



# MANFORD MACHINERY, INC.

4230 E Airport Dr. Ste.105, Ontario, CA 91761  
Tel: (909) 923-5520 Fax: (909) 923-5509

P/ O/ Box 7002, West Orange, NJ 07052  
Tel: (201) 729-1100 Fax: (201) 729-1155

[URL:www.manford-usa.com](http://www.manford-usa.com) [e-mail:sales@manford-usa.com](mailto:sales@manford-usa.com)

## CNC BED TYPE MILLING MACHINE

**MODEL: CB- 1600 without ATC**

**MCB-1600 with Armless type 20 tools ATC**

### MACHINE FEATURES

- 86.6" X 19.7" (2200mm X500mm) Table
- 10HP Spindle Motor, CAT#40 Spindle
- XYZ precision ground double nut & preload C5 grade ball screws 40mm diameter.
- TELESCOPIC STEEL WAY COVERS
- Licensed Meehanite casting with anneal & stress relieving treatment
- ONE PIECE HEAD CASTING
- X/Y/Z WAYS HARDENED & GROUND & high grade TURCITE B
- Y/Z SOLID SQUARE WAY design
- Leveling pads & bolts, Ball screw XYZ
- Tool box & Tools
- Air power drawbar & SEMI GUARDING
- Coolant System & coolant tray
- Quartz work light & Auto lubrication.
- RS-232 interface, End of program light
- Hardware limit switches on XYZ
- Position Accuracy +/-0.0004"
- Repeatability:0.0002"
- Rigid Tapping (for MCB model)
- ATC 20 Tools Genova Type (MCB-1600 only)
- CSA Electricity

### Specification:

Table:	86.6" X 19.7" (2200mm X500mm)
T slot (width x number):	0.71"x 5 (18mm x 5)
Longitudinal travel:	63" (1600mm)
Cross travel:	27.56" (700mm)
Vertical travel:	27.56" (700mm)
Spindle nose to table-top:	4.7"-32.28"(120-820mm)
Max. load capacity:	3300 lbs.(1500 Kgs.)
Spindle taper:	CAT#40
Spindle Speed (r. p.m.):	50-6000 rpm
Spindle center to column front surface:	26.3" (670mm)
Rapid traverse X,Y,Z axes(mm/min):	472 ipm
Cutting feed rate(mm/min):	0.04-200 ipm
Spindle motor:	10 HP



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Net Weight:

9900 lbs. (4500 Kgs)

MODEL	SPINDLE	ATC	CNC SYSTEM	SPINDLE MOTOR	AXES MOTOR	Ontario, CA
CB-1600	CT40	N/A	Fagor 8055i/FL 11" LCD	FM7-A075-S1C1-E01 (7.5/11Kw) (15HP)	FKM44.30A.E3. 100 (11.6Nm)	\$68,000
MCB-1600	CT40	20	Fagor 8055i/FL 11" LCD	FM7-A075-S1C1-E01 (7.5/11Kw) (15HP)	FKM44.30A.E3. 100 (11.6Nm)	\$72,000

### CNC SYSTEM OPTION:

BRAND	MODEL	SCREEN	SPINDLE MOTOR	AXIS MOTORS	EXTRA PRICE
Fanuc	Oi-Mate D	8.4"	7.5Kw (10HP)	B8i/3000rpm	<del>-US\$2,000</del>
	Oi-MC Package B	8.4"	7.5Kw (10HP)	B12i/3000rpm	US\$1,600
Heidenhain	iTNC320	15.1"	7.5Kw (10HP)	1Kw	US\$1,800
Mitsubishi	M70-2B	8.4" color	7.5Kw (10HP)	1Kw	<del>-US\$3,000</del>
Fagor	8055i/FL	11" color	11Kw (15HP)	2Kw	standard

### STANDARD ACCESSORIES:

Tools & box	Semi-l guarding	Heat Exchange for electrical cabinet
Leveling bolts & plate	End of program light	Auto lubrication (box way type)
RS-232 Interface	Auto Power off	Halogen work light
Operation manual	Rigid Tapping	

### With CNC Controller package price:

#### FAGOR 8055i/FL –MC 3 axis CNC system complete

Memory: 500MB of memory card (expandable Compact flash of up to 2 Gb flash memory)

USB connector for backup of programs, parameters and tables.

Ethernet Interface. TCP-IP protocol.

Opto-coupled RS-232 serial line (115,200 baud).

PLC's opto-coupled digital I/O: 16 inputs and 8 outputs (24V DC, 150 mA).

