



Donaldson.
FILTRATION SOLUTIONS

Process Filtration From Pure to Sterile

(P)-SM

MAIN FEATURES & BENEFITS:

- Highly durable stainless steel design
- Regenerable by ultrasonication or backflushing
- Excellent flow rate
- For the filtration of air, steam and liquids
- Approved for Food Contact Use acc. to CFR Title 21 & 1935/2004/EC



INDUSTRIES:



- Chemical



- Food & Beverage



- Paint



- Environmental

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Donaldson.
Ultrafilter

PRODUCT DESCRIPTION

The (P)-SM filter consists of a regenerable stainless steel mesh, with stainless steel outer guard and end caps. The retention rate extends from 5 µm nominal up to 250 µm nominal.

The (P)-SM filter element offers an especially economical pre- and final filtration, where the stainless steel mesh can be regenerated by ultrasonic bath or back flushed. This is especially important at higher particle loads. The contact points of the mesh material are welded firmly together, which guarantees a constant pore diameter, even under extreme operating conditions.

The heavy-duty construction of the (P)-SM filter is also suitable for high-viscosity liquids and can withstand a differential pressure of up to 5 bar (flow from outside to inside). In addition, the filter can be used for temperatures up to 200°C.

The (P)-SM stainless steel filter is designed and developed for the following applications:

Liquid Filtration

- Water filtration
- Chemicals
- Solvents
- Pharmaceutical industry
- Food and beverage
- Syrup
- Cosmetics
- Paints
- Salt- and Seawater
- Coolants

Gas Filtration

- Compressed air
- Carbon dioxide
- Nitrogen
- Tank Ventilation
- Highly aggressive gases

Steam Filtration

PRODUCT SPECIFICATIONS

Product Specifications

Nominal (Absolute) Retention Rates

- 5 µm (8 µm), 25 µm (32 µm), 50 µm (63 µm), 100 µm (100 µm), 250 µm (200 µm)

Filtration Surface

- 0,05 m² per 250 mm element (10")

Temperature Range

- -50°C (-60°F) to 200°C (400°F)
- > 150°C (300°F) welded end caps only

Maximum Differential Pressure (Flow Direction: Outside to Inside)

- 5 bar (75 psid), independent of the system pressure or temperature

MATERIAL COMPLIANCE USA

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

| Filter Materials | | CFR Title |
|---------------------------|------------------------|-----------|
| Filter Matrix: | Stainless Steel 1.4301 | 211.65 |
| End Caps: | Stainless Steel 1.4301 | 211.65 |
| Bonding Materials: | Plastic Steel | 177.2450 |
| O-Rings: | EPDM | 177.2600 |
| Alternatively: | Silicone | 177.2600 |
| | Buna N | 177.2600 |
| | PTFE over silicone | 177.1550 |
| | PTFE over viton | 177.1550 |

