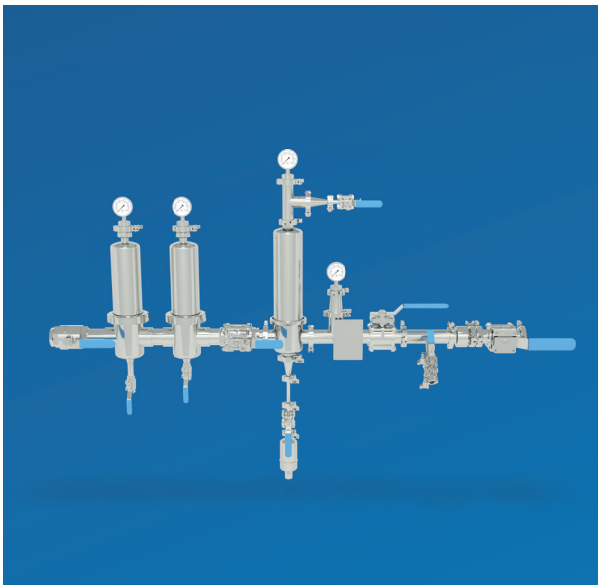
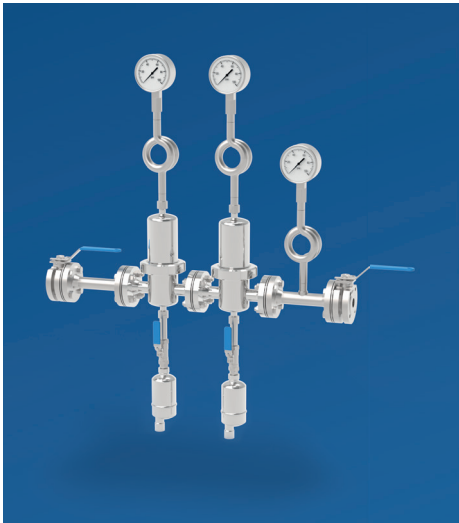




FILTRATION SYSTEMS



WHY FILTRATION SYSTEMS?

The right choice for food and beverage customers

Our Filtration Systems are designed for point-of-use filtration of process and ingredient liquids to meet the filtration requirements of the food and beverage industry. We work together with our customers to develop the most efficient filtration systems to meet their product requirements and ensure easy integration in the production processes.

Our Market Sector Specialists understand the process, integrity and sustainability needs; dedicated Application Engineers design filtration solutions to help to meet unique requirements.

Our skid solutions are available in different sizes and can be custom-adapted to the needs of the production and to the product characteristics. They support flexible and efficient production processes.

The configuration with our premium LifeTec™ liquid filter elements offers best-in-class filtration technology to support product and process integrity. The elements are extremely robust and come with an excellent flow rate and low pressure drop, helping to reduce total cost of ownership.



Application Expertise

Our Sector Specialists understand your process, integrity, and sustainability needs to provide dedicated filtration solutions.



Customized Solutions

We work together with our customers to develop the most efficient filtration systems to meet product requirements and help to ensure easy integration in production processes.



Leading Technology

We manufacture world-class filtration solutions featuring our premium LifeTec™ filters to support product and process integrity.



Feel free to send your request to SES@donaldson.com

LIQUID MODULAR SKIDS

Modular to your needs

A Liquid Modular Skid consists of one or more filtration stages for manual operation, ranging from prefiltration to final filtration. The skids come with premounted valves and manometer and are available in different sizes, according to the number of filter elements in place. A connection to a Clean In Place (CIP) system is easily possible.

The skid can be assembled in a modular way with the possibility to add further filtration steps whenever required.

The Plug-and-Play functionality of the Liquid Modular Skid enables fast and fluent integration into your manufacturing plant. The easy integration supports a high flexibility in the process lines of the food and beverage industry and helps to save maintenance costs and production downtime. This leads to an increased operational efficiency.

