BIPIN PHARMA EQUIPMENT

Were Quality matters the Most.

www.bipinpharmaequipment.com
www.vacuumtraydryerindia.com

About Us

Bipin Pharma Equipment *is a globally renowned name for Pharma Process Solutions. Founded in 1995 by three enterprising entrepreneurs* ***Shri. Ishwarlal Panchal, Bipin Panchal & Bhupendra Panchal****,* ***Bipin Pharma Equipment*** *started its modest operations at Mumbai (Maharashtra) as a pharmaceutical vessels fabricator.*

Over the last 35 years, ***Bipin Pharma equipment*** *reinvented itself multiple times & has transformed itself as an end-to-end process solutions provider for Granulation, catering to Pharma, Nutra & Food industries, Chemical industries.*

At ***Bipin Pharma equipment****, we believe your business deserves top-class engineering solutions – solutions that are customised to your needs, elevate product quality and are easy to handle. With honesty, integrity, customer delight and innovation at the core of our business, we ensure all our products live up to the promise. All our products are designed, built, delivered & supported by a dedicated team of engineers, technologists & executives based out of India.*

Tablet Section.

BIPIN PHARMA EQUIPMENT

Rapid Mixing Granulator.

- **Application**

Rapid Mixer Granulator is an ideal mixer for pharmaceutical, chemicals and food products, including aqueous and solvent granulation, wax granulation, dry mixing and wet granulation. It is the best in mixing chemicals, food ingredients, and drugs.

BIPIN PHARMA EQUIPMENT is a well-known organisation for a Rapid mixer granulator manufacturer, supplier, and exporter. We have fulfilled every customer's requirements since 1995 from India and all over the world.

- **Working principle**

Spinning of material close to the bottom of the mixing bowl and chopper blade sets the entire mixing in whirling and tumbling motion. Chopper blade assembly breaks the lumps formed during mixing. Different types of chopper blades provided for various applications.

