

Sterile vent filter P-BE

ultraair ultrafilter®

The sterile depth filter for the sterile ventilation of storage tanks.

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 0.01 µm. The threedimensional 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.

Features:

All components meet the FDA requirements for the contact with food in accordance with the CFR requirements (code of Federal Regulations), title 21. P-BE filter elements have passed the toxicological tests according to USP XX Class VI for plastics. The filter element corresponds to the cGMP requirements (current Good Manufacturer practice) and is manufactured according to DIN EN ISO 9001. The filter medium is nonfiber releasing and it is manufactured without the use of binders or other chemical additives.

The P-BE –
ensures a safe operation
and is proven thousands
of times in application



SEM of the
P-BE filter media



Applications:

The P-BE sterile filters are, among others, designed and developed for the following applications:

- Chemical industry
- Aseptic packaging
- Pharmaceutical industry
- Biotechnology
- Cosmetic industry
- Breweries
- Dairies
- Food and beverage
- Water treatment systems
- Fermentation processes



ULTRAFILTER
THE FILTRATION MANUFACTURER

Technical alterations reserved - 20.03.2006

Technical Data



Sterile vent filter P-BE

Features:	Benefits:
High-quality stainless steel construction	High mechanical and thermal stability, good durability range against chemicals and numerous aggressive gases
Absolute retention rate of 99.999% related to 0.01 µm	Validated retention rate, integrity testable with DOP test according to HIMA
Manufactured in accordance with cGMP and DIN EN ISO 9001	Constant product quality, high operational- and process safety
Three-dimensional borosilicate depth filter media	High waste containment capacity, low differential pressure, high flow rate
Biologically and chemically inert	No breeding ground for separated microorganisms
100 sterilization cycles guaranteed	Highly economical and low filtration costs
100% integrity tested by factory	Guaranteed quality
Available in 6 element sizes	Optimum filter size for the individual application
Stainless steel core and endcaps	Temperature range from -20°C to 200°C, sterilizable at a steam temperature of up to 141°C

Bacterial retention:

LRV > 7/cm² for T1 Coliphagen

Sterilization:

In-line sterilization with slow speed saturated steam
 max. 121°C for 30 minutes
 max. 131°C for 20 minutes
 max. 141°C for 10 minutes

Autoclave
 125°C for 30 minutes

P-BE filter elements are guaranteed for 100 sterilization cycles – without loss of integrity

Temperatur range:

-20°C to 200°C*

* > 150°C only for dry compressed air

Materials:

Filter medium:	Borosilicate
Outer core:	SS 1.4301 (304)
Inner core:	SS 1.4301 (304)
Supporting fabric:	Polyester
Endcaps:	SS 1.4301 (304)
Bonding material:	Silicone
O-Rings:	Silicone (standard), Buna N, EPDM or Viton

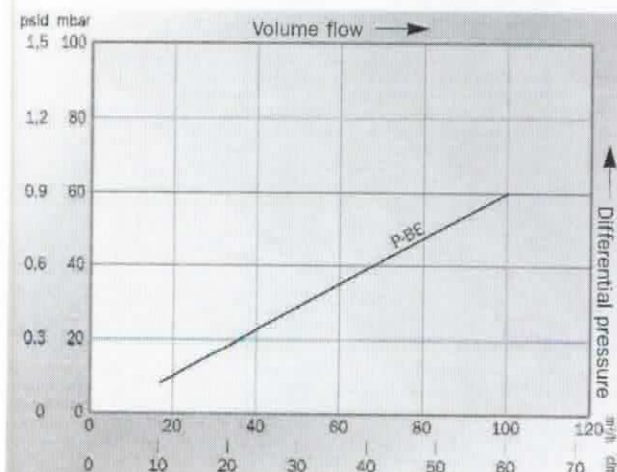
Filtration surface:

494 cm² for 10" element (10/30)
 For other sizes see correction factor (CF)

Absolute retention rate:

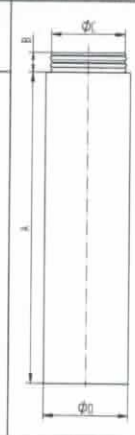
99.999% related to 0.01 µm

Flow rate of a 10" P-BE element – air (1 bar, 20°C)



Dimensions:

Element size	A mm	B mm	Ø C* mm	Ø D* mm	CF**
03/10	76	12	3/4"	42	0,12
05/25	128	14	1"	62	0,32
05/30	128	16	2"	86	0,46
10/30	254	16	2"	86	1,00
20/30	508	16	2"	86	2,10
30/30	762	16	2"	86	3,28



* Plug- type connection with double-o-ring
 ** Correction factor filtration surface

P-BE stainless steel housing

Filter housing for the aeration and de-aeration of sterile storage tanks or containers for transport.

