Pleated Polyethersulfone (PES) Membrane for Final Filtration of Ultrapure Water

The LOFMEM-E cartridge represents the state of the art in ultrapure water filtration technology. The microelectronics-grade filters are inherently hydrophilic and contain no added surfactants or wetting agents. The polyethersulfone membrane offers superior flow characteristics, high contaminant capacity and consistent removal of submicron particles.

Features and Benefits

- Manufactured, flushed, tested and packaged in an ISO Class 7 cleanroom environment
- Filters are 100% flushed with 18 MΩ-cm DI water and integrity tested.
- Resistivity rinse-up to 18 MΩ-cm and single digit ppb TOC levels in less than 30 minutes at 3 gpm per 10-inch element.
- Available in a variety of end cap/adapter configurations to fit all industry-standard housings.
- Pore size, lot and serial number are stamped on each filter element for identification and traceability.

Filter Specifications

<table>
<thead>
<tr>
<th>Media</th>
<th>Asymmetric polyethersulfone membrane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner core, end caps, cage</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Support layers</td>
<td>Spunbond polypropylene</td>
</tr>
<tr>
<td>Gaskets/O-Rings</td>
<td>Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton O-Rings</td>
</tr>
<tr>
<td>Micron ratings</td>
<td>0.03 µm, 0.1 µm, 0.2 µm, 0.45 µm</td>
</tr>
</tbody>
</table>

Dimensions / Parameters

<table>
<thead>
<tr>
<th>Nominal lengths</th>
<th>9.75”, 10”, 20”, 30”, 40” (24.7, 25.4, 50.8, 76.2, 101.6 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside diameter</td>
<td>2.7” (6.9 cm)</td>
</tr>
<tr>
<td>Inside diameter</td>
<td>1.0” (2.54 cm)</td>
</tr>
<tr>
<td>Surface area</td>
<td>7.6 ft² (0.72m²) per 10 inch element</td>
</tr>
<tr>
<td>Max. sustained operating temperature</td>
<td>180°F (82°C) at 20 psid (1.38 bar)</td>
</tr>
<tr>
<td>Max. differential pressure</td>
<td>60 psid @ 80°F (4.14bar @ 27°C)</td>
</tr>
<tr>
<td></td>
<td>30 psid @ 160°F (2.07 bar @ 71°C)</td>
</tr>
<tr>
<td></td>
<td>15 psid @ 203°F (1.03 bar @ 95°C)</td>
</tr>
<tr>
<td>Max. reverse differential pressure</td>
<td>40 psid @ 70°F (2.76 bar @ 21°C)</td>
</tr>
<tr>
<td>Recommended change-out pressure</td>
<td>35 psid (2.4 bar)</td>
</tr>
</tbody>
</table>

“LOFMEM-E cartridges from Eaton are specifically engineered for ultrapure water filtration. They are inherently hydrophilic and contain no added surfactants or wetting agents.”

Get a Price Quote Today!
Performance Specifications

Hot DI Water
Filter cartridge will withstand temperatures of 185°F (85°C) for up to 30 consecutive minutes.

Cleaning/Sanitization
Compatible with most common chemical cleaning, sanitizing and sterilizing agents and with pH range from 1–14. Consult factory for specific compatibility information.

Rinse-Up Volumes
• Resistivity rinse-up to 18 MΩ-cm: <30 minutes at a flow of 3 gpm per 10-inch element.
• Rinse-up to single digit ppb TOC in <120 minutes at a flow of 3 gpm per 10-inch element.

Integrity Test Specifications
Minimum Diffusive Air Flow (per 10-inch cartridge) values for LOFMEM-E filters wet with water:

<table>
<thead>
<tr>
<th>Differential Pressure (Bar)</th>
<th>0.03 µm</th>
<th>0.1 µm</th>
<th>0.2 µm</th>
<th>0.45 µm</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 psig (3.1 bar)</td>
<td>≤ 50 cc/min</td>
<td>≤ 50 cc/min</td>
<td>≤ 35 cc/min</td>
<td>≤ 35 cc/min</td>
</tr>
<tr>
<td>40 psig (2.8 bar)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 psig (2.1 bar)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 psig (1.4 bar)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Filter Specification Code

Filter Series:
LOFMEM-E

Nominal Length:
-9 9.75"  
-10 10.0"  
-20 20.0"  
-30 30.0"  
-40 40.0"

Retention Rating:
-0.03 micron  
-0.1 micron  
-0.2 micron  
-0.45 micron

End Configuration:
DOE Double Open End
-1 226/Flat Single Open End  
-2 222/Fin Single Open End  
-3 226/Fin Single Open End  
-4 222/Flat Single Open End  
-10 Double Open End, Internal O-Ring  
-20 Single Open End, Internal O-Ring

Gasket or O-Ring:
S Silicone  
B Buna-N  
E EPDM  
V Viton  
T FEP/Viton (O-Rings only)

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