

CENTRIFUGE

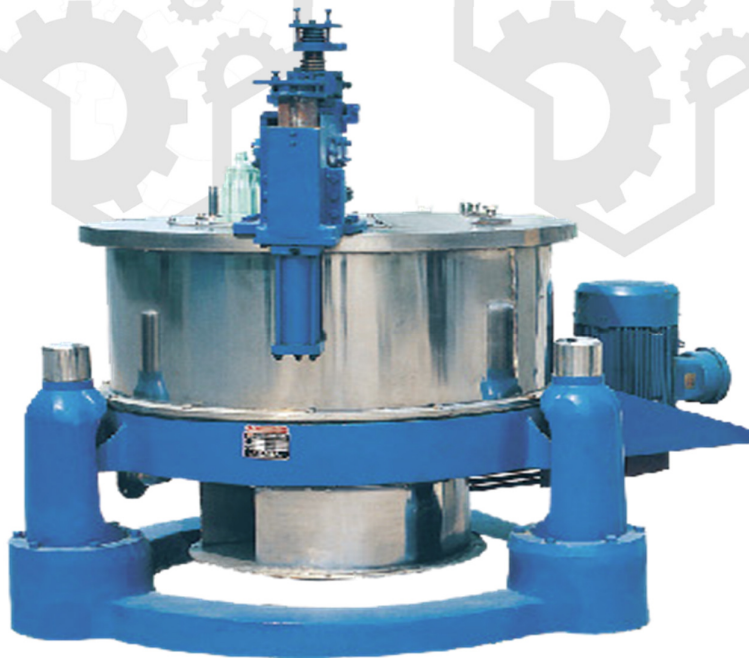
About

A **Basket Centrifuge** is essentially a sedimentation device in which the solids - liquid separation is enhanced by the use of centrifugal force. This is accomplished by rotating the liquid at high speeds to subject the sludge to increased gravitational forces.

The sludge resulting from wastewater treatment operations and processes is usually in the form of a liquid or a semisolid liquid that typically contains 0.25-12% solids by weight, depending upon the operations and processes used. The volume of sludge is larger and hence it's processing and disposal is perhaps the most complex problem due to the presence of the organic matter present in it at the end of biological treatment.

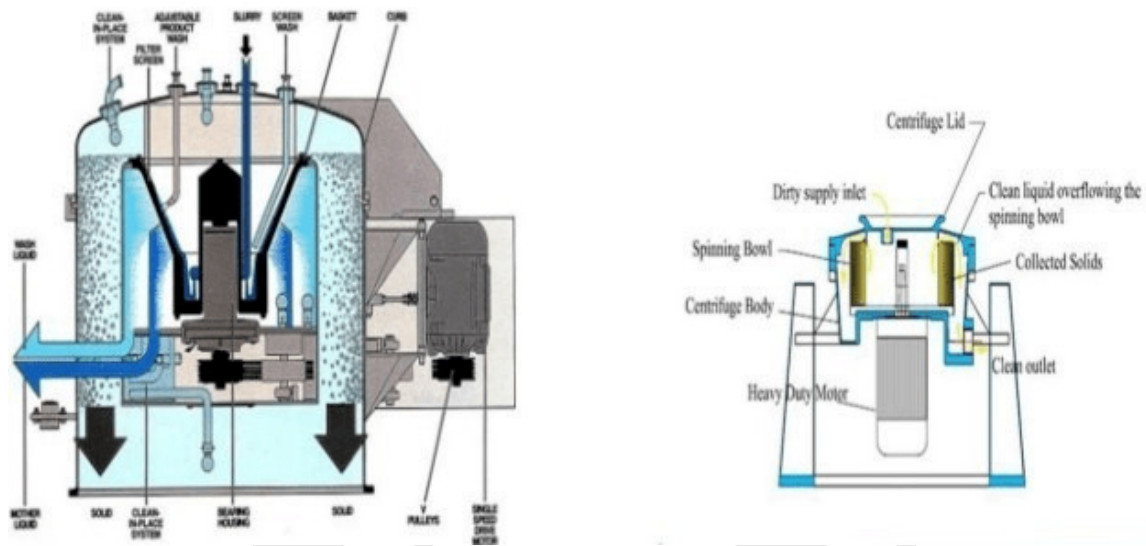
Basket Centrifuge is usually used for dewatering wastewater sludge in a slurry form. It is usually operated in a batch wise process and it is typically applied in treatment plants whereby high amount of solid recovery is very important towards getting a clear water discharge. Normally the cakes obtained using this solid/liquid separation technique is very dry and thus its application in wastewater treatment is usually towards the end of the final discharge in which it acts as a polishing stage.

