

# BARON-MAX®

## Toolroom CNC Bed Mills with Manual Quill

*Manual Operation with DRO, Semi-Automatic Operation or Full 3 Axes CNC Operation*



### BM-410T

- 5 HP Inverter variable speed with Hi-Low speed ranges
- Table size: 10" x 54"
- Saddle length: 600 mm
- Travels: 810 x 450 x 450 mm

### BM-420T

- 5 HP Inverter variable speed with Hi-Low speed ranges
- Table size: 12" x 60"
- Saddle length: 1260 mm
- Travels: 990 x 500 x 500mm

**100% laser & ballbar calibration for positioning accuracy & repeatability**

*The Baron-Max CNC rigid bed mills designed for fast and efficient production of short-run and one-off parts. User friendly, conversational software and unique manual automatic operation making these machines ideal for the tool-room*

### Machine Standard Features

- Powerful 5 HP Inverter variable speed drive with Hi/Low gear 2 speed ranges
- Table size : 10" x 54" (**BM-410T**)  
: 12" x 60" (**BM-420T**)
- Saddle size: 600 mm (**BM-410T**)  
: 1260 mm (**BM-420T**)
- X-Y-Z Travel: 810 x 450 x 450 mm (**BM-410T**)  
: 990 x 500 x 500 mm (**BM-420T**)
- Hardened and ground spindle with NT40 taper
- Hardened and chromed quill with 5" travel
- CP4 ABEC7 angular contact spindle bearings
- C5 double nut X/Y/Z axes, 32mm dia. ballscrew
- Hardened and ground table surface
- Hardened and ground, Box ways on X/Y
- Turcite B coating on saddle X/Y axes ways
- Standard Rubber way cover on three axes
- X/Y axes handwheels
- Coolant system + Halogen work light
- Automatic lubrication
- Base chip tray and rear splash guard

# BARON-MAX®

## Toolroom CNC Bed Mills with Rigid Head

*Manual Operation with DRO, Semi-Automatic Operation or Full 3 Axes CNC Operation*



### BM-410R

- 5 HP Inverter variable speed from 70– 4200rpm with Hi-Low gear
- Table size: 10" x 54"
- Saddle length: 600 mm
- Travels: 810 x 450 x 450 mm

### BM-420R

- 5 HP Inverter variable speed from 70– 4200rpm with Hi-Low gear
- Table size: 12" x 60"
- Saddle length: 1260 mm
- Travels: 990 x 500 x 500mm

**100% laser & ballbar calibration for positioning accuracy & repeatability**

*The Baron-Max CNC rigid bed mills Designed for job shops and tool rooms, with fast simple setup and programming to production of short-run and one-off parts. User friendly, conversational software and unique manual automatic operation making these machines ideal for the tool-room*

### Machine Standard Features

- Powerful 5 HP Inverter variable speed drive with Hi/Low gear 2 speed ranges 70 – 4200 rpm.
- Table size : 10" x 54" (BM-410R)  
: 12" x 60" (BM-420R)
- Saddle size: 600 mm (BM-410R)  
: 1260 mm (BM-420R)
- X-Y-Z Travel: 810 x 450 x 450 mm (BM-410R)  
: 990 x 500 x 500 mm (BM-420R)
- Hardened and ground spindle with NT40 taper
- CP4 ABEC7 angular contact spindle bearings
- Hardened and ground table surface
- C5 double nut X/Y/Z axes 32mm dia. ballscrew
- Hardened and ground, Box ways on X/Y
- Turcite B coating on saddle X/Y axes ways
- Standard Rubber way cover on three axes
- X/Y axes handwheels
- Coolant system with pump
- Automatic lubrication
- Base chip tray and rear splash guard
- Halogen work light

# BARON-MAX<sup>®</sup>

*Toolroom CNC Bed Mills with Manual Quill*

*The Baron Max CNC rigid bed mills was designed for tool room, prototype and mold making uses, we offer user friendly, high quality, affordable machines, and it's the exceptional value for the money.*



- 7.5 HP Hi torque Inverter variable speed drive with Hi-low speed ranges from 0-4200 RPM
- Meehanite casting main frame with annealed & stress relieved for long term reliability
- The spindle speed is programmable through the CNC control with over-ride capability
- CP4 ABEC7 angular contact spindle bearings
- C3 double nut X/Y/Z axes Ø40 mm diameter ballscrews.
- Hardened/ground Box way construction with Turcite B coating on X/Y/Z guide ways
- Telescopic steel way cover on X/Y/Z Axes
- Coolant system and Central lubrication system with alarm
- Heavy-duty chip tray, rear splash guard and table guarding
- Long arm halogen work light 10V/70W
- Portable hand wheel

