



Process Equipment Manufacturers

SEDIMENTATION | FILTRATION | MIXING

DRUM FILTER



RVDF -Rotary Vacuum Drum Filter

The INDOFAB Rotary Drum Filter brings component design concept to vacuum drum filtration with six interchangeable cake discharge methods. Component design implies interchangeable filter decking, piping, journal bearings and filtrate outlet valves, all in a variety of materials of construction. Filter drum dimensions have been standardized from 2ft (610mm) diameter to 13 ft 6 in (4115mm) diameter and variable standard lengths designed for exceptional flexibility.

The INDOFAB component Drum Filter design is capable of adapting to a variety of process conditions. Specific Filtration Tests for non-standard slurry conditions can be carried out for your application to arrive at the right size of filter. Drum submergence can be varied between 20% and 35% of the drum diameter depending on the application & process parameters.

Component Filter Design Facilitates fewer spare parts, faster delivery, lower costs and simpler plant layouts. The efficiencies and economics of the component filter, however, are not limited only to the interchangeability features but also provides exceptional advantages in capacity, washing efficiency and cake dryness. With knowledge gained by more than 35 years experience in the design, engineering and manufacture of filtration equipment, INDOFAB has developed a drum design and piping arrangement that is second to none in achieving minimal Pressure loss in drum piping from drainage deck through filtrate outlet valve. The drive options for component drum filters are available as Traditional (Worm and Worm Wheel drive) or Latest High Efficiency (Planetary gear drive).

MATERIAL OF CONSTRUCTION:

