



GRANULATION LINE

MECHANICAL SIFTER & VIBRO SIFTER



We offer top-class vibro sifters that are circular gyratory screens, vital to separate solids from solids and liquids from solid. Our range is available in different diameters of 20", 30", 36" & 48". We can also customize our vibro sifters as per the client's requirements. Some of the salient features of our vibro sifter encompass of the following:

Faster output at low power consumption, Double deck arrangement can be provided.
Fitted with Vibro Motor Provided lid for dust free operation.

Faster separation, Process adaptability, Long screen life lesser maintenance and power consumption than conventional sifters high capacity and optimum use of space Widely demanded worldwide, our vibro sifter has following special attributes as well Stainless steel GMP construction with S.S.304 or 316 contact parts.

PASTE KETTLE



The tilting paste kettle, is designed for paste preparation. It has a universal application resulting in uniform melting. This tank is designed to meet missing needs of wider range of products under varied operating conditions in Chemicals, Foods, Cosmetics and Pharmaceutical Industry.

The basic principle utilized in the design of this kettle is the jacket for passing steam in order to melt down the product to make paste. This kettle has an unique tilting arrangement for discharging the product.

MULTI MILL



Multimill is used for wet granulation, pulverization in pharma & chemicals industries it operates on the principle of variable force swing beaters having both knife & impact edges rotating within a selected screen to get the required size reduction. Material fed in the hopper passes down to the processing chamber where it moves to the periphery and passes through the screen radially and tangentially. Finally the processed material gets collected in the container kept below the processing chamber.



GRANULATION LINE

RAPID MIXER GRANULATOR



GEM Rapid Mixer Granulator is designed to achieve excellent mixing and consistent granules at lower operating cost along with higher productivity. Better mixing and closed control of granule size leads to faster tableting speeds with improved quality and least rejections.

Salient Features :

- Homogeneous binder distribution.
- Short batch time and reduce cleaning time.
- Maximize CIP effectiveness.
- Air purge sealing system for main stirrer shaft and granulator shaft.
- All internal contact parts are polished to the mirror finish.
- PLC based operating panel for precise control of process & automation.
- A high-speed granulator is inserted horizontally through wall of bowl to assist blending of powder and to break the product to the granules of required size.
- The seal housing and drive shaft may be flushed with cleaning water, which is then drained away from the machine through built in drain tubes.

FLUID BED DRYER



GEM **Fluid Bed Dryer** is used for processing of various minerals and chemicals in the Pharmaceutical industry. our fluid bed dryer is known for its features of high performance, efficiency, flexibility and fast processing.

These **Fluid bed dryer** in standard and customized options, as per enjoyment of our clients. Our fluid bed dryer consists of a simple drying unit and helps in the conversion to a granulation or coater when optional packages are incorporated. These dryers are available in standard pneumatic logic and sophisticated computerized controls and are also offered in Steam heated Model. Our dryers provide simple solution to dry products and are high in performance as compared to the conventional drying method in tray dryers, which is rather inadequate & troublesome.

Salient Features:

- cGMP standard constructed in 2 bar pressure.
- Design consists of Inlet chamber, product bowl expansion chamber with inlet.
- AHU & Exhaust blower, AHU comprises of pre-filter,
- Micro VEE and HEPA filter.
- PC satin cloth for filter bag, Sampling port, Illumination lamp,
- Explosion vent, Safety provisions for inflatable seal will be provided.
- Standard Auto Control System.
- PLC-HMI system shall be provided.
- Capacity ranges from 1 Kg to 350 Kg