Optional expansion of opto-coupled digital PLC I/O: 40 inputs and 24 outputs (24 V DC, 150 mA).

Feedback input and analog output for the spindle.

Optional analog expansion of 4 feedback inputs of 1 Vpp/TTL and 4 analog outputs.

Includes:

CNC 8055i/Plus color 11" LCD MC Compact

4 axes milling simultaneous capacity, Ethernet communication, USB Interface

3D solid graphics, Pockets with Island (2D/3D)

Profile Editor, Software MC Conversational feature

M3/M4/M8 relays for Spindle on/off, coolant on/off, emergency button

Milling DNC software ,WINDNC communication software / Import DXF files



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## Optional Accessory:

General:	Price
Carousel 20-Station Automatic Tool Changer (MCB-1600)	\$1,000
Side-mounted 24-Station ATC (MCB-1600)	\$4,000
Full Enclosure	\$5,500
Coolant pump system	standard
Screw-type Chip Auger	\$3,000
Rigid Tapping	standard
Work Light	standard
Way Covers for Y and Z Axis	standard
Spindle Orientation	standard
End of Program and Alarm Light	standard
BT40 belt type spindle speed 10000rpm (with spindle oil cooler)	\$2,300.-
BT40 belt type spindle speed 15000rpm (with spindle oil cooler)	\$3,000.-
Oil mist lubrication pump	\$800.-
Spindle oil cooler 4000BTU	\$2,000.-
Coolant through spindle center (30 Bar)	\$4,800.-
Oil through tool holder	\$1,000.-
External Transformer , 420-575-600V, 60HZ, 20 KVA	\$1,800.-

## Control Options

UFO Flat Handwheel <b>on the side of the Operator Panel</b>	\$400	
<b>Conversational Programming</b>	standard	No Charge
<b>Telediagnosis</b>	\$1,000	
<b>DNC(winddnc)</b>	standard	No Charge
<b>Engraving</b>	\$800	
<b>Speed Feed Assistance</b>	\$400	
<b>Solid Graphics</b>	standard	
<b>2 GB Compact Flash</b>	\$1,400	
<b>Ethernet</b>	standard	
<b>CNC 8055 -PLUS</b>	\$5,000	5 axis capability
<b>SPECIAL OPTIONS</b>		<b>ADDITIONAL AXIS</b>
<b>4<sup>th</sup> Axis Pre-wiring</b>	\$1,200	Pre-wiring cables only
<b>4th axis Driver and Wiring only, for brushless type Rotary Tables</b>	\$2,800	includes cable, and driver
<b>4th axis (41 in. lb. MOTOR)</b>	\$1,200	Fagor AC motor
<b>CNC-250R rotary table, manual scrull SC-8",</b>	\$11,000.	Golden Sun rotary table



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<b>manual tailstock TS-A160, and cable</b>		model:CNC-250R
<b>Brake Option</b>	\$650	Brake price only
<b>Automatic Spindle option:</b>	standard	M3,M4 relays with contactors, overload fuse
<b>Coolant options</b>	standard	M8 relay with contactors, overload fuse
<b>Additional I/O (54IN 31OUT) with 8 Spare M Functions</b>	\$1,200	Additional PLC inputs and outputs (includes wiring & Labor)
<b>Probing System</b>		
<b>Tool length measurement TS-30 (Marposs)</b>	\$2,500	Marposs TS-30
<b>Tool length measurement ML-85 (Marposs laser tool setter)</b>	\$7,800	MarpossML-85 laser tool setter
<b>Wireless Intuitive Probing System; Renishaw</b>	\$3,800	TS27R Hardware Kit
<b>Wireless tool-setting Probe and Renishaw wireless work, offset probe</b>	\$9,400	OMP40 Hardware Kit CAT40 Shank for OMP40

F.O.B.: Ontario , California

DELIVERY: 3-4 month after receiving your confirmed P/O with down-payment

STANDARD TERMS OF PAYMENT:

A minimum down payment of 10% of the purchase price at receipt of order. Balance, 30 days after date of shipment.

TAXES: Federal, State, Local Taxes are the responsibility of Purchaser.

VALIDITY: This proposal is valid for 60 days.

INSTALLATION:

After the machine has been positioned, cleaned, leveled and the customer has provided electric power service, hydraulic, lubrication oil, cutting oil, cutting tools, etc. a service technician can be dispatched to the installation site by customer's request and all expenses will charge to customer. The technician will place the machine in service, verify proper operation and provide instructions to operating and maintenance personnel. This will need to be pre-arranged in sales contract if the service is needed.

WARRANTY:

One-year warranty for all mechanical and controller components.