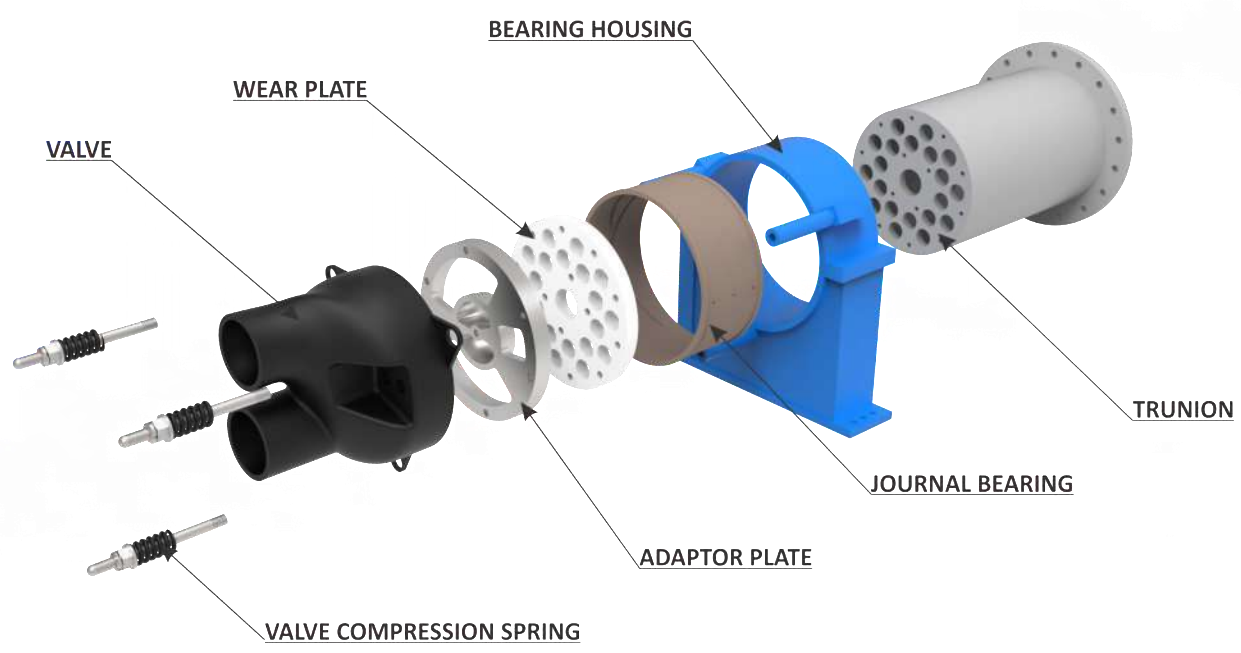
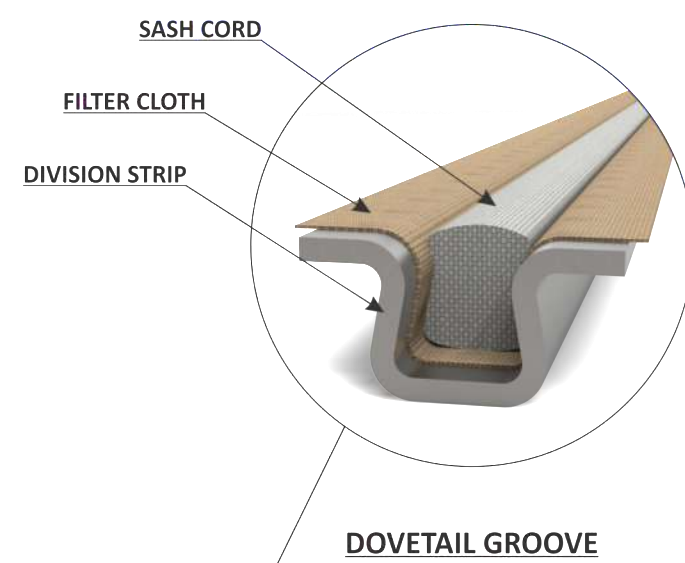
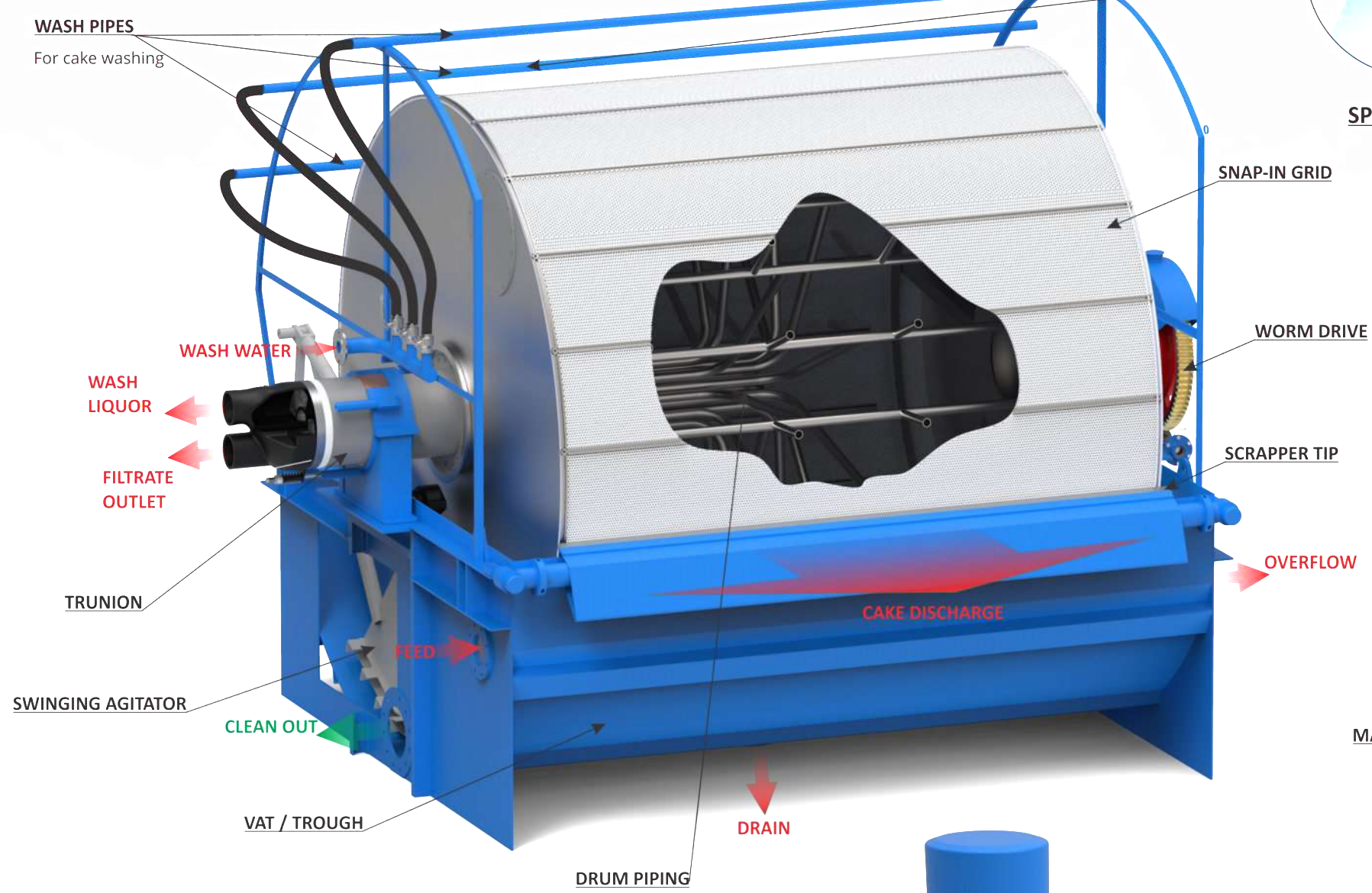
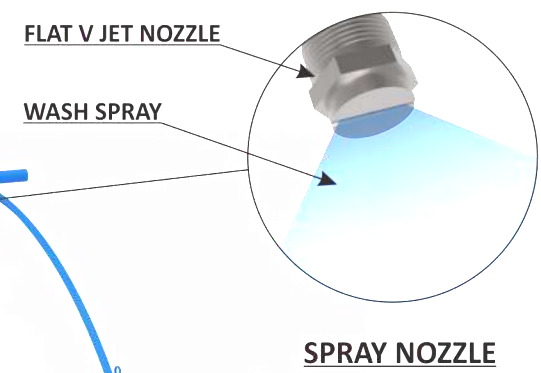
Commonly used Material of Construction is Mild Steel, Stainless Steel SS304/L, SS316/L, SS317/L & Steel Rubber lined constructions for process wetted parts.

