

# SL Slant Bed Turning Center Pricing

Effective December 1, 2010



Machine Model	SL6	SL10	SL12
Chuck Size	6"	10"	12"
Spindle Bar Capacity	1.65" <i>42mm</i>	2.55" <i>65mm</i>	3.58" <i>91mm</i>
Spindle RPM	6000	4000	2500
Spindle Horsepower	Single Speed 12/10 HP 9/7.5 kw	Single Speed 24/15 HP 18/11 kw	Two Speed 24/15 HP 18/11 kw
Optional Spindle Horsepower	Single Speed 18/12 HP 13/9 kw	Two Speed 24/15 HP 18/11 kw	Two Speed 35/25 HP 26/18 kw
Turret – See Accessories for other Turret Options	8 Position, 1" <i>25 mm</i>	8 Position, 1" <i>25 mm</i>	8 Position, 1 ¼" <i>32 mm</i>

MACHINE FEATURES	CONTROL FEATURES
<ul style="list-style-type: none"> <li>• Two Year Parts Warranty</li> <li>• Heavy Duty Linear Way Construction on SL6 &amp; SL10, Box Way Construction on SL12</li> <li>• Precision Ground Ball Screws</li> <li>• Metal Way Cover Construction</li> <li>• Automatic Metered Lubrication with Low Lube Fault</li> <li>• 1" 8 Position or 3/4" 12 position Automatic Turret on SL6 &amp; SL10</li> <li>• 1 ¼" 8 Position Automatic Turret on SL12</li> <li>• Hydraulic Tail Stock with Tail Stock Foot Switch</li> <li>• Heavy Duty Metal Enclosure with Work Lamp</li> <li>• Hydraulic 3 Jaw Chuck with Foot Switch (Optional Collet System)</li> <li>• Flood Coolant System</li> <li>• Closed Loop High Torque Vector Spindle Drive System</li> <li>• Door Interlock Safety Switch</li> <li>• LCD Hour Meter</li> <li>• Programming &amp; Machine Manuals in Electronic Format</li> <li>• Auxiliary Keyboard Port for PC Keyboard</li> <li>• Single Spare "M" Function and "Wait" Channel</li> </ul>	<ul style="list-style-type: none"> <li>• PC-based 7200 T CNC includes 12 MB Parts Storage Memory</li> <li>• 12" LCD Active Matrix Color Display</li> <li>• 3.5" Floppy Drive / RS-232 with DNC Buffer</li> <li>• 1200 Block/Sec High Speed Processor</li> <li>• Conversational plus G &amp; M Code Programming with Part &amp; Tool Path Graphics, User Definable Macros with Trig Help</li> <li>• Front Panel Mounted Electronic Handwheel &amp; Handwheel Controlled Program Execution</li> <li>• Off-line FastCAM Software for Programming and Training</li> <li>• Turning, Facing, Grooving, Tapping and Boring Cycles</li> <li>• Constant Surface (RPM changes with radius) and Feed/Rev. (IPR) with Threading Cycles</li> <li>• Large Program Management Software (Allows Editing of 10 MB Files)</li> <li>• Pattern Repeat, Chamfering, Radius Programming</li> <li>• High Torque AC Digital Servo Drives</li> <li>• Rigid Tap Cycle</li> <li>• Edit Key Lock-out Switch</li> <li>• Spindle Load Meter</li> <li>• All Axes Laser Calibrated</li> </ul>

## CONVENIENCE PACKAGE

Remote Electronic Handwheel
Turret Tooling Set with One Axial Holder, Two Boring Bar Holders and 8 Wedge Blocks
Chip Conveyor
End Cycle Light
Chip Removal Bucket for Chip Conveyor

*Items may be purchased separately*

## PERFORMANCE PACKAGE

Upgrade to Single Speed 18/12 HP 13/9 kw Spindle Motor
Upgrade to Two Speed 24/15 HP 18/11 kw Spindle Motor
Upgrade to Two Speed 35/25 HP 26/18 kw Spindle Motor
Parts Catcher - Limits maximum turning diameter

