

# MULTI-SURFACE MACHINING

MAXIMUM FLEXIBILITY

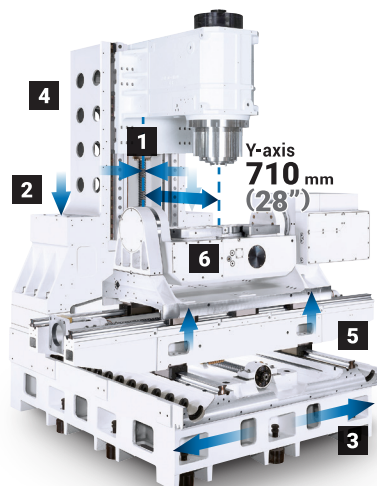
# TERA 50VT/50



**50**  
Taper

**4+1 / 5**  
Axis

**32**  
Tools



The TERA 50VT/50 is a five-axis trunnion (4+1) table machine with hydraulic brakes. The design allows the user to load three vises or can be used as a 720 x 400 mm (28.3" x 15.7") work table with a 320 mm (12.6") diameter faceplate.

1. Symmetric Design
2. Supporting Shoulders
3. Wide Base
4. Honeycomb Ribbed
5. Full Stroke Support
6. Trunnion Table Faceplate option:  
Ø400 mm / Ø500 mm / Ø630 mm  
(Ø15.7" / Ø19.7" / Ø24.8")

## COMPLETE PROCESS IN 1 CYCLE

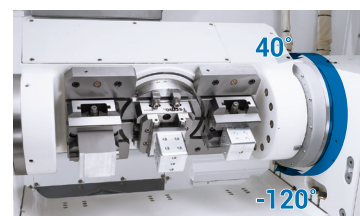


### Machine 6 Sides In One Load

- Left vise: cut dove tail.
- Central vise: 5-side machining.
- Right vise: finish dove tail.



Rotary Axis Motion Ranges

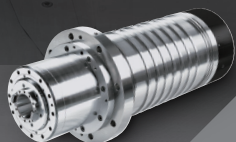


Tilting Axis Motion Ranges

## TERA SERIES STANDARD EQUIPMENT

### BUILT-IN SPINDLE

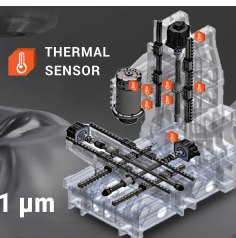
|        |                                                       |
|--------|-------------------------------------------------------|
| Taper  | 50 Taper Dual Contact<br>(BBT / CAT / DIN / HSK-100A) |
| Speed  | 12,000 rpm                                            |
| Power  | 34 kW (45 HP)                                         |
| Torque | 570 Nm (420 ft-lb)                                    |



### DYPEC® DYNAMIC PREDICTIVE ERROR COMPENSATION



Thermal  
Compensation  
Resolution 0.1 µm



### MICRO DYNAMICS HMI

Micro Dynamics features  
Mitsubishi CNC M830VW /  
CNC M850VW (opt) Control.

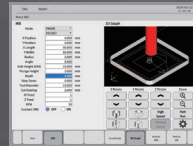
- 5,400 block look ahead.
- 60 GB data server.
- Tilted work planes (G68.2)
- TCP control.



