

COMPONENTS AND DESIGN

Donaldson Sterile Air Manifolds provide a ready-to-install air filtration solution 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. The Sterile Air Manifold includes an isolation valve to sterilize either the sterile air filter or any downstream equipment. This sterile air filtration solution has all required piping components listed in the 3-A Accepted Practice for Supplying Air Under Pressure.

A height adjustable mounting stand with leveling feet is available as an optional accessory to support both the Donaldson Sterile Air Manifold and Donaldson Steam Manifold together. An optional SIP Connection accessory is also available to connect between the Air and Steam Manifolds.

The manifold and all accessories are washdown compatible.

SERVICE

For highest standards of quality and safety in food and beverage processes, the Donaldson field service team is available for:

- manifolds troubleshooting
- repairs
- annual maintenance (replacing elements and other common spare parts)

FEATURES AND BENEFITS

- Minimal site assembly
- Compact design
- Minimal installation downtime
- Ergonomic housing heights
- Low differential pressure drop
- High flow rate capabilities
- Optional integrated steam sterilization

INDUSTRIES

The Sterile Air Manifold is used 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.



- Bottled Water



- Dairy



- Breweries



- Wineries

ASSOCIATED FILTER ELEMENTS

The Donaldson Sterile Air Manifold is designed to fit any combination of compatible Donaldson Process or Compressed Air elements, however we recommend the below configuration:

Stage 1

Donaldson P-SMF filter element acting as a particulate filter

Stage 2

Donaldson P-AK filter element acting as an oil/vapor filter

Stage 3

Donaldson LifeTec™ P-SRF V filter element acting as a particulate filter able to meet 3A retention requirements

PRODUCT SPECIFICATIONS

Features	Specifications
Max. Operating Temperature	302 °F (150 °C)
Max. Operating Pressure	150 psig (10.3 barg) @ 302 °F (150 °C)
Max. Differential Pressure	Defer to 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 < 32 µin after final filter
Materials	All product contact surfaces Stainless Steel AISI 316 or AISI 304 Elastomers are made of EPDM or PTFE

Donaldson’s Sterile Air Manifolds are designed for the filtration of industrial and culinary air and yield low differential pressure at high flow rates. See estimated manifold capacities below. Detailed sizing curve is also provided on the following pages.

APPLICATIONS

The Sterile Air Manifolds are designed and developed for the following applications:

- 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

QUALITY TESTING

All products have been inspected and meet the following requirements by Quality Assurance:

- Sterile Air Manifold roughness Ra < 32 µin downstream of final filter to meet 3-A Sanitary Guidelines.
- FDA requirements for contact with food in accordance with the Code of Federal Regulations, Title 21.
- All components meet the EU requirements for direct food contact use in accordance with EC/1935/2004 and subsequent amendments.
- Pneumatic leak test per ASME B31.3.

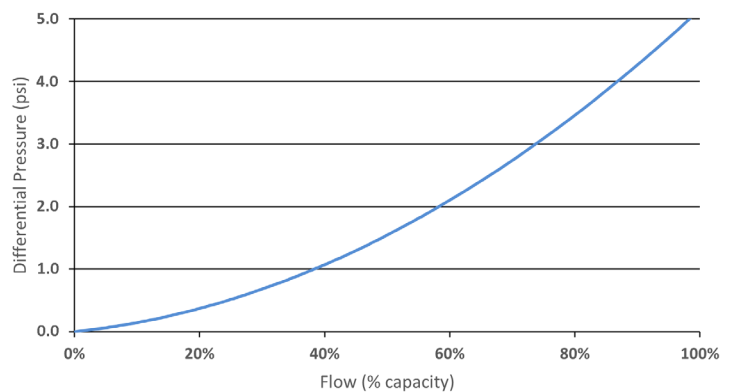
MANIFOLD CAPACITIES

Line Size	Flow (scfm)
3/4 IN	100
1 IN	200
2 IN	400
3 IN	1,100
4 IN	3,800

FLOW CHARACTERISTICS

Estimated flow characteristics using Donaldson housings and typical filter element configuration with 100 psig compressed air.

