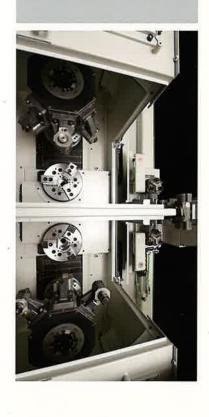


Evolved and Enhanced MW Series Towards Higher Performance



Twin Spindle CNC Chucker

MW120EX / MW200EX



MURATA MACHINERY, LTD.

# The Birth of the MURATEC MW Series and Continuous Growth

The MW16 model was first produced in 1986 as Muratec's Original Horizontal Twin-Spindle Turning with Loader. In 1993, the MW12 was introduced into the market when Muratec's unique built-in gantry loader gained popularity.

After continuous efforts for further improvements, the long-awaited MW120 and MW200 were launched. It was not long before the two models became the best-selling line of Muratec products.

The MW series now offers an extensive range of Horizontal Twin-Spindle CNC Chuckers, meeting the various needs of customers. The MW Series has further succeeded with enhanced EX models.

In search of the ultimate excellence, the MW and EX series will continue to evolve.

# The Secrets behind the Popularity of the MURATEC MW Series

## The MW Series are Horizontal

The turrets and spindles are designed parallel each other. This design helps sustain heavy cutting, and complete accurate finishing, and allows chips to fall naturally away from the part due to gravity.

Our largest advantage of the horizontal is with gantry loader in automated line construction for mass production. The MW series serve best when several machines are combined for high productivity.

## Twin Spindles, Twin Turrets & Number of Stations

Even with a smaller footprint than single spindle machines, high-volume and flexibility are achieved: Flexible machine utilization for two identical processes or for first and second operation. Maximum 12 stations (option) on each turret are an additional booster for flexible machining.

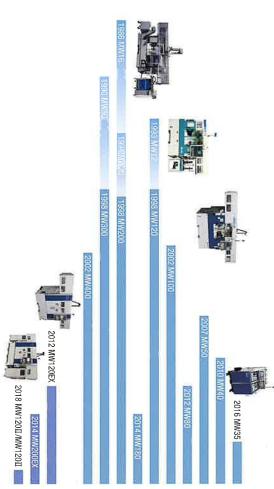
## Separate Beds for Vibration Reduction

The twin spindle MW machines are built on completely separate beds to minimize the transfer of harmonic vibrations. This unique structure helps improve roundness and surface finish of processed workpieces.

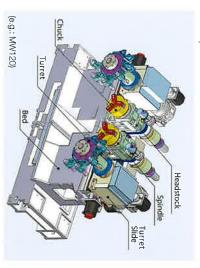
## Intelligent 3-axis Flexible Gantry Loader / Single or Twin

A servo gantry loader CNC 3-axis is incorporated to help meet target cycle time. Twin loader type is also available, giving individual access to the left and right spindles which in-turn leads to highly effective cutting of short-cycle workpieces.

1986 > Muratec Twin-Spindle Chronology



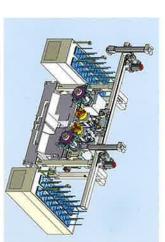
Twin Spindles with Twin Turrets



Combined Machines for Mass Production







Chuck 6" 8"

## MW120EX



Twin Spindle EX Series Line-up

Chuck 10"

## MW200EX

## Basic Machine Specifications

		MW120EX	MW200EX
Maximum chuck size	27	ø165 mm (6 inch)	ø210 mm (8 inch)
		ø210 mm (8 inch)	ø254 mm (10 inch)
Number of turret stations		Right and Left each 8 stations	Right and Left each 10 stations
		Right and Left each 12 stations	Right and Left each 12 stations
Spec. of cutting axes	X-axis	130 mm 24 m/min	190 mm 24 m/min
	Z-axis	145 mm 24 m/min	170 mm 24 m/min
Use tool	0.D tool	□ 20mm	☐ 25mm
	I.D tool	Max. ø 40 mm	Max. ø 40 mm
Spindle drive motor	Standard	7.5 kW/30 min (5.5 kW/Continuous) x 2	15 kW/30 min (11 kW/Continuous) x 2
	Option	11 kW/30 min (7.5 kW/Continuous) x 2	22 kW/30 min (18.5 kW/Continuous) x 2
Spindle speed range		30~3,000 rpm	24~2,400 rpm
		45∼4,500 rpm	35~3,500 rpm
		60~6,000 rpm (7.5kW)	
Footprint	100	1,900 mm x 1,940 mm	2,360 mm x 2,240 mm
Total weight (with tools)		4,200 kg	6,400 kg
Total weight (with loader and tools)	ols)	4,500 kg	7,000 <b>kg</b>