*Items may be purchased separately*

<b>LIVE TOOLING – CONTACT DISTRIBUTOR FOR APPLICATION</b>	<b>SL6</b>	<b>SL10</b>	<b>SL12</b>
C Axis Interface	Option	Option	N/A
Baruffaldi TBMA Live Tooling, Servo Turret, 8 Station Model 160 VDI 40 7.5 HP	Option	Option	N/A
Spindle Brake <i>Required for Live Tooling</i>	Option	Option	N/A
Standard Axial Holder VDI 40	Option	Option	N/A
Standard Radial Holder VDI 40	Option	Option	N/A
<b>OTHER ACCESSORIES</b>	<b>SL6</b>	<b>SL10</b>	<b>SL12</b>
Upgrade to Solid State Non-Volatile Memory 256 MB Flash Card	Option	Option	Option
Multi Format Flash Card Reader	Option	Option	Option
Networking Option includes 30 Days Phone Support <i>Recommend 256 MB Option</i>	Option	Option	Option
Auto Import of DXF Files Conversion Software	Option	Option	Option
CNC Programmable Tail Stock	Option	Option	Option
Optional Barfeeder with Spindle Orient <i>No Spindle Sleeves Included</i>	Option	Option	Option
Barfeeder Interface Only with Spindle Orient - <i>Interface designed for Milltronics Barfeeder only. Consult the factory for other barfeeder interface.</i>	Option	Option	Option
Upgrade to 12 Position ¾" 20 mm Turret	Option	Option	N/A
VDI Turret Face (No Tool Holders)	Option	Option	N/A
Metric Turret Face, 20 or 25 mm - Metric Turret face must be specified	Option	Option	Option
1.5" / 1.25" Boring Bar Holder For 8 / 12 Station Turret – SL6 & SL10	Option	Option	N/A
1" / ¾" Axial Tool Holder For 8 / 12 Station Turret – SL6 & SL10	Option	Option	N/A
Wedge Blocks for Turning Holders – 8 / 12 Station Turret	Option	Option	N/A
5C Collet Chuck, <i>Collet chuck option is purchased additional to the standard chuck supplied with the machine</i>	Option	Option	N/A
16C Collet Chuck, <i>Collet chuck option is purchased additional to the standard chuck supplied with the machine</i>	Option	Option	N/A
Mechanical Tool Setter	Option	Option	Option
Spare "M" Functions – Block of 4 <i>Maximum 2 blocks; price is for each block</i>	Option	Option	Option
RS-232 Cable, 50' 15 meters	Option	Option	Option
Printed Programming Manual (Electronic Format Standard)	Option	Option	Option
Printed Machine Manual (Electronic Format Standard)	Option	Option	Option
Power Requirements 208-240 VAC, 50 – 60 hz, 3Ø	Standard	Standard	Standard
Optional Voltage 208-240 VAC, 50 – 60 hz, 1Ø <i>Includes different spindle drive system and 5 HP motor/generator set</i>	Option	Option	N/A
380-480 Transformer (Reduces Voltage to 208-240) 20 kVA SL6 & SL10 40 kVA SL12 <i>Factory recommended sizes. Consult local electrical codes for proper transformer sizing.</i>	Option	Option	Option
UL/CUL Compliance	Option	Option	Option
CE Code <i>Required for European Union Countries</i>	Option	Option	Option
Export Handling Fee	Option	Option	Option
Crating Charge	Consult Factory		
Two Year Parts Warranty	Standard	Standard	Standard
Factory Start-up and Training On Site, U.S. only	Option	Option	Option
Training at Milltronics <i>Includes lunches, training, materials and manual</i>	Option	Option	Option
<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. 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 All sales of equipment, parts, software and service are subject to Milltronics' Standard Terms and Conditions of Sale.</i></p>			

