

# FILTRATION

TECHNIQUES

FILTRATION SOLUTIONS YOU CAN TRUST



# FILTREX

INDUSTRIES PVT. LTD.

An ISO 9001 : 2015 Certified Company

**Filtrex Industries Pvt. Ltd.**

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## ■ ABOUT US

Filtrex Ind. Pvt. Ltd. is committed to deliver reliable and efficient industrial solution. We focus on best practices and continues improvements through innovation, these improvements are on manufacturing methods and product design. We ore now able to analyse and understand the difference in the Quality of our product, at the same time we are able to reduce manufacturing cost.

FILTREX manufacturing workshop is highly engineered work shop with special machines. Automation has become a need in an engineering workshop, For better product cost and quality. QUALITY- ACCURACY- PRECISION- REPEATABILITY are the key drivers to automation. Human error and interference have reduced overtime, we continue to research on bringing automation to our facility.

We have strong strategic focus on edible oil refining industry and are committed to deliver products and services with best quality. We have an excellent knowledge about filtration and we are able to provide complete solution then just a product. On time delivery is our promise to customer, our engineers are available to provide immediate and excellent service to customers all over India and International.

We take liberty to introducing ourself as Filtrex Ind. Pvt. Ltd. team of engineers & Technocrats dedicated to the service of industry. Company was launched in the middle of 2016 mainly as Pressure Leaf Filters manufacturers in the field of vegetable oil refineries, paint industries, chemical industries, and Pharmaceutical industries in INDIA & abroad. FILTREX vision of manufacturing range of high performance filters in accordance with the current market requirements. A team of new generation innovative professionals, who always take insight into the emerging requirements of the process for development & implementation of latest technologies, to reach the market expectation. Having its own in-house facility and infrastructure to conform to industry standards. Our research team is engaged with developing products that give operational efficiency and reduced OPEX to our customer's. Our manufacturing facility is situated in Kalher-Bhiwandi, minutes away from Thane City. FILTREX have invested in 4,000 SQ FT area in Navi Mumbai for future expansion.

We thank our customers to support us far continues growth.







## VERTICAL PRESSURE LEAF FILTER (VPLF)

FILTREX vertical leaf filtration system is high quality equipment. This filter produces a high filtrate clarity after the clarification run and is also suitable for all kinds of filter aids. VPLF (Vertical Pressure Leaf Filter) can be used for numerous batch and continuous filtration process. The fluid to be filtered flows through the filter medium, which covers both side of the filter leaf. Collected solids remain on the filter leaf as filter cake. In most of the cases this filter cake is then dried through steam or Air. This dried filter cake is then dropped using vibrator activation. The regeneration time between the filtration cycles is short, with automated discharge valve filter cake can be disposed. The most important factor while designing PLF for a particular process is product leftover in the filter media/ filter cake. There are several parameters that determines the product residual. VPLF Filtration method enhance's product recovery.

We FILTREX IND. PVT. LTD. can recommend your filter design to optimise your production loss. Vertical pressure leaf filters can also be delivered as tandem units to save floor space. The pressure leaf filter itself has no rotating parts, keeping maintenance to a minimum. These advantages result in an economical filtration solution. The most important part of the pressure leaf filter is the leaf, The double sided filter leaves are made from stainless steel. The rigid filter leaves have five layers of stainless-steel wire mesh. The mesh size and material selection will add to operational efficiency and filter reliability. In most of food and beverage industry large volumes of products need to be handled, FILTREX IND. PVT. LTD. offers customised designs per product and filtration requirement, increases efficiency and economy together with reliability. Our extensive product range can be utilised for all areas of food and beverage market. FILTREX Filter leaf's detailed specifications are mentioned below. Our state of art production facility increases filter quality, automated riveting machine is used for assembling filter housing. An incorrect rivetting could lead to major leak in the entire system, a single leak path in any leaf will cause a total system failure. In a machine rivetting process leaks would not occur after long operational years.