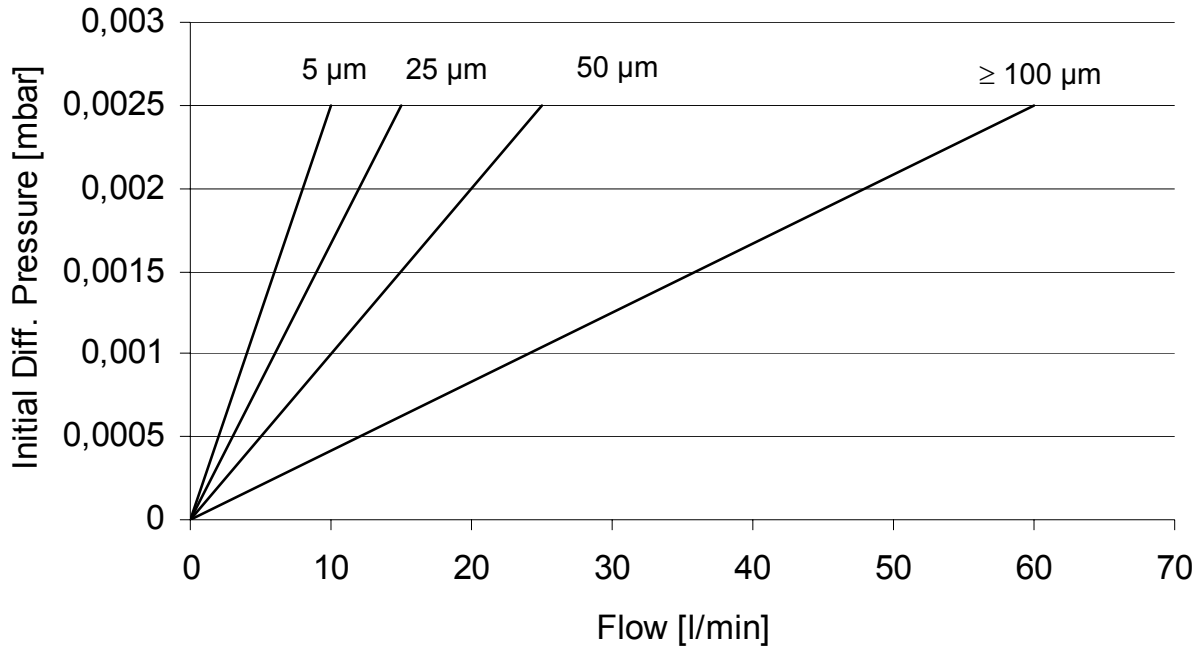
MATERIAL COMPLIANCE EU

The Donaldson (P)-SM filter element is available with a silicone-based potting material which meets the guideline for Food Contact Use as given in **European Regulation (EC) Number 1935/2004**. This specific element is suited for Food Contact Use since all components meet the requirements of the 1935/2004/EC for materials and products intended to come in contact with food stuff (excluding o-rings).

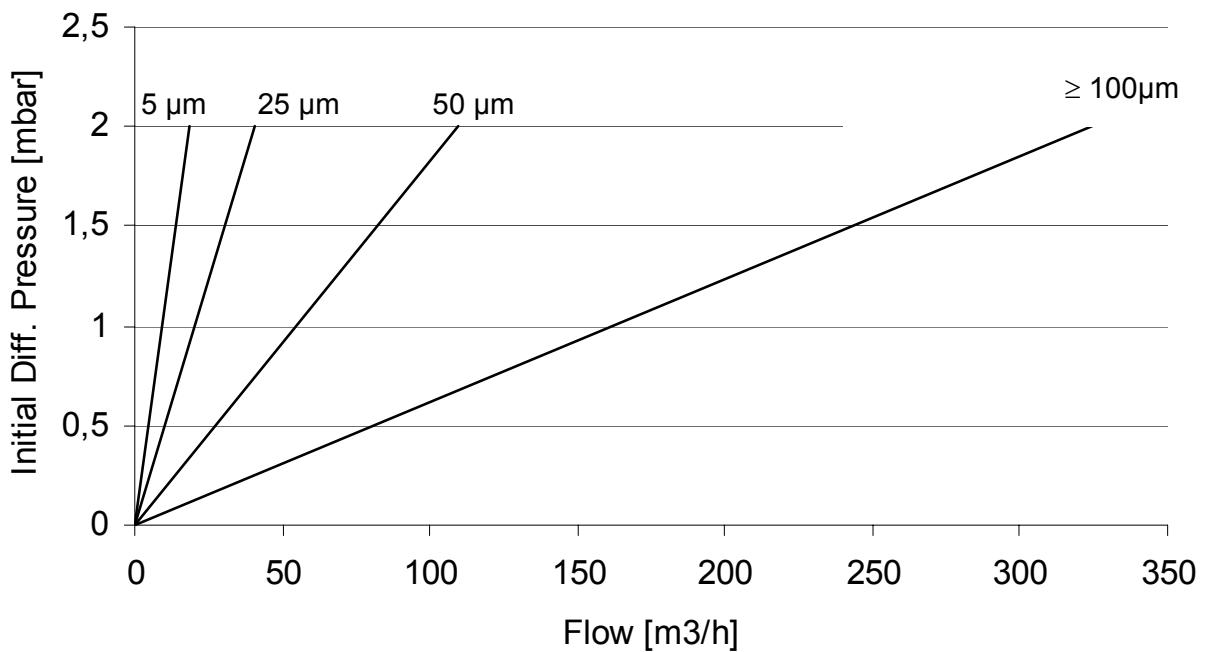
For specific details on the O-rings, please contact your Donaldson Sales Engineer.

