



SEPARATION MACHINES



SEPARATION MACHINES



GYRO SCREEN FOR WET & DRY SCREENING

SEPARATION MACHINES IS USED FOR SHIFTING,
SCALPING,CLASIFICATION,DEDUSTING FILTERATION, DEWATERING ETC



SEPARATION MACHINES

SEPARATION MACHINES AN INNOVATION IN INDUSTRIAL SCREENING

The “Separation Machines” is a circular highly efficient gyratory screen with adjustable multi plane three component inertial inertial mechanical vibrations. The heart of gyros green is the robust specially made vibrator motor which is designed for long trouble free continuous operation. The vibrator motor has double extended shaft fitted at each end with variable eccentric weight. Motor is rigidly mounted on circular vibrating table on rugged springs. Number of interchangeable spacing frames having discharge outlets along with tension rings fitted with screen cloth can be mounted one on top of the other, on vibrating table with help of clamp rings.



HOW SEPARATION MACHINES WORKS- The top weight of the motor shaft rotates in a plane close to the centre of the mass of assembly. Rotation of the top eccentric weights creates vibration in the horizontal plane which causes material to move across the screen cloth to periphery increasing the top eccentric mass. Increases the horizontal throw causing oversize material to discharge at a faster rate.

The bottom eccentric weight rotates below the centre of the vibrating , mass creating tilt on the screen giving vibration in the vertical and tangential planers. Increasing the vertical component of motion which promotes turn over of material on the screen surface helping maximum quantity of undersize material to pass through the screen .The effective vertical motion helps in minimizing blinding of screen by “near size ” particles. Tech tangential component of motion is controlled by the angle Variation in lead angle controlles the spiral pattern of material travel over the screen cloth. Speed and flow pattern of the material travel over the screen cloth can be set by the operator for maximum through put and screen efficiency for any screenable product ... wet and dry... coarse or fine... heavy or light... Hot or cold. Typical material travel patterns or controlled pathway generated at various lead angles are shown below.



$$\begin{matrix} T \\ \uparrow \\ \alpha = 0^\circ \\ \downarrow \\ B \end{matrix}$$

General Classification
the materials spread
from center to
periphery



$$\begin{matrix} T \\ \uparrow \\ \alpha = 30^\circ \\ \downarrow \\ B \end{matrix}$$

For generally screening



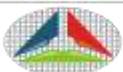
$$\begin{matrix} T \\ \uparrow \\ \alpha = 45^\circ \\ \downarrow \\ B \end{matrix}$$

Precisely screening
the materials have
longest movement
on the surface of
screen



$$\begin{matrix} T \\ \uparrow \\ \alpha = 90^\circ \\ \downarrow \\ B \end{matrix}$$

Special Purpose
the materials spread
from periphery to
center



SEPARATION MACHINES

ISO 9001:2015

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SEPARATION MACHINES FEATURES & ADVANTAGES:- Greater Capacity More Accurate screening Separation Machines gives greater capacity per square meter of screening area and oversize material is discharged with relatively much less percentage of fines than other screening machines.

MINIMUM BLINDING- Gyro screen multi plane action limits screen blinding to an acceptable minimum. However for material having inherent blinding characteristics, Separation offers anti blinding accessories to eliminate blinding.

LONGER SCREEN LIFE:- Screen cloth is held in uniform tension on especially designed mesh frames. The drum tight screening surface vibrates rigidly without flexing of wires, greatly reducing screen ware and increasing screen life.



GYRO SCREEN SPARE PARTS



POWDER HANDLING SYSTEM

This system is PLC controlled and helps in achieving consistent product quantity with Hygiene, Less spillage, Dust free environment,. This system is also called Powder Handling System and is applicable in **Food processing industry, Bakery industry, Chemical industry, Pharmaceutical, Spices industry.**



Flour is drawn from bags using a pneumatic bag tilter.

