEG-1424CNC
Swing over table	270 mm	350 mm
Between centers	600 mm	600 mm
Max. workpiece weight	Center work : 60 kgs / workhead only - 20 kgs	
Wheel head & Feed		
Grinding wheel dimension	405 x 32.50 x 152.4 mm	
Wheel speed	1650 / 1850 rpm	
Max. wheel circumferential speed	2000 mm / min.	
Traverse length	250 mm	
Swing angle	±15 deg.	
Manual infeed	0.001 / 0.01 / 0.1 mm	
Table		
Table longitudinal	700 mm	
Table swivel angle	toward / away operator : 6 deg. / 9 deg.	
Table manual infeed	0.001 / 0.01 / 0.1 mm	
Workhead		
Work spindle speed	30 ~ 360 rpm	
Spindle taper	MT #4	
Spindle bore	25 mm diameter	
Tailstock	MT NO.4 -travel : 32 mm	
Wheel head infeed servo motor	1.5 kw	
Table infeed servo motor	1.5 kw	
Wheelhead spindle motor	3.75 kw (5.6 / 7.5 kw)	
Net weight	2200 kgs	2200 kgs

FREJO TH EXTERNAL GRINDING MACHINE - NC SERIES



AEG-1424NC

SPECIFICATIONS

	AEG-1122NC	AEG-1130NC	AEG-1422NC	AEG-1430NC
Swing over table		270 mm		350 mm
Between centers	600 mm	750 mm	600 mm	750 mm
Max. workpiece weight - center work		60 kgs		80 kgs
Wheel head & Feed				
Grinding wheel dimension	405 x 32.50 x 152.4 mm			
Wheel speed	1650 / 1850 rpm			
Traverse length	250 mm			
Manual infeed	By - MPG 0.001 / 0.01 / 0.1 mm			
Table				
Table swivel angle	toward/away-operator-6/9deg.	toward/away-operator-4/9deg.	toward/away-operator-6/9deg.	toward/away-operator-4/9deg.
Table auto feed - variable speed	50 ~ 4000 mm / min.			
Table handle feed	one revolution - 12.5 mm			
Workhead				
Swivel angle	Toward operator - 30 deg. Away from Operator - 90 deg.			
Work spindle speed	30 ~ 450 rpm			
Spindle taper	MT #4			
Spindle bore	25 mm diameter			
Tailstock	MT #4 - quill travel - 32 mm			
Wheelhead spindle motor	3.7 kw			
Workhead spindle motor	0.4 kw			
Hydraulic system pump	0.75 kw			
Net weight	2100 kgs	2400 kgs	2100 kgs	2400 kgs

FREJO TH BED TYPE HEAVY DUTY CNC MILLING MACHINES



S-1000D



S-1500D

SPECIFICATIONS

	S-1000D	S-1300D	S-1500D	S-1700D
Travels - X / Y / Z	1000 x 500 x 570 mm	1300 x 700 x 670 mm	1500 x 700 x 670 (900) mm	1700 x 700 x 670 (900) mm
Table size	1200 x 500 mm	1500 x 600 mm	1700 x 600 mm	1950 x 600 mm
Spindle nose to table top	100 ~ 670 mm	100 ~ 770 mm	100 ~ 770 (1000) mm	100 ~ 770 (1000) mm
Spindle center to column front	600 mm	700 mm	700 mm	700 mm
T - slot (width x no. x pitch)	16 x 5 x 86 mm	18 x 5 x 110 mm	18 x 5 x 110 mm	18 x 5 x 110 mm
Spindle speed		8000 rpm, (10000, 12000 rpm)		
Spindle taper	BT#40	BT#40	BT#40 (50)	BT#40 (50)
Spindle motor	7.5 / 11 kw	11 / 15 kw	11 / 15 kw	11 / 15 kw
ATC		Armless 20T (ARM type 24 T)		
Ball screw		40 x 10 mm, C5		
Net weight	4200 kgs	6000 kgs	6500 kgs	6800 kgs

