



**MADHAV  
ENGINEERS**  
Leadership, Innovation & Technology



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 SCAN FOR WEBSITE

## Wet Granulation Close Loop Line



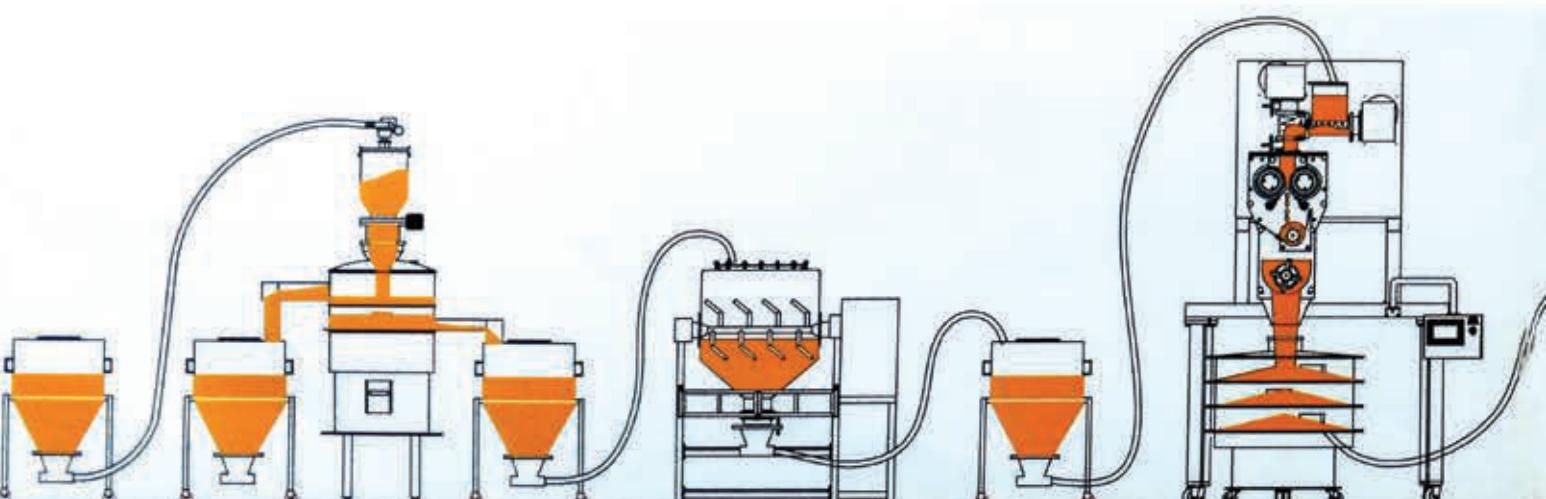
# Introduction

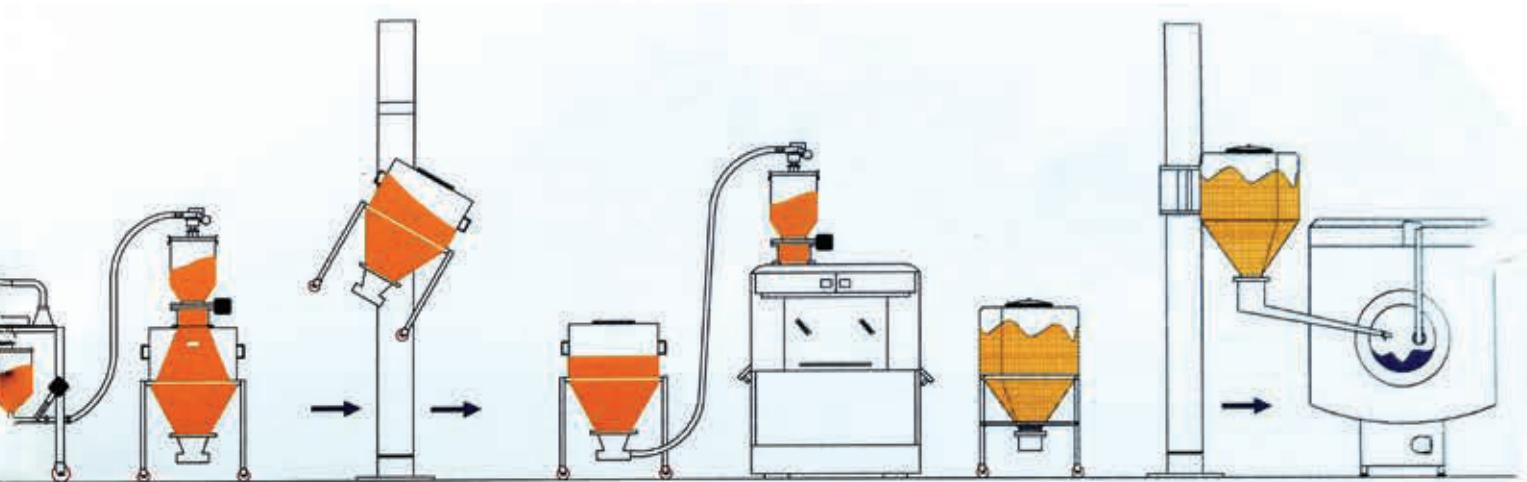
Madhav Engineers Stands out as a prominent manufacturer and innovator of machinery and manufacturing plants based in Mumbai, Maharashtra, India. With a focus on excellence, Madhav Engineers offers top-tier equipment imbued with cutting-edge technology tailored for various industries such as Bulk Drugs, Cosmetics, Food, Pharmaceuticals, and Chemicals. Their specialization extends to automatic processing and packaging machinery for diverse sectors including Pharma, Dairy, Cosmetics & Foods. We adhere strictly to international quality standards while ensuring cost-effectiveness.

