

# CLEVELAND

## VERTICAL MACHINING CENTER MODEL: M1320

### MACHINE FEATURES:

- **Centroid M400 control with 15" LCD**
- **24 tools ATC arm type**
- **25 HP spindle motor, BT50 or CAT50 spindle taper**
- **6,000 rpm spindle speed with spindle oil cooler**
- Hardened & ground with Turcite-B coating guide way
- Double nut precision ball screws hardened & ground for high accuracy and long lasting
- FC30 Meehanite casting main frame with annealed & stress relieved for long term reliability
- 100% laser tested for positioning accuracy & repeatability
- 4 Box ways design on Y axis to provide maximum rigidity & stability
- Telescopic steel way covers on all three axes
- Tool box & tools
- Coolant system and air blast system
- Central lubrication system
- Built-in Quartz work light
- Rigid tapping (opt)
- **Portable hand wheel (opt)**



### Specification

X / Y / Z travel: ..... 52" / 28" / 27.5"  
Distance from spindle to column: ..... 29.7"  
Distance from spindle to table top: ..... 4.3" ~ 31.8"

### Working Table

Size (X / Y): ..... 59.8" / 27.5"  
T-slot: ..... 0.7" x 5 x 5.7"  
Load capacity: ..... 3300 lbs

### Spindle

Motor: ..... 25 HP  
Speed: ..... 6,000 rpm  
Taper: ..... CAT50 / BT50

### Feed Rate

Rapid X / Y / Z: ..... 640 / 640 / 480 ipm  
Cutting: ..... 300 ipm

### ATC

Tool magazine capacity: ..... Arm 24  
Max. tool dia. / adj. pocket empty: ..... Ø 4.1" / Ø 8.6"  
Max. tool length: ..... 13.7"  
Max. tool weight: ..... 33 lbs

### General

Power requirement: ..... 48 KVA  
Pneumatic tank requirement (min.): ..... 5 ~ 8 (5) kg/cm<sup>2</sup>  
Coolant tank capacity: ..... 63.4 gal

### Dimension & Weight

L X W X H: ..... 155" x 113" x 116"  
Weight: ..... 18,700 lbs

### Standard Accessories

Boster (unclamp) cylinder	Auto lube	Air gun & spindle air blast
Full enclosure	Coolant system	Halogen work light
Telescoping way cover	Power chain	Operation manual
Tools & box	Spindle chiller	Encoder set
Screw type chip auger	Electric cabinet set w/ bracket	Arm type 24 tool atc system

### Optional Machine Accessories

CK-105	52pcs Clamping Kit slot: 0.71" (18mm); stud: 5/8-11
CP-MIST	Mist Coolant System
UG-MT15	Upgrade to high torque Y and Delta Motor
WISE-6	6" Angle Vise W/ Swivel Base (Import)
C40RK-45	Retention Knob Cat40, 45degree 20pcs
CP-SP	Coolant Through Spindle

### Optional Software Accessories

10620	Compression tapping
10610	User definable Macros and sub programs [M98 & G65]
10851	Cutter compensation
10360	4th axis software
10630	Unlimited part program size
10730	Intercon off-line conversational program (for your desktop PC)
10810	Rigid tapping [G74 & G 84] (includes 10620)
10850	Coordinate system rotation (CSR)
10625	Scaling and mirroring [G50 & G51]
10814	DXF in, CAD drawing input software
10660	BCD tool change output
10740	Engraving software

#### Digitizing & Probing

10405	DP-4 probing package w/ CSR (10850)
12486	DP-7 probing package w/ CSR (10850)
10770	2D & 3D digitizing software (requires 10405)
10220	TT-1; Tool touch off kit
12468	TT-2; Tool touch off kit
10772	Tool room package (10405 & 10220 & 10600 work coordinate)

#### Manual Pulse Generators (MPG)

11069	100 Step MPG
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**\*\* WE RESERVE THE RIGHT TO CHANGE DESIGN, COLOR, SPECIFICATIONS, OR PRICE WITHOUT NOTICE \*\***

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