

MAM-600HG



For High Machinability

- Rapid Feed (X, Y, and Z) : 24m/min
- Feed Rate : 1 to 10000mm/min
- Spindle Motor : 7.5/11kw (OP 15/22)
- Spindle Revolutions : 8000min⁻¹ (OP 10000, 15000)
- Spindle Accel/Decel Time : 2.7sec
- Chip Disposal : Spiral Conveyor (Standard)
- High Pressure Coolant : Coolant through Spindle (option) (2, 5, and 7MPa)

High Accuracy

- High balance MAM-600HG achieved with the following: positioning accuracy: $\pm 2.5\mu\text{m}$; roundness accuracy: $3.0\mu\text{m}$ (actual measurement)

For Various Cutting Materials

- Movement and range (X, Y, and Z) : 600X600X625mm
- Pallet Size: 400 X 400mm
- Maximum Load Capacity: 400kg
- Maximum Spindle Torque: 350Nm
- Number of Tools : 60 (Maximum: 240)
- Maximum Tool Length : 350mm
- Maximum Tool Diameter : 150mm (175)
- Tool Change Time : 1.3sec
- Maximum Work Piece Dia : 600mm
- Maximum Work Piece Height : 700mm
- Pallet Change Time : 7sec

MATSUURA SYSTEM J300

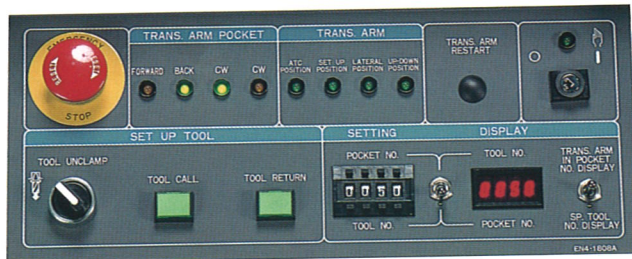
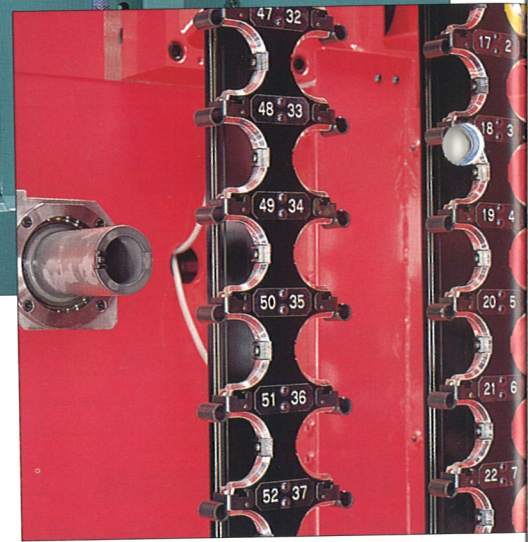
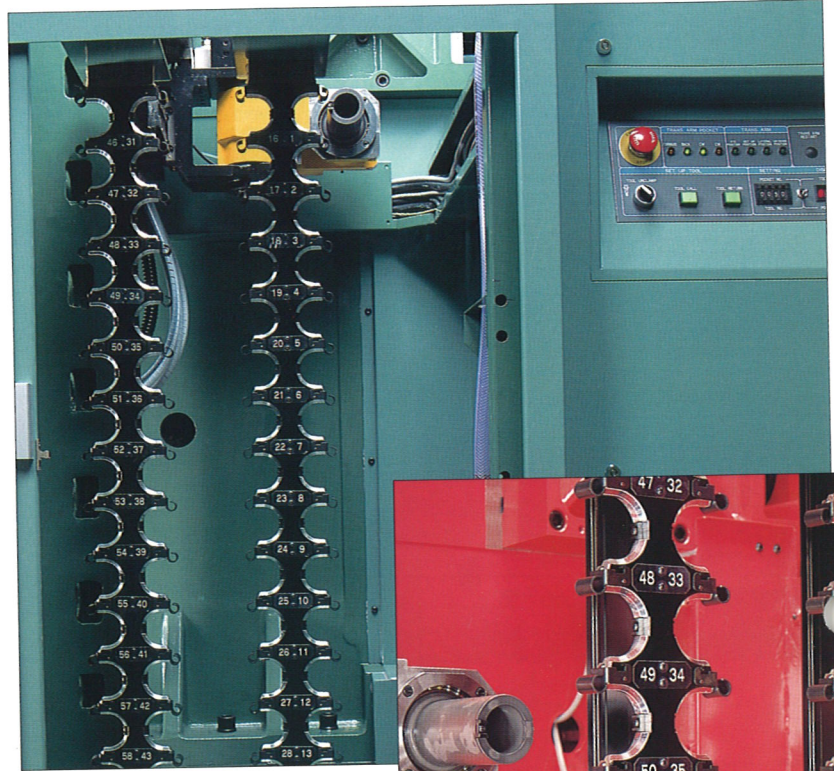
- Advanced Zee-Lag
- IZ-1/30 with Four Times Higher Capacity
- NC built-in Disk Memory
- Network Compatible (Ethernet)
- High Speed DNC Operation (Ethernet)
- Complete DNC Operational Functions
- High Speed Accel/Decel for Each Axis
- High Visibility Thin Type EL Display (Some optional accessories are included in)

