

**Press Release**  
**May 31, 2022**

 **Matsuura**

## 5-Axis Vertical Machining Center

「**MX-520**」

「**MX-520 PC4**」 Product Release



Matsuura Machinery Corporation is pleased to announce the launch of the newly designed **MX-520**, 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 line-up 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 fulfil customer requests for extended unmanned operation and high-mix/low-volume production (Total sales of 1,699 machines as of the End of April 2022).

This is the first **MX-520** model change in 12 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.

### <Main Features>

- (1) Improved productivity with cycle time reduction by performance improvement of machine movement
- (2) Expandable automation design offering both manpower savings and high productivity
- (3) Total support functions for reliable 5-axis machining and prolonged unmanned operation
- (4) Environmental protection by reducing wasteful power consumption with auto power off function



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

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

- Flying S -



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## High Productivity with Cycle Time Reduction by Machine Movement Performance Improvement

To reduce a cycle time that has a direct influence over the productivity of customers, the newly designed **MX-520** achieved a cycle time reduction of 10% or more (compared to conventional model) by improving the 4/5 axis rapid traverse rate to 33/50min<sup>-1</sup> (conventional to 17/33min<sup>-1</sup>) and the performance of machine movement.

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	56min 00sec	49min 56sec
Simultaneous 5 axis	37min 08sec	32min 24sec
Total	93min 08sec	82min 20sec

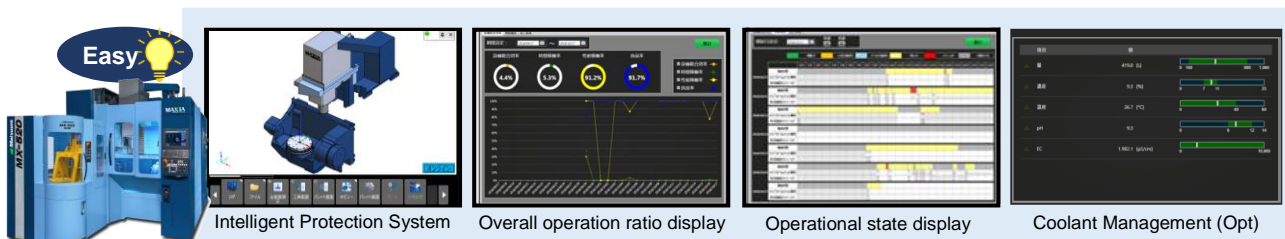
**10% reduction**

## Manpower Savings and High Productivity: Capable of High-Variation/Low-Volume Production and Prolonged Unmanned Operation

To solve labor shortages in your workplace, the **MX-520** can optionally build as a simple automation system with PC4 (floor pallet system) and 90/120 tool magazine, while easily achieving unmanned operation with a small footprint. In addition, the **MX-520** and our high-end model, the **MAM72-52V PC15** (530 tool magazine at maximum) both utilize the same pallets, making it easy to smoothly step up to full-spec automation. A new 15,000 min<sup>-1</sup> is added to the spindle lineup, increasing the options for various machining to meet customer demands.

## Maximum Functionality and Optimized Performance for Fully Automated 5-axis Machining

The Matsuura original collision prevention function (Intelligent Protection System) is 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. To support unmanned operation at night and on weekends, "Operation Status Monitoring Function" is installed as standard for visualizing operation status on the NC screen. "Machine Information Output (MT Connect)" can be selected as an option for visualizing the operation status of the entire factory, including machines from other manufacturers. "Matsuura Remote Monitoring System," which enables operation status monitoring and pallet schedule editing remotely and, "Coolant Management System," which automatically manages and refills coolant are also available as options. 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-520 Features**

1. **MAXIA** Spindle (from heavy duty machining to high speed machining)
  - 1.1. 12,000 min<sup>-1</sup> (7.5/11kW, 120Nm) [Standard]
  - 1.2. 12,000 min<sup>-1</sup> (15/22kW, 187Nm) Powerful type [Option]
  - 1.3. 15,000 min<sup>-1</sup> (15/22kW, 150Nm) [New Option]
  - 1.4. 20,000 min<sup>-1</sup> (15/18.5kW, 108Nm) [Option]
2. Rapid traverse rate (A/C) :33/50min<sup>-1</sup> (\*conventional to 17/33min<sup>-1</sup>)
3. Operability / Accessibility
  - 3.1. Distance from floor to table top surface : 850mm [33.46in.] (with table)  
870mm [34.25in.] (with pallet)
  - 3.2. Distance from machine front to table center : 385mm [15.15in.]
  - 3.3. Front door opening width : 800mm [31.49in.]  
(Opening width sufficient for the maximum workpiece depth 710mm [27.95in.])
  - 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]
  - 4.6. Operation status monitoring function [Standard]

**Main Specification**

		<Reference>	<Reference>	<New>	<Reference>
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	17/33
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

Matsuura will exhibit the newly designed **MX-520 PC4** at JIMTOF2022, the 31<sup>st</sup> Japanese International Machine Tool Fair, November 8-13 at Tokyo Big Sight.