

A LEADING MANUFACTURER OF FINISHING MACHINES & SUPPLIES



About Mass Finishing , Inc.

Mass Finishing manufactures high energy centrifugal barrel finishing machines, vibratory tubs and bowls for your deburring, polishing, deflashing and other finishing needs.

As an industry leader in the production of finishing and polishing equipment, MFI is capable of assisting you every step of the way. This includes helping you develop your finishing process goals along with your production and profit objectives.

Brothers Mike and Tom Mathisen first formed MFI after purchasing the mass finishing division from Timesavers in 1995. With their vast knowledge of the finishing industry, years of experience and large catalog of finishing equipment, Mike and Tommy built a large customer base worldwide. MFI continues to grow and provide its customers with the best products and services available.

In May 2016, Mass Finishing was acquired by Innovance, Inc. Innovance is an employee ownership group based in Albert Lea, MN. Innovance companies include ALMCO, Lou-Rich, Panels Plus, and Mass Finishing, Inc..



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MFI Team

- Pictured for left to right:**
 Inventory Specialist: Jim Mikelson
 Director of Marketing & Business Development: Cole Mathisen
 Assembler: Ed Gray
 Director of Sales & Tech: Tommy Mathisen
 Assembler: Tony Gueningsman
 Part-Time Office: Julie Chap
 Engineer/Project Manager: Cory Carr
 General Manager: Marci Theisen
 Assembler: Doug Ramey
 Assembler: Dan Rochelau
 Assembler: Jim Grow
 Office Administrator: Sarah Mayfield
 Finishing Process Technician: Bobby Emmer
 Inside Sales Associate: Dave Morschen
Not Pictured:
 Assembler: Nate Krummel
 Assembler: Paul Zellmann
 Outside Sales: Mike Marketon
 Marketing Manager: Kristen Handy



HZ-Series

CENTRIFUGAL BARREL FINISHERS

ENTRY LEVEL

HZ-6



HZ-12

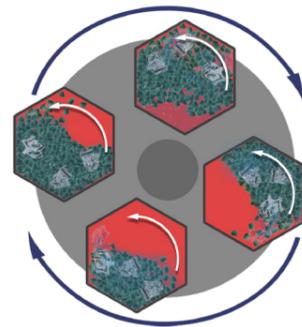


HZ-40



How it Works

Centrifugal barrel finishing machines operate on the "Ferris Wheel" principle with a one-to-one ratio of barrel rotation to turret rotation. Each of the four barrels is loaded to roughly 50-80% full of media, parts, water, and compound. During operation, rotation of the turret creates a sliding force inside the barrel. This motion causes parts and media to contact each other in random or isotropic directions. The resulting finish is consistent across the entire surface of the part. MFI provides complete sample processing, and stocks all required media and supplies.



MODELS	HZ-6	HZ-12	HZ-40
Main Motor HP	1	1	3
Voltage	110v	110v	230-460v
Total Capacity	.2 Cu. Ft.	.4 Cu. Ft.	1.4 Cu. Ft.
Shipping Weight	310 lbs.	700 lbs.	1280 lbs.
Dimensions L x W x H	37" x 23" x 47.5"	32" x 31" x 55"	47" x 38" x 49"
Barrel Length/Diam.	8.375" x 5"	8.375" x 5"	12.5" x 6.75"
Max RPM	250	250	225

FOUR BARREL OPTIONS (HZ-40 Only)



Before



After



Special Features:

Compact Size- The small footprint of these machines make them easy to fit into most productions without sacrificing any finishing speed or results. The caster wheels on the HZ-6 and HZ-12 machines make them easy to maneuver around the production facility.

Removable Barrels- The HZ-6 has two different cradle positions for 2 full-sized barrels or 4 half-sized barrels. The HZ-12 boasts four cradle positions for 4 full-sized barrels or 8 half-sized barrels. The HZ-40 features four barrel options making it extremely versatile. By purchasing a second set of barrels, the operator can reload while the other set is running.

Variable Frequency Control- With the ability to control the speed of the tumble, the operator can polish and achieve finer finishing at low speeds. Higher speeds, 225 to 250 RPM, allow for aggressive deburring and edge radiusing.

Safe and Easy Operation- The integral hood switch and two-button jog requirement makes these extremely safe to operate. The hood is securely locked during cycles. Timers and industrial switches and controls make running the machine simple.

Isotropic Finishing- The finish achieved by centrifugal barrel tumbling machines is isotropic. This means the surface is consistent in all directions unlike hand polishing.

Featured Accessory

Media and Parts Separating System



Optional Accessories

Electronic Hoist



HZ-40 PLC Controller



Media Separator Kit



Processing Table with Sludge Tank



HZ-Series

CENTRIFUGAL BARREL FINISHERS

HIGH EFFICIENCY



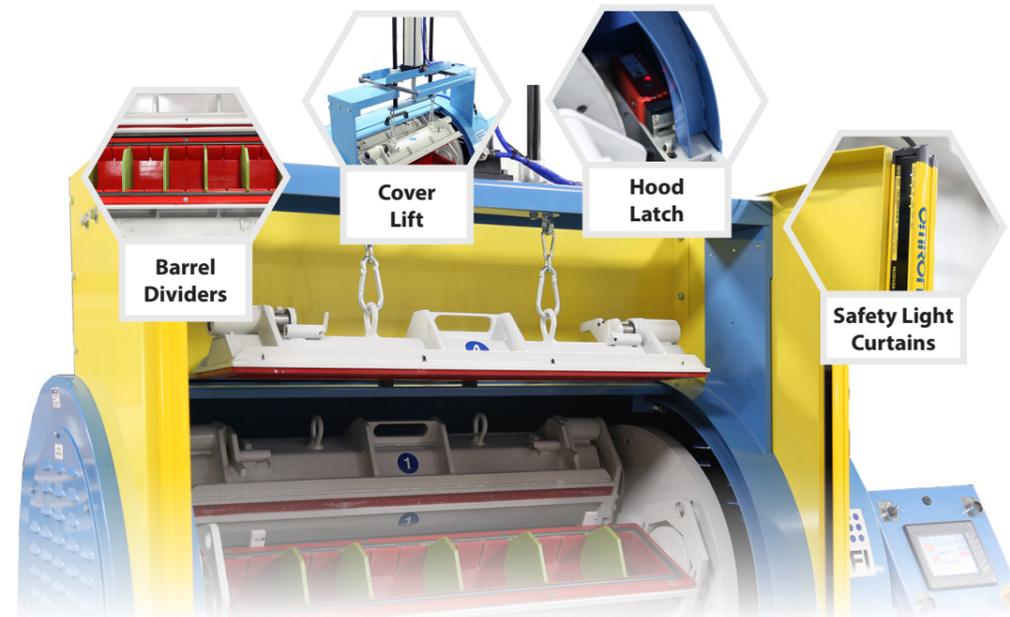
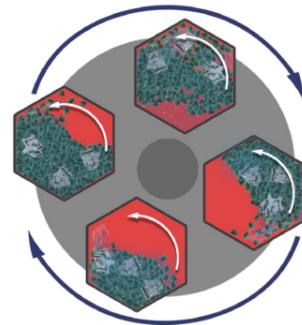
HZ-60



