

MM18 PRICING

MEDIUM DUTY BED MILLING MACHINE

Effective September 1, 2008

MM18

Customer Price – MM18 <i>Without Options or Packages</i>	\$29,980
Spindle Taper / RPM / Diameter	40 / 8000 / 60 mm
Spindle Horsepower 1 minute / 30 minute	12 / 10 HP 9 / 7.5 kw
Travel (XYZ")	30 x 18 x 18"

STANDARD ACCESSORIES

<ul style="list-style-type: none"> • Two Year Parts Warranty • Heavily Ribbed Cast Iron Construction • 35 mm Linear Rails <i>Not inverted</i> • Precision Ground Double Anchored Ball Screws • Precision Ground Table Surface • Metal Way Covers • Automatic Metered Lubrication with Low Lube Fault • High Torque AC Digital Servo Drives • High Torque Closed Loop Vector Spindle Drive System • #40, 8000 RPM Air Purged 60 mm Spindle • Work Lamp • Spindle Taper Blow-out and Tool Release Push Button • Fully Programmable Accessories including Spindle On/Off, Spindle RPM, and Accessories 	<ul style="list-style-type: none"> • PC-based CNC includes 2 MB Parts Storage Memory • 12" LCD Active Matrix Color Display • Conversational plus G & M Code Programming • 3-D Part and Wire Frame Tool Path Graphics on Series 7000 Plus Solid Modeling Graphics on Series 8000 when released • 6 MB Virtual Disk / RS-232 with DNC Buffer • High Speed Processor (7000 Series 1200 block/sec, 8000 Series 2000 blocks/sec) • Optional Four & Five Axis Simultaneous Interpolation Software & Interface • High Torque AC Digital Servo Drives • High Torque Closed Loop Vector Spindle Drive System • All Axes Laser Calibrated and Ballbar Inspected • Spindle Load Meter
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ACCESSORY PACKAGE A

Additional 10 MB Parts Storage (Total of 12 MB)	\$500
Coordinate Rotating, Scaling, Mirror Image, Thread Mill	800
3.5" Floppy Drive	500
Engraving, Helical Interpolation, Auto Routines, & User definable Macros with Trig Assist, & Irregular Pocket Clearing	1,200
Front Panel Mounted Electronic Handwheel plus Handwheel Controlled Program Execution	600
24 MB Program Execution Memory with Large Program Management Software (Allows editing of 10 MB files)	1,400
LCD Hour Meter	300
Auto DXF File Import	700
	List Total \$6,000
<i>Items may be purchased separately</i>	Package Price \$3,000

ACCESSORY PACKAGE B

Programmable On/Off Flood Coolant System	\$900
Rear Splash Guards	800
Coolant Drip Pan	1,100
Table Chip Guard	1,700
Rigid Tap	900
Networking Option Includes 30 Days Phone Support	900
Edit Key Lockout Switch	300
Offline FastCAM Software for Programming & Training	400
	List Total \$7,000
<i>Items may be purchased separately</i>	Package Price \$5,000