### Features:

- High filtrate clarity
- High yield low product losses - Maximum product recovery from filter cake
- Large filtration area - small footprint (high headroom)
- No filter cloth - no washing or cloth replacements
- Totally enclosed operation - no contact with air/moisture
- Positive pressure - no vacuum or lowered pressures necessary
- Wet or dry cake discharge
- Easy to automate - operation with minimum labour
- Fast and effective cleaning without manual interference.
- Mechanically simple
- Easy access to the filter leaves for maintenance or extra leaf cleaning
- Improved housekeeping
- Steam heating optional

### APPLICATIONS:



Edible Oils



Pharmaceuticals



Bio fuels



Foods



West Water



Chemicals



Petrochemicals



## Leaf Specification

| Material of Construction |                            |
|--------------------------|----------------------------|
| 4 MESH                   | AISI 304 (SS 316 optional) |
| 8 MESH                   | AISI 304 (SS 316 optional) |
| RIVETS                   | AISI 316                   |
| NOZZLE                   | AISI 304 (SS 316 optional) |
| O RINGS                  | VITON                      |
| 24 X 110 MESH            | AISI 316L                  |
| PLAIN DUTCH WEAVE        |                            |
| MICRON SIZE              | 80 – 125                   |

## Tank Specification

| Material of Construction | Carbon Steel/ Stainless Steel       |
|--------------------------|-------------------------------------|
| Sizes available          | 5 SQ MTR to 100 SQ MTR              |
| Working Pressure         | 4.5 Kg/Cm2                          |
| Design Pressure          | 8 Kg/ Cm2                           |
| Design Temperature       | 160 DEG C                           |
| Working Temperature      | 100 – 120 DEG C                     |
| Vibrator Assembly        | Standard with Shaft Sleeve and Bush |



## VPLF Selection Sheet

| Sr. No. | FILTRATION AREA | MODEL NUMBER | FILTER LEAFS | CAKE VOLUME (dm <sup>3</sup> ) | DISCHARGE VALVE SIZE (MM) | FILTER VOLUME (M <sup>3</sup> ) | TANK OD (MM) | EMPTY WEIGHT (KG) |
|---------|-----------------|--------------|--------------|--------------------------------|---------------------------|---------------------------------|--------------|-------------------|
| 1       | 2 SQ MTR        | REVF-2-CS    | 5            | 44                             | 200                       | 0.25                            | 480          | 300               |
| 2       | 5 SQ MTR        | REVF-5-CS    | 5            | 110                            | 200                       | 0.75                            | 790          | 650               |
| 3       | 10 SQ MTR       | REVF-10-CS   | 9            | 220                            | 350                       | 1.00                            | 900          | 750               |
| 4       | 15 SQ MTR       | REVF-15-CS   | 9/11         | 330                            | 350                       | 1.23                            | 900          | 1000              |
| 5       | 20 SQ MTR       | REVF-20-CS   | 11           | 440                            | 400                       | 1.70                            | 1100         | 1100              |
| 6       | 24 SQ MTR       | REVF-24-CS   | 11           | 528                            | 500                       | 2.00                            | 1220         | 1270              |
| 7       | 30 SQ MTR       | REVF-30-CS   | 15           | 660                            | 500                       | 2.00                            | 1220         | 1400              |
| 8       | 35 SQ MTR       | REVF-35-CS   | 13           | 840                            | 500                       | 2.80                            | 1380         | 1700              |
| 9       | 40 SQ MTR       | REVF-40-CS   | 15/17        | 960                            | 600                       | 2.90                            | 1380         | 2000              |
| 10      | 48 SQ MTR       | REVF-48-CS   | 17           | 1152                           | 600                       | 3.50                            | 1400         | 2500              |
| 11      | 50 SQ MTR       | REVF-50-CS   | 17           | 1200                           | 600                       | 3.60                            | 1500         | 2500              |
| 12      | 60 SQ MTR       | REVF-60-CS   | 17           | 1440                           | 600                       | 3.90                            | 1500         | 2500              |
| 13      | 70 SQ MTR       | REVF-70-CS   | 19           | 1680                           | 600                       | 5.13                            | 1650         | 2900              |
| 14      | 75 SQ MTR       | REVF-75-CS   | 19           | 1800                           | 600                       | 5.13                            | 1650         | 2900              |
| 15      | 78 SQ MTR       | REVF-78-CS   | 18           | 1872                           | 600                       | 6.35                            | 1650         | 3000              |
| 16      | 80 SQ MTR       | REVF-80-CS   | 18           | 1920                           | 600                       | 6.50                            | 1700         | 3400              |
| 17      | 100 SQ MTR      | REVF-100-CS  | 20           | 2400                           | 600                       | 7.27                            | 1850         | 4000              |