FREJO TH BED TYPE HEAVY DUTY CNC MILLING MACHINES



S-2473



S-3092

SPECIFICATIONS

	S-1654	S-2063	S-2473	S-3092	S-30112
Travels - X / Y / Z	1000 x 508 x 500 mm	1270 x 635 x 600 mm	1500 x 700 x 700 mm	2000 x 840 x 610 (840) mm	2500 x 840 x 610 (840) mm
Table size	1370 x 400 mm	1600 x 500 mm	1854 x 610 mm	2330 x 760 mm	2840 x 760 mm
Table maximum loading	1000 kgs	1200 kgs	1500 kgs	1600 kgs	1700 kgs
Spindle nose to table top	100 ~ 700 mm	100 ~ 700 mm	100 ~ 800 mm	100 ~ 710 (940) mm	100 ~ 710 (940) mm
Spindle center to column front	530 mm	760 mm	760 mm	900 mm	900 mm
Spindle speeds			8000 rpm (10000 rpm)		
Spindle taper	BT#40	BT#40	BT#40, opt. BT#50	BT#40, opt. BT#50	BT#40, opt. BT#50
Spindle motor	10 HP	10 HP	15 HP	15 HP, opt. 20 HP	15 HP, opt. 20 HP
ATC			Armless No. 20T, Arm type No. 24T		
Ball screws (dia. x pitch)	Ø32 x Ø40 x Ø40 mm x 10P	Ø40 mm x 10P	Ø40 mm x 10P	Ø50 mm x 10P	Ø50 mm x 10P
	C5 Grade	C5 Grade	C5 Grade	C5 Grade	C5 Grade
Net weight	2400 kgs	3700 kgs	4100 kgs	8500 kgs	9000 kgs



FUH-1250CNC



FUH-1000CNC

SPECIFICATIONS

	FUH-1250CNC	FUH-1000CNC	FU-1000CNC
Travels - X / Y / Z	1250 x 500 x 470 mm	1000 x 500 x 430 mm	1000 x 350 x 430 mm
Table size	1800 x 400 mm	1500 x 360 mm	1500 x 360 mm
Table maximum loading	1000 kgs	800 kgs	800 kgs
Spindle center to table (H) with arbor / without arbor	50 ~ 480 / 360 ~ 790 mm	50 ~ 480 / 360 ~ 790 mm	50 ~ 480 / 360 ~ 790 mm
Spindle nose to table (V)	50 ~ 520 mm	50 ~ 480 mm	50 ~ 480 mm
T-slot (width x No. x L)	18 x 4 x 80 mm	18 x 4 x 80 mm	18 x 4 x 80 mm
Spindle speeds	L: 320 H: 2000 rpm	L: 320 H: 2000 rpm	L: 320 H: 2000 rpm
Spindle taper	NT#50 (BT#50)	NT#50 (BT#50)	NT#50 (BT#50)
Spindle motor	5.5 kw (7.5 kw)	5.5 kw (7.5 kw)	5.5 kw (7.5 kw)
Vertical rapid feed rate	2000 mm/min	2000 mm/min	2000 mm/min
Longitudinal & cross rapid rate	4000 mm/min	4000 mm/min	4000 mm/min
Vertical cutting feed rate	0-2000 mm/min	0-2000 mm/min	0-2000 mm/min
Longitudinal & cross feed rate	0-4000 mm/min	0-4000 mm/min	0-4000 mm/min
Net weight (approx)	3200 kgs	2900 kgs	2600 kgs

