

RH - Large Travel Rigid Head Bed Mill Pricing



Effective September 1, 2010

| Machine Model | RH35 | RH35XP |
|---|-----------------|--------------------------------|
| Spindle Taper / RPM | 40 / 8000 | 50 / 8000 Optional Gear Box |
| Spindle Horsepower 1 minute / 30 minute, Diameter | 24/15, 70 mm | 24/15, 90 mm |
| Optional Spindle Horsepower 1 minute / 30 minutes | 24/15 Two Speed | 24/15 Two Speed |
| Optional Spindle Horsepower 1 minute / 30 minutes | 35/25 Two Speed | 35/25 Two Speed |
| Travel (XYZ") | 120 x 35 x 30 | 120 x 35 x 30 |

| 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 Way Construction with 6 Ways Base to Saddle • Dual Auger Chip Removal System • Automatic Metered Lubrication with Low Lube Fault • High Torque AC Digital Servo Drives • High Torque Closed Loop Vector Spindle Drive System • Five Bearing 8000 RPM Air Purged Spindle • Spindle Taper Blow-out and Tool Release Push Button • With or without full enclosure • Rigid Tap | <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 7200 Plus Solid Modeling Graphics on Series 8200 • 6 MB Virtual Disk / RS-232 with DNC Buffer • High Speed Processor (7200 Series 1200 block/sec, 8200 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 |
| SOFTWARE PACKAGE A | PERFORMANCE PACKAGE C |
| <p>Additional 10 MB Parts Storage (Total of 12 MB) Coordinate Rotating, Scaling, Mirror Image, Thread Mill 3.5" Floppy Drive Engraving, Helical Interpolation, Auto Routines, & User definable Macros w/ Trig Assist, & Irregular Pocket Clearing Front Panel Mounted Electronic Handwheel & Handwheel Controlled Program Execution 24 MB Program Execution Memory with Large Program Management Software (allows editing of 10 MB file) LCD Hour Meter Auto DXF File Import</p> <p><i>Items may be purchased separately</i></p> | <p>Upgrade to 24/15 HP 18/11 kw Two Speed Closed Loop Spindle Drive System Programmable Spray Mist On/Off Off-line FastCAM Software for Programming and Training Remote Handwheel Unit Tool Release Foot Switch</p> <p><i>Items may be purchased separately</i></p> |
| CONVENIENCE PACKAGE B | |
| <p>Six Nozzle High Volume Multi Height Flood Coolant System with Through Head Cooling and Flow Valve Work Lights (Two at \$400 each) End of Cycle Light Single Spare "M" Function and CNC "Wait" Channel Coolant Drip Pan Rear Splash Guards Networking Option Includes 30 days Phone Support Edit Lockout Key Switch</p> <p><i>Items may be purchased separately</i></p> | |