ACCESSORY PACKAGE C			
Retains All Features of the 7000 Series with Integrated Dual Boot to either Series			
Solid State, Non-Volatile Memory Upgrade to 256 MB*, Multi Format Flash Memory Card Device*			
Enhanced High Speed CPU Required to Run 8000 Series Software*			
High Speed Performance with Enhanced Jerk Control and Look Ahead			
Solid Model Graphics Functionality in Addition to Wire Frame			
USB Connectivity			
MTConnect compliant			
Linux Operating System			
Increases Block per Second From 1200 to 2000 Blocks per Second			
<i>Note: 8000 Series, Linux based software to be released early 2009</i>			
<i>Note: 8000 Series, Linux based software to be released early 2009</i>		List Total	\$7,000
<i>*Immediate Release</i>		Package Price	\$5,000
OTHER ACCESSORIES			
Specify Spindle type	CT40	Standard	
	BT40 or DIN69871	200	
16 Pocket Carousel Type ATC with Electronic Orient		6,900	
CE Table Chip Guard <i>Requires purchase of Pkg B</i>		400	
End of Cycle Light		300	
Spray Mist Programmable On/Off		500	
Off-line FastCAM Software for Programming and Training		400	
Rotary Tables (<i>Includes 4th axis amp & motor</i>)	6.5" (165 mm)	8,900	
	9.0" (228 mm)	10,900	
	5C Collet Table	10,900	
Tail Stock for Rotary Tables	6.5"	1,200	
	9.0"	1,400	
Spare "M" Functions – Block of 4 <i>Maximum 2 blocks; price is for each block</i>		400	
Dual Electronic Handwheels		1,200	
Remote Handwheel Unit		1,200	
Contact Tool Offset Probing with Macros		1,900	
Work Offset Probing with Macros		4,900	
Combo Pack – Contact & Work Tool Offset Probing with Macros		5,900	
Laser Tool Setter with Macros		4,900	
<i>Digiscan</i> Digitizing 3-D Software, Probe & Manual		3,900	
RS-232 Cable, 50' 15 Meters		100	
Additional Programming Manual		100	
Programming Manual in Electronic Format on CD		50	
Additional Machine Manual		100	
Power Requirements 208-240 VAC, 50 – 60 hz, 3Ø		Standard	
Optional Voltage 208-240 VAC, 50 – 60 hz, 1Ø <i>May reduce spindle power by up to 20%</i>	Without ATC	900	
	With ATC	1,600	
380-480 Transformer (Reduces Voltage to 208-240) – 20 kVA <i>Factory recommended sizes. Consult local electrical codes for proper transformer sizing.</i>		2,000	
CE Code <i>Required for European Union countries</i>		1,000	
International Packaging		1,000	
UL/CUL Compliant		1,200	
International Packaging		1,000	
Two Year Parts Warranty <i>See Note</i>		Standard	
Factory Start-up and Training On Site, U.S. only <i>Does not include airfare</i>		3,400	
Training at Milltronics <i>Includes lunches, training, materials and manual</i>		400	
<p><i>Terms in USA: Cash or terms with approved credit; down payment due with order. Terms outside USA: Cash or approved Letter of Credit</i></p> <p><i>F.O.B Waconia, Minnesota USA</i></p> <p><i>Milltronics reserves the right to amend or change without notice without incurring obligation; not responsible for typographical errors.</i></p> <p><i>Consult Written Warranty Statement for Details of Two Year Parts Warranty</i></p> <p><i>Prices do not include taxes, duties, transportation or rigging.</i></p> <p><i>All sales of equipment, parts, software and service are subject to Milltronics Standard Terms and Conditions of Sale.</i></p>			

MM18 SPECIFICATIONS

MEDIUM DUTY BED MILLING MACHINE

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MM18

Control Type	Milltronics CNC
Software	CNC or SLS
Number of Axes	3 (opt 4)
Spindle RPM	CNC Auto Prog. RPM
Functions <i>Automatic</i>	Spindle Start/Stop, Mist, Flood, RPM
CAPACITY	
Standard Table Size	35" x 16" <i>890 x 405 mm</i>
Table Travel X Axis	30" <i>760 mm</i>
Saddle Travel Y Axis	18" <i>460 mm</i>
Head Travel Z Axis	18" <i>460 mm</i>
Throat Distance <i>Spindle to Column</i>	18" <i>460 mm</i>
Spindle to Table Top	4 - 22" <i>100 - 560 mm</i>
Maximum Table Load	1000 lbs <i>450 kg</i>
Machine Weight	7000 lbs <i>3180 kg</i>
T Slots	(4) .63" <i>16 mm</i>
Saddle Width	56" <i>1420 mm</i>
Ball Screw Size: X, Y, Z Axis	32 mm
Ball Screw Grade	C5
Ball Screw Pitch X, Y, Z	8 mm
SPINDLE #40	
Spindle Cartridge Assembly with Three Bearings	60 mm
Spindle Horsepower <i>1 minute / 30 minutes</i>	12/10 HP <i>9/7.5 kw</i>
Reference Torque Chart:	12/10/1/B/Y
Standard Spindle RPM	50 - 8000
PERFORMANCE	
Servo Type	AC
Rapid Traverse	X, Y: 500 ipm <i>12 mpm</i> Z: 300 ipm <i>7.6 mpm</i>
Feedrate Range	300 ipm <i>7620 mmpm</i>
Position Accuracy <i>See note</i>	±0.0003" <i>0.0076 mm</i>
Repeatability <i>See note</i>	0.0002" <i>0.005 mm</i>
Resolution	.00004" <i>.001 mm</i>
Thrust, Machine Duty Rating	X, Y: 800 lb <i>360 kg</i> Z: 1600 lb <i>720 kg</i>