FREJO TH VERTICAL TURRET CNC MILLING MACHINE WITH 2/3 AXIS BALLSCREW



33HP-CNC



33VS-CNC

SPECIFICATIONS

	32/33VS-CNC	32/33VK-CNC	32/33HP-CNC	42/43SH-CNC	42/43VH-CNC	42/43FH-CNC
Table	229 x 1067 mm	254 x 1270 mm	254 x 1270 mm	254 x 1270 mm	254 x 1270 mm	254 x 1270 mm
Long. travel	575 mm	575 mm	575 mm	575 mm	5750 mm	575 mm
Cross travel	290 mm	360 mm	360 mm	360 mm	360 mm	360 mm
Vertical travel	405 mm	360 mm	360 mm	450 mm	450 mm	450 mm
Spindle motor	3 HP	3 HP	3 HP	5 HP	5 HP	5 HP
Spindle taper	R8 / NT30	R8 / NT30	R8 / NT30	NT40	NT40	NT40
Table T slots (number x size)	3 x 16 mm	3 x 16 mm	3 x 16 mm	3 x 16 mm	3 x 16 mm	3 x 16 mm
Spindle speed 60Hz	50 ~ 575 ~ 5000 rpm	50 ~ 575 ~ 5000 rpm	50 ~ 575 ~ 5000 rpm	75 ~ 3450 rpm	60 ~ 4200 rpm	50 ~ 575 ~ 5000 rpm
Spindle nose to table	60 ~ 445 mm	70 ~ 440 mm	60 ~ 420 mm	60 ~ 530 mm	60 ~ 530 mm	60 ~ 530 mm
Spindle centerline to column	150 ~ 480 mm	102 ~ 652 mm	127 ~ 660 mm	150 ~ 700 mm	150 ~ 700 mm	150 ~ 700 mm
Quill travel	120 mm	120 mm	120 mm	127 mm	127 mm	127 mm
Overarm travel	305 mm	550 mm	550 mm	550 mm	550 mm	550 mm
Way type	Dovetail way	Dovetail way	Square way	Square way	Square way	Square way

MORGON RADIAL DRILLING MACHINES - NC TYPE



FRD-1300NCH



Auto Drilling



Auto Chips Cut Off



Auto Peak Drilling (full pulling distance)



Random Tapping



Auto Opposite Drilling



Auto Peak Drilling (changeable pulling distance)



Semi-Auto Tapping

SPECIFICATIONS

	FRD-1300NCH	FRD-1600NCH
Drilling cap. - steel / cast iron	55 / 66 mm	55 / 70 mm
Tapping cap. - steel / cast iron	M50 / M60	M50 / M60
Boring cap. - steel / cast iron	100 / 160 mm	126 / 186 mm
Spindle stroke	250 mm	300 mm
Horizontal travel of headstock	915 mm	1310 mm
Column diameter	Ø300 mm	Ø336 mm
Base size	1800 x 800 x 170 mm	2350 x 920 x 220 mm
Table size	650 x 500 x 410 mm	800 x 540 x 400 mm
Spindle center to column surface	min. 330 mm/max. 1250 mm	min. 400 mm/max. 1600 mm
Spindle nose to base	min. 290 mm/max. 1210 mm	min. 260 mm/max. 1410 mm
Spindle speed (2 steps by inverter)	20 ~ 1500 rpm	20 ~ 1500 rpm
spindle taper	MT#5	MT#5
Spindle motor	5 HP (6P)	5 HP (6P)
Net weight	2150 kgs	3150 kgs

MORGON RADIAL DRILLING MACHINES - NC TYPE



FRD-2000NCH



Auto Drilling



Auto Chips Cut Off



Auto Peak Drilling (full pulling distance)



Random Tapping



Auto Opposite Drilling



Auto Peak Drilling (changeable pulling distance)



Semi-Auto Tapping

SPECIFICATIONS

	FRD-2000NCH	FRD-2500NCH
Drilling cap. - steel / cast iron	85 / 105 mm	85 / 105 mm
Tapping cap. - steel / cast iron	M65 / M75	M65 / M75
Boring cap. - steel / cast iron	150 / 200 mm	150 / 200 mm
Spindle stroke	400 mm	400 mm
Horizontal travel of headstock	1530 mm	2030 mm
Column diameter	480 mm	480 mm
Base size	2900 x 1200 x 250 mm	3400 x 1200 x 250 mm
Table size	800 x 540 x 400 equal*2pcs	800 x 540 x 400 equal*2pcs
Spindle center to column surface	min.420 mm/max. 2000 mm	min.420 mm/max. 2500 mm
Spindle nose to base	min.560 mm/max. 1800 mm	min.560 mm/max. 1800 mm
Spindle speed	2 steps by inverter 20 ~ 1300 rpm	
Spindle feed	DC motor 0.05 - 200 mm/min distance	
Spindle taper	MT#6	MT#6
Spindle motor	10HP (OPT.-15)	10HP (OPT.-15)
Net weight	7200 kgs	7800 kgs

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