

amafilter®

# COMPANY OVERVIEW

Making the world safer, healthier  
and more productive®



**amafilter®**  
Filtration Group®

## Efficient and reliable filtration solutions for solid liquid filtration in the process industry.

SOLUTIONS FOR THE FOOD & BEVERAGES, CHEMICAL AND MINING & MINERALS MARKETS.

### Over 90 years' experience in providing solid liquid filtration solutions across the world.

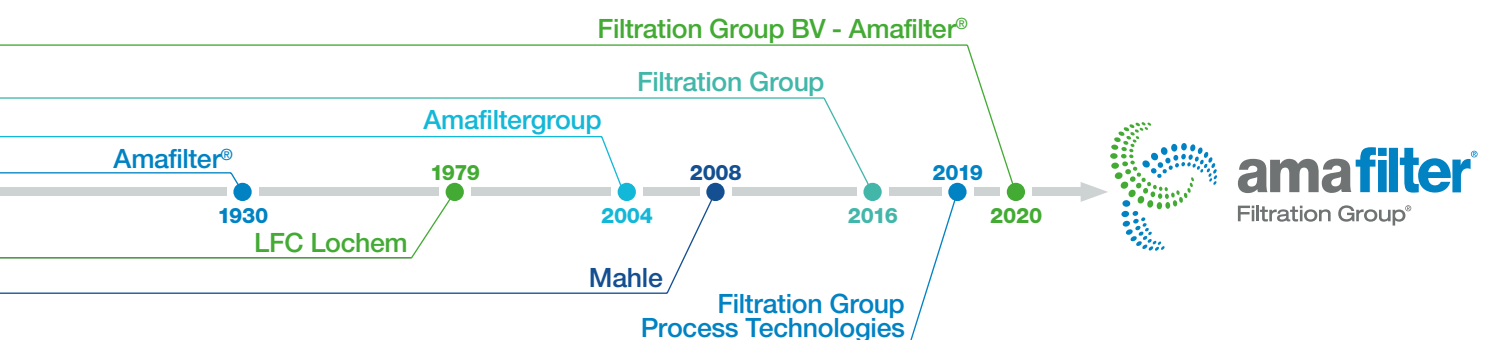
Amafilter® is a Filtration Group brand, specializing in the design, engineering, manufacture and delivery of systems that maximize the efficiency of our customers' plant filtration processes. Our aim is to develop products which deliver cutting edge filtration solutions that have a direct impact on your process applications and enable your operations to run more efficiently.

Our expertise is built from over 90 years' experience of providing filtration solutions across the world in market sectors including food & beverages, chemical industries and minerals & mining. Our expertise covers an extensive range of sector focused applications, such as beet and cane sugar, artificial sweeteners, cheese brine, cocoa butter and gelatine, within the food and beverages sectors. Our experience also extends to chemical applications such as copper electrolytes, waterglass, oleo chemicals, PTA, brine, activated carbon filtration to name a few, as well as minerals applications.

Our product range caters for the most demanding applications and includes the Cricketfilter®, self-cleaning filters and horizontal & vertical pressure leaf filters, as well as process filtration spares.

Our service team delivers world-class service and support across the globe, using our expertise and technical know-how to optimize your filtration process.

We believe in partnering with our customers to provide total filtration solutions throughout the life of a filter. Our experienced laboratory team can assist to optimise filtration processes and maximise efficiencies. We work closely with our customers throughout the process and can assist in the complete design, testing, commissioning and servicing of a project.



### MISSION

We are committed to a better tomorrow and our mission is to make the world safer, healthier and more productive.

Our mission comes alive through the markets we serve, the solutions we provide and how we interact with our teams and customers.



## Filtration Group®

We understand our customers rely on our knowledge, expertise and experience for innovative filtration solutions.  
Customers depend on us – we deliver.



The amafilter® headquarters and manufacturing facility is located in Lochem, The Netherlands, and is supported by teams across Europe based in offices in France, Germany, the UK and the Middle East. We also work closely with a number of trusted partners across the globe.

From our lean manufacturing facility we design, engineer, develop and produce customized filtration systems, bag filter housings, cartridge filter housings and multi bag filter housings.



# Markets we serve

## Food and Beverages

We understand that the food and beverages industry manage large volumes of products throughout their processes, and that maintaining their quality and cleanliness is paramount. Our extensive product range can be utilized for all areas of the food and beverages market. Sterile conditions in a manufacturing environment improve products longevity, ensure consistent quality and reduce the need for preservatives in the final product.

