LM-16A

MEC 15-AXIS CNC TORSION SPRING MACHINE
with Rotating Wire

For wire diameters of ø0.4 ~ ø1.6 mm

Intuitive operation has been made possible with a wire rotation mechanism and eight equipped processing slides as standard options.

This machine is equipped with two swinging axes,
which control the left and right movement of the facing slides independently.

Torsion spring

Extension spring

MEC
LM-16A

AMADA®
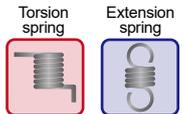
Features

Improved productivity with shortening setup time and reducing work

- The double swing axis divided into upper and lower parts numerically controls the left-right movement of the slide. The program achieves high repeatability and contributes to shortening the setup time. It can also be fixed or unsynced to any slide.
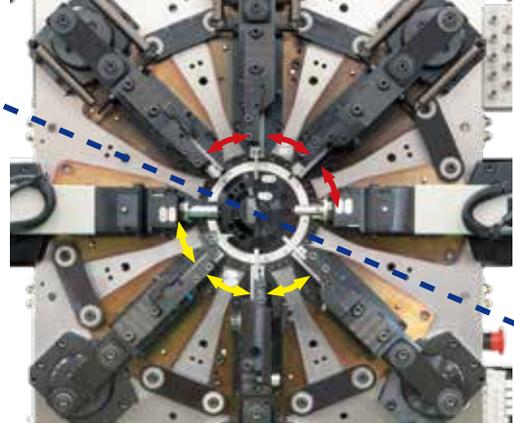
- The 15-axis control is equipped with feed, rotated wire and quill, two swings, eight slides, and two R-servos.
- The introduction of a dual feeder roller reduces feed pressure load applied to the wire, making consistent, high-quality coiling possible.
- All slides utilize a crank mechanism to achieve high speed. The crank mechanism can also be used to change the setting to constant speed operation according to the processing needs.
- The high-speed R-servo reduces bending time.
- This machine integrates a high-speed wire rotation mechanism, which suppresses vibration to the utmost limit.
- Although the spinner tool is compact, the distance between the shaft and the outer pin can be adjusted. This eliminates the need to replace the pin for each wire diameter, reducing setup time and running costs.
- The machine footprint has be reduced by about 40% compared to the conventional model*. *TM-20M

Support for IOT

The operating status of machine can be monitored through mobile phones or computers, and regular maintenance with preventive maintenance functions can contribute to improved production efficiency.

Improved operability with the MNO2 (MEC New Operation 2) programming software

- The **MEC** original **MNO2** software easily organizes important statistics about the machine, including program flow, operating status of each axis, input/output, and jump, etc., as with our other spring machines.
- The latest servo motor control enables high resolution and enables precise operation.
- The motor sensor system makes every slide a sensor. It is possible to measure the presence/absence judgment with a touch sensor, coiling angle, free length, etc. in 0.001 mm units. The measurement results are displayed in tables and graphs, and easy correction control for each axis is possible.
- Highly efficient production is supported by a versatile production management and data collection functions.
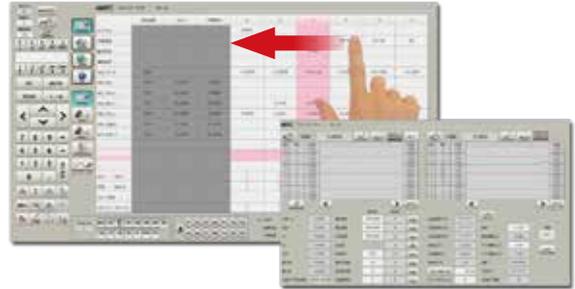
**MNO2 main program and production management screen**
Greatly improved operability, with the easy-to-use navigation system and the touch screen, makes it easy to create programs and shortens setup time.

Main options

We have a wide range of optional units to meet the varied needs of the user in the areas of post-processing and measurement:
- Outer coil diameter servo unit--adjusts diameter with a servo motor
- Air nipper unit--prevents wear and breakage of the quill
- Air grip--enables post-processing
- Reverse bending slide--bends in direction of the machine front
- Grip head unit--enables wire grip with R-servo
- Capacitance sensor--measures free coil length
- Camera sensor--measures free coil length, outer coil diameter, angle, etc.

Specifications

Unit: mm
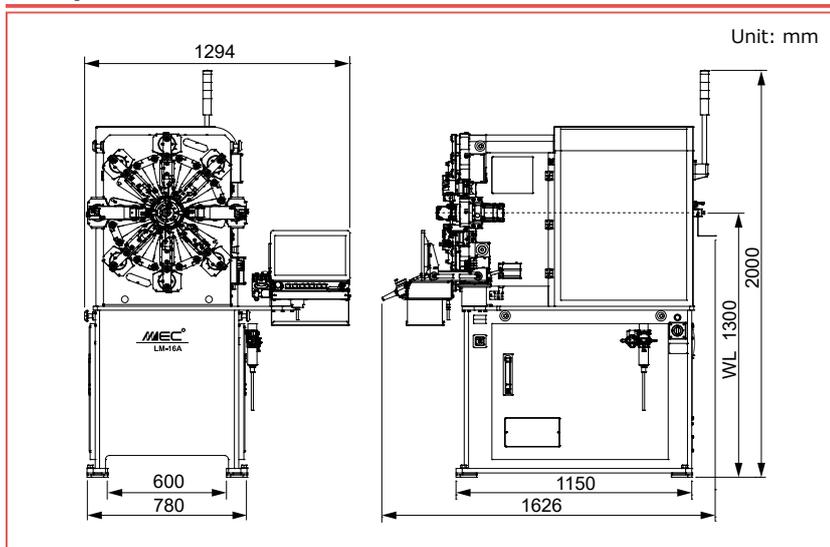
Machine name	LM-16A
Wire diameter	**ø0.4 ~ ø1.6 mm**
Max twirl distance	ø70 mm
Index	D/d 4 or more
Feed axis*	0.0001 mm
Max feed speed	160 m/min
Tool slide	5 pcs
Bending slide	1 pc
R-servo slide	2 pcs
Max air pressure	0.5 MPa
Power source	3-phase, AC 200V, 15A
Net weight	1080 kg
Control device	Windows
Software	MNO2
Display	15.6" Full HD touch screen
External memory	USB Thumb drive
Temperature	5 ~ 40°C

*Resolution: Program input unit, which does not represent accuracy.
Specifications are subject to change without notice for product improvement.