Flour passes through a magnetic grill to the hopper having capacity 200kg with horizontal screw to the vertical screw to feed the vibro screen sifter into a gradual way. Flour Handling System and Dosing System cater to multiple mixers operating in different recipes. The flour is transferred to weigh station through screw conveyor and is pneumatically transferred to the mixer. Similarly sugar is transferred to creamer from Blow Tank mounted on load cells. Batch wise records are maintained through PLC & data can be seen on PC through SCADA. Accurate dosing record maintained mixer wise, batch wise and product wise.

Flour handling system right from Flour receipt in tankers or bags, flour sieving, metal detecting and storing flour in silos through pneumatic transfer and even flour blending can be supplied along pneumatic weighing and transfer system.

GYRO SCREEN SPARE PARTS & FEATURES





SEPARATION MACHINES



Rotary machinery acts as pre-cleaner, fine cleaner and grader. **Rotary Separation Machines** is used to separate out impurities from the grains which are bigger or smaller than mainstream material size. Reel cleaning machinery is very versatile and it is used in several applications. Machinery can be of single sieve, double sieve or triple sieve in round shape. Machine serves to separate coarse impurities, such as straw particles, string, paper, pieces of wood, leaves and cobs etc and fine impurities such as sand, dust, coarse impurities, such as straw particles, string, paper, pieces of wood, leaves and cobs etc and fine impurities such as sand, dust.

Salient Features of Grain Cleaning Machine:

Robust in construction. Optimum quality raw material. Sieve replacement is easy and quick. Self sieve cleaning mechanism.

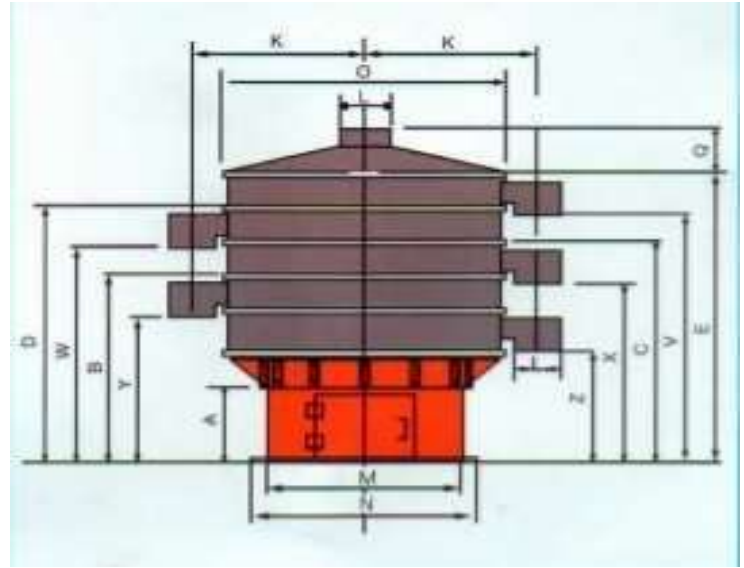


MAGNETS- A bar magnet is an extremely powerful magnet in the shape of a rod, with neodymium magnets embedded inside a stainless steel case. It prevents iron powder contaminating foods, tea leaves and materials. By laying out several bars in a grid to make a filter, it is possible to effectively remove magnetic materials. Bar magnets can be installed firmly by assembling them on a frame. This is suitable for inlets where vibration is dynamically applied.





SEPARATION MACHINES



MODEL	A	B	C	D	E	K	L	M	N	O	Q	V	W	X	Y	Z	MOTOR H.P.
600(24")	305	635	749	863	978	400	152	451	501	622	114	845	730	616	501	387	0.25
750(30")	305	635	749	863	978	490	152	559	635	762	114	845	730	616	501	387	0.25
900(36")	280	724	838	952	1066	571	152	574	680	925	140	929	815	701	587	422	0.5
1200(48")	381	901	1073	1245	1416	743	203	831	921	1206	209	1225	1054	882	711	565	1.5
1500(60")	381	1016	1225	1435	1645	914	203	1010	1118	1524	171	1403	1194	984	775	565	1.5
1800(72")	279	1083	1330	1570	1825	1035	203	1168	1264	1803	190	1559	1311	1063	816	568	2
2100(84")	320	1025	1432			1231	305	1470	1580	2125	220			1158	1025	608	5
2400(96")																	