Application Examples

- Bottled Water
- Wine/Spirit Clarification
- Wine Cold Stabilization
- Beer Clarification
- Beer Cold Stabilization



Model	PF-MS 0130	PF-MS 0330	PF-MS 0530	PF-MS 0830	PF-MS 1230
Stages of filtration	1 - 4				
Number of filter elements per housing	1	3	5	8	12
Size of filter element [inch]	30 in standard (10 in, 20 in and 40 in upon request)				
Inlet/outlet size, tri-clamp ASME-BPE	DN40 (1.5 in)	DN40 (1.5 in)	DN50 (2.0 in)	DN50 (2.0 in)	DN65 (2.5 in)
Operating temperature	Minimum -10 °C (14 °F) – Maximum 150 °C (302 °F)				
Max. operating pressure	10 bar at temperature 120 °C (248 °F)				
Filter vessel volume [l]	6.6	17.8	39	49.8	77
Performance with water [hl/h]	Up to 240				
Filter elements range [µm]	LifeTec™ filter elements graded sterile, absolute and nominal 0.2, 0.45, 0.6, 0.8, 1, 2.4, 5, 10				

STERILE WATER SKIDS

Versatile and tailor made

Our Sterile Water Skids range from completely manual to fully automated filtration systems available in different volumetrics and customizable options.

The skids are specifically designed around our premium LifeTec filter elements, offering best-in-class filtration for clarification, trap-filtration and cold sterile filtration of water, beer, and wine.

The skid’s design follows a tailor made approach while using standard housings on a skid that can be designed to your needs. Configurations with one to three pre-filtration steps

are equally possible as parallel configurations for redundancy or continuous filtration.

Integration of the system into the existing plant is possible upon request.

Application Examples

- Bottled Water
- Wine/Spirit Clarification
- Wine Cold Stabilization
- Beer Clarification
- Beer Cold Stabilization
- Trap Filtration
- Process Water (all sectors)



Model	PF-FF-3 0130	PF-FF-3 0330	PF-FF-3 0530	PF-FF-3 0830	PF-FF-3 1230	PF-FF-3 1830	PF-FF-3 2430	PF-FF-3 3030
Stages of filtration	1 - 4							
Number of filter elements per housing	1	3	5	8	12	18	24	30
Size of filter element [inch]	30 in standard (10 in, 20 in and 40 in upon request)							
Inlet/outlet size, tri-clamp ASME-BPE	DN25 (1.0 in)	DN40 (1.5 in)	DN50 (2.0 in)	DN50 (2.0 in)	DN65 (2.5 in)	DN65 (2.5 in)	DN80 (3.0 in)	DN80 (3.0 in)
Operating temperature	Minimum 5 °C (41 °F) - Maximum 80 °C (176 °F)							
Max. operating pressure	10 bar at temperature 25 °C (77 °F)							
Performance with water [hl/h]	Up to 600							
Filter elements range [µm]	LifeTec™ filter elements graded sterile, absolute and nominal 0.2, 0.45, 0.6, 0.8, 1, 2.4, 5, 10							

STEAM MANIFOLDS FOR CULINARY & PROCESS STEAM

All-in-one steam solution

Donaldson Steam Manifolds provide a ready-to-install steam solution with housings, condensate traps, lockable isolation valves and upstream and downstream pressure gauges.