| SPINDLE CONFIGURATIONS | | RH35 | RH35XP |
|--|---------------|----------------|----------------|
| Specify Tool Holder: CT40 | | Std. | N/A |
| Optional Tool Holder: BT40 or DIN69871 | | | N/A |
| Optional Tool Holder: BT50 | | N/A | |
| Spindle Upgrade to 15,000 RPM Spindle | | | N/A |
| Optional Spindle HP Upgrade to 35/25 HP 26/18 kw Two Speed Wye/delta <i>Requires purchase of Package C</i> | | | |
| Optional Gear Box – 4:1 Ratio <i>Can be combined with any motor configuration</i> | | N/A | |
| Coolant Through Spindle – 300 PSI Low Pressure System – <i>Requires Purchase of Full Enclosure, Arm ATC Recommended. Includes drawbar assembly for ANSI retention knobs and rotary coupling.</i> | | | |
| ROTARY ACCESSORIES | | | |
| Rotary Tables <i>Includes 4th axis amp & motor Application may require riser</i> | | 6.5" (165 mm) | |
| | | 9.0" (228 mm) | |
| | | 10.0" (254 mm) | |
| Tail Stock for Rotary Table | 6.5" (165 mm) | 9.0" (228 mm) | 10.0" (254 mm) |
| 4 th Axis Servo Amplifier & Motor (Electrics only) – Contact factory for 5 axis <i>Included with Rotary Table Accessory</i> | | | |
| ATC OPTIONS | | | |
| 16 Pocket Carousel Type ATC (40 Taper), <i>Requires full enclosure for CE</i> | | | N/A |
| 24 Pocket Carousel Type ATC (40 Taper), <i>Requires full enclosure for CE</i> | | | N/A |
| 20 Pocket Carousel Type ATC (50 Taper), <i>Requires full enclosure for CE</i> | | N/A | |
| 24 Pocket Arm Type ATC (40 Taper), <i>Requires purchase of full enclosure</i> | | | N/A |
| 32 Pocket Arm Type ATC (50 Taper), <i>Requires purchase of full enclosure</i> | | N/A | |
| OTHER ACCESSORIES | | | |
| Upgrade to Solid State Non-Volatile Memory 256 MB Flash Card – <i>7200 Controls only</i> | | | |
| Full Machine Enclosure with Chip Auger & Chip Wash Down (<i>Requires purchase of Pkg. A, B, C</i>) | | | |
| Dual Electronic Handwheel – <i>Not available with full enclosure option</i> | | | |
| Chip Buckets for Dual Auger System – <i>2 Buckets</i> | | | |
| 4" Riser Block – <i>Not Removable Consult factory for other sizes and special applications</i> | | | |
| Spare "M" Functions – <i>Block of 4 Maximum 2 blocks; price is for each block</i> | | | |
| Contact Tool Offset Probing with Macros | | | |
| Work Offset Probing with Macros | | | |
| Combo Pack – Contact & Work Tool Offset Probing with Macros | | | |
| Laser Tool Setter | | | |
| Digiscan Digitizing 3-D Software, Probe, Manuals | | | |
| RS-232 Cable, 50' 15 Meters | | | |
| Additional Programming Manual | | | |
| Programming Manual in Electronic Format on CD | | | |
| Additional Machine Manual | | | |
| Power Requirements 208-240 VAC, 50 – 60 hz, 3Ø | | Standard | Standard |
| 380-480 Transformer (Reduces Voltage to 208-240) <i>Factory recommended sizes. Consult local electrical codes for proper transformer sizing.</i> | | 24 HP | 80 kVA |
| | | 35 HP | 80 kVA |
| UL/CUL Compliance | | | |
| CE Code <i>Required for European Union Countries –Requires Full Enclosure</i> | | | |
| International Packaging | | | |
| Two Year Parts Warranty <small><i>See Note</i></small> | | Standard | Standard |
| Factory Start-up and Training On Site, U.S. only <i>Does not include airfare</i> | | | |
| Training at Milltronics <i>Includes lunches, training, materials and manual</i> | | | |
| <p><small><i>Terms within USA: Cash or terms with approved credit; down payment due with order. Terms outside USA: Cash or approved Letter of Credit F.O.B Waconia, MN USA. Prices do not include taxes, duties, transportation, 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</i></small></p> | | | |