APPLICATOPNS:-

Abrasives Industries	Biscuits	Bulk Drugs	Calcined Petroleum	Coke Cattle Feed Ceramic
Effluent	Chemical & Pharmaceuticals	Cellulose Powder	Detergent powder	Edible Oil
Shorts& Grits	Fertilizer	Gelatine	Metal Powder	Paints
Pharmaceuticals	Polymer Resin/Plastic	Preparation Plant	Sugar	Activated carbon
Spices	Refractory	Starch Slurry	Bakery	Dairy Products
Aluminum & aluminum	Sulphur Powder	Table Salt	Flowers	Graphite Grits
Carbon Products	Oxide	Animal Feeds	Lactose Powder	Saw Dust
Dewatering Of Slurry	Carpet	Coating Powders	Tobacco	
Flour	Dyes & Pigments	Flavors		
Ice Cream Powder	Glass	Glue/Gum		
Minerals	Insecticides	Laundries		
Slurry	Oxalic Acid	Rubber		
	Steel Shorts	Textile		
Tire Reclaim	Toothpaste Powder	Vegetable Oil	Processing	Vitamins

Address: Plot No-A-1021, Balliram Patil Compound, Near G.R. Patil College, Sonarpada, Dombivali(E) 421203

Office: Mukambica Chs. GI-03/24/03, Sector-6, Ghansoli, Navi Mumbai-400701.

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GST Registration No: 27AEFFS2587F1ZR

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Vibratory Finishing Machine

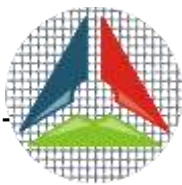
Vibratory finishing machine consists of a bowl lined with polyurethane material which is mounted on springs and uses vibratory motor and unbalanced weights to achieve gyroscopic motion to the workload. Vibratory finishing is used to achieve Deburring, Edge radiusing, Degreasing, Descaling, Polishing, Mirror Finishing and Smoothing of variety of components.

This is the most common method used for deburring and polishing of components which includes sheet metal, machined, cast, forged and moulded parts. A wide range of components of Automotive, Aerospace, Defence and Consumer products can be processed using vibratory finishing machine. We offer following Vibratory machines based on shape of the working bowl.



