

MB Toolroom Bed Mills with Quill Head

Effective June 01, 2011



Machine Model	MB20
Spindle Taper	40
Spindle Horsepower	10/7.5 HP 7.5/5 kw
Travel (XYZ")	40 x 20 x 24
MACHINE FEATURES	CONTROL FEATURES
<ul style="list-style-type: none"> • Two Year Parts Warranty • Heavily Ribbed Cast Iron Construction • Fully Ground Solid Ways with Turcite Surfaces • Precision Ground Double Anchored Ball Screws • Precision Ground Table Surface • Metal Way Covers in Front and Rear of Saddle • Box Ways on Column and Base • Manual Quill Operation Retained • Automatic Metered Lubrication with Low Lube Fault • High Torque 8:1 Back Gear • High Torque AC Digital Servo Drives • High Torque Vector Spindle Drive System • Front Panel Mounted Electronic Handwheel & Handwheel Controlled Program Execution • Programming & Machine Manuals in Electronic Format • LCD Hour Meter • Rigid Tap Option • Single Spare "M" Function with CNC "Wait" Channel 	<ul style="list-style-type: none"> • PC-based 7200 CNC includes 12 MB Parts Storage Memory • 12" LCD Active Matrix Color Display • Conversational plus G & M Code Programming including Coordinate Rotating, Scaling, Mirror Image, Thread Mill Engraving, Helical Interpolation, Auto Routines, & User definable Macros with Trig Assist, & Irregular Pocket Clearing • 3-D Part and Wire Frame Tool Path Graphics on Series 7200 Plus Solid Modeling Graphics on Series 8200 • 3.5" Floppy Drive / RS-232 with DNC Buffer (7200 CNC Only) • High Speed Processor 1200 Block/Sec • Optional Four & Five Axis Simultaneous Interpolation Software & Interface • Large Program Management Software (Allows Editing of 10 MB Files) • Auto DXF File Import • High Torque Closed Loop Vector Spindle Drive System • All Axes Laser Calibrated and Ballbar Inspected • Spindle Load Meter
CONVENIENCE PACKAGE	
Flood Coolant System with Programmable On/Off	
Safety Ring for Drive Dog on #40 Spindles	
Coolant Drip Pan	
Networking Option Includes 30 Days Phone Support	
Single Spare "M" Function and CNC "Wait" Channel	
End of Cycle Light	
Power Drawbar System	
Quill Position Readout	
Rear Splash Guards	
Work Lamp	
<i>Items may be purchased separately</i>	
PERFORMANCE PACKAGE	
Rigid Tap	
Edit Key Lock-out Switch	
Removable Table Chip Guard	
Newall MHG Quill Scale Position Readout with CNC Feedback to Update Tool Length Offsets (Requires Quill Readout in Convenience Package)	
Off-line FastCAM Software for Programming and Training	
Programmable Spray Mist <i>On/Off</i>	
<i>Items may be purchased separately</i>	
8200 CONTROL PACKAGE – Purchase as a Complete Package Only and Includes all the following:	
<ul style="list-style-type: none"> • Solid State Non-Volatile Memory Upgrade to 1 GB • Enhanced CPU Increases Block Processing Speed from 1200 to 2000 bps • Solid Model Graphics Functionality • USB Connectivity in lieu of 3.5" Floppy Disk Drive • High Speed Performance with Enhanced Jerk Control and Look Ahead • MT Connect Compliant 	
<p><i>3.5" Floppy Drive is replaced by USB. Do not combine with 256 MB Program Storage and Multi Format Flash Card Reader from other accessories. FastCAM Software replaced with 8200 Software. RS-232 Data transfer not available on 8200 control.. FastCAM Software purchased in Performance Package replaced with 8200 Software. SLS not available on 8200 control.</i></p>	

SPINDLE CONFIGURATIONS						
Specify Spindle Type for MB20				CT40		Standard
				BT40, NMTB40, DIN2080		Optional
ROTARY TABLE ACCESSORIES						
Rotary Tables <i>Includes 4th axis amp & motor</i> <i>Application may require riser</i>				6.5" (165 mm)		Optional
				9.0" (228 mm)		Optional
				10.0" (254 mm)		Optional
				5C Collet Table		Optional
Tail Stock for Rotary Table	6.5" (165 mm)	Optional	9.0" (228 mm)	Optional	10.0" (254 mm)	Optional
4 th Axis Servo Amplifier & Motor (Electrics only 0.9 kw motor, larger tables may require a larger motor) – Contact factory for 5 axes <i>Included with Rotary Table Accessory</i>					Optional	
<i>Milltronics will charge an engineering fee to interface a customer provided rotary table with the electrics only package. Charge will depend on table and engineering requirements</i>						
OTHER ACCESSORIES						
Upgrade to Solid State Non-Volatile Memory 256 MB Flash Card – 7200 Controls Only					Optional	
Multi Format Flash Card Reader – 7200 Controls Only					Optional	
Dual Electronic Handwheels					Optional	
4" Riser Block – <i>Not Removable</i>					Optional	
Spare "M" Functions - Block of 4 <i>Maximum 2 Blocks</i>					Optional	
<i>Digiscan Digitizing 3-D Software, Probe, Manuals - Not available with 8200 Control Package</i>					Optional	
RS-232 Cable, 50' 15 Meters					Optional	
Printed Programming Manual (Electronic Format Standard)					Optional	
Printed Machine Manual (Electronic Format Standard)					Optional	
Power Requirements 208-240 VAC, 50 – 60 hz, 3Ø					Standard	
380-480 Transformer (Reduces Voltage to 208-240) – 20 kVA <i>Factory Recommended Sizes. Consult Local Electrical Codes for Proper Transformer Sizing.</i>					Optional	
UL/CUL Compliance					Optional	
CE Code <i>Required for European Union Countries – Also Requires CE Table Guard</i>					Optional	
Export Handling Fee					Consult Factory	
Crating Charge					Consult Factory	
Two Year Parts Warranty <i>See Note</i>					Standard	
Factory Start-up and Training On Site, U.S. only					Optional	
Training at Milltronics <i>(Includes Lunches, Training, Materials and Manual)</i>					Optional	
<i>Terms within USA: Cash or terms with approved credit; down payment due with order. Terms outside USA: Cash or approved Letter of Credit FCA Waconia, Minnesota USA; Prices do not include taxes, duties, transportation, insurance, rigging or start-up. Milltronics reserves the right to amend or change without notice without incurring obligation; not responsible for typographical errors. Consult Written Warranty Statement for Details of Two Year Parts Warranty All sales of equipment, parts, software and service are subject to Milltronics' Standard Terms and Conditions of Sale.</i>						

