

PHENIX

ECONOMICAL TYPE VERTICAL MACHINING CENTER

*THE MOST ECONOMICAL, HIGH EFFICIENCY UNIT FOR
MOLD MAKING AS WELL AS VERSATILE MACHINING,
TOOL ROOM, DEVELOPMENT AND MAINTENANCE.*



FMC-850LG(E)

Economical Type Vertical Machining Center

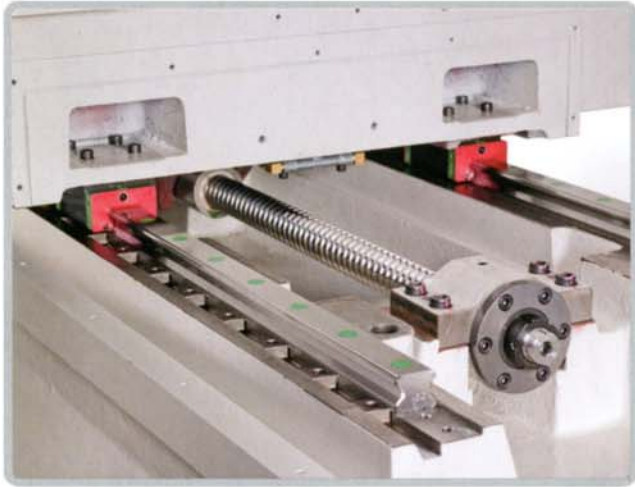
- Hardened & ground C3 grade ballscrews pre-tensioned to minimize backlash, providing high precision movement and reducing heat deformation on all axes.
- Essential castings are made of high grade of meehanite cast iron, which has been stressed relieved to provide a rigid machine structure. This guarantees the maximum precision and vibration absorption.
- Telescopic steel way covers on three axes protect ways and ballscrews from chips and coolant.
- High grade Turcite-B is coated and with precision handscrapping, giving maximum wear resistance.
- Axis motors are direct coupled with ballscrews, featuring high efficient motion control high response, and low noise.



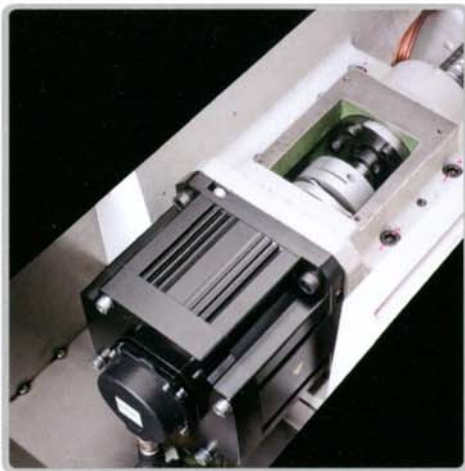
▲ **FMC-610(E)**

Machine frame constuction

Economical Type Vertical Machining Center



The Linear Motion Guideways feature low friction and free from stick-and-slip problem, such the characteristics is especially suitable for high speed 3D cutting and finishing. The quality of workpiece surface is increased ; the need of manual polishing workpiece surface is reduced.



Axis motors are direct coupled with ball screws, featuring high efficient motion control, high response and low noise.



▲ FMC-850LG(E)

Machine frame construction

- Meehanit Cast Iron ■
- Stress relieved, deformation free ■
- High damping coefficient ■
- Designed with Finite Element Method ■
- Oil-coolant separation structure ■

SPECIFICATIONS

MODEL	FMC-610(E)	FMC-850LG(E)
TABLE		
Working surface	710 x 350mm (27-15/16"x13-3/4")	950 x 500mm (37-3/8"x19-11/16")
T-slots (size x number)	16mm x 5 (0.630" x 5)	18mm x 5 (0.709" x 5)
Max. table load	350kgs (772 lbs)	600kgs (1323 lbs)
TRAVEL		
Longitudinal travel (X axis)	610mm (24")	850mm (33-1/2")
Cross travel (Y axis)	350mm (13-13/16")	510mm (20")
Vertical travel (Z axis)	460mm (18-1/8")	510mm (20")
Distance from spindle end to table	100~560mm(3-15/16"~22")	140~650mm(5-1/2"~25-9/16")
Distance from spindle center to column	430mm (16-15/16")	556mm (21-7/8")
SPINDLE		
Spindle nose taper	BT40 (or DIN40 / CAT40, opt.)	BT40 (or DIN40 / CAT40, opt.)
Spindle speeds	8000 r.p.m. ; belt (or 10000~15000 r.p.m., opt.)	8000 r.p.m. ; belt (or 10000~15000 r.p.m., opt.)
FEED		
Cutting feed rate (X, Y, Z axes)	1~10000 mm/min. (max.)	
Rapid traverse (X, Y axes)	15 m/min. (max.)	36 m/min. (max.)
Rapid traverse (Z axis)	15 m/min. (max.)	36 m/min. (max.)
ATC		
Tool storage capacity	10 pcs (carrousel) (or 20pcs (carrousel) / 24pcs (arm), opt.)	16 pcs (carrousel) (or 20pcs (carrousel) / 24pcs (arm), opt.)
Max. tool weight	6 kgs (13.23 lbs)	
Max. tool size(dia. x length)	100mm x 300mm (3-15/16" x 11-13/16")	
Tool selection	Random	
Tool shank	BT-40	
Pull stud bolt	MAS-P40T-1	
MOTOR		
Spindle motor (AC servo)	3.7 / 5.5 KW	5.5 / 7.5 KW
X, Y, Z axes motor (AC servo)	1.5 / 1.5 / 2 KW	2 KW
Coolant pump motor	3/4HP	
DIMENSION		
Machine size	1880x1720x1987 mm (74" x 67-3/4" x 78-1/4")	2600x2330x2685 mm (102-3/8" x 91-3/4" x 105-11/16")
Machine weight	2600kgs (5732 lbs)	3900kgs (8598 lbs)

• The manufacturer reserves the right to modify the design, specifications, mechanisms...etc. to improve the performance of the machine without prior notice. All the specifications shown above are just for reference.

STANDARD ACCESSORIES

- Tool box w/tools
- Leveling screws w/ blocks
- Coolant spraying device
- Auto lubrication
- Heat exchanger for electrical box
- Full enclosure guard
- Work lamp
- Net work interface
- Auto power off circuit
- End of program light

OPTIONAL ACCESSORIES

- Spindle cooling device
- 10000~15000 r.p.m. spindle speed w/ spindle cooling device
- Bigger horse power spindle motor
- Carrousel type 20 tools ATC
- Arm type 24 tools ATC
- Auger style chip conveyer
- High pressure water scour for chip removal
- Coolant through spindle
- Air conditioner for electrical cabinet
- CNC Rotary table (the 4th axis control)

*The machines could be supplied without controller and servo motor/drives as OEM FRAME.



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