



Newly launched !
Latest polishing machine beyond the limit !

www.tipton.co.jp

Mighty-Mild®

Hi-Gravitational Barrel Finishing Machine



Patent	No.5555383
Patent	No.5939709
Design	No.1589059
Design	No.1589060

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

株式会社チップトン

22/09

Tipton Corp.



Hi-Gravitational Barrel Finishing Machine

Max. 3 times higher

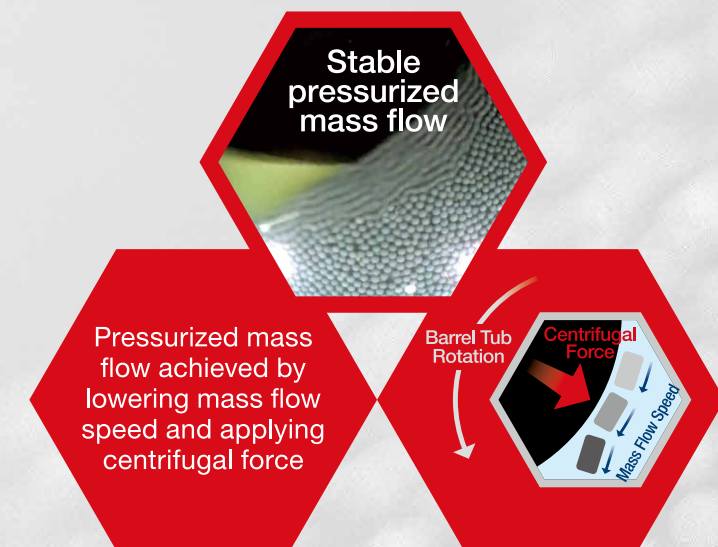
Max. 70% reduced

increasing the grinding power but reducing wear of abrasive media.

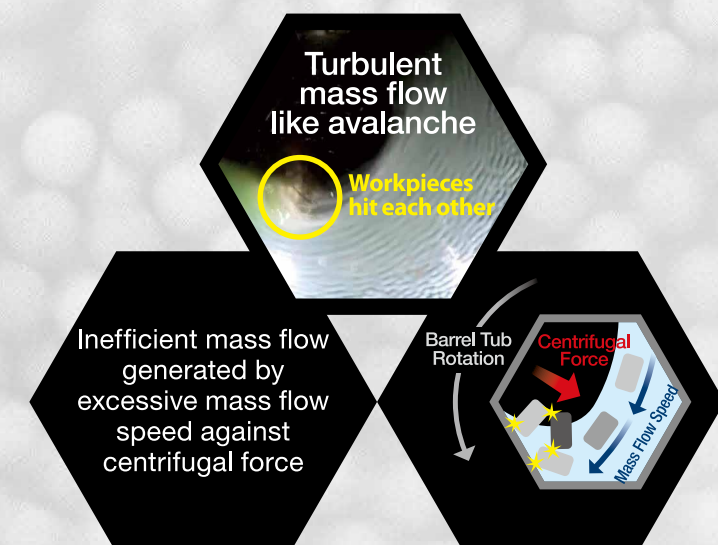
Mighty-Mild®

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

Mighty-Mild®



Conventional Model



Hi-Gravitational Barrel Finishing Machine

Mighty-Mild®

3 advantages to make a big difference from conventional centrifugal barrel finishing machine

Reduction of running cost

Effect of reducing wear of abrasive media

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

Shortening the processing time

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

Suited applications

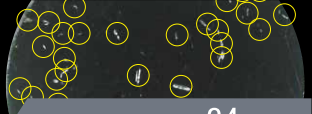

Automotive and Transportation Equipment	CVT parts, Valve sheet, Vane, Sealing, Small gear
Machine Elements Precision/ Medical	Chain, 3D cam, Bearing, Bush, Lens, Probe, Watch stem, Implant
Electric and Electronic	Ceramic capacitor, Neodymium magnet, Crystal resonator, Ferrule, Seal ring
Ornament and Daily Necessaries	Jewelry, Accessories, Wind instrument parts, Fishing rod parts, Glass beads

Quality improvement

Reduction of impingement


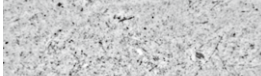

Impingement marks decreased by half as decrease of part-on-part collision times in smooth pressurized mass flow.

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

Centrifugal Barrel Finishing Machine	Mighty-Mild
	
Impingement marks in 34 places	Impingement marks in 6 places

Improvement of surface roughness



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
		
Bearing roller	Ra = 0.063 μm	Ra = 0.043 μm

Improvement of gloss

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.


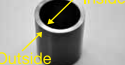
Centrifugal Barrel Finishing Machine	Mighty-Mild
	
100	143

1.2 to 2 times in gloss value

Excellent in polishing inner corners and burrs on the inner edges

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 and reduction of operation errors

Improvement of 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 setup without 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



Lining capable of mounting / removing *Patent applied

Reliable fixing without tools

Easy clamping with one hand *Patent applied

Excellent operability with one hand

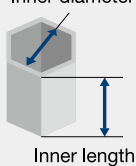
Ergonomic handle for easy work

Reliable lock with automatic clamp stopper

Specifications

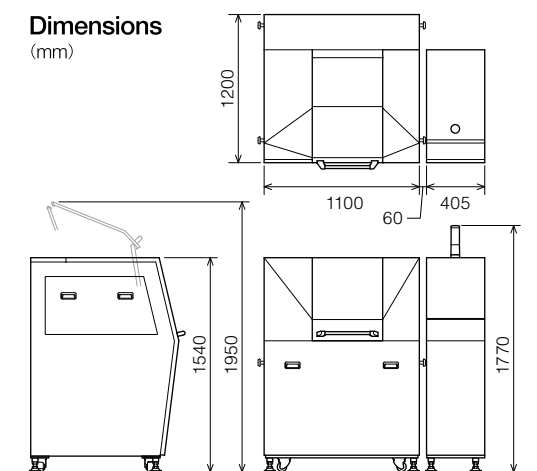
Model	MMC5-4
No. of barrels	4 Barrels
Motor capacity	Turret 7.5 kW Barrel 3.7 kW
Machine size	W1565 × D1200 × H1770 mm
Machine weight	Approx. 1400 kg (Weight included control panel)

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)



TIPTON 株式会社チップトン

<http://www.tipton.co.jp/english/>

Head Office 3-19-21 Toyoda, Minami-Ku, Nagoya, Aichi Prefecture 457-8566 Japan
Tel : +81-52-692-6666
Fax : +81-52-692-9445

Overseas Sales 3-19-21 Toyoda, Minami-Ku, Nagoya, Aichi Prefecture 457-8566 Japan
Tel : +81-52-692-0901
Fax : +81-52-692-9445

Tobishima Factory 3-25-1 Odakara, Tobishima-Mura, Ama-Gun, Aichi Prefecture 490-1438 Japan
Tel : +81-567-56-7500
Fax : +81-567-56-7513

Quality Assurance Section for Product Quality	Tel : +81-567-56-7503 Fax : +81-567-56-7516
Engineering Section for Machine Maintenance	Tel : +81-567-56-7504 Fax : +81-567-56-7514
E-mail	sales-department@tipton.co.jp overseas@tipton.co.jp

VEGETABLE INK This catalog is printed using environment-friendly vegetable ink.

Note) All unapproved reproductions of a report, a photograph, etc are forbidden found in this catalog.

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