

Sterile Air Membrane Filters



Pharmaceutical grade process filters for critical processes requiring integrity validation

The nano P-Series¹ range of sterile membrane process filters are fabricated from polished 304 or 316 stainless steel for critical compressed air and gas applications in the pharmaceutical, high tech manufacturing, food processing, and beverage industries.

This range encompasses ten models with connections from 1/4" to 3" and rated flows from 40 to 702 scfm.

Specifically designed for absolute particulate and bacteria retention in sterile environments, these filters are ideally suited for pharmaceutical protocols where documentation and integrity are critical.

The PTFE membrane filtration media is housed in a polypropylene element which incorporates a positive double o-ring click-lock seal and is 100% integrity tested for reliable performance.

Absolute bacteria & particulate retention for critical integrity

With high efficiency and low pressure drop these filters provide efficient, cost effective performance for absolute validated filtration in compressed air or gas prior to incidental product contact. There is no better filter for your critical process filtration needs.



Applications Include:

Pharmaceuticals

Biotechnology

Food Processing

Beverage

Dairy

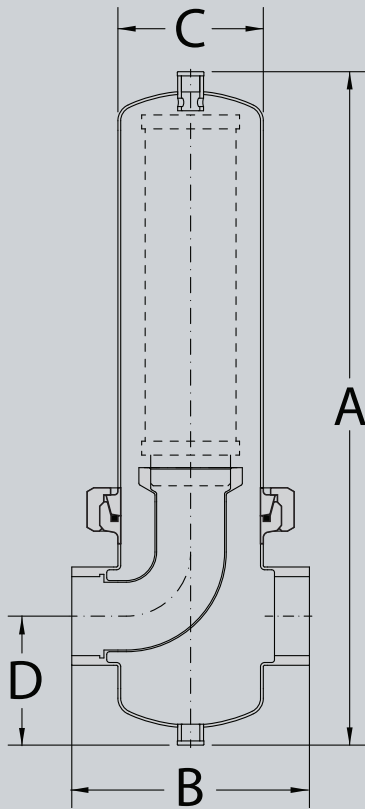
Hospitals

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Technical Specification

| Filter Model | Inlet & Outlet NPT(F) | Rated Flow ⁽¹⁾ | | Dimensions (inches) | | | | Approx. Weight lbs | Replacement Element Part No. |
|--------------|--------------------------|---------------------------|--------------------|---------------------|------------------|------|------|-----------------------|---------------------------------|
| | | scfm | Nm ³ /h | A | B ⁽²⁾ | C | D | | |
| PF 0050 SM-N | ¼" | 40 | 68 | 9.45 | 4.14 | 2.76 | 2.24 | 4.2 | E 102 SM |
| PF 0065 SM-N | ⅜" | 50 | 85 | 9.45 | 4.14 | 2.76 | 2.24 | 4.4 | E 102 SM |
| PF 0085 SM-N | ½" | 55 | 93 | 9.45 | 4.25 | 2.76 | 2.24 | 4.6 | E 102 SM |
| PF 0120 SM-N | ¾" | 60 | 102 | 9.45 | 4.92 | 2.76 | 2.24 | 5.1 | E 102 SM |
| PF 0170 SM-N | 1" | 102 | 173 | 11.40 | 4.92 | 3.35 | 2.78 | 7.3 | E 105 SM |
| PF 0295 SM-N | 1 ½" | 118 | 201 | 12.70 | 5.51 | 3.35 | 3.49 | 11.4 | E 105 SM |
| PF 0460 SM-N | 2" | 235 | 399 | 19.02 | 6.70 | 4.10 | 3.64 | 12.1 | E 110 SM |
| PF 0680 SM-N | 2" | 435 | 739 | 29.37 | 6.70 | 4.10 | 3.64 | 15.0 | E 120 SM |
| PF 0850 SM-N | 2 ½" | 468 | 795 | 29.53 | 7.17 | 4.10 | 3.80 | 15.2 | E 120 SM |
| PF 1150 SM-N | 3" | 702 | 1193 | 40.04 | 7.17 | 4.10 | 3.96 | 19.4 | E 130 SM |



| specifications | standard | optional |
|---------------------------------|---|--|
| design operating pressure range | 0 to 232 psig | 0 to 362 psig |
| inlet & outlet connections | NPT(F) | tri-clamp sanitary |
| drain & vent connections | 1/4" BSPP | - |
| filter housing material | 1.4301 quality 304 stainless steel | 1.4404 quality 316L stainless steel |
| filter housing polishing | passivated & polished to grade Ra <1.6um | - |
| filter housing seals | aseptic EPDM | consult factory |

| element performance | SM |
|--|--|
| particle removal (at 100% PTFE membrane) | 0.2 micron |
| continuous operating temperature range | 35 to 140°F |
| maximum sterilizing temperature ⁽³⁾ | 257°F |
| media material | hydrophobic PTFE membrane |
| media support & endcap material | polypropylene |
| element to housing connection | positive click lock with dual silicone o-rings |

| pressure correction factors | | | | | | | | | |
|-----------------------------|------|------|------|------|------|------|------|------|------|
| operating pressure (psig) | 60 | 70 | 85 | 100 | 115 | 145 | 175 | 205 | 232 |
| correction factor | 0.76 | 0.84 | 0.92 | 1.00 | 1.07 | 1.19 | 1.31 | 1.41 | 1.51 |

- (1) At 100 psig. For all other pressures, refer to the pressure correction factors above.
- (2) +/- 0.118"
- (3) At 30 psia for 20 minutes. Applies to element only.
- (4) Validation documentation available on request.
- Differential pressure gauge available on request.
 - Not for use in air or gas streams containing water or oil.
 - All materials conform to 21CFR Part 177 of the US code of Federal Regulations and USP Class VI Biological test for plastics.