PRESSURE LEAF FILTERS

Clean processes - Continuously
THE TOTAL FILTRATION APPROACH

Filtration Group has an extensive product range. Our options range from filter components like filter elements, cartridges, filter housings and modules for large system installations. Tell us your application, and we will advise which product would fit best to support your application.

Our Heritage
With over 70 years of experience in the application of horizontal and vertical Pressure Leaf Filters, Cricket Filters and several other types of filters, Amafilter Group provided a unique spectrum of filtration and separation solutions.

MAHLE acquired the Amafilter Group in 2008, adding the expertise, synergy of technology and filter products of Amafilter, LFC, Nowata, Vanpipe and Eurofiltec to its industrial filtration portfolio.

Late 2016 Filtration Group completed the acquisition of the industrial filtration business of MAHLE. This acquisition gives customers more choice and flexibility in how they can utilize filtration to make their environments cleaner, safer and more productive.
Your Partner in Filtration
We understand our customer's increasingly demanding and complex process and environmental requirements. Drawing from one of the industry’s broadest in-house technology bases, our market specialist application engineering teams are able to design a total filtration solution for you. We are globally positioned with production facilities and regional sales offices in Europe, the USA and Asia. Additionally, in many countries we have agents and distributors.

We believe in partnering with our customers to provide total filtration solutions throughout the life of your filters. Our laboratory can help to optimize your filtration process and streamline your efficiency. We offer a complete design, testing, commissioning and service together with full customer support. We also supply filter spares, elements, leaves and equipment upgrades for most types of filtration equipment.

Quality and cleanliness of product and plant are the basis of hygienic operation

Chemical - and food processing industries place highest requirements on process quality, cleanliness, systems reliability and products quality. In this respect, our process filtration solutions are used, for example, in the production of sugar, cocoa or edible oils, for the removal of activated carbon, catalyst recovery or for quality improvement.

They filter the finest particles and contaminations from the products and contribute effectively to maximum hygiene, quality and product recovery.

Chemical Industries
The Chemical market faces various filtration challenges. These can include the quality of bulk chemicals, intermediates up to ultra fine chemicals. Filtration Group has decades of experience in being able to supply innovative filtration technologies to provide optimized solutions for the chemical processing industries’ current and future challenges. Our products and services are designed to provide producers of chemicals with the highest consistency and quality. The removal of any contaminants is essential in avoiding any costly re-work and in improving product yield.

Food and Beverages
In most processes of the Food and Beverage industries large volumes of products need to be handled. The quality and cleanliness of both the product and the plant are paramount to hygienic operation and process. Filtration Group offers solutions for the different requirements of individual manufacturers, offering efficiency and economy together with reliability.

Our extensive product range can be utilized for all areas of the food and beverage market, ranging from coarse clarification to sterile filtration, for the removal of microorganisms. Sterile conditions allow the manufacturer to improve shelf life, consistent quality and reduction in the addition of preservatives and protection of the final product.
The result of over 70 years of filtration expertise in various markets

Optimum performance in both liquid and gas applications and vessel construction

Filtration Group has been providing integrated solutions for the oil and gas industry and for biofuel producers around the globe for over a decade. We are one of only a few filtration companies that can provide total filtration solutions required to address the unique challenges associated with the oil, gas and petrochemical industry and with biofuel production.

Oil, Gas and Petrochemical Industries

Filtration Group offers a broad range of outstandingly effective and economic products for crude oil separation and waste water deoiling. Our systems are supremely reliable and require very little maintenance. All systems can be manufactured and fitted in compliance with ASME U-stamp, British Standard and TRCU regulations. Our Systems can be made suitable for ATEX environments and can be expanded with additional safety precautions.

Main Applications

- Oil derivatives and additives
- Amine
- Down well injection
- Waste water
- Produced water
- De-oiling
- Fuel oil
- Crude oil
- Sea water filtration
- Fuel gas treatment
- Glycol

Biofuels

Biofuel production presents unique filtration challenges. The quality of incoming feedstock used in biofuel production can vary widely. Converting inconsistent feedstock to high quality, pure, renewable fuels that meet ASTM standards requires extensive filtration expertise to apply the appropriate technologies in a process. Filtration Group can provide a complete analysis of the processes in your plant and recommend the correct filtration and separations technologies and products to deliver the required quality at an economical cost.

