WPS Capsule Filters
Symmetric Polyethersulfone (PES) Membrane

Excellent flow rates with high efficiency retention

High quality filtration of purified waters for multiple industries

Optimized membrane design for high throughput

Water Service Applications

- Process Water
- DI Water
- Ultrapure Water
- Pharmaceutical Waters

WPS Capsules are hydrophilic and manufactured with symmetric polyethersulfone (PES) membrane. PES membrane exhibits excellent flow rates with high efficiency retention.

WPS capsule filters are used for purified water filtration. The symmetric membrane used in WPS capsules guards against bacterial grow-through, reducing the potential for biofilm accumulation in systems.

Polyethersulfone is particularly suited for high flow rate filtration. The membrane allows optimization for high flow rates and high throughput.

WPS Capsule Filters - Filtration Area

<table>
<thead>
<tr>
<th>Media</th>
<th>Capsule Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2&quot;</td>
</tr>
<tr>
<td>PES Membrane</td>
<td>1.0 ft² (930cm²)</td>
</tr>
</tbody>
</table>

Flow Rate / Filtration Area

The following table represents typical water flow at a one psi (69 mbar) pressure differential across a single 2 inch capsule with 1.0 ft² (930 cm²) of media with 1/2” FNPT ports. The test fluid is water at ambient temperature. Higher pressure drops are acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

<table>
<thead>
<tr>
<th>Pore Size</th>
<th>0.03 μm</th>
<th>0.10 μm</th>
<th>0.22 μm</th>
<th>0.45 μm</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPM</td>
<td>0.21</td>
<td>0.36</td>
<td>0.64</td>
<td>1.0</td>
</tr>
<tr>
<td>LPM</td>
<td>0.79</td>
<td>1.36</td>
<td>2.42</td>
<td>3.79</td>
</tr>
</tbody>
</table>

* For approximate flow rates for 5" through 30" capsules, refer to the appropriate cartridge data sheet

Construction Materials

- Housing: Polypropylene
- Filtration Media: Symmetric Polyethersulfone (PES) Membrane
- Media Support: Polypropylene
- End Caps: Polypropylene
- Center Core: Polypropylene
- Outer Support Cage: Polypropylene
- Sealing Method: Thermal Bonding

Maximum Operating Parameters

- Liquid Operational Pressure: 80 psi (5.5 bar) at 20 °C (68 °F)
- Gases Operational Pressure: 60 psi (4.1 bar) at 20 °C (68 °F)
- Operating Temperature: 43 °C (110 °F) at 30 psi (2.1 bar) in water
- Forward Differential Pressure: 50 psid (3.4 bard) at 20 °C (68 °F)
- Reverse Differential Pressure: 40 psid (2.7 bard) at 20 °C (68 °F)
- Recommended Changeout Pressure: 35 psid (2.4 bard)
Sanitization/Sterilization

**Chemical Sanitization** .......... Industry standard concentrations of hydrogen peroxide, paracetic acid, sodium hypochlorite and other selected chemicals.

**Note** ......................... WPS capsules are not to be used in steam.

**FDA and EC Compliance**

All Critical Process Filtration filters are made using materials that meet the FDA requirements for processing food and beverage products. These filters comply with Title 21 CFR sections 210.3 (b) (6) and 211.72, for non-fiber releasing filters. All materials used to make the filters are listed in European Commission Regulation EU/10/2011, Annex 1.

**Extractables**

WPS capsule filters generally exhibit low levels of non-volatile residues.

**Quality Assurance and Standards**

Critical Process Filtration uses state of the art computer controlled equipment to consistently produce high quality products as well as significantly reduce hand operations that can compromise quality. All manufacturing and testing is continuously monitored in real time so that data can be quickly and easily analyzed to facilitate improvements in both quality and cost.

The Critical Process Filtration manufacturing and quality system meets rigorous ISO 9001:2008 standards. Each operation, including assembly, testing, cleaning, drying and packaging, is done in an appropriately rated clean room. Manufacturing is controlled using a sophisticated manufacturing system that networks work stations, manufacturing centers and inspection points. During the manufacturing and inspection processes, data is collected in real time to allow continuous quality monitoring and full traceability of all materials and processes.

**Total Performance**

Critical Process Filtration, Inc. is a vertically integrated manufacturer of filtration products to industries in which filtration is considered a critical part of the manufacturing process. We supply a complete line of products and services to help you cost effectively satisfy all your filtration requirements from a single source.

**Ordering Information**

Capsule order number example: Water Service Grade Symmetric PES Membrane, 0.22 Micron Rating, Non-Sterile, 10” Length, Sanitary Inlet, Sanitary Outlet = CPWPS-20N0001FF.

<table>
<thead>
<tr>
<th>Micron Rating</th>
<th>Length</th>
<th>Inlet</th>
<th>Outlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>-03 - .03</td>
<td>A - 2”</td>
<td>A - 1/4” Female NPT</td>
<td></td>
</tr>
<tr>
<td>-10 - .10</td>
<td>B - 5”</td>
<td>B - 1/4” Male NPT</td>
<td></td>
</tr>
<tr>
<td>-20 - .22</td>
<td>1 - 10”</td>
<td>C - 3/8” Female NPT</td>
<td></td>
</tr>
<tr>
<td>-40 - .45</td>
<td>2 - 20”</td>
<td>D - 1/2” Female NPT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 - 30”</td>
<td>E - 1/2” Male NPT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>F - Sanitary</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>G - Hose Barb*</td>
<td></td>
</tr>
</tbody>
</table>

**Hose Barb Diameter Ranges**

<table>
<thead>
<tr>
<th>Outer Diameters</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/32” (8.6mm)</td>
<td>9/16” (14.0mm)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inner Diameters</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/32” (4.0mm)</td>
<td>13/32” (10.5mm)</td>
<td></td>
</tr>
</tbody>
</table>

Request a QUOTE from your area representative

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