Mitsubishi Electric Dalian Industrial Products Co., Ltd. is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001 (standards for quality assurance management systems).
Integration of highly evolved technology and ADVANCE control
Compatible with various types of EDM machining

High-speed machining is realized using advanced machining control

- Faster machining and low electrode wear are realized when using graphite electrode
  - Wear using graphite electrode reduced up to 80%
  - Electrode wear comparison for 15x15mm and 40mm depth

- Machining speed is improved up to 40% at the rough machining condition with using IDPM and copper-graphite electrode

Machining stabilizing jump control: SS jump 5
- Jump control suitable for various shapes is realized by optimizing smoothing of jump up operation and speed/acceleration control
- Machining time is reduced up to 40% by optimizing smoothing of simultaneous 2 or 3 axes operation and speed/acceleration control
- Machining time reduced for the uniform fine finish machining using medium-sized electrode

Machining adaptive control: IDPM
- Faster machining and low electrode wear are realized when using graphite electrode
  - Wear using graphite electrode reduced up to 80%
  - Electrode wear comparison for 15x15mm and 40mm depth

- Machining speed is improved up to 40% at the rough machining condition with using IDPM and copper-graphite electrode

Programming (ESPERADVANCE)
- Simple table-format programming
- Machining conditions and programs suitable for various shapes can be created (shape expert)

Electrode and workpiece measurements
- Core alignment positioning with electrode measurement screen
- Coordinate value setting with workpiece measurement screen

Automation
- Continuous operation is possible using many electrode changes
- Continuous operation is possible using many electrode and workpiece changes

Ergonomic design
- Easy-to-view screen (15-inch)
- Intuitive operations using touch-panel control
- User-friendly keyboard and mouse

Highly evolved technology

Advanced machining control
- Off-time control
- Fuzzy control
- Orbit Pro

Machining condition search
- Improved 60%
- New machining adaptive control
- IDPM

Shape expert
- Example of GATE (Sub gate)
- During large-area machining

Stable machining which lessens the load
- With SS jump 5
- Without SS jump 5

Load reduction
- Stabilization of jump up operation and speed/acceleration control

Easy-to-use control (ADVANCE control unit)
- Simple table-format programming
- Machining conditions and programs suitable for various shapes can be created (shape expert)

Electrode measurement screen
- Workpiece measurement screen
- Electrode/Workpiece automatic changing unit specification (two EDMs using a robotic system)

Automation
- Continuous operation is possible using many electrode and workpiece changes

### Machine Specifications

<table>
<thead>
<tr>
<th>Machine Specifications</th>
<th>EA8SM</th>
<th>EA8SM</th>
<th>EA12SM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (W×D×H)</td>
<td>1070×880×1300</td>
<td>1070×880×1300</td>
<td>1070×880×1300</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Power Supply (kVA)</td>
<td>150</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Control System</td>
<td>CNC</td>
<td>CNC</td>
<td>CNC</td>
</tr>
<tr>
<td>Machining Speed (mm/min)</td>
<td>25,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>Spindle Speed (rev/min)</td>
<td>8,000</td>
<td>8,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Machine Table</td>
<td>Granite table</td>
<td>Granite table</td>
<td>Granite table</td>
</tr>
<tr>
<td>Table Size (mm)</td>
<td>1200</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>Working Fluid</td>
<td>Coolant</td>
<td>Coolant</td>
<td>Coolant</td>
</tr>
<tr>
<td>Filtration Method</td>
<td>Three slots at 12-160mm pitch</td>
<td>Three slots at 12-160mm pitch</td>
<td>Three slots at 12-160mm pitch</td>
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<tr>
<td>Fluid level adjustment</td>
<td>85 to 250</td>
<td>85 to 250</td>
<td>85 to 250</td>
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<tr>
<td>Max. Electrode Weight</td>
<td>150 to 400</td>
<td>150 to 400</td>
<td>150 to 400</td>
</tr>
<tr>
<td>Max. Working Fluid Weight</td>
<td>800</td>
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</tr>
<tr>
<td>Total System Weight</td>
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<td>2000</td>
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### Power Supply and Control Specifications

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<tr>
<td>Maximum Machining Current Average[A]</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Maximum Machining Current Peak[A]</td>
<td>80</td>
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<tr>
<td>Connector Power Supply</td>
<td>400V</td>
<td>400V</td>
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<tr>
<td>Connector Power Supply</td>
<td>8A</td>
<td>8A</td>
<td>8A</td>
</tr>
<tr>
<td>Connector Power Supply</td>
<td>20A</td>
<td>20A</td>
<td>20A</td>
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<tr>
<td>Power Supply of DC24V for the LED light</td>
<td>Yes</td>
<td>Yes</td>
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### Network Connection Specifications (FTP and DNC S/W)

- **Data such as NC programs, machining conditions and variables can be exchanged between a personal computer and EDM.**
- One IP address must be prepared for each EDM within the user’s in-house network.

### Options

- Options and retrofit specifications differ according to country and region; please contact a Mitsubishi Electric representative for details.
- *Paint color designation
  - Others
  - Instruction manual (paper edition)
  - Built-in scheduler
  - Built-in anti-virus
  - Standard Equipment
  - Standard equipment
  - Can be added after installation
  - Cannot be added after installation
  - Available only in Japan
  - Provided by third parties

### Power Facility Capacity

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### Head side tooling

- **Removable holder**
- **Automatic clamp**
- **Highly rigid C-axis**

### ATC

- **Shuttle-4T (automatic tool changer)**
- **Shuttle-7T (automatic tool changer)**
- **LS-10T (automatic tool changer)**

### Dielectric fluid system, etc.

- **LS-20T (automatic tool changer)**
- **Dielectric fluid distributor**

### Software

- **Anti-virus protection**
- **Built-in scheduler**
- **Built-in anti-virus**
- **Standard Equipment**
- **Standard equipment**
- **Can be added after installation**
- **Cannot be added after installation**
- **Available only in Japan**
- **Provided by third parties**

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* Specifications are subject to change without notice, and appearance may vary from the photos.*