

**Matsuura**

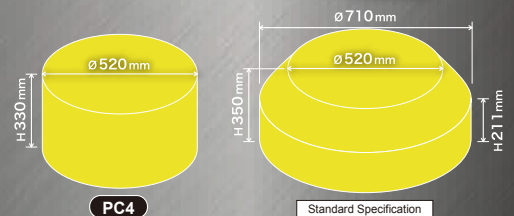
5-Axis Vertical Machining Center

# MX-520

**New!**

PC4

Unmanned and Reliable 5 Axis Production  
4 Pallet Automation for the Market Leading MX-520



Entry Level 5 Axis Automation for Matsuura's Best Selling 5 Axis Future Proof Design – Ready for Industry 4.0 and the IoT

### “Simple Automation” Option

Since its debut in 2010, the **MX-520** has sold in substantial numbers globally to a myriad of industries, machining all known materials. Many customers automated their MX-520 machines with aftermarket made pallet pools. The demand for a 4 pallet and 90 tool Matsuura OEM automation solution for the **MX-520** has arisen directly from our customers.



### MAXIA BT#40 High-rigidity Spindle

Standard 12,000 min<sup>-1</sup> 120 N·m spindle - renowned for its machining capability  
New, optional 12,000 min<sup>-1</sup> 187 N·m powerful spindle for hard-to-cut materials  
Optional 20,000 min<sup>-1</sup> 108 N·m spindle for high-speed aluminum machining



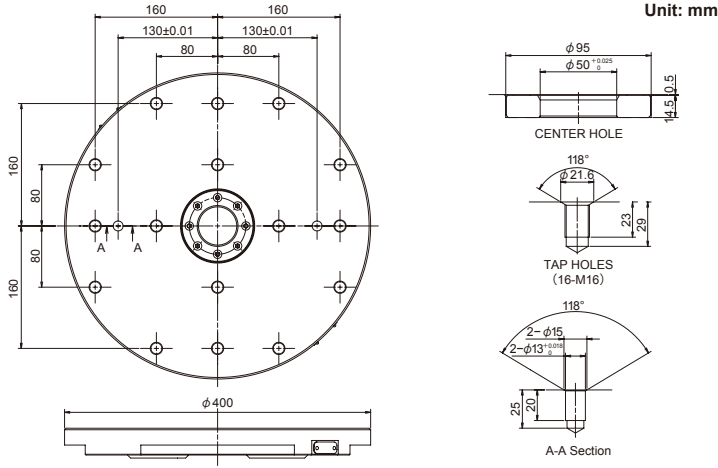
### Ergonomic operation with a new Windows™ based OS.

FANUC 31i (iHMI, 15-inch touch panel type)  
Touch screen with context-sensitive screen icons and quick screen displays assures fast operation and access to data.



## MX-520 Pallet top view

Option

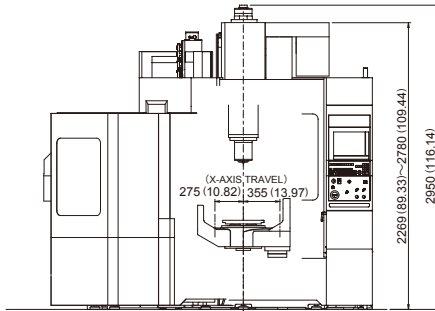


## MX-520 PC4 External view

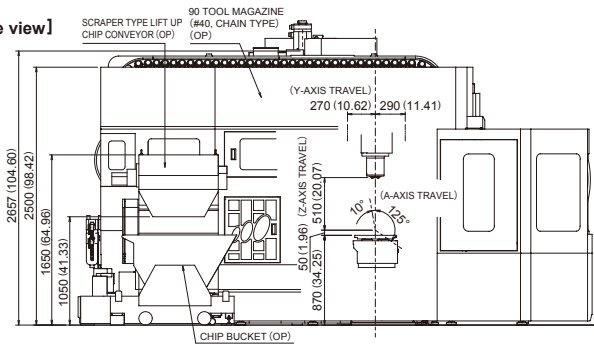
Option

[Front view]

Unit: mm (in.)



