Fulflo® Metallic Filter Cartridges

Optimize Process Filtration with High Integrity Metallic Cartridges

Parker’s Fulflo® stainless steel cartridges provide the optimum filtration solution for fluids and gases in high temperature and high flow rate applications.

Available in a cylindrical or pleated design, cleanable stainless steel cartridges are the logical choice when natural and synthetic media cartridges cannot meet aggressive process conditions.

Fulflo® reusable 304 and 316 grade stainless steel cartridges offer versatility of choice with fourteen nominal particle removal ratings, six standard lengths and a variety of end configurations and seal materials.

Benefits

- Temperature capability up to 500° F with synthetic seals; up to 1500°F with NPT connections
- Available in 304 and 316 stainless steel for compatibility choice with aggressive chemicals
- Available in fourteen nominal ratings from 2 to 840 microns for a wide range of particle size removal
- Dimensional integrity of stainless steel media accommodates high flow rate and high temperature systems
- Cartridges may be cleaned and reused
- Available with a wide range of grommet and O-ring materials to optimize fluid and temperature compatibility
- Variety of seal configurations allow retrofit in many filter vessel designs
- Welded and crimped construction eliminates the need for adhesives which can be a contaminant source and limit temperature range
- Pleated surface maximizes filtration area for longer service life
- Plain (cylindrical) surface provides ease of cleaning
- Optional perforated stainless steel pleat protectors minimize handling damage
- Meets FDA guidelines for use with potable and edible liquids

Applications

- Heat Transfer
- Hot Melt Processes
- Viscous Fluids
- Hot Wax
- Aggressive Gases
- Polymer Filtration
- High Temperature Processes
- Process Fluids Steam
- Corrosive Fluids
- Catalyst Recovery
- Caustic Cleaning Solutions
Fulflo® Metallic Filter Cartridges

Specifications

Materials of Construction:
Filter Medium:
Stainless steel wire cloth
Structural Components:
100% stainless steel
Seal Materials:
Grommets: Buna N, Viton, PTFE, EPDM
O-Rings:
Buna N, EPDM, Viton, PFA encapsulated Viton
Construction Method:
Welded and crimped (no adhesives)
Meets FDA guidelines with optional seal materials (*F* Cook)

Maximum Recommended Operating Conditions:
Temperature:
1500°F (816°C)
NPTF and NPTM styles only
500°F (260°C)
Any cartridge style with PTFE grommet
400°F (204°C)
Any cartridge style with Viton or PFA encapsulated Viton seal material
300°F (149°C)
Any cartridge style with EPDM seal material
250°F (121°C)
Any cartridge style with Buna N seal material

Differential Pressure:
Standard core: 60 psi (4.1 bar)
High pressure core: 300 psi (20.7 bar)
Flow Rate:
10 gpm (38 lpm) per 10 in cartridge
Changeout ΔP: 35 psi (2.4 bar)

Particle Removal Ratings (Nominal):
Effective Filtration Area:
Cylindrical
0.5 ft²/10 in length (465 cm²/254mm)
Pleated
1.7 ft²/10 in length (1580 cm²/254 mm)

Dimensions
Outside Diameter
Cylindrical: 2-1/2 in (64 mm)
Pleated: 2-5/8 in (67 mm)
Inside Diameter
1-1/16 in (27 mm)
Lengths (nominal)
10, 20 and 30 in
Grommet
1-1/16 in (27 mm) ID X 1-7/8 in (48 mm) OD

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

Notes:
1. Clean ΔP is PSI differential at start.
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 cartridge length.

Ordering Information

Cartridge Code
CSS = Cylindrical Stainless Steel
PSS = Pleated Stainless Steel

Nominal Micrometer Rating (µm)
2
5
10
20
40
75
80
100
150
190
230
280
370
540
840

Nominal Length (in)
4
5
10
20
29.25
30
40

Media/Support Construction
G = 304 Stainless Steel
S = 316 Stainless Steel

Seal Material
E = EPDM
F = PTFE (Grommet only)
N = Buna N
T = PFA/Viton* (O-Ring Only)
V = Viton*
X = No Seal Material (FC, MC style)

End Cap Configuration
DO = Double open end (DOE)
DX = Double Open end with extended Core
FC = Single open end w/1” NPTF female connection
MC = Single open end w/1” NPTF male
SC = 226 O-Ring/Flat
TC = 222 O-Ring/Flat

Special Options
F = FDA Grade Seal Material
H = High Pressure Core (316 SS)
P = Pleat Protector sleeve (316 SS)

Removal Rating/Mesh Count/Open Area

<table>
<thead>
<tr>
<th>Micrometer Rating</th>
<th>Mesh Count (per inch)</th>
<th>Percent Open Area</th>
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<tbody>
<tr>
<td>2 (9)</td>
<td>325 x 2300</td>
<td>NA</td>
</tr>
<tr>
<td>5 (14)</td>
<td>200 x 1400</td>
<td>NA</td>
</tr>
<tr>
<td>10 (18)</td>
<td>165 x 1400</td>
<td>NA</td>
</tr>
<tr>
<td>20 (32)</td>
<td>200 x 600</td>
<td>NA</td>
</tr>
<tr>
<td>40 (55)</td>
<td>120 x 400</td>
<td>NA</td>
</tr>
<tr>
<td>75</td>
<td>190 x 200</td>
<td>35</td>
</tr>
<tr>
<td>100</td>
<td>30 x 150</td>
<td>31</td>
</tr>
<tr>
<td>150</td>
<td>90 x 100</td>
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<td>190</td>
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<tr>
<td>540</td>
<td>30 x 30</td>
<td>45</td>
</tr>
<tr>
<td>840</td>
<td>20 x 20</td>
<td>52</td>
</tr>
</tbody>
</table>

Ratings From 2 - 40 micrometers are twill dutch weave pattern
Ratings From 75 - 840 micrometers are open square weave pattern

Flow Factors

<table>
<thead>
<tr>
<th>Length (in)</th>
<th>Flow Factor</th>
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<tbody>
<tr>
<td>9 3/4, 10</td>
<td>0.00036</td>
</tr>
<tr>
<td>19 1/2, 20</td>
<td>0.00076</td>
</tr>
<tr>
<td>29 1/4, 30</td>
<td>0.00116</td>
</tr>
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</table>

Note: Flow factors are the same for all ratings. Center core ID and length are primary flow restrictions.

Specifications are subject to change without notification.
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