

Mitsubishi Electric Wire-cut EDM  
Ultra high precision Wire-cut EDM



# MP series

SERIES MP  
Water Technology

Productivity  



MP1200



MP2400



MP4800

- Stability of machining accuracy
- Rz 0.6 μm with standard power supply
- Reduced operating cost



Basic technology  
Automatic wire threading

New type controller

 **D-CUBES**

Connect

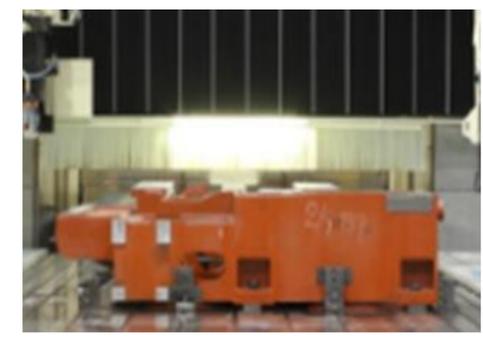
Universal

Brain

Evolution

Smooth

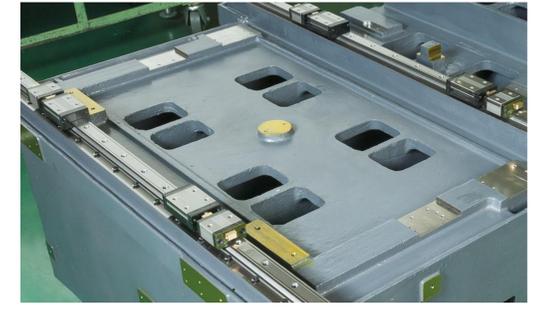
- Ultra-high accuracy machining is realized using highly rigid machine bed structure
- Axis movement accuracy is improved using ultra-high accuracy linear guides
- Reduces machine structure temperature change, which is synchronized with controlled dielectric fluid temperature (Thermal buster)



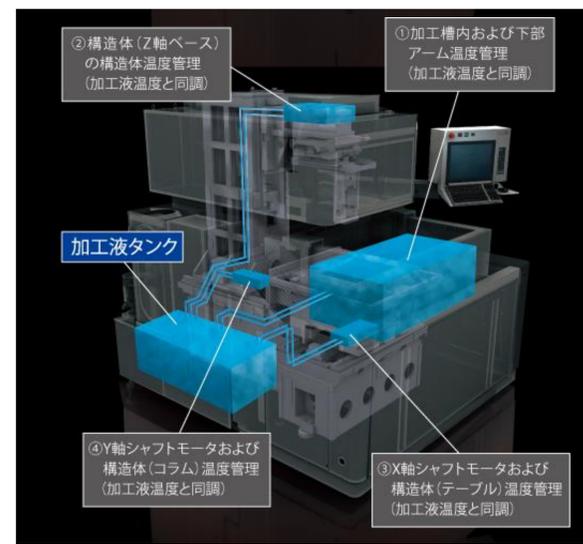
High precision large grinding machine



Highly rigid machine bed structure



Axis movement accuracy



Thermal stability system



Predictive assembly

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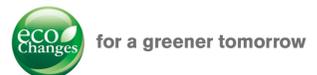
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**D-CUBES** Connect Universal Brain Evolution Smooth

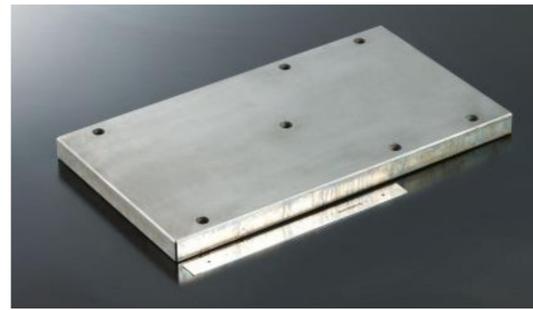


## Machining accuracy

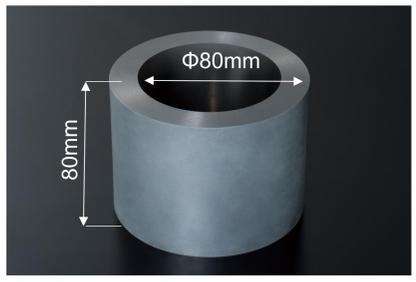
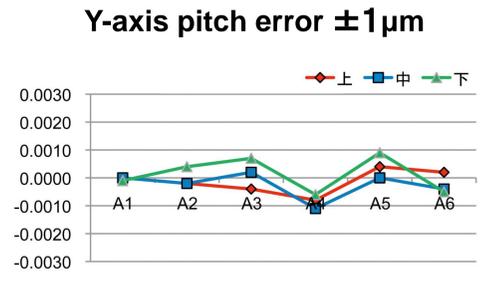
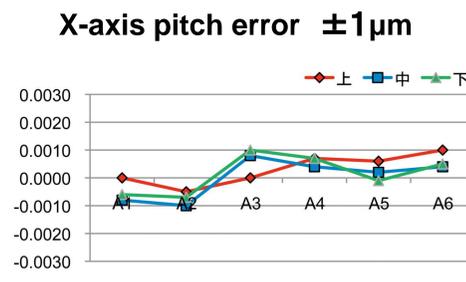