FLOW CHARACTERISTICS

(P)-SM, 10", Deionised water, 25°C



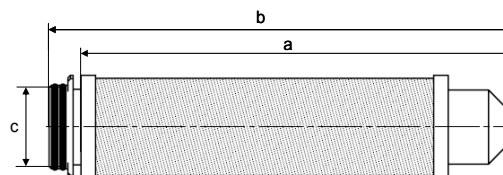
(P)-SM, 10", air, 25°C, 1 bar absolute



AVAILABLE END CAP CONFIGURATIONS

Dimensions (CODE 7 connection):

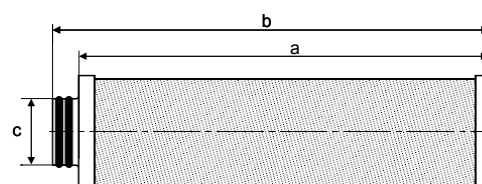
| CODE 7 | | | | | | |
|--------|-----|-------|-----|-------|------|------|
| Size | a | | b | | c | |
| | mm | inch | mm | inch | mm | Inch |
| 10" | 250 | 9,84 | 315 | 12,40 | 56,5 | 2,22 |
| 20" | 500 | 19,68 | 585 | 22,24 | 56,5 | 2,22 |
| 30" | 750 | 29,53 | 815 | 32,08 | 56,5 | 2,22 |



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 | mm | inch | |
| 03/10 | 76 | 2,99 | 87 | 3,42 | 30 | 1,18 | 0,12 |
| 04/10 | 104 | 4,09 | 118 | 4,64 | 30 | 1,18 | 0,17 |
| 04/20 | 104 | 4,09 | 118 | 4,64 | 37 | 1,46 | 0,19 |
| 05/20 | 128 | 5,04 | 142 | 5,59 | 37 | 1,46 | 0,25 |
| 05/25 | 128 | 5,04 | 142 | 5,59 | 37 | 1,46 | 0,32 |
| 07/25 | 180 | 7,08 | 194 | 7,64 | 37 | 1,46 | 0,47 |
| 05/30 | 128 | 5,04 | 144 | 5,67 | 61 | 2,40 | 0,46 |
| 07/30 | 180 | 7,08 | 196 | 7,71 | 61 | 2,40 | 0,68 |
| 10/30 | 254 | 10 | 270 | 10,63 | 61 | 2,40 | 1,00 |
| 15/30 | 381 | 15 | 397 | 15,63 | 61 | 2,40 | 1,55 |
| 20/30 | 510 | 20 | 526 | 20,63 | 61 | 2,40 | 2,10 |
| 30/30 | 764 | 30 | 780 | 30,63 | 61 | 2,40 | 3,28 |
| 30/50 | 764 | 30 | 780 | 30,63 | 89 | 3,50 | 5,89 |



uf: 2" plug connection and flat end cap.

* Plug- type connection with double-o-ring

** Correction Factor Filtration Surface & Flow Rate

Other end cap configurations on request.

Technical alterations reserved 04/2009

- For information on integrity test equipment or integrity test services, please contact your Donaldson Sales Engineer and visit our website at www.donaldson.com!