APPLICATIONS

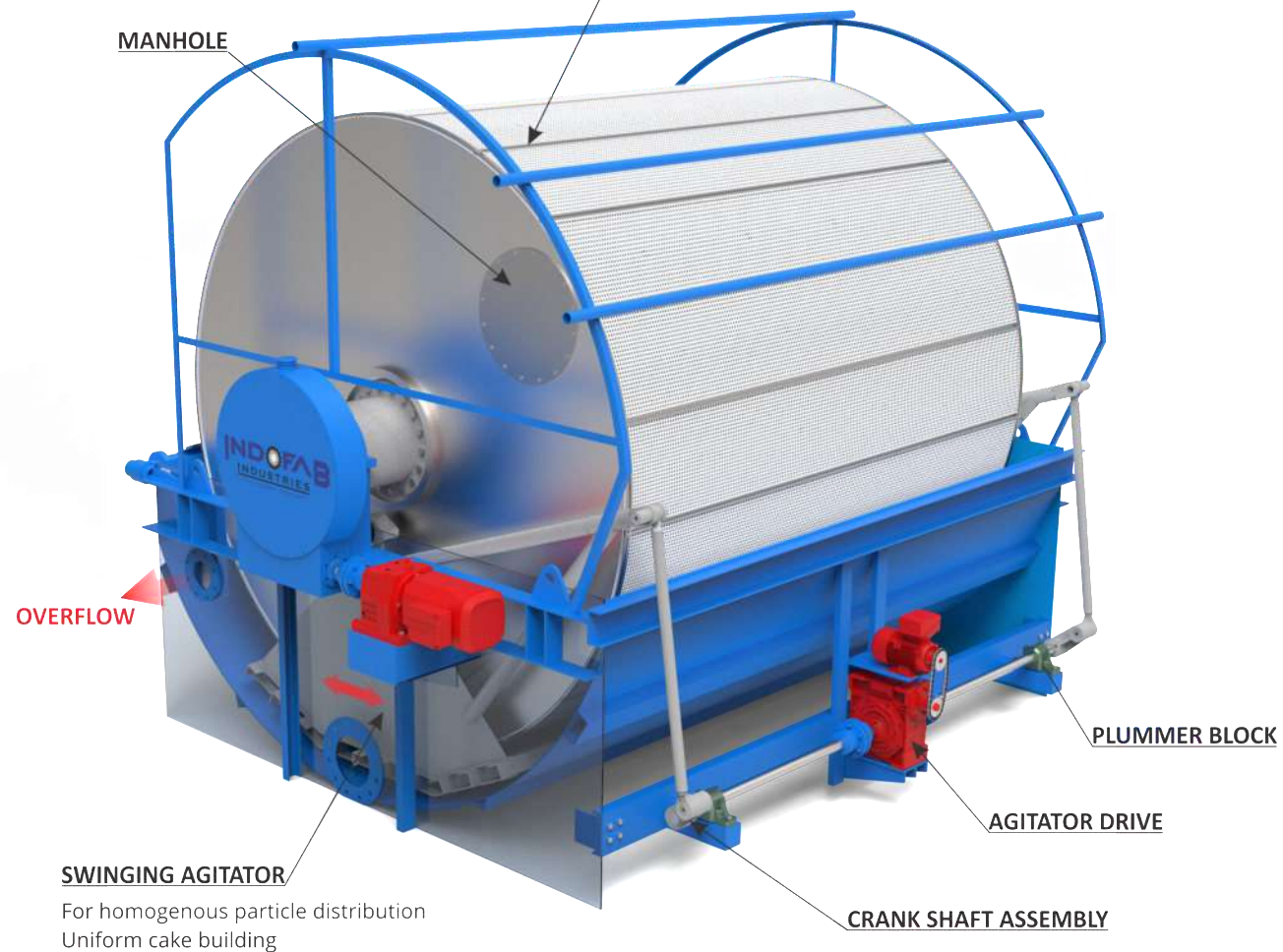
Lime Sludge Filtration, Cane Juice Filtration, Coal Beneficiation, Mineral Beneficiation, Effluent Filtration, Food & Pharma Slurries, Starch Filtration, Pulp & Paper Industry, Chemical Process Industry.



