



**Newly launched!**  
**Latest polishing machine beyond the limit!**

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# Mighty-Mild®

Hi-Gravitational Barrel Finishing Machine



Patent	No.WO2013125491A1
	No.JP5939709B2
	No.JP6860924B2
	No.JP7442796B2
	No.JP2022-145548A1
Design	No.JP2022-144898A1
	No.JP1589059B2
	No.JP1589060B2

2019 Awarded Minister of Economy, Trade and Industry  
of National Invention Award

2018 Awarded Japan Chamber of Commerce  
Chairman's Prize and Machinery  
Industrial Design Award

2015  Awarded Nagoya City Mayor Prize  
of Aichi Environmental Award

24/07/600



Hi-Gravitational Barrel Finishing Machine

Max. 3 times higher

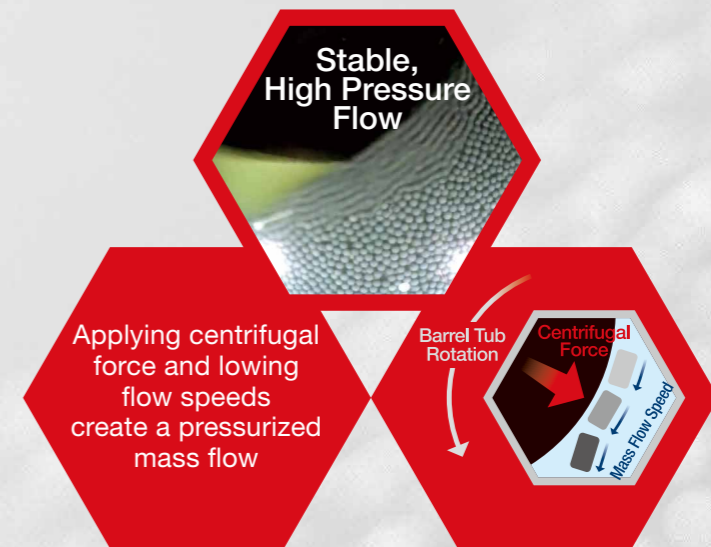
Max. 70% reduced

increasing the grinding power but reducing wear of abrasive media.

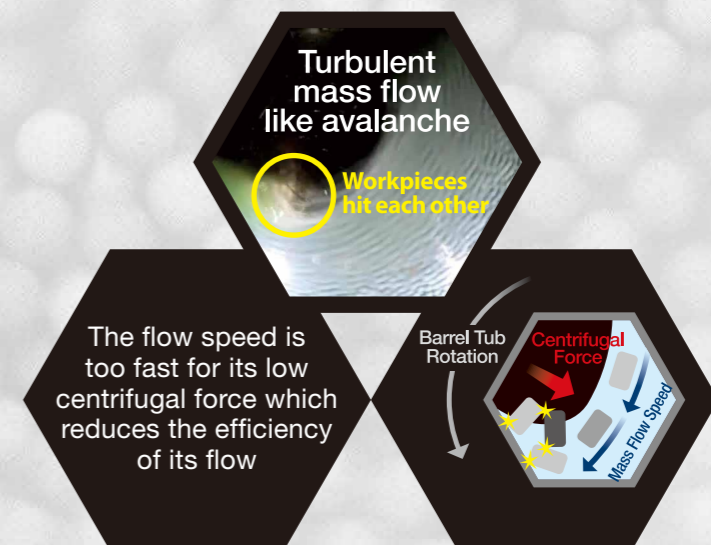
# Mighty-Mild®

Its (Patented) Stable Flow Enhances the Performance of Abrasive Media to the Maximum

## Mighty-Mild.



## Older Tech



# Hi-Gravitational Barrel Finishing Machine

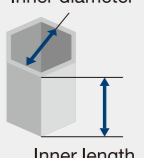
## Mighty-Mild®

### These 3 Points Show the Massive Gap Between it and Older Tech

### Specifications

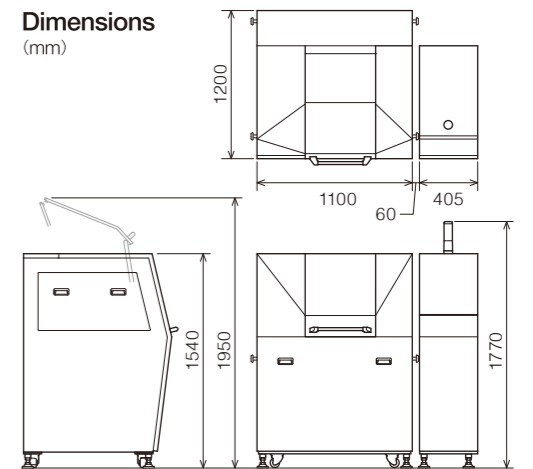
Model	MMC5-4
No. of barrels	4 Barrels
Motor capacity	Turret 7.5 kW
	Barrel 3.7 kW
Machine size	W1565 × D1200 × H1770 mm
Machine weight	Approx. 1400 kg (Weight included control panel)

#### Barrel tub size table

Capacity	Inner diameter	Inner length	Inner diameter
4.7 L	170 mm (Hexagon)	200 mm	
3.8 L		160 mm	
2.9 L		120 mm	
2 L	80 mm		

- Function of automatic correction of revolution during polishing operation
- Function of multistep speed operation
- Function of fixed-position stop upon barrel mounting / removing work
- Detective sensor for barrel blown-off
- Caster

#### Dimensions (mm)



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### Running Costs Reduction

#### Reduction of Media Wear

Stable pressurized mass flow can decrease waste wear of abrasive media as well as consumption of abrasive media by 25% to 70% .

