



Hi-Gravitational Barrel Finishing Machine



Mighty-Mild[®] Vertical

Mighty Mild



CE Overseas specification machine

MMC1-4V

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23/01/X

Industry's highest 40G!

Patent

No.5555383
No.5939709

Design

No.1694983
No.1694984

Awarded

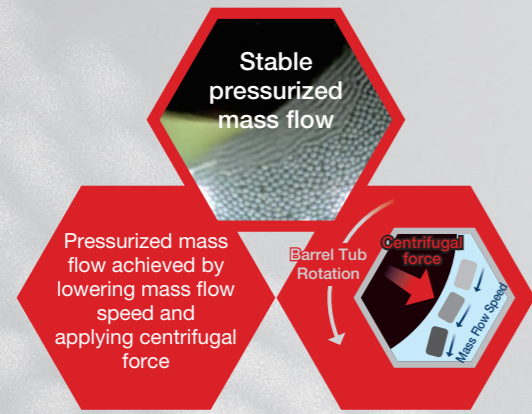
2019 Minister of Economy, Trade and Industry of National Invention Award
2018 Japan Chamber of Commerce Chairman's Prize and Machinery Industrial Design Award
2015 Nagoya City Mayor Prize of Aichi Environmental Award

Made in Japan

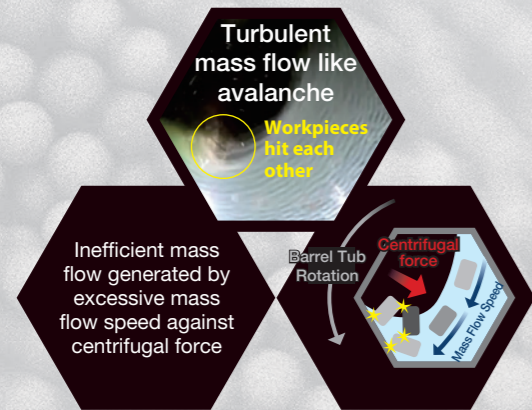
Principle of hi-gravitational barrel finishing method

Stable pressurized mass flow (patented) enhances the performance of abrasive media to the maximum.

Mighty-Mild.



Centrifugal Barrel Finishing Machine



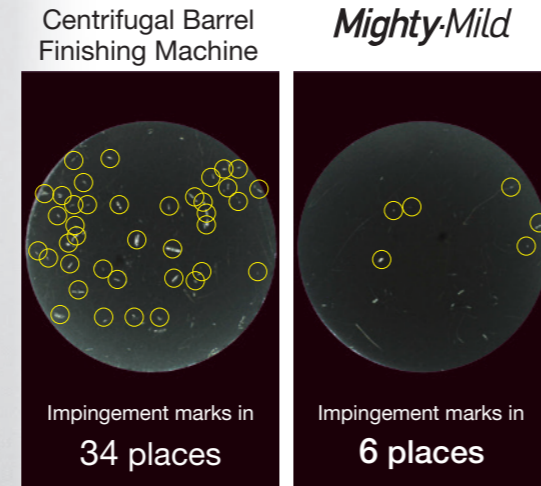
Suited applications

- Electric and Electronics: Ceramic capacitors, magnets, optical components
- Machine elements and precision: Miniature bearings, cutting chips, oil-pneumatic components
- Medical and dental: Implants, artificial joints, dental brackets, endoscopic components
- Ornament and daily necessities: Fishing tools, clock components, jewelry

Polishing quickly and carefully with the industry's highest 40G

Drastic reduction of cracks and impingement marks

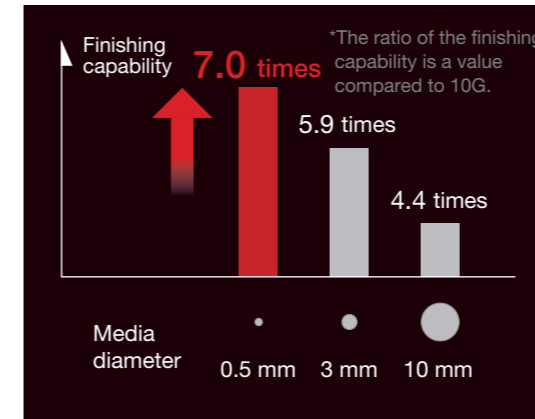
Smooth pressurized flow reduces the number of collisions between workpieces, resulting in a drastic reduction in cracks and impingement flaws.



