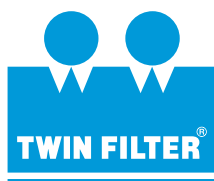


Passion for Filtration



VERTICAL LEAF FILTERS

OVERVIEW

Twin Filter Vertical Leaf Filters are high-quality systems that can be used for numerous batch and continuous filtration processes. The system consists of a number of vertical filter leaves positioned in a horizontal or vertical filter tank. The fluid to be cleared flows through the filter medium which covers both sides of the filter leaf. The collected solids remain on the filter medium as a filter cake.

Vertical Leaf Filters have a high filtration area versus vessel volume ratio. This results in a relatively low initial investment. The pressure leaf filter is typically suitable for fluids with high solid contents.



EASY MAINTANANCE

Vertical Leaf Filters are easy to maintain. They contain almost no moving parts, and the filter leaves can be quickly and easily removed and replaced by spares.

FLEXIBILITY IN APPLICATION AND OPERATION

The filter leaves can be used for direct filtration on the stainless steel. For water filtration the leaves can be covered with filter cloth. In combination with Diatomaceous Earth this makes the leaves very suitable for pre-coat filtration. Also possible in combination with body-feed.

All possible features make our Vertical Leaf Filters suitable for an immense range of applications within several industries.

APPLICATIONS

- Aluminate
- Amines
- Animal Fat
- Brine
- Citric Acid
- Crude Oil
- Fatty Acid
- Fructose
- Gelatine
- Glucose
- Nickel-Catalyst
- Hydrogenation Oil/ Bleaching
- Paraffin Wax
- Pectin
- Resins
- Soya Sauce
- Sulphur
- Water Glass
- Winterization



HORIZONTAL AND VERTICAL TANK

Twin Filter Horizontal and Vertical Leaf Filters are suitable for wet and dry cake discharge.

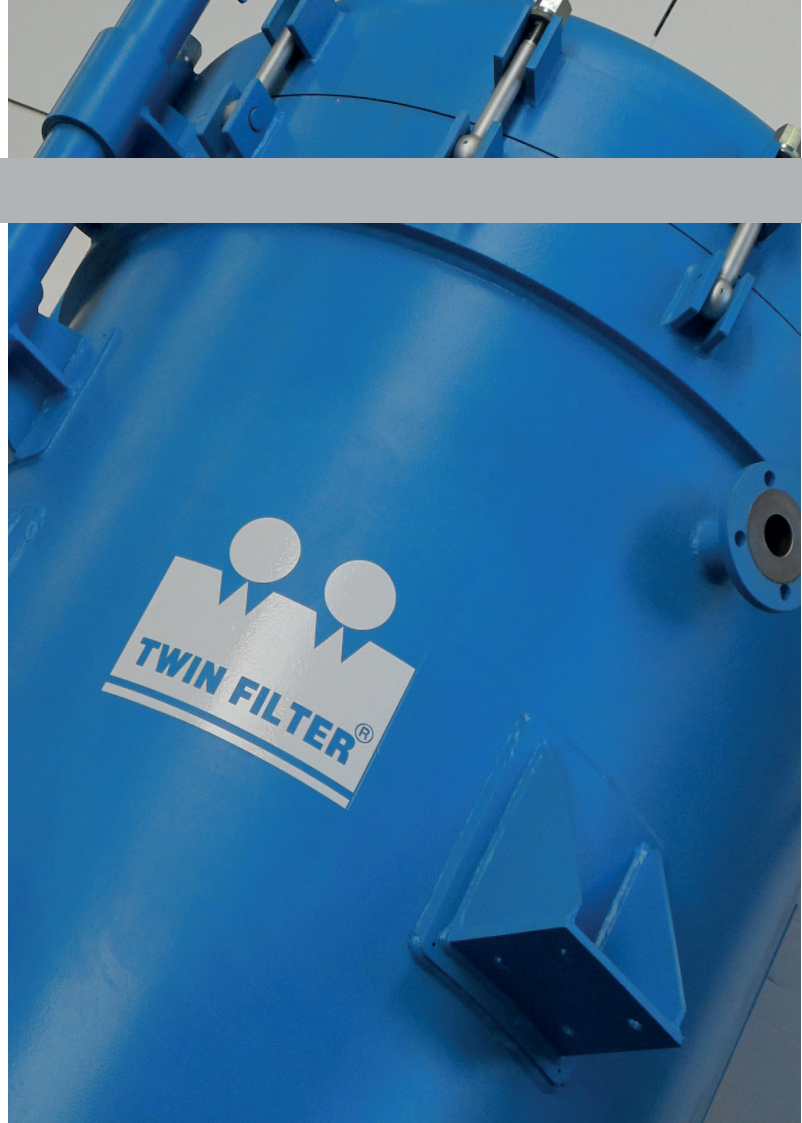
Pressure leaf filters with vertical tank lay-out have the benefit of requiring little floor space. This type of PLF can have up to 120m² of filtration area. The PLF with horizontal tank lay-out can be equipped with even more filtration area, up to 200m². With a horizontal tank lay-out the filter leaves can be accessed during cake discharge.

DRY CAKE DISCHARGE

Filters with a dry cake discharge are equipped with a pneumatic vibrator. The cake is discharged through a conical bottom with butterfly valve. In case of a horizontal tank, the tank is retractable leaving the leaves exposed. The filter cake can be dried by compressed air, inert gas or steam before discharge.

