



# LIQUID CAPABILITIES

Process Filtration



# PROCESS FILTRATION

For over 35 years, Donaldson Process Filtration has provided quality liquid filtration products to process industries around the world. Donaldson innovative filter designs focus on energy efficient operation at high flow rates and are available in a wide variety of materials, micron ratings, and end styles to meet your specific requirements. From pre-filtration to final, and from low capacity to high, when you think purity, think Donaldson.

## ADVANCED FILTRATION TECHNOLOGY

With Donaldson's advanced technology in place, it's possible to reduce your total cost of ownership by optimizing filter performance and improving energy efficiency. LifeTec™ liquid filters with a unique media configuration and cage design that substantially increases dirt-holding capacity, flow through, and strength.



## UNRIVALED SUPPORT AND EXPERTISE

Your business and brand reputation depend on cleanliness throughout your production process. That's why it's important to have a filtration partner who is experienced, reliable, and available when you need them.

- Extensive filter analysis and troubleshooting
- Comprehensive product warranty
- Complete facility assessments
- In-stock and ready to ship

## EXTENSIVE PRODUCT PORTFOLIO

We stock thousands of elements, housings, and accessories for Donaldson filters as well as replacement elements for most other brands. Our elements and housings are engineered to help strengthen your food safety initiatives and protect your brand by meeting:

- FDA Code of Federal Regulations, Title 21
- EC 1935/2004 (Food Contact Materials)
- GFSI sanitary guidelines such as SQF and BRC
- EU 10/2011 (Plastic materials with Food Contact)
- 3-A sanitary and hygienic guidelines
- EC 2023/2006 (Good Manufacturing Practice for Food Contact Materials)

# LIQUID FILTRATION MARKETS

From filtration of non-alcoholic beverages to filtration of food ingredients, our liquid filtration solutions will help preserve the integrity of your products.



**Non-alcoholic Beverages**



**Alcoholic Beverages**



**Dairy Products**



**Bottled Water**



**Food Ingredients**

## APPLICATIONS



**Removal of Chemicals**

Removing treatment chemicals, such as chlorine, from water to avoid unwanted tastes in the final product.\*



**Clarification**

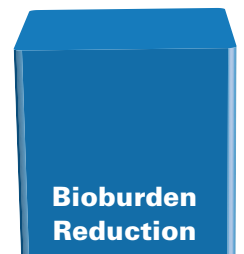
Removing particulate\* from liquids in a facility. A few applications would be:

- Boiler feed water
- RO membrane protection
- CIP water



**Product Filtration**

Removal of organic matter\* prior to packaging. For example, wine, beer, bottled water and juice all require product filtration.



**Bioburden Reduction**

Removal of bacteria\* from liquids that are used as ingredients or are products themselves.

*\*Microorganism retention rates not tested and certified by NSF.*

# PURITY AND PROTECTION AT ALL STAGES

Producing a liquid-based food and beverage product that is free of dirt, rust, living bacteria, microorganisms, and other contaminants is one of the most important aspects of your job.\* Proper filtration is an effective way to help ensure protection against such contaminants. This involves multiple phases, including coarse filtration and bioburden reduction of ingredients and the final product.

## STERILE LIQUID SYSTEM



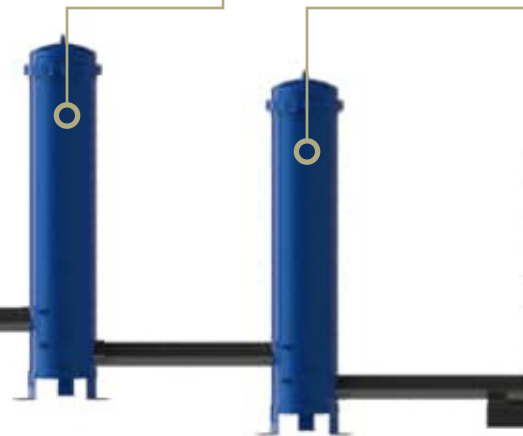
**L-BH Housing & L-BE Element**

Clarification pre-filter removes sediment, rust and sand



**P-FG Housing & ACB Element**

Activated carbon block filter removes unwanted chemicals like chlorine\*



**UNTREATED SOURCE WATER**

\*Microorganism retention not tested and certified by NSF



**P-FG Housing & PP-FC Element**

Clarification depth pre-filter protects RO membranes from contaminants



**PF-EG Housing & PP100 Element**

Pleated depth filter provides clarification and protection for more expensive final membrane filter



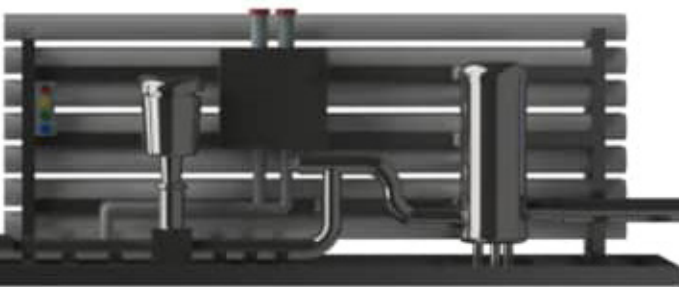
**PF-EG Housing & PES-WN Element**

Final membrane filter reduces bioburden from liquid ingredients and processed food and beverage products.

