

VMXP Vertical 50 Taper Linear Way Machining Center



Effective June 1, 2011

Machine Model	VM22XP	VM25XP	VM30XP
Standard Travel (XYZ")	40 x 22 x 26	50 x 25 x 24	50 x 30 x 24
Extended Travel Option (XYZ")	N/A	60 x 25 x 24	60 x 30 x 24
Spindle Taper	#50	#50	#50
ATC Type	32 Arm	32 Arm	32 Arm
Flood Coolant with Tank and 6 Nozzles	Standard	Standard	Standard
Lubrication	Autolube	Autolube	Autolube
Linear Roller Ways	X, Y: 35 mm, Z: 45 mm	X: 35 mm, Y,Z: 45 mm	X: 35 mm, Y,Z: 45 mm
Horsepower Standard 1 minute / 30 minutes	Two Speed 24/15 hp 18/11kw	Two Speed 24/15 hp 18/11kw	Two Speed 24/15 hp 18/11kw
Horsepower Option 1 minute / 30 minutes	Two Speed 35/25 hp 26/18 kw	Two Speed 35/25 hp 26/18 kw	Two Speed 35/25 hp 26/18 kw
Spindle Size / RPM	90 mm / 8000	90 mm / 8000	90 mm / 8000
Optional Gear Box	3 Spd Gear Box	3 Spd Gear Box	3 Spd Gear Box

MACHINE FEATURES

- Two Year Parts Warranty
- Massive Heavily Ribbed Machine Tool Grade Cast Iron Construction
- Precision Ground Table, Rail and Rail Block Mounting Surfaces
- Auger Style Chip Removal System with Optional Conveyor
- Inverted Rail Table Designs Keeps Bearing Blocks Centered Under Spindle
- Soft Start High Speed Way Covers
- Heavy Duty Enclosure with Work Light & Overhead Loading Capability
- Wide Side Doors for Cleaning or Long Parts
- Precision Ground Double Anchored Ball Screws With
- 32 Pocket Double Arm ATC
- High Torque Vector Spindle Drive with Automatic Shift on Two Speed Motors
- Dampening blocks Z Axis
- Five Bearing Air Purged 8,000 RPM Spindle Cartridge Assembly
- High Torque AC Digital Servo Drives
- Spindle Taper Blow-out and Tool Release Push Button
- Chip Wash Down System
- Six Nozzle Flood Coolant System Including Through Head Cooling with Flow Valve
- Electronic Spindle Orient and Rigid Tap

CONTROL FEATURES

- PC-based 7200 CNC includes 12 MB Parts Storage Memory
- 12" LCD Active Matrix Color Display
- Optional 4 or 5 Axes Simultaneous Interpolation Software and Interface
- 3-D Part and Wire Frame Tool Path Graphics on Series 7200 Plus Solid Modeling Graphics on Series 8200
- 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
- Auto DXF File Import
- Spindle Load Meter
- Front Panel Electronic Handwheel with Handwheel Feed
- Single Spare "M" Function and CNC "Wait" Channel
- 3.5" Floppy Drive / RS-232 with DNC Buffer (7200 CNC Only)
- Auxiliary Keyboard Port for PC Keyboard with Optional Tray
- End of Cycle Light
- Off-line FastCAM Software for Programming and Training
- Edit Key Lock-Out Switch
- All Axes Laser Calibrated and Ballbar Inspected
- Networking Includes 30 Day Phone Support
- Large Program Management Software (Allows Editing of 10 MB Files)
- Programming & Machine Manuals in Electronic Format
- LCD Hour Meter

8200 CONTROL PACKAGE – Purchase as a Complete Package Only and Includes all the following:

- 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

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.