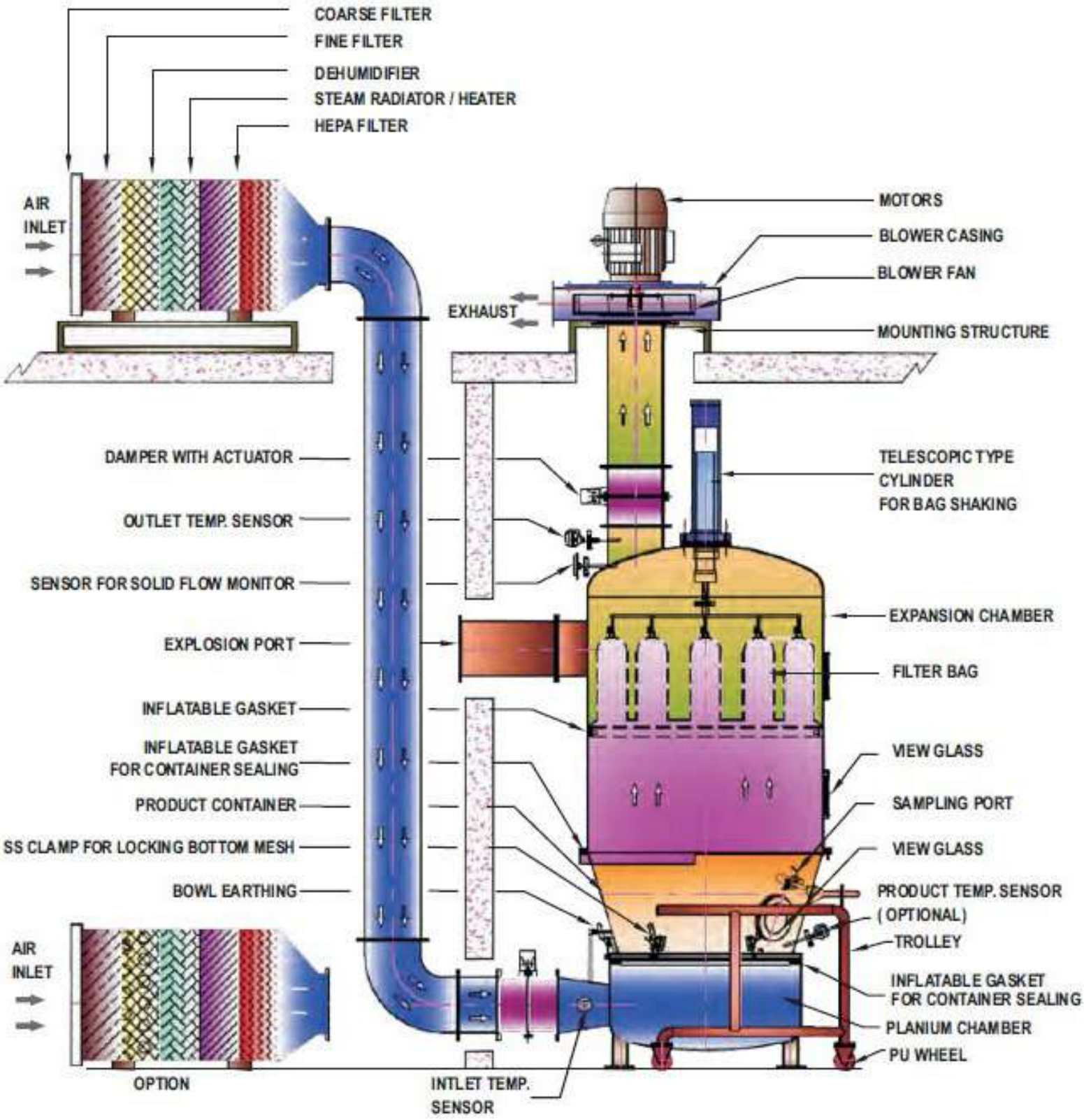
- **Salient features**

GMP Model with SS 316 contact parts. Electrical control panel consisting of switch gears, fuses, motor starter, push buttons, ammeters, indicating lamps, pressure switch, etc. All enclosed in stainless steel sheet metal panel and mini PLC that shows the operation in progress with MIMIC. Granulating blade horizontally rotating at high speed for intense mixing. Mixing blades 3 Numbers for intense mixing. Pneumatically operated bottom side discharge valve. Complete unit is mounted on a rigid structure covered by an S S Sheet. **Bipin Pharma equipment** are the best pharmaceutical machinery manufacturers in India because of its top-quality equipment.

Technical Specification of Rapid Mixer Granulator

Gross Cap Ltrs	Work Cap Ltrs	Main Motor 750 / 1500	Gear Box	Chopper Motor 1500 / 2880	Discharge Ht	Space Required L x b x h mm
25	20	3 / 5	4'	1.5 / 2	600	650 X 1200 X 1100 (1250)
100	80	7.5 / 15	5"	2 / 3	780	1500 X 2200 X 1800 (2175)
150	120	7.5 / 15	5"	3 / 5	780	1800 X 2500 X 1875 (2300)
250	200	25 / 30	7"	3 / 5	1055	2000 X 2800 X 1920 (2450)
400	320	30 / 40	8'	5 / 7.5	1200	2500 X 3000 X 2300 (3000)
600	480	40 / 50	10'	5 / 7.5	1200	2700 X 3200 X 2300 (3000)
1000	600	63 / 85	12'	10 / 15	1200	2900 X 2900 X 2500 (3200)

SCHEMATIC DIAGRAM OF FLUID BED DRYING SYSTEM



Fluid Bed Dryer.

- **Application**

Fluid Bed dryers are arguably used in many industries but it has its greatest importance in the pharmaceutical industry. It has replaced the traditional drying techniques which were time-consuming and have helped to enhance the system. This has led the industry to enter in uniform drying era. It is used to reduce the moisture content of products and granules.

- **Working principle**

Fluid Bed Dryer is composed of a stainless steel chamber having a detachable bottom, which is often perforated and this is called the bowl. Through this perforated bottom, the air is introduced and with the help of heaters that increases the temperature of the air present inside. The heated air is then filtered and is allowed to pass through the bed of the material. Within the system, there is a provision for an attachment of a fan. The fan initiates and monitors the air flow direction. One can also regulate the air flow and the temperature at which the machine is working.

The Fluid Bed Dryer bag expands with the flow of air and powder particles start a turbulent motion. The material gets dry inside due to perpetual exposure to dry air. The material thus exiting the system is once again filtered.

- **Salient features**

All contact parts are S.S. 316 as per GMP Standard.
- Uniform Drying at low temperature
- Intrinsically safe earthing system ensures complete elimination of static charge.
- 65% open perforated air distribution plates along with Dutch weave mesh.
- On line sampling Port. (optional)
- Fan motor unit & Filtration unit can be placed in remote areas
- Heating mode electrical / steam / thermic fluid.
- Pneumatically operated inflatable seals provided for filter bag and product container sealing with pressure switches & FRL to ensure fail safe operation.
- Minimum handling more Hygienic.
- 5kg. to 500kg. batch capacity
- Explosion relief disc.

Multi - Mill.

- **Application**

Multi mill machines are widely used for wet and dry granulation, pulverization etc. These machines find application in pharmaceutical, chemical, bulk drug, cosmetic, dyestuffs and food processing industries

•Multi mill is used for high speed Granulating, Pulverizing, Mixing, Shredding and Chopping, etc, of a wide range of wet and dry materials without special attachments. This machine utilizes the principle of variable force swing hammer blades having both knife and impact edges rotating with a carefully selected screen to control size reduction.

