

MICRO DYNAMICS

Precision Performance

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



MICRO DYNAMICS
Precision Performance

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MD202307E

MEGA TERA SERIES

Specifications

MEGA / TERA SERIES

MICRO DYNAMICS VERTICAL MACHINING CENTER

BUILT-IN SPINDLE

40 Taper Dual Contact



15,000 rpm

31 kW Power

141 Nm Torque

18,000 rpm (opt.)

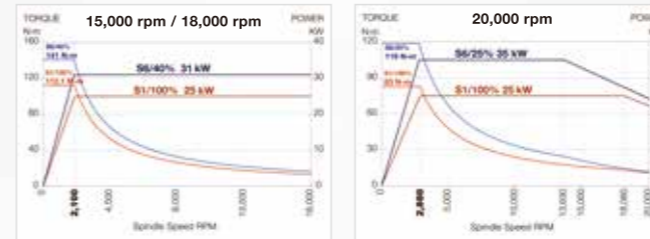
31 kW Power

141 Nm Torque

20,000 rpm (opt.)

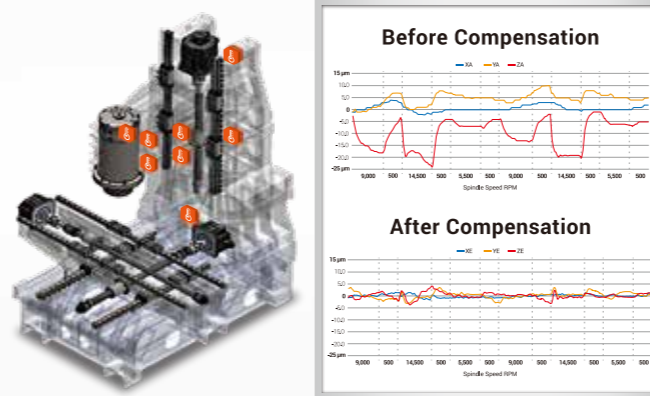
35 kW Power

119 Nm Torque



DYPEC[®] THERMAL COMPENSATION

Dynamic Predictive Error Compensation (Resolution 0.1 μm)

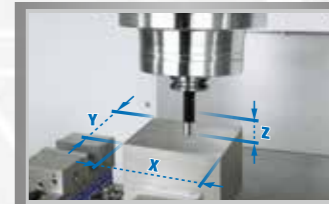


THERMAL SENSORS

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.^(*)

^(*) Optional for U.S. market only

MICRO DYNAMICS

VERTICAL

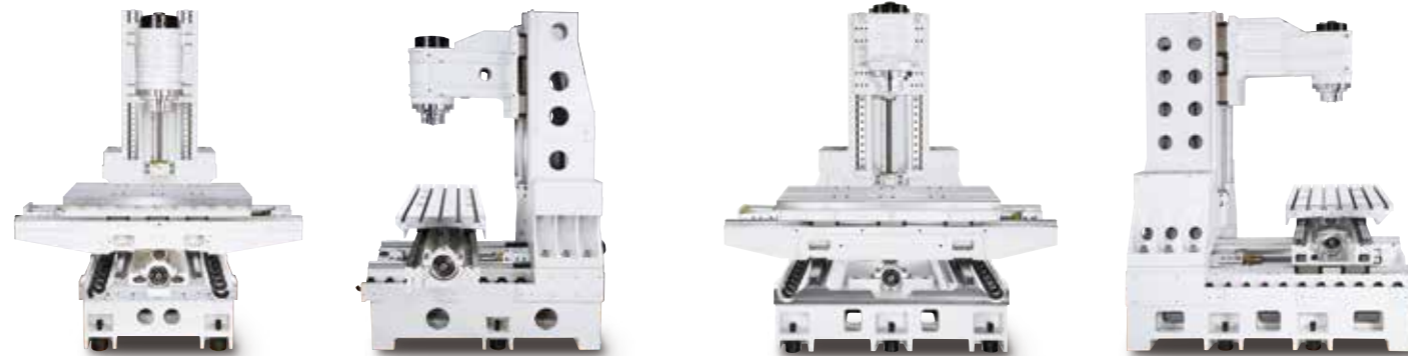
MACHINING CENTER

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.

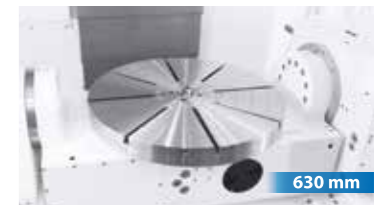
MEGA / TERA represent the two C-frame sizes for the series. The compact frames have the optimal design and placement for all components, making each model one of the smallest foot-prints in it's class.



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



Tilting axis and rotary axis motion ranges.



- MEGA 30VT: **300 mm** and **350 mm** diameter face table. (opt.)
- TERA 50VT: **500 mm** and **630 mm** diameter face table. (opt.)

MODEL	UNIT	MEGA 30V	MEGA 40V	MEGA 20VAPC	MEGA 30VT	TERA 40V	TERA 50V	TERA 60V	TERA 50VT
X Axis	mm	760	1,020	600	780	1,020	1,270	1,524	970
Y Axis	mm	510	510	510	510	710	710	710	710 / 650 (90°)
Z Axis	mm	510	510	510	441	635	635	635	500
Table Size	mm	860 x 500	1,120 x 500	560 x 400	ø220 (500 x 300)	1,120 x 700	1,420 x 700	1,724 x 700	ø320 (720 x 400)
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	kW	31 / 25							
Max. Cutting Torque	Nm	141							
Spindle Speed	rpm	50 ~ 15,000 (optional 18,000 & 20,000)							
Rapid Feedrate (X / Y / Z axis)	m/min	52 / 52 / 48	52 / 52 / 48	52 / 52 / 48	48 / 48 / 48	52 / 52 / 48	52 / 52 / 48	52 / 52 / 48	48 / 48 / 48
Tool Magazine Capacity		30T	40T	40T	40T	40T	40T	40T	40T
Foot Print Size (W x D)	mm	2,389 x 2,245	3,044 x 2,293	2,561 x 2,972	3,044 x 2,293	3,137 x 2,478	3,606 x 2,478	4,322 x 2,478	3,656 x 2,478
Machine Height	mm	2,823	2,823	2,921	2,975	2,953	2,953	2,953	3,005
Machine Net Weight	kg	4,890	5,610	6,400	6,350	8,040	8,600	9,170	9,560