RH - Large Travel Rigid Head Bed Mill Specifications



Effective September 1, 2010

| Machine Model | RH35 | RH35XP |
|---|--|---|
| Control Type | Milltronics CNC | Milltronics CNC |
| Software | CNC or SLS | CNC or SLS |
| Number of Axes | 3 (Opt 4 or 5) | 3 (Opt 4 or 5) |
| Functions: <i>Automatic</i> | Auto operation of spindle start/stop, mist, flood, RPM | |
| CAPACITY | | |
| Standard Table Size | 126 x 32" <i>3200 x 810 mm</i> | 126 x 32" <i>3200 x 810 mm</i> |
| Table Travel - X Axis | 120" <i>3050 mm</i> | 120" <i>3050 mm</i> |
| Saddle Travel - Y Axis | 35" <i>890 mm</i> | 35" <i>890 mm</i> |
| Head Travel - Z Axis | 30" <i>760 mm</i> | 30" <i>760 mm</i> |
| Throat Distance <i>Spindle to Column</i> | 35" <i>890 mm</i> | 35" <i>890 mm</i> |
| Spindle to Table Top | 4 - 34" <i>100 - 860 mm</i> | 4 - 34" <i>100 - 860 mm</i> |
| Spindle to Table Top with #50 20 Pkt ATC | N/A | 3 - 33" <i>80 - 840 mm</i> |
| Maximum Table Load | 5000 lb <i>2270 kg</i> | 5000 lb <i>2270 kg</i> |
| Machine Weight | 40,000 lb <i>18,150 kg</i> | 40,000 lb <i>18,150 kg</i> |
| T Slots | (7) .71" <i>18 mm</i> | (7) .71" <i>18 mm</i> |
| Saddle Width | 229" <i>5820 mm</i> | 229" <i>5820 mm</i> |
| Ball Screw Size: X,Y/Z Axis | 80/63 mm Dbl Nut | 80/63 mm Dbl Nut |
| Ball Screw Grade | C5 | C5 |
| Ball Screw Pitch X,Y,Z | 10 mm | 10 mm |
| SPINDLE | | |
| Spindle Taper/Configuration | #40 Direct Belt Drive | #50 Direct Belt Drive |
| Heavy Duty Spindle Cartridge Assembly with Triplex Bearing Design | 70 mm | 90 mm |
| Spindle Horsepower <i>1 minute / 30 minutes</i> | 24/15 HP <i>18/11 kw</i> | 24/15 HP <i>18/11 kw</i> |
| | Reference Torque Chart 24/15/1/B/Y | |
| Optional Spindle Drive System <i>1 minute / 30 minutes</i> | 24/15 HP <i>18/11kw</i> <i>Two speed</i> | 24/15 HP <i>18/11kw</i> <i>Two speed</i> |
| | Reference Torque Chart 24/15/2/B/Y | |
| Optional Spindle Drive System <i>1 minute / 30 minutes</i> | 35/25 HP <i>26/18kw</i> <i>Two speed</i> | 35/25 HP <i>26/18kw</i> <i>Two speed</i> |
| | Reference Torque Chart 35/25/2/B/Y | |
| Optional Gear Box | N/A | 2 Range 4:1 Gearing |
| | Reference Torque Charts | |
| | For Standard 24 HP - 24/15/1/G/Y | |
| | For Optional 24 HP Two Spd - 24/15/2/G/Y | |
| | For Optional 35 HP Two Spd - 35/25/2/G/Y | |
| Standard Triplex Bearing Spindle RPM | 50 - 8000 | 50 - 8000 |
| Gear Range | Low Range: | 15 - 2000 |
| | High Range: | 50 - 8000 |
| Optional Ceramic Duplex Bearing Spindle RPM <i>Requires balanced tooling, Recommend HP Upgrade</i> | 100 - 15,000 | N/A |
| Balanced Tooling Requirements | Tools Should Be Balanced to 2.5 G's at 15,000 RPM | |
| PERFORMANCE | | |
| Servo Type | AC Digital | AC Digital |
| Rapid Traverse X, Y & Z | 400 ipm <i>10.2 mpm</i> | 400 ipm <i>10.2 mpm</i> |
| Maximum Feedrate | 300 ipm <i>7600 mm/m</i> | 300 ipm <i>7600 mm/m</i> |
| Position Accuracy <i>See note</i> | ±0.00039" <i>0.01 mm</i> | ±0.00039" <i>0.01 mm</i> |
| Repeatability | 0.0002" <i>0.005 mm</i> | 0.0002" <i>0.005 mm</i> |
| Resolution | 0.00004" <i>0.001 mm</i> | 0.00004" <i>0.001 mm</i> |