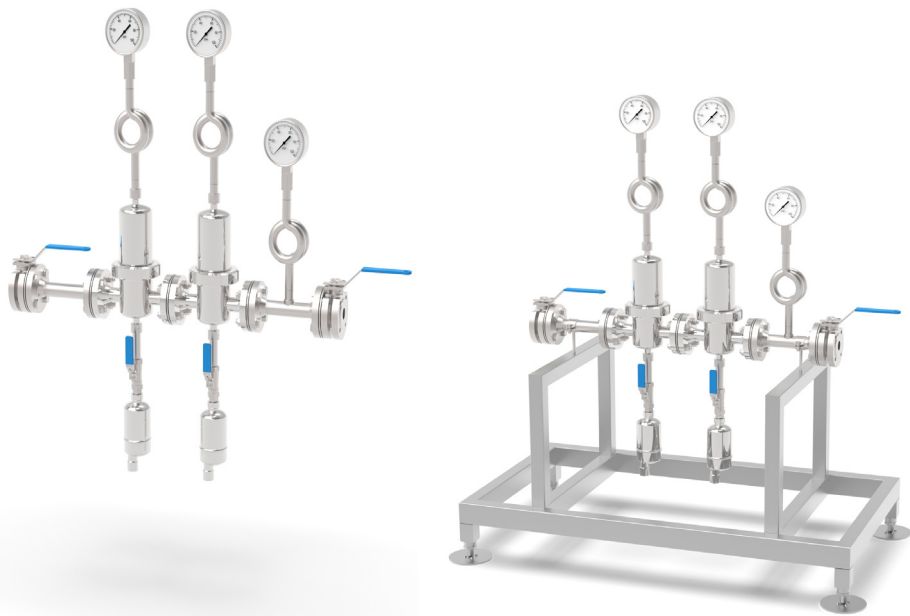
Culinary Steam Manifolds

Donaldson Culinary Steam Manifolds are designed for direct food contact applications. The Culinary Steam products also include a sanitary check valve and sampling valve to incorporate all required piping components listed in the 3-A Accepted Practice for culinary steam. Culinary steam is free of entrained contaminants and suitable for use in direct contact with food products or product contact surfaces.

Process Steam Manifolds

Process Steam Manifolds are designed for non-food contact applications. Process steam is used as a source of energy for many process applications like heating and temperature control. Improved steam quality ensures increased process efficiency and longer service life of downstream heat transfer equipment.

A mounting stand with leveling feet is also available as an optional accessory.



Application Examples

- Sterilization in Place (SIP)
- Fermentation
- Pasteurization
- Rust Capture
- Bottled Water
- Dairy
- Breweries
- Wineries

PRODUCT SPECIFICATIONS		
Parameter	Culinary Steam	Process Steam
Max. operating temperature	150 °C (302 °F)	
Max. operating pressure	10.3 barg (150 psig)	
Max. differential pressure	Defer to filter element datasheets	
Components	Manometers, isolation ball valves, optional support stand, housing jackets	
Internal surface finish [Ra]	Ra < 64 µin before Final Filter Ra < 32 µin after Final Filter	Ra < 64 µin
Metal materials	All product contact surfaces made from EN 1.4404 (AISI 316L) or EN 1.4301 (AISI 304) series Stainless Steel	
Elastomer materials	EPDM	
Inlet/outlet connections	ANSI 150 RF inlet sanitary Tri-Clamp outlet	ANSI 150 RF inlet ANSI 150 RF outlet
Connections	1/2 in NPT	

STERILE AIR MANIFOLDS

Ready-to-install air filtration solution

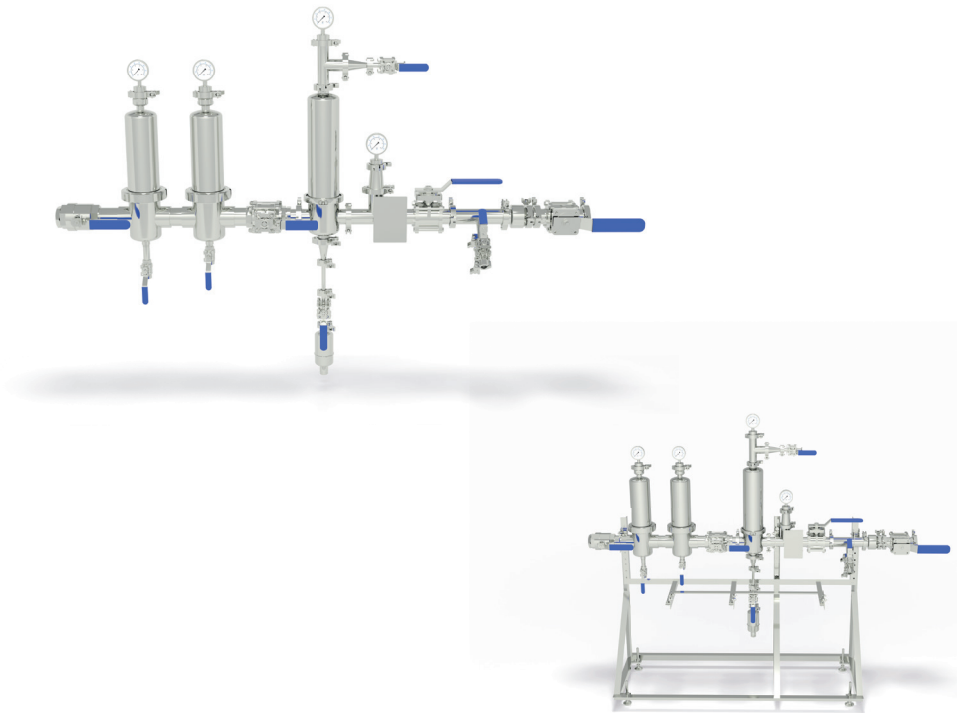
The Sterile Air Manifolds are designed for the filtration of industrial and culinary air to protect products and processes from particulate, organic, or microbial contamination. The sterile air steam is free of particulate and bacterial contaminants and is suitable for use in direct contact with food products or product contact surfaces.