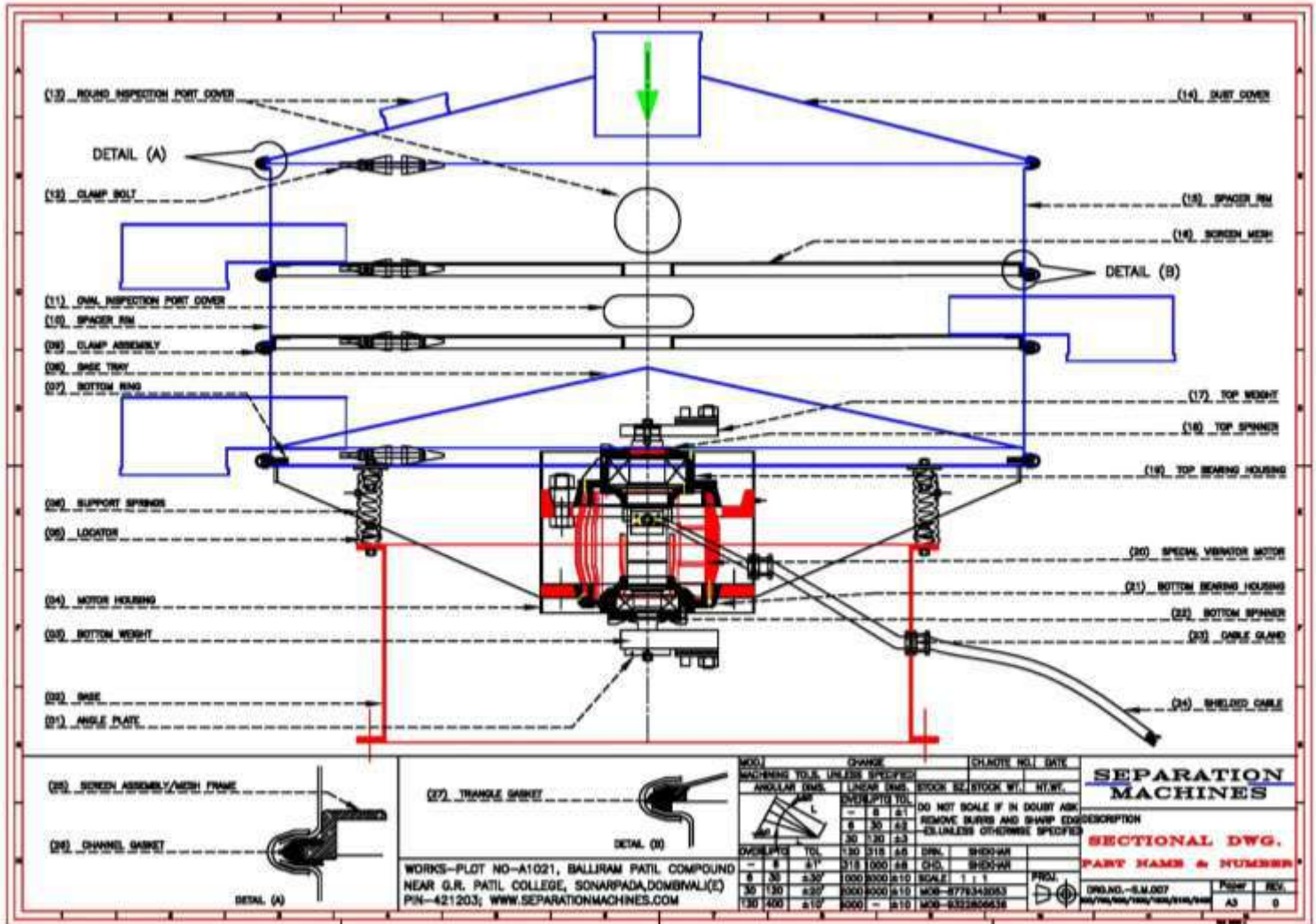
Vibratory Finishing Machine Media and Components





ISO 9001:2015

SEPARATION MACHINES



WORKS—PLOT NO—A1021, BALLIRAM PATIL COMPOUND
 NEAR G.R. PATIL COLLEGE, SONARPADA, DOMBIVALI(E)
 PIN—421203; WWW.SEPARATIONMACHINES.COM

MOD.	CHANGE	DATE	BY
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SEPARATION MACHINES
SECTIONAL DWG.
PART NAME & NUMBER
 PROJ. NO. 010/007
 A3 0

MAJOR USER INDUSTRIES

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

Our Products

Vibratory finishing Machines

Vibratory Finishing Machines are mass finishing machines, used for deburring, polishing, descaling and surface improvement on metal and plastic components.

The machine has steel bowl lined with rubber or polyurethane which is filled up with required media (either ceramic, plastic, 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.

Standard Features

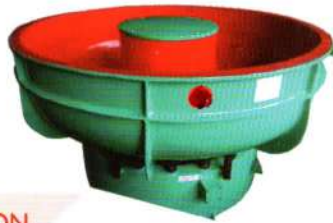
- Effective motor position for Superior Vibration.
- High tensile nut bolts for longer machine life.
- Efficient removal of process fluid for best surface finish.
- Energy efficient motor.
- Bowls shot blasted before and after Polyurethane lining for painting
- All internal welds ground smooth
- Anti rotation motor locking plate provided
- Bowls are stress relieved

