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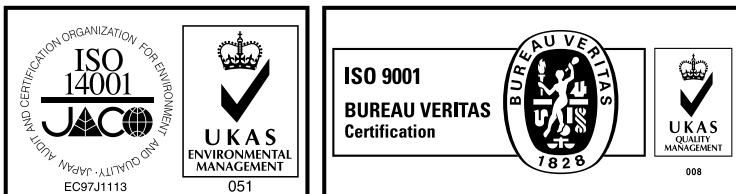
EDM SYSTEMS & WIRE EDM SYSTEMS

Changes for the Better



EDM Systems & Wire EDM Systems

Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001 (standards for quality assurance management systems)

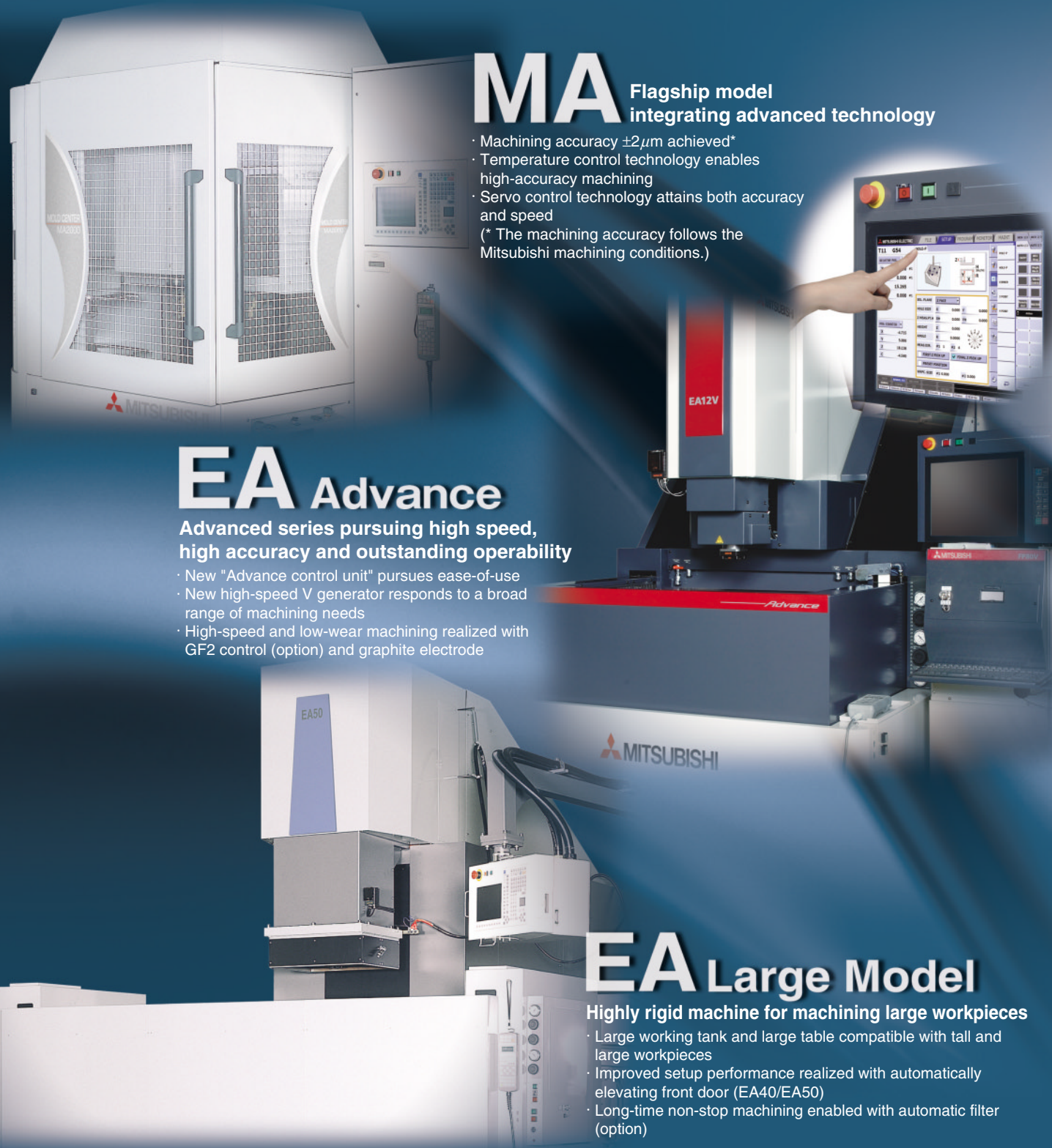


NC EDM SYSTEMS

Die-sinking EDM

A variety of models are available for compact high-precision machining to large high-production machining applications.

Mitsubishi helps to improve our customers' productivity with total solutions covering machine, generator, adaptive control, automated systems and networks.



MA Flagship model integrating advanced technology

- Machining accuracy $\pm 2\mu\text{m}$ achieved*
 - Temperature control technology enables high-accuracy machining
 - Servo control technology attains both accuracy and speed
- (* The machining accuracy follows the Mitsubishi machining conditions.)

EA Advance

Advanced series pursuing high speed, high accuracy and outstanding operability

- New "Advance control unit" pursues ease-of-use
- New high-speed V generator responds to a broad range of machining needs
- High-speed and low-wear machining realized with GF2 control (option) and graphite electrode

EA Large Model

Highly rigid machine for machining large workpieces

- Large working tank and large table compatible with tall and large workpieces
- Improved setup performance realized with automatically elevating front door (EA40/EA50)
- Long-time non-stop machining enabled with automatic filter (option)

Wire EDM SYSTEMS

Wire EDM

Ample lineup corresponding to needs for part machining to super-accurate mold machining. Mitsubishi helps improve our customers' productivity with total solutions covering machine, generator, adaptive control, automated systems and networks.



FA Advance

Global standard model attaining high speeds and high performances

- New "Advance control unit" pursues ease-of-use
- Various power control technology realizes high speeds and high accuracies