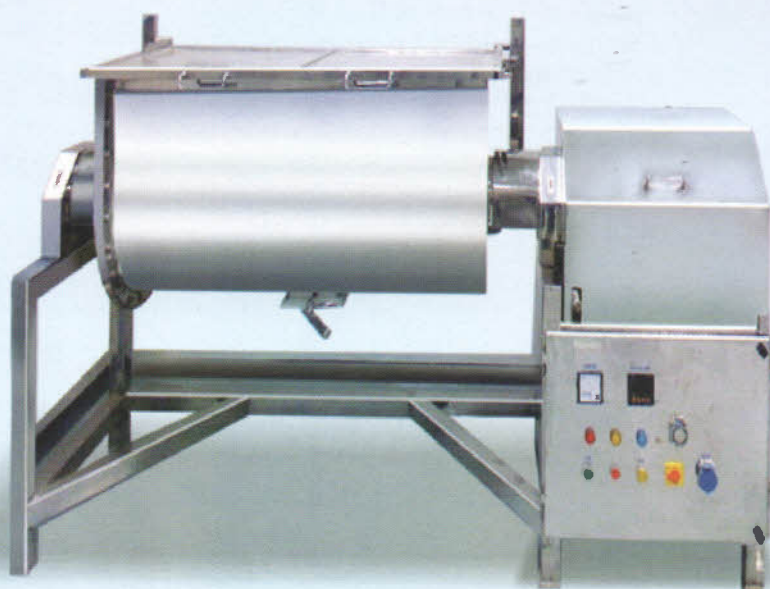


PLANETARY MIXER

For this reason it is widely used for mixing of pharmaceutical powders, Ointments, Cream, Lotions, Pastes, Toothpaste, Cosmetics, Food and Confectionaries, Rubber & Rubber Compound, Colors and Pigments, PVC and Plastic material, Ceramics, Pesticides, Metal Powder, Insecticides, Adhesives, Resins etc.

Salient Features:

- cGMP Model available in capacities of 50 ltr to 1000 ltrs.
- The compact design of the Planetary mixers assures comparatively smaller floor space.
- Planetary mixers are ideal for blending materials of different consistencies, viscosities, densities, shapes and proportions.
- PLM mixers effectively mix liquid with solid and solid with solid.



MASS / RIBBON MIXER

It is specially designed equipment for pharmaceutical industry for mixing various products properly.

The mixing capacity of these Mass Mixers is 5 to 2000 liters as per the client's specific requirements.

Salient Features:

- Optimum quality material
- Effective handling
- Less time consuming
- Easy to clean





COATING SECTION

TRAY DRYER



The dryer is of robust construction built on formed angles of 3mm thick sheet and suitably reinforced with angles and sections. The dryers external walls are manufactured from 1.6mm thick SS sheets of 304 quality. The internal of the dryer is built of 1.6 mm thick S.S 304 quality sheets. The internal structure is fully TIG welded and all the internals have ground smooth surfaces. It is insulated with 50 mm thick glass wool insulation, Claded with SS Polished sheets. The dryer is having a fresh air inlet through 20 Micron PP cloth filters and a adjustable air outlet flap and a door at the front. The door is explosion proof and is locked with the help of spring loaded ball latches with suitable pressure. Door lips are having Neoprene rubber Gasket to prevent leakages.

Electrical heating

The Air inside the Tray Dryer is heated by "U" tube S.S.304 air heaters each of 1 KW. The heaters are fitted on the sides of the dryer to facilitate uniform heating. Maximum temperature attained inside the dryer is 100° C and will be indicated and controlled by a Digital Temperature indicator cum controller over full range of heating load

