

# Supply Chain

Wire EDM, Sinker EDM, and High Speed Milling



It's not where you are, it's where you're going.

MANUFACTURING SOLUTIONS

OPS  **INGERSOLL**  
Fly with the eagle!

**ROKU-ROKU**  
SINCE 1903

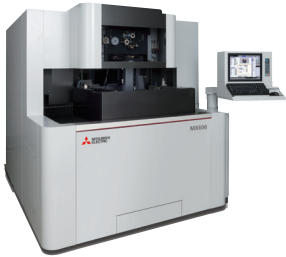
 **MITSUBISHI EDM**

**MC** MACHINERY  
SYSTEMS, INC.  
a subsidiary of  Mitsubishi Corporation

## Ultra-High Precision

**MX Series:** *Combines the ultimate in machine accuracy and surface finish.*

Linear Shaft Motors X,Y,U,V, Granite Isolated Table, 10yr positional accuracy warranty, remote monitoring (free during the warranty period).



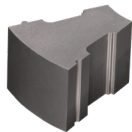
### MX600 Advance Plus

- Nano Precision Accuracy
- Thermal Stability System
- Ultra-Fine Auto-Threading possible using .0008" and .001" wires (optional)
- Ultra-Fine Surface Finishes (1.6  $\mu$ "Ra)

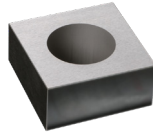
Max. Workpiece Size

W x D x H: (in) 24.4 x 24.0 x 3.9  
(mm) 620 x 600 x 100

Travels in X-Y-Z: (in) 11.8 x 7.8 x 7.0  
(mm) 300 x 200 x 180



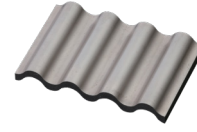
**Geometrical Accuracy**  
 $< \pm 1\mu\text{m}$



**Roundness**  $< 1\mu\text{m}$



**Positional accuracy**  
 $< \pm 1\mu\text{m}$



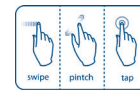
**Surface finish on tungsten carbide**  
Ra 0.04  $\mu\text{m}$

## High Performance

**MVR Series:** *Combines performance with accuracy.*

**Common Features:** New Mitsubishi M800 Control, Linear Shaft motors X,Y,U,V, 10yr positional accuracy warranty, Automatic Vertical Tank Door, 4-sided 1-piece Hardened Table, Lowest Operating Costs, Wire Chopper, remote monitoring (free during the warranty period).

**M800 Control**



### MV1200R Advance

- New Intelligent Auto-Threading with Thread at Breakpoint (.002" Optional)
- Super Fine Surface Finish (4 $\mu$ "Ra Optional)
- Highly Rigid Machine Structure ("T" shaped Meehanite Casting Base)
- AI Control (Power Master)

Max. Workpiece Size

W x D x H: (in) 31.9 x 27.6 x 8.5  
(mm) 810 x 700 x 216

Travels in X-Y-Z: (in) 15.7 x 11.8 x 8.7  
(mm) 400 x 300 x 220



### MV2400R Advance

- New Intelligent Auto-Threading with Thread at Breakpoint (.002" Optional)
- Highly Rigid Machine Structure (Fixed Table Meehanite Casting Base)
- High-Speed Digital Spark Control
- AI Control (Power Master)

Max. Workpiece Size

W x D x H: (in) 41.3 x 32.3 x 12.0  
(mm) 1050 x 820 x 300

Travels in X-Y-Z: (in) 23.6 x 15.7 x 12.2  
(mm) 600 x 400 x 310

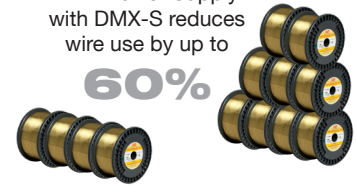
## High Productivity

**MVS Series:** *MVS Series – Combines performance and versatility.*

**Common Features:** New Mitsubishi M800 Control, Linear Shaft Motors X & Y, 10yr Positional Accuracy Warranty, Lowest Operating Costs, remote monitoring (free during the warranty period).