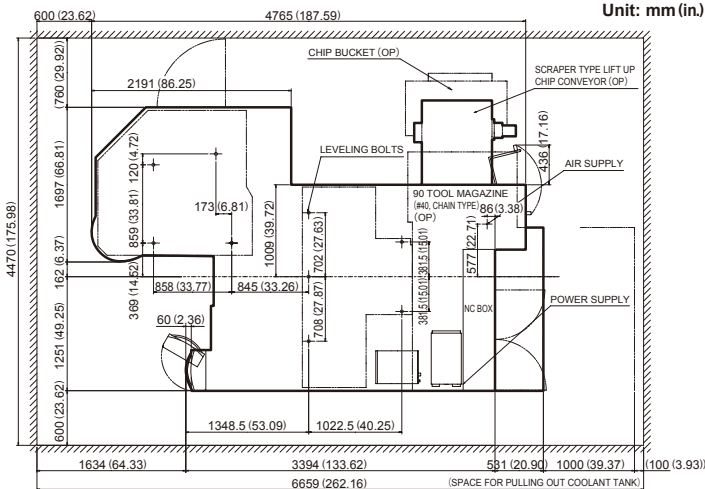
[Left side view]



## MX-520 PC4 Floor plan

Option

Unit: mm (in.)



## MX-520 Machine Specifications

### ■ Movement and Ranges

|                       |          |             |
|-----------------------|----------|-------------|
| X-axis stroke         | mm (in.) | 630 (24.80) |
| Y-axis stroke         | mm (in.) | 560 (22.04) |
| Z-axis stroke         | mm (in.) | 510 (20.07) |
| A-axis rotation angle | deg      | -125~+10    |
| C-axis rotation angle | deg      | 360         |

### ■ Table

Standard

|                     |          |  |
|---------------------|----------|--|
| Working surface     | mm (in.) | $\phi 300$ ( $\phi 11.81$ )  |
| Loading capacity    | kg       | 200  |
| Max. workpiece size | mm       | $\phi 520 \times H350$ ( $\phi 20.47 \times H13.77$ )<br>$\phi 710 \times H350$ ( $\phi 27.95 \times H13.77$ ) (with restrictions) |

### ■ Spindle

|                                |                               |   |          |
|--------------------------------|-------------------------------|---|----------|
| Spindle speed                  | min <sup>-1</sup><br>(kW,N·m) | 12000<br>(7.5/11,120)                   | Standard |
|                                | min <sup>-1</sup><br>(kW,N·m) | 12000<br>(15/22,187)                    | Option   |
|                                | min <sup>-1</sup><br>(kW,N·m) | 20000<br>(15/18.5,108)                  | Option   |
| Spindle speed change command   | —                             | S5 digits direct command                |          |
| Type of spindle taper hole     | —                             | 7/24 taper #40 (BT double contact type) |          |
| Spindle bearing inner diameter | mm (in.)                      | $\phi 80$ ( $\phi 3.14$ )               |          |
| Spindle motor output           | kW                            | AC7.5 / 11                              |          |
| Max. spindle torque            | N·m                           | 120/880min <sup>-1</sup>                |          |

### ■ Feedrate

|                               |                   |                         |
|-------------------------------|-------------------|-------------------------|
| Rapid traverse rate X / Y / Z | mm/min            | 40000/40000/40000       |
| A / C                         | min <sup>-1</sup> | 17/33                   |
| Feedrate X / Y / Z            | mm/min            | 1~40000/1~40000/1~40000 |
| A / C                         | min <sup>-1</sup> | 17/33                   |