| Machine Model | RH35 | RH35XP | |
|--|--|---|------------|
| Thrust, Machine Duty Rating | X, Y: 3000 lb <i>1360 kg</i> Z: 4000 lbs <i>1800 kg</i> | X, Y: 3000 lb <i>1360 kg</i> Z: 4000 lb <i>1800 kg</i> | |
| OPTIONAL AUTOMATIC TOOL CHANGER | | | |
| 16 Pocket #40 Automatic Carousel Tool Changer | Optional | N/A | |
| 24 Pocket #40 Automatic Carousel Tool Changer | Optional | N/A | |
| 16 or 24 Pocket Carousel Style Maximums Diameter / Length / Weight | 3.5" / 13" / 15 lb <i>80 mm/330mm/7 kg</i> | N/A | |
| 16 or 24 Pocket Carousel Style Tool Changer Time | 7 Sec. | N/A | |
| 20 Pocket #50 Carousel Style ATC | N/A | Optional | |
| 26 Pocket #50 Carousel Style Maximums Diameter / Length / Weight | N/A | 5" / 13" / 25 lb <i>125mm/330mm/11kg</i> | |
| 20 Pocket #50 Carousel Tool Changer Time | N/A | 9 Sec. | |
| 24 Pocket Arm Style ATC | Optional | N/A | |
| 40 Pocket Arm Style ATC | Optional | N/A | |
| 24 or 40 Pocket Arm Style Maximums Diameter / Length / Weight | 4" / 9" / 15 lb <i>100mm/230mm/7kg</i> | N/A | |
| 32 Pocket #50 Taper Arm Style ATC | N/A | Optional | |
| 32 Pocket #50 Taper Arm Style Maximums Diameter / Length / Weight (Over 5" has adjacent empty pocket) | N/A | 5" / 13" / 25 lb <i>125mm/330mm/11kg</i> | |
| 32 Pocket #50 Taper Arm Style Tool Changer Time | N/A | 9 Sec. | |
| MISCELLANEOUS | | | |
| Coolant Through Spindle Option (CTS) <i>Requires ANSI Retention Knob</i> | 300 psi <i>20 bar</i> | 300 psi <i>20 bar</i> | |
| CTS – Pump Filtration | 11 Micron | 11 Micron | |
| CTS – Flow Rate | 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> | |
| MISCELLANEOUS | | | |
| Way Surface Design | X Axis: | Box Ways | Box Ways |
| | Y Axis: | 6 Box Ways | 6 Box Ways |
| | Z Axis: | Box Ways | Box Ways |
| 1/4 HP Flood Pump Capacity <i>Optional in Package B</i> | 90 Gal <i>150 L</i> | 90 Gal <i>150 L</i> | |
| Drawbar Air Pressure Required | 100 psi <i>6.8 bar</i> | 100 psi <i>6.8 bar</i> | |
| Power 208-240 VAC 50-60hz, 3Ø (24 HP) | 150 amps 57 kVA | 150 amps 57 kVA | |
| Power 208-240 VAC 50-60hz, 3Ø (35 HP) | 200 amps 76 kVA | 200 amps 76 kVA | |
| Power 208-240 VAC, Single Phase | N/A | N/A | |
| Power 400-440 VAC | Requires Transformer | Requires Transformer | |
| Floor Space Requirement | 300" x 116" <i>7620 x 2950 mm</i> | 300" x 116" <i>7620 x 2950 mm</i> | |
| Floor Space Requirement – Full Enclosure | 302" x 116" <i>7660 x 2950 mm</i> | 302" x 116" <i>7660 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>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.</i></p> <p><i>Centurion features covered under separate literature. For machine duty rating, see "Truth in Specifications" on www.milltronics.net.</i></p> <p><i>Milltronics reserves the right to change specifications at any time without incurring obligation.</i></p> | | | |

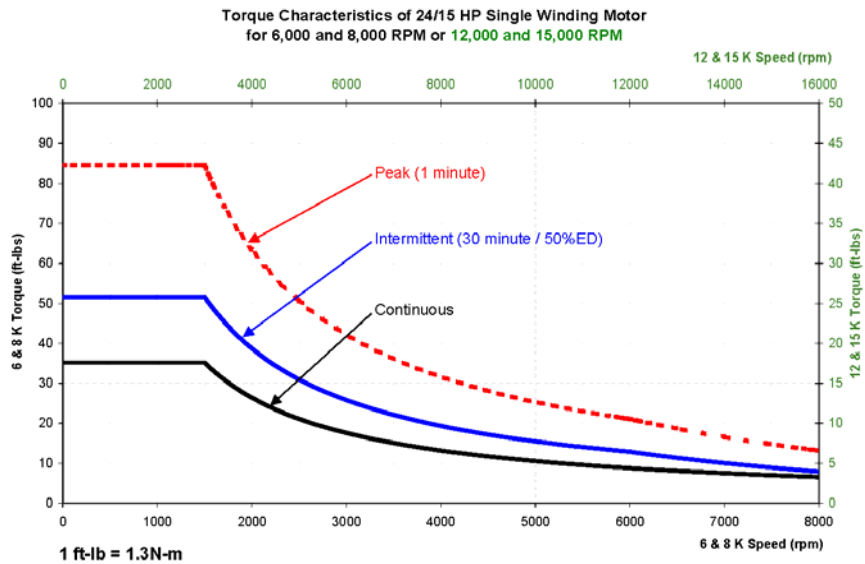
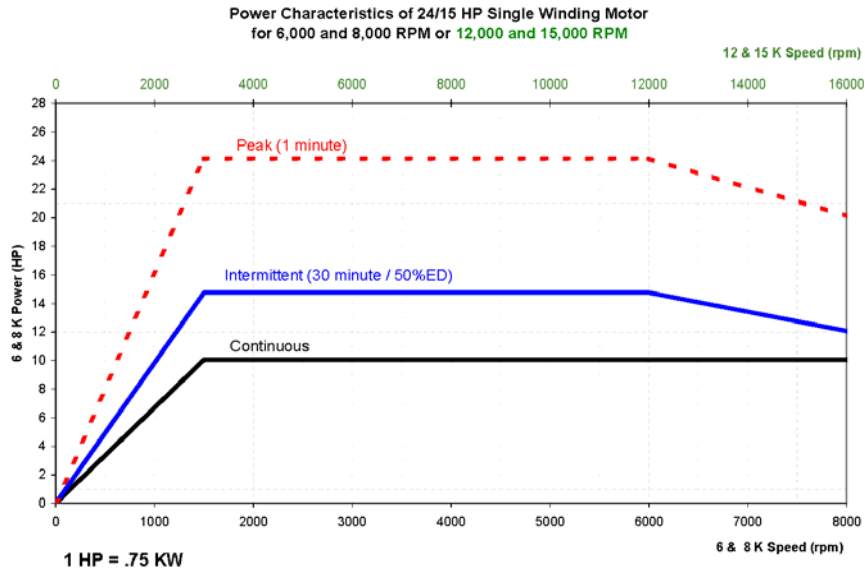
For similar machines see the RH20, RH30 and RH33.