◆ Comparison on wear amount of abrasive media with that by Centrifugal Barrel Finishing Machine being 100




Shape		Centrifugal Barrel Finishing Machine	Mighty-Mild
	Triangle 3mm	100	30
	Sphere 3mm	100	46
	Random shape 2.5mm	100	74

Reduction by 25% to 70% as compared to conventional ratio

#### Cycle Time Reduction

Smooth pressurized mass flow can ensure polishing in a short time without negative effect on workpieces.

◆ Comparison on duration of time to achieve the same grinding amount as compared with that by centrifugal barrel finishing machine being 100

Shape		Centrifugal Barrel Finishing Machine	Mighty-Mild
	Bearing shield (SUS304)	100	32
	Lens material (Glass)	100	39
	Carbide chip (Carbide)	100	29

Reduction by 60% to 70% as compared to conventional ratio

#### Specialties

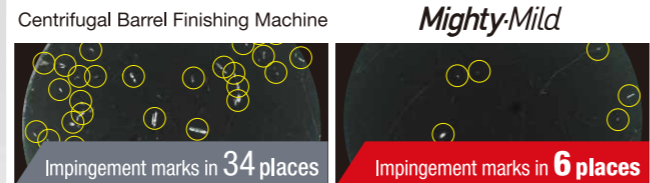
Automotive/Transportation Equipment	CVT Elements, Valve sheets, Vane Sealing, Small Gears, etc
Precision/Medical Device Components	Chain, 3D CAM, Bearing, Bush, Lens, Probes, Watch Stems, Implants, etc
Electronics	Ceramic Capacitors, Magnets, Crystal Resonators, Ferrule, Seal Rings, etc
Accessories and Daily Necessities	Jewelry, Accessories, Wind Instrument Components, Fishing Rod Parts, Glass Beads, etc

### Better Quality

#### Reduction of Damage


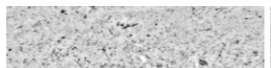

Impingement marks decreased by half as decrease of part-on-part collision times in smooth pressurized mass flow.

◆ Count the number of impingement marks on brass workpieces after polishing brass workpieces mixed with iron workpieces.



#### Smoother Surface

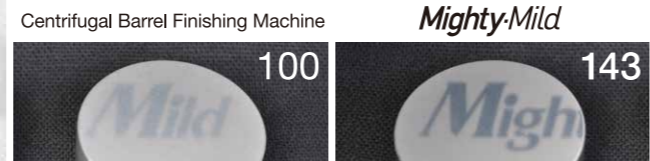
Scratches occurred in the previous process or handling can be removed in a short time and any new scratches will not be generated by decrease of part-on-part collision times in smooth pressurized mass flow. Best suited for hard and fragile workpieces in particular.

Shape	Centrifugal Barrel Finishing Machine	Mighty-Mild
	 Ra = 0.063 μm	 Ra = 0.043 μm

#### Improvement of Gloss/Shine

Compound performance will be sustained by a stable pressurized mass flow.

◆ Gloss level after polishing for 60 min. Please compare the clearness of reflection of characters.

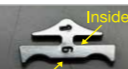



1.2 to 2 times in gloss value

#### Improvement of Inner Diameter Chamfering and Deburring

Abrasive media hit and grind easily the inner edges in stable pressurized mass flow.

◆ Comparison of radiusing amount (comparison with amount of outer radiusing being 100)

Shape		Centrifugal Barrel Finishing Machine	Mighty-Mild
	Work A	Inside/Outside 75/100	Inside/Outside 88/100
	Work B	Inside/Outside 58/100	Inside/Outside 71/100

### Labor Saving, Less Human Error

#### Better Usability

Improvement of visibility of barrel tub mounting/ removal and machine operation



Color contrast for easy recognition to confirm mounting of barrels without fail

Large touch panel hard to make operation mistakes

#### Reliable Set up, without any tools

Required duration of time for mounting/ removing barrel tub and barrel lid is reduced by 75% compared to conventional ratio. \*Compared to our conventional product



Patented Removable Inner Lining

Reliable fixing without tools

Easy clamping with one hand \*Patent applied

Excellent operability with one hand

Easy, Ergonomic Work Flow

Reliable lock with automatic clamp stopper

Note) The above effects may not be always achieved at the same time.