Ultra-high accuracy machining with next-generation drive system

- Pitch accuracy of ±1μm is realized
- Circular accuracy of 0.98 μm is realized for large diameter machining
- Taper accuracy of ±0.01° /dimensional accuracy of ±5μm are realized

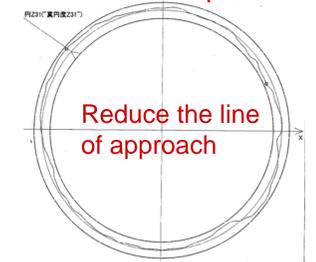


Pitch plate machining



真円加工

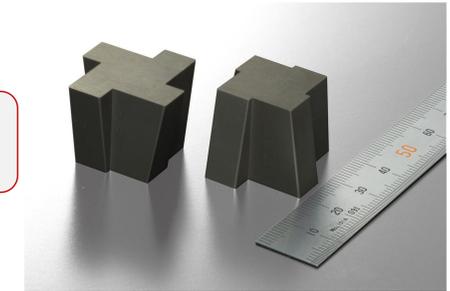
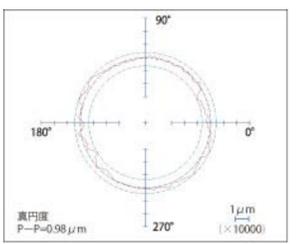
Measure roundness of plate thickness center position



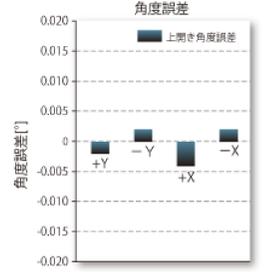
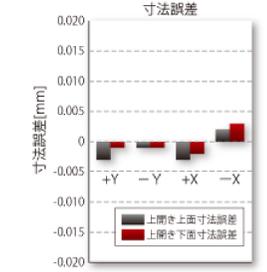
Roundness 1.3 μm including approach



Circular machining (φ 80mm)



Taper machining



Taper ±0.01° /Dimension ±5μm



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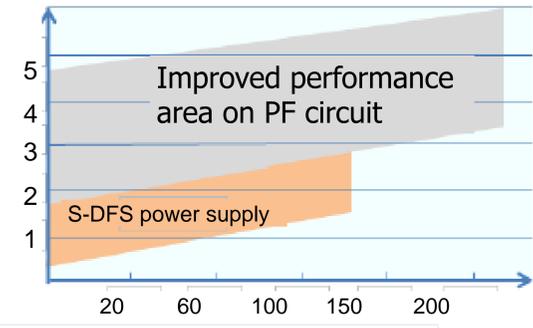
Smooth

## Machining accuracy



High-speed machining has been enhanced by improved power supply

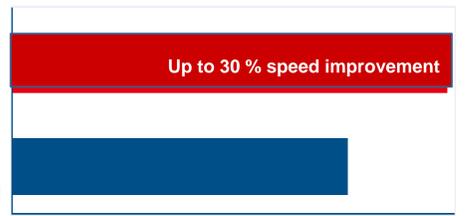
- Shape accuracy of ±2μm is possible for punch machining of 130mm thick
- Surface roughness of Rz0.6μm /Ra0.06μm (Tungsten Carbide) is realized using Super-DFS power supply for thick workpiece
- Comparison with the oil used machine, 30% machining speed improvement



Improved performance area on MP series

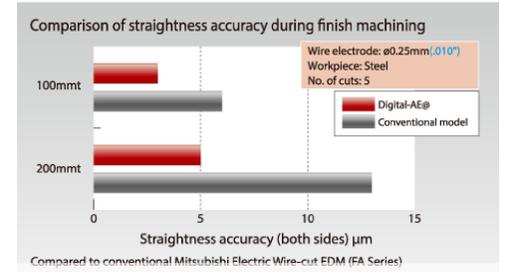


MP Water Technology

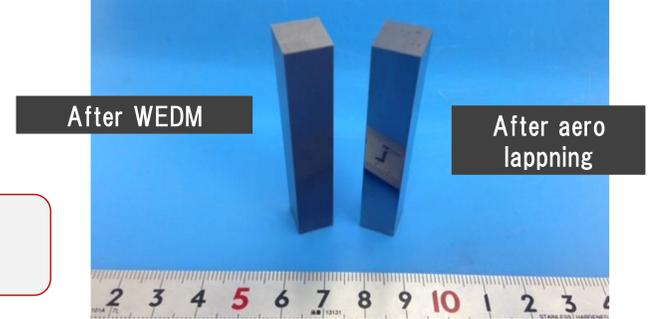


Conventional (Liquid oil Machine)

Φ0.20 BS Tungsten Carbide thickness 60mm Machining speed



Discharge surface finish by aero lapping



Wire electrode : φ0.2BS  
Work Piece : Tungsten carbide  
Work thickness : 60mm  
Surface roughness: Rz0.6μm

A new servo realizes uniform machining surface

