



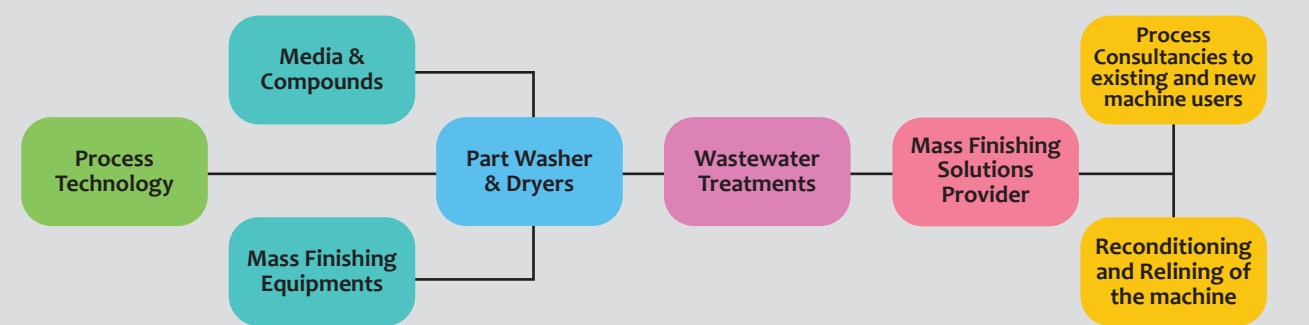
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About 3R MASSFIN

3R MASSFIN has been perfecting its unique mass finishing machines since years to make us the most innovative and most cost-effective surface finishing solution provider. The 3R MASSFIN range is manufactured in our modern purpose build factory located in Thane. 3R MASSFIN produces machines and consumables to achieve a comprehensive, perfect result, as well as maintaining an extensive demonstration and job shop facility for many different types of applications.

Not only do 3R MASSFIN offer high quality mass finishing products but also a fully documented process report sheet with each machine – established by our free trials work- saving our customers time, money and assuring them the best possible solution and results.



Clientele



## Applications and User Industries

### Applications

- Deburring
- Polishing
- De scaling
- De oiling
- Cleaning
- De flashing
- Mirror Finishing
- Pre plate finishing
- Matt Finishing
- Antique finishing
- Ra Value Improvements
- Washing
- Drying

### Parts

- Aluminium Extrusion and Die Casting
- Brass Casting and Hardware
- Sintered Components
- Compressor Components
- Automobile Components
- Bicycle Parts
- Pressed Components
- Watch Parts
- Spectacle Frames and Components
- Cutlery
- Hand Tools and Forgings
- Lock Parts and Components
- Buckles, Bags and Shoe Fittings
- Turbine Blades
- Bearing Cages and Rollers
- Plastic Components
- Gold, Silver and Imitation Jewellery
- Platinum Parts
- Aircraft Components
- Ceramic Components
- Light and Lamp Fittings
- Door and Bathroom Fittings
- Switchgear Fittings
- Gas Regulator Components
- Surgical and Orthopaedic Implants
- Clutch Plates
- Piston Rings and Brake Parts
- Diesel Generator Components

### User Industries

- Additive Manufacturing (3D Printing)
- Aerospace
- Automotive
- Transmission Parts
- Foundry Industry
- Chain Manufacturers
- Plastics Processors
- Painting And Coating
- Machine And Systems Engineering
- Medical Implant Manufacturers
- Coin Industry
- Forging Industry
- Jewelry And Fashion Accessories
- Steel Construction
- Stamping Technology
- Tool Industry
- Natural Stones



Bowl Vibratory Finishing Machines

Vibratory Finishing Machines are mass finishing machines, used for deburring, polishing, descaling etc for metallic and non metallic parts. The machine has a steel bowl lined with polyurethane which is filled up with required media (either ceramic, plastic,porcelain, maize etc. depending upon the finish required) and components. Eccentric weights are mounted on an extended shaft attached to a heavy duty motor to cause vibrations and create a spiral of the media and the components. Variations in vibration, achieved by varying weights and angles, and suitable combination of media enable machine to be used for different components.

VIBRATORY FINISHING MACHINE WITHOUT SEPARATION



| MODELS  | TOTAL VOLUME (LTRS) | CERAMIC CHIP CAPACITY (KG) | O.D. (mm) | BOWL 'U' WIDTH (mm) | MOTOR (HP) |
|---------|---------------------|----------------------------|-----------|---------------------|------------|
| 3RV30   | 30                  | 30-35                      | 613       | 204                 | 0.125      |
| 3RV90   | 90                  | 90-110                     | 855       | 256                 | 1          |
| 3RV120  | 120                 | 120 – 150                  | 1020      | 262                 | 1.5        |
| 3RV210  | 210                 | 210 – 250                  | 1220      | 280                 | 2          |
| 3RV300  | 300                 | 300 – 350                  | 1347      | 342                 | 2          |
| 3RV600  | 600                 | 600-700                    | 1606      | 430                 | 5          |
| 3RV1200 | 1200                | 1200-1400                  | 2010      | 530                 | 8          |
| 3RV1800 | 1800                | 1800-2000                  | 2210      | 600                 | 12         |

VIBRATORY FINISHING MACHINE WITH SEPARATION

| MODELS   | TOTAL VOLUME (LTRS) | CERAMIC CHIP CAPACITY (KG) | O.D. (mm) | BOWL 'U' WIDTH (mm) | MOTOR (HP) |
|----------|---------------------|----------------------------|-----------|---------------------|------------|
| 3RVS150  | 150                 | 90-110                     | 855       | 256                 | 1          |
| 3RVS200  | 200                 | 120 – 150                  | 1020      | 262                 | 1.5        |
| 3RVS350  | 350                 | 210-250                    | 1220      | 280                 | 2          |
| 3RVS500  | 500                 | 300-350                    | 1347      | 342                 | 2          |
| 3RVS875  | 875                 | 600–700                    | 1606      | 430                 | 5          |
| 3RVS1600 | 1600                | 1200-1400                  | 2010      | 530                 | 8          |
| 3RVS2200 | 2200                | 1800-2000                  | 2210      | 600                 | 12         |



