



July 9, 2013

## 5-Axis Vertical Machining Center "MX-850" Product Release

Matsuura Machinery Corporation has developed a new 5-axis vertical machining center model, *MX-850*, and starts selling this model from today.

5-axis vertical machining center, the *MX* Series, offers fundamental 5-axis capabilities that are cultivated through the development of the *MAM72* Series (more than 1,000 machines delivered so far) in response to the demand for cost reduction while maintaining high cost performance with smartly assembled functions. Various support functions are provided as standard features so that new operators can perform 5-axis machining with "Security" and "Ease" that are the keywords.

The first machine in the *MX* Series, *MX-520*, is highly regarded due to its cost performance, good operability and machining capabilities, and more than 200 machines have been delivered all over the world since its debut in April 2010. On the other hand we have received many requests for a larger workpiece handling capability.

The new *MX-850*, the second machine in this Series, is developed to meet these requests: the maximum workpiece size is D850 x H450 mm (1.8 times (volumetric) greater than the *MX-520*), 500 kg (2.5 times greater than the *MX-520*).

The *MX-850* is compactly built yet ensures high rigidity and a sufficient machining area and workability. Three table types are available: standard: D500 mm, option: D700 mm or D500 mm + flat table. In addition to standard spindle of 12,000 min<sup>-1</sup>, optionally **MAXIA** spindle of 20,000 min<sup>-1</sup> for high speed machining or that of 15,000 min<sup>-1</sup> (350 Nm) for heavy duty machining are available to cope with the wide range of customers' requirements.

The distance from the machine front to the table center is reduced to 500 mm to improve accessibility and ensure good operability for setup.

Matsuura's unique collision avoidance system "*IPS*: Intelligent Protection System" is incorporated to facilitate even complex 5-axis machining operation.

The operating support software "*MIMS*: Matsuura Intelligent Meister System" employs a newly developed operation system (with a 15-inch touch panel screen), which improves operability and facilitates setup, operation and maintenance while saving labor and energy.

Matsuura is planning to exhibit the *MX-850* at EMO2013 (European International Machine Tools Fair) that will be held from September 16 in Hannover, Germany.

## MX-850 Features

1. Table size (to cover the wide range of applications)
  - 1.1. D500 mm (standard)
  - 1.2. D700 mm (option)
  - 1.3. D500 mm + flat table (option)
  - 1.4. 6 ports for fixture hydraulic system (option)
2. **MAXIA** spindle (from heavy duty machining to high speed machining)
  - 2.1. 12,000 min<sup>-1</sup>/ 187.3 Nm (standard)
  - 2.2. 15,000 min<sup>-1</sup>/ 350.0 Nm (option)      High torque
  - 2.3. 20,000 min<sup>-1</sup>/ 108.5 Nm (option)      High speed
3. Operability / accessibility
  - 3.1. Distance from floor to table top surface      : 910 mm
  - 3.2. Distance from machine front to table center      : 500 mm
  - 3.3. Front door opening width      : 1,055 mm  
(Opening width sufficient for the maximum workpiece depth 850 mm)
  - 3.4. Open-close style ceiling cover (opening width: 435 mm) for the use of a crane during part setup
4. Collision avoidance system *IPS* (Intelligent Protection System): Standard
  - 4.1. Axis feed stopped before a collision occurs between machine, tool, workpiece and fixture
  - 4.2. Machine collision avoidance during manual operation or setup work that might occur due to human error
  - 4.3. Machine collision avoidance during automatic operation that might occur due to programming error
5. Simple operating system *MIMS* (Matsuura Intelligent Meister System): Standard
  - 5.1. New operation system (15-inch touch panel screen, operation buttons 35% reduced from the conventional model)
  - 5.2. Four keywords
    - ① Reliability Meister      [Security]      To shorten machine down time
    - ② Operability Meister      [Ease]      Ease of operation
    - ③ Thermal Meister      [Accuracy]      Thermal displacement compensation
    - ④ Eco Meister      [Environment]      To reduce standby energy

### Main Specifications

Item	MX-850	MX-520
Travel (X / Y / Z axis)	900/780/650 mm (35.43/30.70/25.59 in.)	630/560/510 mm (24.80/22.04/20.07 in.)
Travel (A / C axis)	-125 ~ +30°/ 360°	-125 ~ +10°/ 360°
Rapid traverse rate (X / Y / Z axis)	40 m/min (1,574.80 ipm)	40 m/min (1,574.80 ipm)
Rapid traverse rate (A axis)	17 min <sup>-1</sup>	17 min <sup>-1</sup>
Rapid traverse rate (C axis)	33 min <sup>-1</sup>	33 min <sup>-1</sup>
Feedrate (X / Y / Z axis)	0.001 ~ 40 m/min (0.00004 ~ 1,574.80 ipm)	0.001 ~ 40 m/min (0.00004 ~ 1,574.80 ipm)
Spindle speed	12,000 min <sup>-1</sup>	12,000 min <sup>-1</sup>
Spindle motor power	15/22 kW	7.5/11 kW
Maximum workpiece size	D850 x H450 mm* (D33.46 x H17.71 in. *)	D710 x H350 mm* (D27.95 x H13.77 in. *)
Loading capacity	500 kg (1,100 lb.)	200 kg (440 lb.)

\* Bullet shaped