AE II Power Supply  
with DMX-S reduces  
wire use by up to

**60%**



### MV1200S Advance

- New Intelligent Auto-Threading with Thread at Breakpoint
- Wire Processor (Optional)
- Manual Vertical Drop Door
- 3-sided Hardened Table

Max. Workpiece Size

W x D x H: (in) 31.9 x 27.6 x 8.5  
(mm) 810 x 700 x 216

Travels in X-Y-Z: (in) 15.7 x 11.8 x 8.7  
(mm) 400 x 300 x 220



### MV2400S Advance

- New Intelligent Auto-Threading with Thread at Breakpoint
- Wire Processor (Optional)
- Automatic Vertical Front Door
- 3-sided Hardened Table

Max. Workpiece Size

W x D x H: (in) 41.3 x 32.3 x 12.0  
(mm) 1050 x 820 x 300

Travels in X-Y-Z: (in) 23.6 x 15.7 x 12.2  
(mm) 600 x 400 x 310



### MV2400ST Advance

- New Intelligent Auto-Threading with Thread at Breakpoint
- Wire Processor (Optional)
- 4-Sided 1-Piece Hardened Table
- Automatic Vertical Front Door
- 21.5" Z Height Available (Optional)

Max. Workpiece Size

W x D x H: (in) 41.3 x 32.3 x 16.5  
(mm) 1050 x 820 x 420

Travels in X-Y-Z: (in) 23.6 x 15.7 x 16.5  
(mm) 600 x 400 x 425



### MV4800 Advance

- New Intelligent Auto-Threading with Thread at Breakpoint
- Wire Processor and Large Spool Standard (25 KG – 50lb.)
- 3-sided Hardened Table with 4th Side Support Rail
- Automatic Vertical Front Door with Window
- 32" Z Height Available (Optional)

Max. Workpiece Size

W x D x H: (in) 49.2 x 40.1 x 20.0 (32in Opt.)  
(mm) 1250 x 1020 x 500 (812 mm Opt.)

Travels in X-Y-Z: (in) 31.5 x 23.6 x 20.1  
(mm) 800 x 600 x 510

**Extra-large: Common Features:** The extra-large capacity of this machine provides an operator catwalk around the front and sides of the workpiece for easy access. The V generator provides plenty of power to cut up to 36 sq."/hr. using 0.014" V wire. The M700 Advance control is onboard CAM programming.



### FA50V Advance

- 24" Submerged (option)
- Workpieces up to 8,800 lbs.
- Wire Processor and Large Spool Standard

Max. Workpiece Size

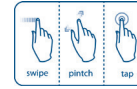
W x D x H: (in) 74.8 x 43.3 x 23.6  
(mm) 1900 x 1100 x 600

Travels in X-Y-Z: (in) 39.4 x 23.6 x 17.7  
(mm) 1000 x 600 x 4500

## High Precision

**SV Series: Common Features:** All New M800 Mitsubishi User-Friendly CNC Control, AI Technology for Excellent Electrode Wear & Speed, High Precision Glass Scales-All Axes (+/- 3µm Accuracy), Automation Ready, Remote Monitoring (Free during the warranty period). HPS Circuitry for exotic material (PCD, cBN, or Carbide)

M800 Control



### SV8P

- Micro Fine Finish Die / Mold and Small-Hole Applications
- Granite Isolated Table
- Small Hole Spindle/Guide Option

Max. Workpiece Size  
W x D x H: (in) 28.7 x 19.3 x 7.8  
(mm) 730 x 490 x 200

Travels in X-Y-Z: (in) 11.8 x 9.8 x 9.8  
(mm) 300 x 250 x 250



### SV12P

- Die / Mold & Precision Parts
- High Rigidity Construction / Faster Jump Speeds

Max. Workpiece Size  
W x D x H: (in) 35.4 x 25.6 x 13.8  
(mm) 900 x 650 x 350

Travels in X-Y-Z: (in) 15.7 x 11.8 x 11.8  
(mm) 400 x 300 x 300

**EA-PS Series: Common Features:** M700 Advanced Series User-Friendly Mitsubishi CNC Control, Integrated Digital Power Master 2 (IDPM2) Technology for Excellent Electrode Wear & Speed, Glass Scales All Axes, Automation Ready, Remote Monitoring (Free during the warranty period). HPS Circuitry for exotic material (PCD, cBN, or Carbide)



### EA8PS Advance

- Micro Fine Finish Die / Mold and Small-Hole Applications
- Granite Isolated Table
- Small Hole Spindle/Guide (OPTIONAL)

Max. Workpiece Size  
W x D x H: (in) 28.7 x 19.3 x 7.8  
(mm) 730 x 490 x 200

Travels in X-Y-Z: (in) 11.8 x 9.8 x 9.8  
(mm) 300 x 250 x 250



### EA12PS Advance

- Micro Fine Finish Die / Mold Applications
- Glossy and Matte Finishing Circuits
- SP Power Supply (\*High-Speed Tungsten Carbide Machining Booster) (OPTIONAL)

