

HMC - Horizontal Machining Center Pricing

Effective September 1, 2008



MACHINE MODEL		HMC35
Travel		51 x 35 x 25"
Spindle Horsepower	<i>30 minutes/ continuous</i>	Two Speed 25/20 HP <i>18.5/15 kw</i>
Spindle Taper		#40
Spindle Type		Belted, 70mm
Tool Changer, Retractable		30 Pocket Double Arm
Spindle RPM		8000 or Optional 15,000
Way Type		Precision Ground Box Ways with Turcite
Table Fixturing Options		Angle Plate 90° Indexing Table Fully Programmable Table
MACHINE FEATURES		
<ul style="list-style-type: none"> • Massive Heavily Ribbed Cast Iron Construction • Hardened and Ground Square Box Ways with Turcite • Precision Ground Table Surface • Heavy Duty #40 Taper, 5 Bearing, 70mm, 8000 (15,000 option) RPM, Air Purged Spindle Cartridge • Air Blast Hose and Wash Down Hose • Spindle Blow Out and Tool Release Push Button • Automatic Metered Lubrication with Low Lube Fault • Ground 40 mm Ball Screws, Double Nut, Double Anchored • Dual Chip Auger System • Full Metal Enclosure with Work Lights • Rear Access Door with Swivel Operators Station • Retractable High Speed Double Arm 30 Pocket ATC • Metal Way Covers on All Axes • Front Mounted Auxiliary Operators Station • Six Nozzle High Volume Flood Coolant System • Two Year Parts Warranty • LCD Hour Meter • End of Cycle Light • Remote Handwheel Unit Mounted in Front of Machine • 2 Chip Buckets for Dual Auger Chip Removal System 		
FANUC Oi CONTROL FEATURES		
<ul style="list-style-type: none"> • ManualGuide™ Conversational Programming System • Dynamic Graphic Display • 256 Kb Program Storage • 10.4" color LCD Display • PCMCIA slot • Scaling, Rotation, & Mirror Image • Remote Electronics Handwheel • 8ms block processing speed (4ms with AICC option) • Manuals on CD ROM (bound manuals are optional) • RS232 port with DNC capability • Ethernet port • Macro Executor 		
ACCESSORY PRICING		
GE Fanuc Control Options		
Data Server with 256 Mb Memory Storage		
AICC 4 M/Sec Block Rate		
SPINDLE ACCESSORIES		
Specify Tool Holder CT40		
Optional Tool Holder BT40 or DIN 69871		
Coolant Through Spindle – 300 PSI Low Pressure System Includes Drawbar Assembly, Ansi Retention Knobs & Rotary Coupling		
Coolant Through Spindle – 700 PSI High Pressure System Includes Drawbar Assembly, ANSI Style Retention Knobs & Rotary Coupling		
Coolant Through Spindle Ready Kit <i>Includes drawbar assembly for ANSI Style Retention Knobs and rotary coupling. Does not include pumps or external coolant tank.</i>		
Programmable Air Blast Through Spindle <i>Requires purchase of Coolant Through Spindle Ready Kit</i>		
SPINDLE ACCESSORIES CONTINUED		

Spindle Chiller Loop for Spindle Cooling <i>Allows for the spindle cooling without flood. If combined with flood, converts the flood to two nozzles. Recommended where coolant is not used or head growth is a concern.</i>	
Upgrade to 15,000 RPM Ceramic Duplex Bearing Spindle	
FIXTURING ACCESSORIES	
90° Angle Plate – 24.8" 630mm Sq.	
Horizontal Indexing Table – 23.6" 600 mm Square 90° Locking	
Horizontal Rotary Table – 20" 510 mm Square 4 th Axis Contouring and Locking	
4 th Axis Servo Amplifier & Motor (Electrics only) Included <i>with Rotary Table Accessory</i>	
OTHER ACCESSORIES	
Coolant Tank Oil Skimmer	
Programmable Spray Mist On/Off	
Programmable Air Blast	
Spare "M" Functions – Block of 4 Maximum <i>2 blocks; price is for each block</i>	
Chip Buckets for Augers (<i>Requires two at \$400 each</i>)	
Chip Wash Down System	
Electrical Cabinet AC unit (<i>Required for shops exceeding 90° F/32° C</i>)	
Work Offset Probing with Macros	
Contact Tool Offset Probing with Macros (<i>Contact Factory</i>)	
Combo Pack – Contact & Work Tool Offset Probing with Macros	
Laser Tool Setter (<i>Contact Factory</i>)	
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	
Voltage 208-240 Three Phase	
Voltage 208-240 Single Phase	
Transformer for 400-440V, 34 KVA	
UL/CUL Compliance	
CE Code (<i>Required for European Union Countries</i>)	
International Packaging	
Two Year Warranty	
On Site Machine Installation, USA Only, Training May be Purchased Separately from Fanuc if Required	
<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 F.O.B Waconia, Minnesota 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. All sales of equipment, parts, software and service are subject to Milltronics' Standard Terms and Conditions of Sale.</i></p>	

