

Catalogue

# RAO EXIM

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RAO EXIM is an Indian export company based in Gujarat, engaged in sourcing and export of products including pharma equipment. We focus on quality sourcing, competitive pricing, and timely delivery. Our aim is to build long-term business relationships with buyers worldwide through transparency and reliability.

# Reaction vessel (Reactor)

Substance Can Be Used For Reaction As

Under:

Gas - Liquid Mixing

Liquid - Liquid Mixing

Solid - Liquid Mixing

Homogenization

Blending

Wet Grinding

Application Of Reactor And Stirred Vessel

Hydrogenation

Oxidation

Homogenization

Chlorination

@ Esterification

Bromination

Slurry Preparation



Design And Range Of Capacity

Capacity : 10 Litres To 50,000 Litres

Shell Diameter : 300 Mm To 6000mm

Pressure Range : Full Vacuum To 60 Kg/Cm<sup>2</sup>

Thickness : 5 Mm To 40 Mm

Temperature Range: Cryogenic To 350 Degree C

# Stirred Vessel (Stirrer)



## Advantage And Special Feature Of Product :

- Compact Design
- Cheap And Easy Installaon
- Easy And Low Cost Maintanance
- High Heat And Mass Transfer Area
- Cung Down Batch Cycle Time
- Capacity Expansion
- High Mixing Efficiency
- Low Operaonal Cost
- Lower Power Consumpon

## Materials of Construction:

- Stainless steel
  - Titanium
- Carbon Steel
- Duplex steel
  - Hastelloy
  - Aluminum
  - Nickel
- Lined with special non-corrosive material like PTFE, FRP, Rubber lining, Tile lining etc





Vacuum Tray Dryer Is An Equipment Design For Drying Such A Substance At Required Low Temperature Under Full Vacuum. Vtd Has Custom Build Modern Design Having Mass Producon Of Drying Substance In Minimum Time Rather Than Conventional Tray Dryer.



# Vacuum Tray Dryer

## Salient Features:

- Material Moc : SS316 / SS304 Gmp Or Ms External With Stainless Steel.
- Shelf ( Hollow Type ) With Baffle SS304 / MS As Per Client Requirement And Easy Maintenance.
- Condenser With Receivers In SS316 / SS304 For Condensaon Recovery.
- Glass View Provided On The Door And Receiver.
- Temperature Indicator Connecons Provide At Hot Water Inlet And Outlet In Vacuum Line.
- Vacuum Guage Provide On Front And Vacuum Breaker To Brake Vacuum By Using Manual Ball Valve.
- Trays Are In SS316 / SS304 As Per Requirement Std. Size 400w X 800 L X 40 Ht.
- Flow Glass Provide To Monitor Condensaon Between Condenser And Receiver.
- Validaon Port Provision For Nitrogen Purging.
- Mirror Polished To Enhance Asthec Look.
- Glasswool Insulaon
- Wall Mounng Arrangement Oponal If Required.



Vacuum Tray Dryer

- **Advantages:**
- **1. High Contact Surface Area For Indirect Heating For Batch Production.**
- **2. Easy And Low Maintenance Cost.**
- **3. Compact Design**
- **4. Low Cost Operation**
- **5. Easy Cleaning In Place As Per Usfd Norms.**
- **6. Heating Product At Low Temperature Under Full Vacuum.**
- **7. Shelf Life Span Is High Due To MOC Of SS316L.**

### **Testing:**

**Main Body Air Test Take Up To 1.5 Kg/Cm<sup>2</sup>.**

**Shelf Hydrotest With Header Assembly 4 Kg/Cm<sup>2</sup>.**

**Vtd Assembly Vacuum Test Take Up To 740 Mm Hg.**

**Condenser With Receiver Assembly Pressure Test Taken Up To 3.5 Kg/Cm<sup>2</sup>.**

### **Applications:**

**Pharma Api Plant**

**Chemical**

**Food And Agro**

## **Vacuum Nutsche Filter**



**Applications:**  
**Pharmaceuticals And Food Industries**  
**Dairy Industries**  
**Dyes And Intermediates**  
**Pesticides, Insecticides**

