



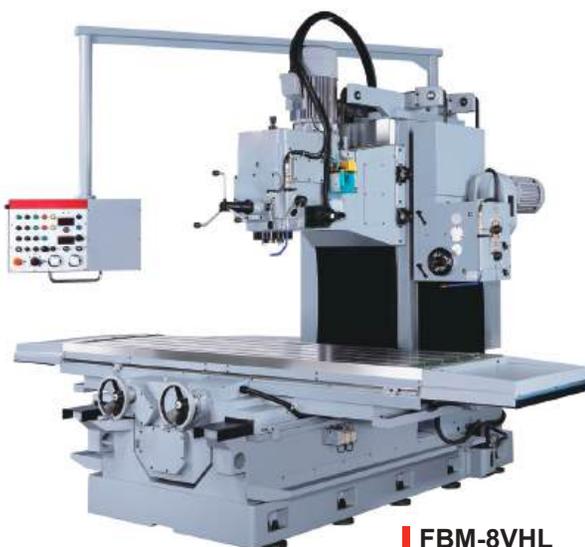
METAL WORKING GENERAL CATALOGUE



FERREJONER



FBM-5VHL



FBM-8VHL

Feature for FBM-5VHL

- The X,Y and W axis are equipped with ballscrew and AC servo motor.
- There are three functions: Rapid & Jog & Manual feed.
- The vertical spindle head, saddle and table are equipped with pneumatic clamp device.
- The horizontal spindle speed is 40-1450 RPM and with 12 steps speed changes.
- A counter weight balance permits the head to travel smoothly and to retain its accuracy stability.
- The X-axis travel could be extended up to 2000mm on request.



Feature for FBM-8VHL

- Full geared drive vertical spindle with 2-ranges variable speed, powerful and easy operating.
- Table feeding system equipped with precision ballscrews and powerful servo motor ensure the table movement smoothly.
- The XYZ axis equipped with pneumatic clamp device.



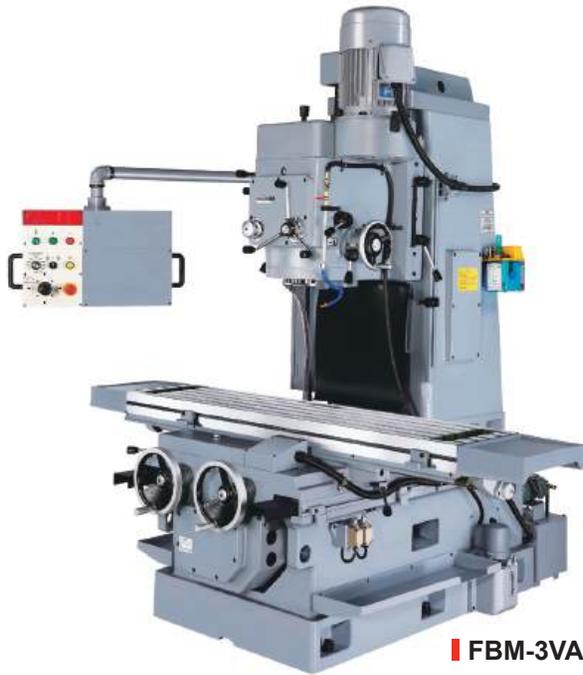
	unit	FBM-5VHL	FBM-8VHL
Capacity			
Table travel (Longitudinal)	mm	1500	2000
Table travel (Cross)	mm	600	800
Vertical spindle head travel(vertical)	mm	700	700
Horizontal spindle head travel(vertical)	mm	650	650
Vertical spindle nose to table top	mm	100~800	70~770
Vertical spindle center to column front	mm	550	800
Distance between Horizontal & vertical spindle center	mm	550	610
Table			
Table working area	mm	2200x500	2700x750
T slot (Wide x No. x Pitch)	mm	18x5x90	18x5x150
Table top to floor	mm	870	900
Spindel Head			
Spindle nose		ISO R297 No.50	
Vertical spindle speeds	rpm	45~1500(60Hz)	45~1500
Horizontal spindle speeds	rpm	40-1450(60HZ)	40~1450(60Hz)
No. of Vertical spindle speed	steps	12	Infinitely variable
No. of Horizontal spindle speed	steps	12	-
Feeds (vertical spindle)	mm/rev	0.05-0.2	12
Feed/Rapid			
Rapid traverse (Longitudinal & cross)	mm/min	3300(60HZ)	3100
W axis rapid traverse (Vertical)	mm/min	3800(60HZ)	3800
X,Y axis feed rate (Longitudinal & cross)	mm/min	-	28~1000
Z axis feed (Vertical spindle)	mm/min	-	3~300
W axis feed rate (Horizontal spindle)	mm/min	-	28~1000
Change of feeds	steps	-	Infinitely variable
Motors			
Vertical spindle	kW(HP)	-	AC 11(15)-4P
Horizontal spindle	kW(HP)	-	AC 5.5(7.5)-6P
Feed	kW(HP)	Servo Motor	-
	kW(HP)	X & Y axis: 3.5(4.7)	X & Y axis: AC 3.5(4.7) servo motor
	kW(HP)	-	Z axis (Vertical spindle):AC 1.3(1.75) servo motor
Lubrication		W axis:0.85(1.14)	W axis (Horizontal spindle):AC 0.85(1.14)(servo)
	Cutting fluid		AC 3.5W-2P
			AC 0.12(1/6)-2P
Machine Size			
Machine height	mm	2870	3198
Floor space (Longitudinal x cross)	mm	4440x2500	5694x3075
Net weight (Approx.)	kg	8700	13000
Standard color			Gray

STANDARD ACCESSORIES

1. Cutting Fluid Device
2. Tools And Box
3. Leveling Blocks
4. Draw Bar

OPTION ACCESSORIES

1. Digital read out
2. Power draw bar



FBM-3VA



FBM-4V

Feature (FOR FBM-3VA)

- Table feeding system equipped with powerful servo motor, ensure the table movement smoothly and operating more easily.
- A manual rapid feed and fine feed on the vertical head, it is also equipped with power feed for boring and drilling. A tri-lever handle mounted in the front easy operation to perform manual rapid movement of the head and easy to setup tool position.