OTHER ACCESSORIES		ALL XP MODELS
Upgrade to Solid State Non-Volatile Memory 256 MB Flash Card – 7200 Controls only		Optional
Multi Format Flash Card Reader – 7200 Controls only		Optional
Thermal Ball Screw Compensation on X and Y Axis		Optional
Thermal Ball Screw Compensation on Z Axis		Optional
ZF Automatic Shift Gear Box <i>Offers three speed ranges in conjunction with two speed motor</i>		Optional
35/25 HP 26/18 kw Two Speed Spindle Motor Upgrade		Optional
Programmable Spray Mist <i>On/Off</i>		Optional
Programmable Air Blast		Optional
PC Keyboard Tray		Optional
Chip Bucket for Chip Auger or Conveyor		Optional
Remote Handwheel Unit		Optional
#50 BT Type Tool Holders		Optional
Coolant Through Spindle – 700 PSI High Pressure System – <i>Includes drawbar assembly for ANSI retention knobs & rotary coupling.</i>		Optional
Coolant Through Spindle – 300 PSI Low Pressure System – <i>Includes drawbar assembly for ANSI retention knobs & rotary coupling.</i>		Optional
Coolant Through Spindle Ready Kit - <i>Includes drawbar assembly for ANSI retention knobs and rotary coupling. Does not include pumps or external coolant tank or electrical interface</i>		Optional
Pressurized Air/Oil Purge System for Ball Screws and Bearing Blocks		Optional
Rotary Tables <i>Includes 4th axis amp & motor Application may require riser</i>	9.0" (228 mm)	Optional
	10.0" (254 mm)	Optional
Tail Stock for Rotary Table	9.0" (228 mm)	Optional
	10.0" (254 mm)	Optional
4 th Axis Servo Amplifier & Motor (Electricians 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 electricians only package. Charge will depend on table and engineering requirements</i>		
Electronic Spindle Chiller Loop		Optional
Chip Conveyor in Lieu of Chip Auger		Optional
Column Riser Block	Column 4" <i>100 mm Not removable</i>	Optional
	Column 6" <i>150 mm Not Removable</i>	Optional
Spare "M" Functions – Block of 4 <i>Maximum 2 blocks; price is for each block</i>		Optional
Contact Tool Offset Probing with Macros		Optional
Work Offset Probing with Macros		Optional
Combo Pack – Contact & Work Tool Offset Probing with Macros		Optional
Laser Tool Setter		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
Power Requirements 208-240 VAC, 50 – 60 hz, 1Ø		N/A
380-480 Transformer (Reduces Voltage to 208-240) - <i>Factory recommended sizes. Consult local electrical codes for proper transformer sizing.</i>	20 kVA	Optional
	40 kVA for 35 HP	Optional
UL/CUL Compliance		Optional
CE Code <i>Required for European Union Countries</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
<p><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.</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>All sales of equipment, parts, software and service are subject to Milltronics' Standard Terms and Conditions of Sale.</i></p>		

