Cleveland Vertical CNC Bed Mill Model: BM-660H

Machine Features:
- Centroid M400 control with 15” LCD
- 15 HP spindle motor, CAT40 spindle taper
- 8,000 rpm spindle speed
- 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
- Box ways design on Y & Z axis to provide maximum rigidity & stability
- Standard way covers on all three axes
- Tool box & tools
- Coolant system
- Central lubrication system
- Built-in Quartz work light
- Portable hand wheel (opt)
- Automatic Tool Changer (opt.)
- Full Enclosure (opt.)

Specification

Table: 29.9” x 72” (760x1830 mm)
Longitudinal travel: 66.9” (1700 mm)
Cross travel: 33.4” (850 mm)
Vertical travel: 27.5” (700 mm)
Spindle nose to table top (D): 4.7” to 33.4” (120-850 mm)
Load capacity: 3300 lbs (1500 kgs)
Spindle taper: BT40 or CAT40
Spindle speed: 60 to 8000 rpm
Transmission of spindle & motor: Belts
Spindle center to column front surface: 25.5” (650 mm)
T slot: 0.62*3*2.36” mm

Feed Rate
Rapid feed rate: X/Y/Z: 250 ipm AC
Cutting feed rate: 1 to 120 ipm

Motor
Spindle motor/max torque: 15 HP / 10 kW
Feed motors on XYZ: 3 kW - AC Servo
Coolant pump: 1/8 HP
Lubrication pump: 150 W
Power requirement: 30 KVA, 3 Phase 208V to 230V (Max)

Automatic Tool Changer
No. of tools: OPT
Max tool diameter: 3.5” (90 mm)
Max tool weight: 15 lbs (7 kgs)

Dimension & Weight
Length x Width x Height: 194.7” x 125.7” x 118.5”
Net weight: 18,700 lbs (8300 kgs)
# Standard Accessories
- Tools & box
- Operation manual
- Auto lube system
- USB 2.0 port
- Leveling bolts & plate
- 15" color LCD
- Halogen work light
- RS-232 interface
- Coolant system
- Splash guard
- 120 GB solid state hard drive
- Shop floor programming/Conversational

# Optional Machine Accessories
- CK-105: 52pcs Clamping Kit
- CP-MIST: Mist Coolant System
- 16ATC: 16 T magazine - Umbrella with Software
- ENCLOURE: Full Enclosure
- SEMI-ENCLOU: Semi Enclosure
- CHIP: Chip Auger
- C40RK-45: Retention Knob Cat40, 45degree 20pcs
- TG-CNC: Table Guard
- TRAN-17KVA: Transformer: 28KVA (440~480V)
- Riser Block: 10" riser block for Engine block job shop
- VISE-6: 6" Angle Vise W/ Swivel Base (Import)

# 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

# Additional Accessories Information
- Power requirement: ...................................... 20 KVA 3 phase 208V to 230V (Max)
- Air requirement: ........................................ With opt. power draw bar 90 - 100 psi
- Type of oil for way oil / oil chiller / pneumatic oil: ••• Mobil Vectra #2/ Shell Tellus 32/ Air tool oil
- Coolant capacity: ....................................... 16 Gallons

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