# SL Slant Bed Turning Center Specifications

Effective December 1, 2010



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

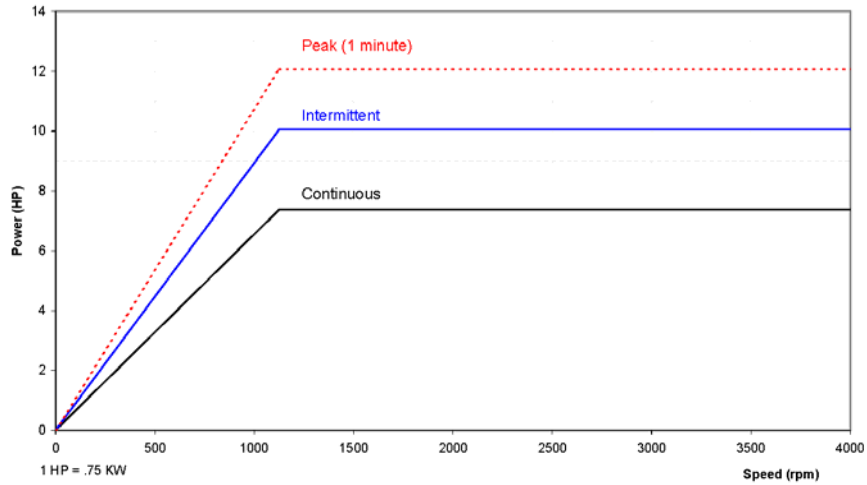
Machine Model	SL6	SL10	SL12
Control Type	Milltronics 7200 T CNC		
Functions	Conversational, G/M Code		
<b>CAPACITY</b>			
Swing Over Way Cover	20" <i>510 mm</i>	20" <i>510 mm</i>	30" <i>760 mm</i>
Swing Over Carriage	9" <i>230 mm</i>	9" <i>230 mm</i>	23" <i>600 mm</i>
Turret – Standard	8 Position	8 Position	8 Position
Turret Optional	12 Position	12 Position	N/A
Travel (X Axis) Cross Slide	8" <i>200 mm</i>	8" <i>200 mm</i>	8.85" <i>225mm</i>
Travel (Z Axis) Long Slide	21" <i>530 mm</i>	21" <i>530 mm</i>	29.5" <i>750 mm</i>
Extended Bed Travel (Z Axis) Long Slide	N/A	N/A	49.2" <i>1250 mm</i>
Bar Capacity, Diameter	1.65" <i>42 mm</i>	2.55" <i>65 mm</i>	3.58" <i>91 mm</i>
Chuck Size	6" <i>152 mm</i>	10" <i>250 mm</i>	12" <i>305 mm</i>
Machine Weight	7000 lb <i>3180 kg</i>	7000 lb <i>3180 kg</i>	13,250 lb <i>6000 kg</i>
Extended Bed Machine Weight	N/A	N/A	18,750 lb <i>8500 kg</i>
Ball Screw Diameter	32 mm	32 mm	36 mm
Ball Screw Grade	C5	C5	C3
Ball Screw Pitch <i>X axis &amp; Z axis</i>	10 mm	10 mm	12 mm
Spindle Load Capacity (Work Holding + Part)	300 lb <i>135 kg</i>	450 lb <i>200 kg</i>	
Turning Diameter, <i>Max with 8 &amp; 12 Station Turret</i>	12.25" <i>310 mm</i>	12.25" <i>310 mm</i>	17.71" <i>450 mm</i>
<b>SPINDLE</b>			
Horsepower <i>1 minute / 30 minutes</i>	Single Speed 12/10 <i>9/7.5 kw</i>	Single Speed 24/15 HP <i>18/11 kw</i>	Two Speed 24/15 HP <i>18/11 kw</i>
Reference Torque Charts:	12/10/1/B/Y	24/15/1/B/Y	24/15/2/B2/Y
Optional Horsepower <i>1 minute / 30 minutes</i>	Single Speed 18/12 <i>13/9 kw</i>	Two Speed 24/15 HP <i>18/11 kw</i>	Two Speed 35/25 HP <i>26/18 kw</i>
Reference Torque Charts:	18/12/1/B/Y	24/15/2/B/Y	35/25/2/B2/Y
Maximum Spindle Runout at Nose	.00019" <i>.0048 mm</i>	.00032" <i>.008 mm</i>	
Spindle Nose Type	A2 - 5	A2 - 6	A2-8
Standard Spindle Speed	50 - 6000	50 - 4000	25 - 2500
Optional Two Speed Spindle Motor	N/A	50 - 1200, 1200 - 4000	25 - 750, 750 - 2500
Spindle Programming Resolution with Orient Option	.015°	.015°	.015°
Spindle Orient Positioning Accuracy with Orient Option	±.05°	±.05°	±.05°
Chuck Size - Hydraulic	3 Jaw, 6" <i>165 mm</i>	3 Jaw, 10" <i>250 mm</i>	3 Jaw, 12" <i>305 mm</i>
16C Collet System / 5C Collet System	Optional / Optional	Optional / Optional	N/A
Hydraulic Tail Stock with Tail Stock Foot Switch	Standard	Standard	Standard
Tail Stock Quill Stroke	2" <i>50 mm</i>	2" <i>50 mm</i>	4.7" <i>120 mm</i>
Tail Stock Quill Diameter	2.55" <i>65 mm</i>	2.55" <i>65 mm</i>	3.54" <i>90 mm</i>
Tail Stock Thrust ( <i>Hydraulic</i> )	550 lb <i>250kg</i>	550 lb <i>250kg</i>	584 lb <i>265kg</i>
Tail Stock Base Travel	17" <i>432 mm</i>	17" <i>432 mm</i>	22" <i>550 mm</i> XT - 41" <i>1050 mm</i>
Tail Stock Quill Taper Size	MT4	MT4	MT5
<b>TOOLING – CONTACT FACTORY FOR LIVE TOOLING SPECIFICATIONS</b>			
Turret	1" <i>25mm</i> 8 Position	1" <i>25mm</i> , 8 Position	1 ¼" 32mm, 8 Position
Optional Turret	¾" <i>20mm</i> 12 Position	¾" <i>20mm</i> 12 Position	N/A
Turret Indexing Mechanism	Electro / Mechanical Hurth Coupling	Electro / Mechanical Hurth Coupling	Hydraulic
Turret Time, 1 Station	0.7 Sec.	0.7 Sec.	0.4 Sec.

