

An ISO 9000:2008 COMPANY

**Rotofilt**



- 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

Based on the principle of sedimentation, the Decanter Solid Bowl Centrifuge uses the force developed under fast rotation of a helical screw conveyor which separates the liquid from the solid fraction at a slightly higher or lower speed than the bowl.

**Application**

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

**Typical products processed:**

**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..

**Design Features**

- Simple, rugged construction
- Rotor comprising screw conveyor inside conico / cylindrical bowl
- Screw conveyor (single flight or multiple 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

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 diameter 2 : 1 and sometime depending upon application 2.5 / 3 : 1.

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



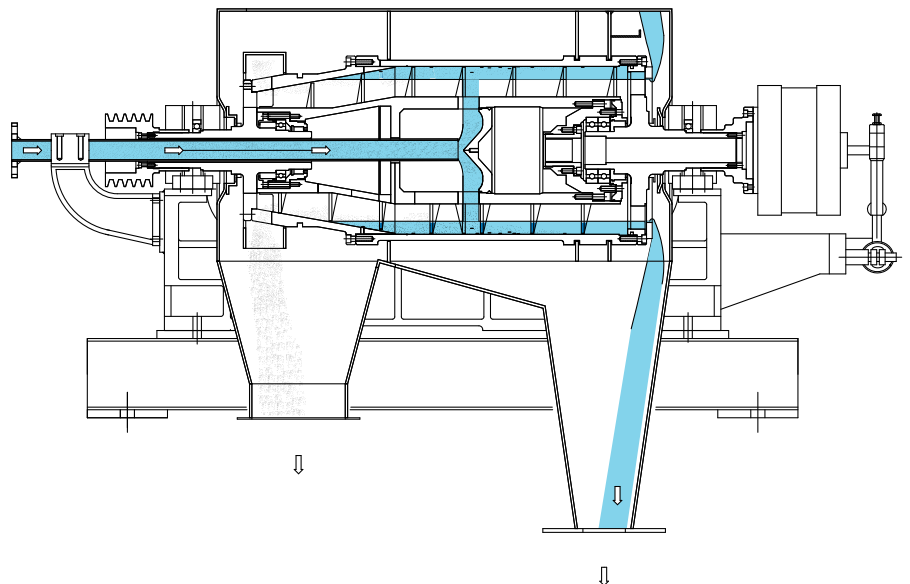
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## Operations

- Separation takes place in Horizontal conical / cylindrical bowl with screw conveyor.
- The slurry is feed into the bowl through a stationery inlet tube and accelerated by specially design 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.

Type/Model	Basket Design	Basket Nominal $\phi$ (mm)	LXWXH (mm)	Approx. Wt. Kgs.
TME - 252	2 stage	250	1500 X 1100 X 950	1200
TME - 352	2 stage	350	1500 X 1100 X 950	1400
TME- 402 400	2 stage Single stage	400	2160 X 1100 X 1150	1600
TME - 502 500 500 C	2 stage Single stage Cylindro Conical	500 575	2450 X 1200 X 1200	1900
TME - 602 600 600 C	2 stage 2 stage Cylindro Conical	600 675	2550 X 1250 X 1250	2100
TME - 702 700 700 C	2 stage Single stage Cylindro Conical	710 800	3050 X 1550 X 1770	4500
TME - 802 803 800 800 C	2 stage 3 stage Single stage Cylindro Conical	810	3050 X 1650 X 1750	5200
TME - 902 903 904 900 C	2 stage 3 stage 4 stage Cylindro Conical	910	3600 X 1800 X 1950	7150



# Rotofilt

**Rotofilt Engineers Ltd.**

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