



Quality Machine Tools / Precision Matthews
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Quotation #

Date: 1/1/2017

Model PM-940-CNC

Heavy Duty Bed Type CNC Milling Machines

(For pricing, see page 4)

Main High Quality Features:

- **Induction Hardened Ways** for extra long life, normally unheard of in this class of machine. Up to 10X Machine Life with this feature when compared with machines with standard, non-hardened ways. **Be sure to check for this feature**
- **Automatic Way/Ball Screw Lubrication system is standard equipment**, coupled with the hardened ways, also greatly extends machine life
- **Exceptionally large travels** for a machine of this size/price range, X Axis has a Max Travel of 26-1/2", Y Axis Max Travel is 13", and Z Axis Max Travel is 20", with 21-1/2" Max Distance from Spindle to Table.
- **High Grade Castings**, with Dovetail Ways on X, Y, and Z Axis for rigid, Accurate Movements. X, Y, and Z Axes feature adjustable, tapered gibs for easy adjustment, to maintain accuracy throughout the machine's life.
- Heavy Duty Boxed Z Axis Column for better support
- Extra Wide 12-1/2" Y Axis Way Width for exceptional rigidity and support in table movements
- Ribbed Heavy Duty Castings used throughout, which provide a higher level of rigidity, which leads to faster cycle times, and greater accuracy.
- Heavy Duty Cast Iron Base provides a very stable platform, for more vibration dampening
- Machine runs on 220 Volt, Single Phase Power. No expensive industrial power supply or phase converters are needed.
- Machine uses the highly capable, yet very affordable Mach 3 Software, controlled through your Windows PC via connection by USB Cable
- Control Board is easily accessible and easy to change and reconfigure, for those users who would want to change to Mach 4 in the future. Conversion to other boards is also very easy to accomplish, if another control platform is desired - so the machine will not be outdated in a short time like many industrial machines with dedicated, sealed control units.
- High precision Inch Pitch BALL screws, (Not Acme Leadscrews like some) to greatly reduce backlash, for much better accuracy (5TPI Screws)
- High Precision R8 Spindle is supported by Precision Adjustable Tapered Roller Spindle Bearings, for longer life, and greater cutting capacity
- Available with either step speed changes by lever, or programmable variable speeds to suit the user's budget
- Longest in class 3 YEAR WARRANTY against defective parts, including electrical (excludes normal wear items)

Main Machine Specifications for PM-940-CNC

Model	PM-940-CNC 6 Speed	PM-45M-CNC-VS
Table Size	9-1/2" x 39-3/8"	
T Slot Number, and Size	3 Slots, Uses 14mm or trimmed 9/16" T Nuts	
X Axis Travel	21" With Full Way Support, 26-1/2" Stop to Stop	
Y Axis Travel	10-3/4" With Full Way Support, 13" Stop to Stop	
Z Axis Travel (Head)	17" With Full Way Support, 20" Stop to Stop	
	(Travels shown above as stop to stop are full usable travels of the machine)	
Width of Way Surface	X Axis 9-1/2", Y Axis 12-1/2", Z Axis 7-1/2"	
Min/Max. Distance, Spindle to Table	1-1/2" / 21-1/2"	
Max Distance Spindle to Column	11" to Z Axis way covers, 12-1/4" to Z Axis way surface	
Quill Travel	5"	
Leadscrew Type	High Precision Ground Ball Screws Class P4, Anti Backlash	
Leadscrew Pitch	.200" (5 Threads Per Inch)	
Dial Graduations on Handwheels	.001" (.200" Per Turn)	
Spindle Taper	R-8	
Spindle Speed Range	90-1920 RPM (6 steps)	90-3200 RPM (Variable, 2 steps)
Spindle Bearing Type	Precision Tapered Roller Bearings, Fully Adjustable	
Spindle Bearing Class	C5	
Main Motor H.P.	2 HP	2 HP
Overall Height, Head Fully Up (Limit switch position can be lowered for low ceilings to set max height at 84", but some Z travel will be lost)	86"	90"
Height with head at normal working height	84"	84"
Depth	Front to back, rear of machine to front of Y axis handle 34-1/2"	
Width	Table Total Length, end of X Motor to X Handle 54-1/2"	
Base Dimensions, At Floor	27"x18-1/2"	
Net Weight	1400 LBS	1400 LBS
Voltage / Phase	220 Volt 1 Phase, 15 Amps Max (220V 20 Amp Circuit)	
Warranty	3 Years	
Shipping Dimensions LxWxH	Ships in 2 pieces, stand is separate from machine, Main Machine Crate is 46"Wx46"Dx57"H 1100 LBS, Base Crate is 26"Wx36"Dx26"H 400 LBS	

CNC Specifications for PM-940-CNC

CNC Control System	Mach 3, powered by user supplied Windows PC, connected by USB Cable to machine
Breakout Board	Jamen JNC-40
X Axis Drive Motor Type, Power	Stepper, NEMA 34, 640 Oz 6.0 Amps/phase 200 Steps/Rev
Y Axis Drive Motor Type, Power	Stepper, NEMA 34, 640 Oz 6.0 Amps/phase 200 Steps/Rev
Z Axis Drive Motor Type, Power	Stepper, NEMA 34, 1200 Oz 6.0 Amp/phase 200 Steps/Rev
X Axis Home Position Setting / Safety Stop	Home/Limit Switch
Y Axis Home Position Setting / Safety Stop	Home/Limit Switch
Z Axis Home Position Setting / Safety Stop	Home/Limit Switch
Max Feed Rate, X Axis	100 IPM (Inches per minute)
Max Feed Rate, Y Axis	100 IPM
Max Feed Rate, Z Axis	75 IPM
Spindle Speed Control Method, PM-940-CNC (6 speed)	Manual, stop machine, shift speed, start machine
Spindle Speed Control Method, PM-940-CNC-VS (Variable Speed)	Programmable, controlled with CNC Software, with manual changes for High/Low Range. 90-980 RPM Programmable in Low Range, 1000-3200 RPM Programmable in High Range

Pricing

Model	PM-940-CNC	PM-940-CNC-VS
Full 3 axis CNC Milling Machine with Standard Equipment, Including: 1. Hardened and Ground Ways on all 3 axes 2. Automatic Lubrication System for Ways and Ball Screws 3. Cast Iron Base 4. Coolant System 5. Way Covers 6. Drawbar 7. 3 Year Warranty	\$6,999.00	\$7,999.00

Optional Equipment Listed Below

4 th Axis, Wired in to machine, complete with step driver installed, includes 6" Rotary table with chuck, and Tailstock (order with machine only, not sold later)	\$1,299.00
52 Pc. Clamp Set (High Quality)	\$59.99
4" Std. Precision Milling Vise with Swivel Base	\$89.97
4" High Precision Milling Vise, with Swivel Base	\$249.99
5" High Precision Milling Vise, with Swivel Base	\$269.00
R-8 Collet Set, 11 Pc, .0005" TIR	\$59.99

Valid: 30 Days

Delivery: PM-940-CNC-VS in stock Jan 5th 2017, PM-940-CNC 6 speed special order only (12-14 weeks)

Shipping: \$299 shipping in the USA, Lift Gate Delivery is an additional \$49 if needed.

Sincerely,
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