Our expertise covers an extensive range of sector-focused applications, such as edible oil, beet and cane sugar, artificial sweeteners, cheese brine, cocoa butter and gelatine, within the food and beverages sectors.

### Some of the applications include:

Avocado oil	Sunflower oil	Cocoa butter
Palm oil	Olive oil	Gelatine
Peanut oil	Mustard oil	Sweeteners
Rice bran oil	All polishing applications	Catalysts
Safflower oil	Beet and cane sugar	Beverages
Sesame oil	Chesse brine	



FILTRATION PRODUCT	MARKET WE SERVE	APPLICATION	FILTRATION PROCESS
Cricketfilters, Versis® and horizontal pressure leaf filter systems, housings	Edible oil / Vegetable oil	Crude oil, miscella, bleached filtration, winterised, catalyst filtration, residual, deodorised oil, polishing	Removing undesirable particles whilst retaining the quality of the oil.
Cricketfilters, Versis® and horizontal pressure leaf filter systems, housings	Sugar and Sweeteners	1st and 2nd stage carbonation, thick juice filtration, standard liquor, re-melting, molasses and polishing	Purification of sugar and sweeteners by removing undesirable particles whilst retaining the quality and characteristics of the products.
Cricketfilter®	Cocoa Butter	Cocoa butter	The purification of cocoa butter after the cocoa presses.
Cricketfilters, Versis® and horizontal pressure leaf filter systems, housings	Dairy	Cheese salt baths, re-circulating salt water, decolouring	Removal of yeast, bacteria and mould from the salt baths whilst ensuring the cheese quality is maintained.

## Mineral Processing – Molten Sulphur

Impurities have a significant negative impact on the efficient production of sulphuric acid and operations across the world need to ensure their filtration processes are designed to minimise contamination and ensure the lowest cost of ownership.

Amafilter® has extensive expertise in the molten sulphur sector of the sulphuric acid industry, having designed and supplied pressure leaf filter systems across the globe assisting customers to optimise their molten sulphur total filtration process.



FILTRATION PRODUCT	MARKET WE SERVE	APPLICATION	FILTRATION PROCESS
Horizontal pressure leaf filter systems, VC cartridge housings and amaCera ceramic filter cartridge	Mining & Minerals	Molten Sulphur	Remove impurities such as ash, dust, organic particles and carbon particles such as asphaltides and bitumen

# Markets we serve



## Chemical Industries

The chemical market faces various filtration challenges, including the quality of bulk chemicals, intermediates, up to ultra-fine chemicals. Filtration Group has extensive experience in the supply of innovative filtration technologies that provide optimized solutions for the chemical processing industries.

Our products are designed to provide the chemical industry with the highest consistency and quality of output, ensuring the removal of any contaminants, hence improving product yield.

Our experience in the chemical industry includes applications such as copper electrolytes, water glass, oleo chemicals, brine, activated carbon filtration to name a few.

### Some of the applications include:

Brine	Polymer and resins	Oleo chemicals
Chlor-Alkali	Surfactants and oils	Inks & coatings
Petrochemicals	Bulk chemicals	Carbon removal
Pigments	Chemical intermediates	Acids & alkalis
Adhesives and sealants	Copper electrolytes	
Coatings	Waterglass	

FILTRATION PRODUCT	MARKET WE SERVE	APPLICATION	FILTRATION PROCESS
Cricketfilter® system	Chemical/Polymer and Resins	Catalyst recovery & filtration and recovery of non-reactive polymers	Capture highly valuable Catalyst for reprocessing
Cricketfilter® system, Versis® pressure filter systems, Bag filter housings	Chemical	Catalyst recovery, impurities filtration, solid filtration, salt, active carbon, electrolysis, filtration of electrolytic bath	Remove solids from the production process
Cricketfilter® system, Versis® pressure filter systems	Chemical	Ester filtration, hydrolisis, catalyst recovery/ filtration, winterising	Remove Waxes and Gums, catalysts and filter aid
Cricketfilter® system, Versis® pressure filter systems and Cartridge filter housings	Chemical	Catalyst recovery & filtration, minerals processing, slurry filtration. Paint filtration	Contamination particle removal



## Biofuels

Biofuel production presents unique filtration challenges. The quality of incoming feedstock used in the production of biodiesel can vary extensively. Converting inconsistent feedstock to high quality, pure, renewable fuels that meet ASTM standards requires extensive filtration expertise and appropriate technologies.

