



September 15, 2020

5-Axis Vertical Machining Center

MAM72-52V Product Release

Matsuura Machinery Corporation has developed a new high speed, large capacity 5-axis vertical machining center, designated the **MAM72-52V**, and is accepting orders from today's date.

The **MAM72** series (with thousands of machines in successful worldwide operation since their debut in 1991) originated the concept of the tower pallet system and remains unrivalled in the market place.

Achieving process integration, complex 5-axis machining and versatile functionality in all machining environments, variable-part variable-volume production and reliable extended unmanned operation are a standard feature of the **MAM72** Series.

Unmatched in performance, and the globally trusted "go to" platform for a myriad of precision led industries, the reputation of the **MAM72** Series will be further enhanced by our latest offering in the **MAM72-52V**. Our many decades of technology leading know-how and experience in unmanned machining performance has culminated in the creation of the **MAM72-52V**, designed to handle a greater workpiece size than our existing models, offer faster response times to market and deliver even higher productivity to meet customers' relentless business requirements for ever faster cycle times and cost down performance.

With the **MAM72-52V**, the maximum workpiece size is D520 mm x H400 mm with a load capacity of 300 kgs per pallet: a 23% increase in diameter, 50% increase in weight, and 75% increase in envelope volume compared to existing models.

In addition, the newly developed 4th-/5th-axis table equipped with direct drive motors achieves a rapid traverse rate of 50 min⁻¹ and 100 min⁻¹ respectively, enabling both high speed and high accuracy in one machine. By reviewing the machine structure, improved accessibility and good operability for setup are ensured since the distance from the machine front (oil pan edge) to the pallet center is reduced to 564 mm and that to the spindle center to 134 mm.

The **MAM72-52V** is an all-in-one machine that enables variable-part variable-volume production and extended unmanned operation, featuring a matrix tool magazine (130 tools/330 tool magazine base),

tower pallet system (PC15) and chip removal system (spiral chip conveyor, lift-up chip conveyor) as standard equipments. Furthermore, to cope with the recent IoT trends, an optional feature for outputting machine running data to a host system is available using a communication protocol called “MTConnect” designed for machine tools.

Matsuura machines have been appreciated for 20 years in a cool two-tone design of navy and light blue. This time, we added an accent of silver color, which calls up a futuristic image, achieving a sophisticated and sharp looking design. This new design expresses our passion for “Monozukuri”, manufacturing technologies, and our promise for progress and success toward the future.

MAM72-52V Features

1. Max. workpiece size: D520 mm × H400 mm [D20.47 × H15.75 in.]
(Existing model: D420 mm × H350 mm)
2. Loading capacity: 300 kg [660 lb.]
(Existing model: 200 kg)
3. **MAXIA** spindle (from heavy duty machining to high speed machining)
 - 3.1 15,000 min⁻¹/ 150 Nm (Standard)
 - 3.2 15,000 min⁻¹/ 187 Nm (Option) High-torque type
 - 3.3 20,000 min⁻¹/ 108.4 Nm (Option) High-speed type
4. High-speed high-precision high-rigidity built-in 4th/5th axes of dedicated design
 - 4.1. Rapid traverse rate: 50 min⁻¹ (4th-axis), 100 min⁻¹ (5th-axis)
 - 4.2. Drive system: Direct drive motor
 - 4.3. Rotary scale provided as standard
5. Ease of operation and maintenance
 - 5.1 Distance from machine front to spindle center: 134 mm
Distance from machine front (oil pan edge) to pallet center: 564 mm
Distance from the floor to the pallet top surface: 1,050 mm
 - 5.2 Easier maintenance of pneumatic devices
6. All-in-one machine for variable-part variable-volume production and extended unmanned operation
 - 6.1. Newly developed matrix magazine:
130 ~ 330 tools (330-tool magazine base), 130 tools standard
370 ~ 530 tools (530-tool magazine base), optional
 - 6.2. Multi-pallet system: Tower pallet system (PC15), standard
 - 6.3. Chip removal system: Spiral chip conveyor, lift-up chip conveyor, standard
7. Improved chip removal
 - 7.1 Downsized internal area (by 10% compared to existing models while increasing the workpiece capacity by 75%)
 - 7.2 Transfer capacity of spiral conveyor increased (by 28% compared to existing models)
 - 7.3 Reduction of bolts in the machine (by 80% compared to existing models)

Main Specifications * MAM72 series (with pallet changer)

Item		MAM72-35V	MAM72-52V	MAM72-70V	MAM72-100H
Travel (X / Y / Z axis)	mm [in.]	550/440/580 [21.65/17.32/22.83]	1,010/540/610 [39.76/21.25/24.01]	1,200/720/710 [47.24/28.34/27.95]	1,050/920/960 [41.33/36.22/37.79]
Travel (4th / 5th axis)	deg	-125 ~ +65/360	-125 ~ +30/360	-125 ~ +30/360	-120 ~ +30/360
Rapid traverse rate (X / Y / Z axis)	m/min [ipm]	60/60/60 [2362.2]	60/60/60 [2362.2]	60/60/60 [2362.2]	60/60/50 [2362.2/2362.2/1968.5]
Rapid traverse rate (4th / 5th axis)	min ⁻¹	50/100	50/100	50/100	50/75
Spindle speed	min ⁻¹	12,000(BT40)	15,000(BT40)	15,000(BT40)	12,000(BT50)
Spindle motor power	kW	7.5/11	15/22	15/22	26/30
Max. workpiece size	mm [in.]	D350 x H315 [D13.77 x H12.40]	D520 x H400 [D20.47 x H15.74]	D700 x H500 [D27.56 x H19.68]	D1,020 x H770 [D40.15 x H30.31]
Loading capacity	kg [lb.]	60 [132]	300 [660]	500 [1100]	780 [1719]



Fig. Appearance of **MAM72-52V**