

### VKM4 – 3 AXIS CNC PRICING

### THE KNEE MILL WITH MILLSLIDE™

Effective September 1, 2008

VKM4

<b>Customer Price – VKM4</b> <b>Without Options or Packages</b>	<b>\$29,980</b>
Spindle Types – Direct Drive with Inverter for Programmable RPM	R8 or #30 or #40
<b>STANDARD ACCESSORIES</b>	
<ul style="list-style-type: none"> <li>• Two Year Parts Warranty</li> <li>• Heavily Ribbed Cast Iron Construction</li> <li>• Fully Ground Solid Ways with Turcite Surfaces</li> <li>• Precision Ground Double Anchored Ball Screws</li> <li>• Precision Ground Table Surface</li> <li>• High Torque 8:1 Back Gear</li> <li>• Box Ways on Column and Base</li> <li>• Manual Quill Operation Retained</li> <li>• Automatic Metered Lubrication with Low Lube Fault</li> <li>• Safety Ring for Drive Dog on #40 Spindles</li> <li>• All Axes Laser Calibrated and Ballbar Inspected</li> <li>• High Torque AC Digital Servo Drives</li> <li>• High Torque Vector Spindle Drive System</li> </ul>	<ul style="list-style-type: none"> <li>• PC-based CNC includes 2 MB Parts Storage Memory</li> <li>• 12" LCD Active Matrix Color Display</li> <li>• Conversational plus G &amp; M Code Programming</li> <li>• 3-D Part and Wire Frame Tool Path Graphics on Series 7000 Plus Solid Modeling Graphics on Series 8000 when released</li> <li>• 6 MB Virtual Disk / RS-232 with DNC Buffer</li> <li>• High Speed Processor (7000 Series 1200 block/sec, 8000 Series 2000 blocks/sec)</li> <li>• Optional Four &amp; Five Axis Simultaneous Interpolation Software &amp; Interface</li> <li>• High Torque AC Digital Servo Drives</li> <li>• High Torque Closed Loop Vector Spindle Drive System</li> <li>• All Axes Laser Calibrated and Ballbar Inspected</li> <li>• Spindle Load Meter</li> <li>• Fully Programmable Accessories including Spindle On/Off, Spindle RPM, and Accessories</li> </ul>
<b>ACCESSORY PACKAGE A</b>	
Additional 10 MB Parts Storage (Total of 12 MB)	\$500
Coordinate Rotating, Scaling, Mirror Image, Thread Mill	800
3.5" Floppy Drive	500
Engraving, Helical Interpolation, Auto Routines, & User Definable Macros with Trig Assist, and Irregular Pocket Clearing	1,200
Front Panel Mounted Electronic Handwheel plus Handwheel Controlled Program Execution	600
24 MB Program Execution Memory with Large Program Management Software (Allows editing of 10 MB files)	1,400
LCD Hour Meter	300
Auto DXF File Import	700
<i>Items may be purchased separately</i>	<b>List Total \$6,000</b>
	<b>Package Price \$3,000</b>
<b>ACCESSORY PACKAGE B</b>	
Rigid Tap	\$1,200
Flood Coolant System with Programmable On/Off	900
Coolant Drip Pan	1,200
Work Lamp	300
Rear Splash Guards	900
Power Drawbar System	1,200
<b>Off-line FastCAM Software for Programming &amp; Training (Supports 7000 Series or 8000 Series with Interpreter)</b>	400
Networking Option Includes 30 Days Phone Support	900
<i>Items may be purchased separately</i>	<b>List Total \$7,000</b>
	<b>Package Price \$5,000</b>

**ACCESSORY PACKAGE C**

Retains All Features of the 7000 Series with Integrated Dual Boot to Either Series  
 Solid State, Non-Volatile Memory Upgrade to 256 MB\*, Multi Format Flash Memory Card Device\*  
 Enhanced High Speed CPU Required to Run 8000 Series Software\*  
 High Speed Performance with Enhanced Jerk Control and Look Ahead  
 Solid Model Graphics Functionality in Addition to Wire Frame  
 USB Connectivity  
 MTConnect Compliant  
 Linux Operating System  
 Increases Block per Second From 1200 to 2000 Blocks per Second