Travels in X-Y-Z: (in) 35.4 x 25.6 x 13.8  
(mm) 900 x 650 x 350

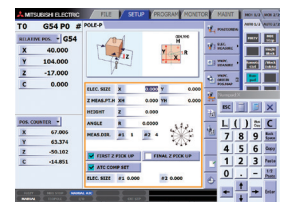
Travels in X-Y-Z: (in) 15.7 x 11.8 x 11.8  
(mm) 400 x 300 x 300

## High Productivity

**EA-S/V Series: Common Features:** M700 Advanced Series User-Friendly Mitsubishi CNC Control, Integrated Digital Power Master (IDPM) Technology for Excellent Electrode Wear & Speed, Glass Scales on Z-Axis Standard, Automation Ready, Remote Monitoring (free during the warranty period).



Reduced Electrode Wear by Over 40%



Electrode Measurement

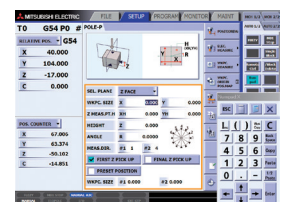


### EA8S Advance

- Die/Mold & Smaller Production Work (Medical – Aerospace)
- Manual Door and 3-sided Drop Tank Design
- Best Value

Max. Workpiece Size  
W x D x H: (in) 28.7 x 19.3 x 7.8  
(mm) 730 x 490 x 200

Travels in X-Y-Z: (in) 11.8 x 9.8 x 9.8  
(mm) 300 x 250 x 250



Workpiece Measurement



### EA12S Advance

- Die/Mold & Smaller Production Work (Medical – Aerospace – Energy)
- Popular Model for Aerospace
- SP Power Supply (\*High-Speed Tungsten Carbide Machining Booster) (OPTIONAL)

Max. Workpiece Size  
W x D x H: (in) 35.4 x 25.6 x 13.8  
(mm) 900 x 650 x 350

Travels in X-Y-Z: (in) 15.7 x 11.8 x 11.8  
(mm) 400 x 300 x 300



### EA12ST Advance

- Production Parts (Aerospace – Energy)
- Large Fixed Tank
- 4 in. Z-Axis Riser
- Max. / Min. Z-Axis Travel 9.8"~21.6" With Macro Chuck

Max. Workpiece Size  
W x D x H: (in) 35.4 x 25.6 x 13.8  
(mm) 900 x 650 x 350

Travels in X-Y-Z: (in) 15.7 x 11.8 x 11.8  
(mm) 400 x 300 x 300



### EA28V Advance

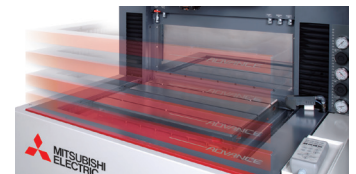
- Larger Production Work & Die/Mold – Aerospace – Energy
- GF2 Adaptive Control
- 3-Sided programmable Drop Tank
- OPTIONAL: 17.7" Z-Stroke

Max. Workpiece Size  
W x D x H: (in) 41.3 x 29.9 x 13.8  
(mm) 1050 x 760 x 350

Travels in X-Y-Z: (in) 25.59 x 17.71 x 13.7  
(mm) 650 x 450 x 350



High-Rigidity C-Axis / High-Accuracy Spindle



3-Sided Drop Tank w 36 0.5" Steps

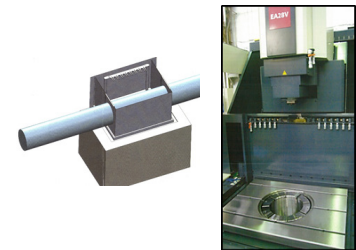


### EA28V-LS Advance

- Even Larger Production Work & Die/Mold – Aerospace - Energy
- GF2 Adaptive Control
- 3-Sided programmable Drop Tank
- One (1) Full Meter of X-Axis Travel

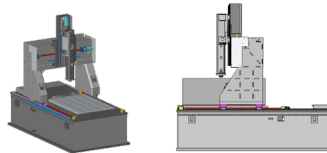
Max. Workpiece Size  
W x D x H: (in) 53.1 x 33.5 x 17.7  
(mm) 1,350 x 850 x 450

Travels in X-Y-Z: (in) 39.4 x 18.5 x 17.7  
(mm) 1000 x 470 x 450



## Productivity with Precision

**Eagle Series: Common Features:** Gantry Design, Quality Engineering, Lowest Electrode Wear in the Industry, Automation Solutions



