

BR IL – Inline Spindle Bridge Mill

Effective June 01, 2011



Machine Model	BR50IL	BR60IL	BR80IL
Standard Travel (XYZ")	100 x 50 x 28"	100 x 60 x 28"	100 x 80 x 28"
Extended Travel (XYZ")	150 x 50 x 28"	150 x 60 x 28"	150 x 80 x 28"
Extended Travel (XYZ")	N/A	N/A	200 x 80 x 28"
Horsepower 1 minute / 30 minutes	Two Speed 24/15 HP 18/11 kw	Two Speed 24/15 HP 18/11 kw	Two Speed 24/15 HP 18/11 kw
Optional Horsepower 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
MACHINE FEATURES	CONTROL FEATURES		
<ul style="list-style-type: none"> • Two Year Parts Warranty • 45mm Linear Ways with Roller Ways on Y & Z Axes • Precision Ground Double Anchored Ball Screws • #40, Four Bearing Air Purged 10,000 RPM BIG PLUS® Dual Contact Inline Spindle Cartridge Assembly (15,000 RPM Optional) • Metal Way Covers • Spindle Taper Blow-out and Tool Release Push Button • High Torque AC Digital Servo Drives • All Axes Laser Calibrated and Ballbar Inspected • Automatic Metered Lubrication • Remote Handwheel Unit • Air Blast Nozzle Programmable by CNC • Off-line FastCAM Software for Programming and Training • Edit Key Lock-out Switch • Bridge Mounted Work Light • Operator's Air Blast Hose • End of Cycle Light • LCD Hour Meter • Single Spare "M" Function and CNC "Wait" Channel • Spindle Chiller System • Rigid Tap • Programming & Machine Manuals in Electronic Format • All Axes Laser Calibrated and Ballbar Inspected 	<ul style="list-style-type: none"> • PC-based 7200 CNC includes 12 MB Parts Storage Memory • 12" LCD Active Matrix Color Display • 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 • 3-D Part and Wire Frame Tool Path Graphics on Series 7200 Plus Solid Modeling Graphics on Series 8200 • 3.5" Floppy Drive / RS-232 with DNC Buffer (7200 CNC Only) • High Speed Processor (7200 Series 1200 Block/Sec, 8200 Series 2000 Blocks/Sec) • Optional Four & Five Axis Simultaneous Interpolation Software & Interface • Large Program Management Software (Allows Editing of 10 MB Files) • High Torque Closed Loop Vector Spindle Drive System • Spindle Load Meter • 24 MB Program Execution Memory with Large Program Management Software (Allows Editing of 10 MB Files) • Front Panel Mounted Electronic Handwheel & Handwheel Controlled Program Execution • Auto DXF File Import • Networking Option Includes 30 days Phone Support 		
8200 CONTROL PACKAGE – Purchase as a Complete Package Only and Includes all the following:			
<ul style="list-style-type: none"> • 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 			
<i>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.</i>			
SPINDLE CONFIGURATIONS — #40			
#40 CT Type	Standard		
#40 BT Type	Optional		
Upgrade to 15,000 RPM Ceramic Bearing	Optional		
Upgrade to Two Speed 35/25 HP 26/18 kw Inline Spindle Drive System	Optional		
BIG PLUS ® Spindle Nose	Standard		
Coolant Through Spindle – 300 PSI Low Pressure System <i>Includes Drawbar Assembly for ANSI Retention Knobs & Rotary Coupling; Must Purchase Enclosure</i>	Optional		