Committed to customer satisfaction, Madhav Engineers provides a comprehensive range of services to support their extensive installed equipment base both domestically and internationally. With a track record of over 1,500 successfully installed machines, their internal service team ensures efficient management of installations.

In 2000, Madhav Engineers expanded its offerings by establishing Madhav Engineers in Mumbai, India, focusing on delivering innovative, research-driven pharmaceutical machinery solutions. As a PHARMATECH partner, they offer end-to-end process solutions specializing in Granulation, Liquid Oral and Ointments.

Madhav Engineers has cultivated expertise in enhancing reliability, efficiency, and sustainability in design and manufacturing solutions. Their dedication spans industries encompassing pharmaceuticals, food, nutraceuticals, cosmetics, herbal, and chemicals, serving clients not only in India but also globally.





### The Organization:

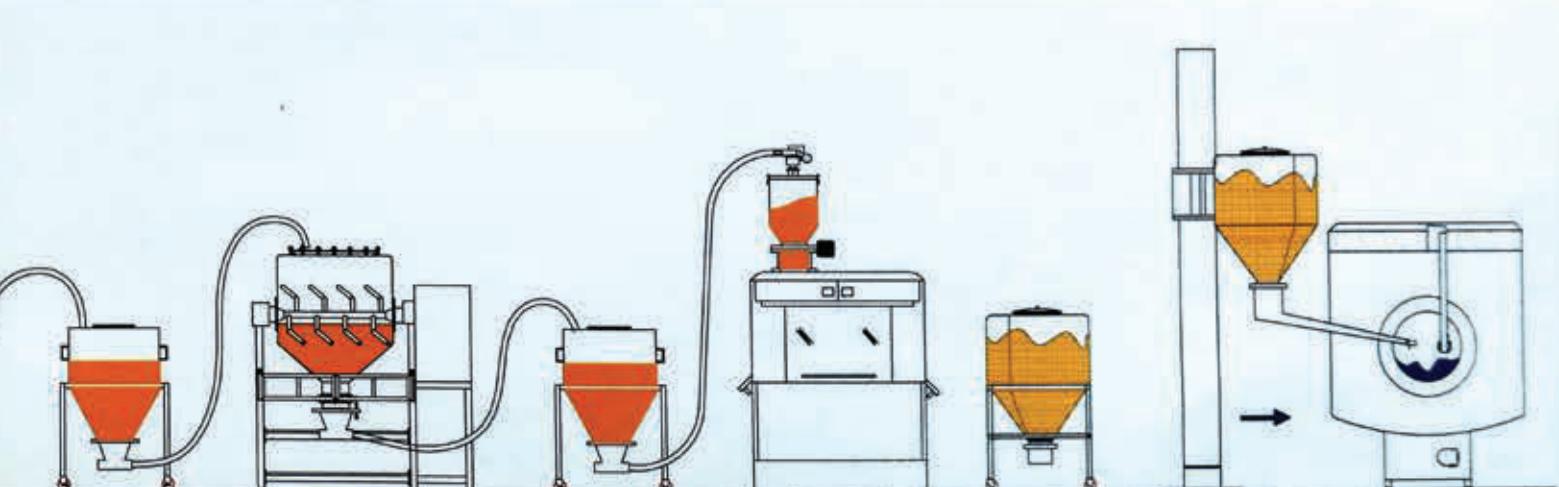
- » Our organization's journey is woven with the threads of human endeavor, innovative concepts, strategic planning, technical proficiency, and product development.
- » It is the harmonious integration of these elements that enables us as an organization to carve out its distinct identity in the market.
- » Through unwavering dedication and commitment, our organization's position is fortified and its impact amplified.

### Quality:

- » Madhav Engineers is unwaveringly dedicated to delivering products and services of the highest quality.
- » Our commitment revolves around meeting and exceeding customer expectations in terms of quality, reliability, and timely delivery.
- » We strive to ensure that our offerings satisfy the diverse needs and preferences of our esteemed clientele.

### Service after sales:

- » At Madhav Engineers, We take pride in our comprehensive after-sales service. Our dedicated staff is committed to adhering to all regulations and timelines, ensuring prompt product delivery.
- » We not only maintain the vitality of our products but also provide extensive training to our clients' maintenance staff, fostering seamless operation and longevity of the equipment.



# TABLET SECTION



## BINDING

### Starch Paste Kettle

Basically this unit is used for preparation of starch paste. Hemispherical shape ensures that the heating of the starch paste is uniform and gets more surface area. The tilting type arrangement ensures ease in unloading the paste into any container or vessel. The starch is put in the kettle and water is added till desired thickness is achieved. The kettle is jacketed and is heated till the starch melts and a thick paste is achieved. This paste can be agitated either manually or with the help of an anchor type agitator which will constantly stir the paste so that there will no lumps formation and proper mixing is achieved.

Temperature can be set to desired temp by adjusting the thermostat provided and the temperature can be seen in the dial thermometer provided.