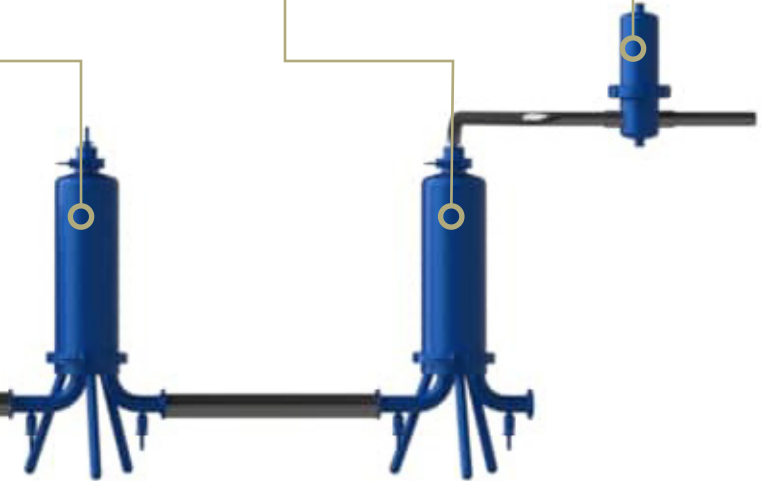


**P-EG Housing & P-GS Element**

Steam sterilization of sterile liquid membrane filters PES-WN



**Reverse Osmosis System**



**PURIFIED WATER OUTLET**

# INCREASED PROCESS RELIABILITY WITH LIFETEC

Donaldson's ground-breaking line of LifeTec process filtration products are stronger, longer-lasting, and have higher flow rates than most products on the market today.

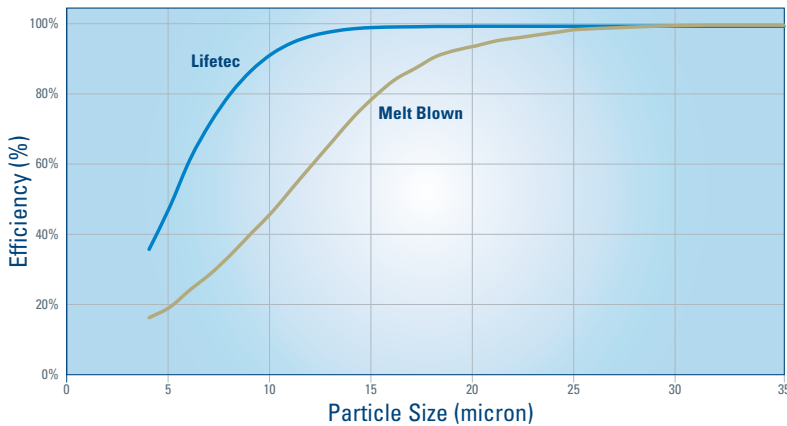
- Depth filters for pre- and fine filtration of inorganic particulate
- Membrane filters for final filtration of processed food ingredients and processed food products
- Retention rates from 0.2 to 50 microns
- Increased dirt holding capacity of filter media
- A wide range of media options to fit your application needs
- Lengths from 254mm to 1016mm (10 to 40 inches)



LIFETEC

## Higher Efficiency = Less Contamination

### Melt Blown versus LifeTec Efficiency Comparison



## MORE EFFICIENT

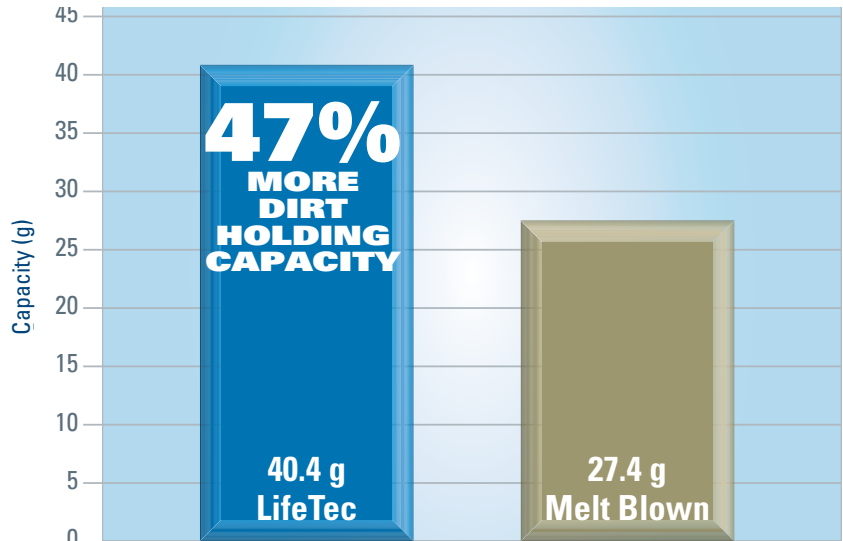
Efficiency is used to describe how effective an element is at trapping contaminant at a given micron size.

