

# CLEVELAND

## Double Column Machining Center Model: D1703

- **Fanuc control system**
- **20 HP spindle motor, CAT50/BT50 spindle taper**
- **ATC 32 Tools**
- **Gear Head 4,500 rpm spindle speed w/spindle oil cooler**
- Roller linear 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
- Telescopic steel way covers on all three axes
- Extended head
- Coolant system and air blast system & tool box & tools
- Central lubrication system
- Built-in Quartz work light
- 90° angle slide milling head (opt)
- Rigid tapping (opt)



### Travel

X / Y / Z axis travel: ..... 118" / 63" / 39"

### Table

Table area: ..... 59"x118"

T-Slot (no.-size x pitch): ..... 7-0.86"x7.8"

No. of linear ways / slide blocks: ..... 2 / 6

Max. table load: ..... 18000 lbs

### Distance

Distance between columns: ..... 67"

Distance from spindle end to table: ..... 7.8"- 47.2"

### Spindle

Spindle nose taper / tool: ..... 7 / 24 / NO.50, CAT50/BT50

Spindle speed: ..... 60-4500rpm

Spindle type: ..... Gear head 4500rpm Ø3.9"

Spindle motor (30 min. rating./ cont.): ..... 20 HP

### Feed

3 axes servo motors X/Y/Z: ..... 7 kW

X / Y / Z axis rapid traverse: ..... 472 / 472 / 393 ipm

Cutting feedrate: ..... 314 ipm

### Automatic Tool Changer (OPT)

Tool magazine capacity: ..... 32

Tool change time:..... 8 seconds arm type

Max. tool dia. / empty adj. tool: ..... Ø4.9"/ Ø8.2"

Max. tool length: ..... 13.7"

Max. tool weight: ..... 39 / 44 lbs

### Accuracy

Positioning accuracy: ..... IS B6201: 0.01 mm / 300 mm  
VDI3441: P0.025 mm

Repeat accuracy: ..... ± 0.003 VDI3441:Ps0.015 mm

Circular accuracy: ..... 0.02 mm / Ø300 (X, Y surface)

## Installation requirements

Connected electricity: ..... 60 KVA  
Weight (about): ..... 72000 lbs

## Standard Accessories

- |  |  |
|--|--|
| 1. Fanuc control system                      | 12. Halogen work light                 |
| 2. Force auto lubrication system             | 13. Automatic power off device         |
| 3. Semi-enclosed splash guard                | 14. Program finished warning lamp      |
| 4. Ship augers at both sides                 | 15. RS-232 interface                   |
| 5. Crawler chip conveyor with chip bucket    | 16. Leveling bolts and blocks          |
| 6. Coolant pump and tank                     | 17. Service tool                       |
| 7. Spindle oil cooler                        | 18. Operation and maintenance manual   |
| 8. Nitrogen gas counter balancing system     | 19. Controller operation manual        |
| 9. Z axis hydraulic counter balancing system | 20. electric circuit drawing           |
| 10. Air system                               | 21. Machine accuracy inspection report |
| 11. Air gun for removing chips               |  |

## Optional Accessories

- |   |                                    |
|---|------------------------------------|
| 1. Auxiliary tool stand                   | 07. Universal milling head         |
| 2. NC rotary table                        | 08. 45 degree angular milling head |
| 3. Automatic tool setting device          | 09. Chain type magazine            |
| 4. Computerized scanning imitative system | 10. Oil water separating tank      |
| 5. Linear scale feedback                  | 11. Coolant through spindle        |
| 6. 90 degree slide milling head           | 12. Tool setting & part probe      |

## Additional Accessories Information

Power requirement: ..... 60 KVA 3 phase 208V to 230V (Max)  
Air requirement: ..... 90 - 100 psi  
Type of oil for way oil / oil chiller / pneumatic oil: .... Mobil Vectra #2/ Shell Tellus 32/ Air tool oil

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