<b>Machine Model</b>	<b>SL6</b>	<b>SL10</b>	<b>SL12</b>
VDI Turret Face	Optional	Optional	N/A
Tool Shank Size – Standard 8 Station Turret	1 x 5" <i>25 x 125mm</i>	1 x 5" <i>25 x 125mm</i>	1 ¼ x 6" <i>32 x 150 mm</i>
Tool Shank Size – Optional 12 Station Turret	¾ x 5" <i>20 x 125mm</i>	¾ x 5" <i>20 x 125mm</i>	N/A
Boring Bar Capacity – Standard 8 Station Turret	1.5" <i>38mm</i>	1.5" <i>38mm</i>	2" <i>50 mm</i>
Boring Bar Capacity – Option 12 Station Turret	1.25" <i>32mm</i>	1.25" <i>32mm</i>	N/A
<b>PERFORMANCE</b>			
Servo Type	AC Digital	AC Digital	AC Digital
Rapid Traverse X & Z	1,000 ipm <i>25.4 mpm</i>	1,000 ipm <i>25.4 mpm</i>	1,000 ipm <i>25.4 mpm</i>
Maximum Feedrate	400 ipm <i>10.16 mpm</i>	400 ipm <i>10.16 mpm</i>	400 ipm <i>10.16 mpm</i>
Position Accuracy <i>See note</i>	±.00039" <i>.001 mm</i>	±.00039" <i>.001 mm</i>	±.00039" <i>.001 mm</i>
Repeatability <i>See note</i>	.00019" <i>.005 mm</i>	.00019" <i>.005 mm</i>	.00019" <i>.005 mm</i>
Feedback Resolution	.00004" <i>.001 mm</i>	.00004" <i>.001 mm</i>	.00004" <i>.001 mm</i>
Thrust, Machine Duty Rating	X: 1000 lb <i>450 kg</i> Z: 1000 lb <i>450 kg</i>	X: 1000 lb <i>450 kg</i> Z: 1000 lb <i>450 kg</i>	X: 1000 lb <i>450 kg</i> Z: 2000 lb <i>950 kg</i>
<b>MISCELLANEOUS</b>			
Optional Barfeeder – Bar Diameter	.2 - 1.5" <i>5 - 38 mm</i>	.2 - 2.55" <i>5 - 65mm</i>	.2 - 2.55" <i>5 - 65mm</i>
Optional Barfeeder – Maximum Bar Length	30" <i>760 mm</i>	30" <i>760 mm</i>	30" <i>760 mm</i>
Optional Barfeeder – Loading Capacity	10 Bars x 2.55" <i>65mm</i>	10 Bars x 2.55" <i>65mm</i>	10 Bars x 2.55" <i>65mm</i>
Parts Catcher Capacity	1.5 x 5" <i>38 x 125 mm</i>	1.5 x 5" <i>38 x 125 mm</i>	3 x 6" <i>80 x 150 mm</i>
Mechanical Tool Setter	Optional	Optional	Optional
Separate Lube Oil Collection <i>Prevents Coolant Contamination</i>	Standard	Standard	Standard
Flood Pump	¾ HP	¾ HP	¾ HP
Flood Capacity	36 Gal <i>140 L</i>	36 Gal <i>140 L</i>	48 Gal <i>185 L</i>
1.5 HP <i>1.1 kw</i> Hydraulic Pump	Standard	Standard	Standard
Hydraulic Tank Capacity	10.5 Gal <i>40 L</i>	10.5 Gal <i>40 L</i>	
Hydraulic Oil Type <i>(Or equivalent)</i>	Mobil DTE 24	Mobil DTE 24	Mobil DTE 24
Way Lube Type <i>(Or equivalent)</i>	Vactra #2	Vactra #2	Vactra #2
Way Surface	30 mm Linear Way	30 mm Linear Way	Box Ways
Floor Space Requirement With Conveyor	126" x 71" <i>3200 x 1800 mm</i>	126" x 71" <i>3200 x 1800 mm</i>	162" x 70" <i>4115 x 1755 mm</i>
Floor Space Requirement With Conveyor – Extended Bed	N/A	N/A	182" x 70" <i>4615 x 1755 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.		
<b>MACHINE SIZE AND POWER</b>			
Bed Inclination	30°	30°	45°
Overall Length Without Accessories	91" <i>2300 mm</i>	91" <i>2300 mm</i>	119" <i>3015mm</i>
Overall Length Without Accessories – Extended Bd	N/A	N/A	139" <i>3515mm</i>
Overall Height	69" <i>1750 mm</i>	69" <i>1750 mm</i>	80" <i>2015 mm</i>
Overall Width	71" <i>1800 mm</i>	71" <i>1800 mm</i>	70" <i>1755mm</i>
Power 208-240 VAC, 50-60hz, 3Ø	40 amps 16 kVA	50 amps 19 kVA	50 amps 19 kVA
Power 208-240 VAC, 50-60hz, 3Ø – 35 HP	N/A	N/A	100 amps 38 kVA
Power 208-240 VAC, 50-60hz, Single Phase	Optional	Optional	N/A
<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.</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>			