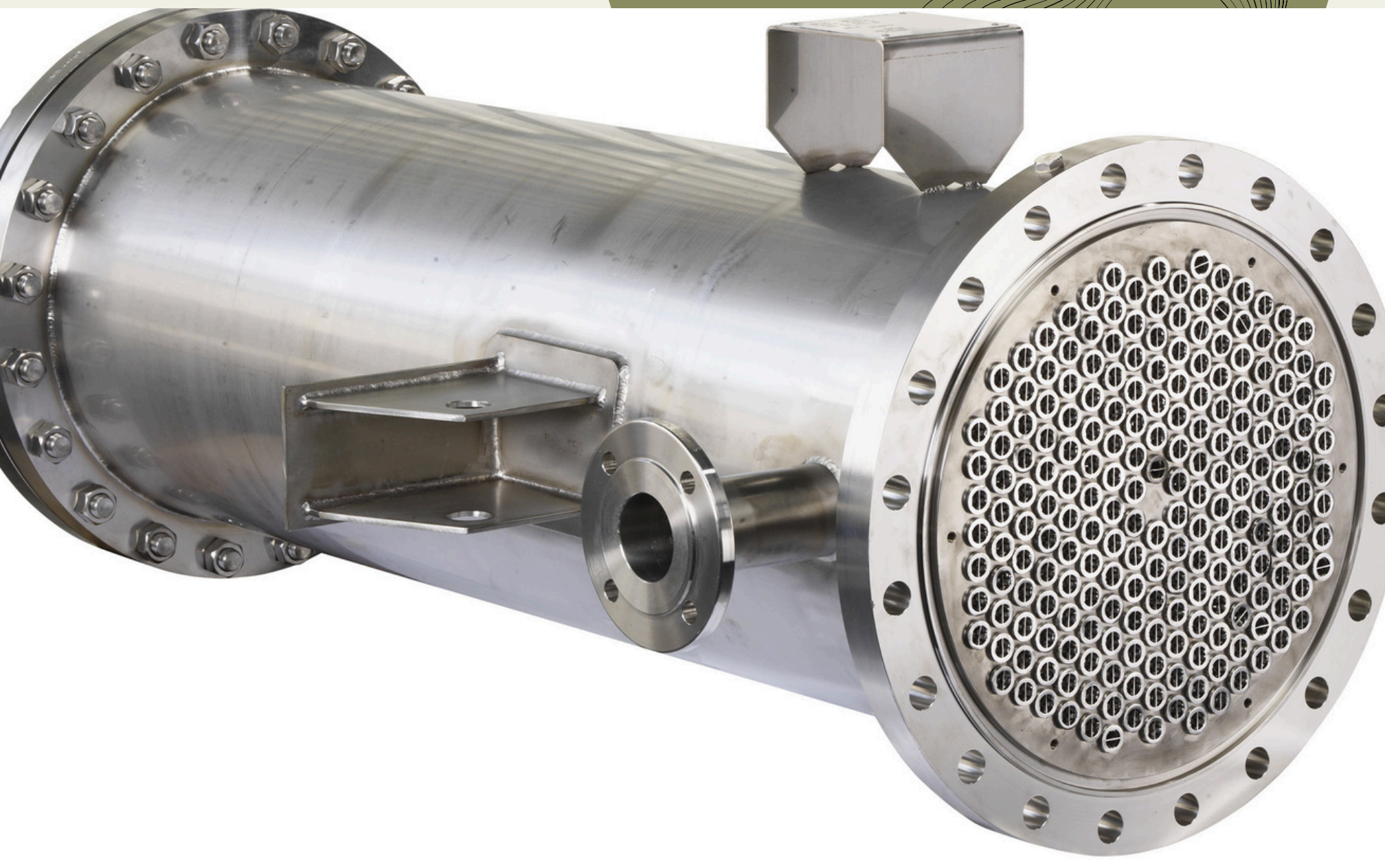
**Solid And Liquid Separation By Filtration With Safe Solvent Recovery**  
**Preventing Atmosphere From Hazardous Chemicals.**

