

amafilter®

# CRICKETFILTER®

Making the world safer, healthier  
and more productive.



ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ  
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# Amafilter®

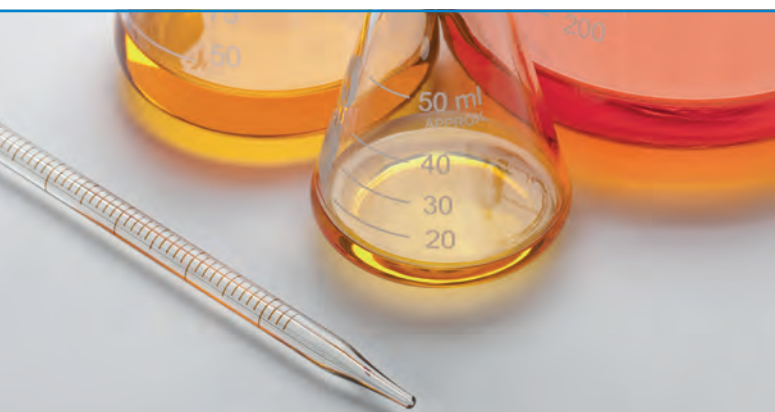
Amafilter® is a Filtration Group brand, specializing in the design, engineering, manufacture and delivery of systems that maximize the efficiency of our customers' plant filtration processes. Our aim is to develop products which deliver cutting-edge filtration solutions that have a direct impact on your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



## Chemical Industry

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 chemical producers with the highest consistency and quality of output, ensuring the removal of any contaminants, hence improving product yield.



## 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 beverage market, including coarse clarification and the removal of microorganisms.



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# Cricketfilter® Technology

The Cricketfilter® was successfully launched in 1990 to optimise direct (cake) filtration and precoat/body aid filtration.

The Cricketfilter® is a well-established pressure filter developed to combine the advantages of pressure leaf filters and cartridge/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 especially suited for separating fine solids from fluids, widely deployed in applications such as edible oil, gelatin, cocoa butter, sugar, sweeteners, oleo chemicals, mining and amine cleaning.

The Cricketfilter® offers versatility for a wide range of applications while providing confidence in critical environments.

It is available as a standard in Carbon Steel and Stainless Steel 316L.

Other special alloy materials, design pressures/temperatures and design codes can be provided upon request.



# Advantages of Cricketfilter®

The Cricketfilter®'s proven technology, already installed in over 1,000 industrial and food applications globally, provides customers with several important advantages. Key among these is the large filtration surface area provided by the unique design of the filter element.

The Cricketfilter® is also ideal for use in polishing applications with low solid contents and solids that are hard/difficult to discharge with a traditional pressure leaf filter. Its unique design, when compared to the pressure leaf filter, provides direct filtration on to filter cloth at temperatures up to 150°C.

Higher pressures and temperatures can also be achieved with customised designed Cricketfilters® which our engineering department can design should there be a specific requirement.

- **The Cricketfilter® is simple to clean.**

It uses air or gas pulses for cleaning the elements section by section, without requiring a vibrator.

- **The Cricketfilter® can be used with filter cloths of various pore sizes and materials.**

This reduces and at times eliminates the amount of extra pre-coating needed, making filtration more economical.

- **Cricketfilter® automation**

It is possible to automate, therefore ensuring low necessary maintenance.



- **Cricketfilter® optimal filter element design**

The Cricketfilter® filter element is based on a cricket bat design, giving it a unique shape which ensures a larger installed filtration area within the same vessel size in comparison to a traditional round candle shape filter element.

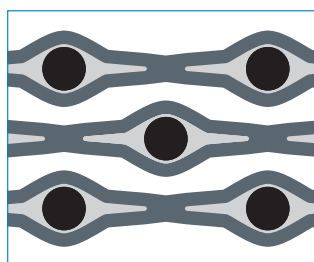
Cleaning is vital in the filtration process and the Cricketfilter® element has been specially designed for maximising the drainability during regeneration, ensuring optimal cleanliness when Cleaning in Place (CIP) takes place.

- **Mould welded**

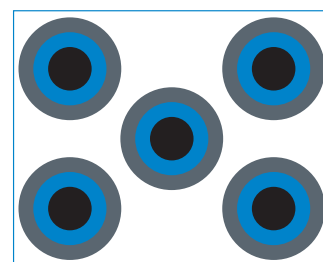
The automated welding process utilised to produce our Cricketfilter® element results in highly accurate dimensional tolerances. This ensures a perfect fit of the filter cloth.

- **Cricketfilter® element shape**

Due to the element shape, the Cricketfilter® has up to 40% more filtration area and can hold up to 40% more cake compared to a traditional round shaped element.



Cross section top view of Cricket bat shaped filter elements with cake



Cross section top view of round shaped filter elements with cake



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# Cricketfilter® Design Options

## Cricketfilter® with Dry Cake Discharge

The Cricketfilter® with dry cake discharge has been engineered to minimize liquid retention in the cake. This minimizes waste when the cake is discarded.

On the other hand, this optimizes the quality of the cake, especially when cake washing is part of the filtration process.

Cricketfilters® with dry cake discharge are especially suitable when the solids are the desired product. A large bottom valve at the base of the filter has been specifically designed to guarantee the easy discharge of the dried cake.

## Cricketfilter® with Wet Cake Discharge

The Cricketfilter® with wet cake discharge is suitable for any application in which the cake formation is too low for dry cake discharge or where the wet cake can be regenerated easily.