#### Salient Features:

- » Entire construction in Stainless steel
- » Semi hemispherical bowl ensure that entire bowl can be emptied by rotating the worm wheel.
- » Simplified construction enables ease of operation.
- » Steam or electric heating is possible depending upon the user requirements.
- » When used with stirrer / anchor the movement of anchor is forward and reverse using cyclic timer.
- » Stirrer can be supplied at additional cost.



Model	BTM-50	BTM-100	BTM-150	BTM-200
Gross Volume approx.	50 Liters	100 Liters	150 Liters	200 Liters
Working Volume approx.	37 Liters	75 Liters	110 Liters	150 Liters
Heating Media	Steam/Oil	Steam/Oil	Steam/Oil	Steam/Oil
Tilting Arrangement	Hand wheel type	Hand wheel type	Hand wheel type	Hand wheel type
Motor Power	1 H. P.	1.5 H. P.	1.5 H. P.	2 H. P.

## Rapid Mixer

High Shear Mixer Granulator is a versatile Machine developed for mixing as well as granulation of ingredients. The multi-bladed dual speed impeller is fitted close to the base of the mixing bowl whereas the chopper is mounted on the wall of the mixing bowl. Both the impeller as well as the chopper have dual-speed options for gently distributing the granulating solution as it is added and for fluidizing the charge and creating the vortex of the material being mixed by both vertical and horizontal components.

### Salient Features

- » In compliance with CGMP Guidelines.
- » All contact parts are made of SS 316.
- » Pneumatic product discharge.
- » Top lid is pneumatically operated with interlock of failsafe design.
- » Perfectly engineered mixer & chopper for uniform and homogeneous mixing of substances.
- » Shorter mixing and granulating time.
- » Effective sealing for leak proof operation.
- » Easy to clean & maintain.
- » PLC based operations with color HMI (optional).
- » Variable frequency drives for both motors (optional).
- » In-line co-mill (optional).
- » Basic machine with Pressure switch with interlock for Air Purge application.



Model	RMG 50	RMG 100	RMG 150	RMG 250	RMG 300	RMG 400	RMG 600	RMG 800	RMG 1000
Gross Volume (Ltrs.)	50	100	150	250	300	400	600	800	1000
Working Volume (Ltrs.)	40	80.0	120.0	200.0	240.0	320.0	480.0	640.0	800.0
Optimum Batch (kg.)Max	20	42	60	100	120	160	240	320	400
Capacity @0.5 B.D Min.	10	25	35	60	70	96	145	195	240
Impeller Motor HP	5	10.0	15.0	30.0	40.0	40.0	50.0	75.0	75.0
Chopper Motor HP.	2	3.0	3.0	5.0	5.0	7.5	10.0	15.0	15.0
Compressed Air Pressure (Bar)	4	6	6	6	6	6	6	6	6

All Dimensions are in mm

L	1000	1700	1850	1925	2400	2650	2850	3000
W	500	1050	1100	1150	2350	2550	3000	3200
H	700	1600	2000	2200	2400	2800	3100	3350
B	N.A.	N.A.	N.A.	N.A.	1975	2250	2500	2700
F	N.A.	750	850	900	975	1100	1200	1300
D	N.A.	650	825	900	950	1100	1150	1275



## Ribbon Mixer

### Product Features

- » Available in multiple working volume / capacity
- » Available in stainless steel and carbon steel
- » Ribbon agitator for center discharge
- » One blender can be used for a wide range of batch sizes, ranging from as small as 10% of the rated capacity
- » Designed for atmospheric & vacuum operation
- » - Centrally located Flush bottom discharge valve
- » Stuffing boxes with easily disassembled housings. Pure Teflon gland packing is provided
- » Stainless steel surfaces are polished to desired standards. All exterior non-stainless surfaces are painted with enamel paint

## Mass Mixer

The Mass Mixer is designed for uniformly mixing of dry and wet material and especially suitable for powder of Pharmaceuticals, Food, Herbals, Agro Chemicals & Chemicals.

### Proficient Features of Lab Mass Mixer

Design is cGMP – Current Good Manufacturing Practices compliance.

All contact parts AISI 316 & non contact parts AISI 304.

Uniform Mixing with paddle blade stirrer.

Self adjusting sealing arrangement to avoid entire black particles.

Tilting device for easy unloading and cleaning.

The interlocked acrylic covers of product container, enclosed drive & Overloads relay protection.



Model	BTM-50	BTM-100	BTM-150	BTM-200	BTM-300	BTM-500
Capacity in Kg	50	100	150	200	300	500
Brim Volume in Liter.	100	200	300	400	600	1000
Working Volume in Liter.	80	160	240	320	580	800
Stirrer RPM	30	30	30	30	30	30
Electric Motor hp/kw	3/2.25	5/3.75	7.5/5.6	7.5/5.6	10/7.5	15/11.25

# Fluid Bed Dryer

## Salient Features

- » Short drying time and Low drying temperature
- Uniform drying
- » Compact design.
- Rapid exchange of granules
- » Heating by electricity/steam air heating systems with SS heat exchangers.
- Single piece retarding chamber and finger bag chamber with inflatable gasket.
- » Pneumatic lifting & locking for product container with retarding chamber.
- Contact parts in Stainless Steel 304 quality or 316 quality or 316L quality
- » as per user's requirement.
- Fully automatic bag shaking arrangement
- » Intrinsically safe earthing mechanism Optional.
- AHU with Inlet-air filtration system with 20 Micron Coarse Filter,
- » 5 Micron Pre Filter and 0.3 micron HEPA filters (r) 99.9% as an option
- Differential pressure gauge across micro-vee and filter bag as an optional.