VACUUM TRAY DRYER

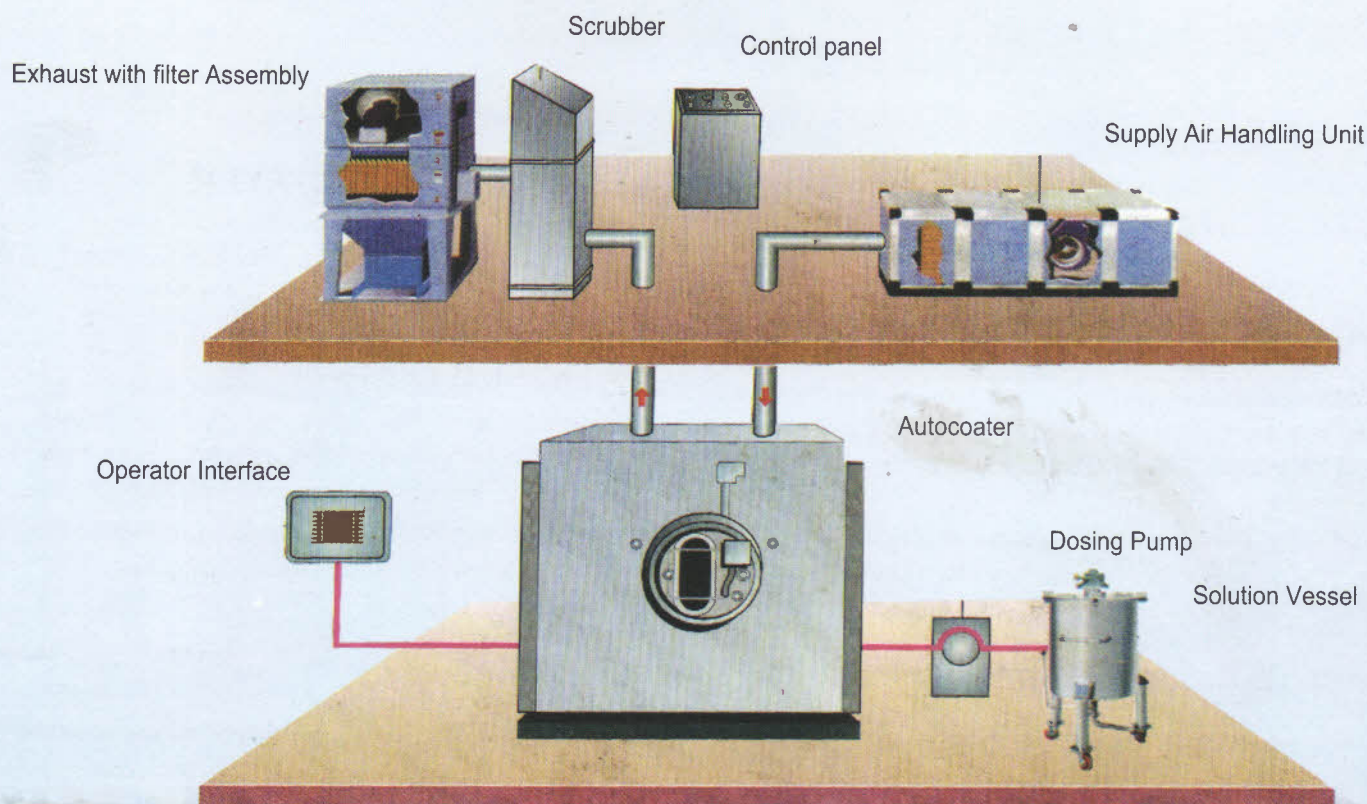


- Main Body/Vacuum chamber thick SS 316 plate with heavy duty SS 316 flange and stiffeners.
- Door thick SS 316 plate (hemisphere shape) with heavy duty SS 316 flange.
- Shelves hollow type pads with SS 316 sheet and baffles.
- Condenser (shell and tube) & receiver SS 304 with isolation valve and flow glass in between to monitor condensation.
- Trays in SS 316 rounded corners and edges.
- Explosion Vent / Rupture disc on vacuum chamber
- Pressure release valve in steam line.
- View & light glass provided on vacuum chamber Door.
- Silicon transparent gasket for door.
- Nitrogen purging valve provided on vacuum chamber.
- Vacuum break valve provided on vacuum chamber.