Additional Features

- Complete Polyurethane lined bowl including separation area.
- Complete Polyurethane dam to avoid metal contact instead of metal
- Polyurethane corrosion resistant paint for longer life in acidic / alkaline environments
- Accident proof media outlet design for total safety

VFM-STD- MODEL

MODEL STD-MODEL	BOWL OUTSIDE DIAMETER(OD)	BOWL AFTER LINING 'U' WIDTH	BOWL AFTER LINING 'U' DEPTH	TOTAL HEIGHT	VOLUME(LTR.)	MOTOR HP
VFM 40-STD	672	140	170	720	40	0.25
VFM 80-STD	902	211	244	854	80	0.5
VFM 160-STD	1040	250	270	885	160	1.5
VFM 250-STD	1195	290	375	985	250	1.5
VFM 350-STD	1304	340	385	990	350	2
VFM 600-STD	1560	415	413	1030	600	3
VFM 800-STD	1676	434	411	1030	800	5
VFM 1200-STD	2053	600	540	1249	1200	7.5
VFM 2000-STD	2288	680	722	1415	2000	10

**VFM-RD-MODEL WITH SEPARATION**

RD-MODEL	BOWL OUTSIDE DIAMETER(OD)	BOWL AFTER LINING 'U' WIDTH	BOWL AFTER LINING 'U' DEPTH	TOTAL HEIGHT	VOLUME(LTR.)	MOTOR HP
VFM 40-RD	672	140	235	785	40	0.25
VFM 80-RD	902	206	333	934	80	0.5
VFM 160-RD	1040	250	370	975	160	1.5
VFM 250-RD	1195	290	455	1075	250	1.5
VFM 350-RD	1304	340	565	1170	350	2
VFM 600-RD	1560	415	550	1165	600	3
VFM 800-RD	1676	434	611	1230	800	5

Vibratory finishing Machine with Separation

These machines are provided with separation of parts from media with specially designed screens. We custom make these screens based on your part sizes and media chosen for your process. It is possible to automate the entire finishing process.

Bigger size machines will be available on demand

**VFM STD-BALL BURNISHING - MODEL**

MODEL BB-MODEL	BOWL OUTSIDE DIAMETER(OD)	BOWL AFTER LINING 'U' WIDTH	BOWL AFTER LINING 'U' DEPTH	TOTAL HEIGHT	VOLUME(LTR.)	MOTOR HP
VFM 40 STD BB	672	140	170	720	40	0.25
VFM 100 STD BB	1000	240	244	854	80	1.5
VFM 160 STD BB	1040	250	270	885	160	2
VFM 250 STD BB	1195	290	375	990	250	2
VFM 350 STD BB	1304	340	385	990	350	3

Vibratory Burnishing Machine

Burnishing machines are specially designed for the burnishing process using steel media. The motors are designed for excellent cascade of increases work load. Separation is manual.



VFM-BB LONG RADIUS-MODEL WITH SEPARATION

MODEL LONG RDS-MODEL	BOWL OUTSIDE DIAMETER(OD)	BOWL AFTER LINING `U' WIDTH	BOWL AFTER LINING `U' DEPTH	TOTAL HEIGHT	VOLUME(LTR.)	MOTOR HP
VFM BB 80-LONG RDS.	1130	136	407	1032	80	1.5
VFM BB 160-LONG RDS.	1255	192	459	1066	160	2.0
VFM BB 350-LONG RDS.	1910	261	864	1594	350	3.0

Special Features

Specially designed for finishing with steel media heavy duty vibratory Drive System Specially strengthened bowl with Separation.