For toolroom bed style milling machines with quill heads see the, MB20.

Also see VKM4 knee mills with quill and Milltronics' patented MillSlide.

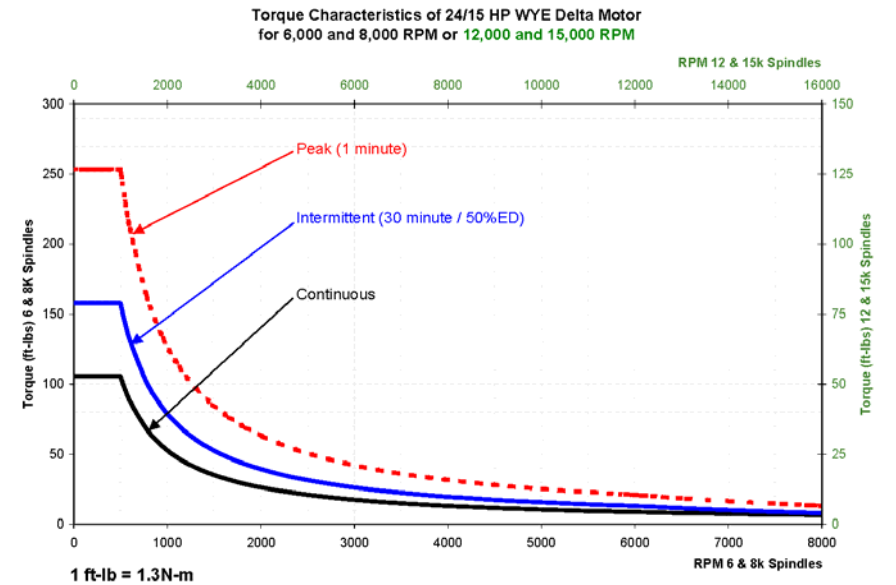
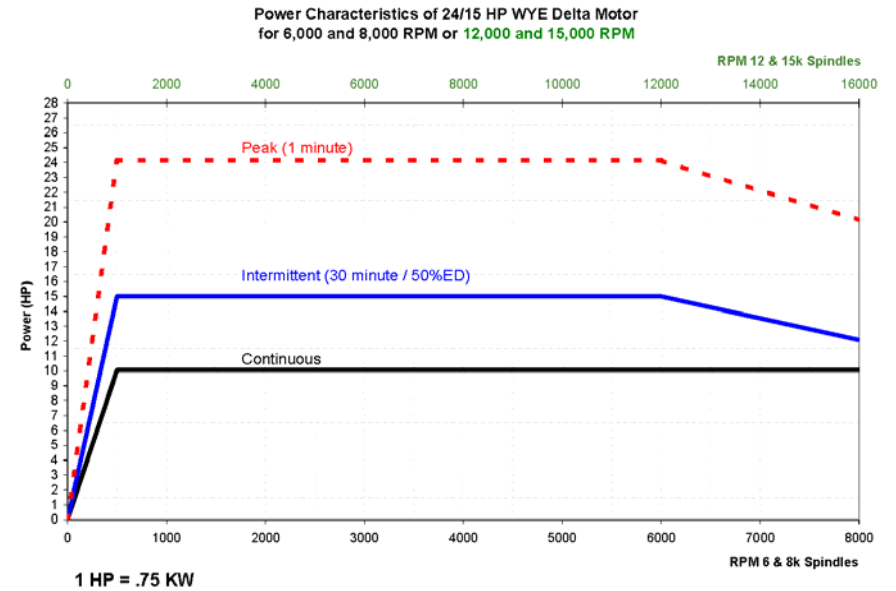
Yaskawa Torque Chart 24/15/1/B/Y – Belted Spindle

