



## **CNC BED Mill MODEL: E320**

### **MACHINE FEATURES:**

**2008**

- \* **ISO 9001** QUALITY ASSURANCE
- \* LATEST CENTROID CONTROL M-400 WITH 15" LCD MONITOR.
- \* 3-AXIS **DIGITAL AC 1 KW. SERVO DRIVE MOTOR** WITH BELT DRIVE.
- \* **CLASS 7 BEARING** FOR SPINDLE RUN OUT LESS THAN 0.00015".
- \* 220 V., 10 HP. **ELECTRONIC VARI SPEED** WITH SPINDLE S CONTROL.
- \* **HARDENED & GROUND** TABLE / CENTER T-SLOT (GROUND FOR QUICK SETTING).
- \* **MEEHANITE CASTING** TO PROVIDE MAXIMUM RIGIDITY AND STABILITY.
- \* **SQUARE SLIDE WAYS** ON X, Y & Z-AXIS.
- \* X, Y & Z-AXIS METAL TELESCOPING WAY COVERS.
- \* **4 BOX WAY DESIGN** ON Y-AXIS FOR LONG-TERM RELIABILITY.
- \* **SUPER WIDE SADDLE** TO ENSURE ACCURACY MOVEMENT.
- \* ALL AXES HAVE HIGH PRECISION, **CLASS C3**, PRE-TENSION **BALLSCREW** TO ENSURE HIGH ACCURACY.
- \* **HARDENED & GROUND** X, Y & Z-AXIS WAY WITH **TURCITE B** COATING TO ELIMINATE STICK-SLIP.
- \* **ATC UMBRELLA TYPE TOOL CHANGER**, 16 MAGAZINE
- \* SPINDLE TAPER CAT 40 OR BT 40.
- \* AUTOMATIC FLOOD (M8) COOLANT SYSTEM OR MIST COOLANT (M7), SPECIFY AT TIME OF ORDER.
- \* **LASER COMPENSATION** TO ENSURE HIGH ACCURACY +/-0.0004" POSITION 0.0002" REPEATABILITY.
- \* FINITE ELEMENT ANALYSIS (FEA)
- \* MACHINE MADE IN TAIWAN, CONTROL **MADE IN U.S.A.**



### **MACHINE STANDARD ACCESSORIES:**

- 16 TOOL MAGAZINE
- X, Y & Z-AXIS METAL TELESCOPING WAY COVERS
- TABLE GUARD
- CHIP TRAY
- AUTO LUBE SYSTEM
- OPERATION MANUALS
- TOOLS & TOOL BOX
- LEVELING BOLTS & PADS

### **CONTROL STANDARD ACCESSORIES:**

- SHOP FLOOR PROGRAMMING
- CUTTER RADIUS COMPENSATION
- CANNED DRILLING CYLES
- G-CODE BACKPLOT
- DRILLING CYCLES
- SPINDLE MULTI GEAR RANGE
- Files transfer by USB or Ethernet
- OPERATION MANUAL & TRAINING VIDEO TAPE

### **MACHINE SPECIFICATIONS:**

#### **MILL ACCURACY:**

POSITIONING: \_\_\_\_\_ ±0.0004"  
 REPEATABILITY: \_\_\_\_\_ ±0.0002"

#### **TABLE:**

WORK TABLE: \_\_\_\_\_ 16" X 41"  
 TABLE T-SLOTS (WxN): \_\_\_\_\_ 0.71" X 4  
 MAX. TABLE LOAD (CENTER): \_\_\_\_\_ 1,500 LBS.



# ATRUMP MACHINERY, INC.



URL: <http://cncmachinesinmotion.com>  
E-mail: [sales@cncmachinesinmotion.com](mailto:sales@cncmachinesinmotion.com)

993 Carbon Canyon Rd. Chino Hills, CA 91709  
Office: (714) 528-7061 Fax: (714) 528-4892

## CNC BED Mill MODEL: E320

### TRAVELS:

X-AXIS TRAVEL:	_____	33.9"
Y-AXIS TRAVEL:	_____	20"
Z-AXIS TRAVEL:	_____	24"
SPINDLE NOSE TO TABLE:	_____	4.8" TO 28.8"
SPINDLE CENTER TO COLUMN:	_____	21.7"

### SPINDLE:

SPINDLE TAPER:	_____	CAT # 40 45° KNOB (BT OPT.)
SPINDLE SPEED:	_____	60 ~ 6,000 RPM
SPINDLE TORQUE OUTPUT:	_____	38 FT-LBS. (50NM) OPT: 70 FT-LBS. (96NM)
3-AXIS DRIVE MOTOR:	_____	AC 1 KW. MOTOR
SPINDLE BEARINGS:	_____	ABEC CLASS 7

### FEED:

RAPID FEED:	_____	360 IPM.
CUTTING FEED:	_____	1-200 IPM.
MINIMUM INPUT INCREMENT:	_____	0.0001"

### AUTOMATIC TOOL CHANGER:

ATC TYPE:	_____	UMBRELLA TYPE
NUMBER OF TOOLS:	_____	16
MAX. TOOL DIAMETER:	_____	Φ3.54"
MAX. TOOL LENGTH:	_____	10-15/16"
MAX. TOOL WEIGHT:	_____	14 LBS.
TOOL CHANGE TIME:	_____	9 SECONDS
PULL STUD/RETENTION KNOB:	_____	STANDARD 45°