The manifold comes with housings, condensate traps, lockable isolation and throttling valves, upstream and downstream pressure gauges, a sanitary check valve, and a steam inlet leg for sterilization-in-place (SIP) of the manifold. This manifold

is recommended to be paired with the Donaldson Steam Manifold for integrated steam sterilization.

An optional SIP Connection can be used to connect between the Donaldson Sterile Air Manifold and Donaldson Steam Manifold for sterilization-in-place of the sterile element within the final filter of the Sterile Air Manifold.

A height adjustable mounting stand with leveling feet is optional to support both the Donaldson Sterile Air Manifold and Donaldson Steam Manifold together.



Application Examples

- Filtration and purification of compressed air and technical gases
- Any application where sterile compressed air is required
- Static or dynamic tank venting
- Aseptic storage or packaging
- Product push
- Cooling or conveying air

PRODUCT SPECIFICATIONS

Max. operating emperature	150 °C (302 °F)
Max. operating pressure	10.3 barg (150 psig)
Max. differential pressure	Defer to filter element datasheets
Components	Donaldson housings, steam trap, manometers from ASHCROFT, Isolation and throttling ball valves, optional SIP connection, optional support stand
Internal surface finish [Ra]	Ra < 30 µin after final filter
Metal materials	All product contact surfaces made of Stainless Steel AISI 316 or AISI 304
Elastomer materials	EPDM or PTFE
Inlet/outlet connections	NPT (line size 3/4 in, 1 in, 2 in, 3 in) or ANSI 150 RF (line size 4 in) inlet Tri-Clamp Outlet

LIFETEC™ FILTER TECHNOLOGY

Premium filter elements

Liquid Modular Skids and Sterile Water Skids are available with LifeTec™ liquid filter elements that are designed to support process and product integrity. They are stronger, longer-lasting, and have higher flow rates than most products in the market today. With this advanced technology, it's possible to reduce your total cost of ownership by optimizing filter performance and improving energy efficiency.



Strength – robust polypropylene filter liner (rhombus structure), that improves static and flow conditions. Improved pressure stability and torsional stiffness, preventing damage to the filter element during filter replacement.

Performance – excellent flow rate and low pressure drop reducing total cost of ownership.

Availability – single piece flow manufacturing guarantees product availability of large batches and single item lots.

The filters are available in a broad range of configurations for nearly every application and technological trend in the processed food and beverage industry, including bioburden reduction of ingredient water, beer, wine and bottled water.



Bottled Water



Breweries



Wineries



Dairies



Fruit Juice



Food Processing



Process Water



SUPERIOR FILTRATION. SOPHISTICATED SERVICES.

Your partner for a wide variety of service solutions

To enhance and complement our field services, we provide highly sophisticated in-house laboratory services to validate oil aerosols, oil mist, particle size or concentrations.

- Integrity Test Membranes (Membra-Check)
- Integrity Test Depth Filtration (Filter Test Center)
- Differential Pressure Measuring
- Particle Spectrum Analysis for Liquids
- Test Filtration for Compressor Condensate



Membra-Check



Filter Test Center (FTCi)



CE FDA

Donaldson
LifeTec™

LIQUID
AIR
STEAM



donaldson.com/process

Donaldson Company, Inc.
Minneapolis, MN

Contact us



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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