•Flow path of material in vertical rotor machine is streamlined. During comminuting, material entering the chamber travels to the periphery and passes through the screen tangentially and radially avoiding chocking and temperature rise.

- **RANGE**

Product	Model
MML 1	1 HP
MML 3	3 HP
MML 5	5 HP
MML 7.5	7.5 HP

- **Salient features**

- Machine Portable on Castor wheels.
- High output with Process uniformity.
- Direction of the Blade rotation can be changed using a Reversing switch for Hammer or Knife operation.
- Multiple combinations of Screens / Speeds / Number of Blades.
- Direction of blade rotation for every Product type.
- Higher Screen opening area for Higher Throughput.
- Easy Dismantling and Cleaning of all Components reducing.
- Production Downtime and increasing Productivity
- Wide range of SS perforated and Wire knitted screen available for every Product type.
- Minimal material handling resulting in Total Dust free operation.
- Additional perforated screen at the bottom of pulverising chamber ensuring Higher Fineness and Controlled Size of Granules.
- Built in Variable Frequency Drive for multiple speeds.

Vibro Sifter

- **Application**

Vibro Sifter is used for screening, sieving, grading for solid-liquid separation, process to separate the desired elements and the undesired elements from the combination of solid to solid (where two solids are generally having different properties) and solid to liquid material. It used in various industries such as Pharmaceutical, Chemicals, Cosmetics, plastics, paints, plastic, minerals, rubber compounds, metal powders, detergents, pesticides and fertilizers, dyestuff and pigments.

- **RANGE**

Model	Size	Motor	Overall Dimension
VS 12"	12 Inches	Vibratory/0.25 HP / 1440 RPM	1025 mm H x 600 mm W x 400 B
VS 20"	20 Inches	Vibratory/0.5 HP / 1440 RPM	1220 mm x 915 mm x 684 mm
VS 30"	30 Inches	Vibratory/0.5 HP / 1440 RPM	1200 mm L x 750 mm W x 1270 mm H
VS 36"	36 Inches	Vibratory/0.5 HP / 1440 RPM	1300 mm x 600 mm W x 400 B
VS 40"	40 Inches	Vibratory/1.5 HP / 1440 RPM	1350 mm x 600 mm W x 400 B

- **Salient features**

  - SS 316 contact parts
  - Portable and compact.
  - Lower energy consumption compared to reciprocating vibratory system.
  - Standard machines are with TEFC motor.
  - All contact parts and screen of 304 AISI Stainless Steel material.
  - Easy dismantling and cleaning facility for contact parts.
  - Wide range of screen sizes 4-300 mesh.

Octagonal Blender.

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- Uniform Drying at low temperature
- Intrinsically safe earthing system ensures complete elimination of static charge.
- 65% open perforated air distribution plates along with Dutch weave mesh.
- On line sampling Port. (optional)
- Fan motor unit & Filtration unit can be placed in remote areas
- Heating mode electrical / steam / thermic fluid.
- Pneumatically operated inflatable seals provided for filter bag and product container sealing with pressure switches & FRL to ensure fail safe operation.
- Minimum handling more Hygienic.
- 5kg. to 500kg. batch capacity
- Explosion relief disc.

Double Cone Blender.

- **Application**

The double cone blender is used to produce homogeneous solid-solid mixture. Mixing is a common process step in the manufacture of products for industries such as healthcare, food, chemical, cosmetics, detergents, fertilizers and plastics. Double cone solids blenders are widely used in these industries.

- **Working principle**

Double cone blender comes in a standard and compact design. All the powder and granules are loaded into the cone for the mixing process to start. Only two-thirds of the cone is filled to ensure complete mixing. The cone of the double cone blender is placed statistically so the chances of overload on the mixture are eliminated. The paddle type baffle in the cone strategizes the uniform mixing in the cone. The stipulated time is taken to mix which may vary depending on how difficult the substance to be mixed may be. The side-valve then helps in the discharge of the mixed material. The double cone blender has a polished surface which makes it very easy to be cleaned manually.