(FOR FBM-4V)

- **OPERATOR CONTROLS**
- All controls are centralized for operator's convenience.



	unit	FBM-3VA	FBM-4V
Capacity			
Table travel (Longitudinal)	mm	1000	1200
Table travel (Cross)	mm	380	450
Vertical spindle head travel(vertical)	mm	500	550
Vertical spindle nose to table top	mm	100~600	100-650
Vertical spindle center to column front	mm	380	450
Table			
Table working area	mm	1700x380	1900x450
T slot (Wide x No. x Pitch)	mm	18x5x70	18x5x80
Table top to floor	mm	800	850
Spindel Head			
Spindle nose		ISO R297 No.50	ISO R297 No.50
Vertical spindle speeds	rpm	45~1500 (60Hz)	45-1500(60HZ)
No. of Vertical spindle speed	steps	12	12
Feeds (Vertical spindle)	mm/rev	0.05~0.2	0.05-0.2
Feed/Rapid			
Rapid traverse (Longitudinal & cross)	mm/min	2800	2880(60HZ)
Feed rates (Longitudinal & cross)	mm/min	28~1000	28-875(60HZ)
Change of feeds	steps	Infinitely variable	12
Motors			
Vertical spindle	kW(HP)	5.5 (7.5)-4P	AC 7.5(10)-4P
Feed	kW(HP)	1.3 (1.74) servo motor	AC 1.5(2)-4P
Lubrication		3.5W-2P	AC 3.5W-2P
Cutting fluid	kW(HP)	0.1 (1/8)-2P	AC 0.12(1/6)-2P
Machine Size			
Machine height	mm(in)	2410	2600
Floor space (Longitudinal x cross)	mm(in)	3200x1960	3800x2210
Net weight (Approx.)	kg	4000	5200
Standard color		Gray	Gray

STANDARD ACCESSORIES

1. Cutting Fluid Device
2. Tools And Box
3. Leveling Blocks
4. Draw Bar

OPTION ACCESSORIES

1. Digital read out
2. Power draw bar



Feature

- 5HP motor
- Table size: 1270×300mm
- Vertical milling head attachment
- Coolant system & oil tray
- X axis gear box driver
- Y axis manual move
- Table up-down rapid traverse
- Table swivel 45 degree
- Horizontal milling arbor
- Draw bar
- Tools and tool box
- Operation manual and part list

FU-2

Specifications

Unit:mm

		FU-2
TABLE	TABLE SIZE	1270x300
	T-SLOT (WxNO.xPITCH)	16x3x80
	SWIVEL (L&R)	45°
TRAVEL	XxYxZ	930x400x450
	XxYxZ-AUTO	920x380x450
FEED	LONG./MIN	18-320(6 STEPS) (50 HZ) 22-384(6 STEPS) (60 HZ)
	LONG. RAPID TRAVERSE/MIN	1040 (50 HZ) 1250 (60 HZ)
	CROSS FEED RATE	50-2200 (50/60 HZ)
	VERTICAL/MIN	360 (50 HZ) 430 (60 HZ)
VERTICAL SPINDLE	SPINDLE NOSE	N.S.T 40
	STEPS	9
	SPINDLE SPEED RPM	45-1100 (50 HZ) 55-1320 (60 HZ)
	SWIVELLING ANGLE	45° (R&L)
HORIZONTAL SPINDLE	SPINDLE NOSE TO TABLE	0-390
	SPINDLE NOSE	N.S.T 40
	SPINDLE SPEED RPM	60-1440 (50 HZ) 75-1730 (60 HZ)
	STEPS	9
	SPINDLE TO BOTTOM OF RAM	175
MOTOR	SPINDLE CENTER TO TABLE	0-450
	HORIZONTAL SPINDLE	5HP
	TABLE FEED X AXIS	3/4 HP
	TABLE FEED Y AXIS	1/2 HP
	TABLE RAPID Z AXIS	1/2 HP
SIZE	COOLANT PUMP	1/8HP
	MACHINE (LxWxH)	2150x1750x1975
	NET WEIGHT (KGS)	2550

OPTIONAL ACCESSORIES :

- | | | |
|----------------------------|-----------------------|---------------------------|
| 1. Larger table size | 5. 52pcs clamping kit | 9. 3axes digital read out |
| 2. Universal dividing head | 6. Halogen work lamp | 10. Slotting head |
| 3. Milling chuck set 15pcs | 7. Rotary table | 11. CE Norm |
| 4. K-type milling vise | 8. Table splash guard | |



FM-2S/2V

Feature

- FM-2S: 2HP , FM-2V: 3HP MOTOR
- 9"X42" TABLE
- R8 OR NT#30 SPINDLE TAPER DOVETAIL WAYS
- HARDENED & GROUND Y WAY
- HARDENED & GROUND TABLE SURFACE
- ONE SHOT LUB SYSTEM
- SINGLE WALL
- TURCITE B