- Mechanism enables stable operation over a long time

PA Flagship series incorporating a transcendental machining performance

- Machining accuracy $\pm 2\mu\text{m}$ achieved*
 - Pursuing super-high accuracy with intensive temperature control
 - High-grade machining of tungsten materials enabled with ASC (option)
- (* The machining accuracy follows the Mitsubishi machining conditions.)

FA Large Model

Highly rigid machine for machining large workpieces

- V500 generator compatible with high-speed machining
- Powerful specifications for long-time machining

BA High-performance model for part to mold machining

- Basic machine with outstanding cost performance
- Lineup compatible with compact parts to large workpieces
- V350II generator suitable for machining special materials and difficult to cut materials

Wire EDM Systems Line up

High machining performance setting new global standard

High-performance EDM FA-S Series



FA10S Advance

Model : FA10S ADVANCE (V-Package)
 Stroke (mm/in) : X:350/13.8 Y:250/9.8 Z:220/8.7
 Max. workpiece dimensions (mm/in) : 800/31.5×600/23.6×215/8.5
 Max. workpiece weight (kg/lb) : 500/1100
 Wire diameter (mm/in) : 0.1/0.004 to 0.36/0.014
 (0.36/0.014: V-package option)



FA20S Advance

Model : FA20S ADVANCE (V-Package)
 Stroke (mm/in) : X:500/19.7 Y:350/13.8 Z:300/11.8
 Max. workpiece dimensions (mm/in) : 1050/41.3×800/31.5×295/11.6
 Max. workpiece weight (kg/lb) : 1500/3300
 Wire diameter (mm/in) : 0.1/0.004 to 0.36/0.014
 (0.36/0.014: V-package option)

The ultimate FA Series machine provides a machining accuracy of $\pm 3\mu\text{m}$

High accuracy EDM FA-PS Series



FA10PS Advance

Model : FA10PS ADVANCE
 Stroke (mm/in) : X:350/13.8 Y:250/9.8 Z:220/8.7
 Max. workpiece dimensions (mm/in) : 800/31.5×600/23.6×215/8.5
 Max. workpiece weight (kg/lb) : 500/1100
 Wire diameter (mm/in) : 0.05/0.002 to 0.3/0.012
 (0.05/0.002, 0.07/0.003: option)

Machining accuracy $\pm 3\mu\text{m}$ achieved

* The machining accuracy follows the Mitsubishi machining conditions.