Main filtration processes in biofuel production:

- Filtration of incoming feedstock such as cold pressed seed oils for pure vegetable oil, fuel, crude rendered fat for fuel application and pre-treatment of refined oil.
- Filtration of clay, carbon and silica absorbents from refined oil.
- Removal of haze and sterols from methyl ester (biodiesel).
- Filtration of glycerin to remove solids such as activated carbon.
- Final product filtration.
Pressure Leaf Systems

The Filtration Group pressure leaf filter is a filter with a large specific filtration area due to the shape of the filter elements. A pressure leaf filter produces high filtrate clarity after the clarification run. All kinds of filter aids can be used in our pressure leaf filters. Our innovative Pressure Leaf Filter is well known for e.g. Edible Oil, Gelatin, Oleo Chemical, Mining applications, metal plating bath filtering and Amine cleaning in the Oil & Gas market.

The regeneration time between the filtration cycles is short. The design of the pressure leaf filter keeps maintenance to a minimum.

A Pressure Leaf Filter is a very economical filtration solution.

Pressure leaf

- The rigid filter leaves are double sided and made of stainless steel.
- The filter leaves have five layers of stainless steel wire mesh.
- Small internal volume
- Low pressure drop
- No deposits in leaf due to constant flow
- The top layer of screen can be customized to the application.
- The leaf spacing is 75 mm to allow for precoat and long filtration times.
- The filter leaves are individually mounted on a central manifold, this allows for any or all filter leaves to be removed easily and quickly.

System possibilities

A pressure leaf filter system is fully enclosed.

There is always positive pressure on filter medium, necessary for volatile liquids.

The vertical filters require only a small footprint. Our vertical filter systems are standard equipped with a cover lift assembly. Other cover lift assembly types are available on request.

The horizontal pressure leaf filter can be built in larger units than the vertical type. Horizontal pressure leaf filters can also be delivered as tandem units to save even more floor space.

In a horizontal pressure leaf system the bundle with filter leaves is moved outside the filter tank with an electric / hydraulic system during cake discharge. The bundle is retracted from the tank or the tank can be moved away from the bundle. The choice is yours.

Because the filter is fully opened during cake discharge it is easy to monitor the condition of the cake, to check that the filter cake has been fully released from the filter leaves and to check the condition of the filter leaves after cake discharge.

Most Filtration Group filter systems can be fully automated. All Pressure Leaf Filter systems can be made with a heating jacket in order to maintain elevated process temperatures.
Advantages
The pressure leaf filter is a closed filtration system and can be fully automated (depending on the process). The regeneration time between the filtration cycles is short. The pressure leaf filter itself has no rotating parts, keeping maintenance to a minimum. These advantages result in an economical filtration solution.

General
- Proven technology
- Easy access for cake removal
- The filter plates are easy to clean
- Reinforced filter elements (longer life time)
- Reinforced design
- Special self-sealing cover gasket

Vertical Pressure Leaf Filters
- Small footprint, large filtration surface.

Horizontal Pressure Leaf Filters
- Huge filtration surface
- Stainless steel cladded tank rings
- Self-sealing, quick release, leak proof jacketed filtrate manifold coupling
- The leaf spacing is 125 mm to allow for precoat and long filtration times.
Secondary components and options

Dry Cake Discharge

Filters with dry cake discharge are used e.g. for the filtration of activated carbon or animal fat. These systems create the least product waste (residual liquid content can be reduced to 20% for specific applications). Filters with dry cake discharge can also be used, when the solids are the product and the customer wants it as pure as possible (washing is an option).

The big valve at the bottom guarantees a proper discharge of the dried cake.
- The filter cake is discharged by a pneumatic vibrator, through a large butterfly valve.
- Filter cake is normally dried before discharge.
- The filter cake can be dried with compressed air, inert gas or steam.

Wet Cake Discharge

Filters with wet cake discharge are perfectly suitable for applications where either the cake formation is too low for dry discharge, the disposal is cheap (regeneration for wet discharge is shorter) or the product needs to be transportable by pump.

Special oscillating high impact jet headers sweep the mesh.
- Filter media with low micron ratings are possible for wet discharge
- Clear filtrate from start
- The cake is sluiced through the discharge outlet.
- The headers also wash the filtering mesh.

Cake breakers

Filtration Group cake breakers are developed to help improve cake discharge. A cake breaker assists a - well separating and compact - cake to break into smaller pieces.

Cake breakers are a reliable solution to ensure a complete discharge of the filter. Filtration Group should evaluate your filtration process and provide advice regarding suitability.

Filter leaf service
- Re-screening of filterleaves: As new filterleaves for a lower price.
- Cleaning of filterleaves: Extend the life, efficiency and the maintenance interval of your filterleaf set.
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