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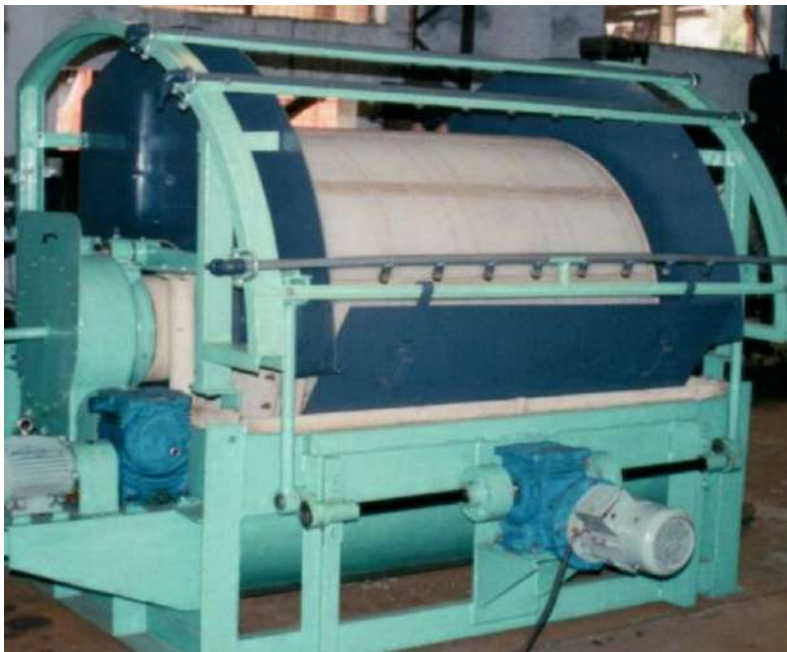
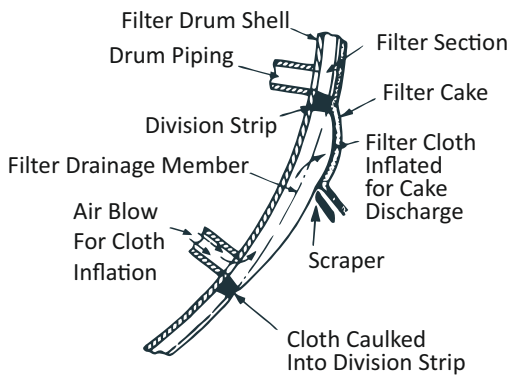
VALVE ASSEMBLY EXPLODED VIEW