FA20PS Advance

Model : FA20PS ADVANCE
 Stroke (mm/in) : X:500/19.7 Y:350/13.8 Z:300/11.8
 Max. workpiece dimensions (mm/in) : 1050/41.3×800/31.5×295/11.6
 Max. workpiece weight (kg/lb) : 1500/3300
 Wire diameter (mm/in) : 0.05/0.002 to 0.3/0.012
 (0.05/0.002, 0.07/0.003: option)

Machining accuracy $\pm 3\mu\text{m}$ achieved

* The machining accuracy follows the Mitsubishi machining conditions.

Effective cost performance machine compatible with production machining

High-productivity basic model BA Series



BA8

Model : BA8
 Stroke (mm/in) : X:320/12.6 Y:250/9.8 Z:220/8.7
 Max. workpiece dimensions (mm/in) : 700/27.6×550/21.7×215/8.5
 Max. workpiece weight (kg/lb) : 500/1100
 Wire diameter (mm/in) : 0.1/0.004 to 0.3/0.012

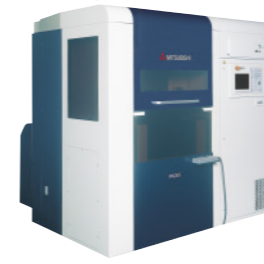


NEW

BA24

Model : BA24
 Stroke (mm/in) : X:600/23.6 Y:400/15.7 Z:310/12.4
 Max. workpiece dimensions (mm/in) : 1050/41.3×820/32.3×305/12.0
 Max. workpiece weight (kg/lb) : 1500/3300
 Wire diameter (mm/in) : 0.1/0.004 to 0.3/0.012

Ultra-high accuracy EDM PA Series

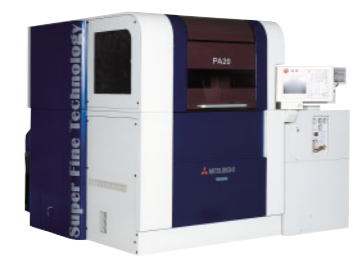


PA05S

Model : PA05SM
 Stroke (mm/in) : X:220/8.7 Y:150/5.9 Z:150/5.9
 Max. workpiece dimensions (mm/in) : 500/19.7×390/15.4×145/5.7
 Max. workpiece weight (kg/lb) : 100/220

Machining accuracy $\pm 2\mu\text{m}$ achieved

* The machining accuracy follows the Mitsubishi machining conditions.



PA20

Model : PA20M
 Stroke (mm/in) : X:500/19.7 Y:350/13.8 Z:300/11.8
 Max. workpiece dimensions (mm/in) : 1050/41.3×800/31.5×295/11.6
 Max. workpiece weight (kg/lb) : 1500/3300

Machining accuracy $\pm 2\mu\text{m}$ achieved

* The machining accuracy follows the Mitsubishi machining conditions.

Machining sizeable workpiece with high-speed V500 power supply

Large EDM FA-V Series



FA30V

Model : FA30VM
 Stroke (mm/in) : X:750/29.5 Y:500/19.6 Z:350/13.7
 Max. workpiece dimensions (mm/in) : 1300/51.1×1000/39.3×345/13.5
 Max. workpiece weight (kg/lb) : 3000/6600
 Wire diameter (mm/in) : 0.2/0.008 to 0.36/0.014
 (0.36/0.014: AT not possible)



