Absolute Rated High Efficiency From All-Polypropylene Pleated Cartridges

Fulflo® Advantage™ Cartridges, made of pleated polypropylene microfiber, provide high efficiency and high purity filtration. The high submicron efficiency of the Advantage line makes it an ideal membrane prefilter or cost-effective alternative to membrane cartridges in a wide range of applications.

Advantage Pleated Cartridges are available in 0.3µm, 0.6µm, 1.2µm, 2.5µm, 5µm, 10µm, 20µm, 40µm and 70µm absolute rated pore sizes (99.99% removal; β = 10,000).

Applications

- Chemicals
- Electronic
- Food & Beverage
- Magnetic Media
- Pharmaceuticals
- Cosmetics
- Medical
- Photographic

Features and Benefits

- All-polypropylene media and construction meet a broad range of performance requirements.
- One-piece fused construction is 100% bonded for maximum cartridge integrity.
- High surface area design provides superior flow rates and extended service life.
- All media and structural components comply with biological, USP XXI Class VI requirements for plastic and are nontoxic per WI-38 Human Cell Cytotoxicity Test.
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
- Fixed pore construction provides ultimate particle retention efficiency.
- Major end seal options are available to fit most housing requirements.
- Advantage cartridges are non-fiber releasing.
Specifications

Filtration Ratings:
- 99.99% at 0.3µm, 0.6µm, 1.2µm, 2.5µm, 5µm, 10µm, 20µm, 40µm and 70µm pore sizes

Materials of Construction:
- Type of Construction: integrally sealed, all-polypropylene pleated media supported by all-polypropylene construction
- Filter Media: composite, spunbonded/melt blown continuous polypropylene microfiber matrix
- Pleat Support Layer (Upstream): polypropylene
- Pleat Drainage Layer (Upstream): polypropylene
- Media Support Core: high-strength polypropylene
- Media Protective Cage: molded polypropylene
- Pleat Pack Side Seal: fused polypropylene
- DOE Caps: polypropylene
- SOE Caps/O-Ring Adaptors: polypropylene
- Gaskets (DOE Style): Buna-N, FDA grade (standard)
- O-Rings (SOE Style): silicone, FDA grade (standard)
- Optional Gasket Materials: (non-FDA): EPR, Viton®, silicone
- Optional O-Ring Materials: (non-FDA): EPR, Viton®, Buna-N, Teflon® encapsulated Viton®

Recommended Operating Conditions:
- Maximum Temperature: 200°F (93°C)
- Maximum Temperature @ 35 psid: 160°F (71°C)
- Change Out ΔP: 35 psi (2.4 bar)
- Maximum ΔP @ Ambient 70°F (21°C): 70 psi (4.8 bar)
- Maximum ΔP @ 200°F (93°C): 20 psi (1.4 bar)

Dimensions:
- Overall Length: See catalog sheet C-2090. SOE fits standard housings with O-ring seals.
- Cartridge Outside Diameter: 2-11/16 in
- Cartridge Inside Diameter: DOE: 1-1/16 in

Ordering Information

AP = Advantage Cartridge Flow Factors (psid/gpm @ 1 cks)

<table>
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<tr>
<th>Length (in)</th>
<th>AP 70</th>
<th>AP 40</th>
<th>AP 20</th>
<th>AP 10</th>
<th>AP 05</th>
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<tr>
<td>40</td>
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<td>3.2</td>
<td>2.4</td>
<td>1.8</td>
<td>1.2</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Flow Rate and Pressure Drop Formulas:

Flow Rate (gpm) = Clean ΔP x Length Factor / Viscosity x Flow Factor

Clean ΔP = Flow Rate x Viscosity x Flow Factor / Length Factor

Percent Removal Efficiency = \( \frac{\beta - 1}{\beta} \times 100 \)

Performance determined per ASTM F-795-88. Single-Pass Test using AC test dust in water at a flow rate of 2.5 gpm per 10 in (9.5 lpm per 254 mm) cartridge.

Notes:
1. Clean ΔP in PSI differential at start of test.
2. Viscosity is centistokes. Use Conversion Tables for other units.
3. Flow Factor is ΔP/GPM at 1 cks for 10 in (or single).
4. Length Factors convert flow or ΔP from 10 in (single length) to required flow or ΔP from 10 in (single length) to required cartridge length.