Used on: Standard RH35, RH35XP
Optional N/A



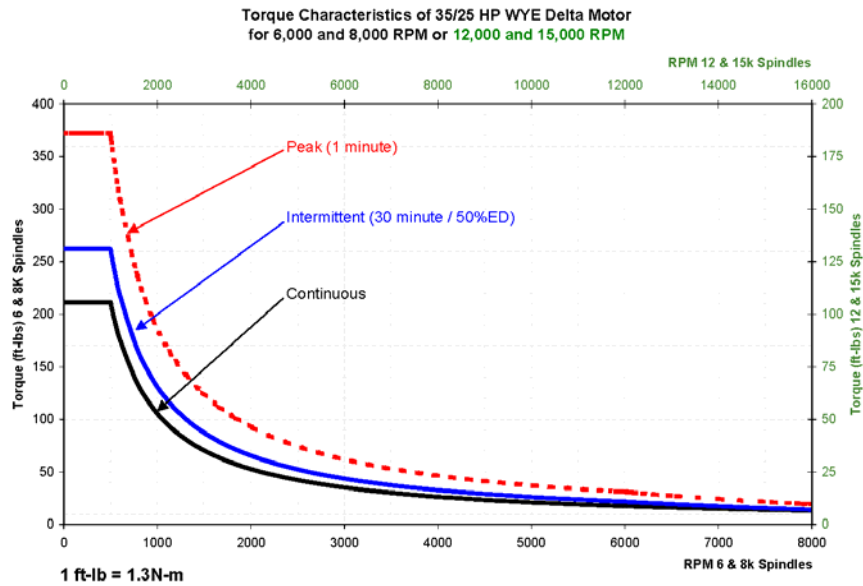
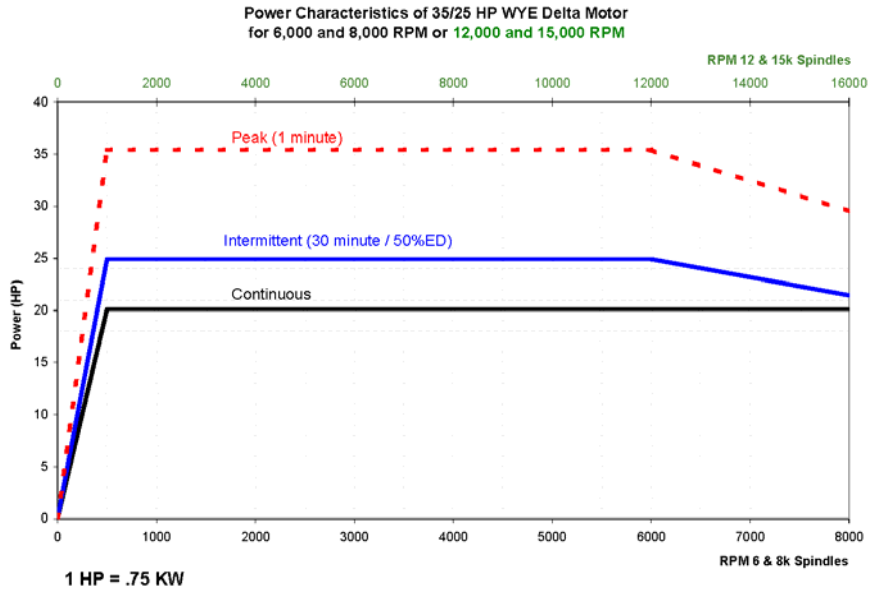
Yaskawa Torque Chart 24/15/2/B/Y – Belted Spindle