NOTE: Cake volume is given in dm<sup>3</sup>, filter media/ bleaching earth density can be multiplied to given cake volume for Cake volume in KG.





## HORIZONTAL PRESSURE LEAF FILTER

Horizontal leaf filter design is to handle larger filtration capacity. There are few Industrial applications where filter cake is taken for further processing then disposal. Some special applications like sulphur filtration requires access to filter cake for the rough cleaning, horizontal leaf filter can only be used.

The horizontal pressure leaf filter can be built in larger units than the vertical type. The housing of the filter leaves is moved outside the filter tank with a hydraulic system, which also operates the bonnet closure. The cake is discharged by a pneumatic vibrator. As the filter is opened during discharge it is easy to monitor the cake discharge.



### Applications



Molton Sulphur



Winterization Dewaxing

### HPLF SELECTION SHEET

| Sr. No. | FILTRATION AREA | MODEL NO.   | FILTER LEAFS | CAKE VOLUME (dm <sup>3</sup> ) | FILTER VOLUME (M <sup>3</sup> ) | TANK OD (MM) | EMPTY WEIGHT (KG) | FLOOR AREA  |
|---------|-----------------|-------------|--------------|--------------------------------|---------------------------------|--------------|-------------------|-------------|
| 1       | 5 SQ MTR        | REHF-5-CS   | 7            | 150                            | 1.30                            | 900          | 1100              | 3500 X 1400 |
| 2       | 10 SQ MTR       | REHF-10-CS  | 13           | 300                            | 1.80                            | 900          | 1500              | 4500 X 1400 |
| 3       | 20 SQ MTR       | REHF-20-CS  | 14           | 600                            | 3.20                            | 1250         | 1800              | 5000 X 1500 |
| 4       | 25 SQ MTR       | REHF-25-CS  | 17           | 750                            | 4.25                            | 1250         | 2100              | 5800 X 1800 |
| 5       | 30 SQ MTR       | REHF-30-CS  | 20           | 900                            | 3.50                            | 1250         | 2500              | 6200 X 1800 |
| 6       | 50 SQ MTR       | REHF-50-CS  | 20           | 1500                           | 6.54                            | 1600         | 4000              | 6300 x 2100 |
| 7       | 60 SQ MTR       | REHF-60-CS  | 24           | 1800                           | 8.30                            | 1600         | 4500              | 6900 X 2100 |
| 8       | 70 SQ MTR       | REHF-70-CS  | 28           | 2100                           | 8.90                            | 1600         | 4700              | 6900 X 2100 |
| 9       | 80 SQ MTR       | REHF-80-CS  | 32           | 2400                           | 9.80                            | 1600         | 5500              | 8400 X 2100 |
| 10      | 100 SQ MTR      | REHF-100-CS | 28           | 3000                           | 11.50                           | 1850         | 6000              | 8300 X 2500 |
| 11      | 125 SQ MTR      | REHF-125-CS | 34           | 3750                           | 13.00                           | 1850         | 6200              | 9600 X 2500 |
| 12      | 150 SQ MTR      | REHF-150-CS | 36           | 4500                           | 14.80                           | 2000         | 10,000            | 9900 X 2700 |

NOTE: Cake volume is given in dm<sup>3</sup>, filter media/ bleaching earth density can be multiplied to given cake volume for Cake volume in KG.