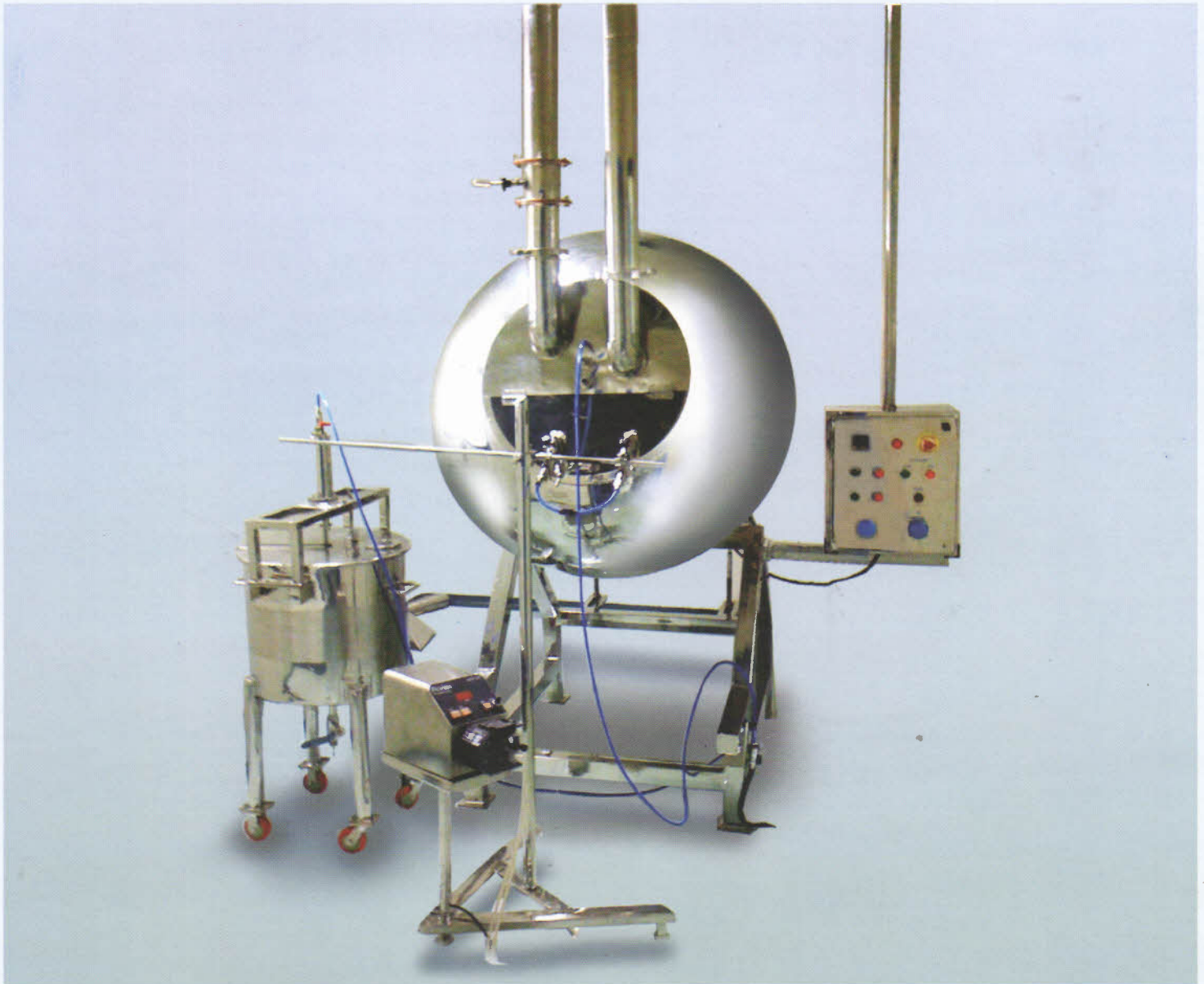
AUTO COATER

- cGMP Standard.
- AHU comprise of pre-filter, Micro vee filter/HEPA filter.
- Design to meet process requirements / space limitations.
- De-humidification of inlet air using chilled water, brine or desiccant systems.
- Air heating system with a choice of energy sources such as steam or electrical energy.
- System comprises of efficient inlet air and Exhaust air to create negative pressure inside the pan to make sure spray spread on to the tablets.
- Spray pattern is achieved without any beard formation.
- For the first time the distance between the bed & the spray nozzle is displayed on the HMI screen. spray angle and distance are adjustable. The nozzles are easy to clean.
- You can exchange a 48" pan for a 36" pan in the equipment.
- This gives batch size flexibility in the same equipment.
- Investment is only required for a single piece of equipment.
- The discharging system is designed & engineered to discharge a single tablet from the pan without manual intervention. The discharge system can be installed without any tools & is easy to remove from the pan after discharge.
- cGMP Model available:
12", 18", 24", 36", 42", 48", 60", 72"