Used on: Standard N/A
Optional RH35, RH35XP



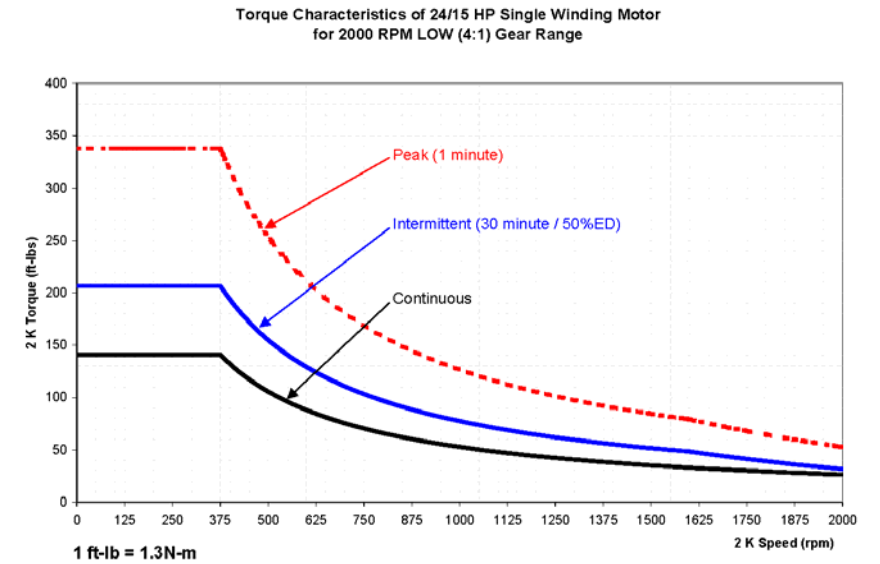
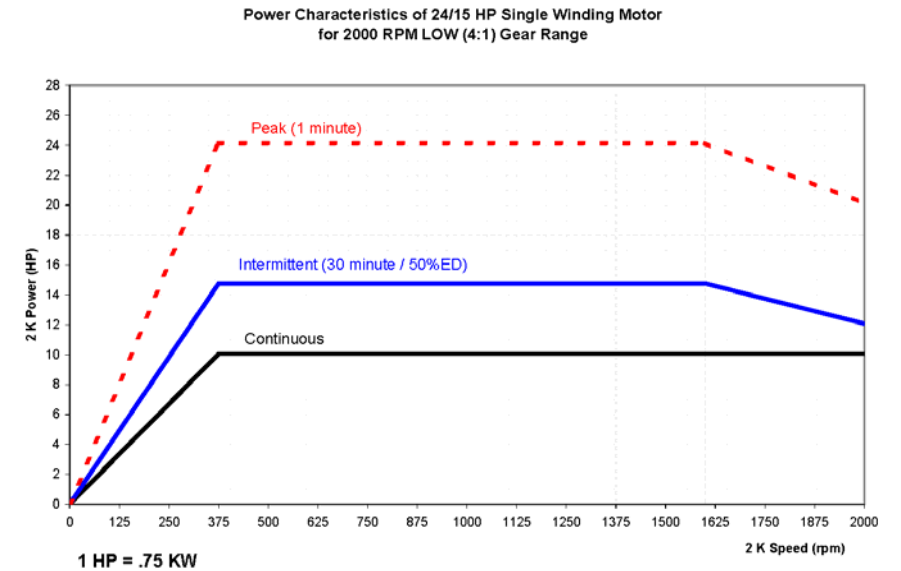
Yaskawa Torque Chart 35/25/2/B/Y – Belted Spindle