Specifications

Specification / Model		FM-2S	FM-2V
Table Size		230x1067mm (9"x42")	
Longitudinal travel		600mm(23-1/2")	
Cross travel		305mm (12")	
Vertical travel(knee)		350mm(13-1/2")	
Table T-solts		No.3x16mm (0.63")	
Maximum workpiece weight		340kg (750 lbs)	
Verticle spindle motor		2HP (3HP)	
Spindle speed	50HZ	70~2310rpm (8 steps)	50~3750 rpm
	60HZ	90~2800rpm (8 steps)	60~4200 rpm
Spindle taper		R8 or NT30	
Spindle nose to table		70~476mm (2-3/4"~18-3/4")	
Spindle center line to column surface		171~476mm (6-3/4"~18-3/4")	
Quill travel		127mm (5")	
Automatic vertical feeds (per revolution)		0.04,0.08,0.14mm (0.0015",0.003",0.006")	
Head swivel		(R&L)90°, (F&B)45°	
Overarm travel		305mm (12")	
Overarm swivel		360°	
Weight (approx.)		1080kg (2380lbs)	
Floor space(L×W×H)		2179x1600x2000mm	2179x1600x2100mm

OPTIONAL ACCESSORIES :

- | | |
|-------------------------------|--------------------------------|
| 1. X,Y,Z AXES POWER FEED UNIT | 9. UNIVERSAL DIVIDING HEAD BS2 |
| 2. COOLANT EQUIPMENTS | 10. MILLING CHUCK SET 15PCS |
| 3. ELECTRIC WITH CONTROL BOX | 11. K-TYPE MILLING VISE |
| 4. AIR POWER DRAWBAR | 12. 52PCS CLAMPING KIT |
| 5. 3AXES DIGITAL READ OUT | 13. HALOGEN WORK LAMP |
| 6. RIGHT ANGLE ATTACHMENT | 14. DRILL CHUCK WITH ARBOR |
| 7. HOR. MILLING ATTACHMENT | 15. ROTARY TABLE |
| 8. CE NORM | 16. TABLE SPLASH GUARD |



FM-3S/3V

Feature

- 3HP MOTOR
- 10"x54"TABLE
- R8 OR NT#30 SPINDLE TAPER
- SQUARE WAYS
- HARDENED & GROUND Y – WAY
- HARDENED & GROUND TABLE SURFACE
- ONE SHOT LUB SYSTEM
- TURCITE B
- SINGLE WALL

Specifications

Specification / Model		FM-3S	FM-3V
Table Size		254x1370mm (10"x54")	
Longitudinal travel		720mm(28")	
Cross travel		370mm (14-1/2")	
Vertical travel(knee)		380mm(15")	
Table T-solts	Number	3	
	Size	16mm(0.63")	
Maximum workpiece weight		430kg(946lbs)	
Verticle spindle motor		3HP	
Spindle speed	50HZ	70~2310rpm (8 steps)	50~3750 rpm
	60HZ	90~2800rpm (8 steps)	60~4200 rpm
Spindle taper		R8 or NST30	
Spindle nose to table		40~420mm (1-5/8"~16-1/2")	
Spindle center line to column surface		102~652mm (4"~25")	
Quill travel		127mm (5")	
Automatic vertical feeds (per revolution)		0.04,0.08,0.14mm (0.0015",0.003",0.006")	
Head swivel		(R&L)90°, (F&B)45°	
Overarm travel		550mm (21-5/8")	
Overarm swivel		360°	
Weight (approx.)		1520kg (3350lbs)	
Floor space(L×W×H)		2572x2300x2150mm	

OPTIONAL ACCESSORIES :

- | | |
|-------------------------------|--------------------------------|
| 1. X,Y,Z AXES POWER FEED UNIT | 9. UNIVERSAL DIVIDING HEAD BS2 |
| 2. COOLANT EQUIPMENTS | 10. MILLING CHUCK SET 15PCS |
| 3. ELECTRIC WITH CONTROL BOX | 11. K-TYPE MILLING VISE |
| 4. AIR POWER DRAWBAR | 12. 52PCS CLAMPING KIT |
| 5. 3AXES DIGITAL READ OUT | 13. HALOGEN WORK LAMP |
| 6. RIGHT ANGLE ATTACHMENT | 14. DRILL CHUCK WITH ARBOR |
| 7. HOR. MILLING ATTACHMENT | 15. ROTARY TABLE |
| 8. CE NORM | 16. TABLE SPLASH GUARD |



FM-4S/4V

Feature

- 5HP MOTOR
- 10"X54"TABLE
- #40 SPINDLE TAPER
- SQUARE WAYS
- HARDENED & GROUND Y – WAY
- HARDENED & GROUND TABLE SURFACE
- ONE SHOT LUB SYSTEM
- TURCITE B
- SINGLE WALL

Specifications

Specification / Model		FM-4S	FM-4V
Table Size		254×1370mm (10"x54")	
Longitudinal travel		720mm(28")	
Cross travel		370mm (14-1/2")	
Vertical travel(knee)		410mm(16")	
Table T-solts	Number	3	
	Size	16mm(5/8")	
Maximum workpiece weight		410kg(900lbs)	
Verticle spindle motor		5HP	
Spindle speed	50HZ	70~2310rpm (8 steps)	50~3750 rpm
	60HZ	90~2800rpm (8 steps)	60~4200 rpm
Spindle taper		NST40	
Spindle nose to table		60~530mm (2-3/8"~20-7/8")	
Spindle center line to column surface		150~670mm (5-7/8"~25-1/2")	
Quill travel		127mm (5")	
Automatic vertical feeds (per revolution)		0.04,0.08,0.14mm (0.0015",0.003",0.006")	
Head swivel		(R&L)90°, (F&B)45°	
Overarm travel		475mm (18-5/8")	
Overarm swivel		360°	
Weight (approx.)		1550kg (3400lbs)	
Floor space(L×W×H)		2572x2300x2150mm	