**VFM-DOME STD- MODEL**

MODEL DOME-MODEL	BOWL OUTSIDE DIAMETER(OD)	BOWL AFTER LINING `U' WIDTH	BOWL AFTER LINING `U' DEPTH	TOTAL HEIGHT	VOLUME(LTR.)	MOTOR HP
VFM 40-DOME STD	608	136	202	753	40	0.25
VFM 80-DOME STD	864	206	299	900	80	0.5
VFM 160-DOME STD	980	250	315	983	160	1.5
VFM 350-DOME STD	1291	340	455	1060	350	2
VFM 600-DOME STD	1510	245	484	1109	600	3
VFM 800-DOME STD	1664	440	554	1180	800	5

**Dome Machine (Curved walls)**

Dome machines have curved bowls that allow larger batch loads and reduced process time. Recommended for light and small components.

VFM-BB-DOME HP-MODEL WITH SEPARATION

MODEL DOME-MODEL	BOWL OUTSIDE DIAMETER(OD)	BOWL AFTER LINING `U' WIDTH	BOWL AFTER LINING `U' DEPTH	TOTAL HEIGHT	VOLUME(LTR.)	MOTOR HP
VFM 40 RD -DOME HP	608	136	202	753	40	0.25
VFM 80 RD -DOME HP	864	206	319	920	80	0.5
VFM 160 RD -DOME HP	980	250	365	1033	160	1.5
VFM 350 RD -DOME HP	1291	340	505	1110	350	2
VFM 600 RD -DOME HP	1510	245	584	1209	600	3
VFM 800 RD -DOME HP	1664	440	674	1300	800	5

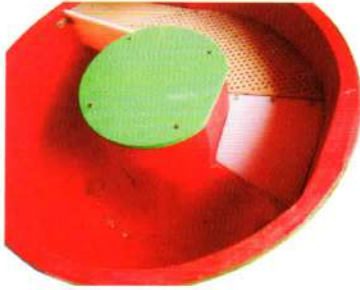
Advantages:

- Fast Processing
- Shorter cycle times
- Higher Productivity
- Cost effective High Polishing process
- Improves corrosion resistance of product
- With auto separation of media nad components



VFM-BUMP- MODEL

MODEL BUMP-MODEL	BOWL OUTSIDE DIAMETER(OD)	BOWL AFTER LINING 'U' WIDTH	BOWL AFTER LINING 'U' DEPTH	TOTAL HEIGHT	VOLUME(LTR.)	MOTOR HP
VFM160-BUMP	1080	256	455	1071	160	1.5
VFM 350-BUMP	1308	351	532	1153	350	2
VFM 600-BUMP	1570	380	545	1170	600	3
VFM 800-BUMP	1664	449	674	1360	800	5
VFM 1200-BUMP	1905	600	880	1415	1200	7.5



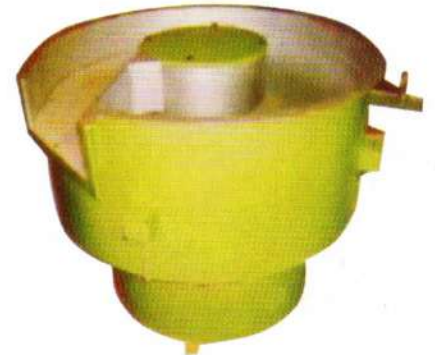
Bump Machine is designed for deburring, polishing, descaling, and antique finishing of any type of metal. It is preferred for heavy duty vibratory action on medium to large size parts. It has a curve wall bowl with 100% separation and manufactured by using cutting edge technologies.

VFD-DRYER- MODEL**For Drying After Vibratory Finishing**

MODEL DRYER-MODEL	BOWL OUTSIDE DIAMETER(OD)	BOWL 'U' WIDTH	BOWL 'U' DEPTH	TOTAL HEIGHT	VOLUME(LTR.)	MOTOR HP	NO. OF HEATERS
VFD 40-DRYER	700	160	292	889	40	0.25	2
VFD 80-DRYER	910	230	410	965	80	0.5	3
VFD 160-DRYER	1076	288	440	1030	160	1.5	3
VFD 350-DRYER	1316	370	555	1197	350	2	4
VFD 600-DRYER	1580	398	656	1300	600	3	4
VFD 1000-DRYER	1951	568	629	1300	1000	7.5	6