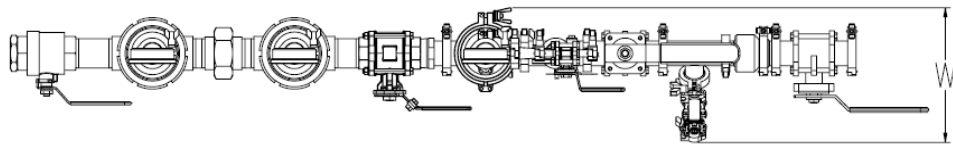
Typical Element Configuration		
Stage 1	Stage 2	Stage 3
P-SMF	P-AK	P-SRF V



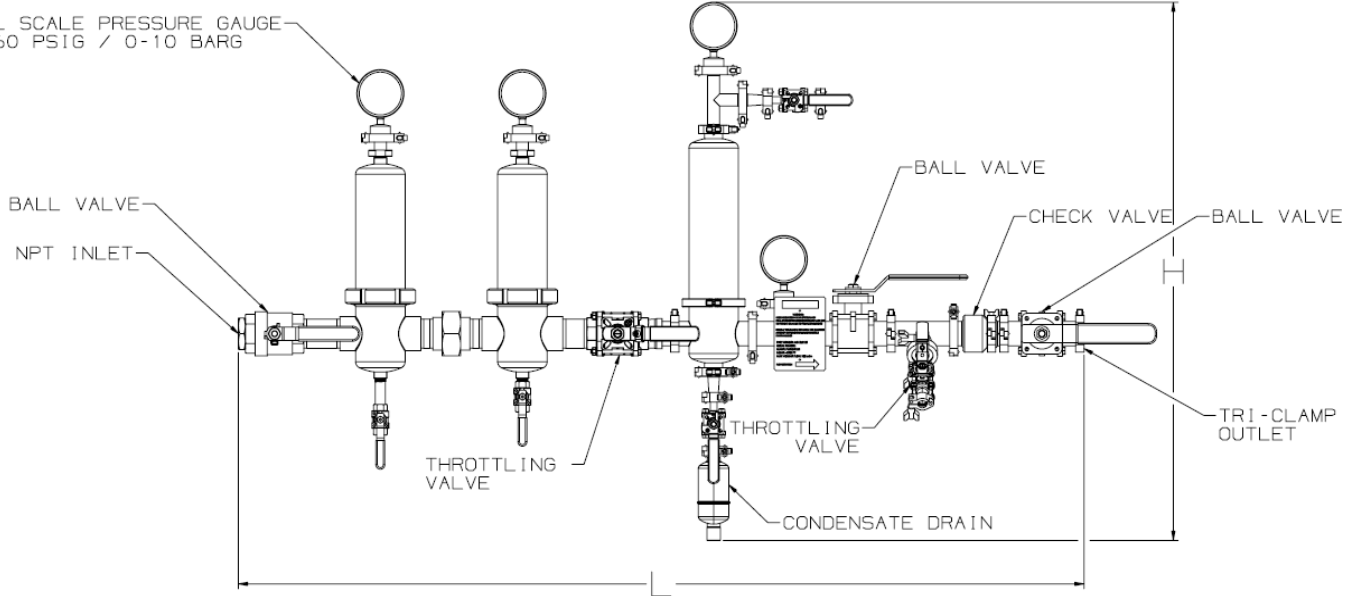
*Flow is modeled as a percentage of the maximum volumetric flow rate capacity as shown in table. Curve is representative of all line sizes.

WEIGHTS AND DIMENSIONS

Sterile Air Manifold Weights and Dimensions												
Line Size	Part Number	Element Size Qty.			Inlet Conn.	Outlet Conn.	Length	Width	Height	Weight	Associated Steam Manifold	
		Stage 1	Stage 2	Stage 3								
3/4 IN	AG1363101	UF 05/20 Qty 1	UF 05/20 Qty 1	UF 05/20 Qty 1	NPT	TRI-CLAMP	51	15	35	40	AG1325601 3/4 IN culinary	
1 IN	AG1363201	UF 07/25 Qty 1	UF 07/25 Qty 1	Code 7 05/30 Qty 1	NPT	TRI-CLAMP	59	11	40	50	AG1325601 3/4 IN culinary	
2 IN	AG1363301	UF 10/30 Qty 1	UF 10/30 Qty 1	Code 7 10/30 Qty 1	NPT	TRI-CLAMP	69	11	44	100	AG1325601 3/4 IN culinary	
3 IN	AG1363401	UF 30/30 Qty 1	UF 30/30 Qty 1	Code 7 30/30 Qty 1	NPT	TRI-CLAMP	93	13	64	150	AG1325601 3/4 IN culinary	
4 IN	AG1363501	UF 30/30 Qty 3	UF 30/30 Qty 3	UF 30/30 Qty 3	ANSI 150 RF Flange	TRI-CLAMP	119	16	73	300	AG1325801 2 IN culinary	



DUAL SCALE PRESSURE GAUGE
0-160 PSIG / 0-10 BARG

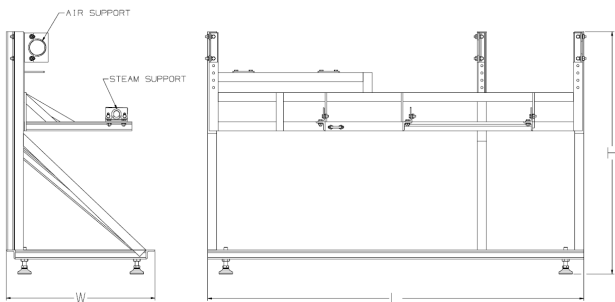


STAND

An optional stand accessory can be used to support the Donaldson Sterile Air Manifold. The stand has height adjustment intervals of 1.5 inches and is equipped with leveling feet for finer adjustment up to 1.5 inches. It is designed to support both Donaldson Sterile Air Manifold and Donaldson Steam Manifold together, minimizing footprint.