FA30V <Z600 specifications>

Model : FA30VM (Z600 specifications)
 Stroke (mm/in) : X:750/29.5 Y:500/19.6 Z:420/16.5
 Max. workpiece dimensions (mm/in) : 1300/51.1×1000/39.3×605/23.8
 Max. workpiece weight (kg/lb) : 3000/6600
 Wire diameter (mm/in) : 0.2/0.008 to 0.36/0.014
 (0.36/0.014: AT not possible)

Ultra-large EDM FA-V Series



FA40V

Model : FA40VM
 Stroke (mm/in) : X:1000/39.3 Y:800/31.4 Z:400/15.7
 Max. workpiece dimensions (mm/in) : 1550/61.0×1300/51.1×395/15.5
 Max. workpiece weight (kg/lb) : 4000/8800
 Wire diameter (mm/in) : 0.2/0.008 to 0.36/0.014
 (0.36/0.014: AT not possible)



FA50V

Model : FA50VM
 Stroke (mm/in) : X:1300/51.1 Y:1000/39.3 Z:400/15.7
 Max. workpiece dimensions (mm/in) : 2000/78.7×1600/62.9×395/15.5
 Max. workpiece weight (kg/lb) : 4000/8800
 Wire diameter (mm/in) : 0.2/0.008 to 0.36/0.014
 (0.36/0.014: AT not possible)

Automated system



Contact Mitsubishi for more information on the automated systems.

Application table

Model	Applicable wire diameter (mm/in)										Applicable power circuit					
	0.02/0.0008	0.03/0.0012	0.05/0.002	0.07/0.003	0.1/0.004	0.15/0.006	0.2/0.008	0.25/0.010	0.3/0.012	0.36/0.014	Standard power circuit	PF circuit	DAE	FS5	DFS	ASC
FA10S ADVANCE	-	-	-	-	○	○	○	○	○	-	AE3 + fine finishing circuit	○	-	-	-	-
FA10S ADVANCE (V-Package)	-	-	-	-	○	○	○	○	○	[○]	V500 + fine finishing circuit	○	○	-	-	-
FA20S ADVANCE	-	-	-	-	○	○	○	○	○	-	AE3 + fine finishing circuit	○	-	-	-	-
FA20S ADVANCE (V-Package)	-	-	-	-	○	○	○	○	○	[○]	V500 + fine finishing circuit	○	○	-	-	-
FA10PS ADVANCE	-	-	[○]	[○]	○	○	○	○	○	-	AE3 + fine finishing circuit	○	-	-	[○]	-
FA20PS ADVANCE	-	-	[○]	[○]	○	○	○	○	○	-	AE3 + fine finishing circuit	○	-	-	[○]	[○]
BA8	-	-	-	-	○	○	○	○	○	-	V350 I	[○]	-	-	-	-
BA24	-	-	-	-	○	○	○	○	○	-	V350 II	[○]	-	-	-	-

*1: Items listed in the table [○] are options. *2: The $\phi 0.3$ wire in the [○] of the application table is outside of the applicable sphere of automatic threading. *3: Items marked with [●] are special options.

Model	Applicable wire diameter (mm/in)										Applicable power circuit					
	0.02/0.0008	0.03/0.0012	0.05/0.002	0.07/0.003	0.1/0.004	0.15/0.006	0.2/0.008	0.25/0.010	0.3/0.012	0.36/0.014	Standard power circuit	PF circuit	DAE	FS5	DFS	ASC
FA30VM	-	-	-	-	-	-	○	○	○	[○]	V500	-	-	-	-	-
FA30VM (Z600)	-	-	-	-	-	-	○	○	○	[○]	V500	-	-	-	-	-
FA40VM	-	-	-	-	-	-	○	○	○	[○]	V500	-	-	-	-	-
FA50VM	-	-	-	-	-	-	○	○	○	[○]	V500	-	-	-	-	-
PA05SM	○	○	○	○	○	[●]	[●]	-	-	-	AE3 + FS circuit	-	-	○	-	[○]
PA20M	-	-	[○]	○	○	○	○	○	○	-	AE3 + fine finishing circuit	○	-	-	[○]	[○]

*4: "V" in advance V refers to V-Package.

*5: Some options are not retrofitable. Contact Mitsubishi Sales Office or dealer for more details.

