

VM SERIES



MILLTRONICS
C N C M A C H I N E S

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Designed, built and supported by American craftsmen 

VM SERIES

Milltronics offers a variety of vertical machining centers and accessories to satisfy the simplest to the most demanding applications. But every base VM model shares a few key features that make it uniquely Milltronics', like our CNC controller, our thermal compensation system and the inverted rail between the table and the saddle. These standard features set our VM series apart in the industry.



VM15



VM16



VM20



VM22



VM25



VM30

WHY MILLTRONICS

Milltronics produces machines that meet customer demands for higher speeds, tighter tolerances, tremendous reliability, low maintenance, quick delivery and incredible value. Our people lead our business by focusing on quality, customer service and innovation. All our machines are proudly built in America by skilled craftsmen, with high quality components to guarantee our foremost commitment to reliability. In fact, the name of every employee is attached to our machines upon completion. Milltronics focuses on delivering quality and value. We are an industry leader, offering customers increased productivity through our easy-to-use Milltronics CNC control. Our machines are comparable in quality to those costing twice as much, yet offer better value every time. When you work with Milltronics, you know you're getting a quality machine from people who care about what they build.

TWO YEAR WARRANTY

Milltronics believes in our product enough to offer a standard TWO YEAR parts warranty on all of our machines.

VM STANDARD FRAMES/40 TAPER

VM15 | VM15XT | VM16 | VM16XT | VM20 | VM20XT

The VM15, VM15XT, VM16, VM16XT, VM20, and VM20XT make up our family of standard frames. All standard frames have heavily ribbed castings to provide superior dampening for high speed machining and aggressive milling. They include wide casting footprint, massive table, true servo type spindle drive, heavy gauge metal enclosure, automatic lubrication and more. Extended travel designs offer additional flexibility.



VM HEAVYWEIGHTS/40 TAPER

VM22 | VM25 | VM25XT | VM30 | VM30XT

The VM22, VM25, VM25XT, VM30, and VM30XT are all designed with heavyweight, oversize columns and bases with massive ribbing to accommodate large, heavy workpieces with ease. Saddle travels up to 30" and table travels up to 60". All VMs can be configured with riser blocks if you need even more room under the spindle. VM heavyweights come with a #40 spindle.



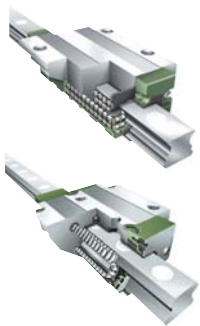
VM EXTREME HEAVYWEIGHTS/50 TAPER

VM22XP | VM25XP | VM30XP

The VM22XP, VM25XP and VM30XP have the "extra power" to handle your toughest workpieces. These models come standard with heavy duty linear roller ways, 90 mm #50 spindle, a 32 pocket arm ATC, and a large, two speed spindle drive with the option of adding a gear box for even more torque.



VM30XP EXTRAS



Roller ways have more surface contact between the rail and roller than typical ball ways. This increased surface contact adds 44% more rigidity to the machine tool.



The two speed gear box gives superior cutting torque at any RPM. Combining a two range gear box and two speed motor provides 1000 ft/lbs of low RPM torque in three ranges. An 8000 RPM spindle offers high speed machining capabilities as well.

DESIGN

Milltronics offers the best in machining technology, holding every machine to the highest industry standards. Our machines are subjected to stringent ballbar test certification and factory laser axis calibration, and correction tables are automatically loaded into the control.

All VM models are designed using the latest Solid Modeling techniques and further undergo Finite Element Analysis (FEA) for cost efficiency while maintaining structural integrity. Multiple inspections during machine construction, including a comprehensive final inspection with factory ballbar and laser certification, ensure high value, quality machining centers.



INVERTED RAIL

Unlike competitor machine designs, our unique inverted rail concept is standard on all VM models and offers superior rigidity for increased cutting performance. Linear rails and bearing blocks are mounted on precision ground surfaces to further dampen cutting vibrations while keeping the machine spindle equally centered within the bearing block support area throughout the entire X-axis travel.

FEATURES

Electrical

- Enclosures are NEMA standard and sealed
- High-performance digital servos and spindle motors with matched drives
- Standard full line regeneration
- Enclosures are built with a heavy gauge sheet metal and include high illumination, watertight fluorescent tube lighting

Castings

- Heavily ribbed castings inside and out with integrated ribs going from the top to the base of the columns

Manufacturing Characteristics

- Structural finite element analysis of all major components and assemblies
- Precision-ground mating surfaces
- Hand-scraped column geometry
- Unique X-axis traversing waycovers require a smaller footprint, with single piece through-column Y-axis waycover

Spindle

- Integral circulating coolant jackets in head casting
- 5-bearing spindle cartridges with all angular bearings
- Labyrinth seal spindle cartridges with air purge to protect against contaminants