Vibratory Dryers Features:

- Continuous and re-circulatory operation can be automated and added to total system
- Mobile, robust, fast and easy to install
- Occupies lesser space
- Adjustable vibration to suit production requirement

**Finishing of Long / Very Large Items**

MODEL LTR. AFTER LINING .	'U' LENGTH AFTER LINING .	'U' WIDTH AFTER LINING .	'U' DEPTH LTR.	CAPACITY LENGTH.	TOTAL WIDTH.	TOTAL	TOTAL HIEGHT	MOTOR HP
TROUGH 250	1160	460	490	250	2082	652	1000	1.5 HP - 2 NO.
TROUGH 500	1755	460	580	500	2762	652	1000	2 HP - 2 NO.
TROUGH 2400	2300	1190	1000	2400	3644	1396	1400	5 HP - 2 NO.
TROUGH 2700	2360	1560	1000	2700	3700	1766	1400	7.5 HP - 2 NO.

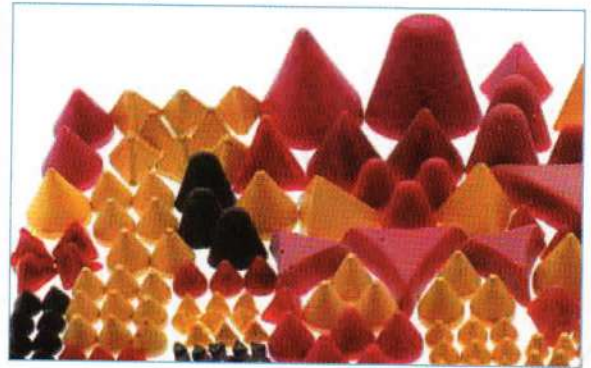
**Advantages:**

- Faster processing than hexagonal barrel
- Can handle small to very large and very long parts
- In-Process Inspection
- Batch or continuous operation

Media & Chemicals

Correct choice of media and chemicals is critical to proper surface finishing.

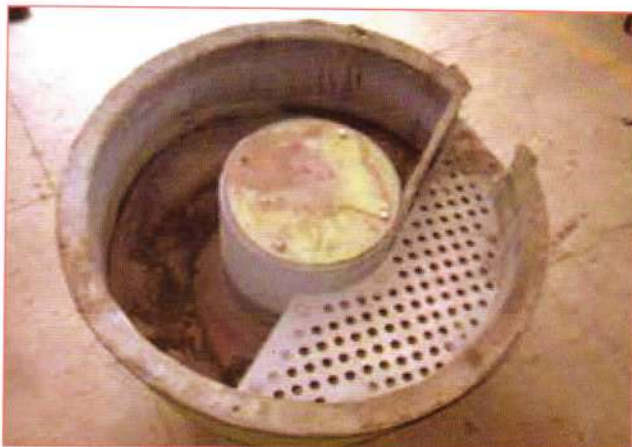
A highly advanced R & D lab decides on the selection of media and chemicals based on the type of material and its geometry. Different types and grades of media ranging from ceramic, plastic, steel, glass to corncobs etc, each with varying abrasive strengths are available. These may be used in combination with highly developed chemical formulations which contribute to the debarring and polishing process, keep parts and media clean, prevent media impingement and assist in achieving the desired finish.