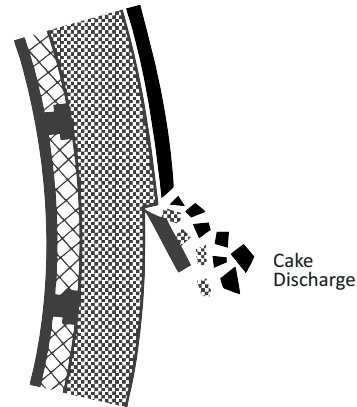
DRIVE SIDE VIEW

SWINGING AGITATOR
For homogenous particle distribution
Uniform cake building

1



2

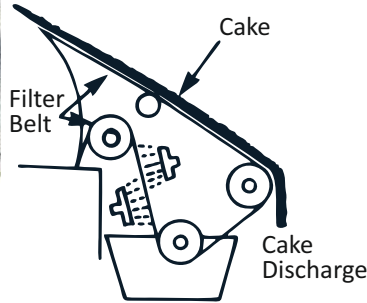
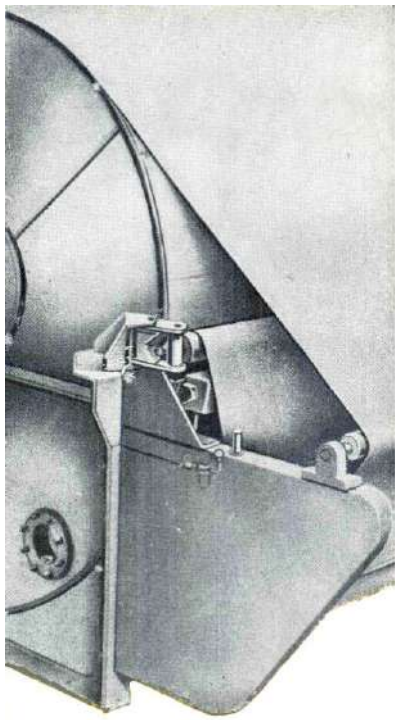


Pre-coat scraper Discharge

Cake Discharge Types

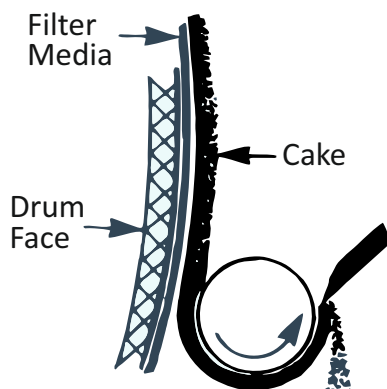
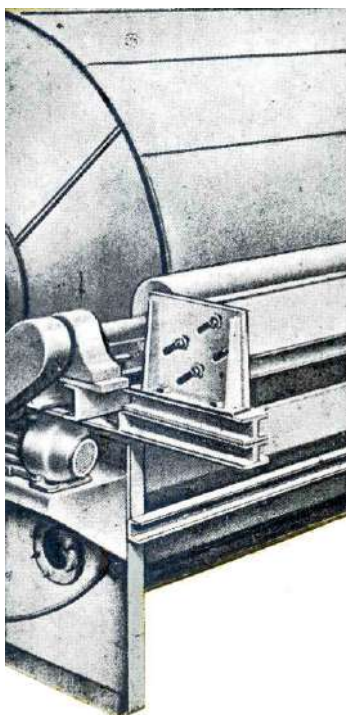
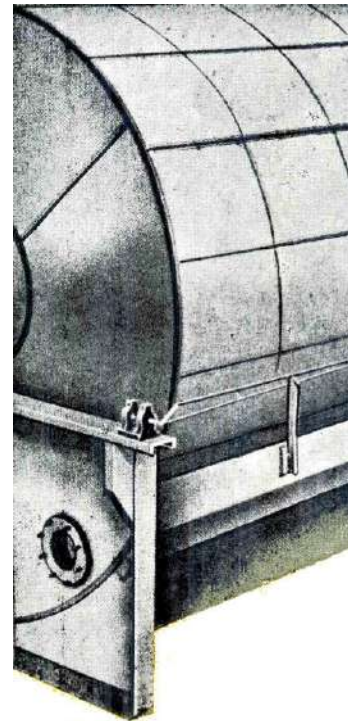
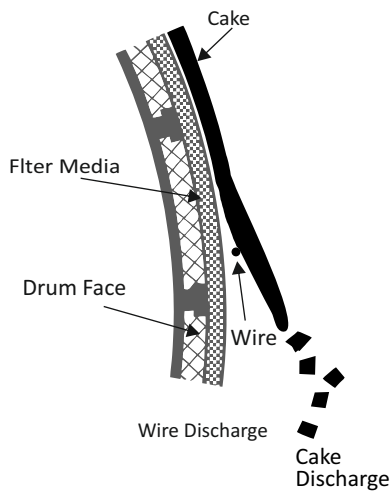
1 SCRAPER DISCHARGE - The Scraper Discharge is the simplest and versatile method of discharging the cake. For filter drums using air blow, to loosen cake two types of scraper designs are available - rigid scraper and floating scraper. The scraper discharge assembly pivots at both the ends and easily adjusted accurately for the desired clearance between scraper tip and the Drum media surface. Just before the cake discharge, a short burst of compressed air is applied which billows the cloth so it deflects around the scraper, releasing the cake and helping to remove the solids from the cloth pores. Scraper tips of Polypropylene, Canvas, Teflon, HSS, Stainless Steel are selected based on application.