PART SETUP



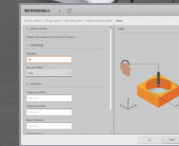
TOOL SETUP



MICRO MILL®



MAGAZINE MONITOR

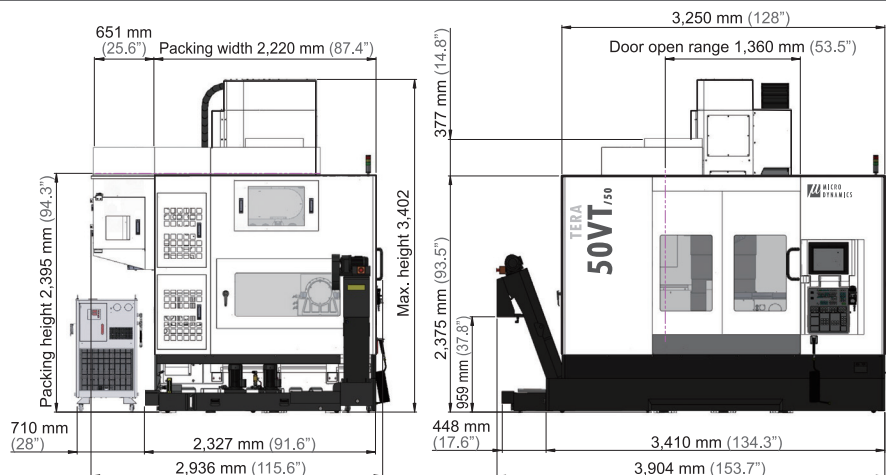


RENISHAW SET & INSPECT

## SPECIFICATIONS

| MODEL                              | TERA 50VT /50                                          |
|------------------------------------|--------------------------------------------------------|
| TRAVEL                             |                                                        |
| X Axis                             | 970 mm (38")                                           |
| Y Axis                             | 710 mm (28") / 650 mm (25.4") at 90°                   |
| Z Axis                             | 500 mm (19.7")                                         |
| A Axis (Tilting Axis)              | 40° ~ -120°                                            |
| C Axis (Rotary Axis)               | 360°                                                   |
| Spindle Nose to Table Surface      | 90 ~ 590 mm (3.5" ~ 23.2")                             |
| Spindle Center to Column Front     | 733.5 mm (28.9")                                       |
| TABLE                              |                                                        |
| Table Size                         | Ø320 mm [720 x 400 mm] (Ø12.6" [28.3" x 15.7"])        |
| Min. Table Index Unit              | 0.001°                                                 |
| Max. Table Load                    | 300 kg (661 lb)                                        |
| Table Height (from the Ground)     | 1,205 mm (47.4")                                       |
| SPINDLE                            |                                                        |
| Spindle Taper                      | 50 Taper Dual Contact (BBT / CAT / DIN / HSK-100A)     |
| I.D. of Spindle Bearing            | Ø100 mm (Ø3.93")                                       |
| Spindle Speed                      | 50 ~ 12,000 rpm                                        |
| Max. Power                         | 34 kW (45 HP)                                          |
| Max. Cutting Torque                | 570 Nm (420 ft-lb)                                     |
| Clamping Force                     | 2,100 kgf (4,630 lbf)                                  |
| Max. Speed for Rigid Tapping       | 3,000 rpm                                              |
| FEEDRATE                           |                                                        |
| Rapid Feedrate - X Axis            | 48,000 mm/min (1,889 ipm)                              |
| Rapid Feedrate - Y Axis            | 48,000 mm/min (1,889 ipm)                              |
| Rapid Feedrate - Z Axis            | 32,000 mm/min (1,260 ipm)                              |
| Rapid Feedrate - A (Tilting) Axis  | 33 rpm                                                 |
| Rapid Feedrate - C (Rotary) Axis   | 66 rpm                                                 |
| Cutting Feedrate                   | 20,000 mm/min (787 ipm)                                |
| ATC                                |                                                        |
| Magazine Capacity                  | 32T                                                    |
| Tool Selection                     | Bi-Direction / Random                                  |
| Tool Shank Type                    | JIS6339 (BT50) / DIN69871 (DIN50) / ANSI B5.50 (CAT50) |
| Pull Stud Type                     | JIS6339 / DIN69872 / CAT50DIN                          |
| Max. Tool Diameter x Length        | Ø125 x 350 mm (Ø5" x 13.8")                            |
| Without Adjacent Tool              | Ø229 mm (Ø9")                                          |
| Max. Tool Weight                   | 15 kg (33.1 lb)                                        |
| PERIPHERAL                         |                                                        |
| Power Consumption (220V/3PH)       | 55 KVA                                                 |
| Pneumatic Supply                   | 300 L/min (10.6 cfm) [0.6 MPa, ANR]                    |
| Cutting Coolant Pump Motor         | 1.1 kW (1.5 HP)                                        |
| Base Wash Pump Motor               | 1.1 kW (1.5 HP)                                        |
| CTS Pump Motor (opt)               | 3 kW (4 HP)                                            |
| Coolant Tank Capacity              | 350 L (92 gal)                                         |
| Foot Print Size (W x D)            | 3,904 x 2,936 mm (153.7" x 115.6")                     |
| Machine Height (H)                 | 3,402 mm (133.9")                                      |
| Packing Size (W x D x H)           | 4,100 x 2,310 x 2,700 mm (161.4" x 90.9" x 106.3")     |
| Machine Net Weight                 | 10,6000 kg (23,369 lb)                                 |
| Machine Gross Weight               | 10,910 kg (24,052 lb)                                  |
| ACCURACY                           |                                                        |
| Positioning Accuracy / Full Stroke | 0.005 mm (0.0002") [VDI 3441]                          |
| Repeatability Accuracy             | ±0.0025 mm (±0.0001")                                  |

## MACHINE DIMENSIONS



Note: specifications subject to change without notice.

## EQUIPMENT

## STANDARD EQUIPMENT

- 12,000 rpm Built-In Spindle (40 Taper)
- DYPEC® Thermal Compensation
- Mitsubishi CNC 830VW (4+1 Axis)
- 15" Touchscreen Display
- Micro Dynamics® HMI
- 8 M-Codes (M20 ~ M27)
- Automatic Power Off
- 32 Tools(★)
- ATC Magazine Panel
- Tool Magazine LED
- CTS Preparation (without Rotary Union)
- Coolant Gun & Air Gun
- Scraper Type Chip Conveyor
- Twin Chip Augers
- Full Chip Enclosure
- Safety Door
- Manuals / Tool Kit / Foundation Kit

## OPTIONAL EQUIPMENT

- X / Y / Z Axis Linear Scale (Renishaw)
- A / C Axis Rotary Scale (Renishaw)
- Mitsubishi CNC 850VW (5-Axis)
- 19" Touchscreen Display
- Tool / Workpiece Measurement
- Additional 8 M-Codes (M130 ~ M137)
- Servo Tool Magazine(\*)
- ATC Auto Door(\*)
- Metal Coolant Ring
- Spinning Window
- 20-bar / 40-bar / 70-bar CTS  
(290 psi / 580 psi / 1,000 psi)
- Chain Type Chip Conveyor
- Drum Type Chip Conveyor
- Rear Type Chip Conveyor(\*)
- Disc Type Oil Skimmer
- Oil Mist Collector
- Ø400 mm / Ø500 mm / Ø630 mm Faceplate  
(Ø15.7" / Ø19.7" / Ø24.8")
- CE-Conformity Package
- Transformer
- Automatic Door (Pneumatic / Servo)

(\*) Factory order



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