HZ-85

How it Works

Centrifugal barrel finishing machines operate on the "Ferris Wheel" principle with a one-to-one ratio of barrel rotation to turret rotation. Each of the four barrels is loaded to roughly 50-80% full of media, parts, water, and compound. During operation, rotation of the turret creates a sliding force inside the barrel. This motion causes parts and media to contact each other in random or isotropic directions. The resulting finish is consistent across the entire surface of the part. MFI provides complete sample processing, and stocks all required media and supplies.



Before



After



Special Features:

Full Size Production- The HZ-60 and HZ-85 provide more than double the capacity and efficiency over the compact centrifugal barrel tumblers like the HZ-12 and HZ-40.

Wide Barrels- The HZ-60 features a 25.75 inch wide barrel and the HZ-85 barrel is 33.5" wide. They can be divided to create several chambers inside each of the four barrels. This is a critical feature when part-on-part impingement needs to be avoided.

Variable Frequency Control- With the ability to control the speed of the tumble, the operator can polish and achieve

finer finishing at low speeds. Higher speeds, up to 225 RPM, allow for aggressive deburring and edge radiusing.

Safe and Easy Operation- The integral hood switch and two-button jog requirement makes the HZ-60 and HZ-85 extremely safe to operate. The hood is securely locked during cycles. A built in cover lift with industrial timers and switches make running the machine simple.

Isotropic Finishing- The finish achieved by centrifugal barrel tumbling machines is isotropic. This means the surface is consistent in all directions unlike hand polishing.

MODELS

HZ-60



HZ-85



Main Motor HP	5	7.5
Voltage	230-460v	230-460v
Total Capacity	2 Cu. Ft.	3 Cu. Ft.
Shipping Weight	3000 lbs.	3300 lbs.
Dimensions L x W x H	68" x 39" x 94"	75" x 39" x 94"
Barrel Length/Diam.	25.75" x 6"	33.5" x 6"
Max RPM	225	225

Featured Accessory

Media and Parts Separating System

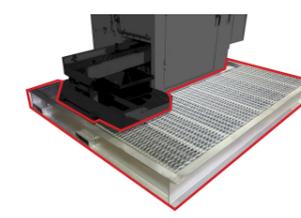


Optional Accessories

PLC Control System



Drain Pan



Processing Table with Sludge Tank



HZ-Series

CENTRIFUGAL BARREL FINISHERS

WIDE DIAMETER



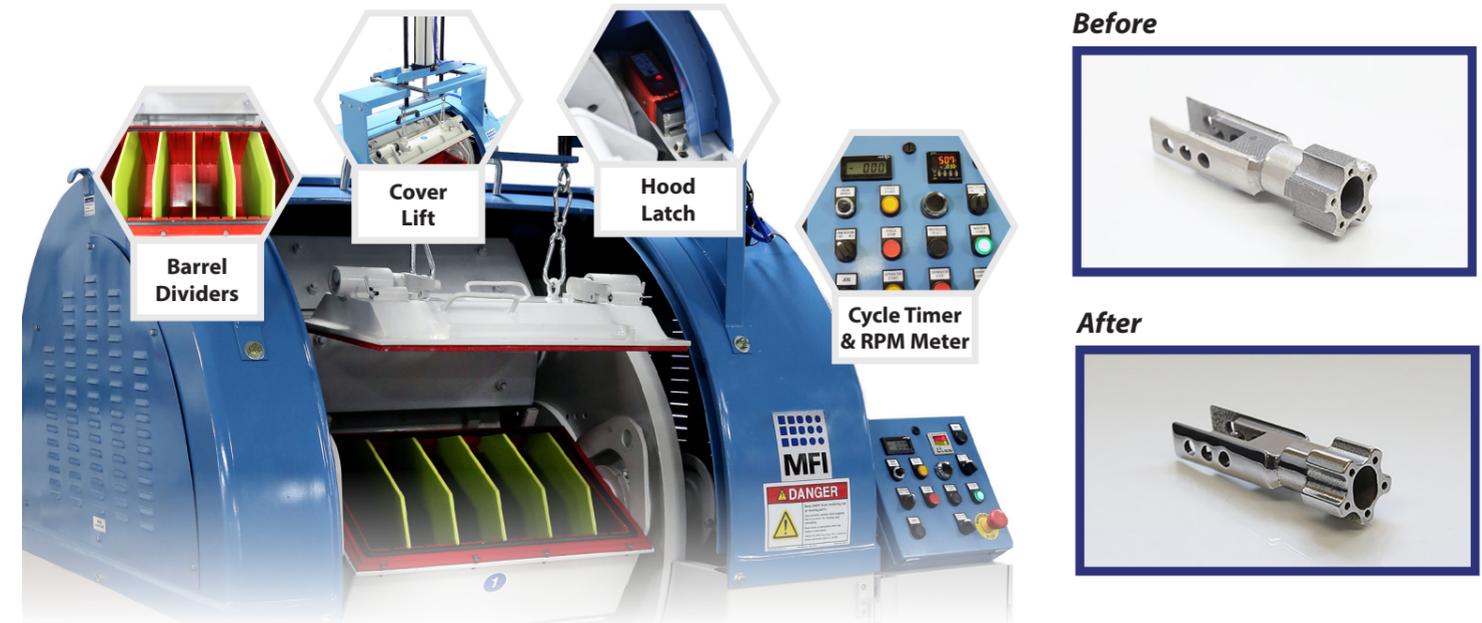
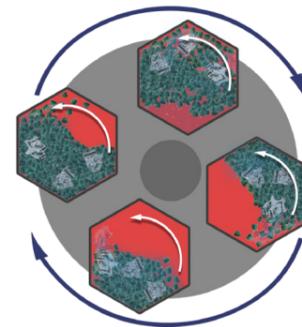
HZ-120



HZ-160

How it Works

Centrifugal barrel finishing machines operate on the "Ferris Wheel" principle with a one-to-one ratio of barrel rotation to turret rotation. Each of the four barrels is loaded to roughly 50-80% full of media, parts, water, and compound. During operation, rotation of the turret creates a sliding force inside the barrel. This motion causes parts and media to contact each other in random or isotropic directions. The resulting finish is consistent across the entire surface of the part. MFI provides complete sample processing, and stocks all required media and supplies.