MAM-600HG/700HG

Matsuura's High Speed ATC

Tool to Tool Change Time : 1.3 seconds
Chip to Chio Change Time : 6 seconde

Matsuura's unique Automatic Tool Changer (ATC) performs high speed tool exchange and the total tool capacity can be expanded, allowing this system to be flexible for machining. Also, ATC magazine area has been reduced to half the size of previous models.



ATC Control Panel

The total tool capacity of ATC can be expanded to a maximum of 240, if necessary.

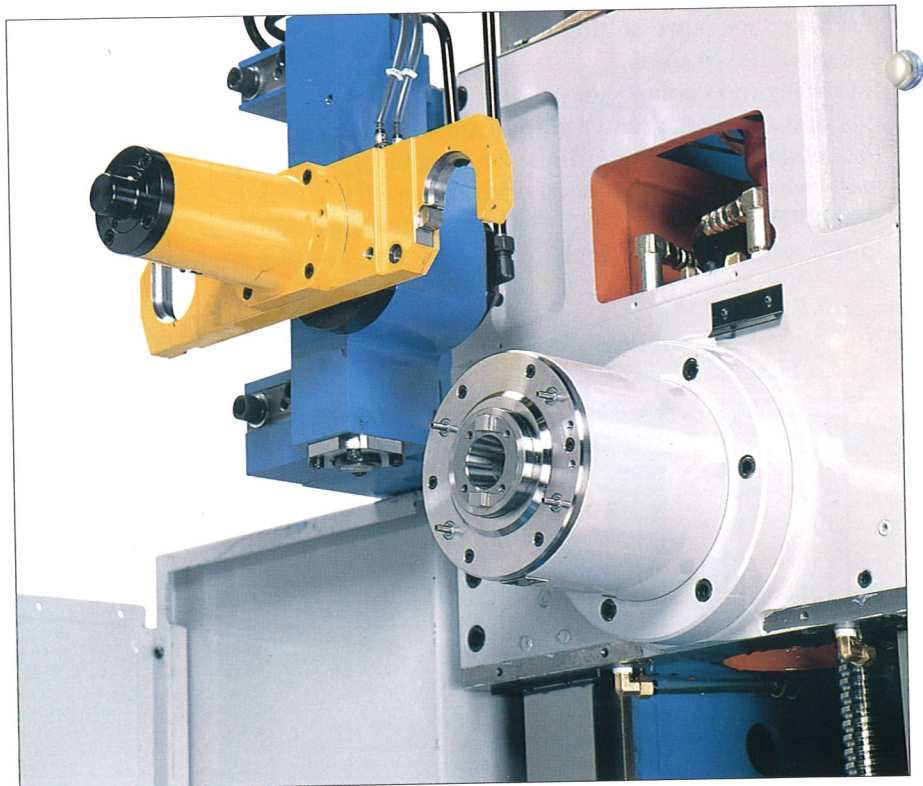
Tool capacity:

Base for a maximum of 60 tools

Base for a maximum of 120 tools

Base for a maximum of 240 tools

Tool expansion is limited based on the tool capacity. Consult with the nearest dealer for details.