### Yaskawa Torque Chart 12/10/1/B/Y – SL6 Belted Spindle

Used on: Standard SL6  
Optional N/A

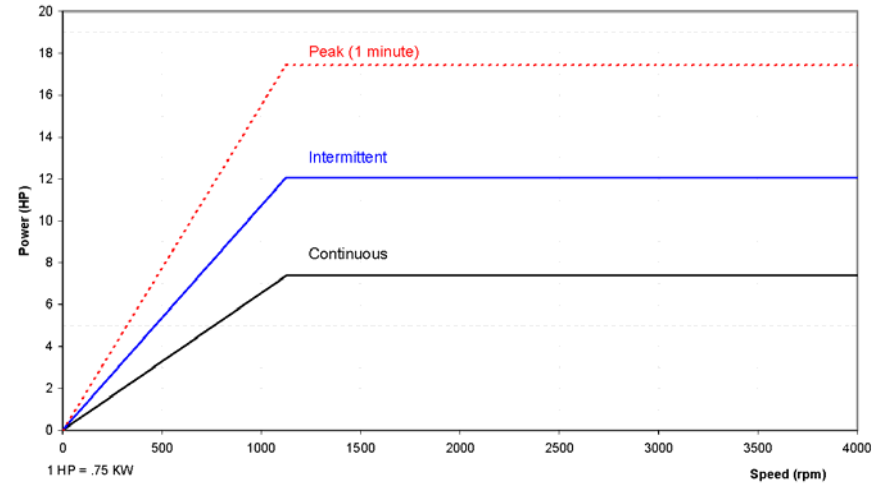
Power Characteristics of SL6 With 12/10 HP Single Winding Motor



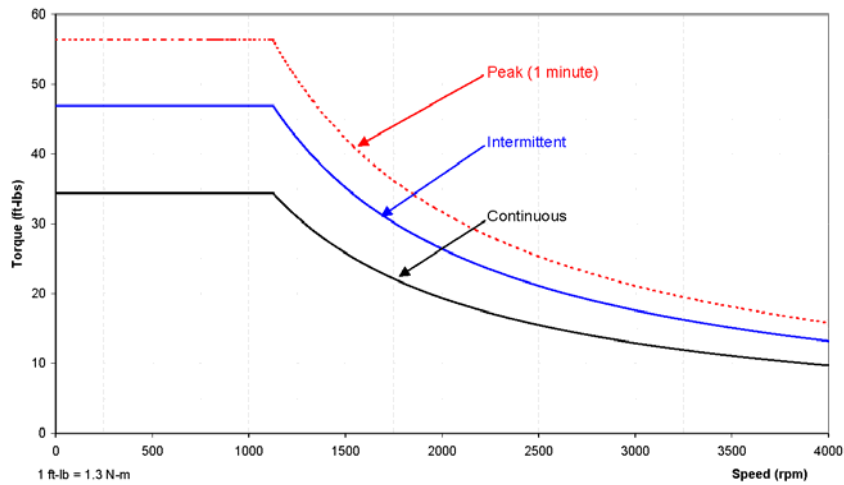
### Yaskawa Torque Chart 18/12/1/B/Y – SL6 Belted Spindle

