











# **Infrared Ray Dryers**

## Salient Features :

- Technology which truly covers the aspects of hygiene, minimum drying time consumption & minimum human intervention, that is Infra red Ray dryers.
- Drying by infra red ray dryers is very easy solution. You can expose your washed equipment to Infra red rays for speedy drying.
- Infra red Rays sources are Ceramic coated thus ensures no particle shedding or black particle generation, which may contaminate washed equipment. As a property Of Infra red rays, it reduces the microbial counts also. Infra red dryer is more effective for drying Stainless Steel equipment because Stainless Steel surface is a reflective surface.
- In this case temperature is not the criterion as it will give heating effect only to the object on which it falls. Infra red rays do not require air as media. Thus rays will not increase temperature of the surrounding atmosphere but it will give heating effect to the object on which it falls.
- Power consumption by Infra red ray Dryers is 5 to 10 times less than power consumption by hot air blower.
- Infra red rays are absolutely safe to human body.
- Heat up & cool down time 1.5 to 5.5min.

**Models of Infrared ray dryers:** a. Insertion type b. Umbrella type c. Cupboard type





# ✓ a -C.I.P System

Useful for cleaning of Processing equipments which can not be sifted to wash area viz. Octagonal Blender, RMG, FBD & Ect.

Optional: PLC control System, Temp. controller, No water indication or interlocking..



## b - Mixing Battery

The device used to produce high pressure & high temperature water. All sort of safety factors are taken into care by providing NRV and Steam Shut Off valve.

# **Bottle Cleaning Equipments & Line Accessories**



# Mini N2 Generator

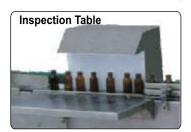
The inert properties of Nitrogen gas makes it ideal blanketing gas in pharmaceutical application where it is needed to prevent oxidation and degradation of chemicals and powder by atmospheric oxygen and moisture,

Protection is achieved by keeping these items under nitrogen atmosphere. This is also termed as nitrogen blanketing nitrogen padding or nitrogen inertisation in which Air is displaced by nitrogen.

Nitrogen is also used to maintain an inert and protective atmosphere in tanks storing flammable liquid pulverizing of sulphur compounds to prevent explosion, pneumatic conveying of powders to prevent oxidation purging of pipelines and vessels to expel dangerous vapours and gases after completion of a pipeline transfer or end of production run.



That is designed for visual inspection of glass bottle with a hood with lighting arrangement and visual inspection background.



# **Turn Table**

Built on SS square frame, solid guide rail & reduction gear box for jerk less & noiseless performance.



# **Airjet Cleaning Machine**

APEX make different user friendly models of air jet cleaning machines which are suitable for cleaning of bottles or containers to be filled. No water consumption or drying problem and hence saving of huge recurring cost. No problem whatever the material of container Glass or PET.

The containers are exposed to pressurized air jet followed by vacuum suction to clean the inner surfaces.

## Optional attachments:

- Filtration system comprises of 5 micron filter, 0.001PPM Filter (Oil & moisture separator), Silica gel filter and finally 1 micron filter.
- **Ionizer** could be provided to de-ionize the static charge on bottle surface and hence better cleaning is achieved.
- Automatic silica gel regeneration system is provided to avoid manual recharging of silica gel in due course of operation.
- In Line HEPA filter could be provided for special purpose requirement.













## LIQUID FILLING MACHINE

- Suitable for filling oral liquids, oils, chemicals, pesticides.
- cGMP compliance.
- PLC control panel.Accuracy in fill volume.

# Models Available:

# Linear Volumetric Filling

- Precisely designed syringes for fine accuracy.

  • Available in Multi-heads.
- · Most compact model.
- Diving machanism while filling.

# Syringeless Type • Compact design.

- No dripping.Absolutely no changeparts required.
  • Filling volume changeover is
- just on your fingertips through plc.