Used on: Standard N/A
Optional RH35, RH35XP



Yaskawa Torque Chart 24/15/1/G/Y – Geared Spindle

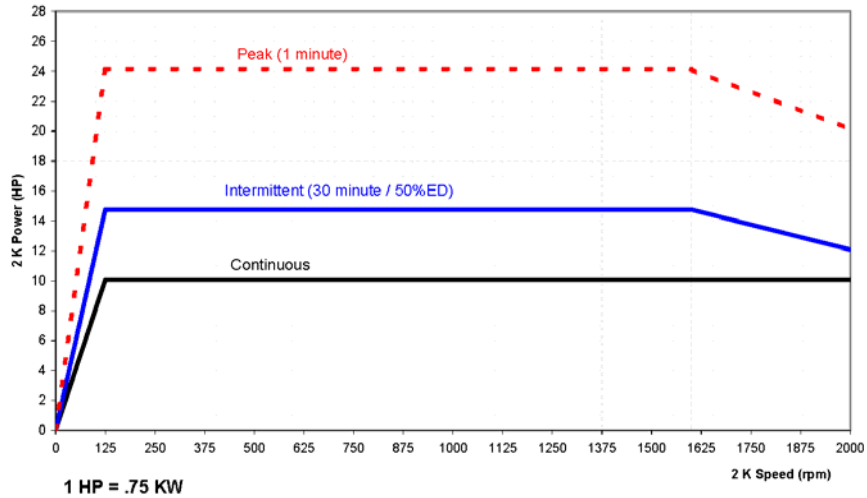
Used on: Standard N/A
Optional RH35XP



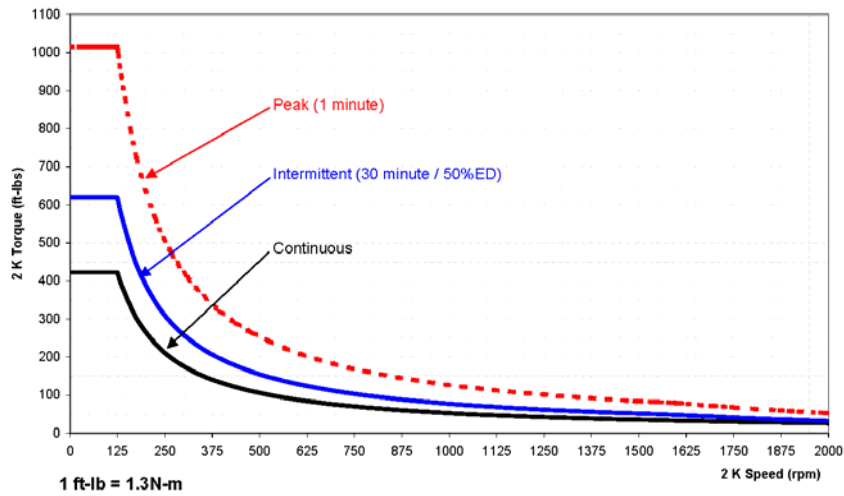
Yaskawa Torque Chart 24/15/2/G/Y – Geared Spindle

Used on: Standard N/A
Optional RH35XP

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



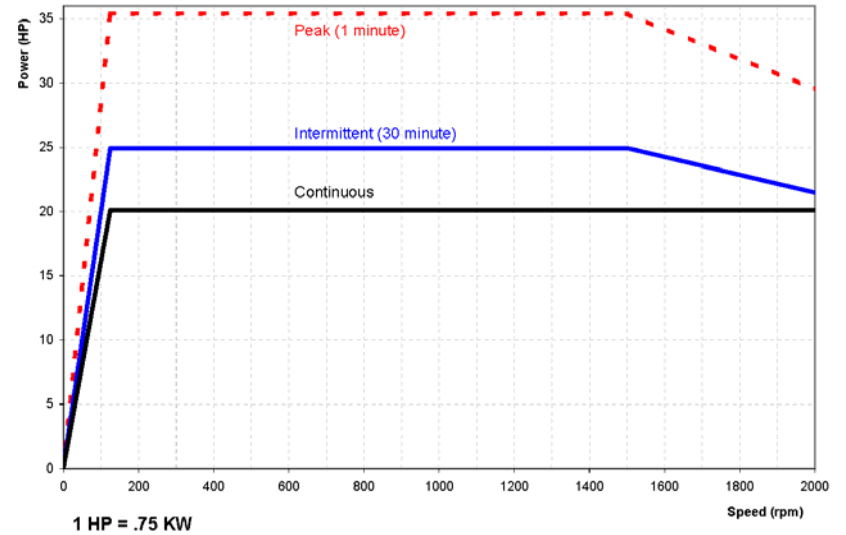
Torque Characteristics of 24/15 HP Wye Delta Motor
for 2000 RPM LOW (4:1) Gear Range



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

Used on: Standard N/A
Optional RH35XP

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



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