Other Filter Available  
**Ro Plants**  
**Bag Filters**  
**Filter Press**  
**Membrane Filters**  
**Cartridge/ Candle Filter.**

**Vacuum Nutsche Filter Is Modern Way To Use Filtration Of Material Under Vacuum And Atmospheric**

**Pressure Along Effective Washing Application. Nutsche Filter Is Consisted Cylindrical Shell / Rectangular Shell , Top Open By Lever , Dishend Type With Davit Arm Attached.**

**All Filters Are Manufacture From Mild Steel , Different Grades Of Stainless Steel Like SS304 /SS316/SS316L , Hastelloy , Mild Steel With Lining Or Coating Like Fep /Leador Rubber , Pe And**



## **Heat Exchanger For Process Involve Phase Transition :**

Condensers

Finned Tube

U-Tube

Fixed Tube Sheet

Removable Tube Sheet

Coil In Tank

Heat Exchanger Without Phase Distribuon  
Coolers And Pre Heaters For Liquids And Gases

## **Heat Exchanger Range And Design :**

Capacity Varies From 0.2 M2 To 600m2

Design Pressure Range : Full Vacuum To 60 Kg/Cm2

Design Temperature Range : Cryogenic To 300 Degree  
Celsius

## **Heat Exchanger / Condenser**

**As Per Mechanical And Thermal Engineering Different Type Of Single Pass And Mulpass He And Condenser Has Been Developed For Cooling , Condensing And Heang Applicaon In Fied Tube Sheets Type , Floang Head Or Removable "U" Tube Bundle Type To Suit Different Processes And To Meet Customer Requirement.**



## **Applications :**

- 1. Distillation
- 2. Solvent extraction
- 3. Gas Absorption
- 4. Packed Columns

## **Material Of Construcon For Columns :**

Different Grade Of Stainless Steel  
Mild Steel , Haste Alloy , Titanium Etc.

Size Of Shell : 150 Mm To 4000mm

Height : Up To 25 Mtrs

Thickness : 5 Mm To 30 Mm

Design Code : Asme Sec. VIII , Div-1 , IS2825 , Bs

## **Columns / Evaporator**

**Manufacturing Different Size And Capacity Columns With Single Pass Perforated Trays /  
Double Pass Perforated Trays With Tray Support Rings And Bolng Tie Rod.**

**we manufacture Columns And Condenser For Various Crical Fluids Like ,  
Ammonia ,Nitrogen , Hydrogen , High Pressure Air Etc.**



## Storage Tanks And Pressure Vessel

Design Range And Capacity:

Capacity : 10 L To 50 Kl

Moc : Carbon Steel , IS2062 , IS2002 , Stainless Steel All Grade SS304 SS316 SS309 SS310 SS321 Etc. And , Alloy Materials.

Parameters: Performance Measured By Nozzles And Manholes.

