

Bottom Driven Bottom Discharge Centrifuges



Table of Contents

1. Bottom Driven Bottom Discharge	2
2. How It Works	2
3. Models	4
4. Contact	4



Bottom Driven Bottom Discharge

Bottom Driven Bottom Discharge Centrifuge (BDBD Centrifuges) provides efficient and non contact discharge of the solid using peeling effects, hence also called Vertical Peeler Centrifuge.

How It Works

BDBD Centrifuge suitable in industries requiring high degree of automation, like pharmaceuticals and fine chemicals, when material is not sticky and easy to peeled off.



Here's a breakdown of how it typically works:

Feeding and Filtration

Centrifugation Phase

Slurry Introduction

The solid-liquid feed (slurry) is fed into the rotating centrifuge basket, which contains a filterbag (often made of woven fabric like polypropylene or polyester).

Centrifugal Force

As the basket rotates at high speed, centrifugal force pushes the denser solid particles outwards against the filterbag.

Liquid Separation

The liquid (filtrate) passes through the filterbag and the perforated basket, collecting in an outer housing and then discharged.

Cake Formation

The solid particles are retained on the inner surface of the filterbag, forming a filter cake.

Washing (Optional)

If required, a washing liquid can be introduced to further purify the cake, with the wash liquid also being separated by centrifugal force.



Scrapping and Discharge

Scrapping Phase

This is crucial part of the process:

Deceleration

Once the filtration and washing are complete, the centrifuge basket slows down.

Scrapping (Peeling)

The key mechanism involves a plough scooping action of scrapper by employing either pneumatic or hydraulic power.

Cake Release

As the scrapper peels the filter cake, which was clinging to its inner surface of the basket, is peeled away and detached.

Discharge

The released cake falls by gravity at the bottom and gentle rotation into a discharge chute or container below the centrifuge.



Construction Features & Options

Scraper Design

Easy to removal material uses a single action scraper, while sticky materials require a double action scraper.

OuterCase Design

- Full Top Cover Opening: For processes requiring complete access to the basket, such as cleaning or inspection.
- Nitrogen Purging: For inerting the system, especially in processes involving flammable or reactive materials.
- Cake Thickness Sensor: To monitor the thickness of the filter cake, ensuring optimal performance and preventing overloading.

Standard Features

- 4 Point suspension for stability and reduced vibration.
- Robust construction for durability and long service life.
- Automated controls for ease of operation.
- VFD Auto Control for speed regulation, enhancing process efficiency.
- Pressure Tested for safety and reliability.

- Customizable options to meet specific process requirements.
- CIP (Clean In Place) system for easy cleaning and maintenance.
- Mirror Polished Finish for hygienic applications, ensuring easy cleaning and preventing contamination.



Safety Features

- Safety interlocks to prevent operation when the cover is open.
- Emergency stop buttons for quick shutdown in case of an emergency.
- Vibration monitoring systems to detect and prevent excessive vibrations.
- Over-speed protection to prevent damage to the centrifuge.
- Nitrogen purging system to prevent explosive atmospheres.

Models

Model	Basket Dia. (mm)	Basket Height (mm)	Lip Dia. (mm)	Filter Area (m ²)	Volume (L)	Max Load (Kg)	Max RPM	G-Value	Power (HP)
36BDBD	900	500	600	1.41	176	176	1000	503	10
48BDBD	1200	600	800	2.26	376	376	900	543	20
60BDBD	1500	700	1000	3.30	687	687	800	536	30
66BDBD	1650	800	1100	4.15	950	950	700	451	40

Contact

WHIRLER CENTRIFUGALS PVT LTD

Office

L605, GIDC, Odhav, Ahmedabad 382415, Gujarat, India

Works

13,14,18,19 Industrial Estate, Varsola, Mahemdabad, Kheda 387130, Gujarat, India.

Email

info@whirlercentrifugals.com

Website

www.whirlercentrifugals.com

Centrifuge Division

- +919426419038
WhatsApp
- +919909960911,
WhatsApp
- +917016476105,
WhatsApp
- +919033723683,
WhatsApp

Disclaimer:

Due to the continuous development of our products, we reserve the right to change the specifications and designs without prior notice. The images shown are indicative and may not represent the actual product. For more details, please contact us directly.