Machine With 100% Separation Of Parts

These machines are designed for complete separation of parts from media after process unlike standard auto separation machine in some case. The machine is made with an inbuilt spiral path through which media and parts moves during regular process cycle. There is a flapper mechanism provided at the maximum level of the spiral so that it can be closed and the whole mass will be transferred to separation sheet during separation cycle. This spiral geometry ensures 100% mixture is carried to the screen.



| MODELS   | TOTAL VOLUME (LTRS) | CERAMIC CHIP CAPACITY (KG) | O.D. (mm) | BOWL 'U' WIDTH (mm) | MOTOR (HP) |
|----------|---------------------|----------------------------|-----------|---------------------|------------|
| 3RVSS190 | 190                 | 110                        | 1020      | 262                 | 1.5        |
| 3RVSS410 | 410                 | 225                        | 1347      | 342                 | 2          |
| 3RVSS790 | 790                 | 500                        | 1614      | 430                 | 5          |

Rectangular Vibratory Finishing Machines

Rectangular Tub vibratory machines are designed for deburring and polishing of bigger and lengthy parts such as bigger castings, sheet metal parts,engine covers, Turbine Blades etc. Continuous process is possible where parts to be deburred or deflashed in short time. Tub Machines are also used for antique finish of tiles, pavers, granites etc

VIBRATORY TUB FINISHING MACHINES

| MODELS  | TOTAL VOLUME (LTRS) | LENGTH (mm) | WIDTH (mm) | MOTOR (HP) |
|---------|---------------------|-------------|------------|------------|
| 3RVT50  | 50                  | 640         | 305        | 0.5        |
| 3RVT300 | 300                 | 1200        | 550        | 5          |
| 3RVT600 | 600                 | 2700        | 465        | 7.5        |
| 3RVT900 | 900                 | 3800        | 465        | 12.5       |



Rapid Ball Burnishing Machine



Advanced machine developed for quick polishing of metal parts compared to standard vibratory machine. The machine is 3 times faster than Conventional Vibratory type burnishing machine. The machine comes with or without separation of parts. The Auto separation machine is having hydraulic tilting arrangement which will ensure 100% separation of parts within 1-2 min

| MODELS   | TOTAL VOLUME (LTRS) | SEPERATION TYPE  | STEEL MEDIA CAPACITY (KG) | DIMENSION      | MOTOR (HP) |
|----------|---------------------|------------------|---------------------------|----------------|------------|
| 3RVBS250 | 250                 | Auto Unloading   | 250                       | 2130*1590*1890 | 3          |
| 3RVB250  | 250                 | Manual Unloading | 250                       | 1550*605*1000  | 3          |
| 3RVB450  | 450                 | Manual Unloading | 450                       | 1100X350       | 7          |
| 3RVB600  | 600                 | Manual Unloading | 600                       | 1200X450       | 7.5        |

Centrifugal Machines

Centrifugal Barrel Machines

High energy centrifugal finishing machines also known as harperizer systems are the fastest and most cost-effective method for deburring and/or polishing mass parts or individual parts. Extremely high centrifugal forces can be generated on parts with this method. Using this concept in combination with various types of ceramic and organic corn cob media, virtually any part finish is achieved from burr removal to extremely high surface finish polishing.



CENTRIFUGAL FINISHING MACHINE

| MODELS     | NO. OF BARRELS  | FLOOR SPACING (mm) (LXWXH) | MOTOR (HP) |
|------------|-----------------|----------------------------|------------|
| 3RCB30 (V) | 7.5 litres x 4  | 1150 x 1100 x 1550         | 3          |
| 3RCB50     | 12.5 litres x 4 | 2910 x 1300 x 1900         | 5          |
| 3RCB80     | 20 litres x 4   | 3270 x 1250 x 1830         | 7.5        |
| 3RCB100    | 25 litres x 4   | 3330 x 1550 x 2150         | 10         |
| 3RCB160    | 40 litres x 4   | 3950 x 2040 x 2400         | 15         |
| 3RCB240    | 60 litres x 4   | 3950 x 2200 x 2800         | 25         |

Centrifugal Machines

Centrifugal Disc Finishing Machines

Centrifugal disc finishing systems from 3R MASSFIN offer lower operating costs and a better finishing performance than vibratory finishers. Centrifugal disc machines can perform a wide range of deburring and polishing functions at 10 to 30 times the speed of vibratory finishers. Centrifugal disc machines operate using a drum with a disc at the bottom that rotates to create a rolling action with parts and media. The spinning of the disc forces parts and media upward while also providing rotation. Continuous rolling and flowing of the parts against the media provides highly efficient deburring and finishing. The inside of the finishing drum and disc are covered with a polyurethane liner that can stand up to repeated and constant use.

Features

- \*SS Construction
- \* Auto flash manual unloading
- \* Long lasting, high wear resistant PU coating
- \*0.5 mm Gap
- \* Heavy duty Motor
- \* Combination of 2,3 disc are available
- \*PLC panel



CENTRIFUGAL FINISHING MACHINE

| MODELS  | VOLUME OF DISC | POWER (HP) | ROTATING SPEED R/M |
|---------|----------------|------------|--------------------|
| 3RCD20  | 20 ltrs        | 2 Hp       | 230                |
| 3RCD40  | 40 ltrs        | 2 Hp       | 230                |
| 3RCD80  | 80 ltrs        | 3 Hp       | 200                |
| 3RCD150 | 150 ltrs       | 5Hp        | 160                |
| 3RCD240 | 240 ltrs       | 7.5 Hp     | 140                |



ZERO Gap Centrifugal Disc



- Suitable for processing thin part as thicker as .1 mm
- Available in 20litre and 50 litre

3R Mjni- 3 in 1 Table Top Disc Finishing Machines



Centrifugal Machines

Semi / Fully Automated Centrifugal Disc Finishing Machines

Centrifugal Disc Machine can be automated partially fully or such as Auto Unloading Separation, Washing of Parts, Auto transfer of Parts from Machine to Drier, Auto loading of Media, etc. with the help of PLC Control Panel.