MODELS	HZ-120	HZ-160
Main Motor HP	10	15
Voltage	230-460v	230-460v
Total Capacity	4.7 Cu. Ft.	7.1 Cu. Ft.
Shipping Weight	2900 lbs.	3500 lbs.
Dimensions L x W x H	71" x 57" x 75"	74" x 57" x 75"
Barrel Length/Diam.	17.25" x 10.25"	20.75" x 12"
Max RPM	150	150

Special Features:

Full Size Production- The HZ-120 and HZ-160 provide more than double the capacity and efficiency over the compact centrifugal barrel tumblers like the HZ-12 and HZ-40.

Deep Barrels- The HZ-120 and 160 feature a deeper barrels for wider parts. The barrels can be divided to create several chambers inside each of the four barrels. This is a critical feature when part-on-part impingement needs to be avoided.

Variable Frequency Control- With the ability to control the speed of the tumble, the operator can polish and

achieve finer finishing at low speeds. Higher speeds, up to 150 RPM, allow for aggressive deburring and edge radiusing.

Safe and Easy Operation- The integral hood switch and two-button jog requirement makes the HZ-120 and HZ-160 extremely safe to operate. The hood is securely locked during cycles. A built in cover lift with industrial timers and switches make running the machine simple.

Isotropic Finishing- The finish achieved by centrifugal barrel tumbling machines is isotropic. This means the surface is consistent in all directions unlike hand polishing.

Featured Accessory

Media and Parts Separating System

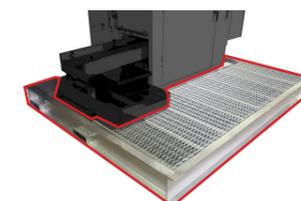


Optional Accessories

PLC Control System



Drain Pan



Processing Table with Sludge Tank



HZ-Series

CENTRIFUGAL BARREL FINISHERS

FULL SIZE



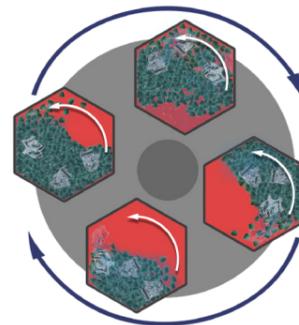
HZ-220



HZ-330

How it Works

Centrifugal barrel finishing machines operate on the "Ferris Wheel" principle with a one-to-one ratio of barrel rotation to turret rotation. Each of the four barrels is loaded to roughly 50-80% full of media, parts, water, and compound. During operation, rotation of the turret creates a sliding force inside the barrel. This motion causes parts and media to contact each other in random or isotropic directions. The resulting finish is consistent across the entire surface of the part. MFI provides complete sample processing, and stocks all required media and supplies.



	HZ-220	HZ-330
Main Motor HP	15	30
Voltage	230-460v	230-460v
Total Capacity	8 Cu. Ft.	12.8 Cu. Ft.
Shipping Weight	5200 lbs.	6800 lbs.
Dimensions L x W x H	81" x 57" x 75"	90" x 56" x 80"
Barrel Length/Diam.	27.5" x 12"	42" x 12"
Max RPM	135	115

Before

After

Special Features:

Full Size Production- The HZ-220 and HZ-330 provides more than double the capacity and efficiency over the compact centrifugal barrel tumblers like the HZ-120 and HZ-60.

Deep Barrels- The HZ-220 and HZ-330 feature deep one foot diameter barrels that can be divided up to create several chambers inside each of the four barrels. This is a critical feature when part-on-part impingement needs to be avoided.

Variable Frequency Control- With the ability to control the speed of the tumble, the operator can polish and

achieve finer finishing at low speeds. Higher speeds up to 135 RPM, allow for aggressive deburring and edge radiusing.

Safe and Easy Operation- The integral hood switch and two-button jog requirement makes the HZ-220 and HZ-330 extremely safe to operate. The hood is securely locked during cycles. A built in cover lift with industrial timers and switches make running the machine simple.

Isotropic Finishing- The finish achieved by centrifugal barrel tumbling machines is isotropic. This means the surface is consistent in all directions unlike hand polishing.

Featured Accessory

Media and Parts Separating System

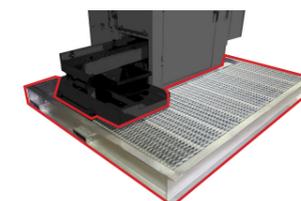


Optional Accessories

PLC Control System



Drain Pan



Processing Table with Sludge Tank



HZ-Series Applications by Industry



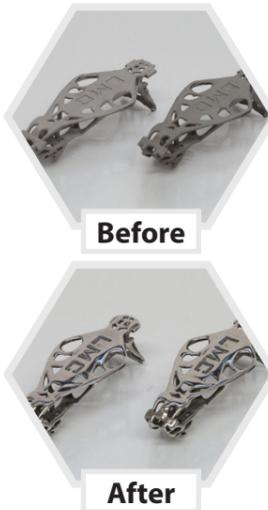
Aerospace

Common Parts: Turbine Blades, Engine Components, Valves, Manifolds, Motor Housings, Fasteners, Instrumentation Components, Cosmetic Functional Parts

Materials: Titanium, Aluminum, Inconel, Nitinol, Plastics, Hardened Steel

High-Energy Centrifugal Barrel Tumbling is an industry standard for jet engine builders. MFI works with the premiere jet and fixed blade manufactures to achieve their extremely sensitive surface roughness requirements. Our customers who are producing aerospace components are required to achieve extremely smooth surfaces on materials that are either extremely hard and light or very delicate.

Process Times: Varying depending on starting surface roughness.
Light Edge Break/Deburr – 5-20 minutes
Rough Grind/Deburr – 20-60 minutes
Full Polish from Raw Part – 30 – 90 minutes



Additive Manufacturing

Common Parts: Blades, Medical Implants, Engine Components, Impellers, Plastic Models, Rings and Jewelry

Materials: Titanium, Aluminum, Inconel, Nitinol, Printable Plastics, Carbon Steel, Gold, Silver

Additive manufactured or 3D printed parts are often left with extremely rough finishes. Most vibratory and blasting methods for surface improvement simply will not work on these parts. Mass Finishing CBF machines generate enough force combined with highly abrasive tumbling media to cut through these rough surfaces. Utilizing multiple steps, MFI process engineers have developed solutions for achieving mirror finishes on 3D printed metal parts.

