

**Press Release**

**June 28, 2022**

 **Matsuura**

## 5-Axis Vertical Machining Center

「**MX-850**」

「**MX-850 PC4**」 Product Release



Matsuura Machinery Corporation is pleased to announce the launch of the newly designed **MX-850**, a 5-axis vertical machining center, and is accepting orders beginning today.

The **MX-Series** was launched to the market in 2010 with the keywords "Security" and "Ease-of-use" for simple and reliable 5-axis machining. Since its debut in 2010, the lineup has been expanded to four models with the **MX-520**, **MX-850**, **MX-330**, & **MX-420 PC10** (in release order), all of which have gained a high reputation due to their user-friendly operability, competitive machining capability and excellent cost performance. This series has built a solid customer base in various industries all over the world as 5-axis machining entry-level models.

With the growth of customer demand for unmanned operation, floor pallet system options were added (**MX-330 PC10**, **MX-420 PC10**, **MX-520 PC4**, & **MX-850 PC4**), to fulfill customer requests for extended unmanned operation and high-mix/low-volume production. (Total sales of 1,712 machines as of the End of May 2022).

This is the first **MX-850** model change in 9 years, and by fusing Matsuura's latest innovative technology with the **MX-Series** concept "Security" and "Ease-of-use," the newly-designed machine improves production efficiency and usability, while offering high productivity and manpower savings. Following the newly-designed **MX-520** released in May, we will bring the **MX-850** to a market where demand for large workpieces is high.

### <Main Features>

- (1) Productivity improvement by cycle time reduction; acceleration of machine movement
- (2) Productivity improvement by extended unmanned operation; full lineup of automation package opt
- (3) Productivity improvement by machine downtime reduction; visualization of machinery in the factory
- (4) Environmental protection by reducing wasteful power consumption with auto power off function



### **MX-520 PC4 & MX-850 PC4 User Testimonials**

"Investment in two Matsuura's replace output of Five Competitor Machines"

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## Productivity improvement by cycle time reduction; acceleration of machine movement

To meet customer demands for cycle time reduction and productivity improvement, the newly-designed **MX-850** achieved a cycle time reduction of 8% (compared to conventional model) by improving the 4/5 axis rapid traverse rate to 20/40min<sup>-1</sup> (conventional to 17/33min<sup>-1</sup>) and machine movement performance.

Fig. Cycle time comparison



[Material]	Aluminum (147x120x60mm) [5.78x4.72x2.36in.]
[Number of tools]	12 tools
[Spindle speed]	2,000~12,000min <sup>-1</sup>

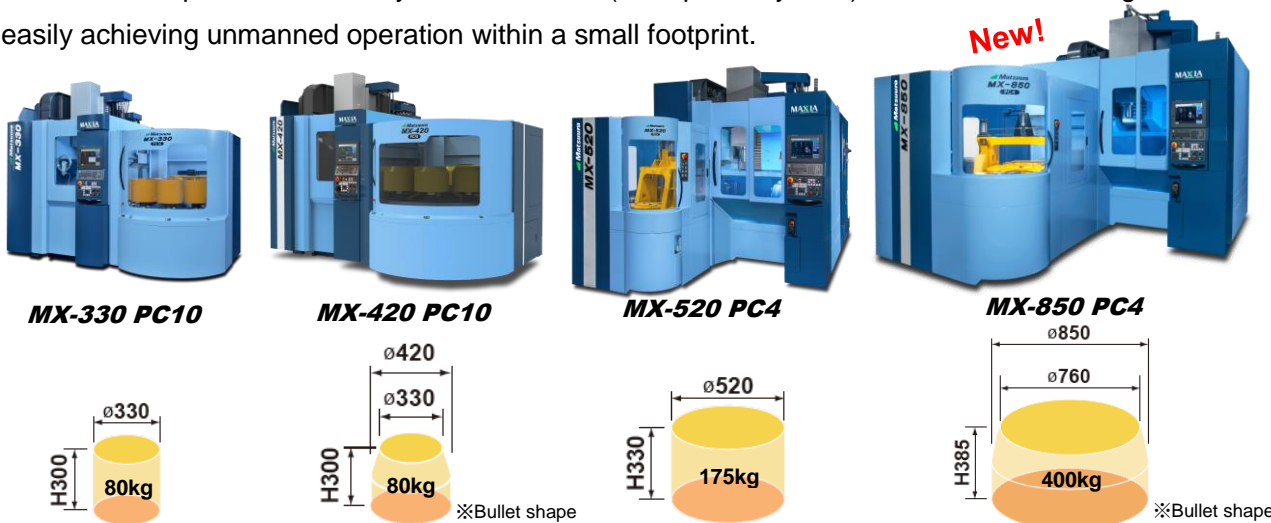
\*Data is not intended to guarantee the performance.