NC EDM Systems Line up

Union of high-accuracy technology and high-speed V power control technology
Compact high-accuracy EDM



NEW

EA8PV Advance

Vertical door type

Machining accuracy $\pm 3\mu\text{m}$ achieved

Model	: EA8PVM ADVANCE
Stroke (mm/in)	: X:300/11.8 Y:250/9.8 Z:250/9.8
Max. workpiece dimensions (mm/in)	: 740/29.1×470/18.5×130/5.1
Max. workpiece weight (kg/lb)	: 550/1210
Max. electrode weight (kg/lb)	: 25/55
Max. fluid level (mm/in)	: 180/7.1

* The machining accuracy follows the Mitsubishi machining conditions.

Ultra-high accuracy EDM



MA2000

Elevation tank type

Machining accuracy $\pm 2\mu\text{m}$ achieved

Model	: MA2000M
Stroke (mm/in)	: X:400/15.7 Y:300/11.8 Z:300/11.8
Max. workpiece dimensions (mm/in)	: 600/23.6×450/17.7×250/9.8
Max. workpiece weight (kg/lb)	: 700/1540
Max. electrode weight (kg/lb)	: 50/110
Max. fluid level (mm/in)	: 300/11.8

* The machining accuracy follows the Mitsubishi machining conditions.

Compact EDM



EA8

(Vertical door type)

Machining accuracy $\pm 3\mu\text{m}$ achieved

Model	: EA8M
Stroke (mm/in)	: X:300/11.8 Y:250/9.8 Z:250/9.8
Max. workpiece dimensions (mm/in)	: 740/29.1×470/18.5×150/5.9
Max. workpiece weight (kg/lb)	: 550/1200
Max. electrode weight (kg/lb)	: 25/55
Max. fluid level (mm/in)	: 200/7.9

EA12D

(Vertical door type)

Machining accuracy $\pm 3\mu\text{m}$ achieved

Model	: EA12DM
Stroke (mm/in)	: X:400/15.7 Y:300/11.8 Z:300/11.8
Max. workpiece dimensions (mm/in)	: 1000/39.3×650/25.5×350/13.7
Max. workpiece weight (kg/lb)	: 1000/2200
Max. electrode weight (kg/lb)	: 50/110
Max. fluid level (mm/in)	: 400/15.7

NEW

EA8PV Advance

Elevation tank type

Machining accuracy $\pm 3\mu\text{m}$ achieved

Model	: EA8PVM ADVANCE
Stroke (mm/in)	: X:300/11.8 Y:250/9.8 Z:250/9.8
Max. workpiece dimensions (mm/in)	: 730/28.7×490/19.3×160/6.3
Max. workpiece weight (kg/lb)	: 550/1210
Max. electrode weight (kg/lb)	: 25/55
Max. fluid level (mm/in)	: 210/8.3

* The machining accuracy follows the Mitsubishi machining conditions.

NEW

EA12V Advance

Elevation tank type

Advance control device equipped

Model	: EA12VM ADVANCE
Stroke (mm/in)	: X:400/15.7 Y:300/11.8 Z:300/11.8
Max. workpiece dimensions (mm/in)	: 800/31.5×550/21.7×250/9.8
Max. workpiece weight (kg/lb)	: 700/1540
Max. electrode weight (kg/lb)	: 50/110
Max. fluid level (mm/in)	: 300/11.8

* The machining accuracy follows the Mitsubishi machining conditions.