CENTRIFUGAL FINISHING MACHINES WITH AUTO UNLOADING SEPARATOR

| Model     | Volume of Disc | Power (HP) | Rotating Speed R/M |
|-----------|----------------|------------|--------------------|
| 3RCDA 40  | 40 litres      | 2          | 230                |
| 3RCDA80   | 80 litres      | 3          | 200                |
| 3RCDA 150 | 150 litres     | 5          | 160                |
| 3RCDA 240 | 240 litres     | 7.5        | 140                |

Magnetic Polishing Machines

The magnetic grinding machines use the force of magnetic field to make the stainless steel pins rotate very fast, and the pins de-burr, polish and clean the work pieces high-effectively and precisely. The magnetic grinding machine are environmental friendly, NO pollution. They do grinding and polishing fast and effectively. They have an excellent ability of fast de-burring, high efficiently grinding small inner holes, inner pipes, crevices, etc. The operation makes no damage to the surface of workpieces, and DO NOT affect the accuracy of workpieces. The magnetic grinding machines are of simple, safe and convenient operation, low cost and long working life. Magnetic machines are available in table top and conveyor type.

Table Top Magnetic Polisher

Suitable for deburring or polishing materials: non magnetized metals such as stainless steel, copper, aluminum, magnesium, zinc etc.



MAGNETIC FINISHING MACHINE

| MODEL      | Size LXWXH    | Tub Size LxW(mm)       | Main Motor        |
|------------|---------------|------------------------|-------------------|
| 3RMF410    | 490X600X1150  | Φ410X235               | 2.0 HP X 1440 rpm |
| 3RMF620    | 750X900X1400  | Φ620X235               | 5.0 HPX1440 rpm   |
| 3RMF1000   | 1800X700X1170 | 1000X560X280           | 5.5 HPX1440 rpm   |
| 3RMF1000/2 | 2700X700X1170 | 1000X560X280<br>02 Nos | 11 HPX1440 rpm    |

Automatic Magnetic Polisher

Suitable for grinding and polishing of extra large parts. The clamps of the machine are to be customized according to the work pieces. The machine is running in circular and automatically



AUTOMATIC MAGNETIC FINISHING MACHINE

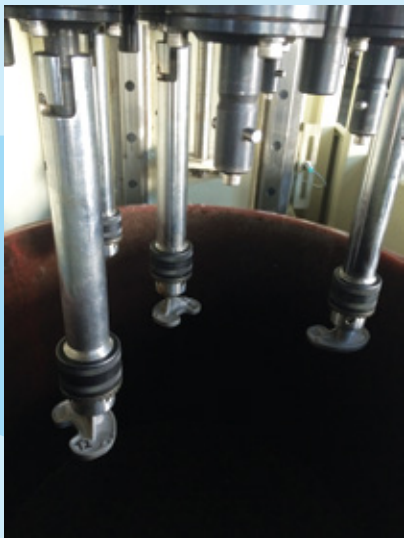
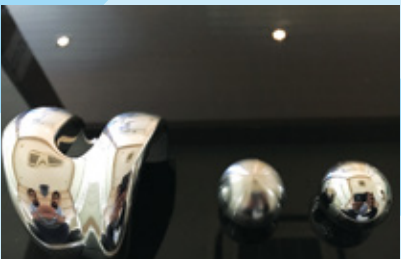
| MODEL    | Size LXWXH in MM | Tub Size LxW(mm) | Power (HP) | Max. Load per Batch (kg) | Weight (Kg) |
|----------|------------------|------------------|------------|--------------------------|-------------|
| 3RMF2000 | 4000X910X1600    | 390X610          |            | NA                       | 2000        |

- \* Clamp need to be customized according to work pieces.
- \* Machine is running automatically
- \* Auto feeding, discharging, changing water, cleaning.



Drag Finishing Machines

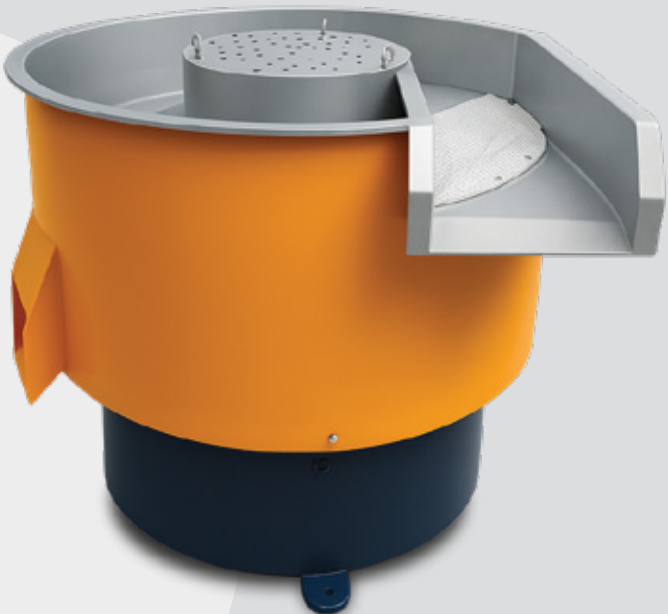
The drag finishing machinery which designed by 3R MASSFIN represents a special technology for surface finishing of high component surface requirement. For example delicate components, parts with specific contours and complicate geometry and extremely strong materials which are hard to machine are example of applications. The applications for the drag finishing technology range from fast surface grinding and milling to surface polishing of delicate components. The suitable components including surgical implants, turbine blades, precision components including pump parts and compressors accessory, wheel rim etc. Drag machines are always customized as per customers demand



Driers

Vibratory Driers

It is used for drying of work pieces after finished process of vibratory finish, especially in cases, when work pieces must not oxidize. Round drier is filled up with drying media (maize grains of different sizes). Wet work pieces are continually loaded in the machine and passing through the process channel in the pre-heated drying medium, which is heated by heating elements in the vibratory drying machine.