  • Ease of maintenance.



**Upto 30 Head Syringeless** Liquid Filling Machine

SPEED DATA FOR SYRINGE								
HEAD ML	4	6	8	10				
100	54	80	104	126				
500	15	22	29	35				

SPEED DATA FOR SYRINGELESS									
HEAD ML	4	6	8	10	20	30			
100	54	80	104	126	226	300			
500	15	22	29	35	75	83			







# FEATURES OF POWDER / GRANULE FILLING MACHINE

- \* High Productivity
- \* Principle of Operation Auger metric
- \* Ease of Operation
- \* No Dripping
- \* Easy availability of spares
- \* Easy Changeover
- \* High accuracy in filling
- \* Pneumatic Indexing System on Single Track
- \* Ease of Maintenance
- \* High Flexibility for different nature of powders
- \* Lower Cost of Production

## **OPTIONAL:**

- \* Dust Extractor
- \* SS OR Aluminium Structure
- \* Touch Panel & PLC.
- \* Nitrogen Purging
- \* No Bottle No Fill
- \* Horizontal Feeding Mechanism
- \* Online Plugging

# **Weight Control**

Logical Weight Control Systems and Data Recording facility available in Powder filling -Automatic and semi automatic models.

# Models Available:

- \* Semi auto Single Head Powder Filling Machine
- \* Double / Triple / Four and Six Head Powder Filling Machine [clutch - Break / A.c. Servo]
- \* Mono Block Single Head Filling & Capping Machine



Four Head Powder Filling Machine Cum Plugging Monoblock



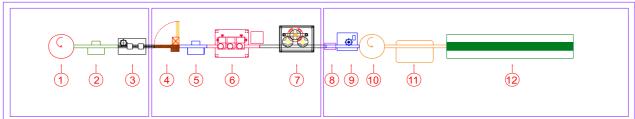
Vibratory Feeding Mechanism For Non Free Flowing Powder.



Dust Extraction System & Nitrogen Purging



# LAYOUT OF FULLY AUTOMATIC POWDER / GRANULE FILLING & PACKING LINE



1. Turntable / Unscrambler 2. Pre-inspection table 3. Fully automatic air jet washing machine 4. Swing conveyor 5. Final inspection table 6. (a) Dry syrup / Powder / Liquid filling machine (b) Dry syrup / Powder filling & capping monoblock 7. (a) ROPP cap sealing single / Multihead machine (b) Cap tightening machine 8. Induction sealing machine 9. Fully auto measure cup placing & pressing machine 10. Turntable / Unscambler 11. Labelling machine 12. Packing conveyor.



# **Capping & Packing Equipments**



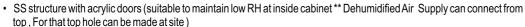
### **MULTI HEADS COMBI CAPPING MACHINE**

This Machine is useful for ROPP + CRC + SCREW Capping. Easy changeover from ROPP capping to Screw capping / CRC.

Screw capping to CRC capping by changing the capping heads of the

Fully automatic machine is designed to seal bottles with metallic and plastic caps of various sizes. Machine consists of sealing head assembly, orientation block for cap feeding, Star wheel, Slat Conveyor & Electrical

- · Mechanical torque setting arrangement.
- · Variable speed for slat conveyor.
- Simple operation easy to operate & maintain the machine.
- GMP model.
- SS or extruded aluminum section cabinet offered as an optional features.
- Daily Production Output Counter will be provided.



For Screw Capping and CRC (Child Resistance Cap) Capping need to do change over. For 22 & 28 mm Diameter ROPP Cap: Need to change Cap Holding / Pressing Top Die and Delivery Chute.

To use from 22mm upto 35 mm Diameter Screw or CRC cap: Need to remove ROPP lower head and fix Cap Pickup and Holding Heads, Pickup star wheel assembly and Delivery Chute. Torque adjustment can be done manually by Mechanical (Magnetic Clutch) Torque System

To use different Diameter of Bottles: Need to change Set of Star Wheels and in-feed worm. Manual Adjustment of tracks and guides.



