

Profile® II Filter Cartridges

For Clarification and Particle Removal

Profile II filter cartridges are high efficiency depth filters designed for superior clarification and particle removal in food and beverage applications.

Description

Constructed of melt blown polypropylene media, Profile II cartridges feature a fixed fiber matrix with graded pore structure, created by continuous intertwined fibers of varying diameter.

These features are the key to this filter's superior removal performance and high contaminant holding capacity. With coarsest pore sizes in the outermost layers and decreasing pore sizes towards the innermost layers of the cartridge, pre-filtration and fine filtration can occur within the same cartridge.

Profile II filter cartridges provide a removal efficiency of >99.98% at the stated micron rating in compatible liquids with highly consistent filtration performance.

Features and Benefits

| Features | Benefits |
|--|---|
| Fixed fiber matrix resulting in highly stable pore structure | <ul style="list-style-type: none"> • Superior removal efficiency • Consistent filtrate quality • No media migration or unloading of contaminants |
| Continuous pore size variation, enabling pre-and fine filtration in the same cartridge | <ul style="list-style-type: none"> • High dirt holding capacity and extremely long service life • Economical cost per filtered volume • Lower disposal costs |
| All polypropylene construction without adhesives, binders or surfactants | <ul style="list-style-type: none"> • Broad chemical compatibility, suitable for use in a variety of fluids |
| Available in multiple configurations | <ul style="list-style-type: none"> • Easy to integrate into existing production lines |

Quality

- Cartridges produced in a controlled environment
- Manufactured according to ISO 9001:2008 certified Quality Management System



Profile II Filter Cartridges

Materials of Construction

| | |
|----------------------------------|---|
| Filter Medium | Polypropylene |
| Core | Polypropylene |
| AB Style Cartridges only | |
| Cage, Fin End and End Cap | Polypropylene |
| Adaptor | Polypropylene with stainless steel reinforcing ring |
| O-ring Seal | Silicone Elastomer Ethylene Propylene Rubber |
| RMF Style Cartridges only | |
| End Cap and Seal | Thermoplastic Elastomer |

Food Contact Compliance

Please refer to the Pall website www.pall.com/foodandbev for a Declaration of Compliance to specific National Legislation and/or Regional Regulatory requirements for food contact use.

Technical Information

The technical information provided is based on controlled laboratory tests done on typical production filters at the conditions described, unless otherwise indicated. Actual operating conditions may affect the filter's performance.

Operating Characteristics in Compatible Fluids¹

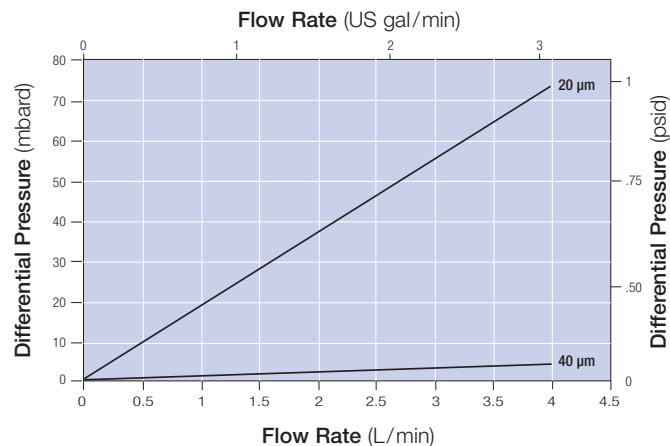
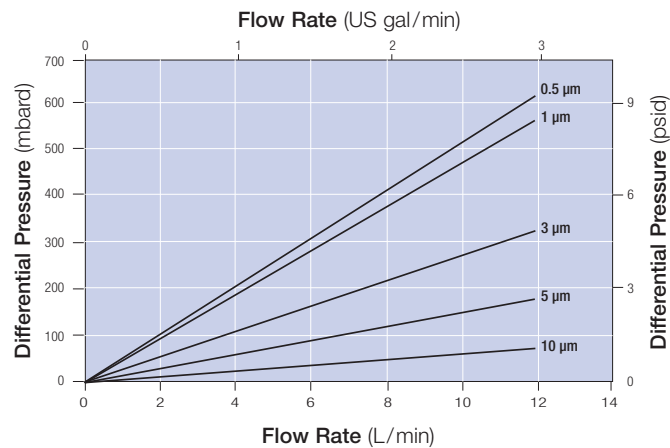
| Maximum Differential Pressure ² | Operating Temperature |
|--|-----------------------|
| 4 bard (60 psid) | 30 °C (86 °F) |
| 3.4 bard (50 psid) | 50 °C (122 °F) |
| 2 bard (30 psid) | 70 °C (158 °F) |
| 1 bard (15 psid) | 82 °C (180 °F) |
| 0.3 bard (5 psid) ³ | 125 °C (257 °F) |

¹ Fluids which do not swell, soften or adversely affect any of the filter components

² In forward direction. Recommended change-out differential pressure is 2.4 bard (35 psid), provided the maximum differential pressure (based on temperature) is not exceeded.