# Fluid Bed Dryer / Processor

# Tray Dryer

In tray dryer, hot air generated by the electric heaters or steam in radiator coils is continuously circulated through the perforated trays with material to be dried. Forced convection heating takes place to remove moisture from the solids placed on trays. Simultaneously, moist air is removed partially. Blower fans or suction devices are installed inside to ensure proper circulation and transfer of heat



## Tray dryer uses in Pharmaceuticals

- » A tray dryer provides a uniform drying process that prevents the materials from getting damaged, this is particularly important in the pharmaceutical industry since the material may be sensitive to heat.
- » It is used to dry materials like; excipients, tablets, powder, and wet granules to dry.
- » It is most efficient to dry for sticky materials
- » Tray drier also used to dry equipment and glassware
- » It is easy to clean and required less time in product-to-product change-over

# MILLING

## Comill

- » Conical Mill, also known as a conical screen mill.
- » This machine used to reduce the size of material uniformly.
- » These machines are used in the food, pharmaceutical, and cosmetic industries.



## Multimill

- » Designed for continuous wet or dry granulation.
- » Beaters & scraper blades made of SS 304 (SS 316 Optional)  
Easy to dismantle and clean
- » Beater drive equipped with reversible switch.
- » Castor wheels provided for mobility.
- » Flameproof electrical components can be provided at extra cost.

## High Speed Turbo Sifter Machine

- » Design is cGMP – Current Good Manufacturing Practices compliance.
- » All contact parts AISI 316 & non contact parts AISI 304.
- » Sieving and milling process are in one operation.
- » Easy movable
- » Easy to dismantle contact parts for clean.
- » Enclosed drive for safety.
- » A C frequency variable speed for sifter and milling drive.



## Vibro Sifter

- » Design is cGMP – Current Good Manufacturing Practices compliance.
- » All contact parts AISI 316 & non contact parts AISI 304.
- » Powerful vibration by gyratory motion by special Vibro motor.
- » Side outlet & fines discharge.
- » Easy movable & clean.
- » Noiseless operation.
- » Lead free and Silicon seal sieve.
- » Compact vibratory design for high speed & dust free sieving.
- » Noiseless and maintenance free machine.
- » All contact parts and screen made of SS 304 (SS 316 optional)
- » Low power consumption compared to
- » reciprocating vibratory system.
- » Easy dismantling and cleaning of contact parts.
- » Machine available with flame proof and double/triple deck options

Model	BTM-SIF-20"	BTM-SIF-30"	BTM-SIF-36"	BTM-SIF-48"	BTM-SIF-60"
Screen Dia.	503 mm.	752 mm.	914 mm.	1220 mm.	1524 mm.
Capacity/Hour*	20 to 200 Kgs.	30 to 300 Kgs.	30 to 325 Kgs.	30 to 400 Kgs.	30 to 500 Kgs.
Charging height	1200 mm without Lid	1050 mm without Lid	1050 mm without Lid	1200 mm without Lid	1350 mm without Lid
Discharging height	720 mm.	670 mm.	670 mm.	670 mm.	670 mm.
Main Electric Motor	0.5 HP	0.5 HP	1.0 HP	1.5 HP	2.0 HP

## Octogonal Blender

- » Design is cGMP – Current Good Manufacturing Practices compliance
- » All Product contact parts AISI 316 & non contact parts AISI 304.
- » Octagonal shape product container for Ideal dry mixer for lubrication of granules and homogenization mixing of multiple batches in to single batch.
- » Available Capacity model in octagonal blender 25 kg to 5000 kg batch size.
- » Enclosed rigid drive with reduction gear box and motor.
- » "A" type rigid structure of the machine with two sides resting of product container.
- » Product container having discharge with butterfly valve and man hole.
- » Charging hole with hinged lid with seal for charging and cleaning.
- » Safety reeling provided for rotating area of product container.
- » Fixed baffles provided for lumps braking.
- » Electric controls panel with cycle time.



## Double Cone Blender

- » Design is cGMP – Current Good Manufacturing Practices compliance
- » All Product contact parts AISI 316 & non contact parts AISI 304.
- » Double Cone shape product container for Ideal dry mixer for lubrication of granules and homogenization mixing of multiple batches in to single batch.
- » Available Capacity model in octagonal blender 25 kg to 2500 kg batch size..
- » Enclosed rigid drive with reduction gear box and motor.
- » "A" type rigid structure of the machine with two sides resting of product container.
- » Product container having discharge with butterfly valve and man hole.
- » Charging hole with hinged lid with seal for charging and cleaning.
- » The product container rotates on sped 8 RPM.
- » Safety reeling provided for rotating area of product container.
- » Fixed baffles provided for lumps braking.
- » Electric controls panel with cycle time.

## V Cone Blender

- » Design is cGMP – Current Good Manufacturing Practices compliance
- » All Product contact parts AISI 316/ 316L & non contact parts AISI 304.
- » 'V' shape product container for Ideal dry mixer for lubrication of granules and homogenization mixing of multiple batches in to single batch.
- » Available Capacity model in octagonal blender 25 kg to 2500 kg batch size..
- » Enclosed rigid drive with reduction gear box and motor.
- » "A" type rigid structure of the machine with two sides resting of product container.
- » Product container having discharge with butterfly valve and man hole.
- » 2 Nos. Charging hole with hinged lid with seal for charging and cleaning.
- » Safety reeling provided for rotating area of product container.
- » Fixed baffles provided for lumps braking.
- » Electric controls panel with cycle time.