Product description:

Filters for the aeration, de-aeration and venting of product series P-BE are used to ensure 100% sterility in the storage of pharmaceutical products, containers of DI water, food, chemicals, and/or the de-aeration of fermenters. The user-friendly two-piece housing has a splash protection to prevent liquids coming in contact with the filter medium and damage it.

Numerous sizes of housings allow to adopt the filter exactly to the respective requirements. In this product series 12 different housing sizes are available for volume flows of 4.5 to 2.010 m³/h at 1 bar (2,6 to 1.180 cfm at 14,7 psi). Due to the ultra.air modular design different filter elements can be used in this housing according to the application. Apart from sterile depth filters there is a choice between hydrophobic polypropylene or Teflon* membrane filters with a retention rate down to 0.01 µm.



Technical data

Materials:

Filter housing:	stainless steel 1.4301 (304) optional 1.4404 (316L)
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Surface finish:

finished on the inside and on the outside polished

Connection types:

Milkpipe DIN 11851
(standard at 0006-0192)
DIN or ANSI flange
(standard from 0432; optional up to 0192)
Clamp (on request)

Maximum operating temperature:

200°C

* Teflon is a registered trademark of the DuPont company



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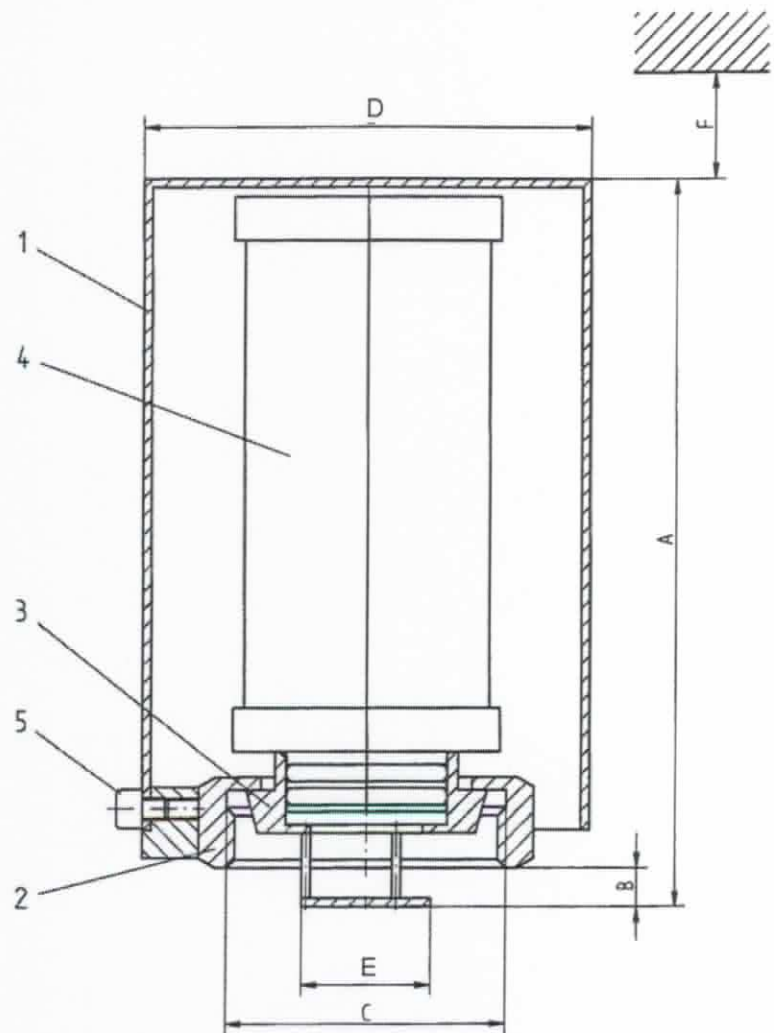
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Dimensions

Vent filter P-BE 0006-0192 with milkpipe connection DIN 11851

Pos.	Piece	Description
5	3	socket head screw
4	1	filter element
3	3	lone socket
2	1	lower housing bowl
1	1	upper housing bowl

Max. operating temperature:	200°C
Material:	
Housing:	1.4301
Attaching parts:	1.4301
Surface finish:	finished inside, polished outside



Size	Weight* (kg)	A mm	B mm	C DIN 11851	ø D mm	ø E mm	F mm	Element
0006	1,5	110	9	DN 32/ Rd 58 x 1/6	85,0 x 2	24	100	03/10
0027	2,2	168	9	DN 40/ Rd 65 x 1/6	104,0 x 2	30	155	05/25
0032	2,4	186	9	DN 50/ Rd 78 x 1/6	114,3 x 2	42	155	05/30
0072	3,3	312	9	DN 50/ Rd 78 x 1/6	114,3 x 2	42	280	10/30
0144	9,2	550	8	DN 80/ Rd 110 x 1/4	154,0 x 2	70	580	20/30
0192	11,6	805	8	DN 80/ Rd 110 x 1/4	154,0 x 2	70	850	30/30

* without filter element