

**Manufacture and designer of Pharmaceutical Machineries ..**



### **FLUID BED DRYER (FBD)**

- Compact Design: The equipment is designed with minimized equipment sizes.
- High Drying Rate: The Fluid Bed Dryer offers a high drying rate.
- Turbulent Motion and Uniform Drying: As the air flows through the bed of material, the powder particles start a turbulent motion
- Operation : PLC + HMI for machine control in manual and automatic mode, with recipe editing.
- High performance AHU unit with sandwich panel for energy efficient.
- cGMP construction with contact parts SS316/SS316L and non-contact SS304



### **RAPID MIXER GRANULATOR (RMG)**

- The machine is designed as per standard of Current Good Manufacturing Practices cGMP.
- Vessel cylindrical design with conical top for optimum mixing quality and wide utilization range
- Chopper and impeller Tangentially attached for Effective compaction of granules and breaking up of lumps
- Minimum bottom and wall clearances for maximum product yield
- 21-CFR part 11 compliance for data integrity and storage (Optional)
- Equipped with direct Cone Mill attachment for high efficiency



### TRAY DRYER (12 TO 96 TRAY)

- Versatile designed to provide uniform drying throughout the material being dried.
- Tray dryers are easy to operate, and the drying process can be controlled with precision.
- Special design of the Blower maintains homogeneous air circulation
- cGMP construction with contact parts SS316/SS316L and non-contact SS304
- Flame-proof construction with explosion flaps, non-sparking metal combinations
- Heating can done through Electric heater/steam/Thermic fluid
- In-built inlet blower with pre-filter and exhaust filter.



### VACUUM TRAY DRYER (12 TO 96 TRAY)

- Vapors condensation unit and receiver aids solvent recovery
- Provision for Explosion Vent / Rupture Disc on body & Validation Port on Body after Drying due
- The manifold connection position inhibits product contamination
- Tunnel type dryers wherein trolleys can be placed one behind the other and loading-unloading through the double door.
- Steam / thermic fluid heat exchanger tested at 20 Kg/cm<sup>2</sup> hydraulically
- cGMP construction with contact parts SS316/SS316L and non-contact SS304.
- Complete Automation w/ PLC controls (Optional)



### ROLL COMPACTOR

- Very compact design available in Plain, Water Jacketed or Flameproof Model.
- Compacting rolls are driven through specially designed twin gearbox. This ensures perfect synchronizations of the roll with a steady torque loading.
- ELNP (Electroless Nickel Plating) or Hard chrome plated with mirror finished compacting rolls made of tools steel.
- Conical predensifier screw is supplied. The screws are cylindrical at base to enable accurate metering.
- Feed screw is sleeplessly driven through variable frequency controlled speed drive
- All contact parts are made of SS304 / SS316. All covers are designed to obtain dust-free operation
- Jacket feed hopper and jacked side wall (Optional)



**ROLL COMPACTOR**

### SPHERONIZER CUM EXTRUDER

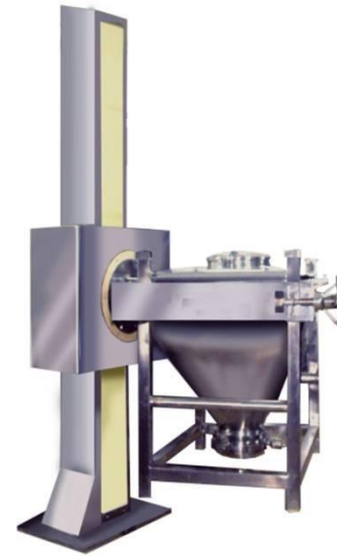
- Pre-densifier screw comprises of cylindrical or conical shape, which is well polished and made of AISI SS-316 quality material
- The feed screw assembly can be lifted by hand-operated hydraulic pump. This facilitates ease in cleaning.
- Various mesh sizes possible depending on the design of extrusion
- Complete flexibility in choosing the right equipment for product and process due to a vast range of extrusion equipment
- win spheronizer with bucket assembly is fitted below the extrusion module
- All contact parts are made of SS304 / SS316. All covers are designed to obtain dust-free operation
- Forming of extrudes / pellets between 0.4 mm and 3 mm diameter.
- Capacity up to 50 To 200 kg/hr



**SPHERONIZER CUM EXTRUDER**

## PILLAR CONTA BLENDER

- **Design is cGMP – Current Good Manufacturing Practices compliance.**
- Interchangeable different capacity of IBP Bins can be used on same machine used for mixing
- Interlocked clamping and blending for 100% fail-safe operation
- PLC & HMI based operating console
- Obtainable Capacity for 25 kg to 1200 kg batch size and Custom Design Available.
- All Product contact parts AISI 316 & non contact parts AISI 304.
- Safety reeling provided for rotating area of product container.
- Vacuum conveying system used for powder transfer (Optional)



**LIFTING &  
POSITIONING DEVICE**



**OCTAGONAL BLENDER**



**DOUBLE CONE BLENDER**

### CO-MILL

- High speed milling, granulating and size reduction by rubbing process.
- Uniform size reduction of wet material with Cone blade with cone type sieve for size reduction.
- Heat generation in co mill is comparatively very low as it works on forced pressure
- S.S. Perforated Screen for Co-Mill 10mm,6mm,4mm,2mm & 2.5mm
- All Product contact parts AISI 316 & non contact parts AISI 304.