2 PRE-COAT SCRAPER DISCHARGE - Pre-coat Filters are designed to filter difficult or impossible to filter slurries by any other means containing colloidal matter, fine particles in suspension or sticky/gummy solids. Pre-Coat media with Cake is usually discarded in such applications. Used in conjunction with a pre-coat filter media usually microporous permeable material (diatomaceous earth). The pre-coat scraper mechanism has a knife edge sharpness that allows it to move against the pre-coat layer with micrometer accuracy. Cuts from 0.0005 to 0.006 of an inch (0.0127 mm to 0.152 mm) are possible. The scraper is equipped with a safety limit switch that actuates an alarm and stops scraper advance when the pre-coat layer has been reduced to a predetermined level. Scraper tips for Pre-Coat Filters are specialized Hardened modular tips of SS, Stellite, High Carbon Steel to a razor sharp finish.



3 BELT DISCHARGE - Used when a dry cake discharge is required from materials having special discharge and cloth binding problems or cake is sticky. The belt discharge consists of a complete roller assembly...bowed discharge roll, return and guide rolls along with wash and scraper mechanisms for cleaning the belt. With this method, the cloth is continuously washed from both the sides to eliminate blinding. The Filter Cloth/Belt is taken off the drum surface and passes over a series of rollers to discharge the cake & to allow washing of belt from both sides before it goes to the next filter cycle.

4 WIRE DISCHARGE - Consisting of a single or double strand of wire tautly stretched across the face of the drum, the wire discharge is employed where sticky, difficult to discharge cakes are encountered. The cake is lifted from the drum, thus avoiding smearing.



5 ROLL DISCHARGE - Where thin, highly adhesive cakes are formed due to very finely divided solids, a roll discharge may be used to great advantage. The roll is a driven floating type and has a smooth or serrated surface to promote adherence to cake. As the vacuum in the drum is released, the cake adheres to the roll and is discharged by a scraper blade resting against the roll. A roller with the axis parallel to the drum serves as a discharge medium; the surface speed of the discharge roller is synchronized with the drum, the sticky cake transfers from the filter drum to the roll and then scraped off the roll. A small heel forms on the roll which make the cake pickup easier. Cakes as thin as 1/16 of an inch (1.5 mm) can be fully discharged.

UNIQUE PIPING DESIGN:

A unique design feature of the component filter is the type piping arrangement. The internal piping is large diameter and streamlined, hydraulically designed to effect a uniform treatment of the entire filter surface. Since filtration efficiency is dependent on proper vacuum reaching the filter media, any pressure drop within the drum is critical. With the component filter pressure loss in the piping from drainage deck through the filter valve never exceeds 2 inches (51 mm) Hg. Multiple outlets on the deck are spaced evenly for balanced drainage.