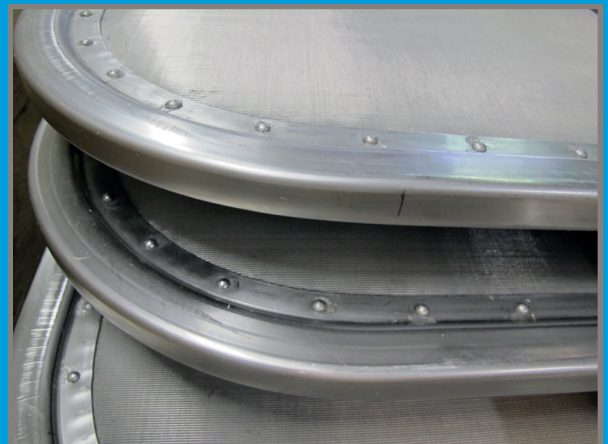
WET CAKE DISCHARGE

Wet cake will be discharged using a built-in spray pipe at the top of the vessel. The cake will be sprayed off, resulting in a slurry which is discharged through the large tank bottom drain. Multiple spray pipes can be installed in one filter, each holding a number of spray nozzles.



STANDARD DESIGN FEATURES

- Minimal floor space for vertical tank lay-out
- Large filtration surface for horizontal tank lay-out
- Retractable tank when horizontal
- Totally enclosed construction
- Automatic, semi-automatic or manual cake discharge
- Rigid design



IMPROVED NOZZLE

Twin Filters drive for innovation resulted in the improved leaf nozzle design. Our team of engineers developed a casted and machined version of the nozzle. This design allows a higher drying gas flow, which ensures the filter cake to be dryer and a minimum loss of fluid.



WIRE MESH

The selected filter mesh depends on the application. The mesh size and material selection are key factors for your filtration process. The right selection of wire mesh will lead to excellent filtration results as well as lower operating and maintenance costs. Contact us for more technical details.



QUALITY FILTER LEAVES

FILTER LEAVES

The most important part of a pressure leaf filter is the leaf. Without a good quality filter leaf your filter will not be able to operate according to your requirements. Depending on your requirements and application, we can supply different types of leaves.

At Twin Filter we manufacture two types of leaves; the Omega Key Hole Channel filter leaf and the Rigid filter leaf. All leaves can be manufactured from various materials, such as 316L SS or special alloys.

The Key Hole Channel filter leaves consist of several layers of wire mesh. The inner layers have a coarse mesh for the discharge of the filtrate and for the support of the outer layers. This design allows a full flow with minimum restriction. The leaves are available in bolted or riveted construction.

Our Rigid filter leaf is extra durable with a life time up to 20 years. These leaves are constructed of fully welded perforated sheets, with support channels designed for low pressure drop. The perforated sheets are covered with replaceable mesh, bolted to the frame. The filter leaves can easily be re-meshed on site.

If your requirements, for example for chemical resistance, need special media like laser perforated holes or etched openings, do not hesitate to let us know. We are happy to discuss which specifications your leaves ought to have to optimize the filtration results.

Synthetic leaves are available in polypropylene, PVDF or other materials on request and covered with synthetic filter material. The filter cake is discharged as a wet slurry.



CONSTRUCTION MATERIALS

Standard construction material of the leaves is stainless steel. Standard construction material of the vessel is carbon steel or stainless steel, depending the application. Gaskets and valve seals can be supplied in many different materials like; NBR, EPDM, PTFE, etc.

OPERATING CONDITIONS

The design pressure is 6 or 7 bar(g), with a design temperature of 150°C or 90°C. The maximum allowable pressure drop is 4 bar. Other design conditions are on request.

FITTINGS

Standard flanged connections according EN1092-1 and ASME B16.5.

PRESSURE VESSEL CODE AND INSPECTIONS

Design code according PED97/23/EC or ASME VIII div. 1, with optional "U"-stamp.

OPTIONS

Optional equipment includes: heating or cooling jackets, segment clamp bolted or hydraulic operated quick opening covers, pumps, pre-coat tanks, interconnecting piping etc.

ABOUT US

As of the 1st of November 2012, Twin Filter became part of Parker Hannifin Corporation. Parker Hannifin has a strong strategic focus on the oil & gas industry and will become a global leader through the acquisition of Twin Filter. Besides oil and gas Parker Hannifin also is of great value for expanding the Twin Filter process and food and beverage markets.

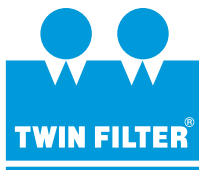
Parker and Twin Filter both offer a wide range of filtration products for many industries including filters and filter vessels, compressed air dryers, hydraulic filters, fuel handling products and nitrogen generators. In addition to filtration, Parker offers many other products for the oil and gas industry such as instrumentation and hoses connectors.

Parker Hannifin operates globally through a network of over 50 customer service centres and sales offices and has a strong presence in all regions. This guarantees immediate service to our customers all over the world.

We assure that all Twin Filter customers will continue receiving our high quality standards of service and solutions.

Twin Filter provides filtration solutions and services for:

- Completion / gravel pack fluids
- Produced water treatment
- (Sea) water intake filtration
- Workover fluids
- Water injection (water flood operations)
- Diesel/fuel filtration/coalescing
- High pressure applications
- Oily water clean-up
- Waste water treatment
- Chemical injection
- Bilge water treatment
- Pipeline flushing
- Powder handling
- Amine and glycol treatment
- RO pre-filtration
- Gas filtration
- Sulphur filtration
- Food and beverage filtration
- Pharmaceutical filtration



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