

info@lennotech.com
 www.lennotech.com
 Tel. +31-15-261.09.00
 Fax. +31-15-261.62.89



Profile® UP Filters

Description

Profile® UP filters are 63.5 mm (2.5 in) diameter pleated polypropylene cartridges. The absolute-rated filter medium is constructed using Pall's proprietary method of varying fiber diameter **continuously** to create a tapered pore filter medium.

Given the unique medium construction and a proprietary crescent-shaped pleat structure, the pressure drop of the Profile UP filters is as low as half that of higher area pleated filters and as low as one-fifteenth that of conventional depth filters. Consequently, Profile UP filters provide exceptional service life. Profile UP filters can best be described as Pall's Ultipleat® filters utilizing Profile depth filter media. As a result, these filters are thicker than conventional pleated filters and are optimized for gel removal and sharp, distinct particle removal. This makes the elements ideal for viscous fluids and dispersions in addition to those many applications where long service life is desired.

For P and W options, the filters are constructed entirely of FDA-listed materials and the absolute rating of the filter is based upon the widely accepted modified Oklahoma State University (OSU) F-2 Filter Performance (Beta Rating) Test.



Features, Advantages and Benefits

Features	Advantages	Benefits
Absolute-rated medium	• Consistent reproducible filtration • No media migration • No unloading of contaminants	• Higher product yields
Pleated depth filter medium	• Excellent gel removal • Selective particle removal • Long service life	• Higher product yields • Enhanced filtration of dispersions • Lower filtration costs
Crescent-shaped medium configuration	• Pressure drop as low as one-fifteenth that of depth filters, as low as half that of pleated filters with the same removal ratings • Optimized filter area • Optimized for viscous fluids	• Faster fill rates • Smaller filter assemblies required • Lower filtration costs • Higher product yields
Polypropylene filter construction	• Wide chemical compatibility • Removal of trace oils • Cartridge may be totally incinerated	• Lower filter inventories • Higher product yields • Lower waste disposal costs

Table 1. Performance Characteristics

Cartridge Grade	Liquid Service Removal Rating in Microns (µm) at % Efficiency		Clean Pressure Drop Aqueous Service MBARD / LPM (PSID / GPM) Per 10 inch Element ²
	90%	99.98%	
020	<1.0	3.2	2.37 / 0.13
045	1.2	4.5	1.55 / 0.085
060	2.5	6.0	0.64 / 0.035
100	4.3	10.0	0.55 / 0.030
200	11.0	20.0	0.46 / 0.025
300	17.0	30.0	0.36 / 0.020
400	19.0	40.0	0.27 / 0.015
500	25.0	50.0	<0.18 / 0.010
700	35.0	– ¹	<0.18 / 0.010
1000	60.0	– ¹	<0.18 / 0.010

Table 2. Operating Characteristics

Maximum Differential Pressure ³ (BARD / PSID)	Temperature (°C / °F)
4.1 / 60	30 / 86
3.4 / 50	50 / 122
2 / 30	70 / 158
1 / 15	80 / 176

¹ Precision evaluation of the 99.98% removal efficiency for these coarse grades is not possible with the OSU test procedure utilized.

² Pressure drop in PSI per GPM for a single 10 inch cartridge. For multiple number of elements, divide by the number of cartridges. For fluids other than water, multiply the value calculated by the fluid's viscosity measured in centipoise.

³ Based upon polypropylene core collapse.

Table 3. Part Numbers / Ordering Information

Removal Rating Microns (µm)	PUY Series	AB Series ⁴ Code 18	AB Series Code 3	AB Series Code 7	AB Series Code 8	Kleen-Change® 700 Series ^{5,6}
2.0	PUY ● UY020 ▲	AB ● UY02018 ■	AB ● UY0203 ■	AB ● UY0207 ■	AB ● UY0208 ■	LY7 ● UY020G23
4.5	PUY ● UY045 ▲	AB ● UY04518 ■	AB ● UY0453 ■	AB ● UY0457 ■	AB ● UY0458 ■	LY7 ● UY045G23
6.0	PUY ● UY060 ▲	AB ● UY06018 ■	AB ● UY0603 ■	AB ● UY0607 ■	AB ● UY0608 ■	LY7 ● UY060G23
10.0	PUY ● UY100 ▲	AB ● UY10018 ■	AB ● UY1003 ■	AB ● UY1007 ■	AB ● UY1008 ■	LY7 ● UY100G23
20.0	PUY ● UY200 ▲	AB ● UY20018 ■	AB ● UY2003 ■	AB ● UY2007 ■	AB ● UY2008 ■	LY7 ● UY200G23
30.0	PUY ● UY300 ▲	AB ● UY30018 ■	AB ● UY3003 ■	AB ● UY3007 ■	AB ● UY3008 ■	LY7 ● UY300G23
40.0	PUY ● UY400 ▲	AB ● UY40018 ■	AB ● UY4003 ■	AB ● UY4007 ■	AB ● UY4008 ■	LY7 ● UY400G23
50.0	PUY ● UY500 ▲	AB ● UY50018 ■	AB ● UY5003 ■	AB ● UY5007 ■	AB ● UY5008 ■	LY7 ● UY500G23
70.0	PUY ● UY700 ▲	AB ● UY70018 ■	AB ● UY7003 ■	AB ● UY7007 ■	AB ● UY7008 ■	LY7 ● UY700G23
100.0	PUY ● UY1000 ▲	AB ● UY100018 ■	AB ● UY10003 ■	AB ● UY10007 ■	AB ● UY10008 ■	LY7 ● UY1000G23