HMC - Horizontal Machining Center Specifications

Effective September 1, 2008



Machine Model	HMC35
Control Type	Fanuc Oi
Number of CNC Axes	Up to 4
CAPACITY	
Table Size	59 x 26" <i>1500 x 660 mm</i>
Table Travel X Axis	51" <i>1300 mm</i>
Head Travel Y Axis	35" <i>890 mm</i>
Saddle Travel Z Axis	25" <i>635 mm</i>
Throat Distance <i>Spindle to Column</i>	30" <i>760 mm</i>
Spindle Nose to Table Edge	5.5" - 31" <i>140 - 790 mm</i>
Spindle Center to Table Top	4.5" - 39.5" <i>115 - 1000 mm</i>
Maximum Table Load (Including Fixturing Weight)	3500 lb <i>1590 kg</i>
Machine Weight	24,000 lb <i>11,000 kg</i>
Machine Table T Slots (# / Width / Spacing)	5 / .71" <i>18 mm</i> / 4.33" <i>110mm</i>
Base Width / Saddle Width	33 / 32" <i>835 / 810 mm</i>
Ball Screw Size	40 mm Double Nut
Ball Screw Grade	C3, 12 pitch
SPINDLE	
Specify Tool Holder Type	CT40 or BT40
Standard Horsepower <i>30 minutes/ continuous</i>	25/20 HP <i>18.5/15 kw</i>
Standard Spindle - Heavy Duty 70 mm Triplex Steel Bearing Spindle	50 - 8000 RPM
Optional Spindle - Ceramic Duplex Bearing Spindle	100 - 15,000 RPM
Balanced Tooling Requirements	Tools Should Be Balanced to 2.5 G's at 15,000 RPM
COOLANT THROUGH SPINDLE	
Coolant Through Spindle Option (CTS) <i>Requires the use of ANSI Retention Knob</i>	300 psi 21 <i>bar</i> 700 psi 48 <i>bar</i>
CTS - Pump Filtration	11 Micron
CTS - Additional Coolant Capacity	118 gal <i>450 L</i>
CTS- Flow Rate	5 gal/min <i>19 L/min</i>
CTS - Pump HP	5 HP <i>3.7 kw</i>
PERFORMANCE	
Servo Type	AC Digital
Rapid Traverse XYZ	800 ipm <i>20 mpm</i>
Maximum Feedrate <i>Part Dependent</i>	300 ipm <i>7620 mmpm</i>
Position Accuracy <i>See note1</i>	±0.00039" <i>.01 mm</i>
Repeatability <i>See note1</i>	.0002" <i>.005 mm</i>
Feedback Resolution	.00004" <i>.001 mm</i>
Thrust, Machine Duty Rating XY, Z	4000 lb <i>1800 kg</i> , 6000 lb <i>2720 kg</i>
ATC - ARM TYPE	
Number of Pockets	30 Retractable
Tool Change Time	20 Seconds
Maximum Tool Diameter <i>Greater than 3.3" diameter tool requires adjacent empty pockets</i>	3.3" <i>85 mm</i> or 6.6" <i>170 mm</i>
Max Tool Length / Weight	11.8" <i>300 mm</i> 17 lb <i>8 kg</i>
OPTIONAL ANGLE PLATE	
Face Place Height	24.8" <i>630 mm</i>
Face Plate Width	24.8" <i>630 mm</i>
Face Plate Hole Matrix	132 Holes on 1.96" <i>50 mm</i> Spacing
Matrix Hole Size	M16

Machine Model		HMC35
Weight	650 lbs <i>295 kg</i>	
OPTIONAL INDEXING TABLE - 90° LOCK		
Table Work Area	23.6 x 23.6" <i>600 x 600 mm</i>	
Table Height	11.2" <i>285 mm</i>	
T Slots (Number) Width / Spacing	(5) .71" <i>18 mm / 3.93" 100 mm</i>	
Table Load Capacity	2300 lb <i>1043 kg</i>	
Table Clamping Force	17,000 lb <i>7916 kg</i>	
Table Clamping Positions – Number / Degree	4 / 90°	
Positioning Accuracy - 90° Clamping Positions	± 4 Degree Seconds	
Repeatability - 90° Clamping Positions	± 1 Degree Seconds	
Rotary Table Weight	1200 lb <i>550 kg</i>	
OPTIONAL ROTARY TABLE – 4th AXIS CONTOURING		
Table Work Area	19.75 x 19.75" <i>500 x 500 mm</i>	
Table Height	8" <i>202 mm</i>	
T Slots (Number) Width / Spacing	(5) .56" <i>14 mm / 4" 101 mm</i>	
Table Load Capacity	2500 lb <i>1135 kg</i>	
Table Clamping Torque <i>See Note2</i>	800 lbf-ft <i>360 kgf-m</i>	
Table Clamping Positions – Number / Degree	Infinite	
Positioning Accuracy	± 20 Arc Seconds	
Repeatability – Approach From Same Direction	±10 Arc Seconds	
Rotary Table Weight	1,000 lb <i>550 kg</i>	
MISCELLANEOUS		
Standard Flood Capacity	80 gal <i>300 L</i>	
Drawbar Air Pressure Required	100 psi <i>6.8 bar</i>	
Optional Electrical Cabinet Air Conditioning	4,000 BTU	
208-240 VAC 50-60 Hz 3Ø	100 amps 34 KVA	
Power 208-240 VAC Single Phase	Not Available	
400-440 VAC <i>Requires Transformer</i>	34 KVA	
Floor Space Requirement	196" x 160" <i>5000 x 4000 mm</i>	
Warranty	Parts: One year or 2100 hours, whichever occurs first, for normal failures. Service: One year or 2100 hours, whichever occurs first, from distributor.	
Extended Parts Warranty for Second Year	Parts warranty for normal failures for up to two years or 4200 hours, whichever occurs first.	
<p><i>Note 1: Measurements performed with Renishaw laser and ballbar systems. Measurements are linear over entire travel. Temperature changes and table loading may affect tolerances. Tolerances are guaranteed over 20" sq. area.</i></p> <p><i>Note 2: For maximum holding torque, load should be placed against the worm drive.</i></p> <p><i>Centurion features covered under separate literature. For machine duty rating, see "Truth in Specifications" on www.milltronics.net. Milltronics reserves the right to amend or change specifications at any time without notice without incurring obligation.</i></p>		