VIBRATORY DRIER

| MODEL    | VOLUME | Bowl OD | Heater Capacity In KW | POWER (HP) |
|----------|--------|---------|-----------------------|------------|
| 3RVD 50  | 50     | 650     | 0.75                  | 0.5        |
| 3RVD 100 | 100    | 940     | 1.5                   | 0.75       |
| 3RVD 200 | 200    | 1080    | 3                     | 1.5        |
| 3RVD 500 | 500    | 1340    | 4                     | 2          |
| 3RVD 800 | 800    | 1600    | 6                     | 3          |

Centrifugal Drier

Centrifugal driers are dryers where bin rotate at high speed, water particle will be absorbed by heat and parts will be dried with the help of inbuilt heater. Suitable for small and tiny parts and is not suitable for heavy parts.



CENTRIFUGAL DRIER

| MODEL                     | 3RCD 400                       | 3RCD 500                       |
|---------------------------|--------------------------------|--------------------------------|
| Basket Size               | 39x25                          | 48x25                          |
| Basket Loading Weight     | 35KG or 1/3rd of basket height | 70KG or 1/3rd of basket height |
| Working Temperature       | 60-90'C                        | 50-80'C                        |
| Basket Rotating Speed RPM | 552                            | 470                            |
| Motor Rotating Speed      | 1440                           | 1440                           |
| Motor Power               | 1                              | 1.5                            |
| Dimension in mm           | 850x650x700                    | 1000x800x910                   |
| Weight in Kg              | 160                            | 210                            |

## New Developments

### 1. Dry Electropolishing Machine



3R MASSFIN Equipments is proud to partner with GPA INNOVA to bring their patented dry-electropolishing technology (DryLyte®) to India.

GPA INNOVA's DLYte® systems use a dry electro-polishing process that:

- Does not require liquid electrolytes, reducing waste, handling of chemicals and environmental burden.
- Achieves highly consistent, reproducible, mirror-like finishes on metals while preserving part geometry and avoiding micro-scratches.
- It is suitable for a wide range of materials - stainless steel, cobalt-chrome, titanium, nickel alloys, aluminium, etc.
- Enables processing of complex geometries, tight tolerances, and difficult to access surfaces.

Together, our offering includes appropriate models of DLYte® machines - from compact, workshop- scale units up to production-scale systems - that enable Indian manufacturers to upgrade their finishing capability, reduce manual labour, improve quality and lower processing time.

### 2. Plasma Polishing Machines



Plasma polishing effect is actually using ion discharge, when polishing liquid near boiling, polishing liquid and artifacts, coupled with the high voltage between form after plasma bombardment was carried out on the product surface, the effect of physical bombardment, chemical reaction and point discharge, reaction is very severe. Physical bombardment, tip discharge can smooth the surface of the workpiece, thus polishing and deburring. The chemical reaction can accelerate the surface velocity of the workpiece, remove the elements of the workpiece surface, and form a passivation layer on the surface of the workpiece to achieve the purpose of purification. Plasma polishing technology has been gradually mature in recent years. It is an irreplaceable process in the polishing industry! The application range is wide, the polishing liquid is neutral, no strong acid strong alkali, it is a kind of better than the environmental protection of the polishing process.

Scope: mobile phone, watch, jewelry, glasses, hardware sanitary ware, electronic digital products, auto parts, aerospace military industry Applicable materials: stainless steel series, copper alloy series, zinc alloy series, aluminum alloy series, titanium alloy series, gold, silver and so on.

## New Developments

### 3. Industrial Part Washing And Drying Units



3R MASSFIN offers cost-saving solutions for a wide range of parts cleaning and drying applications. We've applied our engineering and field expertise gained from designing and manufacturing of our deburring systems to create a line of cleaning equipment suitable for applications that require compliance to stringent cleanliness specifications. We offers a complete line of parts cleaning equipment to meet a wide range of requirements. You can choose from custom-designed or standard units, and machines that operate in batch or feed-through processing modes.

#### Conveyor Type

If a continuous, flow-through parts cleaning system is what you need, an 3R MASSFIN conveyor washer could be your answer. 3R MASSFIN is on the cutting edge when it comes to multi-stage conveyor parts cleaning systems. Our conveyor washers are highly engineered, functionally designed, and ruggedly constructed. Choose from a variety of parts washers that include in-line belt washers, U-Bend washers, monorail systems, and custom designed systems. Let our expert lab and engineering staff help choose the perfect cleaning system for you.

#### IMMERSION TYPE

Immersion parts washers clean components by submersing them in an agitated cleaning solution contained in a wash tank. They are used to remove grease, soil, oil, abrasive dust, blast debris, paint, corrosion or other contamination from the surfaces of parts exiting a production line. 3RMASSFIN's flexible line of immersion and ultrasonic washers is available with a host of different options to suite your needs.

#### CABINET TYPE

##### For "on-line" parts cleaning in manufacturing work cells

With an emphasis on quality and compact design, our new line of Cabinet parts washers is the perfect solution for heavy-duty cleaning of large parts or baskets of small parts in a batch style operation.

#### DRUM TYPE

These units are perfect for continuous cleaning & drying of high volume, small parts when part-on-part contact is acceptable. In operation, as parts auger through the machine's processing drum they are first submerged in cleaning solution and then spray-washed. These units are a complete feed-thru operation, which allows for parts to be automatically fed directly from the washer section to a rotary drying system if required.

#### ULTRA SONIC CLEANING MACHINE

#### STEAM CLEANER

## Accessories

### Processed Water Filtration And Recirculation Units



For environmental reason, processed water recirculation is preferred for industrial application. Centrifugal filtration unit separate solid particle from water effectively which can be reused. Standard units are coming with manual sludge removal from the drum periodically. In applications with more water and sludge volumes, manual removal of the sludge from the system is no longer feasible. In such cases, centrifugal systems with automatic sludge removal are utilized. The main characteristic of these systems is that the sludge is “peeled” from the drum wall and is collected in a sludge container located below the drum with variable volume. After peeling, the drum is rinsed to remove residual sludge and to prevent imbalance during subsequent cleaning cycles.

