

TERA  
40V



Ergonomics Design

CTS Ready

M830VW

Built-In Spindle

PC Based

FC300 Meehanite® Casting

Rear Operation Panel

VT Series



sales@microdynamicsusa.com  
www.microdynamicsusa.com



MD202308US



**VERTICAL MACHINING CENTER**  
Compact, Durable, Powerful,  
Strong and Accurate



**MEGA  
TERA** SERIES

US Specifications

**MEGA / TERA** SERIES

MICRO DYNAMICS VERTICAL MACHINING CENTER

**BUILT-IN SPINDLE**

40 Taper Dual Contact



**15,000 rpm**

**41 HP Power**

**104 ft-lb Torque**

**18,000 rpm (opt.)**

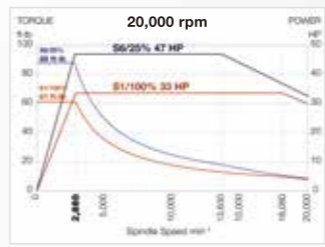
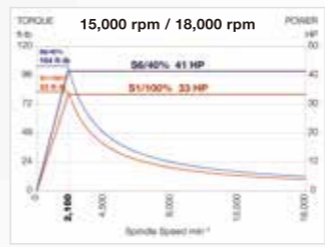
**41 HP Power**

**104 ft-lb Torque**

**20,000 rpm (opt.)**

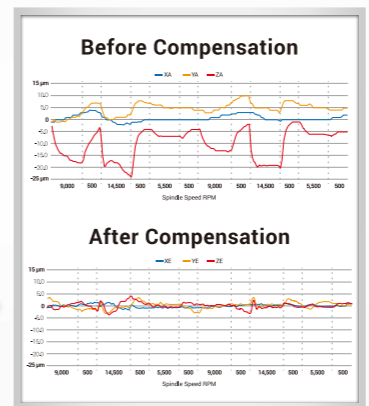
**47 HP Power**

**88 ft-lb Torque**



**DYPEC® THERMAL COMPENSATION**

Dynamic Predictive Error Compensation (Resolution 0.1µm)

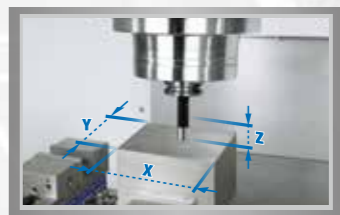


**THERMAL SENSORS**

X/Y/Z axis static error in micron before and after DYPEC® compensation (48 hours test).

**HMI**

Windows Embedded Micro Dynamics HMI



AUTO PART SETUP



MICRO MILL® G-code Generator



COLLISION DETECTION



PART SETUP



TOOL SETUP



PARAMETER SETUP



MAGAZINE MONITOR



ATC RECOVERY



APC RECOVERY

**Mitsubishi CNC M830VW**

- 15" touchscreen display.
- 2,700 block look ahead.
- 20 GB data server.
- 54 sets work offsets.
- 400 sets tool life management.
- 8,000 sets macro variable.
- 64 bit microprocessor.
- Programs can be run from the front side USB or the hard drive.
- 3D circular interpolation.
- NURBS interpolation.
- 4G SSS control (Super Smooth Surface).
- Tool center point control.
- Workpiece position offset for rotary axis.
- Upgradable to 5 axes simultaneous control.

MICRO DYNAMICS

# VERTICAL

## MACHINING CENTER

Micro Dynamics Vertical Machining Center Line opens a new era in multi-purpose and versatile machining centers. Compact, durable, powerful, strong and accurate, the MEGA / TERA Series start a revolution in the market: the smallest C-frame machines provide powerful and precise results for manufacturers of dies and molds, aerospace, automotive, semi-conductor, job shops and general machine sectors.



## MEGA SERIES

## TERA SERIES



The heavily ribbed structure is made of FC300 Meehanite® casting that has been FEA analyzed for strength and stability. All castings are designed to reach the maximum level of rigidity for the best machining performance.

MEGA / TERA represent the two C-frame sizes for the series. The compact frames have the optimal design and placement for all components, making each model one of the smallest foot-prints in it's class.

MODEL	UNIT	MEGA 30V	MEGA 40V	MEGA 20VAPC	MEGA 30VT	TERA 40V	TERA 50V	TERA 60V	TERA 50VT
X Axis	inch	30"	40"	24"	30"	40"	50"	60"	38"
Y Axis	inch	20"	20"	20"	20"	28"	28"	28"	28" / 25.4" (90°)
Z Axis	inch	20"	20"	20"	17.4"	25"	25"	25"	19.7"
Table Size	inch	33.9" x 19.7"	44.1" x 19.7"	22" x 15.7"	ø8.7 (19.7" x 11.8")	44.1" x 27.6"	55.9" x 27.6"	67.9" x 27.6"	ø12.6 (28.3" x 15.7")
A Axis (Tilting Axis)	deg	N/A	N/A	N/A	40° ~ -120°	N/A	N/A	N/A	40° ~ -120°
C Axis (Rotary Axis)	deg	N/A	N/A	N/A	360°	N/A	N/A	N/A	360°
Spindle Taper		40 Taper Dual Contact							
Spindle Motor Power	HP	41 / 33							
Max. Cutting Torque	ft-lb	104							
Spindle Speed	rpm	50 ~ 15,000 (optional 18,000 & 20,000)							
Rapid Feedrate (X / Y / Z axis)	ipm	2,047 / 2,047 / 1,889	2,047 / 2,047 / 1,889	2,047 / 2,047 / 1,889	1,889 / 1,889 / 1,889	2,047 / 2,047 / 1,889	2,047 / 2,047 / 1,889	2,047 / 2,047 / 1,889	1,889 / 1,889 / 1,889
Tool Magazine Capacity		30T	40T	40T	40T	40T	40T	40T	40T
Foot Print Size (W x D)	inch	94.1" x 88.4"	119.8" x 90.3"	100.8" x 117"	119.8" x 90.3"	123.5" x 97.6"	142" x 97.6"	170.2" x 97.6"	143.9" x 97.6"
Machine Height	inch	111.1"	111.1"	115"	117.1"	116.3"	116.3"	116.3"	118.3"
Machine Net Weight	lb	10,780	12,368	14,109	13,999	15,873	18,960	20,216	21,076



Dual pallet changer MEGA 20VAPC is designed for high production.



Tilting axis and rotary axis motion ranges.



- MEGA 30VT: 12" and 14" diameter face table. (opt.)
- TERA 50VT: 20" and 24" diameter face table. (opt.)