This graph illustrates that this LifeTec element is about 99% efficient at capturing particulate that is 15 micron or larger.\* This standard melt blown element is only about 80% efficient at 15 micron, meaning that 20% of the particulate that is 15 micron will pass through the filter and move further down the process stream. The LifeTec element offers more efficiency which results in increased process integrity.

## LONGER LIFE

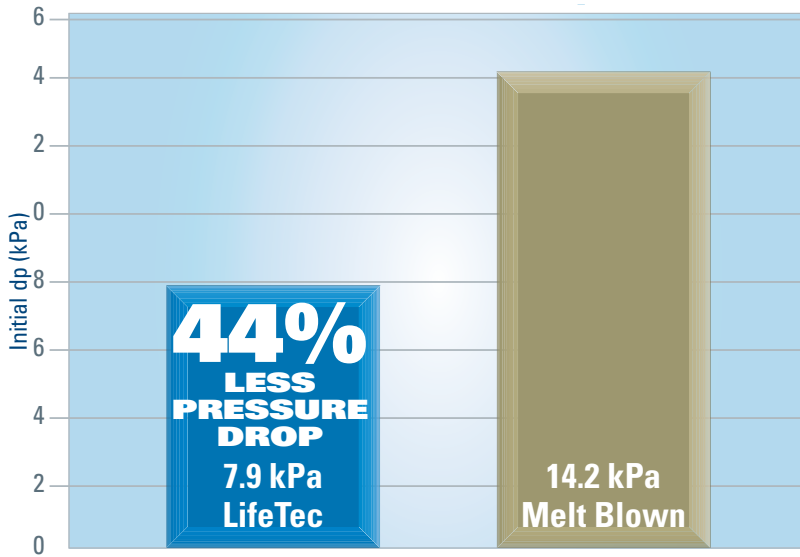
LifeTec's revolutionary cage and pleat design improves overall filtration performance while reducing cost of ownership. Compared to traditional melt blown cartridges, LifeTec offers greater holding capacity and lower pressure drop, allowing for longer life and fewer changes outs, helping save time and money.

### Capacity



\*Microorganism retention rates not tested and certified by NSF.

### Lower Pressure Drop



## COUNT ON SIGNIFICANT SAVINGS

Process owners with their eye on the bottom line know that using Lifetec filters equates to significant cost savings. When compared to standard melt blown elements, LifeTec elements deliver 44% less pressure drop. This reduction in pressure drop translates to less energy consumption and more environmentally friendly operation of a facility.

## FEWER CHANGEOUTS SAVE ENERGY, MAINTENANCE AND FILTER COSTS

## LIFETEC CUTS OPERATING COSTS BY 27%\*



\*Maintenance and filter replacement calculations are based on a comparison of LifeTec PP-TF and melt blown cartridges. Melt blown filters are replaced after four months. LifeTec PP-TF filters provide a 50% increase in life compared to traditional melt blown. Melt blown filters are priced at \$9.50 each, LifeTec PP-TF filters are \$50 each. Labor rate equals \$20 per four filters and are replaced on a timed schedule.

# SUPPORTING PROCESS AND PRODUCT INTEGRITY

## Extensive Product Portfolio

- Process air, steam and liquid filtration products
- Performance engineered to sanitary guidelines
- Wide range of filtration media for any application
- Housings, elements, and parts in-stock, ready to ship

## Advanced Technology

- Optimized filtration performance and efficiency
- Extensive research and development capabilities
- Advanced design and testing capabilities
- Over 1,000 engineers and scientists worldwide

## Unrivalled Support and Expertise

- Expert technical specialists available as resource
- Comprehensive pre- and post-sale support
- Extensive filter analysis and trouble-shooting
- 100 years of successful global manufacturing



Registered



Standard No. 10-04\*



Member of



Member of



Member of



The L48C™ P20-010 Series is Tested and Certified by NSF International against NSF/ANSI Standard 42 for material requirements only.

COMPONENT



The L48C Series with PP ring is Tested and Certified by NSF International against NSF/ANSI Standard 42 for material requirements only.

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The L48C™ PP-N and PP102-N Series is Tested and Certified by NSF International against NSF/ANSI Standard 42 for material requirements only.

COMPONENT



[donaldson.com/process](https://donaldson.com/process)

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**Important Notice:** Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, specifications, availability and data are subject to change without notice, and may vary by region or country.

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