## LEAF REMESHING

Filtration mesh plays important role in your filtration, Filtrex Ind. Pvt. Ltd filtration mesh is manufactured as per European standard and meets all international standards. Detailed specifications are as given below,

24 X 10 MESH AISI316L PLAIN DUTCH WEAVE

MICRON SIZE 80 -125 Microns

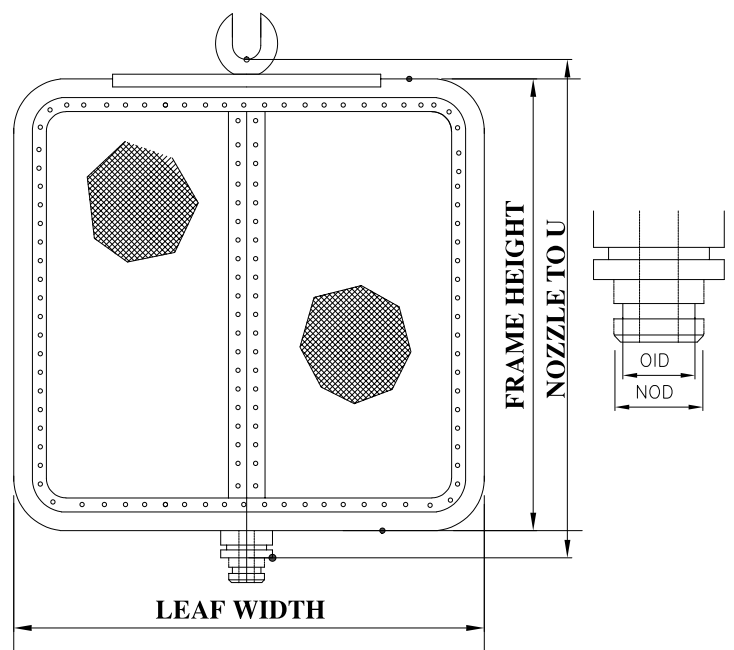
FILTREX IND. PVT. LTD offers a repair service, whereby top layer of wire mesh is replaced with new one. This process involves, De riveting, Mesh cleaning with high pressure wash, Section and mesh straightening, reassembling and welding. Final riveting process is only done with professional machines, manual rivet hammering can never be reliable. There is a major difference between our service and manual jobs.

### Advantages :

- Longer life of the filter leaf reduces downtime cost
- Highest wire thickness is being used results better mechanical strengths and longer life.
- Consistent filtration without clouding
- High tension on filtration mesh, results in uniform cake formation
- Multiple repairs can be performed as no physical damage to filter housing.
- We can repair any Make filter leaf's

## SPARE LEAF SET

FILTREX IND. PVT. LTD can manufactured and supply any make leaf's set for you VPLF or HPLF. We would need details for your existing leaf as given below,





## OPERATIONAL SPARES

### PNEUMATIC VIBRATOR

FILTREX Vibrators provide high impact and energy transfer to ensure easy cake dislodging from Leaf. our vibrators are manufactured from single piece casted design. This Piston type Vibrator is of a high tensile strength, size of the piston is 2.75".



VIBRATOR

### LIP SEAL AND LEAF 'O' RINGS

Filtrex Ind. Pvt. Ltd. gives paramount importance to the quality of O-Rings supplied for Leaf, they are of international standards. A single 'O' Ring failure can cause a total batch failure. Our Lip Seal are designed to sustain a PLF pressure for longer periods.

Filtrex Ind. Pvt. Ltd. recommends to choose correct material for a particular application. All our rubber parts has proper hardness as per the application.



VPLF LIP SEAL



HPLF LIP SEAL



NOZZLE 'O' RINGS

### EYEBOLT

We can supply Eye bolt for any size PLF, this is a high tensile plated bolt with ▶ circlip design.





/// OUR VALUED CUSTOMERS ///



**Our Presence**



**Certifications**

-  Filtrex Ind. Pvt. Ltd. Factory
-  Our Customers



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