COOLANT SYSTEM & ENCLOSURE ACCESSORIES						
BR50IL			100"	150"		
Flood Coolant System, Coolant Tank, Wash Down Hose and Table Trough			Optional	Optional		
BR60IL			100"	150"		
Flood Coolant System, Coolant Tank, Wash Down Hose and Table Trough			Optional	Optional		
Flood Coolant System, Coolant Tank, Wash Down Hose and Dual Chip Auger Chip Removal System			Optional	Optional		
Full Machine Enclosure – <i>Requires purchase of Flood Coolant System with Dual Chip Augers</i>			Optional	Optional		
BR80IL		100"	150"	200"		
Flood Coolant System, Coolant Tank, Wash Down Hose and Table Trough		Optional	Optional	Optional		
Flood Coolant System, Coolant Tank, Wash Down Hose and Dual Chip Auger Chip Removal System		Optional	Optional	Optional		
Full Machine Enclosure – <i>Requires purchase of Flood Coolant System with Dual Chip Augers</i>		Optional	Optional	Optional		
AUTOMATIC TOOL CHANGER						
24 Pocket Carousel ATC with Remote Tool Changer Control Panel				Optional		
ROTARY TABLE ACCESSORIES						
Rotary Tables <i>Includes 4th Axis Amp & motor; Application May Require Riser</i>		6.5" (165 mm)	Optional	9.0" (228 mm)	Optional	
		10.0" (254 mm)	Optional	5C Collet Table	Optional	
Rotary Table Tail Stock	6.5" (165 mm)	Optional	9.0" (228 mm)	Optional	10.0" (254 mm)	Optional
4 th Axis Servo Amplifier & Motor (Electrics 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 electrics only package. Charge will depend on table and engineering requirements</i>						
OTHER ACCESSORIES						
Upgrade to Solid State Non-Volatile Memory 256 MB Flash Card – 7200 Controls only				Optional		
Multi Format Flash Card Reader – 7200 Controls only				Optional		
Tool Release Floor Switch				Optional		
Pressurized Air/Oil Purge System for Ball Screws and Bearing Blocks				Optional		
Programmable Spray Mist <i>On/Off</i> (Included with flood on BR50)				Optional		
Coolant Through Spindle – 300 PSI <i>Low Pressure System</i> <i>Includes Drawbar Assembly for ANSI Retention Knobs and Rotary Coupling, Requires removable side doors</i>				Optional		
Spindle Chiller Loop (Reduces flood system to two nozzles)				Standard		
6" 150 mm Riser Block in Columns (<i>Non-removable</i>)				Optional		
Spare "M" Functions – Block of 4 – Maximum 2 Blocks (<i>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		
Digiscan Digitizing 3-D Software, Probe, Manuals - <i>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		
380-480 Transformer (Reduces Voltage to 208-240) - 40 kVA (<i>Factory Recommended Sizes. Consult Local Electrical Codes for Proper Transformer Sizing.</i>)				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		

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, MN USA; Prices do not include taxes, duties, transportation, insurance, rigging or start-up.

*All sales of equipment, parts, software and service are subject to Milltronics' Standard Terms and Conditions of Sale. Consult Written Warranty Statement for Details of Two Year Parts Warranty
Milltronics reserves the right to amend or change without notice without incurring obligation; not responsible for typographical errors.*