Process Times: Varying depending on starting surface roughness.
Light Surface Improvement – 20-30 minutes
Rough Grind/Heavy Deburr – 60-120 minutes
Full Polish from Raw Part – 90 – 150 minutes



Dental

Common Parts: Partials, Crowns, Additive Appliances, Clear Aligners, Dentures, Retainers, Artificial Teeth

Materials: Steel, Cobalt Chrome, Gold, Stainless Steel, 3D Printed Plastic, Clear Plastic, Zirconium

The dental industry provides a consistent need for polishing and smoothing of various cosmetic and corrective appliances. For decades MFI has helped dental labs deburr and polish cobalt chrome partials and crowns. This application drastically reduces tedious handwork. Over the last five years, with the rise in popularity and affordability of clear aligners, labs around the world rely on MFI to smooth and polish these fragile plastic pieces. Through a combination of media selection and machine parameters, CBF machines prove to be an excellent solution on clear aligners.

Process Times: Varying depending on starting surface roughness.
Clear Aligner Polishing – 5-20 minutes
Metal Rough Grind/Deburr – 20-60 minutes
Metal Full Polish from Raw Part – 30 – 90 minutes



Automotive

Common Parts: Aftermarket Parts, Carbon Fiber Components, Valves, Connecting Rods, Camshafts, Crankshafts, Cylinders, Cosmetic Interior Pieces

Materials: Hardened Steel, Aluminum, Carbon Steel, Stainless Steel

Perfect surface smoothness is crucial to high performance in the racing industry. MFI Centrifugal Barrel Tumblers are used by the top engine makers seeking to squeeze more horsepower out of their engines any way they can. After going through an MFI tumbling process, engine components can more easily shed oil creating less friction and better compression. Many of the engine components are so hard that common finishing techniques are unable to achieve the same finish.

Process Times: Varying depending on starting surface roughness.
Light Edge Break/Deburr – 5-20 minutes
Rough Grind/Deburr – 20-60 minutes
Full Polish from Raw Part – 30 – 90 minutes



Medical

Common Parts: Medical Implants, Bone Plates, Bone Screws, Surgical Tools, Prosthetics, Stents and Heart Valves, Needles and Blades, Instrumentation

Materials: Aluminum, Carbon Steel, Stainless Steel, Inconel, Titanium, Peek

Perhaps one of the largest customer bases for MFI is the Medical Industry. Since its founding, our tech team worked side-by-side with engineers coming up with efficient ways of deburring and polishing various medical parts from femoral and tibial replacements to the smallest screws and devices for specialized application. MFI has even worked to develop specialized media and processes that conform to current guidelines regarding material safety hazards and concerns. With medical implants, the perfect isotropic surface is a necessity to help avoid the buildup of plaque and prevent other possible rejection factors.

Process Times: Varying depending on starting surface roughness.
Light Edge Break/Deburr – 5-20 minutes
Rough Grind/Deburr – 20-60 minutes
Full Polish from Raw Part – 30 – 90 minutes



Firearm

Common Parts: Bolts, Carriers, Muzzle Brakes, Rails, Handguards, Lower Receivers, Upper Receivers, Triggers, Levers, Pistol and Rifle Barrels, Brass Bullet Casings

Materials: Hardened Steel, Aluminum, Carbon Steel, Stainless Steel, Titanium, Brass

MFI has tumbled nearly every component required to the production of firearms and ammunition. MFI technicians developed processes for removing tricky burrs from the ends of gun bolts and tough heat treat scale from the inside and outside of bolt carriers. On AR-15 upper and lower receivers and hand rails, our high energy tumblers can produce a high mirror finish that is perfect for anodizing. With many of the gun parts requiring heat treatment, our CBF machines can remove scale and return the original luster of the metal.

Process Times: Varying depending on starting surface roughness.
Light Edge Break/Deburr – 5-20 minutes
Rough Grind/Deburr – 20-60 minutes
Full Polish from Raw Part – 30 – 90 minutes

Case Studies

3D Logics

3D LOGIC'S CHALLENGE:

Established in early 2018, 3D Logics was adept at creating parts that were accurate and consistent, but often had inherent surface roughness. The company had persistent finishing challenges with metal products, particularly titanium and nickel-based Inconel parts which are extremely tough and require high energy and very exact media to properly finish. Being a startup with just a few employees, 3D Logics wanted a partner that could provide finishing expertise and advice, as well as a selection of specialized media that would enable them to provide high end finished parts to their growing customer base.

OUR SOLUTION:

3D Logics evaluated many equipment manufacturers, but ultimately Mass Finishing Inc. (MFI) had the whole package they were looking for – the best systems (made in Minnesota), years of experience and a large selection of media. 3D Logics purchased an HZ-40 High Energy Centrifugal Barrel Finishing (CBF) Machine, and MFI partnered with them to help their employees gain a better understanding of which media to use depending on the material, size and shape of the item. Whenever 3D Logics has a new part, they can send it the MFI technical team, who will develop the finishing process and send a report so 3D Logics can provide their customers with the highest quality metal and plastic/polymer parts.

THE RESULTS:

Thanks to their HZ-40 CBF and technical assistance from MFI, now 3D Logics can put a mirror finish on their titanium parts, and get precisely finished parts in 20 to 30 minutes. 3D Logics Owner Sterling Logan is very pleased with his HZ-40 CBF and happy to recommend MFI to anyone who has finishing questions. He appreciates the MFI technical team's help, quick response, and honesty to tell him when a barrel finisher isn't the best finishing solution. That's because they don't just want to

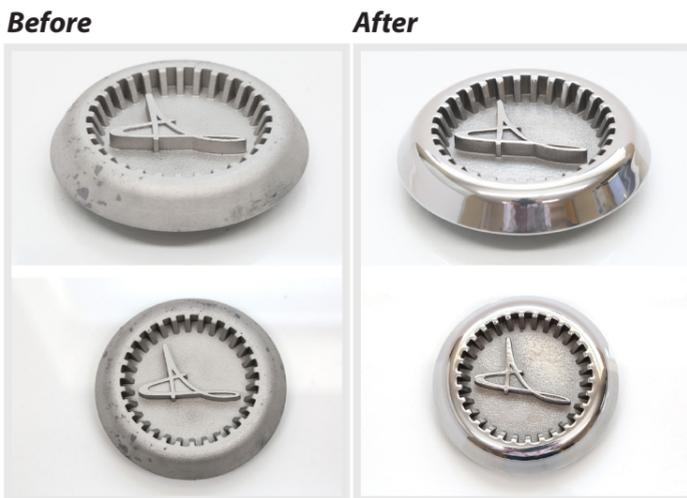
sell him a machine and media, they want him to have the best possible solution.



