Process Filtration
From Pure to Sterile

(P)-BE

MAIN FEATURES & BENEFITS:

- High mechanical and thermal stability
- Excellent flow rate
- Integrity testable according to HIMA
- Thermal stability up to 200 °C
- Approved for Food Contact Use acc. to CFR Title 21 & EEC/1935/2004

INDUSTRIES:

- Dairy

- Fermentation

- Food & Beverage

- Health Care

- Biotechnology

Donaldson® Ultrafilter

PRODUCT DESCRIPTION

The (P)-BE filter is a wounded depth filter with inner and outer guard end caps made from stainless steel. The retention rate is 99,999 % related to 0,2 µm. The three dimensional borosilicate depth media has a large void volume of 95 %. This ensures a high dirt containment capacity at a low differential pressure and a high flow rate. The filter media is inherently hydrophobic

Based on the micro fibre medium made of borosilicate, this depth type filter realises high particle holding capacity and long service life. Based on the low differential pressure of the (P)-BE filter elements a use in tank ventilation applications is recommended.

The depth filter medium is non-fibre releasing and complies to the FDA requirements (Food and Drug Administration 21CFR 211.72 latest edition). Several layers of the glass fibre medium are embedded in stainless steel supports and bound to stainless steel end caps. The sturdy stainless steel construction withstands high differential pressures in both flow directions. (P)-BE sterile filter elements guarantee a safe and reproducible production.

The wounded ventilation depth filter (P)-BE is designed and developed for the following applications:

Filtration of air and gases

- Tank Ventilation
- Compressed Air
- Carbon Dioxide
- Fermentation Air
- Technical Gases

Application areas

- Chemical industry
- Pharmaceutical industry
- Biotechnology
- Breweries
- Dairies
- Aseptic packaging
- Food industry
- Hospitals

PRODUCT SPECIFICATIONS

Product Specifications	
Retention Rate	• > / = 99,999 % at < / = 0,2 µm
Filtration Surface	• 0,05 m^2 per 250 mm element (10”)
Temperature Range	• -20°C (-4°F) to 200°C (400°F) ; > 150°C (300°F) only for dry air
Maximum Differential Pressure	• 5 bar (75 psid), independent of the system pressure or the flow direction
Typical Continuous Air Service Life Time	• 12 months
Typical Vent Service Life Time	• 6 months
Cumulative Steaming Time*	• 141°C (286° F), Saturated Steam, 10 minutes, several cycles

** Figures are based on lab tests to evaluate steaming resistance. Filter elements need to be checked in actual use. Contact Donaldson for recommended Autoclaving/Steaming procedures.*

MATERIAL COMPLIANCE

All components of the (P)-BE filter element are FDA listed for food contact use in the **Code of Federal Regulations (CFR), Title 21**

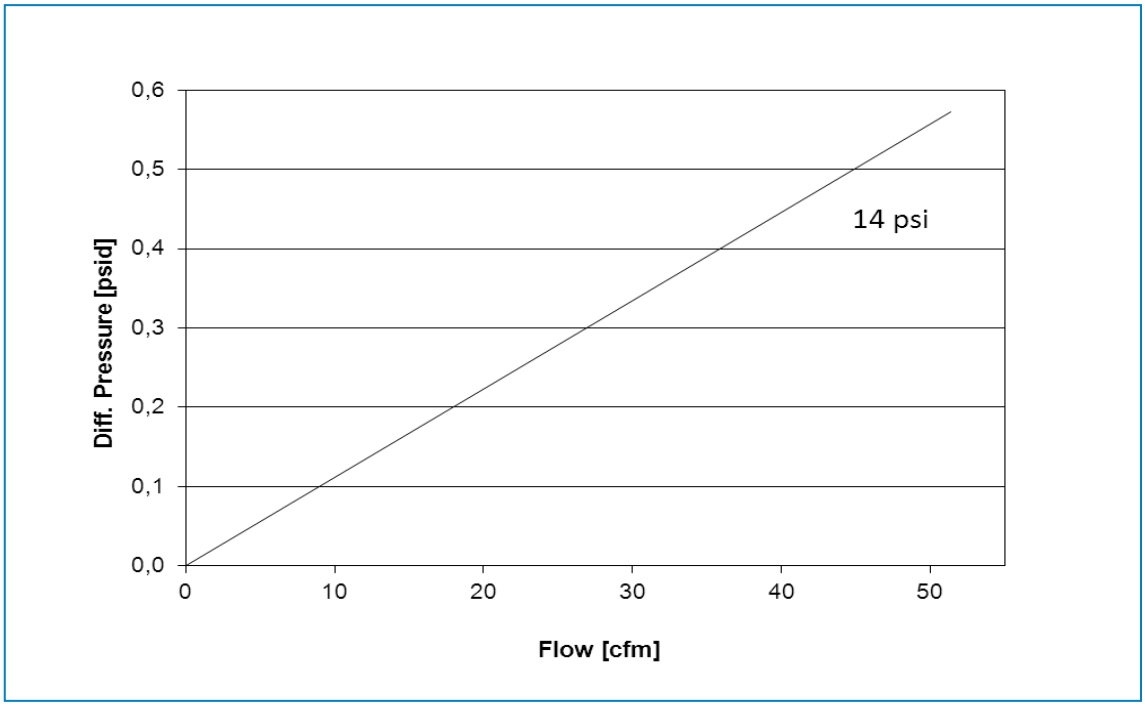
Filter Materials		CFR Title
Filter Matrix:	Borosilicate	177.2260
Upstream Support:	PTFE	177.1550
Downstream Support:	PTFE	177.1550
Outer Guard:	Stainless Steel 1.4301	211.65
Inner Guard:	Stainless Steel 1.4301	211.65
End Caps:	Stainless Steel 1.4301	211.65
Bonding Materials	Silicone	177.2600
O-Rings:	Silicone	177.2600
Alternatively:	EPDM	177.2600
	PTFE over silicone	177.1550
	PTFE over viton	177.1550