BR IL – Inline Spindle Bridge Mill Specifications

Effective June 01, 2011



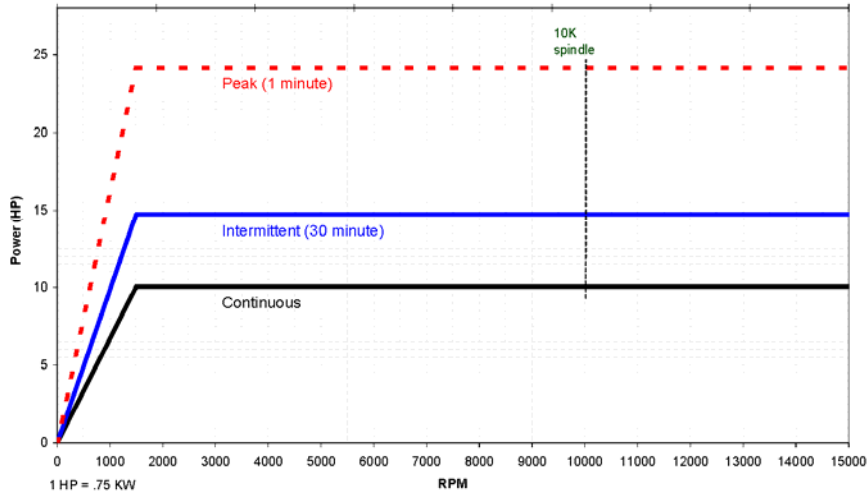
Machine Model	BR50IL	BR60IL	BR80IL
Standard Control Type	Milltronics 7200 CNC		
Optional Control Type	Milltronics 8200 CNC		
Number of Axes	3 (Optional 4 or 5)		
CAPACITY			
Table Size – Standard 100" Travel	48" x 96" <i>1220 x 2440 mm</i>	60" x 96" <i>1524 x 2440 mm</i>	80" x 96" <i>2030 x 2440 mm</i>
Table Size – Optional 150" Travel	48" x 150" <i>1220 x 3800 mm</i>	60" x 150" <i>1524 x 3800 mm</i>	80" x 150" <i>2030 x 3800 mm</i>
Table Size – Optional 200" Travel	N/A	N/A	80" x 200" <i>2030 x 5080 mm</i>
Standard Table Travel X	100" <i>2540 mm</i>		
Optional Table Travel X	150" <i>3800 mm</i>		
Cross Travel Y	50" <i>1270 mm</i>	60" <i>1524 mm</i>	80" <i>2032 mm</i>
Head Travel Z	28" <i>710 mm</i>		
Spindle To Table Top	4" - 32" <i>100 - 810 mm</i>		
Optional Riser, Non-removable	6" <i>150 mm</i>		
Table Surface	6" <i>150 mm</i> Hole Matrix, ½" x 13		
Machine Weight – Standard 100" Travel	13,000 lb <i>6000 kg</i>	14,000 lb <i>6400 kg</i>	16,000 lb <i>7300 kg</i>
Machine Weight – Optional 150" Travel	15,000 lb <i>6800 kg</i>	16,000 lb <i>7300 kg</i>	18,000 lb <i>8200 kg</i>
Machine Weight – Optional 200" Travel	N/A	N/A	23,000 lb <i>10,500 kg</i>
Maximum Table Load <i>Consult Factory for Higher Load Capacities</i>	5000 lb <i>2270 kg</i>		
Ball Screw Grade	C5		
Ball Screw Diameter: X 100", Y, Z (mm)	63, 40, 32		
Ball Screw Diameter: X 150 & 200", Y, Z (mm)	80, 40, 32		
Ball Screw Pitch: X, Y, Z (mm)	40, 20, 10		40, 25, 10
Linear Way Type and Size, X Axis	45 mm Ball Type		
Linear Way Type and Size, Y & Z Axes	45 mm Roller Type		
SPINDLE – #40			
Horsepower <i>1 minute / 30 minutes</i> Reference Torque Chart:	Two Speed 24/15 HP <i>18/11 kw</i> 24/15/2/L/M		
Optional Horsepower <i>1 minute / 30 minutes</i> Reference Torque Chart:	Two Speed 35/25 HP <i>26/18 kw</i> 35/25/2/L/M		
Spindle Size	70 mm		
Standard Spindle RPM	50 – 10,000		
Optional Ceramic Duplex Bearing Spindle RPM <i>Requires Balanced Tooling</i>	100 - 15,000		
***** Tools should be balanced to 2.5 G's at 15,000 RPM *****			
AUTOMATIC TOOL CHANGER – # 40			
Tool Changer Type	24 Pocket Carousel Type		
Tool Changer Time – Tool to Tool	7 Seconds		
Maximum Tool Size (Diameter / Length / Weight)	3.5" / 11" / 15 lb <i>80 mm / 280 mm / 7 kg</i>		
PERFORMANCE			
Servo Type	Digital, AC Brushless		
Rapid Traverse X, Y, Z – 100" Machine	1000 ipm <i>25 mpm</i>		
Rapid Traverse X / Y, Z – 150" Machine	750 / 1000 ipm <i>19 / 25 mpm</i>		
Rapid Traverse X / Y, Z – 200" Machine	600 / 1000 ipm <i>15 / 25 mpm</i>		
Maximum Feedrate <i>Part Dependent</i>	500 ipm <i>12.7 mpm</i>		
Positioning Accuracy ^{see note}	±0.001" <i>.025 mm</i> in 10" <i>250 mm</i> single axis move; ±0.005" <i>.127 mm</i> over full travel area		
Positioning Repeatability ^{see note}	.0003" <i>.005 mm</i>		
Feedback Resolution	.00004" <i>.001 mm</i>		
Thrust, Machine Duty Rating, XYZ	5000 lb <i>2270 kg</i>		
COOLANT THROUGH SPINDLE			
Coolant Through Spindle Option (CTS) <i>Requires ANSI Retention Knob and 70 mm Spindle</i>	300 psi <i>20 bar</i>	300 psi <i>20 bar</i>	300 psi <i>20 bar</i>