MACHINE SPECIFICATIONS

Movement And Ranges

	MAM-600HG	MAM-700HG
X-Axis Travel	600mm (23.62")	750mm
Y-Axis Travel	600mm (23.62")(+225 For Atc)	600mm(+225mm For ATC)
Z-Axis Travel	625mm (24.61")(375 For Pallet Changing)	625mm(+375mm For APC)
From Pallet Surface To Spindle Center	80-680mm (3.15"-26.77")	80-680mm
Pallet Center To Spindle Gauge Plane	150-775mm (5.91"-30.51")	150-775m

Table (Pallet)

Pallet Working Surface	400×400mm	500×500mm
Pallet Loading Capacity	400kg	600kg
Tapped Holes (Size X No.)	(M16×P2.0) ×24	(M16×P2.0) ×24
Weight Of Pallet/PC	84kg	118kg
Min. Pallet Indexing Angle	1 degree	1 degree
Pallet Indexing Time	4.2 sec/180°	4.2sec/180°
Pallet Clamping Force	41.5kN	41.5kN

Spindle

Spindle Speed Range	30-8000mim ⁻¹
Type Of Spindle Taper Hole	7/24 Taper #40
Spindle Bearing Inner Diameter	Φ80
Max. Spindle Torque	350/300RPM

Feedrate

Rapid Traverse Rate (X/Y/Z)	24000mm/min (944.88")
Feedrate (X/Y/Z)	1-10000mm/min (0.04"-393.70")
Jog Feedrate	0-4000mm/min (0-157.48")
Min. Movement Increment (X/Y/Z)	0.001mm (0.00004")

Automatic Tool Changer

Type Of Tool Shank	Jis B 6339 Tool Shank 40t
Type Of Retention Knob	Jis B 6339 Pullstud 40p
Tool Storage Capacity	Pcs 60 Tool / 60 Magazine Base
Max. Tool Diameter	80mm
With Condition	150mm (Up To 16 Pcs And Designated Place)
Max. Tool Length	350 (13.78")
Max. Tool Mass	10kg
Method Of Tool Selection;	Address Code
Tool Changing Time:Tool-To-Tool	1.3sec
Tool Changing Time : Chip-To-Chip	6.0sec (25% Of Z-Axis Movement And Spindle 1000rpm)
Tool Pocket Pitch	82 (3.23")

Automatic Pallet Changer

No. Of Pallets	Pcs 2
Method Of Pallet Change	Turn Table Method
Pallet Changing Time	7.0sec
Pallet Changing Time (Pallet To Pallet)	10.0sec

Power Supply

Electrical Power Supply	KVA 49 (PC2);It Depends On The Optional Accessories.
Additional Case;PC12/27+9KVA,	20bar+6KVA, 50bar+9KVA, Coolant Cooler+5KVA, 22kw Motor+12KVA AC200/220v±10%, 50/60hz±1hz Except For The Above, Transformer Is Required.
Compressed Air Supply	Mpa 0.54-0.93 (5.5-9.5kgf/cm ²)
Required Air Volume	L 550

Tank Capacity

Hydraulic Oil Tank Capacity	L 15
Lubricant Tank Capacity	L 2.7

Coolant Tank Capacity	L 650
Spindle Oil Cooler Tank Capacity	L 14 (Max. Capacity 16L)

Machine Size

Machine Height (From Floor) /PC2	2950mm (116.4")
Floor Space (Incl Maintenance Area)/PC2	5119X6230mm (201.5"X245.3")
Mass Of Machine+NC/PC2	11500kg
Distance From Floor To Pallet Surface	1163mm (45.79")

Accuracy

Positioning Accuracy (X/Y)	±0.005 (+/-0.0002")
Repeatability (X/Y)	±0.002 (+/-0.00008")
Pallet Indexing Accuracy	±3
Pallet Indexing Repeatability	±1
Pallet Changing Accuracy	
Positional Difference Between Pallets	
Y-Axis Direction	0.01 (0.0004")
X-Z-Axis Direction	0.008 (0.0003")
Pallet Changing Repeatability	0.005 (0.0002")

Standard Accessories

- Total Enclosure Guard: With The Safety Switch At Operator Side Door.
- Synchronised Tapping Function
- Handy-Man System/For Yasnac Control Only
- M Code Counter
- Spindle Oil Cooler
- Spiral Conveyor
- Coolant Unit
- Chip Flush
- Feed Axis Interference Prevention Unit
- Spindle Overload Protection
- Work Light (Fluorescent Lamp)
- Others

