FILTER LEAVES

The most important part of a pressure leaf filter is the leaf. Without a good quality 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 Omega Key Hole Channel filter leaves consist of several layers of wire mesh. The inner layers have a coarser 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 lifetime up to 20 years. These leaves are constructed of flax, canvas, and surgical stainless wire mesh supported by wire mesh. For low pressure drop, the perforated sheets are covered with replaceable mesh, bolted to the frame. The filter leaves can easily be replaced on site.

FILTER LEAVES

If your requirements, for example, for chemical resistance, need special media like paper, perforated or metal mesh, do not match to the standard, 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 coated with synthetic filter material. The filter cake is discharged as a wet slurry.

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, Twin Filter also has a great value for expanding the Twin Filter process and product lines for beverage markets.

Parker and Twin Filter both offer a wide range of filtration products for many industries including filters and filter vessels, compressed air filters, hydraulic filters, fuel handling products and dryer generators. In addition to filtration, Parker offers many other products for the oil and gas industry such as mechanical solutions and house connections.

Parker Hannifin operates globally through a network of over 50 customer service centers 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.

CONSTRUCTION MATERIALS

Standard construction material of the leaves is stainless steel. Standard construction material of the vessel is carbon steel or stainless steel, depending on the application. Custom and special leaves can be supplied in different materials like 316L SS, 304L, 316Ti, etc.

OPERATING CONDITIONS

The design pressure is 6 or 7 bar (g) with a design temperature of 150°C or 90°C. Other customer specific pressure and temperature conditions can be met as per customer request.

FITTINGS

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

PRESSURE VESSEL CODE AND INSPECTIONS

Design code according to PED97/23/EC or ASME VIII div. 1, with option “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.

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
• Gas filtration
• Sulphur filtration
• Food and beverage filtration
• Pharmaceutical filtration

QUALITY FILTER LEAVES
Twin Filter® Vertical Leaf Filters are high-quality systems that can be used for numerous batch and continuous filtration processes. The components consist of a number of vertical filter leaves positioned in a horizontal or vertical filter tank. The filter leaves are held in place by means of an external support system, which is attached to both sides of the filter leaf. The collected solid masses on the filter medium can be easily removed and replaced.

Vertical leaf filters have a high filtration area in a vertical vessel volume ratio. This results in a significant space reduction. The pressure leaf filter is typically suitable for fluids with high solid contents.

**FLEXIBILITY IN APPLICATION AND OPERATION**

The filter leaves can be used for both horizontal and vertical tank lay-outs. For higher production rates, the leaves can be connected with filter cloth. In combination with body feed nozzles, the leaves can be arranged as a precoat filter for gas and liquid filter cakes.

**DRY CAKE DISCHARGE**

Dry cake discharge is a common method to recover filter cakes. The cake is discharged through a conical bottom with a butterfly valve. In case of a horizontal tank, the tank is retractable, leaving the leaves exposed for easy cake discharge.

**WET CAKE DISCHARGE**

Wet cake discharge is a common method to recover filter cakes. The cake is discharged through a conical bottom with a butterfly valve. In case of a horizontal tank, the tank is retractable, leaving the leaves exposed for easy cake discharge.

**APPLICATIONS**

- Aluminates
- Amines
- Animal Fat
- Biofuel
- Citric Acid
- Coke (oil)
- Dairy Acid
- Fossil
- Gelatin
- Hydrogenation Oil/Bleaching
- Hydrocarbon
- Pectin
- Resins
- Soya Sauce
- Sulphur
- Water Glass
- Winterization

**OVERVIEW**

- Twin Filter Vertical Leaf Filters
- Dual Filter Horizontal and Vertical Leaf Filters
- Pressure leaf filters
- Vertical tank lay-out
- Retractable tank
- Totally enclosed construction
- Automatic, semi-automatic or manual cake discharge
- Rigid design

**EASY MAINTENANCE**

Twin Filter Vertical Leaf Filters are easy to maintain. The leaves can be quickly and easily removed and replaced.