Machine Model	BR50IL	BR60IL	BR80IL
CTS – Pump Filtration	11 Micron	11 Micron	11 Micron
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>
MISCELLANEOUS			
Automatic Metered Lubrication with Low Lube Fault	Standard		
¼ HP Flood Pump Capacity – <i>Accessory</i>	16 gal <i>60 L</i>	100 gal <i>370 L</i>	100 gal <i>370 L</i>
Drawbar Air Pressure Required	100 psi <i>6.8 bar</i>		
Power 208-240 VAC 50-60hz, 3Ø	100 amps 38 KVA		
Power 208-240 VAC, 1Ø	Not Available		
Power 400-440 VAC	Requires Transformer		
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. 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>			

Mitsubishi Torque Chart 24/15/2/I/M – Inline Spindle

Used on: Standard BR50IL, BR60IL, BR80IL
 Optional N/A

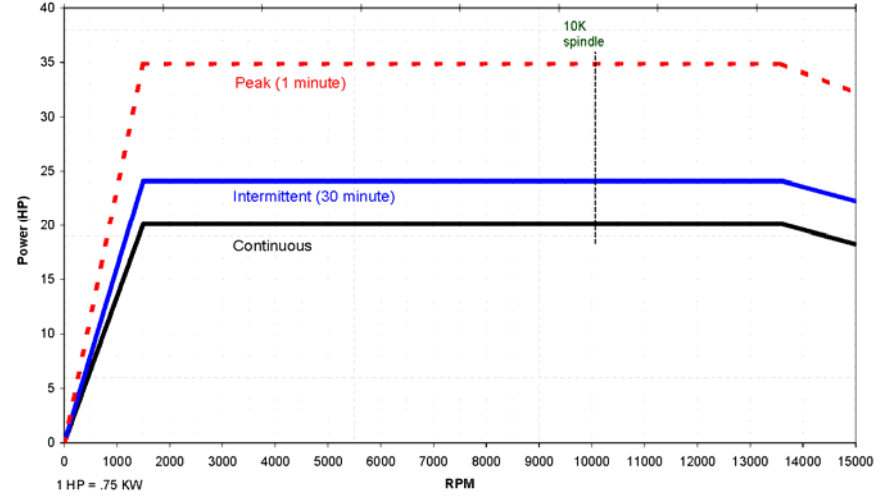
Mitsubishi VKS26-09ZM Power Characteristics of Mitsubishi 24/15 HP
 15,000 RPM Hollow Shaft In-line Delta/WYE Motor



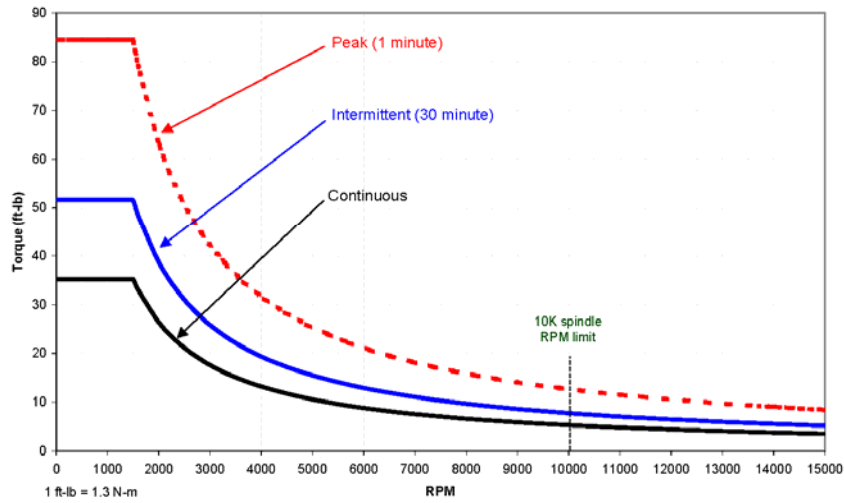
Mitsubishi Torque Chart 35/25/2/I/M – Inline Spindle

Used on: Standard N/A
 Optional BR50IL, BR60IL, BR80IL

Mitsubishi VKS30-16ZM Power Characteristics of Mitsubishi 35/25 HP
 15,000 RPM Hollow Shaft In-line Delta/WYE Motor



Mitsubishi VKS26-09ZM Torque Characteristics of Mitsubishi 24/15 HP
 15,000 RPM Hollow Shaft In-line Delta/WYE Motor



Mitsubishi VKS30-16ZM Torque Characteristics of Mitsubishi 35/25 HP
 15,000 RPM Hollow Shaft In-line Delta/WYE Motor

