

- Operates on the principle of sedimentation.
- Sinking and settling speed for particle size, shape, density and viscosity.
- Compact and enclosed system offering versatility, high performance and low maintenance.
- Perbunan, viton or PTFE seals.

# Decanter

## Solid Bowl Centrifuge

### Description

The Decanter/Solid Bowl Centrifuge operates on the principle of sedimentation. Often the solids are too fine to be dewatered satisfactorily in the filtering centrifuges. They can be separated in solid bowl centrifuges provided their sedimentation speed in the mother liquid is sufficient. The sinking settling speed which is

determined by Particle size, Particle shape, difference in density between solids and liquids as well as their viscosity.

In Decanter centrifuges the cleaning of liquid takes place in cylindrical part where as dewatering of solids by compression of the filter cake takes place in conical part of the bowl. The geometry of the bowl, relation with length and diameter to be adapted to suit the application. In most of the cases, good results are obtained at length to diameter 2 :1 and sometimes depending upon application 2.5/3:1.

The system is continuous, compact and enclosed while offering versatility, high performance, and low maintenance.

## Application

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

## Typical Products

**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, etc.

## Operation

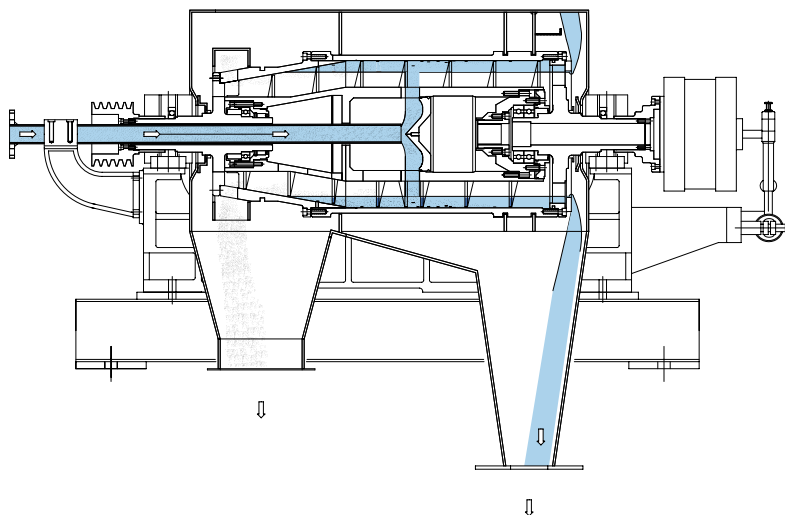
Separation takes place in Horizontal conical / cylindrical bowl with screw conveyor.

The slurry is fed into the bowl through a stationary inlet tube and accelerated by specially designed inlet distributor.

Centrifugal force leads to instant sedimentation of the solids on the wall of bowl.

The conveyor, rotating in the same direction as bowl with differential speed, conveys the solids to conical end. The solids are lifted clear of the liquid and centrifugally dewatered before being discharged into the collecting channel.

The clarified liquid flows into the housing through opening in cylindrical end of the bowl.



## Major Features

Simple, rugged construction.

Rotor comprising screw conveyor inside conical / cylindrical bowl.

Screw conveyor, single flight or multi flights, with or without hard surfacing.

Solids discharge through collecting channel and hard - surfaced scrapers.

Drive by electric motor and V belts with gear box for high strength and reliability.

Oil lubrication for gear box and greasing for bearings.

Overload protection device.

Vibration dampers.

Optional- gas tight design with gas-sealed labyrinths.

Perbunan, Viton or PTFE seals.

Pressure - tight design with glide ring seals for up to 10 bar.

Optional - Centralised lubrication system.



## Rotofilt Engineers Ltd.

Patel Farm, Opp. Shri Krishna Temple, Nr. Bhammariya Kuva, N.H.No. 8, Lambha, Ahmedabad-382 405 India.

Tel.: +91 79 2571 4967, 2571 2861, 2571 1596 • Fax : +91 79 2571 3757 • Email : [rotofilt@rotofilt.com](mailto:rotofilt@rotofilt.com) • [www.rotofilt.com](http://www.rotofilt.com)

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