VMXP Vertical 50 Taper Linear Way Machining Center Specifications



Effective June 1, 2011

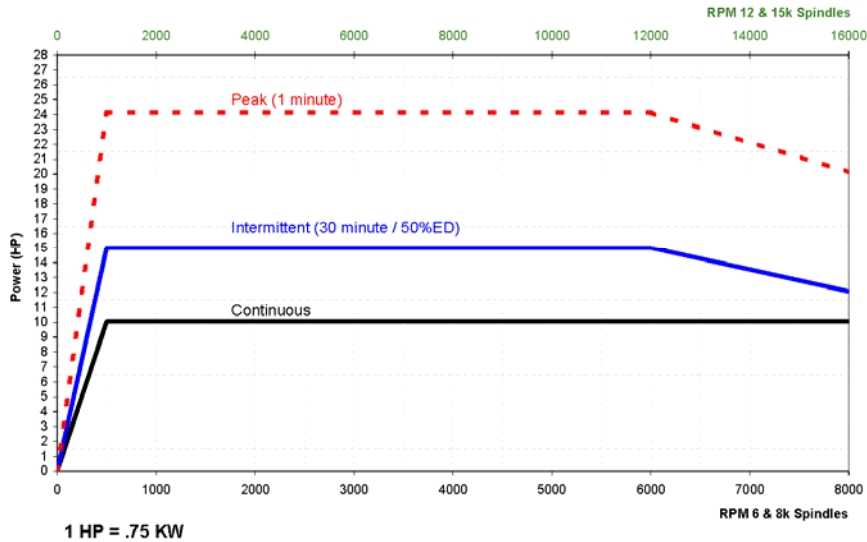
Machine Model	VM22XP	VM25XP	VM30XP
Standard Control Type	Milltronics 7200 CNC	Milltronics 7200 CNC	Milltronics 7200 CNC
Optional Control Type	Milltronics 8200 CNC	Milltronics 8200 CNC	Milltronics 8200 CNC
Number of Axes	3 (Opt 4 or 5)	3 (Opt 4 or 5)	3 (Opt 4 or 5)
CAPACITY			
Table Size	45" x 24" <i>1150 x 610 mm</i>	56" x 24" <i>1420 x 610 mm</i>	56" x 24" <i>1420 x 610 mm</i>
Option Table Size – Extended Travel	N/A	66" x 26" <i>1680 x 660 mm</i>	66" x 26" <i>1680 x 660 mm</i>
Standard Table Travel X	40" <i>1015 mm</i>	50" <i>1270 mm</i>	50" <i>1270 mm</i>
Optional Extended Table Travel – X	N/A	60" <i>1524 mm</i>	60" <i>1524 mm</i>
Saddle Travel Y	22" <i>560 mm</i>	25" <i>635 mm</i>	30" <i>760 mm</i>
Head Travel Z	26" <i>660 mm</i>	24" <i>610 mm</i>	24" <i>610 mm</i>
Throat Distance – Spindle to Column	23" <i>580 mm</i>	25" <i>635 mm</i>	30" <i>760 mm</i>
Spindle To Table Top <i>Optional Column Risers increase dimensions by 4" 100 mm or 6" 150 mm</i>	4.25" - 30.25" <i>110 - 770 mm</i>	4" - 28" <i>100 - 770 mm</i>	4" - 28" <i>100 - 770 mm</i>
Maximum Table Load with Linear Roller Ways	4000 lb <i>1810 kg</i>	5000 lb <i>2260 kg</i>	5000 lb <i>2260 kg</i>
Machine Weight	18,000 lb <i>8170 kg</i>	21,000 lb <i>9500 kg</i>	22,000 lb <i>10,000 kg</i>
T Slots	(5) .63 <i>16 mm</i>	(5) .63 <i>16 mm</i>	(5) .63 <i>16 mm</i>
Ball Screw Grade	C5	C5	C5
Ball Screw Diameter: X, Y, Z	1.25"	1.5"	1.5"
Ball Screw Pitch: X, Y, Z Lead	10 mm	10 mm	10 mm
Ball Screw Pitch - Optional 60" X Axis Only	N/A	16 mm	16 mm
Premier Series Linear Way Type and Size	X, Y 35 mm Roller Z 45mm Roller	X 35 mm Roller YZ 45mm Roller	X 35 mm Roller YZ 45mm Roller
SPINDLE – #50			
Standard Horsepower <i>1 minute / 30 minutes</i> Reference Torque Chart:	Two Speed 24/15 HP <i>18/11 kw</i> 24/15/2/B/Y		
Optional Horsepower <i>1 minute / 30 minutes</i> Reference Torque Chart:	Two Speed 35/25 HP <i>26/18.5 kw</i> 35/25/2/B/Y		
Optional High Torque System With 24 HP Reference Torque Chart: With Optional 35 HP Reference Torque Chart:	3 Speed Gear Box 24/15/2/G/Y 35/25/2/G/Y		
Standard Spindle Size	90 mm	90 mm	90 mm
Standard Spindle RPM	50 - 8000	50 - 8000	50 - 8000
Spindle Range with Optional Gear Box	Low	0 – 375	0 – 375
	Mid	376 – 2000	376 – 2000
	High	2001 – 8000	2001 – 8000
Tool Holder Type	CT50 or BT50	CT50 or BT50	CT50 or BT50
COOLANT THROUGH SPINDLE			
Coolant Through Spindle Option (CTS) <i>Requires ANSI Retention Knob and 70 mm Spindle</i>	300 or 700 psi <i>20 or 48 bar</i>	300 or 700 psi <i>20 or 48 bar</i>	300 or 700 psi <i>20 or 48 bar</i>
CTS – Pump Filtration	11 Micron	11 Micron	11 Micron
CTS – Additional Coolant Capacity <i>Uses Standard Flood Tank for 300 psi System</i>	118 Gal <i>450 L</i>	118 Gal <i>450 L</i>	118 Gal <i>450 L</i>
CTS – Flow Rate	5 gal/min <i>19 L/min</i>	5 gal/min <i>19 L/min</i>	5 gal/min <i>19 L/min</i>
CTS – Pump HP	5 HP <i>3.7 kw</i>	5 HP <i>3.7 kw</i>	5 HP <i>3.7 kw</i>
AUTOMATIC TOOL CHANGER			

