Donaldson
FILTRATION SOLUTIONS

P-SLF BOX

STERILE AIR VENTILATION SYSTEM

Process Filtration

Sterile air box used in processed food and beverage manufacturing environments.

In the processing of perishable or sensitive food and beverage products, the demands for hygiene are usually very high. Ambient air is polluted and can ruin even the cleanest production process if it comes into contact with the end product without being purified. Bacteria, oil mist, water and dust in ambient air are the main reasons for spoilage of products. Sterile air creates aseptic conditions in pressurized and open storage or mixing tanks and in filling machines. A continuous exchange of the air cushion and a slight overpressure in this critical area reduces the risk of contamination with unfiltered ambient air.

For processed food and beverage applications processes where bacteria and particle-free air is required, Donaldson® developed the P-SLF sterile air Box. With eight box sizes from .5 to 15 m^3/min (18 to 529 cfm), sterile air can be produced in a cost-effective way. The P-SLF box is available in mobile and stationary versions and can be sanitized with saturated steam.

The filtration system is a compact unit consisting of a pre-filter and sterile filter with a low pressure blower. With a very low overpressure, the sterile air is transported into the storage tank. This constant air exchange prevents contamination by bacteria and particles found in ambient air.

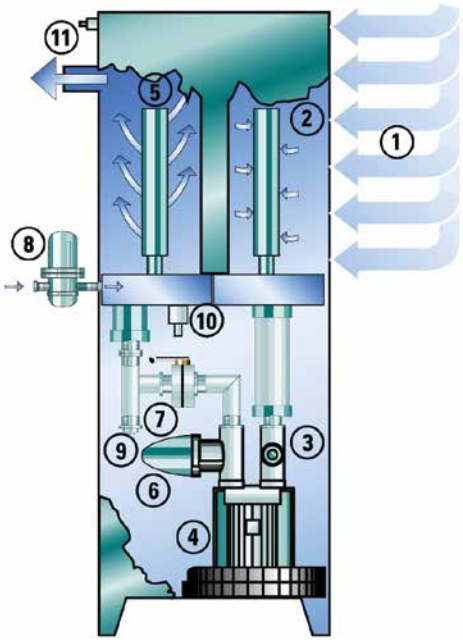
P-SLF BOX

HOW IT WORKS

The blower draws ambient air (1) into the filtration chamber (2). The air is cleaned with a prefilter on the upstream side of the blower. The retained particles will cause an increase in differential pressure over time. To protect the blower (4), a vacuum relief valve (3) is installed. The blower compresses (4) the air to about 1.5 psi. The compressed air is fed into the sterile chamber (5) where a sterile filter retains bacteria and other contaminants. To protect the blower, a pressure relief valve will open if the sterile filter is blocked. At the outlet (11) the sterile air is fed to the tank or other point of use.

During sterilization of the upper chamber and filter elements, the disc valve (7) needs to be closed to prevent steam from entering the blower. To maintain good steam quality, a steam filter (8) is standard on the P-SLF box. After sterilization the condensate can be drained out the discharge valve (9) (10).

See also sterilization instructions.



SPECIFICATIONS

Type P-SLF	Flow Rate				Dimensions						Filter Elements	
	Differential Pressure: 0.10 bar (1.5 psid)		Differential Pressure: 0.21 bar (3 psid)		Height		Width		Depth			
	m^3/min	cfm	m^3/min	cfm	mm	in.	mm	in.	mm	in.	Size	Type
0288-0	1.19	42	0.51**	18**	1626	64	737	29	483	19	2x20/30 2x20/30 1x05/20	FF BE P-GS
0432-0	2.38	84	1.02	36	1626	64	737	29	483	19	3x20/30 3x20/30 1x05/20	FF BE P-GS
0576-0	3.57	126	2.10	74	1829	72	737	29	483	19	3x30/30 3x30/30 1x05/25	FF BE P-GS
0768-0	4.53	160	3.62	128	2032	80	991	39	584	23	4x20/30 4x20/30 1x05/25	FF BE P-GS
1152-0	6.80	240	4.53	160	2032	80	991	39	686	27	6x30/30 6x30/30 1x05/25	FF BE P-GS
1536-0	7.36	260	6.23	220	2032	80	1194	47	686	27	8x30/30 8x30/30 1x07/30	FF BE P-GS
2304-0	11.33	400	8.50	300	2286	90	1194	47	686	27	12x30/30 12x30/30 1x07/30	FF BE P-GS
3072-0	16.99	600	14.16	500	2464	97	1194	47	686	27	16x30/30 16x30/30 1x10/30	FF BE P-GS

** Maximum 0.17 bar (2.5 psi) total blower difference.

- P–SLF Box Sterile Air Ventilation Systems are integrated units, complete with prefilter FF G2", sterile filter BE G2" and a steam filter P–GS combined with a blower for low pressure applications. The P-SLF processes ambient air to sterile air.
- The sterile air system is also available in a 4.14 bar (60 psig) version. In this case the sterile filter can be sterilized with saturated steam up to 4.14 bar (60 psig).
- Standard Power Supply: 110 V/60 Hz; (P-SLF 0228-0 – 1152-0)
  440 V/60 Hz; (P-SLF 1536-0 – 3072-0)
- Other electrical connections available.

Registered: Quality Management System 9001:2008 ISO

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.

Donaldson.

Donaldson Company, Inc.
Minneapolis, MN

donaldson.com
shop.donaldson.com

Australasia 61-02-4350-2066
marketing.australia@donaldson.com

Brazil 55-11-4894-6035
vendas.brasil@donaldson.com

China 86-400-921-7032
info.cn@donaldson.com

EMEA 49-2129-569-0
cap-europe@donaldson.com

India 91-124-4807-400
indiainquiries@donaldson.com

Japan 81-42-540-4123
ndl-ultrafilter-web@donaldson.com

Korea 82-2-517-3333
cap-kr@donaldson.com

Latin America 52-449-300-2442
industrialair@donaldson.com

North America 800-543-3634
processfilters@donaldson.com

South Africa 27-11-997-6000
samarketing@donaldson.com

Southeast Asia 65-6311-7373
sea.salesenquiry@donaldson.com