*Items may be purchased separately  
 \*Immediate Release*

**List Total \$7,000**  
**Package Price \$5,000**

**OTHER ACCESSORIES**

Specify Spindle Type for VKM4	CT40	Standard
	R8, CT/BT30, BT40 NMTB40, DIN2080	200
Quill Position Readout		500
Newall MHG Quill Scale Position Readout with CNC Feedback to Update Tool Length Offsets		1,500
Spray Mist Programmable On/Off		400
Table Chip Guard		1,200
CE Removable Table Chip Guard		1,600
Edit Key Lock-out Switch		300
Upgrade Mechanical Handwheels to Larger Dia. with Retractable Handles <i>Limits Rapids to 200 IPM</i>		300
Rotary Tables <i>Includes 4<sup>th</sup> Axis Amp &amp; Motor</i>	6.5" (165 mm)	8,900
	5C Collet Table	10,900
Tail Stock for Rotary Table		1,200
4 <sup>th</sup> Axis Servo Amplifier & Motor (Electrics only) <i>Included with Rotary Table Accessory</i>		4,800
Dual Electronic Handwheels		1,200
End of Cycle Light		300
Spare "M" Functions – Block of 4 <i>Maximum 2 blocks; price is for each block</i>		800
<i>Digiscan</i> Digitizing 3-D Software, Probe, Manuals		3,900
RS-232 Cable, 50' <i>15 Meters</i>		100
Additional Programming Manual		100
Programming Manual in Electronic Format on CD		50
Additional Machine Manual		100
Power Requirements 208-240 VAC, 50 – 60 hz, 3Ø		Standard
Optional Voltage 208-240 VAC, 50 – 60 hz, 1Ø <i>May reduce spindle power by up to 20%</i>		200
380-480 Transformer (Reduces Voltage to 208-240) – 20 kVA <i>Factory recommended sizes. Consult local electrical codes for proper transformer sizing.</i>		2,000
CE Code <i>Required for European Union countries</i>		1,000
International Packaging		1,000
UL/CUL Compliant		1,200
Two Year Parts Warranty <small><i>See Note</i></small>		Standard
Factory Start-up and Training On Site, U.S. only <i>Does not include airfare</i>		3,400
Training at Milltronics <i>Includes lunches, training, materials and manual</i>		400

*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*

*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*

*Prices do not include taxes, duties, transportation, rigging or start-up.*

*All sales of equipment, parts, software and service are subject to Milltronics' Standard Terms and Conditions of Sale.*

## VKM4 – 3 AXIS CNC SPECIFICATIONS THE KNEE MILL WITH MILLSLIDE™

Effective September 1, 2008

VKM4

Control Type	Milltronics CNC
Software	CNC or SLS
Number of Axes	3 (Opt 4)
Functions: <i>Automatic</i>	Auto operation of spindle start/stop, mist, flood, RPM
Functions: <i>Manual</i>	All functions operate both manually or automatically, except back gear is manual shift
<b>CAPACITY</b>	
Standard Table Size	53" x 12" <b>1350 x 305 mm</b>
Table Travel - X Axis	30" <b>760 mm</b>
Saddle Travel - Y Axis	15" <b>380 mm</b>
Heavy Duty MillSlide™ Travel - Z Axis	5.25" <b>133 mm</b>
Quill Travel <i>Worm gear style quill feed not available</i>	6" <b>152 mm</b>
Knee Travel	18" <b>450 mm</b>
Throat <i>Spindle to column, adjustable</i>	15.3 - 27.5" <b>390 - 700 mm</b>
Spindle to Table Top <i>Quill up</i>	0 - 21" <b>0 - 535 mm</b>
Maximum Table Load	1500 lb <b>680 kg</b>
Machine Weight	4600 lb <b>2100 kg</b>
T Slots	(4) .63" <b>16 mm</b>
Saddle Width	24.5, 15.5" <b>622, 393 mm</b>
Ball Screw Size: X, Y, Z Axis	1.25"
Ball Screw Grade	C5
Ball Screw Pitch X, Y, Z	X/Y .2"; Z .25"
Head Swivel	Rigid
<b>SPINDLE</b>	
Horsepower <i>1 minute / 30 minutes</i>	7.5 / 5 HP <b>5.5 / 3.7 kw</b>
High Torque Type (Manual Shift)	Back Gear
Spindle Speeds: <i>Low (CNC Programmable)</i>	60-500 RPM
Spindle Speeds: <i>High (CNC Programmable)</i>	500-4000 RPM
Standard Tool Holder Type	CT40
Optional Tool Holder Type	R8, CT/BT30, BT40, NMTB40, DIN2080
Quill Size	4.125" <b>104 mm</b>
<b>PERFORMANCE</b>	
Servo Type	AC Digital
Rapid Traverse <i>(Reduced to 200 IPM with Upgraded Larger Handwheels)</i>	400 ipm <b>10.1 mpm</b>
Maximum Feedrate	200 ipm <b>5080 mm/m</b>
Position Accuracy <i>See note</i>	±0.00039" <b>.01 mm</b>
Repeatability	.0002" <b>.005 mm</b>
Resolution	.00004" <b>.001 mm</b>

Thrust, Machine Duty Rating	X, Y: 2000 lb <b>900 kg</b> Z: 3000 lb <b>1360 kg</b>
<b>MISCELLANEOUS</b>	
1/8 HP Flood Pump Capacity <i>Optional in Package B</i>	7.5 gal. <b>28 L</b>
Drawbar Air Pressure Required	80 psi <b>5.5 bar</b>
Power Requirements 208-240 VAC, 50 – 60 hz, 3Ø	30 amps, 11 kVA
Power 208-240 VAC, Single Phase	Optional
Power 380-480 VAC, 50 – 60 hz, 3Ø	Requires Transformer
Floor Space Requirement	98" x 72" <b>249 x 1830 mm</b>
Warranty	Parts: 2 Year (or 4200 hours, whichever occurs first) on all normal failures. Service: 1 Year (or 2100 hours, whichever occurs first) from dealer or available 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 <a href="http://www.milltronics.net">www.milltronics.net</a>. Milltronics reserves the right to change specifications at any time without incurring obligation.</i></p>	