Option: The MW120EX - Newly-developed Package for Idle Time Reduction

## ■ Gantry Loader Specifications

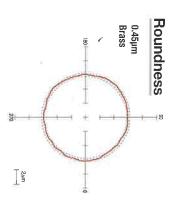
		MW120EX	MW200EX
Loader workpiece handling capacity (size)	ng capacity (size)	ø 120 mm × 80 mm	ø 200 mm × 120 mm
Loader workpiece handling	Loader workpiece handling capacity (weight with jaws)	$3.0 \text{ kg} \times 2$	6.0 kg × 2 (OP: 8.0 kg × 2)
X-axis (Left/Right)	Stroke	The gantry loader X-axis	The gantry loader X-axis stroke adjustable to layout.
	Max, speed	240 m/min	150 m/min
Y-axis (Up/Down)	Stroke	575 mm	650 mm
	Max, speed	175 m/min	110 m/min
Z-axis (Fwd./Rev.)	Stroke	205 mm	300 mm
	Max, speed	65 m/min	50 m/min
$\alpha$ -axis (Hand index)	Stroke	180°	180°
	Cycle time	0,6 sec/180°	0.9 sec/180° (OP : 1.5 sec/1 <b>80°</b> )
Jaw stroke	Loader/Turn-around	ø 30 mm	ø 55 mm
Standard loading time		4.05 sec	9.0 sec (OP: 9.6 sec)

# Faster and Higher Efficiency -

Newly-Developed High-Speed Gantry Loader

(MW120EX)

## ■ Test Data (Samples): MW120EX



### Surface Finish

1000 µm

Undulation: 0.3 µm



-1000 µm J 399.7 µm



3.600 mm

-2500 µm<sup>-J</sup> 400.0µm

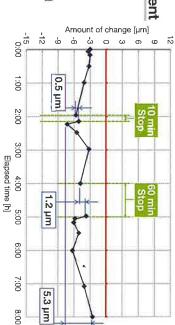
SCM20 (60~65HRC) Hard turning

Undulation: 0.15 µm

## Thermal Displacement

Change in temperature 8°C (temperature-controlled room)

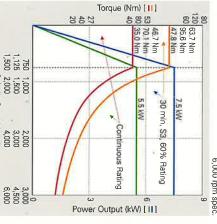
The above test results are based on extensive testing under our prescribed conditions



## Main Spindle Output Power Characteristics







Torque (Nm) [Ⅱ]

52

155

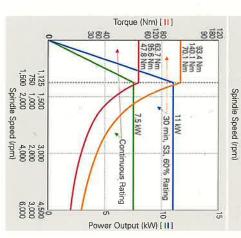
175.2 Nm 120.8 Nm

30 min, S3, 60% Rating

Continuous Rating

Power Output (kW) [II] 10

238.9 Nm 164.7 Nm



Torque (Nm) [11]

86

870

1,160

1,600 2,320

2,400

Spindle Speed (rpm)

375

350.4 Nm 241.6 Nm

870

1,160

1,600 2,320

2,400

Spindle Speed (rpm)

294,6 Nm 203.2 Nm

30 min, S3, 60% Rating 18.5 KW 22 kW

Continuous Rating

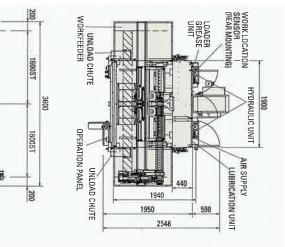
#### MW200EX

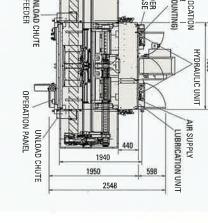
207

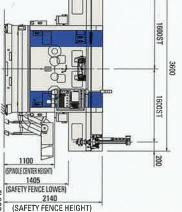
#### 2,400 rpm spec. 3,500 rpm spec. 20

**MW120EX** 

Floor Layout





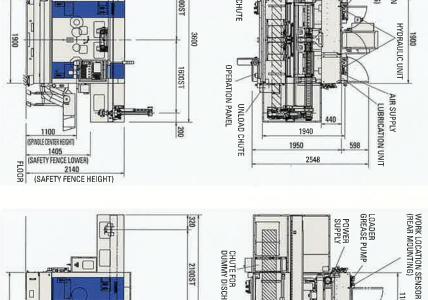


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Power Output (kW) [II]

1180

#### MW200EX



CHUTE FOR DUMMY DISCHARGE

OPERATION

190

509

300 ST

2240

703

2100ST

4840

210051

- \* The machines shown in the catalogue include some optional items and may vary in appearance from the actual machines
- Specifications and designs are subject to change without prior notice

(unit:mm)

1150 (SPINDLE CENTER HEIGHT) 1530

(SAFETY FENCE LOWER)

2100

(SAFETY FENCE HEIGHT)

2360

(unit:mm)

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### MACHINE TOOLS DIVISION MURATA MACHINERY, LTD. For EU countries, machines are built with CE-safety conformity.

Safety Specification

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