



FEMCO “BMC-110R1 with APC” CNC Horizontal Boring & Milling Machine with Automatic Pallet Changer



A highly efficient **Automatic Pallet Changer** design allows for the machining of one work piece and the loading of the next work piece simultaneously for maximum productivity.

All major components are fully ribbed close grain **Meehanite castings** completely stressed relieved before machining. The vertical column walls are thick and cross ribbed, the front vertical way is massive and is offset 3 ½” from the back way to absorb any radial thrust generated during heavy machining operations and to guarantee accuracy, rigidity and longevity.

Box Ways are induction hardened to 55-60 C X .100” deep and are precision ground. Headstock, column base, and cross slides are lined with turcite (A LOW FRICTION MATERIAL). Turcite provides excellent wear and slip stick characteristics due to its low coefficient of friction. It also provides good vibration damping. Turcite reacts with the machine structure thus giving a high static and dynamic stiffness to the machine.

Lubrication to all axes is done automatically to ensure longevity of the ways.

Large 2 inch Diameter, high precision ball screws are pre-loaded with the nut when installed. This ensures zero-backlash and smooth motion through the machining process.

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The spindle is made from chromium molybdenum steel alloy. The **spindle and the sleeve surfaces are hardened in a nitrating process**, then ground and lapped, thus, insuring high rigidity for a smooth surface and long life. Class 7 bearings are used in all our spindles.

The worktable can be indexed automatically every 90 degrees allowing for standard four face machining. Angles between 0 and 360 degrees can be positioned manually.

SPECIFICATIONS:

Travel:

Table Cross Travel (X-Axis)	55.12"
Headstock Travel (Y-Axis)	54.72"
Table Longitudinal Travel (Z-Axis)	43.31"

Table:

APC Table Size	43.3" x 43.3"
APC Table Load	6,600 Lbs

SPINDLE:

Bar Diameter	4.33"
Stroke (W-Axis)	19.69"
Taper	ISO #50 with Power Operated Drawbar
Tool Shank	CT50
Milling Spindle Diameter	8.86"
Pull Stud	(Option MAS-I) MAS-II 60 deg
Motor (Continuous/30 min Rated)	AC 22/26 KW (29.5 / 35 HP)
Speed Ranger-Low	Stepless 5 to 454 RPM
Speed Ranger-High	Stepless 455 to 2,500 RPM

Automatic tool changer (ATC)

Tool Storage Capacity	60 ATC Standard, 90 ATC Optional
Max. Tool Diameter (Adjacent Pods Full)	4.72"
Max. Tool Diameter (Adjacent Pods Empty)	9.84"
Max. Tool Length	15.75"
Max. Tool Weight	55 Lbs
Tool to Tool Exchanging Time	15 sec
Tool Selection Method:	Automatic Selection of the Shortest Route

Positioning Servo Motor:

X-Axis	8.0 hp
Y-Axis	9.4 hp
Z-Axis	8.0 hp
W-Axis	5.4 hp
Rotary table	5.1 hp

Control:

Positioning Accuracy X, Y, Z, and W-Axis	0.001"/11.81"
Repeatability X, Y, Z, and W-Axis	±0.0004"
Control Axes	5
W-Axis	4

Rapid Traverse Rate:

X-, Y-, Z-Axis	394 IPM
W-Axis	157 IPM

Machine Dimensions and Net Weight:

Height (Standard)	132.7"
Floor Space	230" x 374"
Net Weight	44,000 Lbs

Power Requirements: 220 Volts 3 Phase 60 Cycle, 100 Amps,
(440 Volt Transformer on Request)

MACHINE FEATURES:**FANUC Oi CONTROL SYSTEM:**

Controlled 5 Axes	Simultaneous Controllable 4 Axes
Reference Point Return (G27, G28)	Linear Interpolation
Circular Interpolation	9" CRT/MDI (Small Type) / (Full Key)
Registered Programs 63	Part Program Stored Length 80m
Sequence Number Search	Program Number Search
Manual Pulse Generator	External Work Number Search
Program Protect	Inch/Metric Switching
Machine Lock	Backlash Compensation
Program Protect Signal	Self-Diagnosis Function
Read/Puncher Interface	Direct Input of Meas. Work Coord. Sys. Shift
EIA/ISO Automatic Recognition	Mirror Image
Actual Speed Display	Tool Compensation Memory 32 Sets
Canned Cycle for Hole Machining	Work Coordinate System G54 - G59

STANDARD ACCESSORIES:

Rotary Table, 90 Degree Precision Indexing	Table Slideway Cover (Z Axis)
Saddle Slideway Cover (X Axis)	X-, Y-, Z-Axes Ball Screw Cover
Working Light	Headstock Cooling System
Anchors and Levels for Installation	Y Axis Splash Guard
Operator's Manual	

PRICELIST:

BMC 110R1 with Pallet Changer

P.O.R.

Price F.O.B. Garden Grove, CA

OPTIONAL ACCESSORIES:

Full "B" Axis Table

P.O.R.

60 Tool ATC

P.O.R.

FANUC 32i control

P.O.R.

90 Tool ATC

P.O.R.

Spindle extension sleeve 300mm

P.O.R.

Chip Conveyor

P.O.R.

Transformer

P.O.R.

Coolant thru spindle

P.O.R.

TERMS AND CONDITIONS:

Installation of your machine will be from your local dealer, backed by FEMCO upon confirmation that the machine has been positioned on leveling pads and ready for hookup.

Service and after Installation Support is a High priority at FEMCO. Our Distributors provide qualified service technicians, and our Distributors are fully supported by FEMCO Service and Parts staff. Customers are expected to assist in troubleshooting and part exchanges.

One Year Parts New Machine Warranty. If any parts of the machine fail under normal operation and proves to be defective in material or workmanship FEMCO will provide it free of charge for a period of twelve (12) months from date of installation. **All Fanuc components carry a full two (2) year parts warranty.**

Payment Terms: are 30% down with order, 60% at delivery and balance due on installation or 30 days after delivery which ever comes first.

Delivery: From Stock or quoted delivery time.

Price is Valid for Thirty (30) days from date of quote. Specifications are subject to change without notice.