Lining And Coang : Pe , Rubber , Frp , Hdpe , Halar

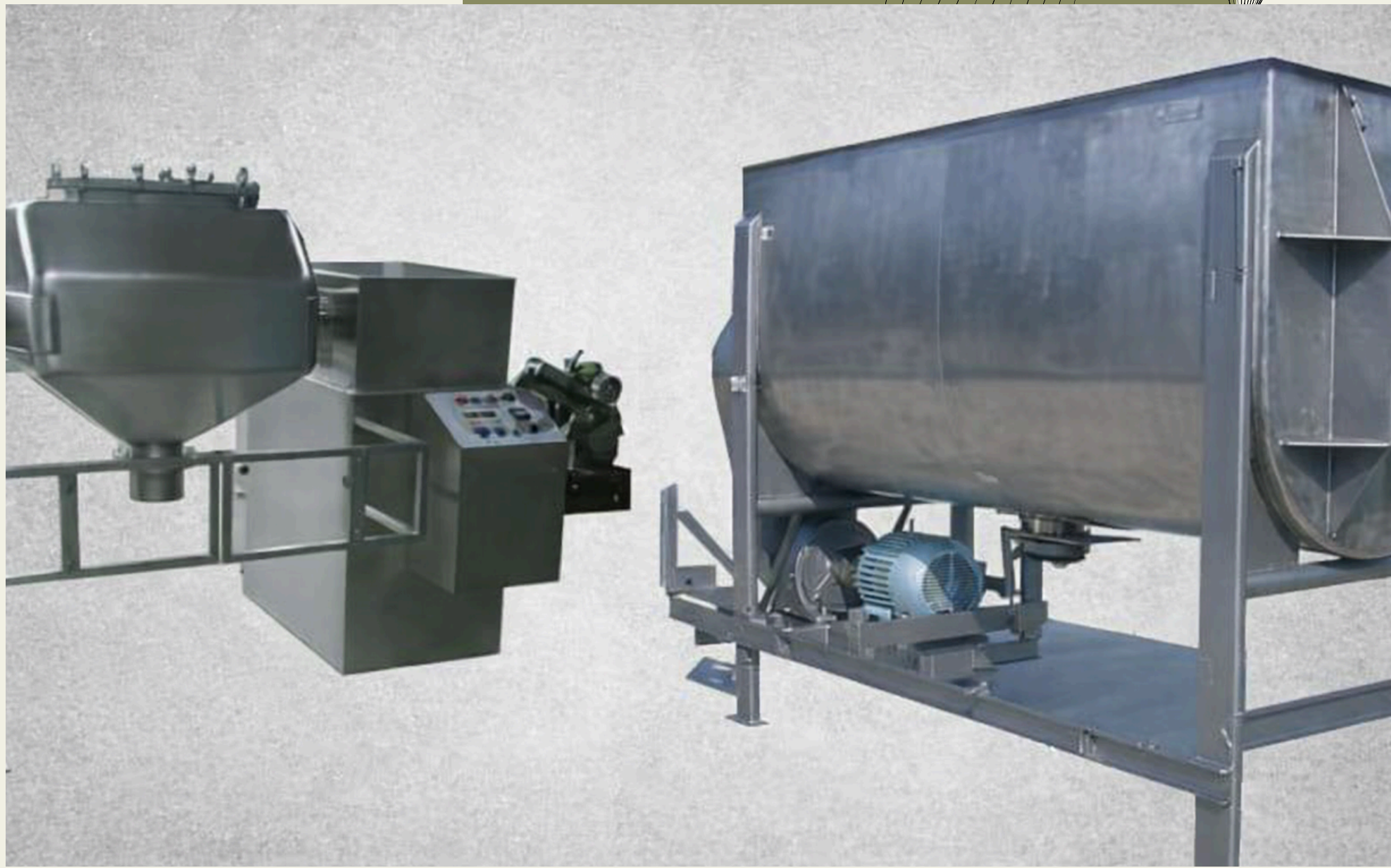
We manufacture Different Type Of Storage Tank And Pressure Vessel Which Are Widely Used In Pharmaceucals , Dairy, Chemical , Dye And Intermediates , Food And Beverage , Ferlizer , Petro Chemicals , Refineries , And Many Other Streams.

Pressure Vessel And Storage Tank Having Use To Store Of Possessive Material Like Acid , Chemicals , Basic And Any Other Material Under Pressure Or Atmospheric.

Capacity Of Pressure Vessel And Storage Tanks : 10 Litres To 50000 Litres

Some Time For Special Material Storage There Are Different Processes Carried Out Like Pe Lining , Pfa Coang, Halar Coang , An Stac Halar Coang , Ss Insulaon , Jacket Etc.

Vessel And Storage Tank Is Design As Per Mechanical / Process Chemical Code IS 2825 , ASME Secon Viii, Div-1/Api/650/IS803.