Amafilter® can carry out a complete analysis of your plant's processes and recommend the correct filtration and separations technologies to meet the product quality you require.

FILTRATION PRODUCT	MARKET WE SERVE	APPLICATION	FILTRATION PROCESS
Cricketfilters, Versis® pressure filter systems, Bag filter housings	Biofuel	Biodiesel, animal fat, cooking oil, degumming, winterization, bleaching and deodorization	Removing or reducing the contaminants and impurities present in the feedstock to deliver quality biodiesel



## Amafilter® Cricketfilter®

The Cricketfilter® is a well-established pressure filter developed to combine the advantages of pressure leaf filters and candle filters whilst avoiding their drawbacks.

To achieve this, a filter element was designed with a unique shape, which provides benefits over and above the traditional round-shaped filter elements, and delivers a more efficient filter area/volume ratio and for a wide range of filtration areas from 1 up to 200 m<sup>2</sup> to suit the required flow rate.

The Cricketfilter® is suitable for the removal of particles from animal fat and polyethylene from biodiesel.



## Amafilter® bag filter housings

We supply a wide range of bag filter housings in 304 or 316 stainless steel for use in the filtration of liquids containing higher concentrations of coarse solids.

These bag filter housings are suitable for biodiesel applications.

They are robust, corrosion free, have a high-flow capacity and provide consistent and reliable performance in solid liquid filtration applications.



## Cartridge filter housings

Amafilter® liquid cartridge filter housings are designed and built to deliver quality, functionality and reliability. They are produced to ASME industry standards and can be used in a variety of filtration processes including pre-filtration, final filtration and polished filtration. Our housings are extensively used in the chemical, mining & minerals and food & beverages industries.

We can custom-design cartridge filter housings to meet specific customer requirements and meet all necessary regulations and international standards. We work closely with our customers to understand their challenges and design and customize our housings to meet their unique needs.





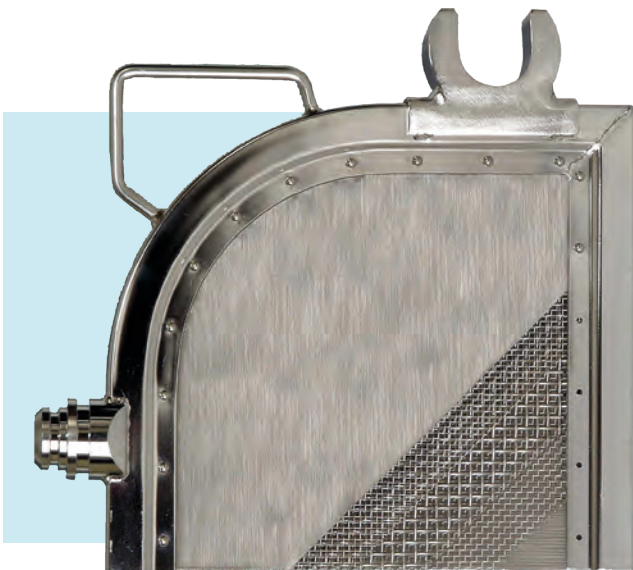
## Versis® Pressure Leaf Filter System

The Amafilter® Versis® pressure leaf filter system has been specifically designed to provide a large filtration area. It is a fully automated system with double sided stainless steel pressure filter leaves. It is suitable for most applications.



## Horizontal Pressure Leaf Filter Systems

The Amafilter® horizontal pressure leaf filters have been specifically designed to provide a large filtration area and produce high filtrate clarity after the clarification run. Different types of filter aids can be used in our pressure leaf filters to improve filtrate quality.



## Pressure Leaf Filter Systems Elements

Our product range of Versis® vertical pressure leaf and horizontal pressure leaf filters include an extensive range of filter leaves designs to meet various market sector requirements.

The quality and condition of filter leaves can have a significant impact, not only on the productivity of the filtration system but also on its ability to achieve a high performance standard.

# Amafilter® Case Studies

## Improving Filtration Quality and Reducing Maintenance Costs at Cerdia's Acetic Acid Plant

Cerdia Produktions GmbH were not achieving the desired filtration levels and automation efficiencies with their existing system. To maintain filtration effectiveness, the Cerdia's maintenance team was changing their process filter cloths up to three times a week, incurring high operational expenses.

The Amafilter® specialist team recommended Cerdia to install a Cricketfilter® system with a fully automated backwash. A 1 m<sup>2</sup> surface area Cricketfilter® pilot unit was installed to determine the correct filter size to meet Cerdia's requirements in flow and quality of the filtrate without filter aid.