TABLET & CAPSULES SECTION



CONVENTIONAL COATING PAN

The **Coating Pan** is simple unit, which employs the principle of rolling a batch of tablets in an elliptical pan, spraying the coating solution on it and passing hot air across the tablet bed. An exhaust blower may be used to carry away the excess fumes generated during the coating and drying process.

It is useful for monitoring, controlling and optimizing the complex coating process, which ensures uniform surface coating. Coating Pan is semi-ellipsoidal shape with a circular opening at top that is designed with M.S. fabricated structure. The electric control air filter and S.S. pan are outside the structure.

Our clients can also available from us Polishing Pan. provided with hot Air Blower.
cGMP Model available: (Lab Model 12") to 18", 24", 36", 42", 48", 60", 72"



MOBILE LOADING SYSTEM



Mobile Loader with Multimill and the sifter shall be used for in line for milling and sieving. The Mobile loader shall be used for Multi applications such as for loading powder into RMG Blunders, Compression Machines.

The unique design ensures safety provision while loading and the arm extended to load the material centrally.

IPC Bins shall be used for lifting while charging and discharging the material.

This system will avoid dusting in the GMP area as well as it minimize the spillage of powder with the help of silicone bellows.

LIFTING & POSITIONING MACHINE



The unit allowing for reduced manpower and better GMP. It is ideal for linear flows and allows for faster operations with minimum dust generation and reduced change overs. The unit totally movable typewhich can be placed near the blender and can be loaded through the container one by one.

Available in capacities of 60 to 100 kgs.

PNEUMATIC CONVEYING SYSTEM



Gem pneumatic systems and support equipment for conveying, weighing and batching of dry materials. The primary technology for conveying is vacuum, but positive pressure pneumatic systems as well as mechanical conveyors are used as applications dictate.

GEM so far innovatively developed the systems with Inline sieving, direct charging of Mixer Granulators, blending and for sugar transfer system.

GEM
Pharma
Machineries
& Equipments
For
Pharmaceuticals,
Chemicals,
Cosmetics,
Beverages &
Food Industries.



POWDER CONVEYING SYSTEM

CAPSULE FILLING MACHINE (HAND OPERATED)



Machine is established in the R&D section of pharma industries, where it may be used for smaller batches

The machine can be operated very easily and gives negligible rejections, with no weight variations. The design is functional for simplified operation giving precise result, easily movable and can dismantled and reassembled easily. Contact parts are: SS 304, And other chrome plated.

Technical Specification: App.Weight 400 Kgs.
300 Holes Dimensions 395 mm, (L), 240 mm (W),
500 mm (H), Main Drive 55-60 Thousands per 8 hrs

CAPSULE INSPECTION / POLISHING MACHINE WITH DUST COLLECTOR



- This machine compatible with SS hopper, conveyor belt and a vibrator with double brush powder collector.
- There is a lighting source to inspect the capsules minutely, the capsules move on the conveyor belt and complete movement the capsules are subjected to roll in between the nylon bristles and filter cloth.
- In this course the powder and edges of the capsules are removed and sucked by the dust collector.
- The capsules come out of the chute, thoroughly polished, glossy and clean.
- Output 50 to 60 thousand capsules per hour.

AUTOMATIC CAPSULE LOADER

Vertical automatic capsule loader is very compact, for small scale pharmaceutical units, the design is extremely functional.

The loader is very simple to operated and time and lobar saving. Easily movable without any extra strength. It gives higher production at a lower cost, and with much better standards of accuracy than any other semi-automatic loader, which are being phased out gradually in most of the unit.