BASKET CENTRIFUGE



Working Principle

A normal design and build up of a typical basket centrifuge usually contains either a perforated drum with holes for the water to pass through or one in which the drum has a solid wall surface without any holes (imperforated). The first one, perforated type, sludge medium will enter to the drum and then under centrifugal force, the water will move away towards outside of the drum and it will be collected and drained out. The other one which is imperforated, water can only be separated from the sludge when it overflows from the top of the bowl. Regardless of design, both sludge/water separations can still be achieved although the perforated type provide a slight advantage compared to the other.



In order to achieve better separation and getting a clear filtrate, polymer can be added to assist the whole process. Polymer will help to bind together the sludge medium and thus helps to prevent the fine sludge particle from escaping together with the liquid discharge. A typically available industrial sized basket centrifuge will come complete with a R.P.M probe, safety interlock system, vibration detector for better control by the operators and if for any reason, either one of these are missing from your unit, it is your right to request for and have it installed.

Product Description

- Compact Designs
- Sturdy Construction
- Durable
- Safe to Operate
- Trouble Free Functioning
- Saves Time and Labour.
- Level of vibration is much lower & operates very smoothly.
- Can be mounted on upper floor and can be easily relocated.
- Almost negligible maintenance cost.
- Working area is free from abstracts and a clean area can be maintained.

How does a Basket Centrifuge Work?

The Basket centrifuge is a filtering centrifuge which separates solids and liquid from a solid-liquid mixture. This type of centrifuge is commonly used with a continuous process in which slurry containing both solid and liquid are continuously fed into and continuously discharged from the centrifuge. In a typical screen scroll centrifuge, the basic principle is that entering feed is separated into liquid and solids as two products. The feed transitions from the small to larger diameter end of the conical basket by the inclination of the screen basket and slightly different speed of the scraper worm. The solid material retained on the screen transitions along the cone via an internal screw conveyor while the liquid output centrifugal force causes the feed slurry to pass through the screen openings.

Components of a Vertical Basket Centrifuges are a screen, scroll, basket, housing, and helical screw. Feed containing liquid and solid materials transitions into the vertical basket centrifuge from the top. The process accelerates via centrifugal acceleration produced from the rotating parts contacted. As such, centrifugal force transitions liquids through the openings. Meanwhile, solids remain on the screen surface as they cannot pass through because of granular particles larger than the screen pores or due to agglomeration. Flights manipulate the movement of solids across the screen surface. Liquids that have gone through the screen transition through an effluent outlet from the side of the machine, while solids collected from the screen fall by gravity through the bottom discharge of the machine.

Application Range

- Biological Sludge Dewatering
- Flocculated Sludge Dewatering

Product Specifications

PRODUCT NAME	MODEL NO.	SPECIFICATION
BASKET CENTRIFUGE	UTCF-12	Size-300 x 240 mm, MOC- ms/ss, Capacity-5kg/Batch
	UTCF-16	Size-400 x 280 mm, MOC-ms/ss, Capacity-15kg/Batch
	UTCF-18	Size-450 x 280 mm, MOC-ms/ss, Capacity-20kg/Batch
	UTCF-20	Size-500 x 280 mm, MOC-ms/ss, Capacity-25kg/Batch
	UTCF-24	Size-600 x 350 mm, MOC-ms/ss, Capacity-45kg/Batch
	UTCF-30	Size-750 x 350 mm, MOC-ms/ss, Capacity-75kg/Batch
	UTCF-36	Size-915 x 450 mm, MOC-ms/ss, Capacity-150kg/Batch
	UTCF-48	Size-1220 x 500 mm, MOC-ms/ss, Capacity-150kg/Batch

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