- **Salient features**

The Innovative Features that Dual Shaped Blender is capable of

- The design of the blender is cGMP which means (Current Good Manufacturing Practices compliance).
- Every product of the machine is either contact parts with AISI 316 or non-contact parts with AISI 304.
- The dual cone-shaped material container is an ideal choice for dry mixing and lubrication of small granule particles & also for making a homogenisation mixture of numerous batches into an individual batch.
- The available range model of the octagonal blender can hold weight from 25Kg to a count of 2500 kg according to the batch size.
- The machine encloses the rigid driving with the help of reduction in the gearbox & motor too.
- There is an “A” type of rigid structure in the blending equipment & 2 of its sides halting the material container.
- The material container has a discharge component along with the butterfly valve & a manhole.
- The charging hole is attached to a hinged lid that has a seal in order to charge & clean material.
- The blender material container rotates at a specific speed of 8 RPM.
- The Safety reeling in the machine provides a rotating area to the container of the product.
- Blender’s fixed baffles afford the ability of lumps braking.
- The electric control panel in the machine is fed with a cycle Time

Paste Kettle.

- **Application**

Pharmaceutical Starch Paste Preparation Kettle / Binder Preparation Vessels (Paste Kettle)
Nutraceutical Starch Paste Preparation Kettle / Binder Preparation Vessels (Paste Kettle)
Food Starch Paste Preparation Kettle / Binder Preparation Vessels (Paste Kettle)
Cosmetics Starch Paste Preparation Kettle / Binder Preparation Vessels (Paste Kettle)
Starch Paste Preparation Kettle / Binder Preparation Vessels (Paste Kettle) Customised sizes available on request.
Starch Paste Preparation Kettle – With Electrically OR Steam Heated model as per customer requirement with capacity LITRES : 60 / 100 / 150 / 200 / 500/ 1000/ 1200 LTR – Customised sizes available on request.

- **Working principle**

Paste Kettle is made from suitable gauge stainless steel material. Machine structure is made of thick stainless steel 304 angles. Top cover of the kettle is loose lid type. So now we look into process operation of the paste kettle. Below is step-by-step process guide of paste kettle machine:

- Open the top loose lid cover and load the starch into container.
- Pour other preservatives or emulsifiers into starch as per product type requirements.
- Material loaded should be filled up to level of anchor stirrer blade only. Excess filling of material may result in overflowing it from the container.
- Close the loose lid of container.
- Provide steam to the jacket (in case of steam heated model) or fill thermic fluid in the jacket (in case of thermic oil heated model).
- Now start the heaters to achieve designed temperature. Set the desired temperature in temperature controller.
- Once you achieve desired temperature then start stirrer of the equipment from the control panel.
- Adjust speed of the stirrer through VFD port onto control panel.
- Switch off heating as & when required as per product type requirements.
- Keep process ongoing for 15 to 30 minutes batch time depends upon product type.
- Once process get finish lift the stirrer assembly by rotating hand wheel.
- Now place storage container below kettle and rotate kettle container by hand wheel to receive finished paste.

- **Salient features**

- Capacity available in 60 to 1200 liters
- Designed with good and effective manufacturing practices
- Tilting unit provided for unloading
- Provided with a coloured touchscreen display
- For Jacketing and Insulation of heating product bowl is present
- Two Heating Options: Steam Heated, Electric Heated
- Digital Temperature Controller for adjusting temperatures
- Jacket with safety valve and vent cock provided with steam accessories
- Provided with electric or steam jacket
- Stirrer with a flameproof drive motor
- Low maintenance and Long Service.

Coating Pan.

- **Application**

A coating pan is a tool used in the manufacturing of pharmaceutical products to coat a tablet with an aqueous or organic film. The coating protects the tablets from physical and chemical damage, as well as disguising their taste.

- **Working principle**

The purpose of this type of tablet coating machine is to have a round metal pan that can be anywhere from 12 to 72 inches. The dish has a slight inclination to the seat top, roughly 45°C. The electric engine in the typical covering dish rotates the round metal skillet on a level plane to its pivot. A cluster of tablets tumbles due to the movement of this skillet.
The conventional pan structure includes an air inlet once again. Occasionally, extremely high temperatures can cause the tablets' basic ingredients to break down or debase. The heated air dries the tablet's coating. All noxious air will exit the framework through the front segment of the standard covering the container once more during the method. This air is carried away by the channel framework's procedures. To smoothly cover the arrangement, this machine uses showering or spooning components. That is, the typical coating mechanism will begin to cover the tablets as the round metal dish pivots.

- **Salient features**

- Coating pan drive can be available with VFD for pan speed variation which required in both film as well as sugar coating
- Spraying systems is also available with the unit
- Polishing pan is made suitable on the same drive of coating pan drive
- Hot air / Cold air blowing system used for tablets.
- Model available in sizes 12", 24", 30", 42", 60" & 72"
- Hot air blower system with mobile trolley and filter housing will be provided with TIC or PID type temperature controller for control of air temperature within the range of 50 degree C to 80 degree C
- Hapa filter unit (optional) can be provided along with inlet ducting lines
- Other options such as FLP motor & panel, steam heating unit can be provided