Drastic improvement in finishing capability

It exerts more than four times the finishing capability compared to conventional centrifugal barrel machines. In particular, it gives a higher finishing effect to minute workpieces and media.

Influence of finishing capability due to increase in pressure (10G → 40G)

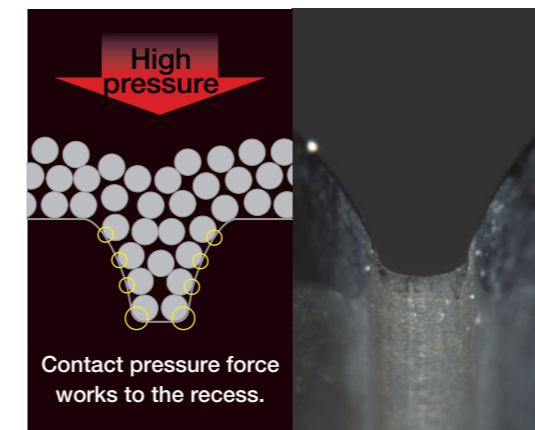
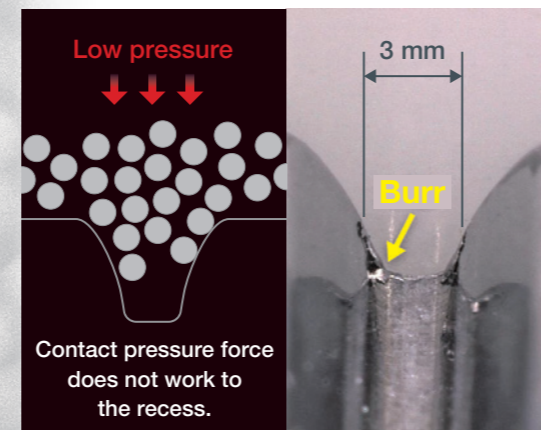


Even complicated recesses and fine shapes are finished quickly and carefully.



The industry-highest gravity, 40G, removes hidden burrs by pushing media deep into gaps that could not be polished before.