## Conta Bin Blender

- » Design is cGMP – Current Good Manufacturing Practices compliance
- » All Product contact parts AISI 316 & non contact parts AISI 304.
- » IBC Bin Blender for Ideal dry mixer for lubrication of granules and homogenization mixing and conveying of the material to further process.
- » Available Capacity: 25 kg to 500 kg batch size.
- » Interchangeable different capacity IBC Bin can be used on same machine use for mixing.
- » This is a closed and contained system where by a single step transfer material from Container of the Conta blender is transferred to the tablet press hopper.
- » In granulation room the dry granules enter to the container for blending through a dust free connection and the same container is loaded over to the blender for blending
- » Totally dust free.
- » Also another advantage is adaptability of this system to handle more than one size of bunkers or containers so processing of different sizes of production batches in single equipment.
- » Enclosed rigid drive with reduction gear box and motor in the machine structure.
- » Hydraulic power pack system for lifting of product bin for mixing.
- » A suitable reeling around the cage with one entry point for the bin on detachable trolley
- » The charging hole with cover is provided on top with quick opening and closing arrangement with dust proof joints for particle free transfer.
- » IBC Bin having discharge with butterfly valve and trolley for easy mobility.
- » Electric controls panel with cycle time

It can automatically complete lifting, clamping, mixing and descending tasks and can be matched with different specification pharmaceutical bins to satisfy large batch and various mixing. Batch size variation achievable in 500 Kg. Model for example, is from 75 Kg. to 500 Kg. using two different sizes of containers.

Controls can be supplied to meet 21 CFR Part 11 – Optional on request.

Supplied as pedestal (stand-alone), through-the-wall or post hoist mounted

Model	300L	600L	750L	1000L	1500L	2000L	3000L	4000L
Types of Blender	Conta/ Octagonal/ Double cone/ Ribbon/ Polygon/ "V" Blender							
Gross Capacity	300L	600L	750L	1000L	1500L	2000L	3000L	4000L
Working Capacity in Kg*	75-120	150-250	190-300	190-300	250-400	500-800	750-1200	1000-1600
Motor HP	3	5	5	5	7.5	10	15	15
RPM**	6/12	6/12	6/12	6/12	6/12	Variable	Variable	Variable

\*Working Capacity depends on the Product bulk density.

\*0.5 Bulk Density considered for working capacity.

\*50% of the volume considered as working volume in Double Cone Blenders

\*80% of the volume considered as working volume in Octagonal, Conta and Polygonal Blenders

\*Will be provided as per the customer specification

Conventional coating machine are used to sugar coat tablets, pills, etc in for a variety of industries such as Pharmaceutical, Confectionery, Food and others. They are also used for rolling and heating beans and edible nuts or seeds.

The product is to be filled inside the pan. During the rotation motion, coating material is sprayed by spraying system according to the technological process and rational technological process. So process materials (product) are coated due to rotating pan. The coating round pot is rotated by variable speed. At the same time hot air is supplied through inbuilt Hot air blower system which dries rapidly (heating or cooling) and evenly thus forming a solid and smooth surface.

## Conventional Coating Pan

- » Design is cGMP – Current Good Manufacturing Practices compliance.
- » All contact parts AISI 316/304 & non contact parts AISI 304.
- » Conventional coating system for manual film coating and sugar coating.
- » Machine is designed with fabricated structure fitted with SS enclosure which makes simple, cleanable outside covering and mounted on anti vibration pad.
- » Closed powerful pan drive with reduction gearbox and motor by variable speed pulley.
- » Movable hot air blowing system with electric heater.
- » Easy to replace polishing pan and other size coating pan.



## Auto Coater

- » Operations in-between batches are flexible.  
Pollution free operations supported by treating the expended air.
- » Adjustable AC Speed Drive in Perforated Pan.
- » Technical operating area installed with Exhaust Air Unit & Entire Inler Air Handler.
- » PLC controlled software & operation for a user friendly experience.
- » Special diverter assemblage for tablet discharging.
- » Inlet & outlet duck attached with pneumatically operated damper to control outlet & inlet air.
- » Process visualization facility with glass contained stainless steel door closed at Pan mouth.
- » Pan containing FLP fluorescent light for radiance
- » AC frequency drive of both the blowers control Inlet & Exhaust flow of air.  
Adjustable spray guns at front entry arm made of stainless steel.

# Roll Compactor cGMP

- » In Compliance with cGMP guidelines.
- » Contact Parts are made of S.S. 316 except rollers.
- » Very compact design available in Plain, Water Jacketed or Flameproof Model.
- » Screw is driven through AC Variable Frequency Drive. Safety slipping clutch between gearbox and feed screw.
- » ELNP (Electroless Nickel Plating) or Hard chrome plated with mirror finished compacting rolls made of tools steel.
- » Rolls drive through twins shaft gearbox with drive unit coupled to it using coupling. which ensures synchronization of the rolls with a steady torque loading.
- » Pre-densifier screw comprises of cylindrical or conical shape, which is well polished and made of AISI SS-316 quality material.
- » The feed screw assembly can be lifted by hand-operated hydraulic pump. This facilitates ease in cleaning.
- » Pre-Compression chamber guides the products to roll without any slippage or leakage.



