

## sterile air membrane filters



### pharmaceutical grade process filters for critical processes requiring integrity validation

The nano P<sup>1</sup> 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 ¼" 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, 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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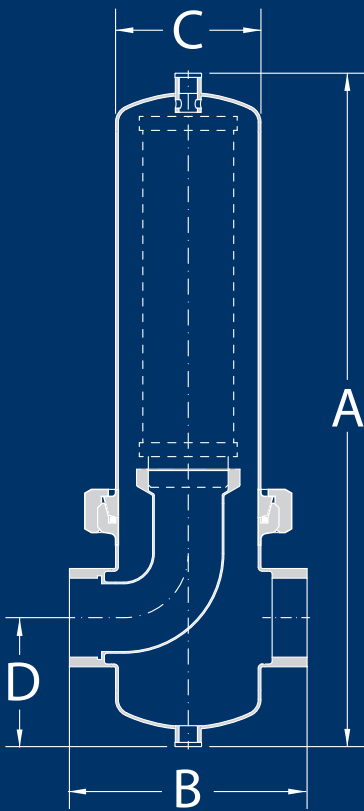
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# technical specification

		rated flow <sup>(1)</sup>		dimensions (inches)				approx. weight	replacement element
		scfm	Nm <sup>3</sup> /h	A	B <sup>(2)</sup>	C	D	lbs	part no.
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 (psig)	0 to 232	-
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)	0.01 micron
continuous operating temperature range	35 to 140°F
maximum sterilizing temperature <sup>(3)</sup>	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
- 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
  - air flow from outside to inside