OPTIONAL ACCESSORIES :

- | | |
|-------------------------------|--------------------------------|
| 1. X,Y,Z AXES POWER FEED UNIT | 9. UNIVERSAL DIVIDING HEAD BS2 |
| 2. COOLANT EQUIPMENTS | 10. MILLING CHUCK SET 15PCS |
| 3. ELECTRIC WITH CONTROL BOX | 11. K-TYPE MILLING VISE |
| 4. AIR POWER DRAWBAR | 12. 52PCS CLAMPING KIT |
| 5. 3AXES DIGITAL READ OUT | 13. HALOGEN WORK LAMP |
| 6. RIGHT ANGLE ATTACHMENT | 14. DRILL CHUCK WITH ARBOR |
| 7. HOR. MILLING ATTACHMENT | 15. ROTARY TABLE |
| 8. CE NORM | 16. TABLE SPLASH GUARD |



FM-5S/5V

Feature

- 5HP MOTOR
- 12.5"X58"TABLE
- #40 SPINDLE TAPER
- SQUARE WAYS
- HARDENED & GROUND Y WAY
- HARDENED & GROUND TABLE SURFACE
- DULEX ELECTRIC BOX
- COOLANT SYSTEM
- AUTO LUB SYSTEM
- TURCITE B, SINGLE WALL
- PENDENT TYPE CONTROL PANEL
- ELEVATION MOTOR FOR Z AXIS

Specifications

Specification / Model		FM-5S	FM-5V
Table Size		315x1470mm (12-1/2"x58")	
Longitudinal travel		800mm(31-1/2")	
Cross travel		400mm (15-3/4")	
Vertical travel(knee)		430mm(17")	
Table T-slots	Number	3	
	Size	16mm(5/8")	
Maximum workpiece weight		450kg(990lbs)	
Verticle spindle motor		5HP	
Spindle speed	50HZ	70~2310rpm (8 steps)	50~3300 rpm
	60HZ	90~2800rpm (8 steps)	60~4000 rpm
Spindle taper		NST40	
Spindle nose to table		60~530mm (2-3/8"~20-7/8")	
Spindle center line to column surface		150~670mm (5-7/8"~27-1/2")	
Quill travel		127mm (5")	
Automatic vertical feeds (per revolution)		0.04,0.08,0.14mm (0.0015",0.003",0.006")	
Head swivel		(R&L)90°, (F&B)45°	
Overarm travel		475mm (18-5/8")	
Overarm swivel		360°	
Weight (approx.)		1800kg	
Floor space(L×W×H)		2772x2400x2375mm	

OPTIONAL ACCESSORIES :

- | | |
|-------------------------------|--------------------------------|
| 1. X,Y,Z AXES POWER FEED UNIT | 9. UNIVERSAL DIVIDING HEAD BS2 |
| 2. COOLANT EQUIPMENTS | 10. MILLING CHUCK SET 15PCS |
| 3. ELECTRIC WITH CONTROL BOX | 11. K-TYPE MILLING VISE |
| 4. AIR POWER DRAWBAR | 12. 52PCS CLAMPING KIT |
| 5. 3AXES DIGITAL READ OUT | 13. HALOGEN WORK LAMP |
| 6. RIGHT ANGLE ATTACHMENT | 14. DRILL CHUCK WITH ARBOR |
| 7. HOR. MILLING ATTACHMENT | 15. ROTARY TABLE |
| 8. CE NORM | 16. TABLE SPLASH GUARD |



FSML-1700

Feature

- All models with oil bathed lubrication system to headstock.
- All models meet CE.(on request)
- All models with 86mm spindle bore, ASA D1-8.
- All castings are properly stabilized and stress relieved.
- Bed ways are hardened & ground to min. HRC 48-55.
- Extremely low noise level.
- Foot brake pedal provided.
- Built-in coolant pump & fitting provided.
- CSS(constant surface speed control) on request for E.V.S model.
- Wider bed way which gives absorbs vibration.

Entire machines are manufactured in Taiwan



Universal gearbox



Headstock



Electrical box & inverter
(for variable type)

Specifications

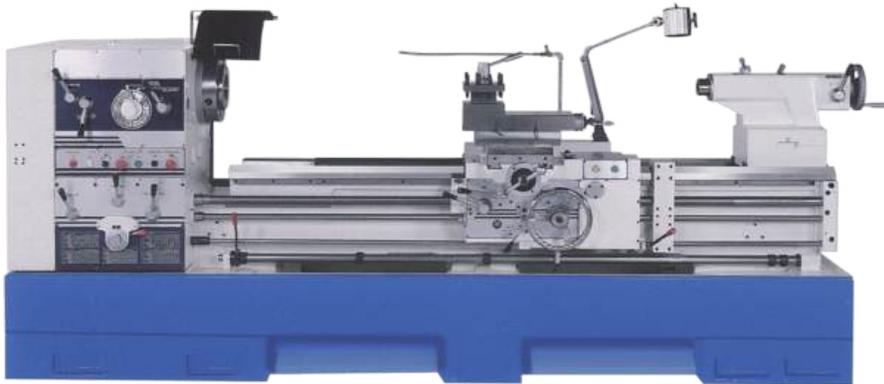
	FSML-1740/V	FSML-1760/V	FSML-1780/V	FSML-2040/V	FSML-2060/V	FSML-2080/V
Bed width	330 mm					
Swing over bed/carriage/gap	440/272/660mm			510/342/730mm		
Between centers	1000mm	1500mm	2000mm	1000mm	1500mm	2000mm
Spindle speeds	12steps:20~1800rpm (V:variable speed 3steps:10~2000rpm)					
Spindle motor	10HP (7.5Kw)					
Spindle bore/nose/taper	86 mm/D1-8 /MT #5					
Leadscrew dia./pitch	35 mm diameter, P= 6 mm (4TPI)					
Tailstock-quill diameter/travel/taper	75 mm diameter/150 mm/ MT#5					
Total travel of cross slide	290 mm					
Total travel of top slide	130 mm					
Max. size cutting tool	25 mm					
Inch threads	2-72 T.P.I (48)					
Metric pitches	0.2-14 mm (48)					
Diametral/module pitches	8-60 D.P./0.2-3.5 M.P. (24)					
Feed rod diameter	25mm					
Range of longitudinal feeds	0.06-2.00 mm/rev.(36)					
Range of cross feeds	0.03-0.80 mm/rev.(36)					
Motor coolant pump	1/8 HP					
Machine net weight	1900 kgs	2000 kgs	2200 kgs	2000 kgs	2100 kgs	2300 kgs