**FLEXIBILITY IN APPLICATION AND OPERATION**

The filter leaves can be used for both horizontal and vertical tank lay-outs. For higher production rates, the leaves can be connected with filter cloth. In combination with body feed nozzles, the leaves can be arranged as a precoat filter for gas and liquid filter cakes.

**DRY CAKE DISCHARGE**

Dry cake discharge is a common method to recover filter cakes. The cake is discharged through a conical bottom with a butterfly valve. In case of a horizontal tank, the tank is retractable, leaving the leaves exposed for easy cake discharge.

**WET CAKE DISCHARGE**

Wet cake discharge is a common method to recover filter cakes. The cake is discharged through a conical bottom with a butterfly valve. In case of a horizontal tank, the tank is retractable, leaving the leaves exposed for easy cake discharge.

**APPLICATIONS**

- Aluminates
- Amines
- Animal Fat
- Biofuel
- Citric Acid
- Coke (oil)
- Dairy Acid
- Fossil
- Gelatin
- Hydrogenation Oil/Bleaching
- Hydrocarbon
- Pectin
- Resins
- Soya Sauce
- Sulphur
- Water Glass
- Winterization

**STANDARD DESIGN FEATURES**

- Minimal filter area for vertical tank layout
- Large filtration surface for horizontal tank lay-out
- Automatic cake discharge
- Totally enclosed construction
- Rigid design

**IMPROVED NOZZLE**

Twin Filter® drive for innovation resulted in the improved leaf nozzle design. The leaf nozzle is a key component to the Twin Filter® performance. The improved nozzle reduces energy consumption and ensures the filter cake is more compact and has fewer structural faults.

**WIRE MESH**

The selection of wire mesh depends on the application. The wire size and slot size are key factors to consider. The wire mesh is tailored to meet the specific requirements of the process. Contact us for more technical details.
Twin Filter Vertical Leaf Filters are high-quality systems that can be used for numerous batch and continuous filtration processes. The innovative concept of a number of vertical filter leaves positioned in a horizontal or vertical filter tank. The filter leaves are housed horizontally in their working position next to the filter leaf. The collected solid mass on the filter leaves is discharged by means of a horizontal or vertical leaf discharge. Vertical leaf filters have a high filtration area to vessel volume ratio. This results in a relatively low investment cost and a high overall efficiency.

Flexible application and operation:
Vertical and horizontal leaf filters can be used for direct filtration on the stainless steel or for filter cloth. In combination with body-fed, filter leaves can be used for a wide range of applications. The filter leaves can be used with a wide range of materials and can be replaced by spares.

Ease of maintenance:
Filter leaves are easy to maintain. The leaves with almost no moving parts can be quickly and easily removed and replaced by spares.

Applications:
- Aluminates
- Amines
- Animal Fat
- Acid
- Citric Acid
- Coke-ash
- Fatty Acid
- Fuel oil
- Gelatine
- Glucose
- Nickel Catalyst
- Phosphogypsum (CLC Wastewater)
- Paraffin Wax
- Paper
- Plastics
- Pulp
- Salt
- Soda Ash
- Water Glass
- Winterization

Standard design features:
- Minimal filter area for vertical tank layout
- Large filtration surface for horizontal tank lay out
- Easily integrable into existing systems
- Totally enclosed construction
- Automatic, semi-automatic or manual cake discharge
- Rigid design

Twin Filters drive for innovation resulted in the improved leaf nozzle design. The leaf nozzle has been optimized for both horizontal and vertical tanks. The nozzle is made of a special material that ensures the filter cake is evenly dried and a minimum loss of fluid.

The selected filter mesh depends on the application. The mesh size and material are selected in close consultation with our teams. The combination of a small mesh size and material will result in a higher filtering efficiency and a lower operating cost.

Overview:
Twin Filter Vertical and Horizontal Leaf Filters are suitable for wet and dry 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 retracted, leaving the leaves exposed. The filter cake can then be dried by compressed air or inert gas 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.