Gantry Design Allows Top Loading Of Large Parts Efficiently



### G5

Max. Workpiece Size  
W x D x H: (in) 23.4 x 28.3 x 12.7  
(mm) 595 x 720 x 323

Travels in X-Y-Z: (in) 20.6 x 15.75 x 17.7  
(ULTRA High Accuracy) (mm) 523 x 400 x 450



G5 Series for Ultra High Precision and Finish Requirements

### IG 800 / 1200 / 1400 / 2000

**EAGLE 800:**  
Max. Workpiece Size  
W x D x H: (in) 29.5 x 41.3 x 15.7  
(mm) 750 x 1050 x 400

Travels in X-Y-Z: (in) 21.6 x 33.5 x 17.7  
(mm) 650 x 450 x 350



**EAGLE 1200:** Extended Tank & Travel Options Available

Max. Workpiece Size  
W x D x H: (in) 37.4 x 57.4 x 22.6  
(mm) 950 x 1460 x 575

Travels in X-Y-Z: (in) 50.0 x 69.7 x 26.8  
(mm) 1270 x 1770 x 680



**EAGLE 1400:** Extended Tank & Travel Options Available

Max. Workpiece Size  
W x D x H: (in) 47.2 x 90.5 x 27.5  
(mm) 1200 x 2300 x 675

Travels in X-Y-Z: (in) 59.4 x 101.9 x 31.1  
(mm) 1508 x 2588 x 790



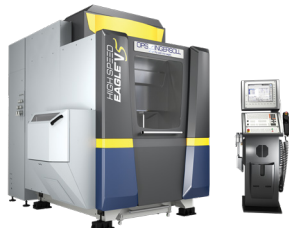
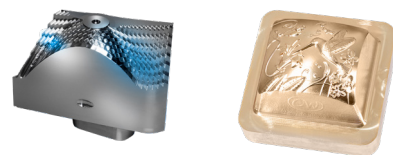
**EAGLE 2000:**  
Max. Workpiece Size  
W x D x H: (in) 77.5 x 124.8 x 49.2  
(mm) 1969 x 3170 x 1250

Travels in X-Y-Z: (in) 68.0 x 108.2 x 39.3  
(mm) 1727 x 2743 x 998

## High Speed-High Accuracy 5-Axis Milling

**Ingersoll: Common Features:** Heidenhain TNC-640 Control, Optimized Polymer Concrete Casting, Graphite or High-Pressure Coolant versions available, many spindle configurations available from 18,000 RPM to 42,000 RPM. Many automation solutions are available to connect one or more machines.

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Fly with the eagle!



### V5

- Compact 5-axis solution
- 2-Axis rotary table with tilt range -120 ~ +60°

Rotary Table Diameter (in) 16.9 (mm) 430

Travels in X-Y-Z: (in) 21.6 x 15.7 x 15.7 (mm) 550 x 400 x 400



### V9

- Double Gantry drive in both X and Y axis (2 motors, ball screws, and scales)
- 2-Axis rotary table with tilt range -140 ~ +60°
- Rotary table centerline can be offset to allow for taller workpieces or special automation configurations

Rotary Table Diameter (in) 23.6 (mm) 600

Travels in X-Y-Z: (in) 31.5 x 23.6 x 19.7 (mm) 800 x 600 x 800



## High Speed-High Accuracy VMC

**Roku Roku: Common Features:** Fanuc 31i-B5 controls with AI Contour Control, Nano Smoothing, and 1,000 block look ahead, Highly Rigid Bridge-Type Mono-Block castings, Spindle Centerline Extremely close to Z-axis guideways for Ultimate Stability. All machines built to Jig-Borer standards.

**ROKU-ROKU**

SINCE 1903



HC-435 II  
Max. Workpiece Size  
W x D: (in) 23.6 x 13.0 (mm) 600 x 330

Travels in X-Y-Z: (in) 16.1 x 13.0 x 7.8 (mm) 400 x 330 x 200



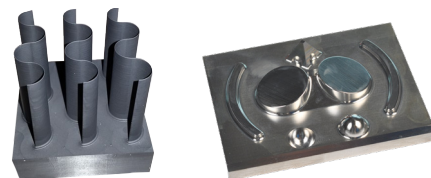
HC-548EX  
Max. Workpiece Size  
W x D: (in) 23.6 x 14.1 (mm) 600 x 360