The vertical loader can fill 2 or 3 manual capsule filling machine trays depending on quality of the capsules and skill of man power, it takes 28 seconds time for filling 300 hole plate and there is a significant difference in your production. It is fabricated from high grade aluminum and mild steel, with Perspex spray painted finish.

Technical Specification:

Approx. Weight: 80 Kgs.
Dimensions: 640 (L), 390 (W), 935 (H) in mm,
Main Drive: 0.25 HP / 3Phase / 50 Cycles.





TABLET & CAPSULES SECTION



CAPSULES FILLING MACHINE (SINGLE HEAD)

This double head high productivity model has all the winning features with certain additional Provisions for enhanced production. High capacity of 30,000 capsules per hour, using only two Operators, the machine can also be supplied with protection or contamination-proof hood.



CAPSULES FILLING MACHINE (DOUBLE HEAD)

This double head high productivity model has all the winning features with certain additional Provisions for enhanced production. High capacity of 45,000 capsules per hour, using only two Operators, the machine can also be supplied with protection or contamination-proof hood.



OINTMENT / CREAM PLANT



OINTMENT / CREAM MANUFACTURING PLANT

GEM Ointment and cream machine that we are offering to the clients is effective, efficient and reliable in all possible conditions. This product is designed by the personnel, having years of experience and expertise in their working areas.

Operation Sequence for Ointment / Cream Mfg.

Ensuring body internals of the works are cleaned thoroughly, Charging of pre-determined water quantity to water phase vessel supply of steam and melting down the sugar. Addition of additives manually and mix at Preset temperature, Charging of oil / Petroleum jelly / Wax to oil phase vessel supply of steam & heat them addition of additives manually and mix at preset temperature Starting homogenizer for emulsification and dispersion Vacuum transfer the heated oil and heated water to ointment, cream after confirmation of cream / ointment discharge the product to storage tank using lobe pump keeping the product under slow speed cogitation in storage vessel transferring the product to filling through material pump.

Technical Specifications:

These plants are ideal tools for the pharmaceutical & cosmetic industries. apt for the production of ointment, cream, lotions, tooth paste & other emulsions & homogenization, specially designed to take care of two critical factors which directly affects the quality of the ointment/creams minimum man handling of ointment / negligible vacuum drop during mixing-blending provides the benefits of the effective manpower utilization

Salient Features:

The plant operated only by one operator and one helper. Material transfers are done by vacuum or by transfer pump. All contact parts are of SS 316 quality material, All vessel are suitable for internal pressure of 1kg.cm2 and hence can be sterilized. The entire plant is equipped with CIP & SIP connections. All values of tem. & time of the plant is indicated digitally on the control panel. All vessels are cGMP model, Capacities of 10 kg to 1000 kg. PLC based automatic operating plant can be designed as per requirement.

Equipment and Accessories:

Manufacturing Vessel or Jacketed Planetary, Wax Phase Vessel with Top Entry Stirrer, Water Phase Vessel with Top Entry Stirrer, Storage Vessel, Vacuum Pump, Control Panel, Product Piping, Working Platform, Material Transfer Pump (02 Nos.) to Transfer Material from Manufacturing Vessel & Storage Vessel to Ointment (Tube) Filling M/C



SUGAR SYRUP MANUFACTURING PLANT



SUGAR SYRUP MANUFACTURING PLANT

GEM Sugar syrup manufacturing Plants are ideal tools for the pharmaceutical industry for the production of Oral Liquids. It is specially designed to take care of two critical factors which directly affect the quality of the Liquids. Minimum man handling of Liquid. Effective cleanliness during manufacturing. Needless to say, it also provides the benefits of the effective manpower utilization.