For similar machines see the RH20, RH30, RH33 and RH35 toolroom bed style milling machines with rigid head and ATC.
Also see VKM4 knee mill machines with quill and Milltronics' patented MillSlide.

MB Toolroom Bed Mills with Quill Head Specifications



Effective June 01, 2011

Machine Model	MB20
Standard Control Type	Milltronics 7200 CNC
Optional Control Type	Milltronics 8200 CNC
Software	CNC or SLS
Number of Axes	3 (Opt 4 or 5)
Functions: <i>Automatic</i>	Auto operation of spindle start/stop, mist, flood, RPM
Functions: <i>Manual</i>	All functions are both manual or automatic, except back gear is manual shift
CAPACITY	
Standard Table Size	54 x 16" <i>1370 x 405 mm</i>
Table Travel - X Axis	40" <i>1015 mm</i>
Saddle Travel - Y Axis	20" <i>510 mm</i>
Head Travel - Z Axis	24" <i>610 mm</i>
Quill Travel <i>Worm gear style quill feed not available</i>	6" <i>152 mm</i>
Throat Distance <i>Spindle to Column</i>	21" <i>530 mm</i>
Spindle to Table Top - <i>Quill up</i>	3¾ - 27¾" <i>95 - 705 mm</i>
Maximum Table Load	2500 lb <i>1130 kg</i>
Machine Weight	7000 lb <i>3200 kg</i>
T Slots	(5) .63" <i>16 mm</i>
Saddle Width	46" <i>1160 mm</i>
Ball Screw Size: X,Y,Z Axis	32/40/40mm
Ball Screw Grade	C5
Ball Screw Pitch X,Y,Z	.2"
Head Swivel	±45°
SPINDLE	
Horsepower <i>1 minute / 30 minutes</i>	10 / 7.5 HP <i>7.5 / 5.5 kw</i>
High Torque Type (Manual Shift)	Back Gear
Spindle Speeds: <i>Low</i> (CNC Programmable)	60 - 500 RPM
Spindle Speeds: <i>High</i> (CNC Programmable)	500 - 4000 RPM
Standard Tool Holder Type <i>See note</i>	CT40
Optional Tool Holder Type <i>See note</i>	BT40 NMTB40 DIN2080
Quill Size	4.125" <i>104 mm</i>
PERFORMANCE	
Servo Type	AC Digital
Rapid Traverse	X,Y: 500 ipm <i>12 mpm</i> Z: 300 ipm <i>7.6 mpm</i>
Maximum Feedrate	300 ipm <i>7620 mmpm</i>
Position Accuracy <i>See note</i>	±0.00039" <i>0.01 mm</i>
Repeatability	0.0002" <i>0.005 mm</i>
Resolution	0.00004" <i>0.001 mm</i>
Thrust, Machine Duty Rating	X, Y: 3000 lb <i>1360 kg</i> Z: 4000 lb <i>1800 kg</i>
MISCELLANEOUS	
1/4 HP Flood Pump Capacity <i>Optional in Convenience Package</i>	7.5 Gal. <i>28 L</i>

Machine Model	MB20
Drawbar Air Pressure Required	80 psi <i>5.5 bar</i>
Power 208-240 VAC 50-60hz, 3Ø	30 amps 11 kVA
Power 400-440 VAC	Req. Transformer
Floor Space Requirement	129" x 78" <i>3280x1980 mm</i>
Warranty	Parts: Two years or 4200 hours, whichever occurs first on all normal failures. Service: One year or 2100 hours (whichever occurs first) from distributor.
<p><i>Note: Measurements performed with Renishaw laser and ballbar systems. Measurements are linear over entire travel. Temperature changes and table loads may affect tolerances. Tolerances are guaranteed over 10" sq. area. Centurion features covered under separate literature. For machine duty rating, see "Truth in Specifications" on www.milltronics.net. Milltronics reserves the right to change specifications at any time without incurring obligation.</i></p>	

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