Machine Model	VM22XP	VM25XP	VM30XP
Standard Double Arm ATC – Number of Pockets	32	32	32
Tool Changer Time – Tool to Tool	7.5 Seconds	7.5 Seconds	7.5 Seconds
Maximum Tool Diameter – <i>Over 4" dia tool requires adjacent empty pockets</i>	4" <i>100 mm</i> or 5" <i>125 mm</i>	4" <i>100 mm</i> or 5" <i>125 mm</i>	4" <i>100 mm</i> or 5" <i>125 mm</i>
Maximum Tool Length / Weight	9" / 25 lb <i>230 mm / 12 kg</i>	11" / 25 lb <i>280 mm / 12 kg</i>	11" / 25 lb <i>280 mm / 12 kg</i>
PERFORMANCE			
Servo Type	Digital, AC Brushless	Digital, AC Brushless	Digital, AC Brushless
Rapid Traverse Rate	1000 ipm <i>25 mpm</i>	1000 ipm <i>25 mpm</i>	1000 ipm <i>25 mpm</i>
Maximum Feedrate – Part Dependent	500 ipm <i>12.7 mpm</i>	500 ipm <i>12.7 mpm</i>	500 ipm <i>12.7 mpm</i>
Positioning Accuracy ^{see note}	±0.0002" <i>0.005 mm</i>	±0.0002" <i>0.005 mm</i>	±0.0002" <i>0.005 mm</i>
Positioning Repeatability ^{see note}	.00015" <i>0.0038 mm</i>	.00015" <i>0.0038 mm</i>	.00015" <i>0.0038 mm</i>
Feedback Resolution	0.00004" <i>0.001 mm</i>	0.00004" <i>0.001 mm</i>	0.00004" <i>0.001 mm</i>
Axis Thrust, Machine Duty Rating	X, Y: 1500 lbs <i>680 kg</i> Z: 5000 lb <i>2270 kg</i>	X, Y: 2300 lb <i>1000 kg</i> Z: 5000 lb <i>2270 kg</i>	X, Y: 2300 lb <i>1000 kg</i> Z: 5000 lb <i>2270 kg</i>
MISCELLANEOUS			
Flood Capacity	70 gal. <i>266 L</i>	70 gal. <i>266 L</i>	70 gal. <i>266 L</i>
Drawbar Air Pressure Required	100 psi <i>6.8 bar</i>	100 psi <i>6.8 bar</i>	100 psi <i>6.8 bar</i>
Power 208-240 VAC 50-60hz, 3Ø	24 HP Spindle Motor	50 amps 19 kVA	50 amps 19 kVA
	35 HP Spindle Motor	100 amps 38 kVA	100 amps 38 kVA
Power 400-440 VAC	Req Transformer	Req Transformer	Req Transformer
Floor Space Requirement – Standard <i>Minimum required with no options</i>	124" x 109" <i>3150 x 2770 mm</i>	144" x 113" <i>3660 x 2870 mm</i>	144" x 116" <i>3660 x 2950 mm</i>
Floor Space Requirement – Extended Travel <i>Minimum required with no options</i>	N/A	187" x 113" <i>4750 x 2870 mm</i>	187" x 116" <i>4750 x 2950 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.</i></p> <p><i>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>			

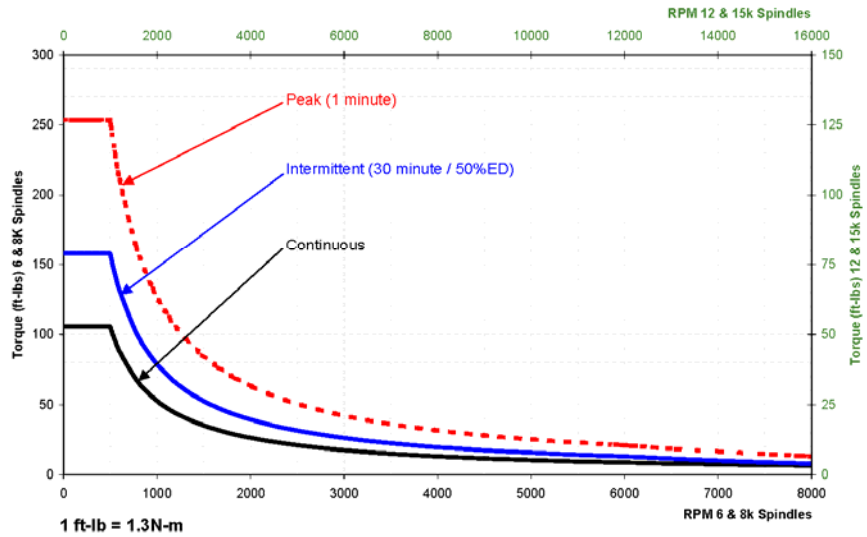
Yaskawa Torque Chart 24/15/2/B/Y – Belted Spindle

Used on: Standard VM22XP, VM25XP, VM30XP
 Optional N/A

Power Characteristics of 24/15 HP WYE Delta Motor
 for 6,000 and 8,000 RPM or 12,000 and 15,000 RPM