#### Advantages

1. Lower water consumption
2. Lower finishing compound consumption.
3. No choke up in drainage

### Sound Reduction Cover



In order to bring noise level within allowed limit and to make operator's life easy, we recommend sound reduction cover / cabin as per customers choice.

### Control Panel



A Standard control panel comes with starter, timer and VFD in case process or customer demands. A PLC Control Panel generally comes as a part of automation, integration of multiple machines where too many parameters to take care of.

## Accessories

### Magnetic Part Separator



**Movable / Fixed** type magnetic separator come with or without demagnetizer to separate magnetic parts from media after completion of process. The shape and size of separator can be customized according to customers

### Media Separator



In order to make sure maximum utilization of media, 3R MASSFIN come up with worn out media separator. Under size media can be separated by using this equipment. The separator comes with multiple easy detachable mesh on request.

### Dosing Units

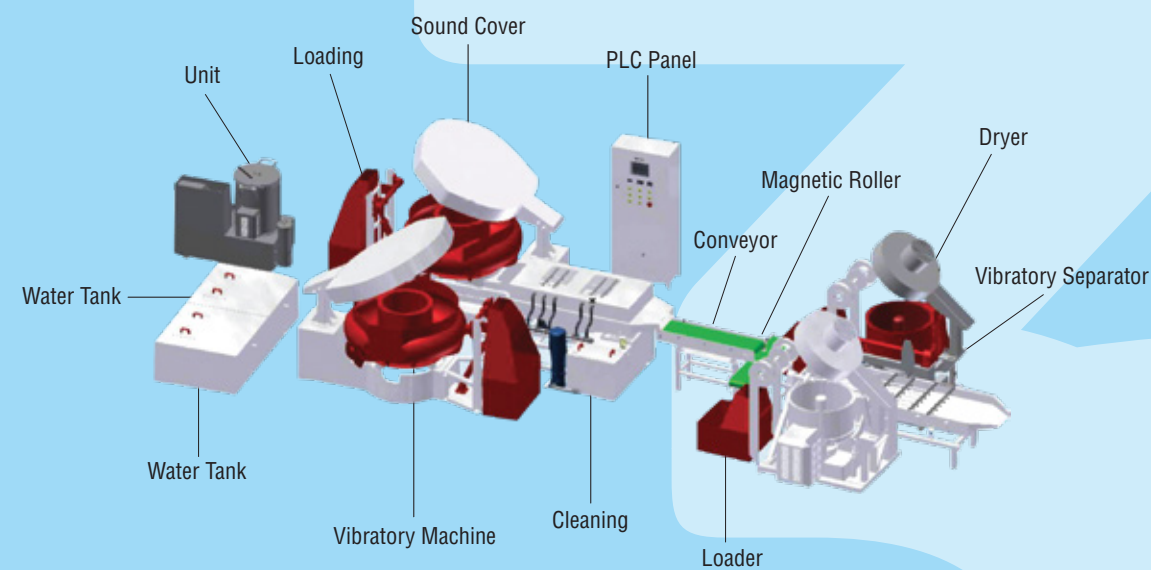


Dosing unit generally use to control chemical and water flow with the help of pump and rota meter.

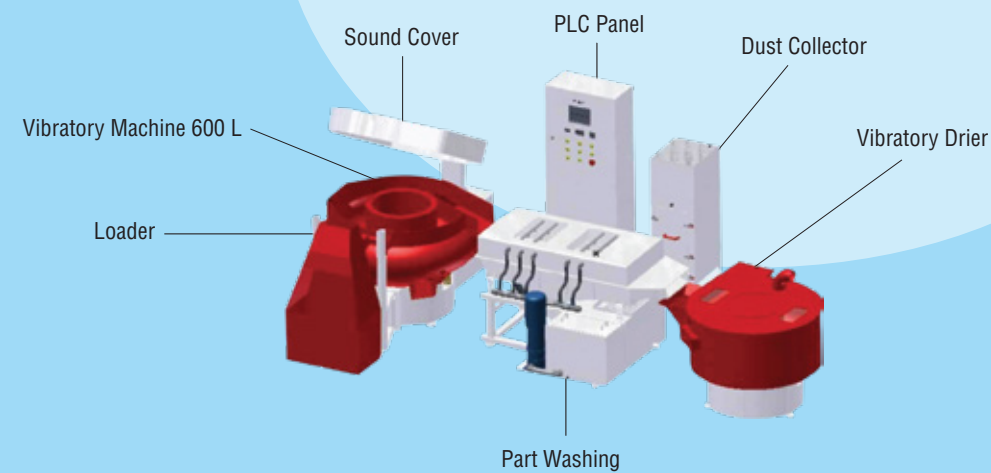
# Automated Finishing Systems

3R MASSFIN Offer custom made integrated system of mass finishing machines with various accessories such as loader,separator,dosing, water filtration,conveyor mechanism etc. which leads in reduction of man power, consistent finish, most economic and high productivity.