ALL MODELS ARE AVAILABLE IN
A VARIETY OF CONFIGURATIONS
BUILT YOUR WAY

STANDARD AND OPTIONAL FEATURES

Feature	Standard	Optional
Spindle RPM	8,000	15,000
Spindle Size	60mm	Heavy Duty 70mm or 50 Taper 90mm
Spindle HP	High Power	Many Upgrade Options Available
Spindle Configuration	Belted	Direct Coupled In-line
Chip Removal	Drawers	Auger or Conveyor
Rapid Velocity	1000 ipm	1600 ipm
Linear Guideways	Ball Type	Roller Type
ATC Style	Carousel	Double Arm
ATC # Tools	16	24 or 40
Parts Storage	12MB	256MB
# Axes	3	4 or 5

ADDITIONAL ADD-ON OPTIONS

MACHINE OPTIONS

Part, Tool and Workpiece probing
Rotary Tables
Increased Horsepower Options
Coolant Through the Spindle - 300 or 700 psi
Thermal growth compensation (patent pending)
Pressurized lube for abrasive milling
Riser Block for Extra Z Clearance
Extended Travels on Most Models

CONTROL OPTIONS

Ethernet Networking
Multi-Format Flash Memory Readers
Digitizing
"S" Curve Accel/Decel Ramp Modifier
DXF Importation
Offline Software
Remote Handwheel
"Trig" Assist

INLINE SPINDLE CONFIGURATION



All VM models except for the XP models are available in an inline direct coupled spindle configuration. This technology offers improved performance by eliminating pulleys and belts. This design reduces inertia, vibration and head heating thereby improving part finish, tolerances and ramping time. Inline spindles are available for most models in 10,000 RPM and 15,000 RPM, and are available to support coolant through the spindle.

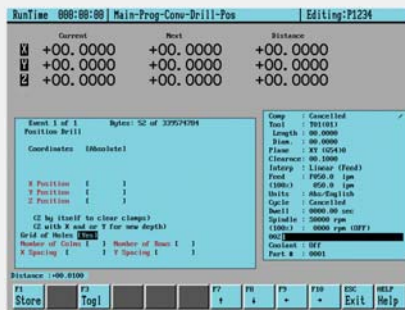
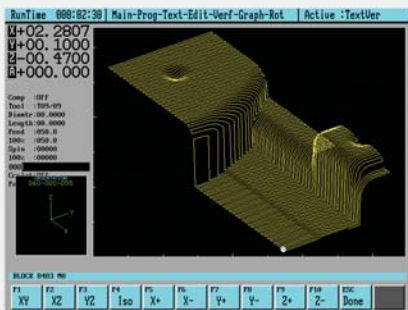
CENTURION CNC CONTROL

The Milltronics CNC control blends ease of use with features and performance demanded by the most sophisticated workshops. New operators can be quickly trained and productive in no time with Conversational programming, on screen Help, intuitive menus, color graphics, prompted tool setting routines and more. A unique and powerful "Trig Help" feature even eliminates need for shop floor calculations. Sophisticated workshops will welcome the 1ms processing speed, 255 move look ahead, networking capability, large program storage, memory card readers, probing cycles and industry standard G & M code format.



FEATURES

- 1 ms Block Speed
- 12 MB Program Storage
- 12" Color Screen and Graphics
- "Trig Help" Function
- Up to 5 Axes
- DXF Importation
- Network Capability
- Memory Card Reader
- Conversational Programming
- Concurrent Programming
- Handwheel Run Verify
- Industry Compatible EIA/ISO G & M Code Format



MACHINE SPECIFICATIONS

VM SMALL FRAMES #40 SPINDLE MODELS STANDARD | XT EXTENDED TRAVEL

VM15 and VM15XT

Table size	40" x 16"	1015 x 405mm
Travel	25" x 16" x 20"	635 x 405 x 510mm
Optional travel	30" x 16" x 20"	760 x 405 x 510mm
Horsepower	12/10	9/7.5 kw
Optional HP	18/12	13/9 kw
ATC options	16, 24 carousel or arm style	
Weight	8,600 lbs	3900 kg

VM16 and VM16XT

Table size	45" x 16"	1150 x 405mm
Travel	30" x 16" x 20"	760 x 405 x 510mm
Optional travel	30" x 16" x 26"	760 x 405 x 660mm
Horsepower	18/12	13/9 kw
Optional HP	24/15	18/11 kw
ATC options	16, 24 carousel or arm style	
Weight	9,000 lbs	4000 kg

VM20 and VM20XT

Table size	34" x 20"	864 x 510mm
Optional Table	45" x 20"	1150 x 510mm
Travel	30" x 20" x 26"	760 x 510 x 660mm
Optional travel	40" x 20" x 26"	1015 x 510 x 660mm
Horsepower	24/15	18/11 kw
Optional HP	24/15 Dual Spd	18/11 kw Dual Spd
ATC options	24 carousel, 16 or 24 arm style	
Weight	10,000 lbs	4545 kg