MODEL	PRC - 200/50	PRC - 200/75	PRC - 200/100	PRC - 200/150
Output *	20 to 60kgs./Hr.	75 to 100 kgs./Hr.	100 to 250 kgs./Hr.	100 to 350 Kgs./Hr.
Roll Size	Ø200mmx50mm(W)	Ø200 mm x 75mm(W)	Ø200 x 100 mm(W)	Ø200mm.x150mm(W)
Roll Drive Motor	5 Hp / 960 RPM / 3 Ph			10Hp/960RPM/3Ph
Feed Screw Drive Motor	3 Hp / 1440 RPM / 3 Ph		7.5Hp/1440RPM/3Ph	5Hp/1440RPM/3Ph
Roll Surface **	Corrugated/Plain/Knurled/Briquetted (Selection depends upon material characteristics.)			
Roll Speed	5 to 25 RPM (Through Step pulley drive.)			
Feed Screw Spped	10 to 60 RPM (Through Mechanical Variator)			



## Roll Compactor cGMP

Online Arrangement of all Roll Compactor Models with Granulator / MultiMill / Co-mill, Shifter & Vaccume Laoding System Also Available

MODEL	PRC - 200/150	PRC - 200/200	PRC-300/150	PRC - 300/300
Output *	100 to 350 kg./Hr.	100 to 450 kg./Hr.	100 to 600 kg./Hr.	450 TO 1000 kg. /Hr.
Roll Size	Ø200 x150mm(W)	Ø200 x200mm(W)	Ø300 x 150 mm(W)	Ø300 x 300 mm (W)
Roll Drive Motor	10 Hp/960 RPM/3 Ph	20Hp/960RPM/3Ph	30Hp/960RPM/3Ph	40Hp/960RPM/3Ph
Feed Screw Drive Motor	5 Hp/1440 RPM / 3 Ph	7Hp/1440RPM/3Ph	7.5Hp/1440RPM/3ph	10Hp/1440RPM/3ph
Roll Surface **	Corrugated/Plain/Knurled/Briquetted (Selection depends upon material characteristics.)			
Roll Speed	5 to 25 RPM (Through Step pull			
Feed Screw Spped	10 to 140 RPM (Through Mechanical Variator)			

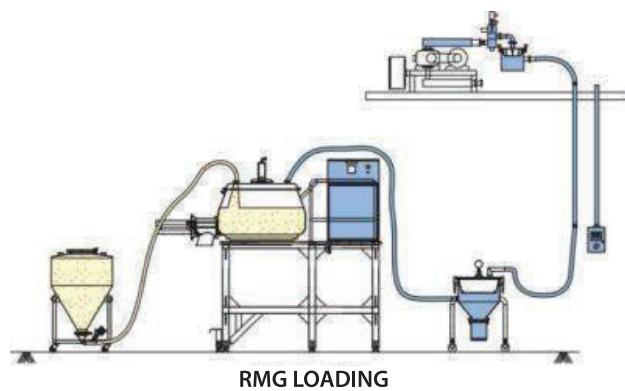
# MATERIAL HANDLING SECTION



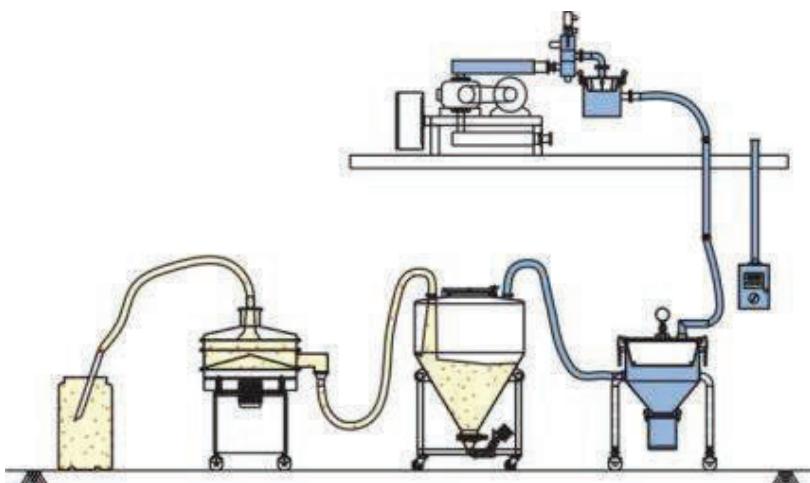
## OTHER MATERIAL HANDLING EQUIPMENT ARE

- » IPC Bins Capacity as per customer requirement
- » Bunkers
- » Powder Storage Drums
- » Sterile container
- » Die Punch Tooling Cabinate (5/6 Drawers)
- » Storage lockers or Cupboard.
- » SS pallet Truck
- » SS pallet
- » Pass Boxes
- » Packing conveyor
- » Drawers & lockers cabinate
- » SS Trays
- » SS Storage Tank Capacity upto 25 kl