After successful site trials, a Cricketfilter® 2000W system was installed, which led to a significant reduction in filter cloth changes whilst the auto-sequence backwash also reduced maintenance intervention. This led to filtration quality, reduced maintenance costs and improved profitability.



## Providing a Filtration Solution that Increased Plant Efficiency, Maintained the Quality of the Product and Made the Plant More Profitable

Villapana Spa was experiencing frequent filter changes which were both time and labour intensive and caused significant filtration process inefficiencies and product output to only reach 40% of the plant's capacity.

After reviewing the process, Amafilter® recommended the use of their RBDCD horizontal pressure leaf filter system for the customer's grapeseed oil application. The filter system would assist in the winterizing process, the final step in the production of grapeseed oil. Once installed, Villapana Spa began experiencing noticeable improvements in plant efficiency. The new system only required one operator to clean it, reducing operating costs by 50% and production downtime was reduced due to the quicker and easier servicing of the new filter system.

Importantly, the plant is now operating at 100% capacity, up from 40%. They are now producing approximately 8 tonnes of oil each day, nearly triple their original output. Product quality has remained excellent, and the company has become more profitable since switching to the RBDC horizontal pressure leaf filter system.







## Increasing the production life of sulphuric acid production units from 16 to 24 months

An existing sulphur customers wanted to increase the service life of their sulphuric acid production units from 16 to 24 months by reducing the solid content in their liquid sulphur to max. 10 ppm.

The Amafilter® team recommended the installation of an automated two-vessel skid-mounted ceramic cartridge filter system, which could be tailored to the customer's unique specifications. The system would be delivered in "Plug & Play mode", making the unit easy to install, to connect and quick to initiate production.

Amafilter® reduced the schedule of delivery of the unit by almost 12 months as a result to the system's Plug & Play mode, with average market deliveries being 24 months. The polishing filter technology reduced the solid content in the liquid sulphur to less max. 10 ppm, improving production time and increasing the production life of the sulphuric acid production units from 16-months to 24-months. In addition, no maintenance was required for a 24 months period, making the operation safer and increasing profitability due to reduced maintenance.



## The Cricketfilter® automated system significantly improved salt bath filtration efficiency leading to a more profitable operation

Amafilter® were approached by one of their existing customers, a European leading producer of quality cheese products enjoyed world-wide, to assist them to find a solution to their existing salt bath filtration process issues. The salt bath contaminants built up quickly and even though the strainers were cleaned manually every 2 hours, at significant process cost, this was not sufficient.

The amafilter® team reviewed the customer's process and advised the company that the best solution for their application, and to resolve their quality problems, was to install a Cricketfilter®. The Cricketfilter® removes greater amounts of yeasts, moulds and bacteria requiring less regeneration intervals than other systems.

**The customer commented:** "The Amafilter® engineering and sales team responded promptly to our requirements and worked closely with our team, to find the most effective solution for our process. The cricketfilter® brought significant improvements to our filtration process by delivering a higher quality product, improving productivity and reducing cost as no manual cleaning is required, making our production more costs effective all around."



Amafilter®'s reputation for delivering outstanding service and efficient filtration systems is built on decades of hard work, research and design. All of which allow us to produce industry-leading products which meet full international standards.

## **We are committed to service**

We work closely with our customers to understand their filtration needs. And then use our expertise to customize their system processes to enhance performance and improve the total cost of ownership.

From our test laboratory in Lochem, Netherlands, we provide testing services using the latest filtration equipment so we can offer customers the right products for their specific application. And we carry out sample screening tests to demonstrate how amafilter® can improve your filtration process.

Should you wish to have tests carried out at your plant, we have an extensive range of testing equipment which can be rented and installed at your premises. This will provide you with information on the suitability of your chosen system, ensuring you reduce capital investment risk and achieve the best possible results for your operation.





## Engineering Services

Consultancy & Analysis  
- System Optimisation -  
Process Engineering Package (PEP)  
Existing Vessel Evaluation  
New Vessel Design  
Software Engineering



## Field Services

Field Service Support  
Installation & Commissioning  
Rental  
Site Inspections  
Spares  
Re-screening  
Maintenance programmes  
On-site (operator) training



## Lab Services

Equipment and Process Optimization  
Upgrades and overhauls  
Fluid Quantification  
Quick Scan laboratory test  
Extensive laboratory test





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