## 1. Loader + 2 Vibrator+ Drier + Separator

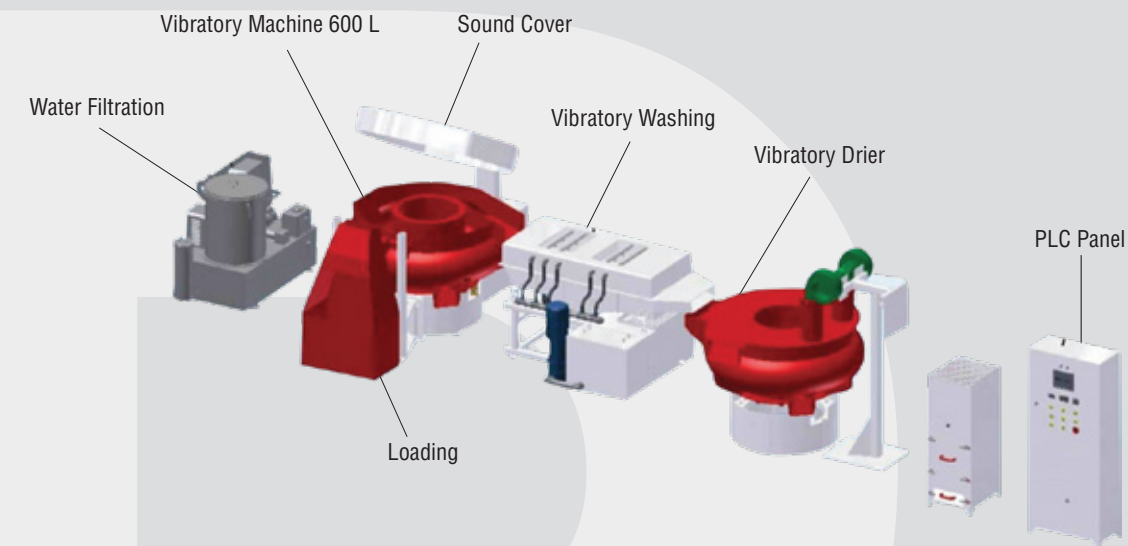


## 2. Loading+ Vibrator +Cleaning + Drying

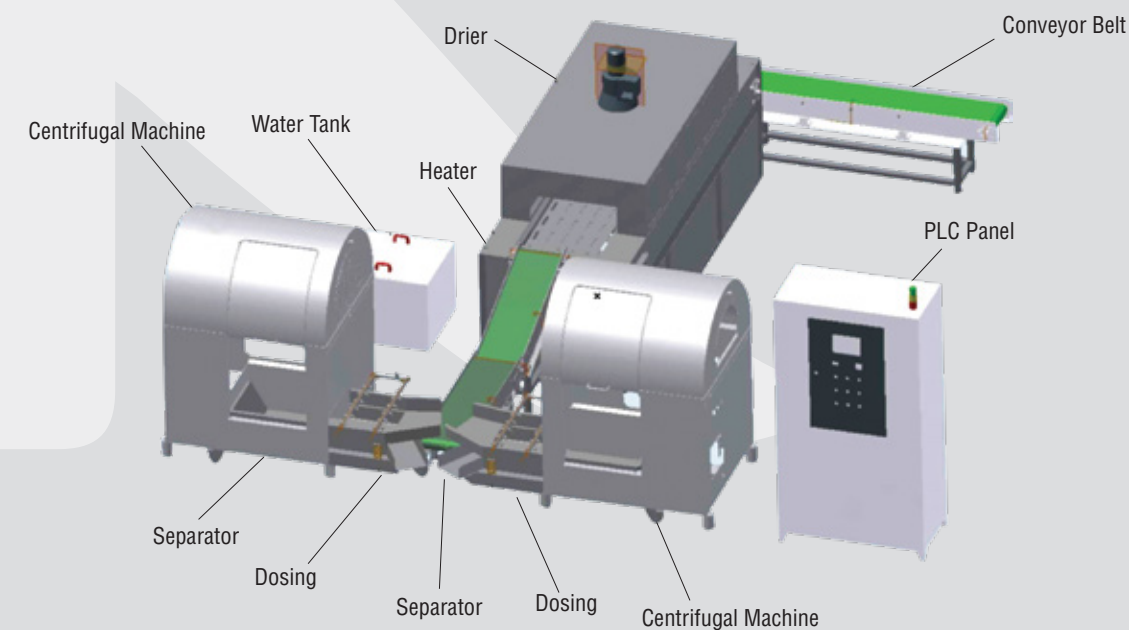


# Automated Finishing Systems

## 3. Loader + Vibrator + Cleaner + Drier + Water Filtration Unit + PLC

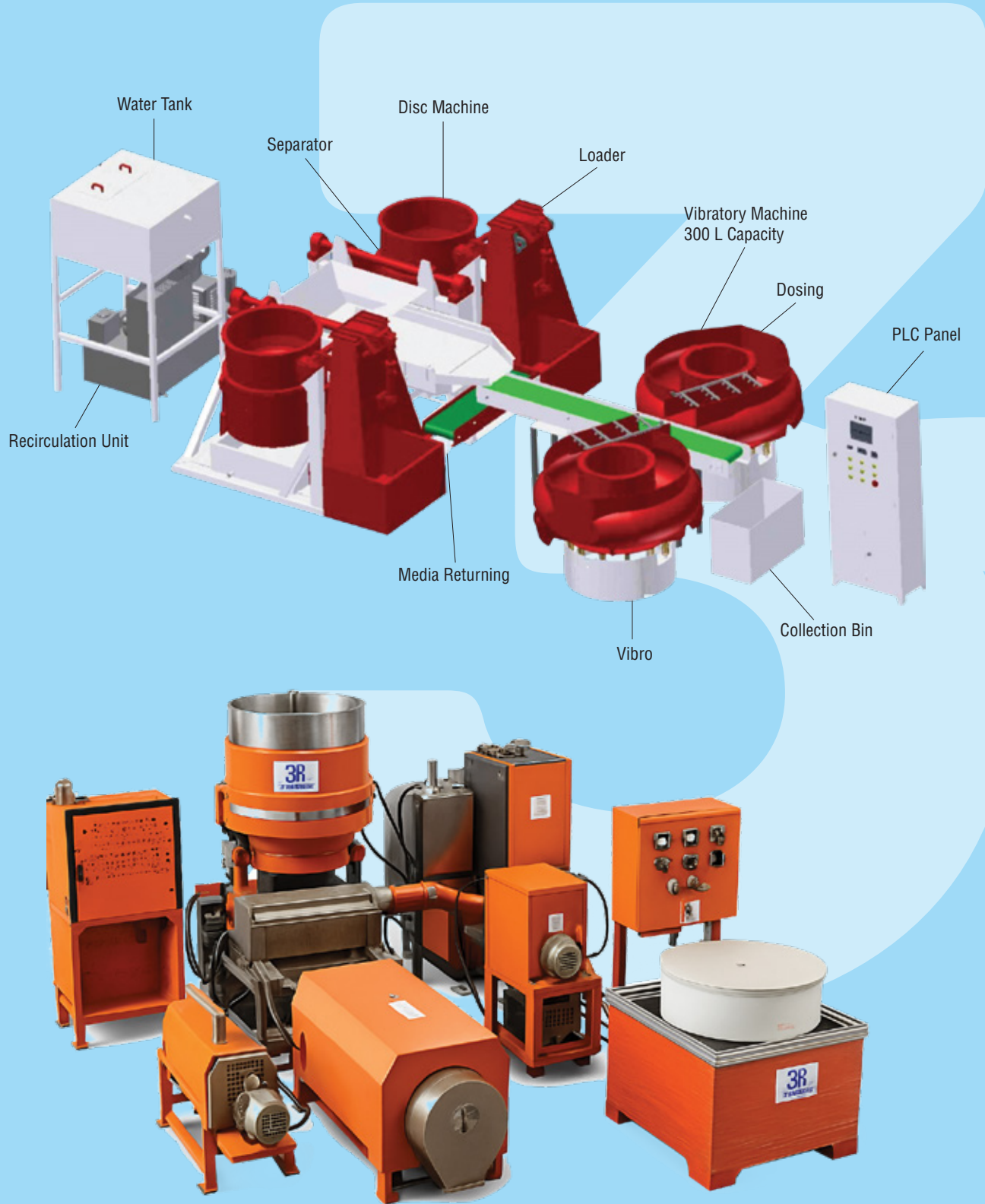


## Centrifugal Barrel Automation



Automated Finishing Systems

Centrifugal Disc Automation



Mass Finishing Medias

Media refers to abrasive or non-abrasive consumable elements used in the surface finishing process. The main function of media is to abrade or polish the edge and surface of components to the desired finishing. Media also keeps the components from hitting each other and serves as a carrier for chemicals used.

CERAMIC MEDIA



|      |       | SHAPE                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| SIZE |       |  |  |  |  |  |  |
|      | SCT   | ACT                                                                                 | SCC                                                                                 | ACC                                                                                 | ACE                                                                                 | C                                                                                   | available against request                                                           |
|      | 3x3   |                                                                                     | 3x8                                                                                 | 2x5                                                                                 | 14x14x8                                                                             |                                                                                     |                                                                                     |
|      | 5x5   | 5x5                                                                                 | 4x8                                                                                 | 3x8                                                                                 | 20x20x8                                                                             |                                                                                     |                                                                                     |
|      | 6x6   | 6x6                                                                                 | 5x8                                                                                 | 4x8                                                                                 |                                                                                     |                                                                                     |                                                                                     |
|      | 8x8   | 8x8                                                                                 | 5x10                                                                                | 5x8                                                                                 |                                                                                     |                                                                                     |                                                                                     |
|      | 10x10 | 10x10                                                                               | 6x12                                                                                | 5x10                                                                                |                                                                                     |                                                                                     |                                                                                     |
|      | 15x15 | 15x15                                                                               | 10x12                                                                               | 6x12                                                                                |                                                                                     |                                                                                     |                                                                                     |
|      | 20x20 | 20x20                                                                               | 10x15                                                                               | 10x12                                                                               |                                                                                     |                                                                                     |                                                                                     |