"Our customers immediately noticed a difference when we started using the HZ-CBF. They asked, 'Wow, are these 3D parts? This is incredible, these parts are amazing. What did you do?'"

Mass Finishing gives us a leg up on the competition and we're happy to partner with them. Anyone seriously looking at barrel finishers should take a close look at Mass Finishing. They'd be in good hands."

– Sterling Logan, Owner of 3D Logics



Conn-Selmer

CONN-SELMER'S CHALLENGE:

Crafting musical instruments that are flawless to the eye and make beautiful music is an exacting process that combines art, science, old-world craftsmanship and attention to detail. Much of the finishing work for trumpets and trombones involves hand buffing using polishing belts and wheels. This is a dirty, dangerous job because it's common for the belt or wheel to grab a part and suddenly fling it out of the operator's hand. In a tight labor market, it's also very difficult to find workers to perform hand polishing, and it will likely become even more difficult in the future.

OUR SOLUTION:

When Conn-Selmer was looking for a solution to reduce hand finishing, a company that specializes in finishing and mass media recommended Mass Finishing's equipment. Mass Finishing Inc. (MFI) developed a process using a corncob treated media with various oils and abrasives and their HZ-330 Centrifugal Barrel Finisher (CBF) to polish trumpets and trombones. The proprietary mixture developed exclusively for Conn-Selmer by MFI substantially reduced the need for hand finishing. MFI worked closely with Conn-Selmer, providing customer service and support in developing a faster polishing system, and then trained operators to ensure consistent results.

THE RESULTS:

The old hand buffing method required an average of 34 minutes to hand buff each trumpet, while the new finishing system can buff 8 trumpets at a time in 20 minutes, followed by approximately 10 minutes of inspection and hand finishing. The MFI barrel buffing process is 8 times more efficient, provides sizable labor savings, is much safer, and also delivers environmental advantages. Operators no longer need personal protection equipment (PPE) as brass and bronze dust in the air has been eliminated. Previously, a bag house was required to

collect the dust and a hazardous materials contractor was needed to periodically clean the dust from the bag house. Conn-Selmer officials were so impressed, the company is also purchasing an HZ-85 CBF from MFI to eliminate the rough buff process used to process brass instrument mouthpieces.

"The (CBF) process produces results that can achieve hundreds of thousands of dollars in realized savings each year, and also eliminate the need for buffing and specialty wax bars to buff our products. There is always skepticism when a new process is introduced and claims to obtain results just as good as the "time honored" manual processes, but I'm very impressed with this process and I'd definitely recommend it."

–Perry Richards, Director of Engineering and Operational Excellence



RF-Series

CENTRIFUGAL DISC FINISHERS

Models	RF-20	RF-50	RF-100	RF-200	RF-300A	RF-400A
Capacity (Cu. Ft.)	.7	1.5	3	6	9.9	12.1
Working Capacity (Cu. Ft.)	.7	1.5	2.1	3.6	4.5	7.5
Overall L x W x H	33"x33"x49"	50"x37"x 44" 60	60"x40"x52"	93"x77"x56"	121"x84"x55"	136" x 90" x 61"
Tube Size	11"x11.5"	20"x15"	24" x 15"	34" x 20"	36" x 21" 42	42" x 25"
Motor (HP)	1	2	5	7.5	7.5	15
Weight (lbs)	575	850	1,215	1,425	6,615	8,380
Voltage	230 or 460	230 or 460	230 or 460	230 or 460	230 or 460	230 or 460

RF-100



RF-50

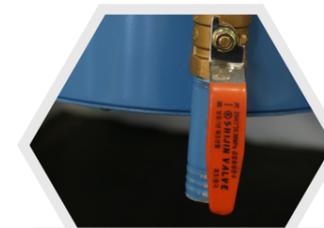


RF-20



How it Works

RF-Series Disc Finishers utilize a stationary barrel wall with a spinning disc at the base. The spinning disc causes the media and parts to move upward and rub against the stationary polyurethane wall of the barrel. This continuous rolling and flowing motion creates the finishing action. Parts and media contact each other in random or isotropic directions. The resulting finish is consistent across the entire surface of the part. MFI provides complete sample processing, and stocks all required media and supplies.



Flow Through System



Cycle Timer & RPM Meter



Gap Adjustment Bolts



Tilt System

Disc Features:

Flexibility- RF Series disc finishers can perform a wide variety of finishing applications from coarse grinding to delicate polishing. RF Disc Finishers can perform operations such as deburring, descaling, polishing, cleaning and removing flash.

Efficiency- RF Series Centrifugal Disc machines can finish parts up to five to ten times faster than vibratory machines. While still slower than barrel tumblers, disc machines offer similar energy.

Variable Frequency Control- With the ability to control the speed of the tumble, the operator can polish and

achieve finer finishing at low speeds. Higher speeds allow for aggressive deburring and edge radiusing.

Adjustable Gap- A critical operation point on disc machines is the gap between the moving base and the stationary tub wall. MFI RF-Series machines feature gap adjustment bolts to ensure media and parts are not entering the gap.

Models for all Budgets- Standard disc finishers are less expensive than centrifugal barrel tumbling machines. This makes them an appealing option for startups and lower cost applications.

RF-300A Fully Automated System

The fully automated versions of the RF-Series feature a loading and unloading system along with a built in media separator for continuous operation. The unit is controlled entirely through a touchscreen PLC interface.



1060 Commerce Blvd, Howard Lake, MN 55349
www.massfin.com | sales@massfin.com | (320) 543-3222

Accessories

PSA-1660 MEDIA AND PART SEPARATOR



How It works- The PSA-1660 media separator utilizes two .15 hp shaker motors which are harmonized to create the vibration needed to separate media from parts. When the operator dumps media and parts onto the screen, media falls through the screen while parts stay on top. Screens are removable and come standard in 1/4 inch increments.

Special Features:

- Industrial Construction
- Heavy Duty Caster Wheels
- Variable Frequency Control
- Catch Bins
- Customizable

Specifications	
Drive Unit	230v 3 Phase, 60 Hertz Converted to 120v
Feed Height	33.75" to 35.50"
Discharge Height	29.5"
Shipping Weight	500 Lbs.
Screen Dimensions (removable)	15"x60"
Screen Openings	1/4" Increments (Custom Available)

Table & Tank

PART PROCESSING STATION



How It Works- Water that drains from the table into the sludge tank enters the first compartment. As the compartment fills the water travels through the baffling to the second and third compartment where it is pumped out.

