

Filtration

Classification

Clarification

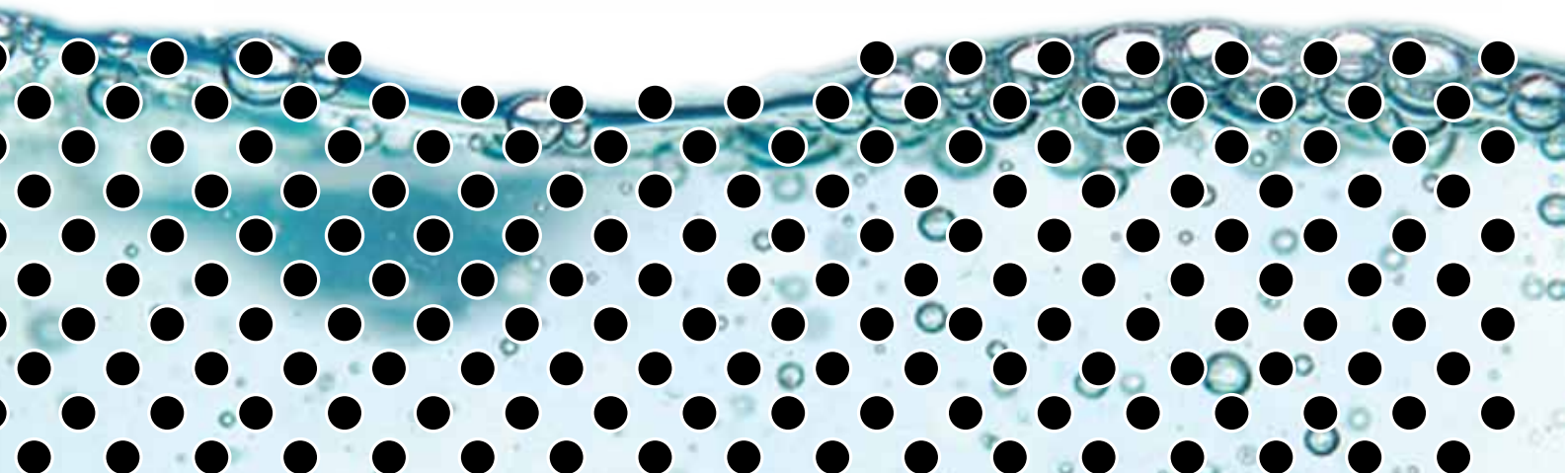
Solid / Liquid Separation

An ISO 9001:2008 COMPANY

**Rotofilt**

# Cost Efficient Precise Solution

Solid/Liquid Separation Equipment



## Cost Efficient Precise Solution.

Solid /Liquid Separation is challenging problem to process industries in multiple ways. It not only eats into your profit but leads to compromise in the quality sometimes.

Rotofilt with years of experience and rigorous Research & Development in Solid /Liquid Separation have developed profound insight into the problems of Solid/Liquid Separation and have evolved technology and methods to resolve the core issues related to the Solid/Liquid Separation.

Rotofilt ensures highest quality of out put in terms of filtrate quality, moisture, colour, rheology, opacity, and other required characteristics.

## Cost Efficiency:

At all time escalating cost is enigma for the Process Industries. Whether in form of deploying energy or raw material inputs, compliancy adds to the cost of Solid /Liquid Separation.

Rotofilt Engineers have consciously studied these problems with great details and have designed and manufactured their range of Equipment .

## Precise Solutions.

Rotofilt studies requirement of the client and custom makes their range of equipment. The intrinsic value of the equipment design fosters Precise Solution.

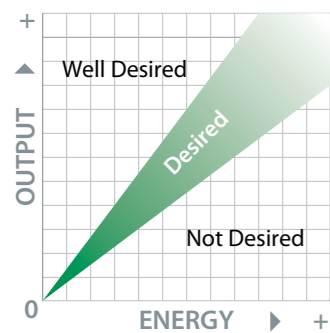
The precise requirement of the client in achieving the optimized quality in liquid and cake are easily met with detailed R&D upfront followed by envisaging apt design and building well defined rugged equipment.

The equipment increases yields and reduces waste and thereby deliver the same quantity of material at lesser cost.

The desired output graph is achieved after studying the requirements and than providing the pragmatic solutions.

## Rotofilt ensures

- Higher Product Quality
- Optimized usage of Raw Material
- Higher Yield
- Consistency
- Lower Maintenance and operating cost.



## Range of Equipment

### Pusher Centrifuge :

Continuous separation by filtration.

### Decanter Solid Bowl Centrifuge:

Continuous separation by sedimentation.

### Vertical Pressure Filter:

Continuous cyclic operation by filtration with optimum pressure.

### Peeler Centrifuge:

Horizontal discontinuous separation by filtration.

### Vertical Basket Centrifuge:

Vertical design for discontinuous separation by filtration and sedimentation.

