Pall Corporation

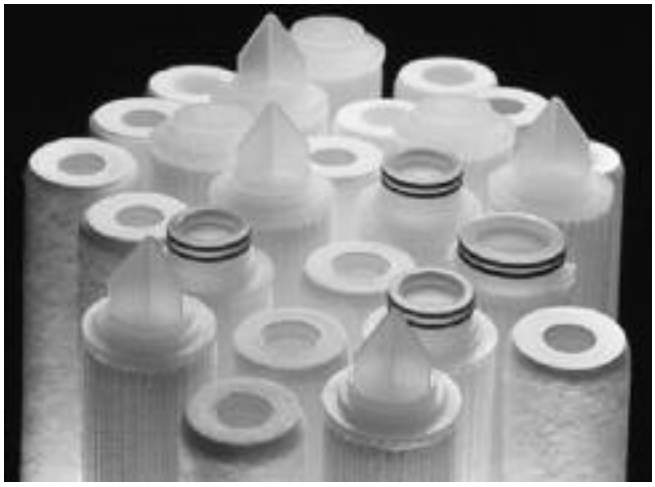
Profile® II Filter Elements

Description

Profile® II filters are all polypropylene. The elements have an absolute-rated downstream section, and a continuously graded pore size upstream section, which increases service life many-fold.

The materials of construction - chemically resistant polypropylene – permit application in a very wide range of corrosive and non-corrosive fluids. The fibers in Profile II filters may be considered continuous. No binder resin is used – the fibers are “bonded” by intertwining during the manufacturing process. As a result, Profile II filters show no media migration.

The Profile II filter has numerous applications in a broad range of industries that include chemical, petrochemical, photochemical, pharmaceutical, biological, electronic, magnetic tape, electroplating, food and beverage, cosmetic, veterinary, medical and fermentation industries. They are used as both prefilters and as final filters.



Standard Profile® II Filter Elements. Available in RF Series, RMF Series and AB Series—Code 3 and Code 7.

Operating Characteristics

Recommended maximum pressure differential is 60 psi up to 30°C (86°F), 50 psi up to 50°C (122°F), 30 psi up to 70°C (158°F), and 15 psi up to 82°C (180°F).

For applications where the filters are heated for any reason above 122°F (50°C) and the temperature is then reduced by 36°F (20°C) or more, AB Series elements are recommended. See Bulletin PRO 400 and PRE-1 for more detailed information.

Table I. Profile II Cartridge Grades And Their Characteristics

Cartridge Grade	Removal Ratings			Typical Clean Pressure Drop		Typical Aqueous Flow (GPM/10″ Cartridge)
	Liquid Service		Gaseous Service	Liquid Service	Gaseous Service	
	Rating in µm At % Efficiency		DOP (0.3 µm)[1]	Aqueous Pressure	CFM of air per PSI	
	99.9%	100%	Efficiency %	drop[2]	per 10″ cartridge[3]	
003*	<0.5[4]	<0.5[4]	>99.9999	3.5	2.3	1 - 2.5
005	<0.5[4]	<0.5[4]	>99.9999	2.8	2.7	1 - 2.5
010	<0.5[4]	1	>99.9999	2.6	3.6	1 - 3
030	2.5	3	>99.9999	1.5	6.4	2 - 5
050	4	5	>99.9999	0.8	11.0	3 - 8
070	6	7	>99.9999	0.5	17.0	5 - 12
100	9	10	99.2	0.3	29.0	6 - 15
120	11	12	96.5	0.2	36.0	6 - 15
150	13	15	88	0.15	44.0	8 - 15
200	18	20	84.8	0.10	75.0	10 - 15
300	26	30	67	0.08	119.0	10 - 15
400	35	40	48.3	0.05	207.0	10 - 15
700	70	—[5]	34	<0.05	415.0	10 - 15
900	90[4]	—[5]	25	<0.05	640.0	10 - 15
1200	120[4]	—[5]	10	<0.05	1000.0	10 - 15