## **Size Reducon And Mass Mixing Equipment**

### **Ribbon Blender Design:**

Capacity Range: 50 Litres To 15000 Litres  
Material Of Construction : Various Grades Of Stainless  
Steel, Mild Steel , Haste Alloy (Gmp And Non  
Gmp Model)

**We has continous R & D And Experience Of Over 5 Years To Designing Various Size Reduction  
and Mass Mixing Process Applicacons Like Dyes And Intermediates , Chemicals  
Pharmacetuicals ,  
Fertlizer , Food And Beverage , Pescides , Pigments , Pharma Bulk Drugs , Dairy Industries.**

**We Offer Following Equipments For Mass Mixing And Size Reduction Of Substance.**

- 1. Ribbon Blender**
- 2. Double Cone Blender**
- 3. Octagonal Blender**

# Multimill

- **New Design Features:**
- • **Design Is Gmp – Current Good Manufacturing Praces**
- **Compliance.**
- • **All Contact Parts AISI 316 & Non Contact Parts AISI 304.**
- • **Easy To Movability.**
- • **A C Frequency Drive To Achieve Desire Speed Up To 2880**
- **Rpm.**
- • **High Operang Simplicity For Easy Cleaning Of Contact**
- **Parts**
- • **Option for Different sizes Of Perforated Sieve.**



**Multimill is a Self Contained Portable Unit Useful For Granulating, Pulverizing, Mixing And Size Reduction. The Multi Mill Operates On The Principle Of Variable Force Swing Beaters Having Both Knife And Impact Edges Rotating Within A Selected Screen To Get The Required Size Reduction.**

**In Mul Mill Parcle Size Reduction Is Done Through Impact In Air, On Material By Blades Moving At High Speeds, Inside A Cylindrical Hopper.**

**Capacity :  
1 Kg Per Hour To 50 Kg Per Hour Gmp And Non Gmp Model**

**Application :  
Pharmaceutical , Food , Chemical Industries,  
College  
Laboratory , R & D And Other Industries.**

**Isolator And Containment Technology Widely Used In Pharma  
Oncology Industries Where We Have  
To Handle Potent Drugs Which Required To Handle In Isolator  
Or Flexible Canopy To Prevent  
Human , Environment And Drugs.We had Been  
Developing Containment System For Easy  
Handle Of Potent And Possessive Drugs And Meet Exact Need  
Of Customer.**

## **Applications**

- Pharmaceutical industry – handling APIs, powder transfer, sterile processing**
- Chemical industry – working with hazardous or moisture-sensitive materials**
- Research labs – controlled atmosphere experiments (inert gas like nitrogen)**
- Biotech – contamination-free handling of samples**
- Powder processing – safe handling of toxic or fine powders**



Isolator Containment Technology

**We are also Manufacture Different Type Of Clean Room Furniture Which Are Widely Used In Pharma , Dairy ,Chemical , Ferlizer , Hotel , and any Other Industries Where SS Furniture Required.**

## Clean Room Furniture



### **Following Clean Room Furniture Are Listed Below:**

- 1. Storage Cabinet
- 2. Cupboard
- 3. Sop Stand
- 4. Shoes Rack
- 5. Printer Box
- 6. Trolley
- 7. Cage Trolley
- 8. Pallet
- 9. Dustbin
- 10. SS Weight Box Trolley
- 11. Movable Table
- 12. Weighing Stand

**Material Of Construction :**  
**Stainless Steel**  
**Ms IS2062**

Vibro Sifters Are Used For Raw Material Sieving In Pharmaceucal, Food And Chemical Industry. Raw Material Is Fed Through In Feed Hopper And There Is A Sieve Of Required Mesh Size Through Which The Sieved Material Falls. There Is Vibro Motor And Spring Type Suspension System Through Which The Vibration Of The Vibro Motor Are Transmied To The Sieve Chamber. As the Sieve vibrates The Material Gets Sized Or Sieved through it.

**Capacity And Design Range :**

**12 Inch To 38 Inch**

**0.25 Hp/1440 Rpm / 3 Phase Motor**

**Double Or Tripple Deck As Per**

**Application**

**Collector As Per Need Of Customer**

**Application : Pharmaceucal , Food , Chemical  
Industries**

Vibro Sifters





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**Thank you so much**