### MOTORS:

SPINDLE MOTOR:	_____	10 HP., 3Φ 220 VOLTS
KVA RATING / AMPS:	_____	17 KVA. / 50 AMPS.
MAXIMUM MOTOR OUTPUT:	_____	STANDARD 10 HP. (30 MIN.) 15 HP. (PEAK)
COOLANT PUMP MOTOR:	_____	0.6 HP., 3Φ 220 VOLTS
LUBRICANT:	_____	1Φ 220 V., WAY OIL #2 BY HANGSTEFERS

### ADDITIONAL INFORMATION:

BALLSCREW DIAMETER:	_____	1.26"
AIR REQUIREMENTS:	_____	80 ~ 90 PSI
COOLANT FLOW/CAPACITY:	_____	30-36 GALLONS
FLOOR SPACE:	_____	99" X 83" X 96"
WEIGHT:	_____	6,820 LBS.

### BASE PRICE:

**ATRUMP E320 VMC with table guards (see below for full enclosure option) \_\_\_\_\_ \$ 55,880.00**



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## ATRUMP VERTICAL MACHINING CENTER MODEL: E320

### MACHINE OPTIONAL ACCESSORIES:

1. 20 PC SET OF 45° RETENTION KNOBS FOR AUTOMATIC TOOL CHANGER _____	\$ 300.00
2. HIGH VOLTAGE OPTION (TRANSFORMER): 220 VOLTS TO 440 OR 480 VOLTS _____	\$ Call
3. MOTOR UPGRADE FROM 10 HP. TO 15 HP. _____	\$ 2,000.00
4. FULL METAL ENCLOSURE (MAY ONLY BE ORDERED AT THE TIME OF PURCHASE) _____	\$ 4,400.00
5. CHIP AUGER, ONLY AVAIL. WITH FULL METAL ENCL. _____	\$ 4,400.00
6. 6" ANGLOCK TYPE VISE WITH SWIVEL BASE _____	\$ 275.00
7. VACU-VISE 12" X 12" VACUUM TABLE _____	\$ 1,295.00
8. VACU-VISE 24" X 16" VACUUM TABLE _____	\$ 1,995.00
9. VENTURI VACUUM GENERATOR (FOR USE WITH VACU-VISE TABLES) _____	\$ 375.00
10. UPGRADE TO 8,000 RPM _____	\$ 3,000.00

### OPTIONAL CONTROL ACCESSORIES:

Since each customer has different needs and expectations for his machine tool, you can order your CNC machine with the features that fit your needs today. Then, in the future, upgrade your machine with just a phone call.

#### Software Options

1. Multi work coordinate system [G55-59]	700.00
2. Subprograms & Macros [M98 & G65]	INCL
3. Scaling and Mirroring [G50 & G51]	495.00
4. Unlimited Program Memory (1 meg is standard)	1,495.00
5. Millwrite Engraving software.	665.00
6. Rigid tapping	995.00
7. Compression tapping	350.00
8. Ball screw mapping	INCL
9. Intercon programming software for your desk top PC (standard on your control)	840.00
10. Coordinate System Rotation	495.00
11. DXF input, tool path generator	495.00
12. On-site setup of network communication between your control and one desk top (windows based) computer.	700.00
13. Technical documents and telephone assistance for the setup of network communication between your control and one desk top (windows based) computer or a multi computer company wide network.	345.00
14. <b>Software Packages:</b>	
<b>B.</b> Multiple work coordinates, Sub routines and Macros, Scaling and mirroring.	All for 1,850.00
<b>C.</b> Unlimited file size, Scaling and mirroring, Coordinate system rotation.	All for 1,699.00
<b>D. Deluxe tool room package</b> - a "Machines in Motion exclusive offer" including: Tool touch off device and software unlock. Digital touch probe and probing software unlock. Coordinate system rotation unlock.	All for <b>3,520.00</b>



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### **Digitizing and Probing**

10405	Probing package includes DP-4 probe hardware and probing cycles software.	2,210.00
10228	Digitizing software (3D surface copying). Complete package includes Unlimited program memory and Scaling & mirroring software options. Also includes Mold Magic, desk top software for reposting digitized tool path compensating for different tool sizes and milling step over.	4,200.00
10220	TT-1 Tool height touch off kit. Comes with touch off hardware and software.	755.00

### **Accessories**

10014	MPG Handwheel with axis selector	670.00
	4 <sup>th</sup> Axis Model RT-200 200mm diameter face, 7" chuck w/ mounting plate.	8,909.00
	4 <sup>th</sup> axis installation and programming included free of charge by Machines in Motion Inc. when purchased with a new Atrump machining center.	
	6" model (RT-150) is \$529.00 less than the RT-200 quoted above.	

**STANDARD TERMS OF PAYMENT:** 20% down-payment, terms to suit available.

**VALIDITY:** This proposal is valid for 60 days.

**Training:** CNC Machines purchased from Machines in Motion Inc. include free machine setup and on-site control use training. Additional days of on-site services are available at 1/2 our normal daily rate.

Travel related expenses additional.

**WARRANTY:** One-year warranty for any defects in material or workmanship of machine tool and factory installed components.

**Contact: Doug Laursen** of Machines in Motion Inc. Personal cell phone number 714 404-2996

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