Used on: Standard N/A  
Optional SL6

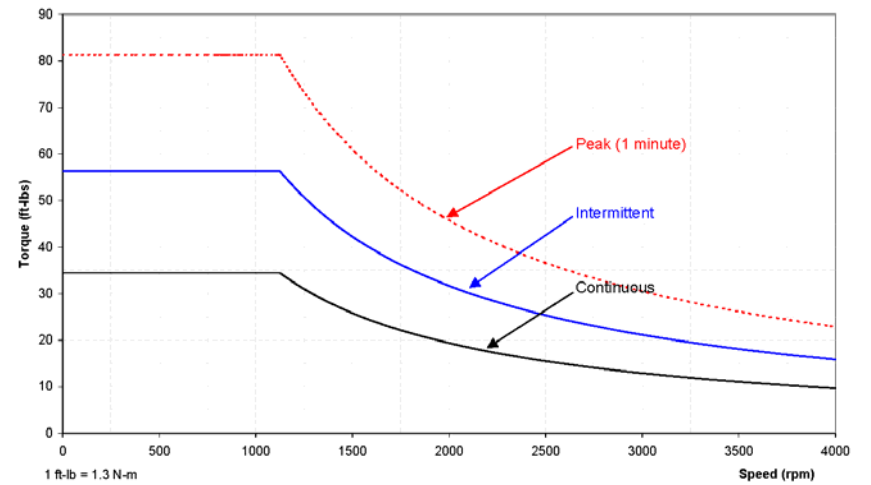
Power Characteristics of SL6 With 18/12 HP Single Winding Motor



Torque Characteristics of SL6 With 12/10 HP Single Winding Motor



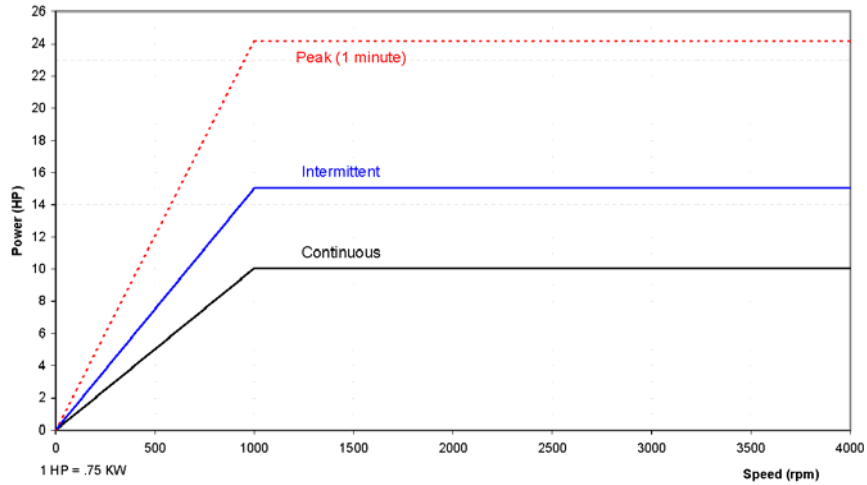
Torque Characteristics of SL6 With 18/12 HP Single Winding Motor



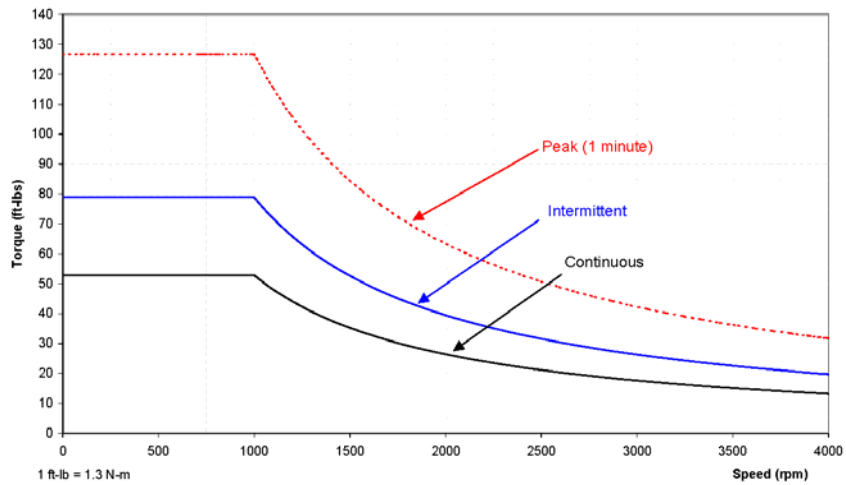
## Yaskawa Torque Chart 24/15/1/B/Y – SL10 Belted Spindle