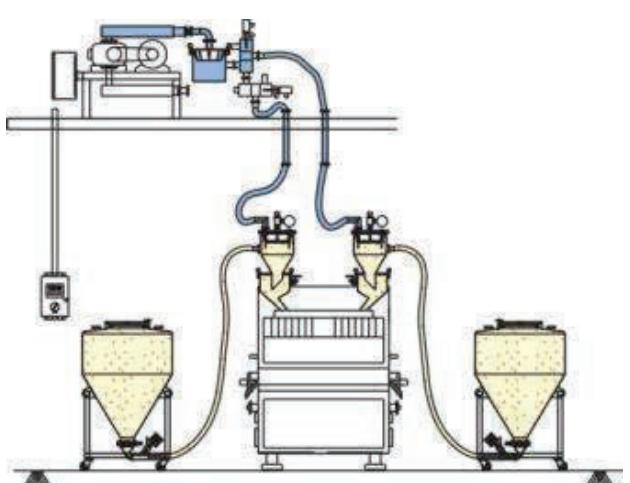
## Vacuum Transfer System



Capacity	100 to 5000 kg/hour
Vacuum Source	Specially designed blower
Filter Cleaning	Air blasted pulse jet system
Discharge	Full opening
Level Sensing	Through level sensor
Material Of Construction	Contact parts SS 316
System Control	Non contact parts SS 304
	Sequential timer or PLC based



IPC LOADING WITH INLINE SIFTING



TABLET PRESS LOADING

# OINTMENT SECTION



## Application:

Pharmaceuticals, Cream, Gel, Sterile & Non Sterile Ointments and Biotech Products

Cosmetics: Cold Cream Hair Dye Cream, Conditioner, Lotions, Gels, Mascara Make-Up, Shampoo, toothpaste.

## Design Base:

- » A Special Pharmaceutical Design enables Application in Biotechnical Process. Material, Surface as well as general design are in keeping with the GMP directives as well as the recommendation of the FDA & USFDA.
- » Vessel design as per ASME guideline and tailor made design as per users / product Requirements.
- » All Vessel are per GMP regulations.
- » Total Plant is design & Supplied as per CGMP Guideline.

## Technical Specification:

- » Choice of Various type of anchor design.
- » Homogenizer (Option) - Top Entry, Side Entry, Bottom Entry with Circulation Facility.
- » Hydraulic Lid Lifting for fast & easy cleaning of top dish & vessel.
- » Load Cell for Fast & accurate measuring System.
- » Flexible Product transfer Pipe & Fitting in case of Load Cell & hydraulic Lifting.
- » VFD for Anchor Agitators to vary the RPM.
- » VFD for Homogenizer to vary the RPM.
- » Specially Design drive Assembly.
- » Total Plant is design & Supplied as per CGMP Guideline.

## Control System:

- » Manual Control - Temperature Indicator/Timer/Single Phase Protection/Push Button to operate the Complete Plant.
- » Auto Control - PLC based with touch screen and pass word level to feed the parameters of process for Heating/Cooling/ Stirrer Timing/Homogenizer Timing / Stirrer Speed / Homogenizer Speed/Vacuum/Pressure / CIP etc. This choice of package to suit requirement to each product.
- » HMI (Touch Screen) for visualization of machines of specific process condition and data.
- » SCADA Package (Optional)

## Control System:

- » 5kg to 3000kgs.



## Colloidal Mill

A Colloidal Mill is a machine that is used to reduce the particle size of a solid in suspension in a liquid, or to reduce the droplet size of a liquid suspended in another liquid. This is done by applying high levels of hydraulic shear to the process liquid. It is frequently used to increase the stability of suspensions and emulsions. The Colloidal Mill is used for various applications such as Superfine grinding, homogenizing, emulsifying, dispersing, mixing and extracting of liquids, ointments and highly viscous products in pharmaceutical, cosmetics, suspensions & emulsion industries.

Model	SPE-250	SPE 500	SPE 1000
Output-Liter/Hour	150 to 1500	150 to 2500	250 to 5000
Rotor Speed-RPM	2800	2800	2800
Hopper Capacity Liter	15	15	25
Partial Size Reduction Micron	5 to 10	5 to 10	5 to 10
Electne Motor HP KW	3/2.25	5/3.75	10/7.5

## Automatic Rotary Tube Filling

Capacity	40-60 Tubes/Min
Machine Type	Automatic
Filling Range	5gm to 250 gm
Filling Accuracy	±1%
Tube Diameter	15 mm to 50 mm
Tube Length	80 mm to 200 mm
Sealing System	Hot Air Sealing
Packaging type	Plastic Tubes



# ORAL LIQUID SECTION



## Automatic Liquid Manufacturing Plant

Manufacturing of syrups, oral liquids, liquid products in pharmaceutical - food, Beverage, Distillery, Ayurvedic industries. Models: from 50- 10,000 Ltrs capacity in fully automatic untouched process or in semi automatic models as per GMP/C-Gmp manufacturing standards with validation documents.

### Salient Features

- » Three Tank Process: Sugar Melting- Vessel-Manufacturing Vessel - Storage Vessel SS-304/316/316L quality
- » The tanks can be mounted on legs or lugs as required.
- » Stirrers/impeller type high speed stirrers, paddle type slow speed stirrer for low viscous liquids & anchor type stirrer for high viscous liquids
- » Jacket for steam heating or electrical heating is optionally provided for hot process
- » Made In SS-304, 316, 316 L In GMP/Non-Gmp Models.
- » Baffles Provided In Vessel To Reduce Mixing Time And Create Turbulence
- » Homogenizer For Homogenous Online / Inline Mixing Of Products/Suspensions Bottom Homogenizer/Stirrer Optional.
- » Conical Pre-Filter/Basket Filter, Zero Hold Up Sparkler Filter Press For Final Filter Provided With Unit.
- » Electropolished Interconnecting Pipeline and TC Fittings for Easy Cleaning & Assembly.
- » Complete Untouched Process Optional With Auto Transfer Of Products & Ingredients.
- » Sight Glass On Manhole For In Process Observation
- » Optional Vacuum Arrangement Provided On Requirement
- » In Built CIP System For Cleaning And Washing Of Vessels From Inside
- » Matt Surface Polish Outside And Mirror Polish From Inside
- » Tank Layout And Dimensions Can Be Designed To Suit The Working Area
- » Load cell-Level indicators can be integrated with system
- » Control panel: Standard control panel / Digital control panel is provided with the plant which includes on/off switches for stirrer, homogenizer, pumps, filter press and thermostatic controller for electrical heating system. Conveniently fitted within easy reach of operator. Pic operated control panel system optional.