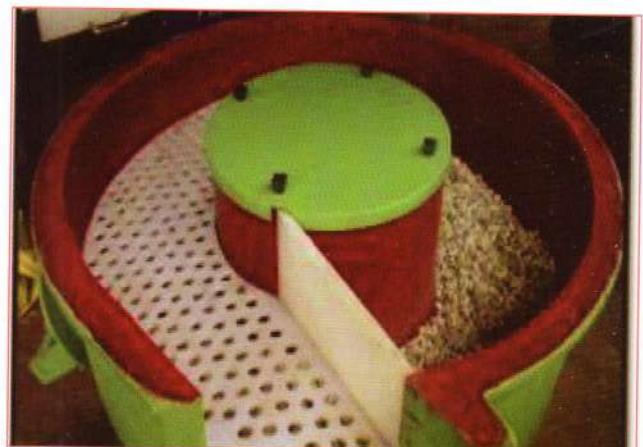
Repairs & Reconditioning

Our machines are sturdy and built to last. With proper care and maintenance they are technically capable of a long life. With our commitment to provide total solutions, the Vibro team undertakes all types of services related to complete Repairs and Relining of equipment. The aim is to make the machines last as long as possible, and we do not recommend purchase of new machines unless absolutely necessary. What's more, we provide repairs and reconditioning services even in the case of finishing machines that have not been manufactured by us.

Before



After



Finishing of Small / Delicate components

Centrifugal Finishing Machines

Centrifugal Finishing Machines are high 'G' force machines specifically developed for smaller components, and for those that require long process times in Vibratory Finishing machines. Smaller machines have removable barrels, while larger ones have fixed barrels with provision for barrel and turret inching. There are several options available - straight barrels, inclined barrels, removable barrels (for small machines), variable speeds, media parts separators, inching arrangements, rubber / polyurethane lining, conveyors, etc.



CFM (Centrifugal Finishing Machine)

Model	MOTOR HP	MACHINE WIDTH	MACHINE LENGTH	MACHINE HIEGHT	BARREL PE LTR/NO. OF
CFM - 10	1.5 HP	950	1050	1160	2.5 PER LTR / 4
CFM - 30	3 HP	1075	1050	1225	7.5 PER LTR / 4
CFM - 40	5 HP	1090	1190	1400	10 PER LTR / 4
CFM - 60	5 HP	1120	1225	1500	15 PER LTR / 4
CFM - 100	10 HP	1420	1965	1800	25 PER LTR / 4

Accessories

Auto Loader

Bin type loader required for transfer of parts from customer bins into the machine. The loader can be customised for component bins used by customers. Efficient, Easy loading & unloading of parts without damage, Heavy Duty and Economical.

PLC Control Panel

A full automation of the system can be done with PLC Control panel where manual intervention is not required. the panel work with touch screen or line display and has HMI with feather touch buttons.

Magnetic Separator

Generally used for Separation from media of ferrous components having similar size. These can be separated magnetically. Magnetic separator can have a inbuilt demagnetiser and in some cases can be used to convey components to the next machine / dryer.



Simple Control Panel



With starter and timers as required.

Upon request it is possible for install a variable speed drive to control the RPM of the vibrating motor.



Dosing Unit

Dosing of right quantity of water and compound is necessary for successful surface finishing. The controlled +ow of chemical and water is done with dosing pump and rotameter housed in a mild steel cabinet. Dosing unit can be integrated with an

Automated Finishing System

Mass finishing is becoming increasingly sophisticated in order to provide a high level of productivity, reliability and consistency of quality as demanded by industry. Vibro Equipments with several decades of experience in mass finishing offers custom-designed Automated systems with integration of operations like loading, washing, chemical dosing, sound dampening, finishing, separation, drying and waste water treatment. The system can be controlled by PLC with detail process monitoring and controlling all aspects of the process.

Advantages of Automation in Finishing Systems

- Increased Productivity
- Consistent Output
- Reduced Operational Cost
- Reduced Manpower
- Better Safety

Vibro Equipments offers automation with the use of latest technology to reduce the need of human work. Higher Productivity and higher output have been the major factors for the increasing demand of automation in the finishing process. Though many may claim that a human can achieve consistent finish using machines, there is definitely an increase in the consistency of finish after every batch with efficient automation



A typical Automated finishing System would consist of:

- Auto loading of parts into machine
- Sound dampening
- Dosing Equipment to feed correct quantity of chemical during process
- Control Panels to instruct the machine as per the processes set for finishing for a stipulated time
- Vibrators / Magnetic Separators for separation and / or washing of parts
- Conveyors for transfer
- Waste water treatment system



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