⁴ Available only as 762 mm (30 inch) or 1016 mm (40 inch) continuous length elements.

⁵ Kleen-Change 700 series assemblies are only available with 254 mm (10 inch) or 508 mm (20 inch) cartridges.

⁶ Kleen-Change 100 series assemblies are available.

Code ●	Cartridge length mm / in
1	254 / 10
2	508 / 20
3	762 / 30
4	1016 / 40

Code ■	O-Ring option
H4	Silicone-standard for Code 3, 7 and 8
H	Fluorocarbon elastomer
J	Ethylene propylene
H13	Nitrite, standard for Code 18

Code ▲	Gasket option
J	Ethylene propylene-standard
H13	Nitrite
H4	Silicone
H	Fluorocarbon elastomer
Y1	Polypropylene

Code ▲	Optional configuration
SI	Spring attached to filter top

Table 4. Ordering Details

Style	Description
PUY Series	• Double open ended • Continuous 10, 20, 30, or 40 inch lengths • Elastomeric gaskets attached to each end cap • Fits housings designed to hold either 2.5 or 2.75 inch outer diameter filters
AB Code 18 Series	• Single open ended • Continuous 10, 20, 30, or 40 inch lengths • Single 222 size O-ring • Flat top end which will engage the housing lid in the case of back pressure
AB Code 3 Series	• Single open ended • Continuous 10, 20, 30, or 40 inch lengths • 222 size O-ring • Notched top end to center the filter

Housing Information

Housings are available in either polypropylene, PVC, CPVC, PVDF, carbon steel, or stainless steel and can accommodate 1-152, 10 inch modules per housing (one 40 inch filter represents four 10 inch modules).

Style	Description
AB Code 7 Series	• Single open ended • Continuous 10, 20, 30, or 40 inch lengths • 226 size O-ring • Finned top end to center filter • Locking tabs on cartridge bottom to hold cartridge in place
AB Code 8 Series	• Single open ended • Continuous 10, 20, 30, or 40 inch lengths • 222 size O-ring • Finned top end to center filter
Kleen-Change 700 Assembly	• Completely disposable polypropylene capsule • Assembly holds either seven 10 inch or 20 inch filters • Maximum operating pressure of 5.2 barg (75 psid) at 38°C (100°F) • Supplied with 1 inch Tri-Clamp* inlet and outlet connections, which are internally threaded with a 3/4 inch FNPT

Notes:

- The AB Code 18, 3, 7 and 8 elements are recommended if the cartridges are to be heated and then cooled by 20°C (68°F) prior to filtration.
- The fit-up of AB Code 18 filters must be confirmed to ensure that the top of the filter will meet with the housing lid or internal plate in the case of back pressure. This will ensure the cartridge O-ring seal is maintained.
- The choice of an AB Code 3, 7 or 8 element will depend on the

Specifications and availability: The information provided in this literature was reviewed for accuracy at the time of publication. Product availability may be subject to change without notice. For current information, consult your local Pall distributor or contact Pall Corporation directly.



LENNTech

info@lenntech.com

www.lenntech.com

Tel. +31-15-261.09.00

Fax. +31-15-261.62.89

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Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your Pall representative or visit www.pall.com to verify that this information remains valid. Products in this document may be covered by one or more of the following patent numbers: EP 0 667 800; EP 0 982 061; EP 1 380 331; US 5,543,047; US 5,690,765; US 5,725,784; US 6,113,784; US 7,083,564; US 7,318,800.

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