Travels in X-Y-Z: (in) 18.1 x 14.1 x 10.2 (mm) 460 x 360 x 260



HC-658 II  
Max. Workpiece Size  
W x D: (in) 29.5 x 19.7 (mm) 750 x 500

Travels in X-Y-Z: (in) 23.6 x 19.7 x 15.7 (mm) 600 x 500 x 400



### HC [Dry]

- Dual Purpose (Hard Milling and Graphite Capable)
- Dust Protection and Collection (Air purged guide-ways, ball-screws, and ATC)
- HC-658 II comes standard with broaching capabilities for sharp internal corners

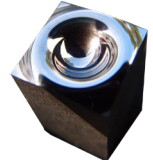


## MEGA-SSS [Wet]

- Microfine Machining Centers +/- 1 micron positioning accuracy
- Dynamic Balance – 0.5µm spindle runout
- RG Machining function for Jig Grinding applications
- MEGA-SSS 5AXP Ultra-High Precision 5-Axis Machining Center

Max. Workpiece Size  
W x D: (in) 23.6 x 13.0  
(mm) 600 x 330

Travels in X-Y-Z: (in) 16.1 x 13.0 x 7.8  
(mm) 400 x 330 x 200

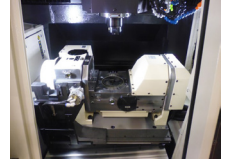


## CEGA SS [Wet]

- 20 HP / HSK-40 / 30,000 RPM Spindle
- A.H.I.S Active Heat Isolation System to keep heat from influencing accuracy
- Ideal for micro drilling and tapping applications
- CEGA SS-5AXP Ultra-High Precision 5-Axis Machining Center

Max. Workpiece Size  
W x D: (in) 25.6 x 16.1  
(mm) 650 x 330

Travels in X-Y-Z: (in) 20.0 x 16.1 x 12.2  
(mm) 500 x 330 x 310



## VS-652 II [Wet]

- 20 HP / HSK-40 / 30,000 RPM spindle (40,000 RPM option)

Max. Workpiece Size  
W x D: (in) 29.5 x 19.7  
(mm) 750 x 500

Travels in X-Y-Z: (in) 23.6 x 19.7 x 15.7  
(mm) 600 x 500 x 400



## Zeus [Wet]

- 20 HP / HSK-50 / 25,000 RPM spindle
- Dual Y-axis ball screws – 1,600 lb table capacity
- 31.5" x 23.6" x 15.7" (X,Y,Z Travels)
- High accuracy positioning +/-0.4 (full stroke)

Max. Workpiece Size  
W x D: (in) 37.4 x 23.6  
(mm) 950 x 600

Travels in X-Y-Z: (in) 31.5 x 23.6 x 15.7  
(mm) 800 x 600 x 400

## Ultra-High Accuracy-High Speed VMC

**Roku Roku: Common Features:** The Ultimate High Accuracy Linear Motor Machines

Dual opposed linear motor drive machine, thermal stability.

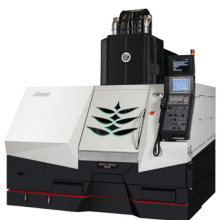


## Android II [Wet]

- Linear Drive System with 2nm Scale resolution
- HSK-25 / 60,000 RPM spindle
- M-Kit, Super MAC, and Super TMS delivers Multi-zone temperature tracking combined with Auto-Calibration.
- Android II 5AXP-DD Ultra-High Precision Direct Drive 5-Axis Machining Center

Max. Workpiece Size  
W x D: (in) 21.6 x 13.8  
(mm) 550 x 350

Travels in X-Y-Z: (in) 17.7 x 13.8 x 7.8  
(mm) 450 x 350 x 200



## Vision [Wet]

- Linear Drive System with 2nm Scale resolution
- 20 HP / HSK-40 / 30,000 RPM spindle
- M-Kit, Super MAC, and Super TMS delivers Multi-zone temperature tracking combined with Auto-Calibration.

Max. Workpiece Size  
W x D: (in) 29.5 x 21.6  
(mm) 750 x 550

Travels in X-Y-Z: (in) 25.6 x 21.6 x 11.8  
(mm) 650 x 550 x 300



## ABOUT MC MACHINERY SYSTEMS

MC Machinery Systems customers get the best of both worlds: A single source for a diverse arsenal of manufacturing technologies and our expansive and knowledgeable support network. Our expertise spans virtually every aspect of metalworking—from simple fabrication to CNC-driven, automated manufacturing cells.

## APPLICATIONS, TRAINING, & SERVICE SUPPORT

Over 200 employees in North America are dedicated to providing the best customer support in the industry. From our applications engineers who can help start up a production or produce a turnkey solution, to our training classes and finally our after-sale service and technology support, we've got you covered.

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