VARAFINE™ VFSG Series Filter Cartridges

High Flow Asymmetric Membrane Filter Cartridge

• Absolute Rated at >99.9% Efficiency With Retention Ratings of 0.05, 0.1, 0.2, 0.45, 0.65, 0.8, or 1.2 µm
• Patented Highly Asymmetric Membrane Ensures Superior Flow Rates And Long Life
• Contaminants Trapped and Held by Positive Mechanical Retention
• Manufactured in an ISO Class 7 Cleanroom
• Pre-Flushed and Tested with Ultrapure 18 Megohm-cm Water
• Compatible with Most Sanitizing Agents

Performance Specifications

Filter Grades (>99.9% Retention Rating by Standard Latex Bead Challenge):
0.05, 0.1, 0.2, 0.45, 0.65, 0.8, 1.2 µm

Maximum Differential Pressure:
20 psid (1.4 bard) @ 203°F (95°C)
80 psid (5.5 bard) @ 68°F (20°C)

Recommended Change Out Differential Pressure:
35 psid (2.4 bard)

Chemical Compatibility:
Cartridge resists most acids and bases, pH 1-14, and most oxidizing agents. Consult factory for specific application information.

Sanitizing Agents:
Cartridge may be sanitized in place with common oxidizing agents. Consult factory for compatibility information.

Rinse-Up:
Cartridges will rinse-up to 18 Megohm-cm in less than 6 minutes at a flow rate of 2.6 gpm (10 lpm).

Product Specifications

Materials of Construction:
Filter Media:
Hydrophilic Highly Asymmetric Polysulfone Membrane
Support Material:
Polypropylene
Hardware:
Hydroxypropy cellulose
Sealing:
Silicone Elastomer, EPDM, Buna N, Fluoroelastomer, Expanded PTFE FEP Encapsulated Silicone, FEP Encapsulated Fluoroelastomer, White Silicone

Dimensions (nominal):
Outside Diameter: 2 ⅞” (6.6 cm)
Lengths: 4” (10.2 cm), 10” (25.4 cm), 20” (50.8 cm), 30” (76.2 cm), 40” (102 cm)
Surface Area: 6.1 ft² (0.57 m²) per 10” (25.4 cm) equivalent

1 - Provided that the maximum differential pressure is not exceeded based on temperature limits defined above.
### Liquid Flow Specifications

<table>
<thead>
<tr>
<th>Filter Grade (µm)</th>
<th>DI Water Flow (10° equivalent)</th>
<th>DI Water Flow (GPM/PSID)</th>
<th>lpm/mbard</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td></td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>0.1</td>
<td></td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>0.2</td>
<td></td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>0.45</td>
<td></td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>0.65</td>
<td></td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>0.8</td>
<td></td>
<td>7.0</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td></td>
<td>8.0</td>
<td></td>
</tr>
</tbody>
</table>

### Part Numbers/Ordering Information

**VFSG** – (e.g., VFSG100–10M3S)

<table>
<thead>
<tr>
<th>Code</th>
<th>Filter Grades</th>
<th>Code</th>
<th>Cartridge Lengths (nominal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>050</td>
<td>0.05 µm</td>
<td>4</td>
<td>4&quot;</td>
</tr>
<tr>
<td>100</td>
<td>0.1 µm</td>
<td>10</td>
<td>10&quot;</td>
</tr>
<tr>
<td>200</td>
<td>0.2 µm</td>
<td>20</td>
<td>20&quot;</td>
</tr>
<tr>
<td>450</td>
<td>0.45 µm</td>
<td>30</td>
<td>30&quot;</td>
</tr>
<tr>
<td>650</td>
<td>0.65 µm</td>
<td>40</td>
<td>40&quot;</td>
</tr>
<tr>
<td>800</td>
<td>0.8 µm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>1.2 µm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 - For details, contact Pall Corporation.

### Code End Configurations

- **M2**: SOE flat closed end, fits housings with 020 O-ring post
- **M3**: SOE flat closed end, external 222 O-rings (retrofits other manufacturers’ Code 0)²
- **M5**: DOE, internal 120 O-rings (retrofits 213 O-ring style)²
- **M6**: SOE flat closed end, external 226 O-rings (retrofits other manufacturers’ Code 6)²
- **M7**: SOE fin end, external 226 O-rings (retrofits other manufacturers’ Code 7)²
- **M8**: SOE fin end, external 222 O-rings (retrofits other manufacturers’ Code 5)²
- **M10**: DOE, internal O-rings (fits other manufacturers’ housings)³
- **M11**: SOE flat closed end, internal 120 O-ring (retrofits other manufacturers’ X-style)²
- **DOE**: DOE with elastomer gasket seals & end caps

### Code Gasket/O-ring Materials

- **S**: Silicone (standard O-rings)
- **E**: Nordel
- **V**: Fluoroelastomer
- **N**: Buna N (standard gaskets)
- **M**: White Silicone (O-rings)
- **T**: FEP Encapsulated Silicone (O-rings)
- **F**: FEP Encapsulated Fluoroelastomer (O-rings)
- **T**: Expanded PTFE (gaskets)

---

**Lenntech**

info@lenntech.com

www.lenntech.com

Tel. +31-15-261.09.00

Fax. +31-15-261.62.89

---

Pall Corporation has offices and plants throughout the world in locations including: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, France, Germany, Hong Kong, India, Indonesia, Ireland, Italy, Japan, Korea, Malaysia, Mexico, the Netherlands, New Zealand, Norway, Poland, Puerto Rico, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, United Kingdom, United States, and Venezuela. Distributors are located in all major industrial areas of the world.

© Copyright 2006, Pall Corporation. Pall, Code and Varafine are trademarks of Pall Corporation. ® Indicates a Pall trademark registered in the USA. Filtration, Separation, Solution is a service mark of Pall Corporation.

Bulletin #E-2105-4C 1/06