|      | 25x25 | 25x25                                                                               |                                                                                     | 10x15                                                                               |                                                                                     |                                                                                     |                                                                                     |

PLASTIC MEDIA



|      |       | SHAPE                                                                                |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
|------|-------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| SIZE |       |  |  |  |  |  |
|      | Cone  | Tetra                                                                                | Para                                                                                 | Triangle                                                                             | Tristar                                                                              | available against request                                                            |
|      | 5x5   | 5x5                                                                                  | 10x10                                                                                | 20x40                                                                                |                                                                                      |                                                                                      |
|      | 10x10 | 10x10                                                                                | 30x30                                                                                |                                                                                      |                                                                                      |                                                                                      |
|      | 20x20 | 15x15                                                                                | 40x40                                                                                |                                                                                      |                                                                                      |                                                                                      |
|      | 40x40 | 30x30                                                                                | 60x60                                                                                |                                                                                      |                                                                                      |                                                                                      |
|      | 20x20 | 40x40                                                                                |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
|      | 30x30 | 60x60                                                                                |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
|      | 40x40 |                                                                                      |                                                                                      |                                                                                      |                                                                                      |                                                                                      |

ZIRCONIUM BALLS



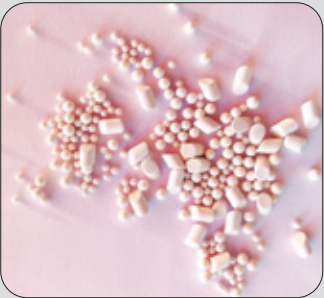
| SIZE | .7-.9MM   |
|------|-----------|
|      | 1.2-1.5MM |
|      | 1.8-2MM   |
|      | 2.2-2.5MM |
|      | 2.5-3MM   |
|      | 3-4MM     |

DRY MEDIAS



|      |      | MATERIAL |         |
|------|------|----------|---------|
| SIZE |      | Concorb  | Waulnut |
|      | 0406 | 0406     | 0406    |
|      | 0608 | 0608     | 0608    |
|      | 1016 | 1016     | 1016    |
|      | 1620 | 1620     | 1620    |
|      | 2040 | 2040     | 2040    |
|      | 4060 | 4060     | 4060    |

PORCELAIN MEDIAS



|      |     | SHAPE |           |
|------|-----|-------|-----------|
| SIZE |     | Balls | Cylinders |
|      | 1-2 | 3x8   |           |
|      | 4-5 | 4x6   |           |
|      | 6mm | 8x12  |           |
|      |     | 7x10  |           |

