

# CLEVELAND

## VERTICAL MACHINING CENTER MODEL: L660

### MACHINE FEATURES:

- Centroid M400 control with 15" LCD
- Armless type 16 tool ATC
- 10 HP spindle motor, CAT40 / BT40 spindle taper
- 8,000 rpm spindle speed with spindle oil cooler
- Linear guide way on three axes
- 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
- Telescopic steel way covers on 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: .....	26" / 18" / 20"
Distance from spindle to column: .....	20.4"
Distance from spindle to table top: .....	5.9" ~ 26"

### **Working Table**

Size (X / Y): .....	30" / 18"
T-slot: .....	0.7" x 4 x 4.3"
Load capacity: .....	1100 lbs

### **Spindle**

Motor: .....	10 HP
Speed: .....	8,000 rpm
Taper: .....	CAT40 / BT40

### **Feed Rate**

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

### **ATC**

Tool magazine capacity: .....	Armless 16 tool
Max. tool dia. / adj. pocket empty: .....	Ø 3.1" / Ø 5.9"
Max. tool length: .....	11.8"
Max. tool weight: .....	15.4 lbs

### **General**

Power requirement: .....	19 KVA
Pneumatic tank requirement (min.): .....	5 ~ 8 (5) kg/cm <sup>2</sup>
Coolant tank capacity (pump): .....	63.4 gal (1 hp)

### **Dimension & Weight**

L X W X H: .....	125" x 92" x 97"
Weight: .....	9,900 lbs

### Standard Accessories

Booster (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 coolant unit	Encoder set
Screw type chip auger	Electric cabinet set w/ bracket	

### Optional Machine Accessories

CK-105	52pcs Clamping Kit
CP-MIST	Mist Coolant System
UG-RPM100	Upgrade to 10000 rpm ( need to be finished in factory)
TRAN-17	Transformer: 28KVA (440~480V)
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
UG-MT10-15	Upgrade Motor from 10 to 15HP

### 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

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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)

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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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