Special Features:

- Industrial Construction
- Smart Design
- Simple Operation
- Heavy Duty Caster Wheels

Specifications	
Frame	2"x2"x1/8" Aluminum
Table	72" L x 32" W x 38" H
Sink	32" L x 15" W x 14" H
Back Splash	72" L x 8" W x 20" H
Sludge Tank	66" L x 27" W x 16" H

Microseparator CF55 SD Centrifuge Module

How it Works

Filtration without media for industrial applications

The CF55 SD Series Microseparator™ is a manually cleaned, liquid- solid separator module providing efficient and reliable cleaning of process water, machine tool coolants, or oil in a wide variety of industrial applications. The robust construction is ideally suited to the characteristics of abrasive solids such as glass, quartz, ceramics, carbide, and metals.

Process liquid is fed to the Microseparator™ rotor where the solids are centrifugally separated for easy removal via a reusable liner. Cleaning a full rotor only requires stopping the Microseparator™, opening the hinged cover, and removing the accumulated solids from the reusable liner.

The CF55 SD Series Microseparator™ incorporates a mild steel support frame, manually cleaned Microseparator™, and an electrical control package incorporating starters for the centrifuge and optional feed pump. Easy to set up and install requiring only 3 phase power. We also offer a wide variety of standard tank systems incorporating the CF50 or higher capacity CF80 series centrifuges.

Options & Accessories:

- Integrated feed pump (per process requirements)
- Castors, outlet piping hose, and power cord
- Self-draining rotor assembly (aluminum only, oil processes only)
- pare rotor liner
- 304 SS rotor assembly
- Mark available on request



Technical Data

Materials of Construction

- 304 SS enclosure
- aluminum rotor assembly optional 304 SS
- neoprene liner
- mild steel support frame

Process Capacity

- flow rate: 12 gpm (45 lpm)
- rotor volume: 1.75 gal (6.6 l)

Electrical

- 2 hp (1.5 kw) drive motor
- NEMA 12 enclosure
- pump motor starter included
- 110v cover limit switch or optional 24V DC electro-mechanical interlock
- UL 508 A construction CE/CSA std available
- all 3 phase power configurations available

Ceramic Media

Media Selection

Finding the right media to produce your desired finish is just as critical as finding the right equipment. With more than three decades of experience in the polishing and deburring industry, Mass Finishing can quickly determine the best media and process for your finishing job. While the composition of the media is important, the shape can also affect the performance on particular parts.

Ceramic

Commonly used in first steps for heavy deburring and grinding on harder ferrous metals. This media comes in a wide spectrum of shapes. Varying levels of abrasive can increase or decrease its cutting power.



3/4" x 7/8" Dura 30 Cone

Ceramic Cylinders

5500-10010	1/8" x 11/32" DURA 30 CYLINDERS	5500-10220	3/8" x 5/8" DURA 30 AC-45 CYLINDERS
5500-10014	1/8" x 11/32" C-BOND CYLINDERS	5500-10260	1/2" x 7/8" DURA 30 CYLINDERS
5500-10018	1/8" x 11/32" XC CYLINDERS	5500-10276	7/8" x 1-3/4" DURA 30 CYLINDER
5500-10050	3/16" x 11/32" (3/8") DURA 30 CYLINDER	5500-10298	5/16" x 9/16" C-BOND CYLINDERS
5500-10053	3/16" x 3/8" DURA 140 CYLINDERS	5500-10285	3/16" x 3/8" AH-41 ACC-22 CYLINDERS
5500-10100	5/16" x 9/16" (5/8") DURA 30 CYLINDERS		

Ceramic Triangles

5500-10410	3/8" x 1/4" DURA 30 TRIANGLES
5500-10412	5/8" x 5/8" DURA 30 TRIANGLES
5500-10415	3/8" x 7/16" DURA-120 TRIANGLES
5500-10417	7/8" x 3/8" DURA 30 TRIANGLES
5500-10421	7/8" x 7/8" DURA 30 TRIANGLES
5500-10700	3/8" x 3/8" C-BOND TRIANGLES
5500-10801	7/8" X 5/16" C-BOND TRIANGLES
5500-10810	1-1/8" x 5/16" C-BOND TRIANGLES

Ceramic Cones

5500-10320	1/2" x 5/8" DURA 30 CONES
5500-10330	3/4" x 7/8" DURA 30 CONES
5500-10350	1 1/4" x 1 1/4" DURA 30 CONES
5500-10364	3/4" x 3/4" AH-41 CONES
5500-10365	3/4" x 7/8" C-BOND CONES

Ceramic Tri-Stars

5500-31010	4.1mm x 4.6mm HRS CUTTING TRI-STAR
5500-60400	6 x 6mm DZ RM TRI-STAR
5500-60405	4 x 4mm DZ RGS TRI-STAR
5500-60406	10 x 10mm DZ RM TRI-STAR
5500-60407	15 x 15 x 06mm EZ RS TRI-STAR
5500-60430	10/12 DZ RM TRI-STAR

Ceramic Stars

5500-10610	5/8" x 1/4" DURA 30 STARS
5500-10611	7/8" x 3/8" DURA 30 STARS
5500-10601	5/8" x 1/4" AH41 AC3S-22 STARS
5500-10602	3/8" x 3/8" AH41 AC3S-22 STARS
5500-10603	1/4" x 1/4" AH41 AC3S-22 STARS

XM Media

5500-30024	XM #3
5500-30029	XM #4
5500-30030	XM #5
5500-30040	XM #6
5500-30050	XM #8
5500-30060	XM #10
5500-30065	XM #12
5500-30070	XM #14
5500-30072	XM #16
5500-30075	XM #18
5500-30077	XM #20
5500-30080	XM #24
5500-30090	XM #36

Ceramic Cutting Pins

5500-21012	2.5mm x 8mm CUTTING PINS
5500-21013	1.5mm x 5mm CUTTING PINS
5500-21015	3mm x 6mm CUTTING PINS

Ceramic Cutting Triangles

5500-21050	2 x 2mm FAST CUT GRAY TRIANGLES
5500-21051	3 x 3mm FAST CUT GRAY TRIANGLES
5500-21052	4 x 4mm FAST CUT GRAY TRIANGLES
5500-21053	4 x 8mm FAST CUT GRAY TRIANGLES
5500-21054	6 x 6mm FAST CUT GRAY TRIANGLES
5500-21055	3 x 6mm FAST CUT GRAY TRIANGLES

Ceramic Cutting Spheres

5500-50000	1mm FAST CUT SPHERES
5500-21000	2mm FAST CUT SPHERES
5500-50100	3mm FAST CUT SPHERES
5500-50110	4mm FAST CUT SPHERES
5500-50115	5mm FAST CUT SPHERES
5500-50120	6mm FAST CUT SPHERES
5500-50121	7mm FAST CUT SPHERES
5500-50122	8mm FAST CUT SPHERES
5500-50124	9mm FAST CUT SPHERES

Ceramic Mix

5500-70032	DENTA CERAMIC MIX - 50 LB. BOX
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Porcelain Media

Media Selection

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Porcelain

This heavy media contains no abrasive or cutting power and works well for providing polish and an edge radius. High durability allows it to last longer than other media.