The Salient Features

- The Plant is designed to be operated only by one operator and one helper.
- All material transfers are done by vacuum or transfer pump. (Optional)
- All the vessels are cGMP (paint free construction). The gaskets used are of silicon (food grade)
- All contact parts are of SS316 & finished to class 4B (Mirror) finish and are crevice free.
- The entry of all stirrer & high speed emulsifier from bottom. in-line Emulsifiers (as per customer choice) provided on demand. (Optional)
- All vessels are suitable for eternal pressure of 1kg/cm² and hence can be sterilized.
- All pipes, pipe fittings and valves are of SS316 (as per customer requirement) seamless quality, internally electro polished, with tri-clover ended joints.
- the entire plant is equipped with CIP & SIP connection, so that customer can use these facility, if have CIP & SIP requirement.
- All values of temperature & time of the plant are indicated digitally on the control panel.
- Ampere indicates on Ampere meters.
- PLC based automatic operating plant can be designed as per requirement.

Plant Consist the Following Equipments and Accessories.

- Sugar melting Vessel with bottom entry stirrer.
- Mfg. vessel with bottom entry homogeniser.
- Storage Vessel with bottom entry stirrer.
- Control Panel.
- Product Piping with filters and valves.
- Working Platform.
- Transfer pump-Centrifugal.
- Filter Press.

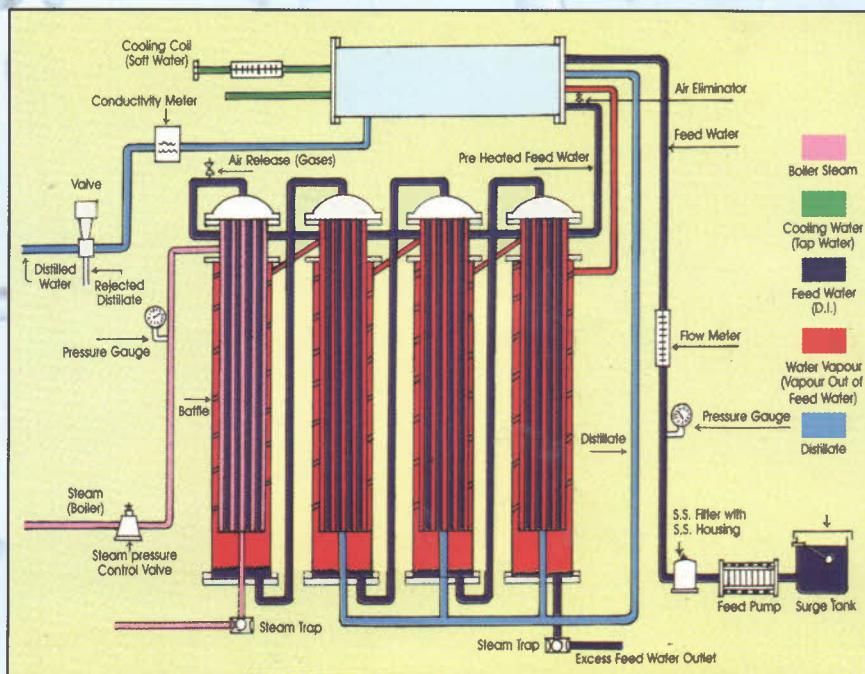
GEM PHARMA are a reputed name in the market, engaged in Manufacturing, Exporting and Supplying of machines.



MULTICOLUMN DISTILLATION PLANT

GEM MULTICOLUMN DISTILLATION PLANT

Our injectable section is one of the hugely popular products. This product is gaining popularity among clients based on their efficient functioning and high performance. Apart from this, our offered product is also trusted by the clients for its reliability and durability.



We manufacture multi column distillation plant which is most widely used ingredient in drug manufacturing. Pharmaceutical Water and Steam are the fundamental utilities for the manufacturing process. Complete water and steam systems are built up module by module. Each module is assembled on a skid and delivered fully ready for commissioning & validation.

This design saves time and provides flexibility in the production area. It is also designed to produce water for Injection by evaporating,

purifying and condensing feed water. The feed water is sequentially evaporated and condensed in a series of columns, or effects.

The design of each column is fundamentally the same. Only the first effect is heated by external energy. Each subsequent effect uses pure steam from the previous effect as heating media, and the condensate is collected as WFI. Pure Steam from the final effect enters the shell of a heat exchanger, which uses cooling water to condense the steam to WFI.



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