MV Series

Wire-cut EDM Systems
MV Series

HEAD OFFICE: TOKYO BLDG., 2-3-5, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS: 1-14, YODA-IRINMAI, 5-CHOME, HIGASHI-KU, NAGOYA 461-8670, JAPAN

MITSUBISHI ELECTRIC CORPORATION

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

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

Revised publication, effective Sep. 2013.
Specifications are subject to change without notice.
New generation makes it’s mark in a continuously updated lineage.

Next-generation Innovations of our best selling Performance Machine

MV Series
High-value-added machining
<options for MV-R series>

Digital-FS power supply
Optimum surface roughness of Rz1.4µm/Ra0.05µm (Tangential cutting)
Workpiece : Steel (SKD11) t40mm(.16")
Surface roughness : Rz0.2µm/Ra0.05µm

Options for MV-R series
- Standard functions
  - Angle Master ADVANCE (S/W)
  - Digital-FS power supply
  - Angle Master ADVANCE (S/W)
  - Digital-FS power supply
- Options
  - Anti-virus protection (MV-R)
  - Sleep mode (MV-R)
  - Anti-virus protection (MV-S)
  - Sleep mode (MV-R)

Power consumption reduced up to 69% (FA Series ratio)
Filter cost reduced up to 45%
Ion exchange resin cost reduced up to 25%
Wire consumption reduced up to 46%

Power supply: 300V(1±10%) 50Hz/60Hz
Wire electrode: ø0.05(.002")/ø0.07(.003")
Wire electrode: ø0.05(.002")/ø0.07(.003")

Improved machining accuracy
- Equipment with a linear shaft motor (LSM)
- Mitsubishi Electric's optical drive system uses fiber-optic communications between the control unit, servo amplifier and linear motor to improve machining accuracy
- Circular accuracy within 2µm
- Improved accuracy up to 17%
- Improved accuracy up to 9%

Improved productivity
- Faster machining is realized with improved power-supply performance (R23.5µm/Ra0.45µm with 3 cuts)
- All machining conditions are provided (speed condition, nozzle release condition)
- Machining time comparison for R23.5µm/Ra0.45µm with 3 cuts

Easy operation
- Search function for machining conditions is improved by a narrow-down function
- Job scheduling adjustments use the schedule call back, extra job insertion and ME-pack feature
- WE-pack is a package of machining processes including offset, machining speed and adaptive control settings

Energy savings, low running cost
- Power consumption reduced up to 69%
- Filter cost reduced up to 45%
- Ion exchange resin cost reduced up to 25%
- Wire consumption reduced up to 46%

Conventional model
MV-S
MV-R
MV-S
MV-R
Reduced 55%
Reduced 55%
Reduced 45%
Reduced 45%
Reduced 42%
Reduced 42%
Reduced 25%
Reduced 25%

Compared to conventional Mitsubishi Electric Wire-cut EDM (FA Series)
Machining Samples

Punch
- Model: MV2400S
- Material thickness: ø0.2(.008")/BS
- Workpiece: Steel(SKD11)
- Connectors: Punch ø0.25(.010")/BS
- Material thickness: ø0.2(.008")/BS
- Model: MV1200R/S

Taper
- Accuracy: ±0.01°
- Surface roughness: 8.1um/Rad.6µm/24µ"Ra
- Thickness: 30mm(1.18")
- Taper angle: 15°
- Workpiece material: Steel(SKD11)

Pitch machining
- Model: MV2400R
- Accuracy: ±2µm
- Surface roughness: 6.8um/Rad.6µm/24µ"Ra
- Thickness: 60mm(2.36")
- Workpiece material: Steel(SKD11)

Connector machining
- Model: MV1200R
- Accuracy: ±60(2.4)×±60(2.4)±60(2.4)
- Surface roughness: 1.1um/Rad.6µm/24µ"Ra
- Thickness: 20mm(.787")
- Workpiece material: Steel(SKD11)

Cutting edge machining
- Model: MV1200R
- Accuracy: ±75(2.9)×±75(2.9)
- Surface roughness: 3.0um/Rad.6µm/24µ"Ra
- Thickness: 50mm(1.97")
- Workpiece material: Steel(SKD11)

Slide core
- Model: MV2400S
- Accuracy: ±5µm
- Surface roughness: 3.0um/Rad.6µm/24µ"Ra
- Thickness: 80mm(3.15")
- Workpiece material: Steel(SKD11)

Machine Specifications

MV1200R/S
- Standard Machine Specifications
  - Model: MV1200S
  - Electrode material: Steel(SKD11)
  - Workpiece: Steel(SKD11)
  - Table dimensions: 2700×1530×840(106.3×59.8×33.1"

MV2400R/S
- Standard Machine Specifications
  - Model: MV2400S
  - Electrode material: Steel(SKD11)
  - Workpiece: Steel(SKD11)
  - Table dimensions: 2800×1630×840(110×64×33.1"

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* ODS provides highly accurate machining for various applications.
* Digital-FS power supply (option for MV-R series)
* High-speed and precise straight machining are realized
* Thick workpieces can be machined with high straight-line accuracy using ODS
* High-speed and precise straight machining are realized using PFC

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* Taper accuracy is improved regardless of wire angle
* ODS provides high accuracy when cutting a U-shaped tapered shape
* ODS is highly accurate machining possible using ODS

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* Connectors: Punch ø0.25(.010")/BS
* Electrod: ø0.2(.008")/BS
* Workpiece: Steel(SKD11)
* Taper: ±60(2.4)×±60(2.4)±60(2.4)
* Surface roughness: 3.0um/Rad.6µm/24µ"Ra
* Thickness: 50mm(1.97")
* Workpiece material: Steel(SKD11)

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* Connectors: Punch ø0.25(.010")/BS
* Electrod: ø0.2(.008")/BS
* Workpiece: Steel(SKD11)
* Taper: ±75(2.9)×±75(2.9)
* Surface roughness: 3.0um/Rad.6µm/24µ"Ra
* Thickness: 80mm(3.15")
* Workpiece material: Steel(SKD11)