MACHINE SPECIFICATIONS

Movement And Ranges

	MAM-600HG	MAM-700HG
X-Axis Travel	600mm (23.62")	750mm
Y-Axis Travel	600mm (23.62")(+225 For Atc)	600mm(+225mm For ATC)
Z-Axis Travel	625mm (24.61")(375 For Pallet Changing)	625mm(+375mm For APC)
From Pallet Surface To Spindle Center	80-680mm (3.15"-26.77")	80-680mm
Pallet Center To Spindle Gauge Plane	150-775mm (5.91"-30.51")	150-775mm

Table (Pallet)

Pallet Working Surface	400×400mm	500×500mm
Pallet Loading Capacity	400kg	600kg
Tapped Holes (Size X No.)	(M16×P2.0) ×24	(M16×P2.0) ×24
Weight Of Pallet/PC	84kg	118kg
Min. Pallet Indexing Angle	1 degree	1 degree
Pallet Indexing Time	4.2 sec/180°	4.2sec/180°
Pallet Clamping Force	41.5kN	41.5kN

Spindle

Spindle Speed Range	30-8000mim ⁻¹
Type Of Spindle Taper Hole	7/24 Taper #40
Spindle Bearing Inner Diameter	Φ80
Max. Spindle Torque	350/300RPM

Feedrate

Rapid Traverse Rate (X/Y/Z)	24000mm/min (944.88")
Feedrate (X/Y/Z)	1-10000mm/min (0.04"-393.70")
Jog Feedrate	0-4000mm/min (0-157.48")
Min. Movement Increment (X/Y/Z)	0.001mm (0.00004")

Automatic Tool Changer

Type Of Tool Shank	Jis B 6339 Tool Shank 40t
Type Of Retention Knob	Jis B 6339 Pullstud 40p
Tool Storage Capacity	Pcs 60 Tool / 60 Magazine Base
Max. Tool Diameter	80mm
With Condition	150mm (Up To 16 Pcs And Designated Place)
Max. Tool Length	350 (13.78")
Max. Tool Mass	10kg
Method Of Tool Selection;	Address Code
Tool Changing Time:Tool-To-Tool	1.3sec
Tool Changing Time : Chip-To-Chip	6.0sec
	(25% Of Z-Axis Movement And Spindle 1000rpm)
Tool Pocket Pitch	82 (3.23")

Automatic Pallet Changer

No. Of Pallets	Pcs 2
Method Of Pallet Change	Turn Table Method
Pallet Changing Time	7.0sec
Pallet Changing Time (Pallet To Pallet)	10.0sec

Power Supply

Electrical Power Supply	KVA 49 (PC2);It Depends On The Optional Accessories.
Additional Case;PC12/27+9KVA,	20bar+6KVA, 50bar+9KVA, Coolant Cooler+5KVA, 22kw Motor+12KVA AC200/220v±10%, 50/60hz±1hz Except For The Above, Transformer Is Required.
Compressed Air Supply	Mpa 0.54-0.93 (5.5-9.5kgf/cm ²)
Required Air Volume	L 550

Tank Capacity

Hydraulic Oil Tank Capacity	L 15
Lubricant Tank Capacity	L 2.7

Coolant Tank Capacity	L 650
Spindle Oil Cooler Tank Capacity	L 14 (Max. Capacity 16L)

Machine Size

Machine Height (From Floor) /PC2	2950mm (116.4")
Floor Space (Incl Maintenance Area)/PC2	5119X6230mm (201.5"X245.3")
Mass Of Machine+NC/PC2	11500kg
Distance From Floor To Pallet Surface	1163mm (45.79")

Accuracy

Positioning Accuracy (X/Y)	±0.005 (+/-0.0002")
Repeatability (X/Y)	±0.002 (+/-0.00008")
Pallet Indexing Accuracy	±3
Pallet Indexing Repeatability	±1
Pallet Changing Accuracy	
Positional Difference Between Pallets	
Y-Axis Direction	0.01 (0.0004")
X-Z-Axis Direction	0.008 (0.0003")
Pallet Changing Repeatability	0.005 (0.0002")

Standard Accessories

- Total Enclosure Guard: With The Safety Switch At Operator Side Door.
- Synchronised Tapping Function
- Handy-Man System/For Yasnac Control Only
- M Code Counter
- Spindle Oil Cooler
- Spiral Conveyor
- Coolant Unit
- Chip Flush
- Feed Axis Interference Prevention Unit
- Spindle Overload Protection
- Work Light (Fluorescent Lamp)
- Others

New Control Panel (J300)

Compact and User-friendly Control Panel with Improved Safety, Reliability, and Operationability

Two-level soft keys

Easy to use, two-level keys choose menus on the screen.