# Pusher Centrifuge

Single / Multi-stage Design

An ideal continuous Solid/Liquid Separation Equipment for suspended, fast draining, crystalline, granular or fibrous Solids from the Liquid phase and for the slurries which cannot be filtered easily. The average particle size of the solids must be at least 0.1 mm. and above

## Features

- Cylindrical/Cylindroconical baskets with single stage or multistage designs.
- Hydraulic pushing mechanism.
- Solid discharge by collection channel and down guide.
- Separation of mother liquor and wash by compartment.
- Optimized power consumption.



## Application

Pusher Centrifuges are used in all fields for the separation of slurries with solids which can not be filtered easily. The average particle size of the solids must be at least 0.1 mm. and above

**Chemicals** Glauber's Salt, Boric acid, Ascorbic acid, Adipic acid, Sodium chloride, Iron sulphate Copper sulphate, Sodium bichromate.

**Fertilizers** Ammonium sulphate, Potash, Urea, Calcium nitrate, Potassium sulphate.

**Plastic/Explosives** PVC, Polystyrene, Polyethylene, Polypropylene, Linters, Nitrocellulose.

**Food Stuff/Animal Feeds** Extraction residues, Meat pulp.

**Beneficiation** Rock phosphate, Gypsum, Ores, Coal.



# Decanter /Solid Bowl Centrifuge

Often Solids are too fine to be dewatered satisfactorily in the Filter type Centrifuges. They can be separated in the Decanter/Solid bowl Centrifuges provided their sedimentation speed in the mother liquor /liquid is sufficient.

Decanter Solid Bowl Centrifuges is ideal Solid/Liquid Separation Equipment in this application.

## Features

- Operating on the principle of sedimentation.
- Compact and enclosed system offering versatility, high performance and low maintenance.
- Simple rugged construction.
- Start or Multi start flighted scroll with or without hard surfacing.
- Solid discharge through collecting channel and hard surfaced scrapers.
- Optional Gas light design
- Option of centralized lubrication system.

## Application

The Decaners/Solid Bowl Centrifuges are used for clarification (solid / liquid separations), dewatering and classification duties in various process industries.

**Inorganic products** Aluminium hydroxide, barium sulphate, lead oxide, chromium oxide, ferrous hydroxide, magnesium hydroxide, titanium dioxide, zinc sulphate etc.

**Organic products** Carboxymethylcellulose, Caprolactam, Dimethylterephthalate, Terephthalic acid, Phthalic acid, etc.

**Plastics** Polyethylene, Polypropylene, Polystyrene, Polyvinyl Chloride etc.

**Silicates** Asbestos, Clay etc.

**Cellulose** De-inking flotation concentrate

**Foodstuffs** Fishmeal, Casein, Whey, Distilleries, Breweries etc.

**Effluent Treatment Plants** Suitable for Chemical, Biochemical and other Sludge.

# Automatic Vertical Pressure Filter

Automatic Vertical Pressure Filter is the most advanced hi-tech Solid/Liquid Separation Equipment to meet the high end demand of improvised voluminous productivity while saving energy cost and eliminating emissions.

## Features

- Unique design of plate packs which has dual chambers, one for slurry input and the other for filtrate outlet.
- Special hydraulic system for closing, clamping and opening of plate pack with sequential control.
- Unique high pressure Squeezing Station, Conveying, Washing and Control system housed in compact design – enabling driest cake output compared to other processes.
- Space and power efficient to reduce the cost consistently.



*Designed and developed with ten years of research to addresses the need of chemical process industries with simple and reliable application.*

## Application

Hi-end specialty chemicals, Pharmaceuticals, Food processing, Mining & Mineral Processing and many more.

# Peeler Centrifuge

Product which are difficult to filter or decant can be easily separated using Peeler Centrifuge. Even though the operational method is discontinuous – i.e. solid/liquid separation takes place in specific work steps, sequentially, the process can be fully automated.

The unique feature of Horizontal Peeler Centrifuge is the constant/varied basket speed. i.e. all operations like feeding, drying discharging etc. are carried out at full/varied basket-speed. The sequence of Operations can be (either semi or fully automatically) controlled by Electro-hydraulic control panel / PLC controller.

## Application

Organic Inorganic Chemical Industry for separating solids from solid/liquid slurry with 5 to 50 % solids contents and particle size ranging from 2 microns to 10 mm.

Ideally suited for:

- Organic & Inorganic Chemicals,
- Pharmaceuticals
- Food processing
- Plastic.

## Features

- Controlled lateral filtration.
- Automatic heel cake adjustment.(optional)
- Optional Gas tight upto 0.05 bar over pressure.
- Labyrinth shaft seal.
- Solid discharge by chute / screw conveyor.
- Electro-hydraulic/PLC controlled operations



# Vertical Basket Centrifuge

Vertical Basket Centrifuge operates on the principle of discontinuous filtration vertical basket separation is deal for small batch sizes and where products are changed frequently with low process costs i.e. one machine for many products.

## Features

- 3 point / 4 point vibration suspension.
- Option of gas light design.
- Cake removal by hydraulic/mechanical power scraper .
- Hydraulic variable speed drive / V belt drive.
- Basket diameter upto 1500mm.
- Effective washing option.



## Application

Ideally suited for :

- Chemicals
- Pharmaceuticals
- Food processing.



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