

PHENIX

L SERIES

COMPACT CNC MILLING MACHINE

The most economical, high performance, occupying space saving unit for small mold making, precision parts machining as well as training, development and maintenance.



▲ FM-90L ATC

SPECIFICATIONS

| MODEL | FM-90L MH | FM-90L ATC |
|------------------------------------|--|------------------------------------|
| TABLE | | |
| Working surface | 770x300mm (30-5/16" x 11-13/16") | |
| T-slots (size x number x pitch) | 16mm x 3 x 80mm (0.630" x 3 x 3.150") | |
| Max. table load | 200kgs (442 lbs) | |
| TRAVEL | | |
| Longitudinal travel (X axis) | 450mm (17-11/16") | |
| Cross travel (Y axis) | 400mm (15-3/4") | |
| Vertical travel (Z axis) | 400mm (15-3/4") | |
| Distance from spindle end to table | 120 ~ 520mm (4-11/16" ~ 20-7/16") | |
| SPINDLE | | |
| Spindle nose taper | BT-40 | |
| Spindle speeds | Vari 10000 r.p.m. (max.), Belt drive (or 12000 r.p.m. (max.), opt.) | |
| FEED | | |
| Cutting feed rate | 1 ~ 5000 mm/min. (max.) | |
| Rapid traverse (X, Y axes) | 20 m/min. (max.) | |
| Rapid traverse (Z axis) | 20 m/min. (max.) | |
| ATC | | |
| Tool storage capacity | — | 12 pcs (carrousel) |
| Max. tool weight | — | 6 kgs (13.26 lbs) |
| Max. tool size (dia. x length) | — | Ø80x250mm (Ø 3-1/8" x 9-13/16") |
| Tool selection | — | Random |
| Tool shank | — | BT-40 |
| Pull stud bolt | — | MAS-P40T-1 |
| MOTOR | | |
| Spindle motor | 3.7/5.5 kw | |
| X/Y/Z axes motor (AC servo) | 1.2/1.2/1.8 kw (Fanuc, β) | |
| Coolant pump motor | AC 0.5kw | |
| CONSTRUCTION | | |
| 3 Axes slide ways | Linear slide way, 25/25/30mm | |
| Dimension of ball screw | Ø25 / Ø25 / Ø32 x P10, C3 | |
| Type | Floor type (w/ machine base) | |
| GENERAL | | |
| Machine weight (Approx.) | 2900 kgs (6409 lbs) | |
| Machine size (L x W x H) | 1870x2150x2560 mm (73-5/8"x 84-5/8" x 100-3/4") | |

• 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 / EQUIPMENTS

| | | |
|---|-------|--|
| ■ Air tool clamp / unclamp device | 1 set | ■ Precision ball screws on 3 axes |
| ■ Tools | 1 set | ■ Linear slide ways on 3 axes |
| ■ Tool box | 1 set | ■ Centralized auto lubrication device |
| ■ Leveling screws w/blocks | 1 set | ■ Coolant spraying device |
| ■ Full enclosure guard | 1 set | ■ Work lamp |
| ■ Telescopic sheet metal way covers on 3 axes | 1 set | ■ Heat exchanger for electrical cabinet |
| | | ■ Power transformer w/cabinet (except OEM) |

OPTIONAL ACCESSORIES / EQUIPMENTS

| | |
|---|--|
| ■ Direct drive spindle | ■ Water gun |
| ■ Spindle cooling device (for 10000 r.p.m.) | ■ Air gun |
| ■ 12000 r.p.m. spindle w/spindle cooling device | ■ Air conditioning device for electrical cabinet |
| ■ Chain type chip conveyer & cart | |

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



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