Finishing Compound



- About Compound
- Enhances finishing efficiency
  - Relives impact of barrel media and subjects
  - Prevents damage in Deburring
  - Removes fat from subjects
  - Alleviates abrasion of barrel media
  - Preserves or improves original colors of subjects

| Name of Chemical | Application                                    | Material        | Form   |
|------------------|------------------------------------------------|-----------------|--------|
| 3RL61            | DESCALING, DEOILING, DEBURRING                 | ALL METALS      | LIQUID |
| 3RL90            | POLISHING                                      | ALL METALS      | LIQUID |
| 3RL22            | DESCALING, DEOILING, DEBURRING                 | ALL METALS      | LIQUID |
| 3RL91            | POLISHING                                      | ALL METALS      | LIQUID |
| 3RL100           | RUST PREVENTIVE                                | MS              | LIQUID |
| 3RL80            | POLISHING                                      | AL              | LIQUID |
| 3RL87            | POLISHING                                      | ALL METALS      | LIQUID |
| 3RL1             | DEBURRING                                      | ALL METALSS     | LIQUID |
| 3RL11            | HEAVY DEBURRING/ CLEANING                      | ALL METALSS     | LIQUID |
| 3RL15            | DESCALING                                      | FERROUS METAL   | LIQUID |
| 3RL15A           | HEAVY DESCALING                                | FERROUS METAL   | LIQUID |
| 3RL88A           | POLISHING WITH RUST PREVENTIVE                 | ALL METALS      | LIQUID |
| 3RL99A           | POLISHING WITH RUST PREVENTIVE                 | ALL METALS      | LIQUID |
| 3RL 79           | MAGNETIC POLISHING                             | ALL METALS      | LIQUID |
| 3RL 15 B         | DESCALING                                      | NON FERROUS     | LIQUID |
| 3RL 15 C         | DESCALING/ POLISHING/ CLEANING                 | STEEL BALLS     | LIQUID |
| 3RL20            | POLISHING                                      | SS              | LIQUID |
| 3RL90            | POLISHING                                      | SS, MS, AL      | LIQUID |
| 3RL44            | POLISHING                                      | BRASS           | LIQUID |
| 3RL55            | POLISHING                                      | AL/ZINC/MAZAK   | LIQUID |
| 3RL77            | POLISHING                                      | FERROUS CASTING | LIQUID |
| 3RL88            | DEBURRING/POLISHING                            | SINTHERED PARTS | LIQUID |
| 3RL99            | DEBURRING/POLISHING                            | BEARING PARTS   | LIQUID |
| 3RL96            | POLISHING                                      | SILVER          | LIQUID |
| 3RL96G           | POLISHING                                      | GOLD            | LIQUID |
| 3RL30            | DEBURRING/POLISHING                            | BRONZE/NICKEL   | LIQUID |
| 3RP40            | DESCALING                                      | FERROUS         | POWDER |
| 3RP50            | HEAVY DEBURRING                                | ALL METALS      | POWDER |
| 3RP60            | DESCALING                                      | FERROUS         | POWDER |
| 3RP70            | DEBURRING                                      | MS PRESS PARTS  | POWDER |
| 3RP80            | POLISHING/DEBURRING                            | MAZAK DIECAST   | POWDER |
| 3RP300           | DEBURRING                                      | ALL METALS      | POWDER |
| 3RPS100          | 3R MASSFIN SPECIAL HEAVY GRINDING              | SS, MS, ZINC    | PASTE  |
| 3RPS200          | DRY POLISHING                                  | ALL METALS      | PASTE  |
| 3RPS300          | 3R MASSFIN SPECIAL FINE GRINDING AND POLISHING | ALL METALSS     | PASTE  |
| 3RL500           | RUST PREVENTIVE                                | FERROUS         | LIQUID |

Case Studies

1. Die Casting Parts

One of the leading manufacturer of Aluminium diecasting parts in India were doing fettling and 2-3 stage of manual buffing to achieve glossy finish required for final assembly on two wheeler. We have supplied an automated vibratory finishing systems where the customer could achieve result directly from fetling to the final finish. Now they are happy with the consistent uniform finish, less rejection, less manual intervention and pollution free working atmosphere.

2. Surgical Implant Manufacturer

One of the largest producer of surgical implants based in Gujarat has approached us with the difficulties they are facing in polishing of implants such as in consistency, non availability of skilled labor, false commitment from other polishing machine supplier. We have suggested a combination of centrifugal disc finishing machine for small implants such as screws, and vibratory finishing machines for larger plates and nails. Unlike other manufacturers of mass finishing machines, we have spent almost 6 month to develop process suitable for them as media impression, dent marks,scratches are not acceptable. Now the customer has recommended other two implant manufactures to contact us for similar application.

3. Sheet Metal Parts

Largest manufacturer of pressed parts manufacturer ( Chain and Sprocket ) in india has been using mass finishing machines for years. They have been facing 30-40% rejection of parts since proper descaling was not happening after hardening hence plated surface getting peeled off immediately, black patches visible even after plating etc. They have approached us for process development and for new machines. We could improve the rejection rate from 40% to 5-8% and they are happy with our service and products.

4. Jewellery

One of the quality jewelry manufacturer in India has bought polishing machine worth more than 1.7 crore e from Germany and US for finishing of their jewelry product to the best quality. They stopped using the machine after few months since they find the machine is not giving desired result, poor recovery of precious metal etc. We happened to visit their factory to understand their problem and with our proper guidance they again started using those machine with a combination of our recently supplied Electro polishing machine to compete polishing of filigree designs.

5. Wooden and 3D Printed Parts

We have supplied specially developed dry process solution to wooden toys manufacturers and 3D Printed Plastic Parts ( Mobile Covers, Spectacle Frames ) for surface smoothing which is ready for final painting.

You may contact us if .....

- You are doing deburring, polishing etc manually and looking for machines
- You are already using mass finishing machines and not happy with the results
- You are already machine user and looking for reconditioning or relining of machines
- You are already machine user and looking for better quality media and chemicals
- You are looking for any automated systems

Free Trial Facility Available at our R&D Centre in Thane, Mumbai





### 3R MASSFIN Equipments Pvt Ltd

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