Mighty-Mild

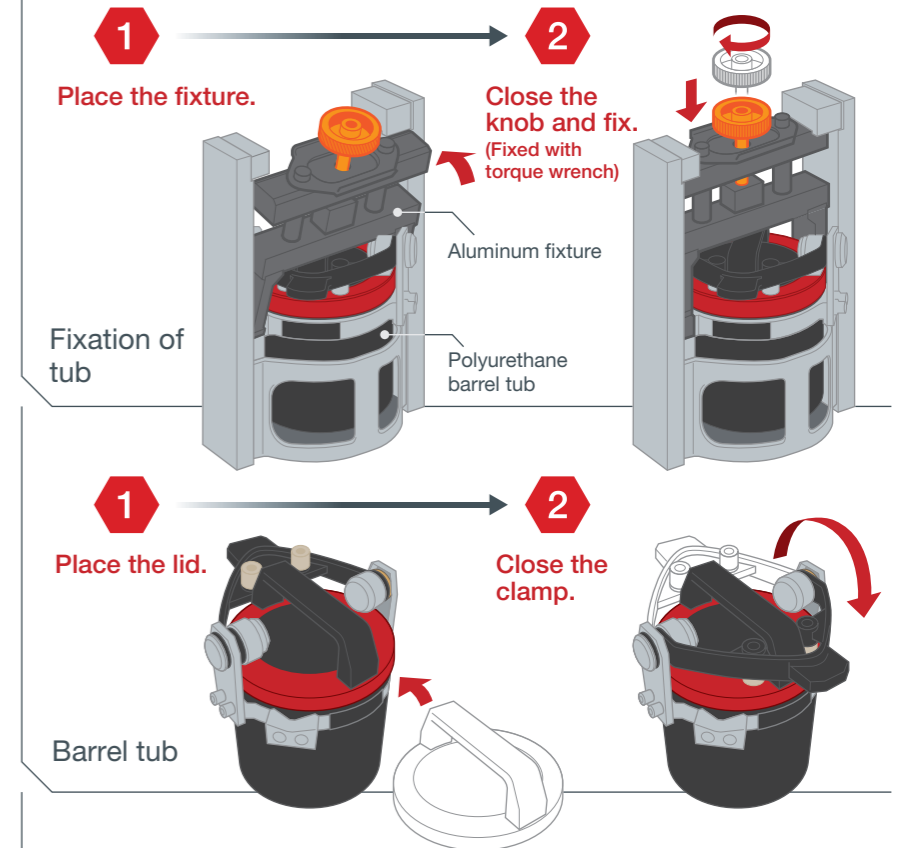


Labor saving, safety, and control

Universal design easily operable for anyone

Light and easily operable. Even women and the elderly can handle it easily.

Two-motion system



Highest reliability and support for stable operation

- Highest-level safety reliability**
Compliant with ISO13489-1 European and American PLe safety standards
- Automatic rotation speed correction function**
Automatically corrects the rotation speed to +/-5 rpm or less of the setting. This ensures the constant finishing condition. **Patent No. 5939709**
- Five times longer product life of drive section (compared to conventional models)**
Newly developed bearing structure realizes both the industry's highest 40G and longer life of the drive section.
- Barrel tub fixation detection function**
Detects the failure to fix the barrel tub or looseness caused during finishing and automatically stops the tub. **Patent pending**

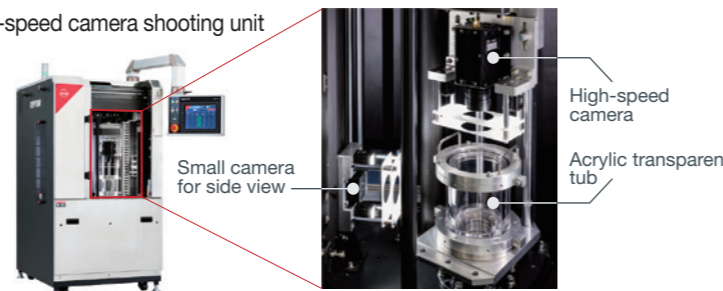
Special specifications

Flow analysis specification (high-speed camera)

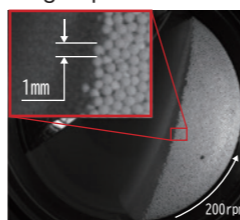
The behavior in the highly rotating finishing tub can be observed precisely using the high-speed camera. In addition, the speed distribution of the content can be evaluated quantitatively by PIV analysis of the captured video.

*Applicable to both dry and wet types.
*PIV (Particle Image Velocimetry): A method to measure velocity distribution of particles on a two-dimensional plane based on a particle image

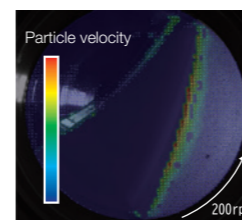
High-speed camera shooting unit



Shooting by high-speed camera



PIV analysis results



Please contact us for details regarding this specification.

MMC1-4V specifications

| | |
|------------------|---|
| Model | MMC1-4V |
| No. of barrels | 4 barrels |
| ID of Barrel Tub | 1.0 L / 105 mm (Inner diameter) x 105 mm (Depth) 0.5 L / 105 mm (Inner diameter) x 52.5 mm (Depth) |
| Motor capacity | Revolution / 2.2 kW Rotation / 2.2 kW |
| Machine size | 950 mm (W) x 1220 mm (D) x 1620 mm (H) |
| Machine weight | Approx. 900 kg |

Dimensions (mm)