Flexibility in application and operation:
The filter leaves can be used for direct filtration on the stainless steel or for filter cloth. In combination with body-fed, filter leaves can be used for a wide range of applications. The filter leaves can be used with a wide range of materials and can be replaced by spares.

E-commerce:
Filter leaves are easy to maintain. The leaves with almost no moving parts can be quickly and easily removed and replaced by spares.

Applications:
- Aluminates
- Amines
- Animal Fat
- Acid
- Citric Acid
- Coke-ash
- Fatty Acid
- Fuel oil
- Gelatine
- Glucose
- Nickel Catalyst
- Phosphogypsum (CLC Wastewater)
- Paraffin Wax
- Paper
- Plastics
- Pulp
- Salt
- Soda Ash
- Water Glass
- Winterization

Standard design features:
- Minimal filter area for vertical tank layout
- Large filtration surface for horizontal tank lay out
- Easily integrable into existing systems
- Totally enclosed construction
- Automatic, semi-automatic or manual cake discharge
- Rigid design

Twin Filters drive for innovation resulted in the improved leaf nozzle design. The leaf nozzle has been optimized for both horizontal and vertical tanks. The nozzle is made of a special material that ensures the filter cake is evenly dried and a minimum loss of fluid.

The selected filter mesh depends on the application. The mesh size and material are selected in close consultation with our teams. The combination of a small mesh size and material will result in a higher filtering efficiency and a lower operating cost.
Twin Filter Vertical Leaf Filters are high-quality systems that can be used for numerous batch and continuous filtration processes. The improvements of a number of vertical filter leaves positioned in a horizontal or vertical filter tank. The filter leaves have a high filtration area versus vessel volume ratio. This results in a substantial less capital investment. The pressure leaf filter is typically suitable for fluids with high solid contents.

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

**Applications**

- Aluminates
- Amines
- Animal Fat
- Biowaste
- Citric Acid
- Cave Lees
- Fatty Acid
- Furan
- Gelatin
- Glucose
- Nickel-Catalyst
- Hydrogenation Oil/Bleaching
- Paraffin Wax
- Pectin
- Resins
- Soya Sauce
- Sulphur
- Water Glass
- Winterisation

**Standard Design Features**

- Minimal filter area for vertical tank layout
- Large filtration surface for horizontal tank layout
- Continuous cake discharge
- Totally enclosed construction
- Automatic, semi-automatic or manual cake discharge
- Easy maintenance

**Easy Maintenance**

Vertical Leaf Filters are easy to maintain. The leaves almost need no regular care 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 both horizontal or vertical tank layouts. For either orientation the leaves can be cleaned with filter cloth, to maximise the filtration surface. The leaves can be used in combination with the horizontal or vertical tank layouts providing a high filtration area.

**Dry Cake Discharge**

The filter leaves 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 positioned horizontally allowing 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.

**Overview**

**Horizontal and Vertical Tank**

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

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

**Twin Filter Horizontal and Vertical Leaf Filters**

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

**Dry Cake Discharge**

Filter leaves with 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 positioned horizontally allowing 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.
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 an 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 resistance. The leaves are available in bolted or riveted construction.

Our Rigid filter leaf is extra durable with a lifetime up to 20 years. These leaves are constructed of thin, highly perforated sheets, with support in the leaf design 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 polypropylene or nitronic steel, let us know. We are happy to discuss which specifications your leaves ought to have to optimize the filtration results.

SYNTHETIC LEAVES

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

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 has a great value for expanding the Twin Filter process and tool and component markets.

Parker and Twin Filter both offer a wide range of filtration products for many industries including Filter and filter vessels, component of filters, hydraulic filters, fuel handling products and chemical processing. In addition to filtration, Parker offers many other products for the oil and gas industry such as instrumentation and house connection.

Parker Hannifin operates globally through a network of over 50 customer service centers 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.

