

TERA 40V

ERGONOMICS DESIGN

M850VW

CTS Ready

Built-In Spindle

PC Based

FC300 Meehanite® Casting

Rear Operation Panel

VT Series

MICRO DYNAMICS
Precision Performance

sales@microdynamicsusa.com
www.microdynamicsusa.com

MD202603 SAE



VERTICAL MACHINING CENTER

Compact, Durable, Powerful,
Strong and Accurate



MEGA TERA SERIES

US Specifications

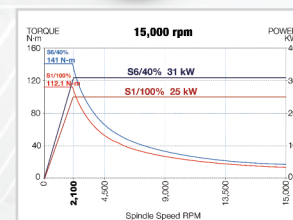
MEGA / TERA SERIES

BUILT-IN SPINDLE

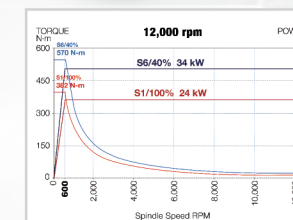
Powerful Integrated **Dual Contact** Spindles.



40 Taper



50 Taper



CAT30 / BBT30 / HSK-40A

30,000 rpm / 24 HP / 18 ft-lb MEGA 20VT Option

CAT40 / BBT40 / HSK-63A

15,000 rpm / 41 HP / 104 ft-lb

20,000 rpm / 47 HP / 88 ft-lb

24,000 rpm / 47 HP / 88 ft-lb
(Standard HSK-63A)

CAT50 / BBT50 / HSK-100A

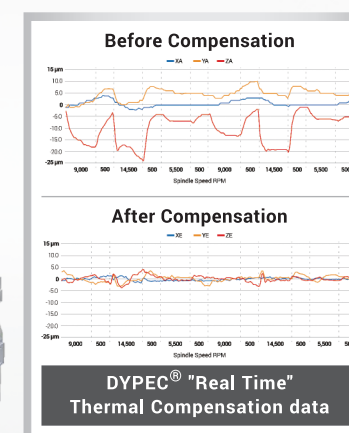
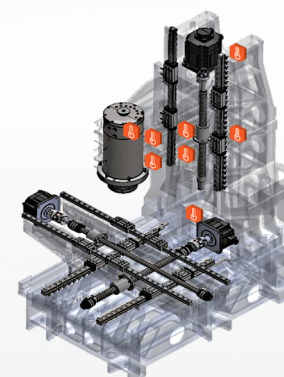
12,000 rpm / 45 HP / 420 ft-lb

CTS + ATS (Coolant Through Spindle + Air Through Spindle)

- 20-Bar (290 psi)
- 40-Bar (580 psi)
- 70-Bar (1,000 psi)

DYPEC® Thermal Compensation

Dynamic Predictive
Error Compensation
(resolution 0.1µm)



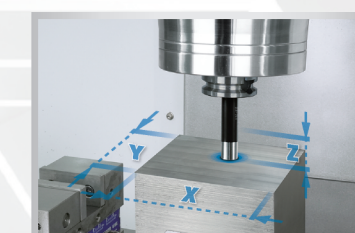
X/Y/Z axis static in micron error before and after DYPEC® compensation (48 hours test).

THERMAL SENSORS

MICRO DYNAMICS VERTICAL MACHINING CENTER

MICRO DYNAMICS HMI

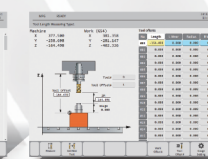
Micro Dynamics HMI Apps.



AUTO PART SETUP with HARD PROBE.



PART SETUP



TOOL SETUP



MICRO MILL®



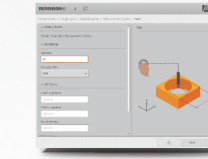
MAGAZINE MONITOR



ATC RECOVERY



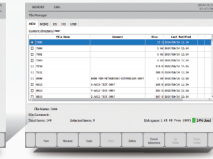
APC RECOVERY



RENISHAW
SET & INSPECT



COLLISION DETECTION



FILE MANAGER

MITSUBISHI CNC M830VW / CNC M850VW(*)

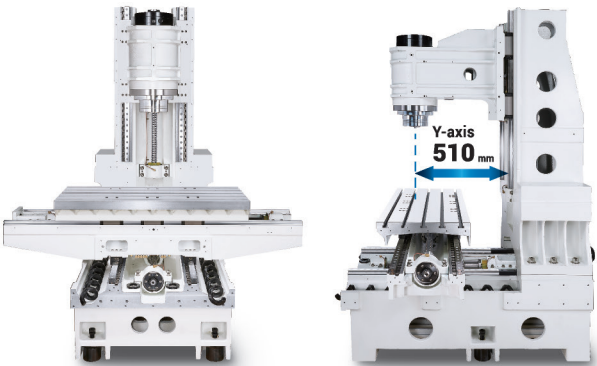
- 15" / 19"(*) touchscreen display.
- 5,400 block look ahead.
- 60 GB data server.
- 54 sets work offsets.
- 400 sets tool life management.
- 8,000 sets macro variable.
- 64 bit microprocessor.
- Programs can be run from the front side USB or the hard drive.
- 3D circular interpolation.
- NURBS interpolation.(**)
- 4G SSS control (Super Smooth Surface).
- Tool center point control.
- Workpiece position offset for rotary axis.
- Upgradable to 5 axes simultaneous control.(**)