# HIGH EFFICIENCY, PRODUCTIVITY, USER-FRIENDLY

## Description :

BM-T series was designed for your toolroom applications, Built as the most accurate and reliable machine, 7.5 HP vector inverter drives for programmable spindle speed and NT #40/4500rpm, swivel  $\pm 45^\circ$  (R & L) by worm gear and tied up with 4 off screws, manual quill with 140 mm travel and with hi-low back gears for heavy cutting, the large  $\varnothing 40$  mm of precision ground ball-screw with double nuts on 3-axes and mounted on both of end, the AC brushless axes servo motors & drives to provide accurate traverse and maintenance -free, X-Y-Z axes & quill Travel : 1300 x 600 x 635 & 140 mm, table size : 420 x 1600 mm and 800 Kgs table load capacity



The Fagor 8055i MC Control System is one of the most versatile CNC in existence due to its Dual Operating System. In one mode, it is a very powerful ISO G-code control System and in the other mode Icon conversational programming with highly interactive graphics.



## Icon Conversational Programming

- 26 canned cycles... Slot Milling, Profile Milling, Multiple Drilling cycles, Boring cycles, Reaming cycles, Arc bolt hole cycles, Random position cycles, Grid Pattern position cycles and more
- Mirror Imaging • Automatic chamfer blending
- Arc defined by three points • Automatic radius blending
- Part Scaling (in part or whole)
- Programming in absolute arc center coordinates
- Main plane selection • Individual plane selections
- Definition of lower work area limits
- Zero offsets and auto-deletion of offsets referencing
- Automatic machine home sequence
- Preset of coordinate values • Preset of polar origin

## G Code Programming

- Geometric help • Execution mode • MDI mode
- Teach-in mode • Play back mode • Single block mode
- Manual mode • Background editing mode
- Mid program start • Automatic tool calibration mode
- Tool inspection mode with auto-return
- Programmable spindle speed (SUP models)
- Number of main programs: 999,999 \*3
- Repeat of sections of program
- Part zero offsets • Number of nesting levels: 15
- Feedrate: 0.00001 to 7900 inches/min.
- Machining canned cycles in all planes
- User defined canned cycles • On board graphic editor
- Override control for feed rate and spindle

# Simpler, faster, more productive

## Specifications

	<i>BM-410 T</i>	<i>BM-420 T</i>			
	<i>BM-410R</i>	<i>BM-420R</i>	<i>BM-460 T</i>	<i>BM-560 T</i>	<i>BM-600 T</i>
<b>HEADSTOCK:</b>					
Spindle Motor	5 HP	5 HP	7.5 HP	7.5 HP	7.5 HP
Spindle speed range	60 – 4000 rpm		60 – 4200 rpm		
Spindle Taper	NT40		NT40	NT40	NT40
Quill diameter	Ø100mm	Ø100mm	Ø105 mm	Ø110 mm	
Quill Travel	127mm (5")	127mm (5")	140 mm (6")	150 mm (6")	
Head swivel (Right/ Left)	±90 degrees		±90 degrees		
<b>TRAVEL</b>					
Table size (mm)	254x1370mm	305x1520mm	400x1370mm	420x1600mm	450x1800mm
Longitudinal travel (X-axis)	810 mm (32")	980 mm (39")	1000 mm (40")	1300 mm (51")	1500mm (60")
Cross travel (Y-axis)	450 mm (18")	450 mm (20")	510 mm (20")	630 mm (25")	630 mm (25")
Vertical travel (Z-axis)	450 mm (18")	450 mm (22")	510 mm (20")	610 mm (24")	610 mm (24")
Spindle nose to table top	100-660mm	100-660mm	100-660mm	120-750mm	120-750mm
Spindle center to column	500 mm	550 mm	550 mm	660 mm	660 mm
Max. Table loading cap.	300 KGS	400 KGS	800 KGS	1000 KGS	1000 KGS
<b>FEED</b>					
Feed Motor (X-Y-Z)	1 kW, AC		2 kW, AC		
Rapid traverse (X-Y-Z)	6,000 mm/min		15,000 mm/min (393.70 ipm)		
Cutting feed rate	3,500 mm/min		6,000 mm/min (196 ipm)		
Coolant pump motor	1/8 hp				
Coolant Capacity	16 Gallons				
Lubrication pump	150 W				
Power required	<b>15 KVA</b>				
Air required	6 kg/cm (85 psi)				
Packing size (W x D x H)	65"x78"x82"	65"x78"x82"	72" x 84" x 88"	80" x 84" x 88"	80" x 84" x 88"
Operation dimensions	110"x75" x 93"	115"x78" x 96"	165" x 84' x 105"	175" x 84" x 88"	175" x 84" x 88"
Machine weight (Approx.)	1,350 kg	1,500 kg	3,200 kg	3,800 kg	4,200 kg

All data subject to change without notice

**BARON-MAX<sup>®</sup>** MACHINE TOOLS Since 1976

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