All products have been inspected and released by Quality Assurance as having met the following requirements:

- Donaldson Filtration Deutschland GmbH confirms that all materials used for the P-BE element meet regulatory and legislative requirements and guidelines for food contact as detailed in European Regulation (EC) Number 1935/2004. These articles are intended for indirect food use in filtration of gases, therefore migration testing has been limited to an atmospheric and watery environment.
- All filter elements are integrity tested according to ASTM D 2986-91 and DIN EN 1822 to verify compliance with established quality and design specifications and to assure consistent and reliable performance.
- On request a Factory Test Certificate according to DIN EN 10204 is available.

FLOW CHARACTERISTICS

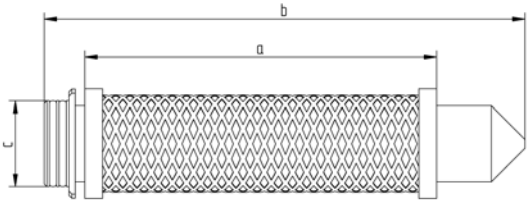
(P)-BE, 10/30, air, 25°C, 14 psi



AVAILABLE END CAP TYPES

Dimensions (CODE 7 connection):

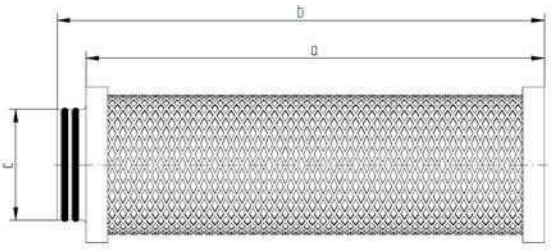
CODE 7						
Size	a		b		c	
	mm	inch	mm	inch	mm	inch
5”	125	5	190	7,48	56,5	2,22
10”	250	10	315	12,40	56,5	2,22
20”	500	20	585	22,24	56,5	2,22
30”	750	30	815	32,08	56,5	2,22



CODE 7: 2 x 226 o-rings, bayonet 2 locking tabs, locating fin.

Dimensions (uf plug connection):

uf – plug connection						
Size	a		b		C*	CF**
	mm	inch	mm	inch	inch	
03/10	76	3	87	3,42	3/4″P	0,12
04/10	104	4	118	4,64	3/4″P	0,17
04/20	104	4	118	4,64	1″P	0,19
05/20	128	5	142	5,59	1″P	0,25
05/25	128	5	142	5,59	1″P	0,32
07/25	180	7	194	7,64	1″P	0,47
05/30	128	5	144	5,67	2″P	0,46
07/30	180	7	196	7,71	2″P	0,68
10/30	254	10	270	10,63	2″P	1,00
15/30	381	15	397	15,63	2″P	1,55
20/30	510	20	526	20,63	2″P	2,10
30/30	764	30	780	30,63	2″P	3,28
30/50	764	30	780	30,63	3″P	5,89

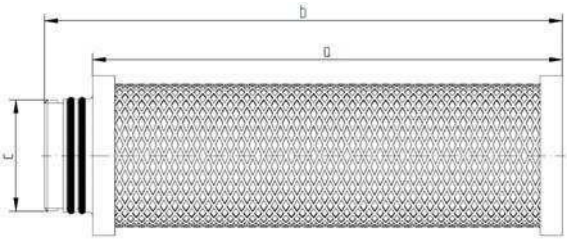


* Plug-type connection with double-o-ring

** Correction Factor Filtration Surface & Flow Rate

Dimensions (thread connection):

thread connection					
Size	a		b		c
	mm	inch	mm	inch	inch
03/10	76	3	39	1,53	G2
07/30	180	7	206	8,11	G2
10/30	254	10	281	11,06	G2
15/30	381	15	407	16,02	G2
20/30	508	20	534	21,02	G2
30/30	762	30	788	31,02	G2
30/50	762	30	788	31,02	G3



Other end cap configurations on request.

- **Integrity test of this element to be done by DOP Test.**
- **For information on test equipment or test services, please contact your Donaldson Sales Engineer**