STANDARD ACCESSORIES :

- Auto carriage stop
- Steady rest
- Splash guard
- Threading Dial indicator
- 4 way tool post
- Foot brake & E-stop
- Coolant pump
- Main motor
- Chip tray
- Center sleeve
- Dead center
- Level pads
- Adjust tools & tool box
- Manual & part list

OPTIONAL ACCESSORIES :

- 3 Jaw scroll chuck
- 4 Jaw independent chuck
- Face plate
- Follow rest
- Quick change tool post with tool holder
- Live center
- Drill chuck with arbor
- Taper attachment
- 5C level type collect attachment
- Work lamp (quarts halogen lamp)
- Digital readout



FEATURES:

- 12 Steps spindle speed shorten processing time. (4 steps for various series with inverter-option)
- 104mm spindle bore with TIMKEN ball bearing for heavy cutting.
- Clutches inside headstock for easy operation save electricity.
- Faster and safer electromagnetic braking system.
- Detached electrical box with overload protection device for safety .
- No need for gear exchange while switching the system for the gearbox, with safety cutting and cycling lubrication system.
- Heated, carburized and accurately grinded gears in headstock prolong lathe life.
- Tailstock with 2 speed gearbox for drilling work .
- Closed type oil immersion and auto feeding system in apron for better lubrication.
- One piece molding, accurately grind and high frequency heated treated foundation bed.
- Emergency brake pedal for power cutting for safe, fast and precise operation.
- When machining larger work piece, gap can be removed accordingly.

FHL-2600

Entire machines are manufactured in Taiwan



• HEAD STOCK



• GEAR BOX



• SPINDLE



• APRON



• BEARING

Specifications

Unit:mm

	FHL-2400	FHL-2600	FHL-2900	FHL-3400
Bed width	420mm			
Swing over bed/carriage/gap	600/820/380mm	660/880/440mm	740/960/520mm	870/1100/590mm
Between centers	1500/2000/3000/4250mm			
Spindle speeds	12steps /25~1200 rpm			
Spindle motor	15HP			
Spindle bore/nose/taper	104 mm/A1-11orD1-11 /108x1:20			
Tailstock-quill diameter/ travel/taper	77 mm diameter /178 mm/MT#5			
Carriage cross slide travel	330	380	420	550
Carriage tool holder travel	230			
Carriage cutting tool size	25x25			
Dia. of leadscrew	6mm/pitch, 4TPI			
Metric pitch threads	0.5~14mm/pitch(31)			
Inch pitch threads	2~56TPI(45)			
Module pitch diameter	0.25~7M.P(23)			
Pitch thread diameter	4~112D.P.(43)			
Longitudinal feeds	0.03~0.73mm/rev.			
Cross feeds	0.01~0.3mm/rev.			
Machine net weight for 3000mm B.C	4400kgs	4600kgs	4800kgs	5000kgs

Standard Accessories

- Fixed center
- Coolant system
- Work light
- 12" 3-jaw chuck with plate
- Rapid traverse for longitudinal
- Steady rest
- 4-way tool post
- Tool box with tool kits
- Pad

Optional Accessories

- 4-jaw chuck
- Full length splash guard
- Rotation center
- Face plate
- Drive plate
- Taper attachment
- Follow rest
- CE device
- DRO
- Quick change tool post
- 6-Position bed stop
- Vanable speed change with inverter



FHL-1700

Entire machines are manufactured in Taiwan



• HEAD STOCK



• SPINDLE

FEATURES:

- 12 Steps spindle speed shorten processing time. (3 steps for FHL-1700/2000 inverter) (4 Steps for FHL-2000C inverter-option)
- 58mm spindle bore is able to machine larger shaft (FHL-1700/2000)
- 82mm spindle bore with FAG ball bearings for light and heavy cutting for FHL-2000C.
- Detached electrical box with overload protection device for safety.
- No need for gear exchange while switching the system for the gearbox, with safety cutting and cycling lubrication system.
- Heated, carburized and accurately grinded gears in headstock prolong lathe life.
- Strong tailstock with larger shaft diameter, special design center and anti-stroke device prevent tailstock sleeve from slipping off. (FHL-1700/2000)
- Tailstock with 2 speed gearbox for drilling work. (FHL-2000C)
- Closed type oil immersion system in apron for better lubrication.
- Longer tool holder travel distance. (FHL-2000C)