4.5mm x 14mm Polishing Pins

Porcelain Polishing Pins

5500-40010	1.3 x 3mm POLISHING PINS
5500-40020	1.7mm x 5mm POLISHING PINS
5500-40039C	2mm x 8mm POLISHING PINS
5500-40040	2.5mm x 8mm POLISHING PINS
5500-40055	3mm x 10mm POLISHING PINS
5500-40056	4.5mm X 14mm POLISHING PINS

Porcelain Polishing Triangles

5500-40064	2mm x 2mm POLISHING TRIANGLES
5500-40065	3mm x 3mm POLISHING TRIANGLES
5500-40066	4mm x 4mm POLISHING TRIANGLES
5500-40067	6mm x 6mm POLISHING TRIANGLES

Porcelain Polishing Tri-Stars

5500-41010	3mm x 3mm POLISH TRI-STARS
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Porcelain Microbrite Spheres

5500-20010	1mm MICROBRITE SPHERES
5500-20015	2mm MICROBRITE SPHERES
5500-20020	3mm MICROBRITE SPHERES
5500-20030	4mm MICROBRITE SPHERES
5500-20040	5mm MICROBRITE SPHERES
5500-20050	6mm MICROBRITE SPHERES
5500-20060	8mm MICROBRITE SPHERES
5500-20080	10mm MICROBRITE SPHERES
5500-20085	11mm MICROBRITE SPHERES

Plastic Media

Media Selection

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Plastic

Used in both first and second step processes on softer non-ferrous metals, plastic media can produce an edge radius and prepare the surface of the part for plating, anodizing or polishing.



3/8 MF- Pre-Polishing Cone

Plastic Cones

5500-50010	RG-22 1/2" CONES
5500-50020	RG-11 3/8" CONES
5500-50040	RG-33 3/4" CONES
5500-50050	RG 1/4" CONES
5500-60062	3/4" RTC PMC CONES
5500-64009	3/8 MF-PRE-POLISHING CONE
5500-64010	9/16 MF-PRE-POLISHING CONE
5500-63010	V-2030 12mm (1/2") CONES
5500-10368	5/8" x 7/8" X CONES
5500-10371	3/4" x 3/4" X CONES
5500-10384	1/2" x 9/16" XG CONES
5500-10367	3/4" x 3/4" XV CONES
5500-10377	3/4" x 3/4" XV-1 CONES

Plastic Triangles

5500-60052	#4000 M2 MT 7/8" TRIANGLES
5500-60065	#4000 M2 3/8" MINI T TRIANGLES
5500-600552	#2000 MT MEDIA 7/8" TRIANGLES PMC

Plastic Pyramids

5500-50051	RG 1/4" PYRAMIDS
5500-50052	RG 3/8" PYRAMIDS
5500-10510	1/4" x 1/4" XV PYRAMIDS
5500-10511	1/4" x 1/4" X PYRAMIDS
5500-10522	3/8" x 3/8" X PYRAMIDS
5500-10527	1/4" XG PYRAMIDS

Plastic RG Cone & Pyramids

5500-50010	RG-22 1/2" CONES
5500-50020	RG-11 3/8" CONES
5500-50040	RG-33 3/4" CONES
5500-50050	RG 1/4" CONES
5500-50051	RG 1/4" PYRAMIDS
5500-50052	RG 3/8" PYRAMIDS

Plastic Tetrahedron

5500-64101	9/16 MF- Pre-Polishing Tetrahedron
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Dry Media

Media Selection

Finding the right media to produce your desired finish is just as critical as finding the right equipment. With more than three decades of experience in the polishing and deburring industry, Mass Finishing can quickly determine the best media and process for your finishing job. While the composition of the media is important, the shape can also affect the performance on particular parts.

Corn Cob

MFI manufactures a variety of dry corn cob media that contains a variety of ingredients that promote polishing and burnishing of parts.



MF-1 Medium

MFI Corn Cob	
5501-10001	MF-1, FAT FREE COB FINE (20/40)
5501-10002	MF-1, FAT FREE COB MEDIUM (10/14)
5501-10003	MF-1 FAT FREE COB BLEND (5/8 & 10/14)
5501-20001	MF-2 VIBE COB FINE (20/40)
5501-20002	MF-2 VIBE COB MEDIUM (10/14)
5501-20003	MF-2 VIBE COB BLEND (5/8 & 10/14)
5501-30001	MF-3 HIGH-ENERGY COB FINE (20/40)
5501-30002	MF-3 HIGH-ENERGY COB MEDIUM (10/14)
5501-30003	MF-3 HIGH-ENERGY COB BLEND (5/8 & 10/14)
5501-20004	MF-3F HIGH-ENERGY COB COARSE (10/14)
5501-50001	MF-5 CUTTING COB MEDIUM (10/14)
Walnut Shell	
5502-10010	MF-W-309 HIGH ENERGY WALNUT SHELL MEDIUM (10/14)

Plain and Specialty Cob	
5500-61010	10/14 PLAIN COB
5500-61014	20/40 PLAIN COB
5500-61020	SLUDGE TANK ABSORBENT (40 lb Boxes)
Other Corn Cob Varieties	
5500-60005	SB-10 CORN COB
5500-60010	HI-LITE #10 CORN COB (10/14 mesh size)
5500-60020	HI-LITE #20 CORN COB (20/40 mesh size)
5500-60014	TTC #10 CORN COB

Compounds & Additives

Powder & Liquid Compounds

MFI typically uses liquid additives like soaps and polishing agents in wet processes. In dry tumbling powder compounds are used to promote longevity of media and increase burnishing performance. MFI works with customers to develop a process which includes the proper combination of media and additives.