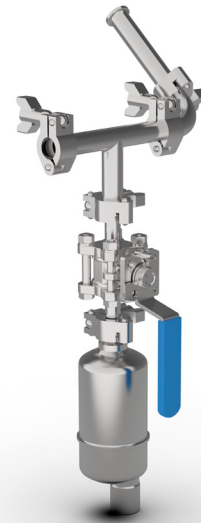


Stand Weights and Dimensions					
Line Size	Part Number	Length	Width	Height	Weight lb
		IN	IN	IN	
3/4 IN	AG1431001	39	21	33-42	50
1 1/2 IN	AG1431101	43	20	33-42	55
2 IN	AG1431201	52	20	33-42	60
3 IN	AG1431301	69	20	37-46	70
4 IN	AG1431401	100	23	49-58	100

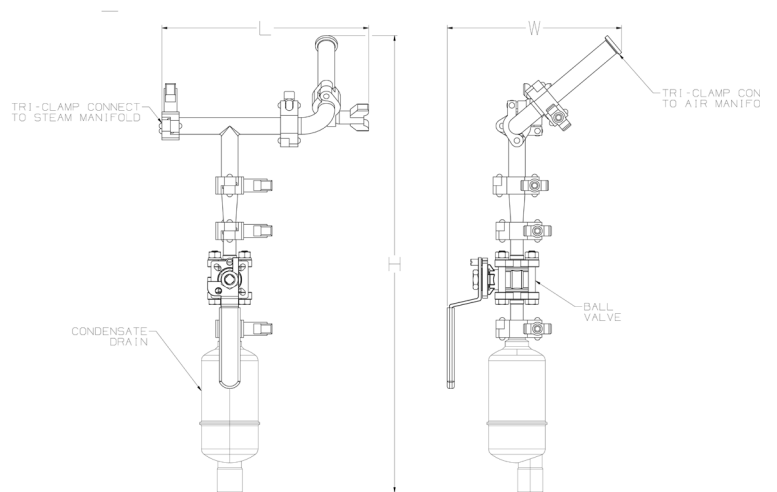


SIP CONNECTION

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. This SIP connection includes upstream and downstream sanitary tri-clamp connections as well as a steam trap, meeting 3-A Culinary Steam Guidelines.



SIP Connection Weights and Dimensions					
Line Size	Part Number	Length	Width	Height	Weight lb
		IN	IN	IN	
3/4 IN - 3 IN	AG1445801	9	8	18	25
4 IN	AG1445901	11	11	23	30



SPARE PARTS

Donaldson can provide spare parts for all common service components including pressure gauges, gaskets and clamps. Service kits consist of every process and housing gasket used with each manifold. For ordering filter elements, refer to Process Filtration catalog.

Part Number	Description
AG1464601	ACC, PRESSURE GAUGE, 1 1/2 IN TC, 316LSS, DUAL SCALE 0-160 PSIG / 0-10 BARG
AG1420501	ACC, CLAMP, 1/2 IN - 3/4 IN, TC, 304SS
1C311916-AS	ACC, CLAMP, 1 - 1 1/2 IN, TC, 304SS
1C311924-AS	ACC, CLAMP, 2 IN, TC, 304SS
1C312001-AS	ACC, CLAMP, 3 IN, TC, 304SS
1C312006-AS	ACC, CLAMP, 4 IN, TC, 304SS
AG1468401	SERVICE KIT, MANIFOLD, AIR, 3/4 IN, NPT, TC
AG1468501	SERVICE KIT, MANIFOLD, AIR, 1 IN, NPT, TC
AG1468601	SERVICE KIT, MANIFOLD, AIR, 2 IN, NPT, TC
AG1468701	SERVICE KIT, MANIFOLD, AIR, 3 IN, NPT, TC
AG1468801	SERVICE KIT, MANIFOLD, AIR, 4 IN, ANSI 150, TC
AG1468901	SERVICE KIT, ACC, SIP CONNECTION, MANIFOLD, AIR, 3/4 IN - 3 IN, TC
AG1469001	SERVICE KIT, ACC, SIP CONNECTION, MANIFOLD, AIR, 4 IN, TC



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.

F119305 ENG (08/25) Sterile Air Manifolds (US)©2025 Donaldson Co., Inc. Donaldson and the color blue are marks of Donaldson Company, Inc. All other marks belong to their respective owners.