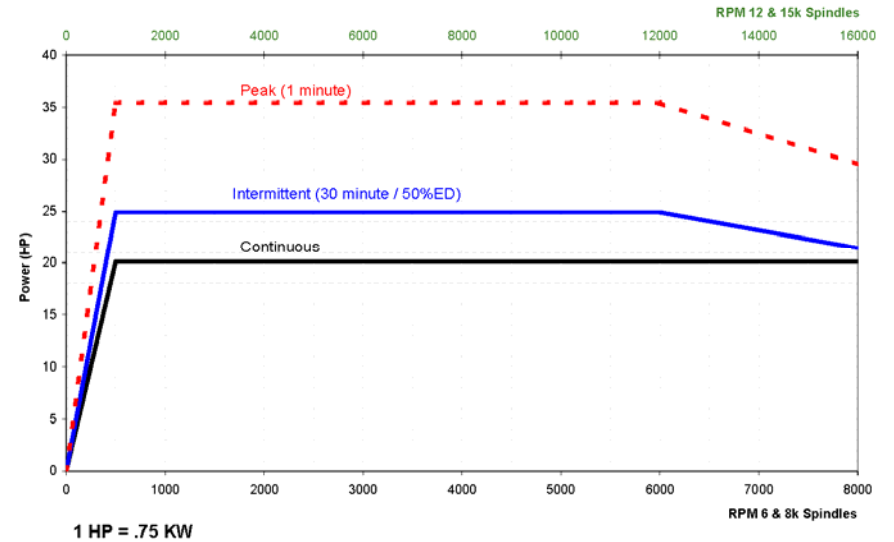
Torque Characteristics of 24/15 HP WYE Delta Motor
 for 6,000 and 8,000 RPM or 12,000 and 15,000 RPM



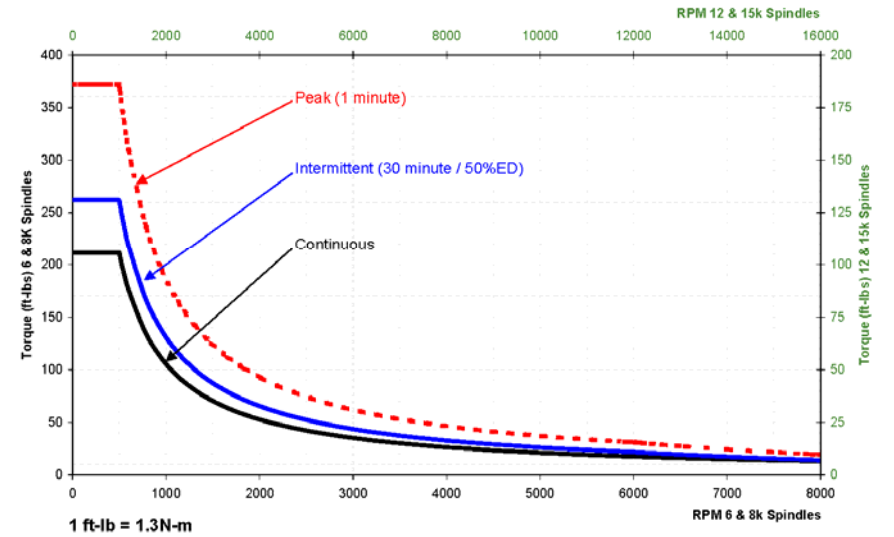
Yaskawa Torque Chart 35/25/2/B/Y – Belted Spindle

Used on: Standard N/A
 Optional VM22XP, VM25XP, VM30XP

Power Characteristics of 35/25 HP WYE Delta Motor
 for 6,000 and 8,000 RPM or 12,000 and 15,000 RPM