Powdered Compound

Beads	
5500-68010	POLY-PLUS 20-30 BEADS
5500-68015	LUBRIGLIDE BEADS
Aluminum Oxide	
5500-60610	36 GRIT ALUMINUM OXIDE
5500-60612	80 GRIT ALUMINUM OXIDE
5500-60611	100 GRIT ALUMINUM OXIDE
5500-60615	120 GRIT ALUMINUM OXIDE
5500-60617	180 GRIT ALUMINUM OXIDE
5500-60625	200 GRIT ALUMINUM OXIDE
5500-60626	220 GRIT ALUMINUM OXIDE
MFC-3 Compound	
5400-10075	MFC-3 COMPOUND - 400 LB. DRUM
5400-10076	MFC-3 COMPOUND - 40 LB. BOX
360 Compound	
5400-10020	360 COMPOUND - 300 LB. DRUM
5400-10021-1	360 COMPOUND - 50 LB. BOX
Radiance 2	
5400-10030	RADIANCE 2 COMPOUND - 200 LB. DRUM
5400-10031-1	RADIANCE 2 COMPOUND - 25 LB. BOX
Corn Cob Powder	
5400-10040	CORN COB POWDER - 50 LB. BOX
5400-10042	CORN COB POWDER - 8 LB CONTAINER



Liquid Compound

TS Compound	
5400-10001	TS COMPOUND - 1/2 GALLON JUG
5400-10002	TS COMPOUND - 5 GALLON BUCKET
5400-10010	TS. COMPOUND - 55 GALLON DRUM
Metal Magic	
5400-10050	METAL MAGIC- 55 GALLON DRUM
5400-10051	METAL MAGIC- 5 GALLON BUCKET
5400-10052	METAL MAGIC - 1/2 GALLON JUG
RP-100	
5400-10065	RP-100 RUST INHIBITOR - 55 GALLON DRUM
5400-10065-1	RP-100 RUST INHIBITOR - 5 GALLON BUCKET
5400-10065-2	RP-100 RUST INHIBITOR - 1/2 GALLON JUG
Low Foam Control	
5400-30010	LOW FOAM CONTROL - 55 GALLON DRUM
5400-30010-1	LOW FOAM CONTROL - 5 GALLON BUCKET
5400-30010-2	LOW FOAM CONTROL - 1/2 GALLON JUG

Vibratory & Other Finishing Options

Both ALMCO and MFI are part of the same employee owned holding company, Innovance. This relationship allows both companies to provide a wider array of standard and custom solutions for their customers. ALMCO is a state-of-the-art manufacturer of vibratory deburring, washing, cleaning and metal finishing products.

Economy



Our economy line of tubs offers a lower price point for jobs that require lower volume tumbling operations.

Available Models/ Internal Dimensions

PV - .75	8.625" x 13.75"
PV - 2.5	15.5" x 19.75"
PV - 5	15.25" x 44.5"
W - 5	19" x 35.25"

VB-Series



The VB-Series of batch vibratory tubs offers an industrial quality machine that is ready for full-time use.

Available Models/ Internal Dimensions

VB-1410	14" x 10"
VB-1432	14" x 32"
VB-1448	14" x 48"
VB-1615	16" x 15"
VB-1631	16" x 31"
VB-2015	19" x 15"
VB-2034	19" x 34"
VB-2056	19" x 56"

V-Series

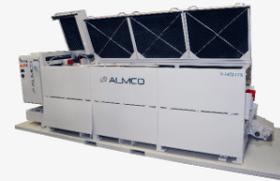


The V-Series is our premiere line of batch vibratory tub systems. These can be fully customized to fit any job requirement and are made for all-day, every-day use.

Available Models/ Internal Dimensions

V-3	15" x 17"
V-5	31" x 17"
V-7	31" x 17"
V-8	33.75" x 19.75"
V-12	33.75" x 23.5"
V-16	96.75" x 17"
V-27	114" x 19.75"
V-52	142" x 23.5"
V-70	189" x 23.5"
V-88	240" x 23.5"
V-122	336" x 23.5"
V-3447	47" x 34"
V-3496	96" x 34"
V-34-120	228" x 34"
V-4448	48" x 44"
V44-192	192" x 44"

Thru-Feed



Inline Thru-feed machines are integrated with material handling systems including an oscillating parts-media separator. These machines are excellent to incorporate with optional automatic parts load and unloading mechanisms for increased efficiencies.

Available Models/ Internal Dimensions

V1472TF	6 ft. x 14"
V14120TF	10 ft. x 14"
V-16TF	8 ft. x 17"
V-27TF	10 ft. x 19.5"
V-26TF	13 ft. x 17"
V-52TF	12 ft. x 23.5"
V-70TF	16 ft. x 23.5"
V-88TF	20 ft. x 23.5"
V-122TF	28 ft. x 23.5"
V34-120TF	16 ft. x 34"
V44-192TF	16 ft. x 44"

SBB Series Bowls



A premium quality line of spiral bottom vibratory bowls. These units offer a variety of features and are able to operate 24/7 in fully automated configurations.

Available Models/ Internal Dimensions

SBB-8	12"
SBB-12	13"
SBB-24	24"

OR/LR Series Bowls



The LR long radius tub is useful for through-feed operation where the part is loaded near the discharge screen and is unloaded after making one pass around the tub. The OR original round bowl series offers many options to fully customize the machine to your specific application.

Available Models/ Internal Dimensions

OR-3	8.25"
OR-5	10"
OR-10	12.5"
OR-20	17.25"
OR-23	19"
OR-5VLR	8.25"
OR-9VLR	10"
OR-16VLR	12.5"
OR-25VLR	15"
OR-40VLR	17"

MV Series Bowls



The MV-Series is an economical line of vibratory bowls that offer a very low price point with a bunch of added features including internal separation, dosing and sound cover.

Available Models/ Internal Dimensions

MV1DR	1 CuFt
MV 1B	1 CuFt
MV2DR	2 CuFt
MV 3B	3 CuFt
MV 3DR	3 CuFt
MV 4B	4 CuFt
MV 5DR	5 CuFt
MV 7B	7 CuFt

Spindle/Sutton



Spindle and Sutton deburring systems or slurry finishing machines are ideal for deburring complex parts, including gears, bearing cages, splined shafts, pump rotators, jet compressor discs and blades and more.

Available Models/ Internal Dimensions

S2-30	2.5
S2F-36	6
S2F-48	16
S2F-48CRA	16
S2F-48DRA	8.5
1SF-48	30
CFT-2000-1	18
CFT-2500-1	24
CFT-3000-1	40
CFT-4000-1	40
CFT-000-1	50
CFCA-1100-1	45
CFCA-2200-1	55



1060 Commerce Blvd, Howard Lake, MN 55349
www.massfin.com | sales@massfin.com | (320) 543-3222

Mass Finishing, Inc. is a 100% employee owned company. It is part of Innovance, a holding company for a family of industrial manufacturing businesses.