

INTRODUCING

The New **Diamond Cut Series**

Vertical Machining Center

TV-500



Direct Drive 24k Spindle

- Travel size range:
TV-500 (19.7 x 15.7 x 13)
TV-700 (27.6 x 15.7 x 13)
- BBT-30 Tool Taper
- 21-Position Turret ATC standard
- **High Rigidity**
Rigid meehanite wide base, box-shaped column, longer and wider saddle with full support design assures heavy loading capabilities during machining.
- **High Speed**
Direct drive double anchored ball screws combined with heavy duty linear guide ways provide high rigidity, low noise and low friction.
- **High Accuracy**
The spindle is designed with an isolated direct drive (IDD) transmission which uses no belt or gear in the motor/spindle connection. The spindle is free from the thermal effect of the main motor while a surrounding jacket of oil circulated through a chiller system further stabilizes spindle temperature.
- **High Efficiency**
The ATC is a very fast cam driven Turret Type and combined with High Torque Motors shortens the axial positioning time of all 3-axes >1G. Acceleration time from 0 to 2,360"/min. is only 0.21 seconds shortens non-cutting time.
- **Chip Removal**
Starts with complete covering of all the axis surfaces dropping the chips into the Back-Flow designed machine base which provides a smooth flow of chips into the high capacity fluid tank (53 gal) which effectively transfers away the cutting heat. The drawer type tank design slides inside the machine which saves floor space.



TV Series

Standard Machine Features

Full Enclosure
 24,000-RPM Direct Drive Spindle
 Spindle Oil Chiller
 Oil / Coolant Separator
 21-Position Automatic Tool Changer
 LM Guide-ways (Ball Type)
 Auto Oil Lube System
 Air Gun
 Water Gun
 Automatic Power Shut Down Circuit
 Three Stage Patrol Lamp
 Machine Lamp
 Leveling Bolts and Pads
 Instruction Manuals
 Electrical Schematics
 Accuracy Test Documentation
 Spindle Load Meter

Mitsubishi M70-V Standard Package

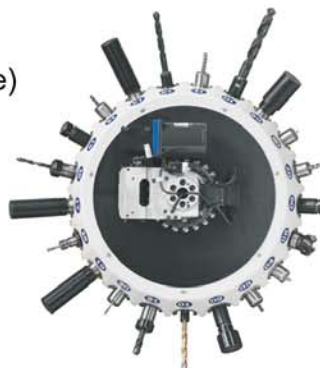
300 Block Look Ahead
 Editable Data Server (Flashcard type)
 Ethernet with TCP/IP Protocol &
 RS232 Communications
 512 KB Machine Memory
 Parts Count & Run Hour Display
 Inch/Metric Switching
 Helical Interpolation
 Coordinate Rotation
 Rigid Tapping
 Tool Life Management
 Additional Work Offsets
 Navi (Conversational)
 Programming
 Workpiece Pickup Routines
 Graphic's Display
 Inch/Metric Switching



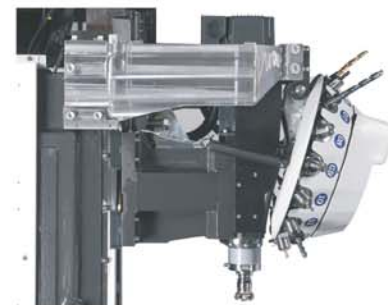
Model Size	Axis Travels X-Y-Z inch	Table Size X-Y inch	Max Table Cap. lbs	Spindle Speed	Spindle HP (cont/30 min)	Spindle Nose to Table inch	ATC Tool Count Tool Taper	Max Tool Dia. w / wo Adj. Tool	Max Tool Length / Weight	X, Y, (Z) Rapid Speed	Cutting Feedrate inch/min.	Machine Weight lbs.	Power KVA	Coolant Cap. Gal.	Mach Dimensions W-D-H inch
TV-500	19.7 x 15.7 x 13.0	25.6 x 15.7	550	24,000	3 / 5	5.9 ~ 18.9	Turret-21 / BBT-30	2.4 / 3.1	9.8	2,360 (all)	0.04 ~ 787	5,500	15	53	62.2 x 94.1 x 93.7
TV-700	27.6 x 15.7 x 13.0	33.4 x 15.7	550	24,000	3 / 5	5.9 ~ 18.9	Turret-21 / BBT-30	2.4 / 3.1	9.8	2,360 (all)	0.04 ~ 787	6,600	15	53	62.2 x 94.1 x 93.7

Optional Accessories

Automatic Centering Probe (Blum Infrared TC50 Probe)
 Tool Length Touch Pre-setter (Blum Z Nano)
 Tool Length Laser Pre-setter (Blum NT)
 Programmable Coolant Nozzle
 Mist Collector
 Mist Pump (for hard milling)
 Chip Conveyor
 Transformer – 30kVA
 *4th and 5th Axis Unit including interfacing
 Pallet Changer System



21-Position Automatic Tool Changer



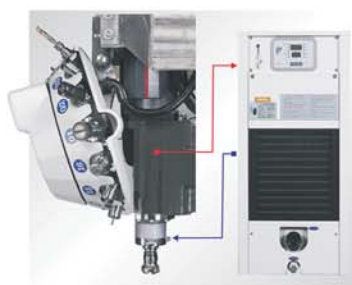
24,000-RPM Direct Drive Spindle



Large-Span Base Casting



Back Tapered casting for optimal chip removal



Spindle Coolant System



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