Used on: Standard SL10  
Optional N/A

Power Characteristics of SL10 With 24/15 HP Single Winding Motor



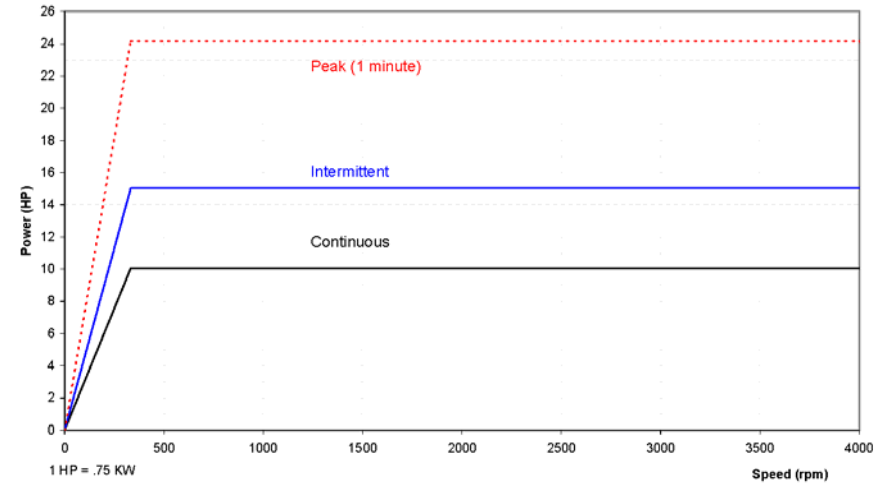
Torque Characteristics of SL10 With 24/15 HP Single Winding Motor



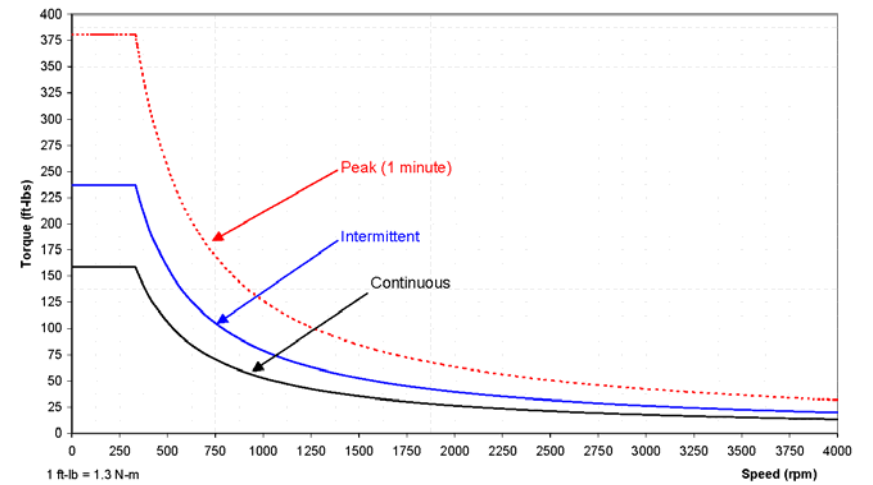
## Yaskawa Torque Chart 24/15/2/B/Y – SL10 Belted Spindle