[1] Air flow used for these data was 20 cfm/10″ module, except grade 700, which was run at 4 cfm.
[2] Pressure drop is PSI per GPM for a single 10″ module. For multiple elements, divide by number of modules. For fluids other than water, multiply by viscosity in centipoise.
[3] For longer modules, increase the flow rates listed in proportion. The flow rates listed do not take into account pressure losses due to flow in the internal diameter of the element, which becomes significant above about 40 to 60 cfm.
[4] Extrapolated values.
[5] Precise evaluation of the 100% removal efficiency for these coarse grades is not possible with test procedure utilized.
* AB style only.

Sizes

The Profile II RF, and RMF Series filter elements are 2½″ O.D. and are available in one piece 10″, 20″, 30″, and 40″ length modules. Profile II elements are also available in 2¾″ diameter AB Code 3, 7 and 8 Series configurations. See Bulletin PRO 400 for further details.

Part Numbers / Ordering Information

Table II. Standard Configurations of Profile II Cartridges

100% Removal Rating, µm	Profile II Element Part Numbers	
	For General Application	For General Application Including in situ Steam Sterilization, and in situ Hot Water Sanitizing[1]
	RF Series	AB Series
0.3* [2]	———	AB ▲ Y003 ◆ ▼ ☆
0.5 [2]	R ■ ▲ F005 ●	AB ▲ Y005 ◆ ▼ ☆
1	R ■ ▲ F010 ●	AB ▲ Y010 ◆ ▼ ☆
3	R ■ ▲ F030 ●	AB ▲ Y030 ◆ ▼ ☆
5	R ■ ▲ F050 ●	AB ▲ Y050 ◆ ▼ ☆
7	R ■ ▲ F070 ●	AB ▲ Y070 ◆ ▼ ☆
10	R ■ ▲ F100 ●	
12	R ■ ▲ F120 ●	
15	R ■ ▲ F150 ●	
20	R ■ ▲ F200 ●	
30	R ■ ▲ F300 ●	
40	R ■ ▲ F400 ●	
70	R ■ ▲ F700 ●	
90	R ■ ▲ F900 ●	
120	R ■ ▲ F1200 ●	

■

Gasket	Code
None	No Symbol
Elastomeric Material**	M***

▲

Nominal Length, In.	Code
10	1
20	2
30	3
40	4

●

Gasket Material	Code
Alloy of Polypropylene and Ethylene Propylene Diene Monomer (EPDM)	H21

▼

Application	Code
Pharmaceutical	P
Other	Omit

☆

O-ring Option	Code
Silicone	H4
Viton A	H
Ethylene-Propylene	J

◆

Cartridge Diameter O.D., In.	Adaptor Configuration	Number of O-rings	O-ring Size	FDA Listed Materials of Construction	Code
2¾	Flat Top	2	222	Yes	3
2¾	Finned Top, Locking Tabs	2	226	Yes	7
2¾	Finned Top	2	222	Yes	8

[1] Only P grade AB Series elements may be in-situ steam sterilized.

[2] Extrapolated valves.

* AB style only.

** Provides a positive sealing surface to eliminate potential fluid bypass in competitive housings with blunt knife edges.

*** When the M symbol is selected the part number must end in H21 code.

Table III. Housings For Profile II Elements

Type Of Element	Housing Available
R ☐ F Series and RM ☐ F Series	See Housing Data Sheets H2, H13, H14, H15, H16, H17, H18, H19, H36, H37, H38 and H39 for Pall housings specifically designed to accommodate these elements. R ☐ F Series elements may also be used with competitor built housings which accommodate 2½″ O.D. x 10″, 20″, 30″, and 40″ nominal length elements; however, sealing may be marginal for grades 030 (3 µm absolute) and finer.
AB ☐ Y Series, Code 3, 7 and 8	See Housing Data Sheets H22, H26, H28, H29, H30, H31, H32, and H35.

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