Middle/Large EDM



EA30

Vertical door type

Machining accuracy $\pm 3\mu\text{m}$ achieved

Model	: EA30M
Stroke (mm/in)	: X:700/27.5 Y:500/19.6 Z:350/13.7
Max. workpiece dimensions (mm/in)	: 1230/48.4×800/31.4×350/13.7
Max. workpiece weight (kg/lb)	: 2000/4400
Max. electrode weight (kg/lb)	: 200/440
Max. fluid level (mm/in)	: 400/15.7

EA40

Automatic elevating front door

Machining accuracy $\pm 3\mu\text{m}$ achieved

Model	: EA40M
Stroke (mm/in)	: X:1000/39.3 Y:600/23.6 Z:450/17.7
Max. workpiece dimensions (mm/in)	: 1500/59.0×1000/39.3×400/15.7
Max. workpiece weight (kg/lb)	: 5000/11000
Max. electrode weight (kg/lb)	: 300/660
Max. fluid level (mm/in)	: 450/17.7

Incorporating high-speed and high-accuracy, and outstanding operation and maintenance
High-performance EDM



NEW

EA28V Advance

Elevation tank type

Advance control device equipped

Model	: EA28VM ADVANCE
Stroke (mm/in)	: X:650/25.6 Y:450/17.7 Z:350/13.8
Max. workpiece dimensions (mm/in)	: 1050/41.3×760/29.9×350/13.8
Max. workpiece weight (kg/lb)	: 2000/4400
Max. electrode weight (kg/lb)	: 200/440
Max. fluid level (mm/in)	: 400/15.7

* The machining accuracy follows the Mitsubishi machining conditions.



EA50

Automatic elevating front door

Machining accuracy $\pm 3\mu\text{m}$ achieved

Model	: EA50M
Stroke (mm/in)	: X:1500/59.0 Y:600/23.6 Z:600/23.6
Max. workpiece dimensions (mm/in)	: 2400/94.4×1500/59.0×750/29.5
Max. workpiece weight (kg/lb)	: 10000/22000
Max. electrode weight (kg/lb)	: 500/1100
Max. fluid level (mm/in)	: 800/31.5

Automated system



Configuration: EA12V Advance × 2 units + EDCHANGE

A two (three) unit control system consisting of EA8PV ADVANCE (elevating specifications), EA12V ADVANCE, EA28V ADVANCE and MA2000M, etc., is also available. Contact Mitsubishi for more information on the automated systems.

Combination of standard generator and special generator

Model	Standard power supply (selective)					Special power supply				
	FP80V	FP120V	FP60MA	FP60EA	FP100EA	FP100B	SP	NP2 circuit	Narrow gap circuit	GF2 control
Maximum machining current[A]	80	120	80	80	120	270	—	—	—	—
EA8PVM ADVANCE	○	—	—	—	—	—	—	◎	◎	●
EA12VM ADVANCE	○	○	—	—	—	—	—	—	◎	●
EA28VM ADVANCE	○	○	—	—	—	—	—	—	◎	●
MA2000M	—	—	○	—	—	—	○	◎	—	—
EA8M	—	—	—	○	—	—	○	—	—	—
EA12DM	—	—	—	○	○	—	○	—	—	—
EA30M	—	—	—	○	○	—	—	—	—	—

List of compliance: ◎ Standard equipment ○ Option which can be retrofit ● Option which cannot be retrofit — Incompatible
The specifications of options and retrofits differ according to the country and region, so please check with your dealer.

Head side tooling and ATC combination

Model	Head side tooling				ATC				
	Built-in C axis	High-accuracy built-in spindle	Automatic clamp	Floating holder	Shuttle 4T	Shuttle 7T	LS-20T	MVH-20T	MVH-40T
EA8PVM ADVANCE	○	●	○	○	○	○	—	●	—
EA12VM ADVANCE	○	●	○	○	—	—	—	○	○
EA28VM ADVANCE	○	●	○	○	—	—	—	○	○
MA2000M	◎	●	—	—	—	—	◎	—	●
EA8M	○	—	○	○	○	○	—	—	—
EA12DM	○	—	○	○	○	○	—	○	—
EA30M	○	—	○	○	—	—	—	○	○

List of compliance: ◎ Standard equipment ○ Option which can be retrofit ● Option which cannot be retrofit — Incompatible
The specifications of options and retrofits differ according to the country and region, so please check with your dealer.



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- * Not all models are supported for all countries and regions.
 - * The specifications of machine differ according to the country and region, so please check with your dealer.
 - * Processing data provided in this brochure is for reference only.