(*) Optional (**) for authorized regions

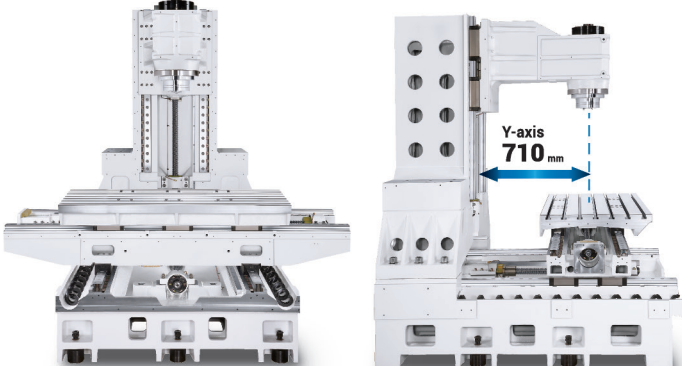
VERTICAL MACHINING CENTER

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.

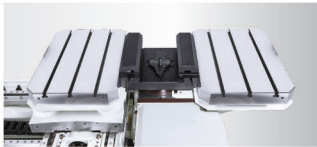
MEGA SERIES



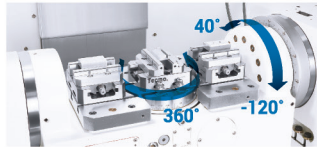
TERA SERIES



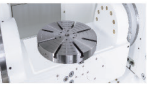
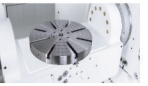
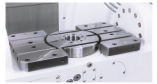
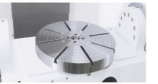
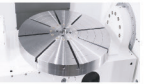
VAPC Type - Auto Pallet Changer



VT Type - Vertical Trunnion



TRUNNION TABLE FACE PLATE

MODEL	Standard	Option (Field interchangeable)	
	ø8.7"	ø11.8"	ø13.8"
MEGA 30VT			
	ø12.6"	ø19.7"	ø24.8"
TERA 50VT			



SERIES		MEGA series					TERA series						
ITEM / MODELS	UNIT	MEGA 30V	MEGA 40V	MEGA 20VAPC	MEGA 20VT ^(*)	MEGA 30VT	TERA 40V	TERA 50V	TERA 60V	TERA 50VT	TERA 50V/50	TERA 60V/50	TERA 50VT/50
X Axis	inch	30	40	24	30	30	40	50	60	38	50	60	38
Y Axis	inch	20	20	20	20	20	28	28	28	28 / 25.4 (90°)	28	28	28 / 25.4 (90°)
Z Axis	inch	20	20	20	17.8	17.4	25	25	25	19.7	25	25	19.7"
Table Size	inch	33.9 x 19.7	44.1 x 19.7	22 x 15.7	ø7.9	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	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°	40° ~ -120°	N/A	N/A	N/A	40° ~ -120°	N/A	N/A	40° ~ -120°
C Axis (Rotary Axis)	deg	N/A	N/A	N/A	360°	360°	N/A	N/A	N/A	360°	N/A	N/A	360°
Spindle Taper		40 Taper Dual Contact (CAT / BBT / HSK-63A)									50 Taper Dual Contact (CAT / BT / HSK-100A)		
Spindle Motor Power	HP	41									45		
Max. Cutting Torque	ft-lb	104									420		
Spindle Speed	rpm	50 ~ 15,000									50 ~ 12,000		
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	48 / 48 / 48	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	2,047 / 2,047 / 1,260	2,047 / 2,047 / 1,260	1,889 / 1,889 / 1,260
Tool Magazine Capacity		30T	40T	40T	40T	40T	40T	40T	40T	40T	32T	32T	32T
Foot Print Size (W x D)	inch	94.1 x 88.4	119.8 x 90.3	100.8 x 117	97.6 x 90.3	119.8 x 90.3	123.5 x 97.6	142 x 97.6	170.2 x 97.6	145.4 x 97.6	153.7 x 115.6	170.2 x 115.6	153.7 x 115.6
Machine Height	inch	111.1	111.1	115	117.1	117.1	116.3	116.3	116.3	121	129.7	129.7	133.9
Machine Net Weight	lb	10,780	12,368	14,109	13,999	13,999	17,725	18,960	20,216	21,076	21,164	22,421	23,369

Note: Specifications subject to change without notice.

(*)Optional 30,000 rpm spindle (BBT30 / HSK-40A)