³ AB style only

Typical Flow Rates⁴



⁴ Typical initial clean delta p per 254 mm (10 inch) cartridge, water at 20 °C (68 °F). For liquids with viscosity greater than 1 cP, multiply the delta p by the viscosity.

Sterilization and Sanitization⁵

| Method | Temperature | Cumulative Time |
|------------------------------------|-----------------|-----------------|
| Steam Sterilization or Autoclaving | 125 °C (257 °F) | 10 hours |
| Hot Water Sanitization | 80 °C (176 °F) | |

⁵ For applications requiring *in situ* sterilization or sanitization Pall recommends the use of Code 7 adaptors to ensure filter sealing after cooling. Cartridges should be cooled to system operating temperature prior to use. If RF or RMF elements are heated *in situ* and cooled by a difference of more than 20 °C (36 °F), sealing of the element may be marginal, depending on the type of sealing mechanism used in the filter housing.

Ordering Information

This information is a guide to the part numbering structure and possible options. For availability of specific options and housing details, please contact Pall.

| | | | | |
|--------------|---------|---------|---------|---------|
| Part Number: | AB | Y | | W |
| | Table 1 | Table 2 | Table 3 | Table 4 |
| | R | F | W | |
| | Table 1 | Table 2 | | |
| | RM | F | W | |
| | Table 1 | Table 2 | | |

Example Part Number: **AB2Y0507WJ**

See bold reference code in tables.

Table 1: Nominal Length

| Code | Length | Code | Length |
|------------------------|----------------|---------------|----------------|
| AB, RF and RMF Styles | | RF Style only | |
| 1 | 254 mm (10") | 01 | 25.4 mm (1") |
| 2 | 508 mm (20") | 05 | 127 mm (5") |
| 3 | 762 mm (30") | 09 | 228.6 mm (9") |
| 4 | 1016 mm (40") | 39 | 990.6 mm (39") |
| RF and RMF Styles only | | | |
| 29 | 736.6 mm (29") | | |

Table 2: Removal Rating⁶

| AB Style | Code | Rating (µm) @ 99.98% Efficiency (β-5000) | Rating (µm) @ 90% Efficiency (β-10) |
|------------|---------------|--|-------------------------------------|
| | RF, RMF Style | | |
| 005 | 005 | 0.5* | <0.5* |
| 010 | 010 | 1 | <0.5* |
| 030 | 030 | 3 | <1* |
| 050 | 050 | 5 | 2 |
| 100 | 100 | 10 | 6.5 |
| n.a. | 200 | 20 | 10 |
| n.a. | 400 | 40 | 20 |

⁶ Profile II filter cartridge liquid retention ratings up to 20 micron are based on a modified OSU-F2 single pass test in an aqueous medium. Oil is used as the test medium for the 40 micron grade. Asterisks indicate extrapolated values.

Table 3: Adaptor

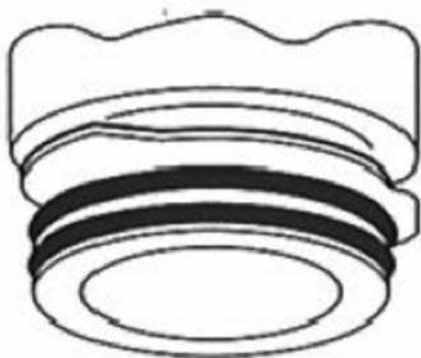
| Code | Description |
|----------|---|
| 3 | SOE - single open end with flat closed end and external 222 O-rings |
| 7 | SOE - single open end with fin end, 2 locking tabs and external 226 O-rings |
| 8 | SOE - single open end with fin end and external 222 O-rings |
| 28 | SOE - single open end with fin end, 3 locking tabs and external 222 O-rings |

Table 4: O-ring Seal⁷

| Code | Description |
|------|---------------------------|
| H4 | Silicone Elastomer |
| J | Ethylene Propylene Rubber |

⁷ AB style configurations only

Figure 1: Adaptor configurations for Profile II filters.

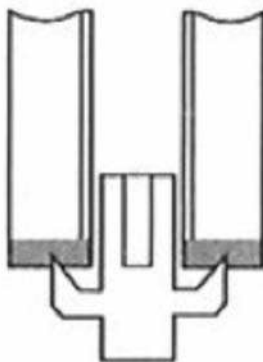


AB Style

Code 7

70 mm dia.

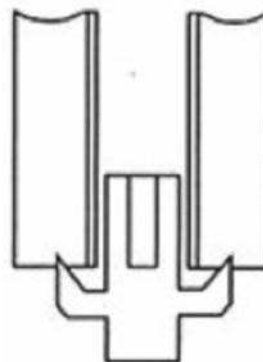
Double o-ring seal



RMF Style

63.5 mm dia.

Flat gasket seal



RF Style

63.5 mm dia.

Knife-edge seal