### MULTI MILL

- Product Capacity: 50 Kg/h To 250 Kg/hr
- Contact parts SS 316, Non contact parts SS 304 with Mirror/Mat polish
- Design is cGMP - Current Good Manufacturing Practices compliance  
Easy Dismantling & Cleaning and change over
- Multiple combination of Perforated Screen, Speeds, Number of blades.
- 12 nos. beater with knife edges, impact & 02 nos. scraper blades
- AC Frequency and Beltless drive & online granulation model available



### 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.
- Lead free and Silicon seal sieve.
- Output capacity 50To 500 KG /HR





### **FBD FINGER BAG WASHING MACHINE**

- Fully-automatic FBD finger washing machines with touch operating screen
- **F**ront load provision with pre define recipe
- Auto water filling, washing and drainage cycle.
- All Product contact parts AISI 316 & non contact parts AISI 304.
- High performance and easy operate



### **AUTOMATIC DUCT CLEANING SYSTEM**

- The most effective automatic duct cleaning technology.
- Auto movement of hi pressure nozzle through the duct
- Effective cleaning with Hi Pressure @ 150 Bar
- Compact unit easy to move from place to another place
- Interlocking with low water level and low water pressure



### **HI PRESSURE JET CLEANING SYSTEM**

- Automated Hi pressure jet cleaning systems design to clean and sanitise more effectively and consistently than manual cleaning
- Optimization of the uses of cleaning agent and water
- Hi pressure pump design @ 170 Bar for effective cleaning where hard to clean (Equipment/Area)
- Available in SS 304 and SS 316





**STORAGE VESSEL**



**MANUFACTURING TANK**



**INPROCESS CONTAINER-IPC**

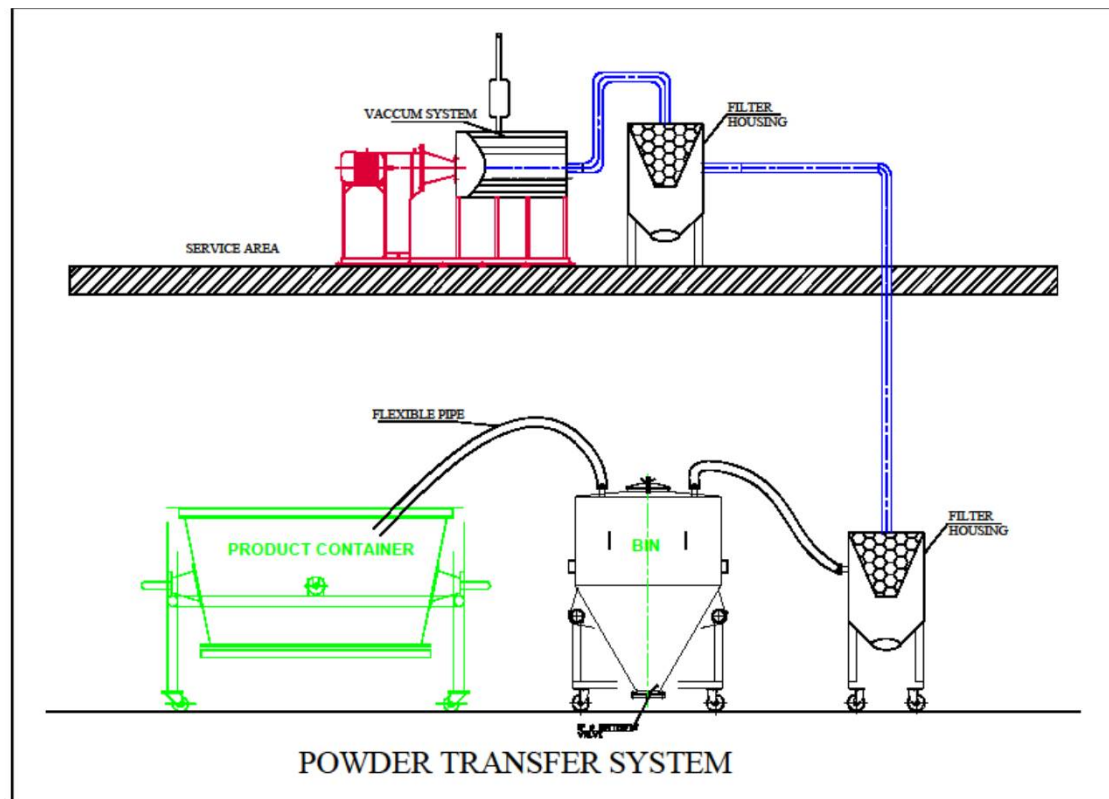


**BLENDER BIN**



## POWDER TRANSFER SYSTEM (PTS)

- Fully automatic system, with timing controls and automatic air purging system for filter cleaning.
- Design is cGMP – Current Good Manufacturing Practices compliance.
- Option for Inline Milling, Sifting with Blender and Loading material to RMG, Tablet press & Vessel.
- Can be used for transfer of products having bulk densities up to 1.0gm/cc.
- Vacuum Blower and cyclone filter can be installed in service area
- All contact parts AISI 316 & non contact parts AISI 304
- Capacity available 100 Kg to 5000 Kg/hr.



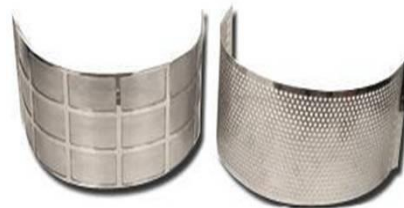
## **SPARE PARTS**



**CONE MILL SCREEN**



**MULTIMILL SCREEN**



**CAD MILL SCREEN**



**MULTIMILL BLADE SET**



**MULTIMILL BLADE**



**SIFTER SIEVE**



**SIFTER DISCHARGE CHUTE**



**MULTIMILL HOPPER**



**SIEVE INSPECTION HOOD**



**POWDER DISCHARGE CHUTE**



**DISCHARGE VALVE**



**PU CASTER WHEEL**

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