VM LARGE FRAMES #40 SPINDLE MODELS STANDARD | XT EXTENDED TRAVEL

VM22

Table size	45" x 24"	1150 x 610mm
Travel	40" x 22" x 26"	1015 x 560 x 660mm
Optional travel	N/A	N/A
Horsepower	24/15	18/11 kw
Optional HP	24/15 Dual Spd	18/11 kw Dual Spd
ATC options	24 carousel or arm style	
Weight	16,000 lbs	7300 kg

VM25 and VM25XT

Table size	56" x 24"	1420 x 610mm
Optional Table	66" x 26"	1680 x 660mm
Travel	50" x 25" x 24"	1270 x 635 x 610mm
Optional travel	60" x 25" x 24"	1524 x 635 x 610mm
Horsepower	24/15 Dual Spd	18/11 kw Dual Spd
Optional HP	35/25 Dual Spd	26/18 kw Dual Spd
ATC options	24 carousel or 24 and 40 arm style	
Weight	19,000 lbs	8600 kg

VM30 and VM30XT

Table size	56" x 24"	1420 x 610mm
Optional Table	66" x 26"	1680 x 660mm
Travel	50" x 30" x 24"	1270 x 760 x 610mm
Optional travel	60" x 30" x 24"	1524 x 760 x 610mm
Horsepower	24/15 Dual Spd	18/11 kw Dual Spd
Optional HP	35/25 Dual Spd	26/18 kw Dual Spd
ATC options	24 carousel or 24 and 40 arm style	
Weight	20,000 lbs	9000 kg

VM LARGE FRAMES #50 SPINDLE MODELS (EXTENDED POWER) STANDARD | XT EXTENDED TRAVEL

VM22XP

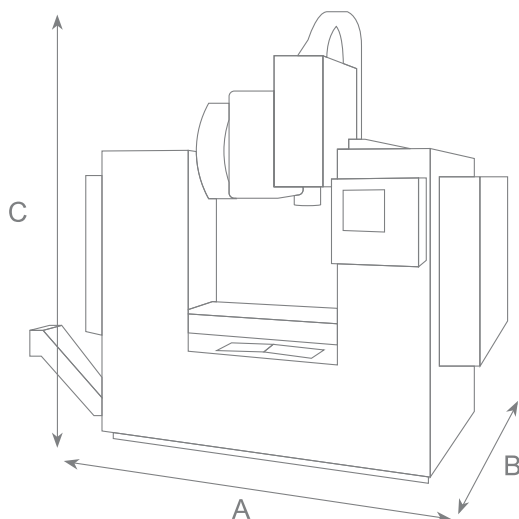
Table size	45" x 24"	1150 x 610mm
Travel	40" x 22" x 26"	1015 x 560 x 660mm
Optional travel	N/A	N/A
Horsepower	24/15	18/11 kw
Optional HP	35/25	26/18 kw
ATC options	32 pocket arm style	
Weight	18,000 lbs	8170 kg

VM25XP and VM25XPXT

Table size	56" x 24"	1420 x 610mm
Optional Table	66" x 26"	1680 x 660mm
Travel	50" x 25" x 24"	1270 x 635 x 610mm
Optional travel	60" x 25" x 24"	1524 x 635 x 610mm
Horsepower	24/15	18/11 kw
Optional HP	35/25	26/18 kw
ATC options	32 pocket arm style	
Weight	21,000 lbs	9500 kg

VM30XP and VM30XPXT

Table size	56" x 24"	1420 x 610mm
Optional Table	66" x 26"	1680 x 660mm
Travel	50" x 30" x 24"	1270 x 760 x 610mm
Optional travel	60" x 30" x 24"	1524 x 760 x 610mm
Horsepower	24/15	18/11 kw
Optional HP	35/25	26/18 kw
ATC options	32 pocket arm style	
Weight	22,000 lbs	10,000 kg



MODEL

A

B

C

MODEL	A	B	C
VM15	92"	90"	114"
VM16	92"	90"	114"
VM16XT	92"	90"	120"
VM20	92"	90"	120"
VM20XT	112"	90"	120"
VM22	125"	109"	120"
VM25	144"	113"	120"
VM25XT	192"	113"	120"
VM30	144"	116"	120"
VM30XT	192"	116"	120"

Auger and conveyor may add width. XP Models may add depth.

Visit www.milltronics.net for complete specifications and footprints.



VM SERIES



RW SERIES



TT SERIES



MM SERIES



RH SERIES



BR SERIES



ML SERIES



SL SERIES



HM SERIES

ABOUT US

Milltronics has designed and manufactured quality CNC machines for the metal cutting industry for over 30 years. Milltronics markets its 50+ diverse product models under three divisions: Milltronics CNC Machines, Partner Machines, and International Machine Tools. We are a growing, family owned and operated company based in Minnesota, and a division of Liberty Diversified, Inc.