Specifications

Unit:mm

	FHL-1700	FHL-2000	FHL-2000C
Bed width	300mm		
Swing over bed/carriage/gap	430/660/245	500/730/280	510/735/285
Between centers	750/1000/1500/2000	1000/1500/2000	1000/1500/2000
Spindle speeds	12 steps 20~2000RPM		12steps 25~1500RPM
Spindle motor	5HP	7.5HP	7.5HP
Spindle bore/ nose/taper	58mm/A1-6 or D1-6/MT#6		82mm/A1-8 or D1-8/MT#8
Leadscrew dia./ pitch	35mm diameter/4TPI,P=6mm		
T meter/ trave/taper	58mm diameter/150 mm/MT#4		
Carriage cross slide travel	250mm		
Carriage tool holder travel	180mm		
Carriage cutting tool size	25x25mm		
Metric pitch threads	0.5~7mm(22)		
Inch pitch threads	4~56TPI(36)		
Module pitch diameter	0.5~3.5M.P.(12)		
Pitch thread diameter	8~56D.P.(21)		
Longitudinal feeds	0.05~0.70mm/rev.		
Cross feeds	0.025~0.35mm/rev		
Machine net weight for 1500mm B.C	1700kgs	2100kgs	2100kgs

Standard Accessories

- Fixed center
- Coolant system
- Work light
- 9" 3-jaw chuck with plate(FHL-1700/2000)
- 10" 3-jaw chuck with place(FHL-2000C)
- Steady rest
- 4-way tool post
- Tool box with tool kits
- Pad

Optional Accessories

- 4-jaw chuck
- Full length splash guard
- Rotation center
- Face plate
- Drive plate
- Taper attachment
- Follow rest
- CE device
- DRO
- Quick change tool post
- 4-Position bed stop
- Variable speed change with inverter



FEL-1640EVS

FEATURES:

- All models with oil bathed lubrication system to headstock.
- All models meet CE.(on request)
- All models with 52.5mm spindle bore, ASA D1-6.
- All castings are properly stabilized and stress relieved.
- Bed ways are hardened & ground to min. HRC 48-55.
- Turcite B coating between the bed and carriage.
- Extremely low noise level.
- Foot brake pedal provided.
- Built-in coolant pump & fitting provided.
- Wider bed way which gives absorbs vibration.
- CSS (constant surface speed control) on request for EVS model.

Entire machines are manufactured in Taiwan



• E.V.S. MODEL ELECTRIC CONTROL



• HEAVY DUTY SPINDLE



• E.V.S. HEADSTOCK

Specifications

	FEL-1440/1460HG	FEL-1640/1660HG	FEL-1440/1460EVS	FEL-1640/1660EVS
Bed width	260 mm			
Swing over bed/carriage/gap	360/212/533mm	410/262/583mm	360/212/533mm	410/262/583mm
Between centers	1000/1500mm			
Spindle speeds	8 steps:70~1800RPM, opt:16 steps:40~2000RPM, EVS:20~2500rpm, 2steps			
Spindle motor	5HP 4P OPT.5HP 4P/2.5HP 8P		AC 3.7Kw (5HP), Inverter 1/4HP	
Spindle bore/ nose/taper	52.5mm/D1-6/MT#6			
Slide travel-cross/compound	220/125 mm			
Tailstock-quill diameter/ travel/taper	52mm/152mm/MT#4			
Length on bed /width of carriage	513mm/412mm			
Whitworth threads: Kinds/Range	45 kinds/2~72 T.P.I			
Metric threads: Kinds/Range	39 kinds/0.2~14mm			
D.P. threads: Kinds/Range	21 kinds/8~44 D.P.			
M.P. threads: Kinds/Range	18 kinds/0.3~3.5 M.P.			
Longitudinal feeds	0.05~1.7mm			
Cross feeds	0.025~0.85 mm			
Machine net weight	1350/1450kg	1400/1500kg	1350/1450kg	1400/1500kg

Standard Accessories

- Face plate
- Steady rest
- Follow rest
- Threading Dial indicator
- 4 way tool post
- Foot brake & E-stop
- Coolant pump
- Main motor
- Set of change gears
- Center sleeve
- Dead center
- Level pads
- Adjust tools & tool box
- Manual & part list

Optional Accessories

- 3 jaw scroll chuck
- 4 jaw independent chuck
- Chip tray
- Full length splash guard
- Micro carriage stop
- Quick change tool post with tool holder
- Live center
- Drill chuck with arbor
- Taper attachment
- 5C level type collet attachment
- 5C collet (metric or inch)
- Work lamp
- Digital readout
- Chuck safety guard
- Hydraulic copying attachment



FCL-1300G

FEATURES:

- All models with oil bathed lubrication system to headstock.
- All models meet CE.(on request).
- All models with 40mm spindle bore, ASA D1-4.
- All castings are properly stabilized and stress relieved.
- Bed ways are hardened & ground to min. HRC 48-55.
- Extremely low noise level.
- Foot brake pedal provided.
- Built-in coolant pump & fitting provided.
- CSS(constant surface speed control) on request for E.V.S model.
- Wider bed way which gives absorbs vibration.