Used on: Standard N/A  
Optional SL10

Power Characteristics of SL10 With 24/15 HP WYE/Delta Motor

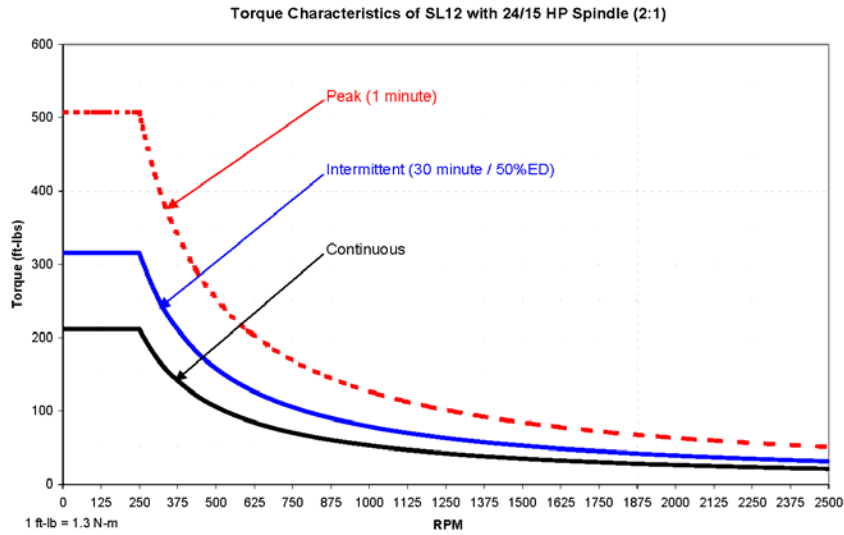
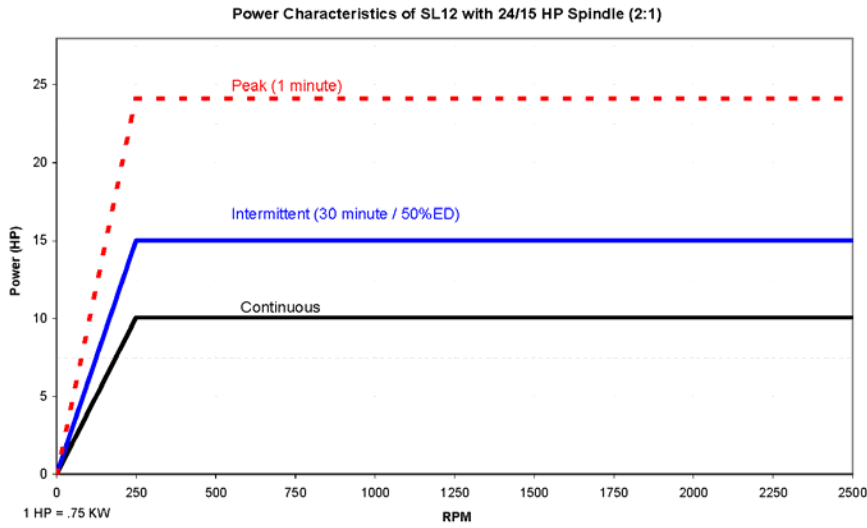


Torque Characteristics of SL10 With 24/15 HP WYE/Delta Motor



### Yaskawa Torque Chart 24/15/2/B2/Y – SL12 Belted Spindle

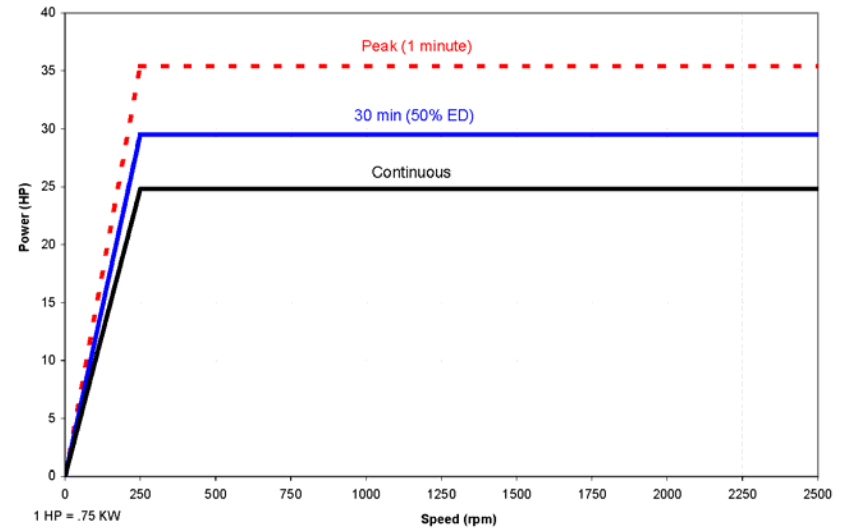
Used on: Standard SL12  
Optional N/A



### Yaskawa Torque Chart 35/25/2/B2/Y – SL12 Belted Spindle

Used on: Standard N/A  
Optional SL12

Power Characteristics of SL12 with 35/25 HP Spindle (2:1)



Torque Characteristics of SL12 with 35/25 HP Spindle (2:1)