OPTIONAL AUTOMATIC TOOL CHANGER	
16 Pocket Automatic Carousel Tool Changer	Optional
Maximum Diameter / Length / Weight	4" / 11" / 10 lb <i>100mm/280mm/4.5kg</i>
Max. Length With Table Guard	8" <i>200 mm</i>
Tool Change Time	7 Sec.

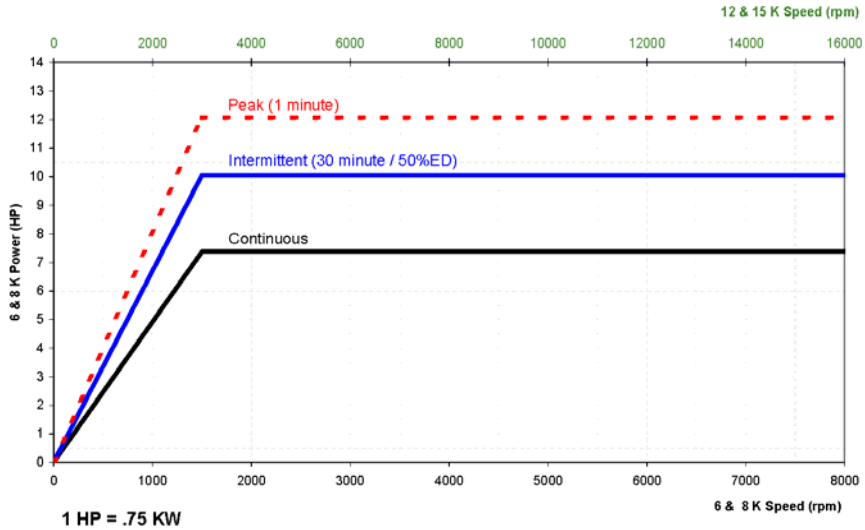
MISCELLANEOUS	
1/4 HP Flood Pump Capacity <i>Optional in Package B</i>	10 Gal. 40 L
Drawbar Air Pressure Required	100 psi 6.8 bar
Power Requirements 208-240 VAC, 50 – 60 hz, 3Ø	50 amps 19 kVA
Power 208-240 VAC, Single Phase	Optional
Power 380-480 VAC, 50 – 60 hz, 3Ø	Requires Transformer
Floor Space Requirement	110" x 78" 2800 x 1980 mm
Warranty	Parts: 2 Year (or 4200 hours, whichever occurs first) on all normal failures. Service: 1 Year (or 2100 hours, whichever occurs first) from distributor.
<p><i>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>	

For similar machines see the RH20, VM15, VM16 and VM20

Yaskawa Torque Chart 12/10/1/B/Y – Inline Spindle

Used on: Standard MM18
 Optional N/A

Power Characteristics of 12/10 HP Single Winding Motor
 for 6,000 and 8,000 RPM or 12,000 and 15,000 RPM



Torque Characteristics of 12/10 HP Single Winding Motor
 for 6,000 and 8,000 RPM or 12,000 and 15,000 RPM