PARKER HANNIFIN

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 has a great value for expanding the Twin Filter process and tool and component markets.

Parker and Twin Filter both offer a wide range of filtration products for many industries including Filter and filter vessels, component of filters, hydraulic filters, fuel handling products and chemical processing. In addition to filtration, Parker offers many other products for the oil and gas industry such as instrumentation and house connection.

Parker Hannifin operates globally through a network of over 50 customer service centers 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.

PARKER HANNIFIN

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 has a great value for expanding the Twin Filter process and tool and component markets.

Parker and Twin Filter both offer a wide range of filtration products for many industries including Filter and filter vessels, component of filters, hydraulic filters, fuel handling products and chemical processing. In addition to filtration, Parker offers many other products for the oil and gas industry such as instrumentation and house connection.

Parker Hannifin operates globally through a network of over 50 customer service centers 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.
FILTER LEAVES

The design of a pressure leaf filter is such that it is only suitable for the handling of liquid or semi-liquid materials. According to the requirements and application, a variety of construction materials can be supplied. The leaves may be manufactured from a variety of materials such as 304 or 316 stainless steel.

The leaves are constructed of two types of leaves, the Sigma Key Hole Channel filter leaf and the Right Angle filter leaf. All leaves can be manufactured from various materials, such as 304 or 316 stainless steel.

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

Our Right Angle leaves consist of a single layer of wire mesh. These leaves are constructed of flat, opening metal sheets, with support in the form of elongated holes for low pressure drop. The perforated sheets are covered with replaceable mesh, bolted to the frame. The filter leaves can easily be removed on site.

FILTER LEAVES

The most important part of a pressure leaf filter is the leaf. Without a 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.

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 has a large expertise in 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, component air filters, hydraulic filters, fuel handling products and accessories. In addition to filtration, Parker offers many other products for the oil and gas industry such as metering and house connections.

Parker Hannifin operates globally through a network of over 50 sales and service offices. We assure that all Twin Filter customers will continue receiving our high quality standards of service and solutions.

VERTICAL LEAF FILTERS

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 has a large expertise in 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, component air filters, hydraulic filters, fuel handling products and accessories. In addition to filtration, Parker offers many other products for the oil and gas industry such as metering and house connections.

Parker Hannifin operates globally through a network of over 50 sales and service offices. We assure that all Twin Filter customers will continue receiving our high quality standards of service and solutions.

FILTER LEAVES

The most important part of a pressure leaf filter is the leaf. Without a 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 Right Angle filter leaf. All leaves can be manufactured from various materials, such as 304 or 316 stainless steel.

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

Our Right Angle leaves consist of a single layer of wire mesh. These leaves are constructed of flat, opening metal sheets, with support in the form of elongated holes for low pressure drop. The perforated sheets are covered with replaceable mesh, bolted to the frame. The filter leaves can easily be removed on site.

If your requirements, for example for chemical resistance, need special materials like polypropylene or PTFE or other materials as required, we would be happy to discuss which specifications your leaves ought to have to optimize the filtration results.

FILTER LEAVES

The most important part of a pressure leaf filter is the leaf. Without a 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 Right Angle filter leaf. All leaves can be manufactured from various materials, such as 304 or 316 stainless steel.

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

Our Right Angle leaves consist of a single layer of wire mesh. These leaves are constructed of flat, opening metal sheets, with support in the form of elongated holes for low pressure drop. The perforated sheets are covered with replaceable mesh, bolted to the frame. The filter leaves can easily be removed on site.

FILTER LEAVES

The most important part of a pressure leaf filter is the leaf. Without a 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 Right Angle filter leaf. All leaves can be manufactured from various materials, such as 304 or 316 stainless steel.

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

Our Right Angle leaves consist of a single layer of wire mesh. These leaves are constructed of flat, opening metal sheets, with support in the form of elongated holes for low pressure drop. The perforated sheets are covered with replaceable mesh, bolted to the frame. The filter leaves can easily be removed on site.