Entire machines are manufactured in Taiwan



• HEADSTOCK



• GEAR BOX



• APRON



• CARRIAGE & SLIDE



• HEAVY DUTY SPINDLE

Specifications

	FCL-1330G	FCL-1340G	FCL-1330EVS	FCL-1340EVS
Bed width	230 mm			
Swing over bed/carriage/gap(for 1000 only)	342/205/512mm			
Between centers	760mm	1000mm	760mm	1000mm
Spindle speeds	8 steps, 80~2000rpm or 16 steps 50~2570rpm, 100~2570rpm		2 steps 100~3000rpm	
Spindle motor	3HP 4P OPT.5HP 2P/2.5HP 4P		AC 2.2KW (3HP) Inverter	
Spindle bore/nose/taper	40 mm/D1-4 /MT #5			
Slide travel-cross/top slide	180/95 mm			
Tailstock-quill diameter/travel/taper	50 mm diameter/112 mm/MT#3			
Length on bed/width of carriage	400/384mm			
Whitworth threads: kinds/Range	45 kinds/2~72 T.P.I			
Metric threads: kinds/range	39 kinds/0.2~14mm			
D.P. threads: kinds/range	21 Kinds/8~44 D.P.			
M.P. threads: kinds/range	18 kinds/0.3~3.5M.P.			
Longitudinal feeds	0.05~1.7 mm			
Cross feeds	0.025~0.85 mm			
Machine net weight	850Kgs	1000Kgs	850Kgs	1000Kgs

Standard Accessories

- Face plate
- Steady rest
- Follow rest
- Threading Dial indicator
- 4 way tool post
- Foot brake & E-stop
- Coolant pump
- Main motor
- Set of change gears
- Center sleeve
- Dead center
- Level pads
- Adjust tools & tool box
- Manual & part list

Optional Accessories

- 3 jaw scroll chuck
- 4 jaw independent chuck
- Chip tray
- Full length splash guard
- Micro carriage stop
- Quick change tool post with tool holder
- Live center
- Drill chuck with arbor
- Taper attachment
- 5C level type collet attachment
- 5C collet (metric or inch)
- Work lamp
- Digital readout
- Chuck safety guard
- Hydraulic copying attachment



FRD-1280H



FRD-1300H

FEATURES

1. separates speed operation on locking installation easy and convenient to operate. excellent & exact precision.
2. opening model on precision heavy duty installation. easy to save and repair.
3. 12-speed gear box with more function.

FEATURES

1. roll bearing at basement is built round a double column provides max. rigidity and accuracy.
2. spindle main gear are made of SCM material all through harden and precision grinding.
3. bed is solid construction, it reinforced by rubs. it provided a positive, rocking proof foundation format, stability.
4. column is duplex type. the inner cylinder has a thick wall and reinforced by ribs.

Specifications

ITEM				FRD-1280H	FRD-1300H
Capacity	Drilling	Steel	mm	50	55
		Castiron	mm	60	66
	Tapping	Steel	mm	30	50
		Castiron	mm	38	60
	Boring	Steel	mm	85	100
		Castiron	mm	120	160
Spindle stroke			mm	250	
Size of morse Taper				NO.4	NO.5
Spindle speed				44-1500(12)	
Spindle Feeds				0.05/0.09/0.15	0.05-0.306(6)
Column Diameter			mm	300	
Max.distance, column surface spindle center			mm	1250	1260
Min.distance, column surface spindle center			mm	330	
Horizontal Travel of Headstock			mm	920	925
Max.distance, base to spindle			mm	1210	
Min.distance, base to spindle			mm	290	
Overall height of column			mm	2140	
Machine height from floor			mm	2585	2590
Dimensions of base			mm	1800x800x170	
Effective area of table			mm	650x500x410	
Spindle drive motor			HP	3HP(4Px8P)	5HP4P/8P
Arm elevation motor			HP	2	
Coolant pump			HP	1/8	
Oil motor			HP	1	
weight-Approx			kgs	2050	2150
Gross weight-Approx			kgs	2150	2250
Measurement (LxWxH)			mm	2290x1100x2230	



FRD-750S/900S



FRD-1100S

FEATURES-HANDLE

1. roller bearing at basement is built round a double column provides max. rigidity and accuracy.
2. protection design for limited safety is utilized in every transmission section.

Specifications

ITEM				FRD-750S	FRD-900S	FRD-1100S
Capacity	Drilling	Steel	mm	38		50
		Castiron	mm	50		60
	Tapping	Steel	mm	25		30
		Castiron	mm	32		38
	Boring	Steel	mm	75		85
		Castiron	mm	105		120
Spindle stroke			mm	200		250
Size of morse Taper				NO.4		
Spindle speed				88-1500(6)		44-1500(12)
Spindle Feeds				0.05/0.09/0.15		
Column Diameter			mm	210		300
Max.distance, column surface spindle center			mm	765	910	1150
Min.distance, column surface spindle center			mm	290		330
Horizontal Travel of Headstock			mm	500	650	810
Max.distance, base to spindle			mm	1110		1210
Min.distance, base to spindle			mm	282		290
Overall height of column			mm	1850		2140
Machine height from floor			mm	2175		2585
Dimensions of base			mm	1280x640x150	1435x640x150	1800x800x170
Effective area of table			mm	550x405x315		650x500x410
Spindle drive motor			HP	2		3(4Px8P)
Arm elevation motor			HP	1		2
Coolant pump			HP	1/8		
weight-Approx			kgs	1100	1170	2000
Gross weight-Approx			kgs	1200	1270	2100
Measurement (LxWxH)			mm	1430x820x2060	1580x820x2060	2010x1050x2230



UMD-16V



UMD-20V



UMD-20VF

Model	UMD-16V	UMD-20V	UMD-20VF
Drilling capacity	Ø16mm	Ø20mm	
Spindle taper	MT#2		
Spindle travel	90mm		
Table size	280x280mm		
Base size	470x280mm		500x330mm
Spindle speed (rpm) 50HZ	350~2500/min	150~2500/min	
Number of speeds	Variable Speeds		
Motor	DC 1.2kw 230V 1Ph 8A		
Net weight (kgs)	N.W : 88kg / G.W : 91kg		N.W : 100kg / G.W : 103kg
Overall height	1080mm		1760mm