Wet cake discharge doesn't require the inclusion of a large bottom valve.



## Cricketfilter® with Septum Plate

The Cricketfilter® with septum plate is our optimal solution for processes that do not require a large filtration area. It is also perfectly suited as a polishing and/or heel filter.

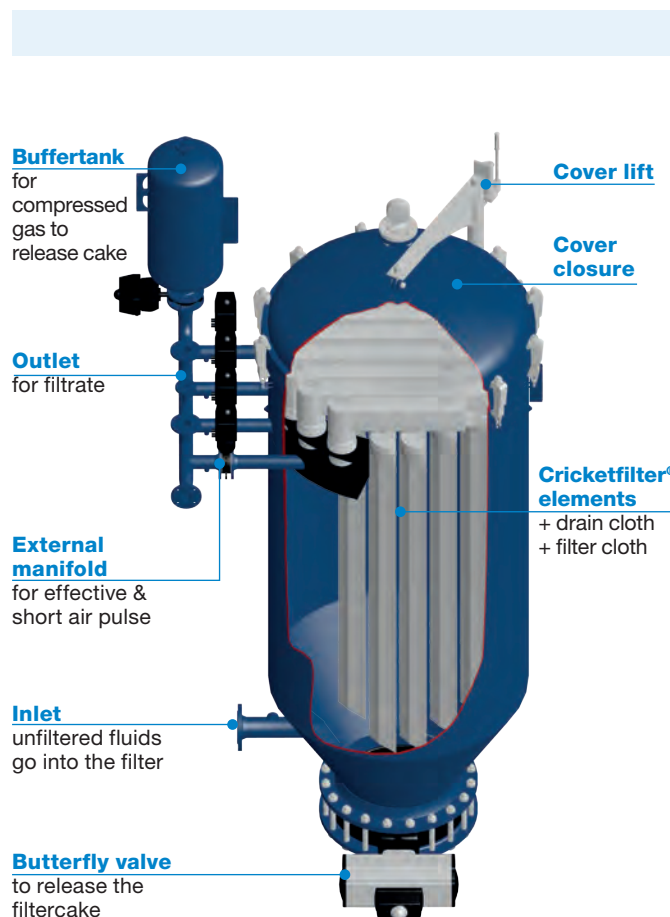
### Advantages:

- No internal manifolds.
- Side outlet, ensuring a completely drainable septum.
- Small footprint.
- Easy to automate.
- Ease of clean due to less internal parts.

# Cricketfilter® with dry and wet cake discharge

Both the Cricketfilter® with dry and with wet cake discharge have uniquely cricket bat shaped filter elements with a small internal volume that ensures minimum backwash during cake release and prevents solids settling down in the element itself.

It works with a wide variety of different filter media (1-80 µm) and intensive cleaning of the filter medium is possible.



## Cricketfilter® with dry cake discharge

The Cricketfilter® with dry cake discharge is designed to be specifically suitable for the food and beverages and chemical sectors. This filter produces the least product waste, reducing residual liquid content down to 20% for specific applications. This solution is ideal if you require highly pure solids as the product.

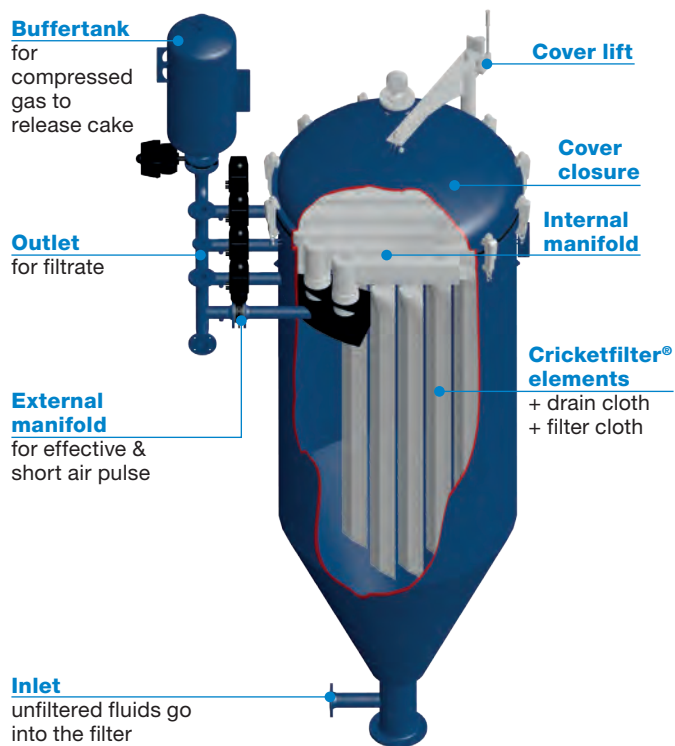


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## Cricketfilter® with wet cake discharge

The Cricketfilter® with wet cake discharge has unique filter elements with small internal volume that ensures minimum backwash during cake release and prevents solids settling down in the element itself. It works with a wide variety of different filter media (1-80  $\mu\text{m}$ ) and intensive cleaning of the filter medium is possible.

## Cricketfilter® for wet cake discharge with Septum plate

The Cricketfilter® for wet and dry cake discharge with septum plate is designed to be safer to use than filter bags, as it eliminates the need to replace filter bags, thereby making it safer when opening bag filter housings.



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Filtration Group<sup>®</sup>