Cycle time	Current	Model Change
4/5 axis indexing	53min 27sec	50min 21sec
Simultaneous 5-axis	37min 20sec	33min 32sec
Total	90min 47sec	83min 53sec

**8% Reduction**

## Productivity improvement by 24 hours continuous unmanned operation; full lineup of automation package option

The **MX series** offers not only reliable 5-axis machining to a wide range of work sizes, but also offers an automation package option for all models in the product lineup, capable of both variable-part /variable-volume production and extended unmanned operation, to solve labor shortages in your workplace. The **MX-850** can meet a market where demand for large workpieces is high, and optionally build as a simple automation system with PC4 (floor pallet system) and 90/120 tool magazine, while easily achieving unmanned operation within a small footprint.



## Productivity improvement by machine downtime reduction; visualization of machinery in the factory for reliable unmanned operation

To optimize production efficiency, the "Operation Status Monitoring Function" is installed as standard for visualizing operation status on the NC screen. In addition, the "Matsuura Remote Monitoring System (option)" offers reliable unmanned operation, and reduces machine downtime by quickly alerting when machine stops or alarms remotely. Customers may access the pallet management screen from a remote location and quickly respond to sudden schedule changes. The "Coolant Management System," which automatically manages and refills coolant is also an available option. As part of Matsuura's environmental commitment to reduce energy costs, wasteful power consumption is reduced by a new standard function that automatically turns off the machine power, when not in use, to increase your

shop's productivity.

### **MX-850 Features**

1. **MAXIA** Spindle (from heavy duty machining to high speed machining)
  - 1.1. 12,000 min<sup>-1</sup> (15/22kW, 187Nm) [Standard]
  - 1.2. 15,000 min<sup>-1</sup> (15/30kW, 350Nm) [Option]
  - 1.3. 20,000 min<sup>-1</sup> (15/18.5kW, 108Nm) [Option]
2. Rapid traverse rate (A/C) :20/40min<sup>-1</sup> (\*conventional to 17/33min<sup>-1</sup>)
3. Operability / Accessibility
  - 3.1. Distance from floor to table top surface : 910mm [35.82in.] (with table)  
975mm [38.39in.] (with pallet)
  - 3.2. Distance from machine front to table center : 500mm [19.68in.]
  - 3.3. Front door opening width : 1,055mm [41.53in.]  
(Opening width sufficient for the maximum workpiece depth 850mm [33.46in.])
  - 3.4. A sliding roof cover designed for easy crane access in changeover.
4. Usability
  - 4.1. Improved work efficiency by layout daily maintenance devices centrally in one place.
  - 4.2. Reduced chip cleaning time by reduction in machine inside bolts, which cause chip accumulation, and by a stainless steel cover inside the machine for smooth chip flow.
  - 4.3. **Matsuura G-Tech 31i** ( iHMI, 15-inch touch panel screen)
  - 4.4. Operator assisting software “**MiMS** (Matsuura Intelligent Meister System)” [Standard]
  - 4.5. Collision prevention function “Intelligent Protection System” [Standard]  
\*Installed as standard on the NC screen (previously requiring an external PC). This function prevents collision from programming errors during auto operation and human errors during manual operation.
  - 4.6. Operation status monitoring function [Standard]

### **Main Specification**

		<Reference>	<Reference>	<Reference>	<New>
Item	Unit	<b>MX-330</b>	<b>MX-420 PC10</b>	<b>MX-520</b>	<b>MX-850</b>
Travel (X/Y/Z axis)	mm [in.]	435/465/560 [17.13/ 18.31 /22.05]	435/465/560 [17.13/ 18.31 /22.05]	630/560/510 [24.80/ 22.04 /20.07]	900/780/650 [35.43/ 30.70 /25.59]
Travel (A/C axis)	deg	-125 ~ +10/360	-125 ~ +10/360	-125 ~ +10/360	-125 ~ +30/360
Rapid traverse rate (X/Y/Z axis)	m/min [ipm]	40/40/40 [1574.8]	40/40/40 [1574.8]	40/40/40 [1574.8]	40/40/40 [1574.8]
Rapid traverse rate (A/C axis)	min <sup>-1</sup>	17/33	17/33	33/50	20/40
Spindle speed	min <sup>-1</sup>	15,000	15,000	12,000	12,000
Spindle motor power	kW	5.5/7.5	5.5/7.5	7.5/11	15/22
Spindle torque	Nm	65	65	120	187
Pallet type	pallets	PC10(opt)	PC10(std)	PC4(opt)	PC4(opt)
Working Surface (with pallet changer)	mm [in.]	D250 [D9.84] (D130) [D5.12]	- (D130) [D5.12]	D300(std) [D11.81] D500(opt) [D19.68] (D400) [D15.75]	D500(std) [D19.68] D700(opt) [D27.55] (D630) [D24.80]
Max. workpiece size (with pallet changer)	mm [in.]	D420 x H320* [D16.53 x H12.59] (D330 x H300) [D12.99 x H11.81]	- (D420 x H300*) [D16.54 x H11.81]	D710 x H350* [D27.95 x H13.77] (D520 x H330) [D20.47 x H12.09]	D850 x H450* [D33.46 x H17.71] (D850 x H385*) [D33.46 x H15.16]
Loading capacity (with pallet changer)	kg [lb.]	80 [176] (80) [176]	- (80) [176]	200 [440] (175) [385]	500 [1102] (400) [881]

\* Bullet shaped