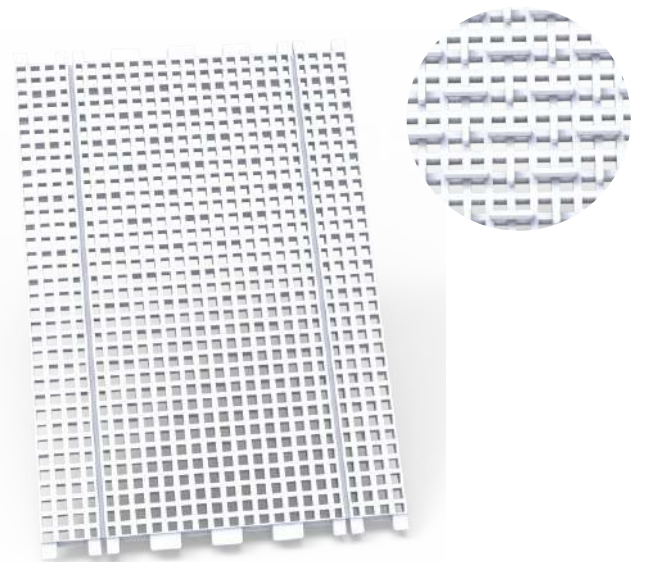
ADAPTABLE FILTRATE VALVE

Trunnions and valves are interchangeable on any diameter drum, fundamentally only five different sizes of valve cover the entire range of Filter drum Diameters. The valve on the component filter is streamlined with an open center, insuring straight line flow at maximum hydraulic capacity. It is held in place by three spring loaded studs that permit easy access to the bridge plate & wear plate; simultaneously maintaining a positive pressure on the rotary surface joint allowing minimal air passage. High Drainage/Extra Long Filters are very easy with Component design providing Filtrate Outlet on both sides of Filter Drum. Valves with Dual Discharge Mother Filtrate & Light Filtrate(Wash Liquor) are a good option for Concentration sensitive slurries. A vacuum hose safely keeps Spring Loaded Suspended valve free of external forces causing misalignment/leakage at rotary joint.



STANDARD DRAINAGE GRID :

Another unique feature of the component filter which literally makes maintenance a snap is the quick snap-in drainage grid supporting the filter media. available in molded rubber , polypropylene and other plastics it provides 55% open area, substantially increasing filtration efficiency . the ease with which this grid can be removed and installed greatly simplifies cleaning and replacement, snapping it on or off is only a matter of seconds. Drainage grids are the same width for all diameter drums and are interchangeable on all models regardless of size. Filter Media / Cloth is secured firmly Drum Surface using Special Cord which can be easily caulked in all over the drum tightly fitting in the Division Strips separating the Decking panels. For Special Applications alternative replaceable SS screens are available.



Snap-In to division strip

ALSO AVAILABLE FOR APPLICATION SPECIFIC REQUIREMENTS LIKE

- Lime mud filter used in Causticizing Plants
- Pulp Drum filters in Pulp & Paper Industry.
- Dregs Filter used in Re-Causticizing Plants.
- Cane Juice Filters for Sugar Industry.

INDOFAB INDUSTRIES

Process Equipment Manufacturers

ISO 9001:2015 Certified Company

INDOFAB INDUSTRIES is a well-known name for supply of Quality Process Equipments for past 35 years. The company has its legacy of working with top notch EPC contractors and Consultants, serving large size Project requirements for Government & Private Organizations.

INDOFAB is an **ISO 9001:2015** Certified company for **Design & Manufacture** of Industrial Process Equipments in the field of solid-liquid separation; working for diverse Industries like WTP, ETP, STP, Municipal/Industrial Water & Waste Water Treatment, Paper & Pulp, Mineral Processing & Ore Beneficiation and Milk of Lime Plants.

The company has In-house Design, Testing, Pilot Facilities for Establishing its designs & continues to deploy latest Analysis/Design tools for Process Equipment Design. Combined with In-house Manufacturing Capacity with over 44000 Sq.Ft. Working area with 8 EOT Cranes facilitates working of about 100+ team turning out more than 1150 tons of steel per annum.

Strategically located facilities in & around **Mumbai** our office & manufacturing facilities are easily accessible for representatives, heavy vehicles & port facilities. We at INDOFAB are glad to retain more than 75% of our repeat clients due to our efficient after sales spares & services for decades together.

Few of our Esteemed Clients / Consultants we work for



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