This device is installed inline in cap feeding chute with air and vacuum arrangement. 4 heads will be used to achieve 120 BPM. This system will require separate change parts for each different type / size of Caps.

In this system 4 caps at a time will stop and hold by using Electropneumatic Principle, then Air jets will blow inside the caps and simultaneously vacuum will be applied to suck the blown air to avoid contamination in environment. This Blowing air will be Dust, Moisture, Oil free & Iron (Static Charges) @25 PSI pressure. To achieve this quality of air, air will be passed through various chains of filter & device.



ONLINE CAP CLEANING



Sticker Labelling Machine

### Sticker Labelling Machine Features:

- Compact design
- Complete cGMP model
- Wrap around mechanism to wrap the label on container.
- · Reel mechanism to hang the roll
- Label release mechanism
- Break assembly to avoid variation during realising of roll.
- · No change part for change in container, due to special mechanism.
- Provision for all type of online batch coding i.e.
- Ink Coder
- Cassette Coder
- Hot Foil Coder
- S.S. Metal Stereo Box for Printing



- Compact Drive Unit, this enables optimum usage of the belt till the edge of the table.
- Low Power Consumption because of improved design
- Endless Molded belt made of food grade material (Green) with PVC coating for better finish, aesthetics GMP & longer life.
- Collapsible Design, so that it occupies less storage space & also reduces transportation cost.
- Superior design results in smooth and trouble free operation in the long run.
- Sturdy structure to withstand heavy loads.
- Optional: Internal Pendent for electrical wires & compressed air, from conveyor infeed end to outfeed end.



ROPP CAP



SCREW CAP



CRC CAP



# **Manufacturing, Material Handling & Other Equipments**





# ▼ TABLET / CAPSULE INSPECTION BELT

## MOC:

 All exposed surfaces SS 304 and Contact parts SS 316 complies of Cgmp

## **FEATURES:**

- The Specially designed detachable system of the belt, ensure clean ability of the conveyor.
- Lamp will be providing for the inspection & two side tablet inspection.

## OUTPUT:

Approximately 40,000 to 60,000 tablet per hour



Semi Aut De-blistering DBLI-2

## De-blistering M/C.

- Speedy & Fully recovery of products from Blister packs.
- Does not damage the products.
- Auto separation & collection of products & scrap.
- · Can be suitable for all types of packs.
- Can be used for the full length of rejected webs in semi auto machine.
- · Speedy changeover.
- Aluminum body for longer life & aesthetics.



Semi Auto De-blistering DBLI-2-CR

# **Lifters GMP Model:**

This hydraulically operated device is used for lifting, loading and Transferring of powder / Empty Capsules / Tablets into Machines / Container.

# Blender / IPC / BIN.

# **General features:**

- Superior designs to ensure uniform blending & easy discharge.
- Totally enclosed system allows following cGMP as closely as possible and avoids cross Contamination & pollution of the environment.
- · Timer for automation.
- Built in valves at the bottom for easy discharge.
- No-guard, No-Start device for safety.









# Sifters GMP Model: Salient Features.

- Standard machines are with TEFC motor, explosion proof / flame proof motor optional.
- All contact parts and screen of SS 304 / SS 316 Stainless steel material.
- Easy dismantling and cleaning facility for contact parts.
- Wide range of screen sizes 4 -300 mesh.

Models Available : SMS-20. & SMS-30.

Optional accessories : Brushing arrangement, SS lid with charging port Aluminum ring and SS tie rod for fixing screen finer then 100 mesh.





# Multi Mill GMP Model:

Multi mill is a portable selfcontained unit for high Speed granulation, pulverization, mixing, shredding, chopping

This machine works on the principle of variable force.

Useful for :Pharmaceuticals, Chemicals, Food products, etc...







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