Machine lock switch

When opening the total splash guard, press this switch to interlock the machine, ensuring operator's safety.

ATC/APC single operation button

Simple process by following the display allows you to return to normal operation from any trouble.

Emergency stop button

Push lock, forced detachment contact will not cause malfunction by fusing the contact.

Tool length measurement (TLM) button

Tool length and work origin are quickly measured.

Coolant stop button

Cutting oil is stopped when process program check is on.

Soft switch button

The display is instantly changed to the soft switch display.

ATC position manual return button

Feed axis is instantly returned to ATC position.

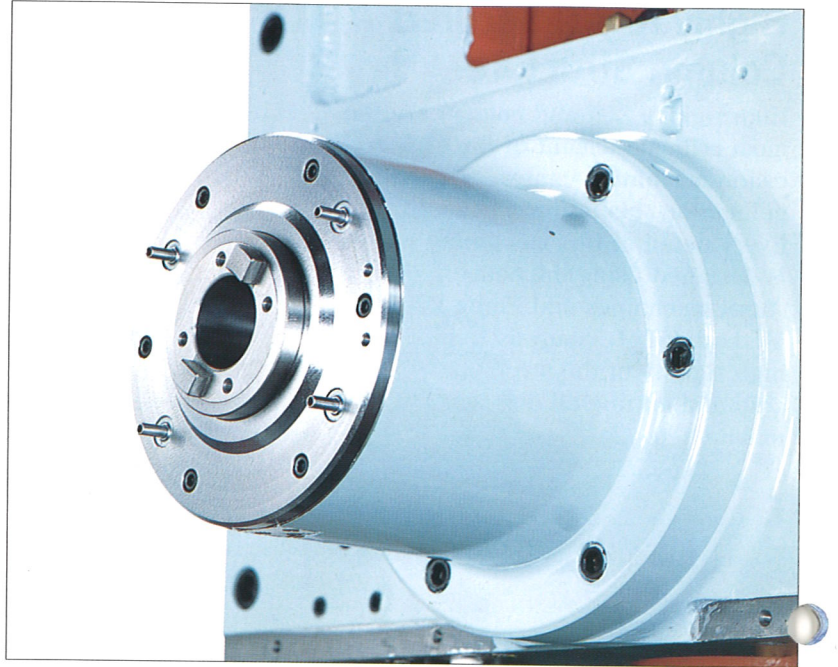
Manual feed button

Embedded button may prevent operational errors.



State of the Art Spindle

Matsura's technologically advanced spindles are recognized as embodying years of technology and reputation. Spindles adopts ceramic bearings which excel in rigidity and generate less heat. A line-up of heavy duty 8000 min^{-1} and high speed types 10,000 min^{-1} , 15,000 min^{-1} are available. The High Tech Spindle connecting to the motor is characterized by low speed/high torque, high speed/high horsepower, allowing a wide range of cutting from aluminum to steel and even tougher materials. The 11 kw motor is standard while the 22 kw motor is available as an option.

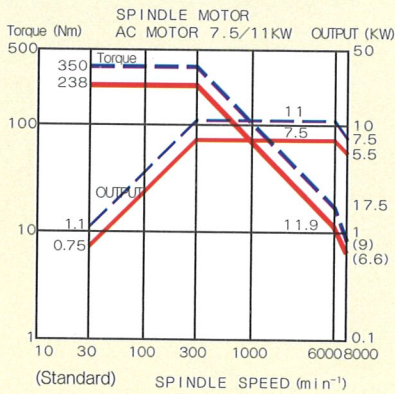


Spindle Motor Characteristics (with J300)

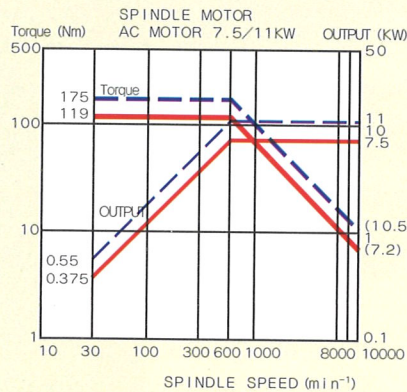
Spindle Torque Characteristic Chart

--- Short tern rating — Continuous rating

8000 min^{-1}



10000 min^{-1}



15000 min^{-1}