All dimensions subject to change without prior notice. Specifications/ Description mentioned shown in picture may vary with different models.





## Semi-automatic Rotary Bottle Washing Machine

Rotary Bottle Washing Machine or rotary bottle washer is compact and highly efficient machine with elegant look. Washer available in sturdy and accurate configuration and offer superior functionality in the pharmaceutical, Food & beverage, Cosmetics, Agriculture and Chemical industries. All contact surface of the machine made from SS 304 or other food grade materials. The machine operates on the rotary movement principal with "GENEVA" mechanism. Our bottle washing machines are offered in safe packaging to avoid any damage during the transportation.

Model	SRWM-64	SRWM-96
Output/Hour*	2600 to 5000	4300 to 7500
No. of Container Holder	64	96
Direction of Machine**	Clock wise	
Electric	Main Motor Pump (2 Nos.)	0.5 HP/415 Volts/50 Hz
Specifications	Electric Heaters	1 HP/415 Volts/ 50 Hz X 2 Nos.
Tank Capacity	3 kW.	
Wash Cycle	75 Ltrs. S.S. 316 (2 Nos.)	
Working Height	4 Inner +1 Outer	
Change parts required	860 mm ± 50 mm (A) Neck Dia.: Neck holding pocket (B) Flat Containers: Special type of cups	

## Liquid Filling Machine

The heavy duty, Single head to six head piston or servo type liquid filler for all types of liquids, creams, pastes, gels, etc. containing particulate matter up to 7/8 in diameter. Volumes dispensed can range from 200 to 100ml per cycle, depending on model selected. During a filling cycle, the product piston travels back to draw product from the hopper into a precision machined cylinder, then extends forward to fill. Product is dispensed into the bag or container through a filling nozzle and/pr cutoff device



Model	SAVLF-50	SAVLF-100	SAVLF-150	SAVLF-200
Output/Hour*	1200 to 3000	2400 to 5500	3600 to 7500	5000 to 9000
Direction of Movement**	Left to Right			
Number of head/Syringe	2 Nos.	4 Nos.	6 Nos.	8 Nos.
Fill Size***	5 ml to 1000 ml			
Electric	Main Machine	1 HP/415 Volts / 50 Hz. (1.5 HP for 1000 ml)		2 HP
Specifications	Conveyor	0.5 HP/415 Volts/50 Hz.		
Height of Conveyor**		860 mm ± 50mm Adjustable.		
Change parts required		(A) Syringes, (B) Nozzle, (C) Inlet & outlet hose pipe.		

# Automatic Single Head ROPP Cap Sealing Machine

Our Machines are widely used in Pharma Syrup, Dry Syrup, Honey, Edible Oil, Lubricant Oil, Hair Oil, Shampoo, Phenol, Fruit Juice, Ready to Drink Juice, Cosmetics, Talcum Powder, Bleach Powder, Herbal Powder, Ayurveda Powder, Wine, Liquor, Electrical Components, Dental Products, Adhesive, Glue, Rubber Adhesive, Stationery, LIP Balm, Petroleum Jelly, Hair Developer, Hair Straightener, Hand Wash, Dish Wash, Hand Sanitizer, Cosmetic Lotion, Hair Wash, etc...



Model	SARCSM-50	
Output/Hour*	1000 to 3000 bottles.	
Direction of movement**	Left to Right	
No. of Sealing Head	1 Nos.	
Electrical	Main Motor	1 HP/415 Volts/50 Hz.
Specifications**	Cap Feeding Bowl	300 Watt, Magnetic coil
Height of Conveyor	860 mm to 910 mm (A) Container: Star Wheel, Back Guide, Feed Worm (B) Cap Die, Delivery Chute, Bowl	
Change parts required		

# Automatic Vertical Sticker Labelling Machine

offers Semi automatic Gum Labelling Machine, Semi automatic Sticker Labelling, Automatic Round Bottle Sticker Labelling, Flat Bottle labelling machine & Horizontal Labelling Machine with very high accuracy without cut and overlapping applicator. This model is fully automatic and has a smooth stainless steel finish, with capacities of 10-30 BPM for Semi automatic Gum Labelling, 10-30 BPM Semi automatic Sticker Labelling, 20-300 BPM for Automatic Round Bottle Sticker Labelling, & 20-300 BPM for Horizontal Labelling Machine

Model	SASLM-100	
Output/Hour*	3600 to 8000 Nos.	
Direction of movement**	Left to Right	
Electrical	Conveyor Motor	0.5 HP/415 Volts/50 Hz
Specifications**	Pressing	0.5 HP/415 Volts/50 Hz
	Device Monitor	
	Servo Motor	400 w
Height of Conveyor	860 ± 50 mm	





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