### ■ Automatic Tool Changer

|                          |          |  |          |
|--------------------------|----------|--|----------|
| Type of tool shank       | —        | JIS B 6339 tool shank 40T  |          |
| Pullstud                 | —        | JIS B 6339 pullstud 40P  |          |
| Tool storage capacity    | tools    | 60 (Chain type)  | Standard |
|                          | tools    | 90 (Chain type)  | Option   |
| Max. tool diameter       | mm (in.) | $\phi 80$ ( $\phi 3.14$ ) (With adjacent tools)<br>$\phi 150$ ( $\phi 5.90$ ) (Without adjacent tools) |          |
| Max. tool length         | mm (in.) | 300 (11.81)  |          |
| Max. tool mass           | kg       | 10   |          |
| Method of tool selection | —        | Memory random system   |          |

### ■ Pallet Specification

Option

|                     |          |   |
|---------------------|----------|---|
| Working surface     | mm (in.) | $\phi 400$ ( $\phi 15.74$ )                           |
| Max. workpiece size | mm (in.) | $\phi 520 \times H330$ ( $\phi 20.47 \times H12.99$ ) |
| Loading capacity    | kg       | 175   |
| Number of pallets   | —        | 1 (Single pallet)                                     |
|                     | —        | 4 (Floor pallet system)                               |

### ■ Robot interface

Option

|                             |   |   |
|-----------------------------|---|---|
| Robot interface + auto door | — | Only an interface added                     |
| Robot + auto door           | — | Robot details to be discussed individually. |

### ■ Power Sources

|                         |     |   |
|-------------------------|-----|---|
| Electrical power supply | kVA | 44 (Depends on the options provided)  |
| Power supply voltage    | V   | AC200 / 220 $\pm 10\%$<br>Transformer required for the voltage except above |
| Power supply voltage    | Hz  | 50 / 60 $\pm 1$   |

### ■ Tank Capacity

|                          |   |                        |
|--------------------------|---|------------------------|
| Coolant tank capacity    | L | 560                    |
| Oil cooler tank capacity | L | 14 (Total capacity:16) |

### ■ NC System

|                |   |                           |
|----------------|---|---------------------------|
| Control system | — | <b>Matsura G-Tech 31i</b> |
|----------------|---|---------------------------|



URL : <http://www.matsura.co.jp/>  
E-MAIL : [webmaster@matsura.co.jp](mailto:webmaster@matsura.co.jp)

### Matsura Machinery Corporation

1-1 Urushihara-cho Fukui City 910-8530 Japan TEL : +81-776-56-8106 FAX : +81-776-56-8151

**MATSUURA Europe GmbH** ([www.matsura.de/](http://www.matsura.de/))

Berta-Cramer-Ring 21 D-65205 Wiesbaden-Delkenheim, Germany TEL : +49-6122-7803-80 FAX : +49-6122-7803-33

**MATSUURA Machinery Ltd.** ([www.matsura.co.uk/](http://www.matsura.co.uk/))

Gee Road, Whitwick Business Park, Leicestershire LE67 4NH, England TEL : +44-1530-511-400 FAX : +44-1530-511-440

**MATSUURA MACHINERY GmbH** ([www.matsura.de/](http://www.matsura.de/))

Berta-Cramer-Ring 21 D-65205 Wiesbaden-Delkenheim, Germany TEL : +49-6122-7803-0 FAX : +49-6122-7803-33

**ELLIOTT MATSUURA CANADA INC.** ([www.elliottmachinery.com/](http://www.elliottmachinery.com/))

2120 Buckingham Road Oakville Ontario L6H 5X2, Canada TEL : +1-905-829-2211 FAX : +1-905-829-5600

**MATSUURA MACHINERY USA INC.** ([www.matsurausa.com/](http://www.matsurausa.com/))

325 Randolph Ave., St. Paul, MN 55102, U.S.A. TEL : +1-651-289-9700

\* Product specifications and dimensions are subject to change without prior notice. This product is subject to all applicable export control laws and regulations

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