

An ISO 9000:2015 COMPANY

**Rotofilt**

- Improvement in productivity
- Reduction in energy consumption
- Superior product Properties
- High Yield
- Emission avoidance



# Automatic Vertical **Pressure** | Filter

Automatic Vertical Pressure Filter is ultimate equipment designed to handle flammable, toxic and corrosive material since they are autoclaved and designed for hazardous environment when high pressure and safe environment is required. Like wise they may be readily jacketed for application whenever hot or cold temperature is to be preserved. Rotofilt Automatic Vertical Pressure Filter ensures the driest cake and high yield of the product with marked reduction of energy consumption.

Rotofilt Automatic Pressure Filter is a state –of –art equipment with proven technology and matches the features with the world-class manufacturers. This is evident from the repeat orders Rotofilt receives today from India and abroad. Rotofilt prides with their indigenous fusion of intelligence and technology.

#### The Automatic Vertical Pressure Filter ensures

- Improvement in productivity
- Reduction in energy consumption
- Superior product Properties
- High Yield
- Emission avoidance

#### Application

##### Automatic Vertical Pressure Filter is ideally suited for :

- Pharmaceuticals
- Food Processing
- Waste Processing
- Effluent Treatment
- Minerals
- Mineral Concentrates
- Chemical Processing

Based on service requirements non corrosive, corrosive or highly corrosive application, machine can be built with various stainless steels and high strength materials.





## Design Features:

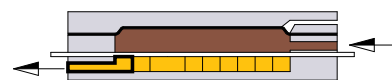
- 1 The horizontal plate design results in even distribution of slurry, wash liquid and most effective air penetration with no risk of cake cracking.
- 2 Fully automatic
  - Resulting in consistent performance in terms of through put, i.e. higher productivity.
  - Once downstream and upstream equipment integrated with optimized process parameters leading to highest quality products, with lowest moisture and yield.
  - No operator required, eliminates exposure of operator to chemical & equipment.
- 3 As the driest cake is produced of all filtration methods, Lower energy costs as it eliminates or reduces the requirement of dryers.
- 4 Ultra filtration wash system eliminates plant effluent system.
- 5 The machine can be built with features conforming to explosion proof standards.
- 6 Based on service requirements non corrosive, corrosive or highly corrosive application, machine can be built with various stainless steels & high strength materials.
  - *Horizontal filters plates*
  - *Diaphragm pressing for filtration and cake washing up to 16 bar.*
  - *Air blow for final drying of solids (cake)*
  - *Continuous filter cloth guarantying a positive cake discharge*
  - *Cloth washing both side of cloth (front & back)*
  - *PLC – controlled panel.*

## Mode of Operation

### Filtration:

With the push of Button, Filter Plates close, closed chambers are formed. Pressurised pumping of slurry into all chambers simultaneously takes place. As filtrate permeates the filter cloth, cakes are formed.

■ Filtrate    ■ Slurry flows into chambers



### Squeezing:

High Pressure water fills all chambers, inflates diaphragm, squeezing the already formed cakes with 4 to 5 times higher pressure than feed pressure.

Tightly woven filter cloth allows for higher pressure and increases filter efficiency.

■ Filtrate    ■ Pressurized water fills diaphragms



### Cake Wash

As the plates are horizontal, wash liquid is evenly distributed for uniform cake washing.

■ Filtrate    ■ Wash water is pumped in



### Post Wash Squeezing

High pressure water is pumped in simultaneously to all chambers, squeezing all the wash liquid through cakes with 'Total displacement' wash, thus achieving very high efficiency.

■ Filtrate    ■ Pressurized water fills diaphragms



### Air - Blowing

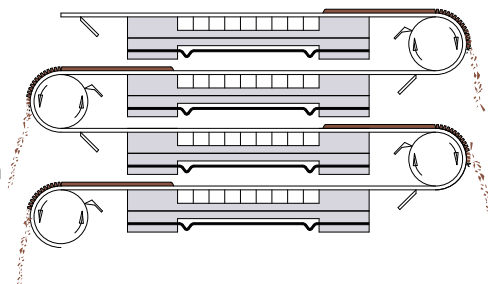
Compressed air is blown through cakes in all chambers simultaneously through adjusting Pressure & duration of air, further minimizes the moisture.

■ Filtrate    □ Compressed air blown into chambers



### Cake Discharge & Cloth Washing

All filter plate packs open with advancement of filter cloth all solids are discharged automatically. Both sides of filter cloth is washed with high pressure water to clear the cloth sieves of any binding solids.



# Rotofilt

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