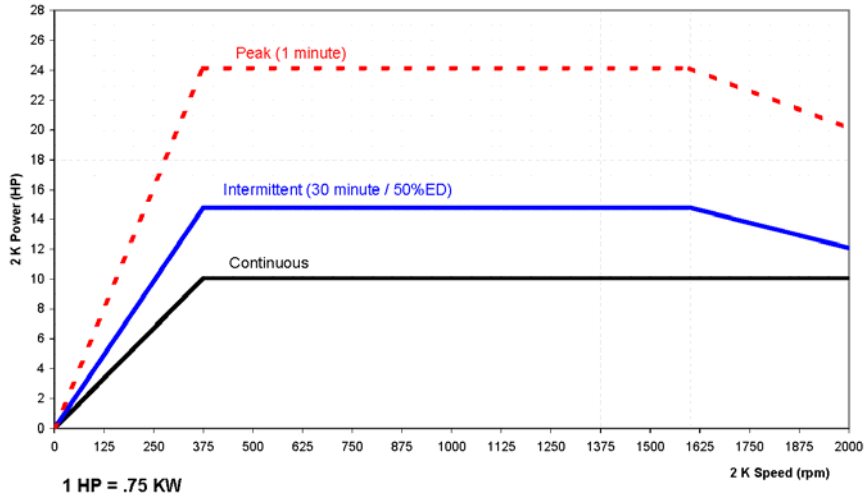
Torque Characteristics of 35/25 HP WYE Delta Motor
 for 6,000 and 8,000 RPM or 12,000 and 15,000 RPM



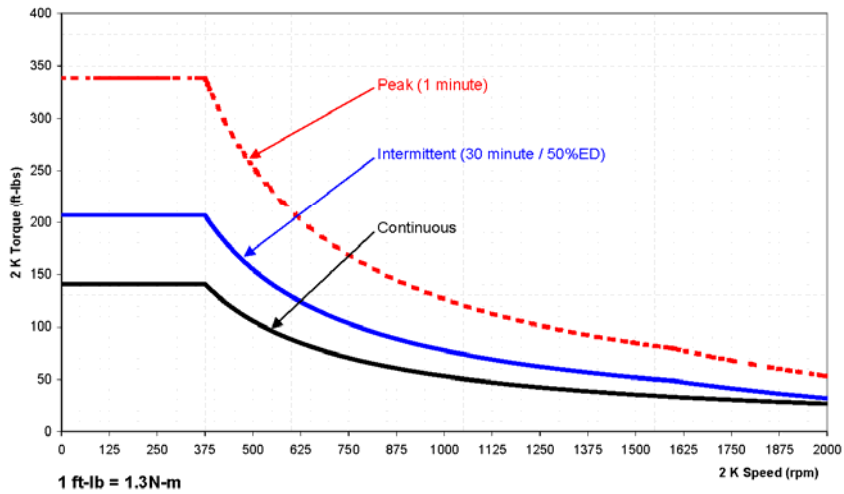
Yaskawa Torque Chart 24/15/2/G/Y – Geared Spindle

Used on: Standard N/A
Optional VM22XP, VM25XP, VM30XP

Power Characteristics of 24/15 HP Single Winding Motor
for 2000 RPM LOW (4:1) Gear Range



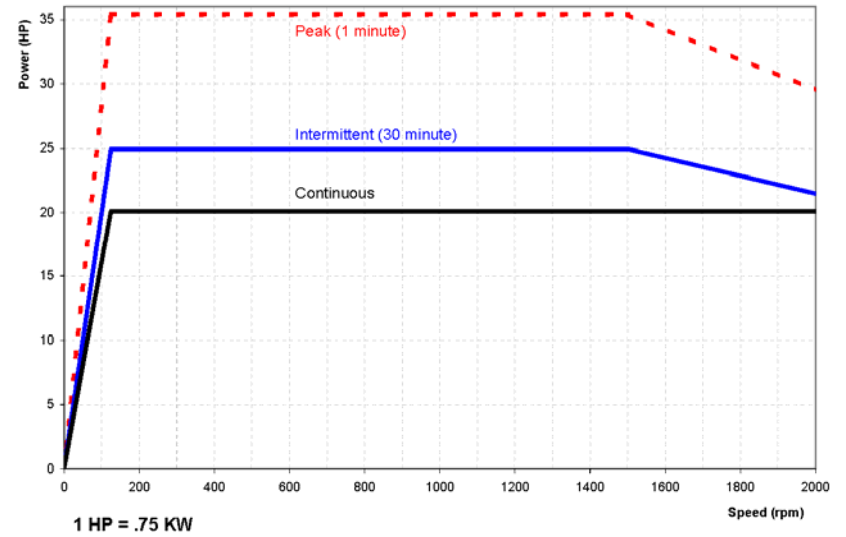
Torque Characteristics of 24/15 HP Single Winding Motor
for 2000 RPM LOW (4:1) Gear Range



Yaskawa Torque Chart 35/25/2/G/Y – Geared Spindle

Used on: Standard N/A
Optional VM22XP, VM25XP, VM30XP

Power Characteristics of VM30XP #50 With 35/25hp Motor - LOW Gear



Torque Characteristics of VM30XP #50 With 35/25hp Motor - LOW Gear