UMD-20VC



UMD-25V



UMD-30VP

Model	UMD-20VC	UMD-25V	UMD-30VP
Drilling capacity	Ø20mm	Ø25mm	Ø30mm
Spindle taper	MT#2	MT#3	
Spindle travel	90mm	125mm	
Table size	300x320mm	350x350mm	285x395mm
Base size	560x470mm	560x410mm	
Spindle speed (rpm) 50HZ	150~2500/min	150~2500/min	100~2500/min
Number of speeds	Variable Speeds		Variable Speeds
Motor	DC 1.2kw 230V 1Ph 8A		DC 1.5kw 400V 3Ph 5A
Pump motor	NA		0.1kW 1Ph 0.2A
Net weight (kgs)	N.W : 132kg / G.W : 149kg	N.W : 146kg / G.W : 167kg	N.W : 198kg / G.W : 219kg
Overall height	MAX1980mm MIN1490mm		1750mm



optional

MD-25



optional

MD-31



optional

MD-31N2F

• Spindle Power Down Feed
0.12-0.18-0.25mm per/rev.

WORKING CAPACITY		MD-25	MD-31	MD-31N2F
In Mild Steel	Drilling	25mm	32mm	32mm
	Face Mill	76mm	76mm	76mm
	End Mill	20mm	20mm	20mm
(Optional)	Tapping	16mm	16mm	16mm
In Light Alloy		25mm	32mm	32mm

Item		Unit	MD-25	MD-31	MD-31N2F
Main Motor		HP	3/4	1.5	
Speed	1 Speed Motor (standard)	rpm	60Hz/110-2580 50Hz/90-2150	60Hz/150-3000 50Hz/125-2500	12 speeds
	2 Speed Motor (optional)	rpm	-	60Hz/75-3000 50Hz/62-2500	23 speeds
Taper			MT3 or R8		
Stroke		mm	95	130	107
Depth		mm	170	205	
Table Size		mm	585x190	730x210	
X Travel/Y Travel		mm	380/150	460/190	
Column Diameter		mm	Ø92	Ø115	
No. of T Slot			4	4	
T Slot Size		mm	14x24	16x26	
Packing Dimensions		mm	740x710x995(w/o stand)	810x740x1150(w/o stand)	
Machine Weight		NW/GW	160/190 kgs	230/255 kgs	

Standard Accessories

MODEL	MD-25		MD-31/31N2F	
	MT3	R8	MT3	R8
ACCESSORY				
CHUCK ARBOR	√	√	√	√
CUTTING ARBOR	√	√	√	√
HANDLE ROD	√	√	√	√
KNOB	√	√	√	√
PUNCH KEY	√		√	
1/2" DRILL CHUCK	√	√	√	√
TABLE HANDLE WHEEL	√	√	√	√
HEAD HANDLE	√	√	√	√
3" FACE CUTTER	√	√	√	√
3" U TYPE VISE	√	√	√	√
LOCK HANDLE FOR HEAD BODY			√	√

Optional Accessories

- Tapping Control
- Keyless Chuck
- Chuck Guard for Mill/Drill
- Power Table Feed
- Deluxe Stand
- D.R.O. (Digital Readout)



FHBS-916A

Specifications

MANUAL / 4 SPEED(916A)	
MANUAL / VARIABLE SPEED(916V)	
MOTOR 1.5HP	
BLADE SPEED	25/40/51/71MPM (82/132/170/235FPM)(916A) 25~75MPM (82~259FPM)(916V)
BLADE SIZE	27x0.9x3035MM
CAPACITY	90° • 225MM — 225x345MM — 35x400MM
	45° • 165MM ┆ 225x165MM
PACKING MEASUREMENT	1727x749x1092MM(916A) 1803x749x1092MM(916V)
N.W / G.W.	285KGS / 320KGS



FHBS-918HAV

Specifications

SEMI-AUTO / MANUAL VISE / VARIABLE SPEED(918HA)	
SEMI-AUTO / HYDRAULIC VISE / VARIABLE SPEED(918HAV)	
MOTOR 2HP	
BLADE SPEED	25~75MPM(82~259FPM)
BLADE SIZE	27x0.9x3345MM
CAPACITY	90° • 225MM — 225x430MM — 150x450MM
	45° • 225MM ┆ 225x295MM
PACKING MEASUREMENT	1930x750x1080MM
N.W / G.W.	480KGS / 550KGS



FHBS-812

Specifications

TOGGLE SWITCH (812)	
GEAR TRANSMISSION (812G)	
MOTOR 1HP 4P 1720RPM	
BLADE SPEED	50Hz:22/33/45/65MPM 60Hz:25/40/55/80MPM
BLADE SIZE	19x0.9x2360MM
CAPACITY	90° ● 200MM — 200x240MM — 90x305MM
	45° ● 105MM
PACKING MEASUREMENT	1295x483x1100MM
N.W / G.W.	149KGS / 169KGS



FHBS-812B1

Specifications

MAGNETIC SWITCH (812B)	
TOGGLE SWITCH(812B1)	
MOTOR 1HP 4P 1720RPM	
BLADE SPEED	50Hz:22/33/45/65MPM 60Hz:25/40/55/80MPM
BLADE SIZE	19x0.9x2360MM
CAPACITY	90° ● 200MM — 165x275MM — 55x300MM
	45° ● 120MM — 200x120MM
PACKING MEASUREMENT	1280x482x1092MM
N.W / G.W.	143KGS / 163KGS



FHBS-812B
Magnetic switch

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