1. Introduction

The amaFine BC PES filter cartridge uses a specially designed polyethersulphone membrane. The filter membrane has an asymmetrical configuration where the specific defining matrix is embedded between two matrices with larger pores. The asymmetrical configuration and the protection of the sterile zone against mechanical damage are perfectly combined in a unique design to allow a filter cartridge with a high degree of integrity. Polyethersulphone is extremely resistant to attacks by oxidizing agents in pure water applications, acid and basic applications. The amaFine BC is especially designed for the safe and reliable sterile filtration of a wide variety of solutions.
2. Features
- Extended effective filtration area
- Testable in situ
- Steamable in situ or in autoclave
- Construction materials chemically and biologically inert according to FDA and EEC directives
- Manufacturing in clean room, class 10,000 according cGMP guidelines
- Absolute filter ratings
- 100% integrity tested in clean room, class 100

3. Food safety

Food safety

Bio safety
The components of the filter cartridges (excl. O-rings and gaskets) pass the USP Biological Reactivity and Chemical-Physical tests for CLASS VI plastics.

4. Product/Performance specifications

Filter medium : polyethersulphone membrane
Support medium : polyester
Hardware : polypropylene
Longitudinal weld : ultrasonic welding
End cap seal : thermally welded
Gaskets/O-rings : silicone, EPDM, Viton®, other materials on request

Dimensions
- External diameter : 70 mm
- Length : see ordering information
- Filtration area : 0.8 m²/10" cartridge

Maximum recommended differential pressure
- Design : 5.0 bar at 25 °C
- Operating : 2.0 bar at 25 °C
- Maximum operating temperature : 65 °C

Rinse up volume
The recommended rinse up volume is 3 liter per 10" length cartridge.

5. Water flow rate for 10" cartridge

<table>
<thead>
<tr>
<th>Cartridge Code</th>
<th>Absolute rating in liquids</th>
<th>Bacterial retention</th>
<th>Acceptable limit for pressure hold test* on 10&quot; cartridge</th>
<th>Acceptable limit for water diffusion test for 10&quot; cartridge (ml/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC 0.1</td>
<td>0.1 micron</td>
<td>≥10^8-9 Pseudomonas aeruginosa</td>
<td>≤0.12 bar @ 2.8 bar</td>
<td>≤18 @ 2.8 bar</td>
</tr>
<tr>
<td>BC 0.2</td>
<td>0.2 micron</td>
<td>≥10^8-9 Pseudomonas aeruginosa</td>
<td>≤0.10 bar @ 1.8 bar</td>
<td>≤15 @ 1.8 bar</td>
</tr>
<tr>
<td>BC 0.45</td>
<td>0.45 micron</td>
<td>≥10^8-9 Pseudomonas aeruginosa</td>
<td>≤0.13 bar @ 1.2 bar</td>
<td>≤20 @ 1.2 bar</td>
</tr>
<tr>
<td>BC 0.65</td>
<td>0.65 micron</td>
<td>≥10^8-9 Pseudomonas aeruginosa</td>
<td>≤0.13 bar @ 0.9 bar</td>
<td>≤20 @ 0.9 bar</td>
</tr>
</tbody>
</table>

* The values are related to 5 minutes and are indicative as they depend on volume of the housing upstream the filter element

6. Ordering code

Example

<table>
<thead>
<tr>
<th>Cartridge type</th>
<th>Micron rating [µm]</th>
<th>Nominal length [inch]</th>
<th>Hardware material</th>
<th>Cartridge style</th>
<th>O-Ring material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cartridge type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMAFINE BC</td>
<td>0.2</td>
<td>20</td>
<td>U</td>
<td>X7</td>
<td>S</td>
</tr>
<tr>
<td>Cartridge type</td>
<td>0.1</td>
<td>10 (254 mm)</td>
<td>U=polypropylene</td>
<td>X3</td>
<td>S=Silicone</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>20 (508 mm)</td>
<td></td>
<td>X7</td>
<td>E=EPDM</td>
</tr>
<tr>
<td></td>
<td>0.45</td>
<td>30 (762 mm)</td>
<td></td>
<td>X8</td>
<td>V=Viton</td>
</tr>
<tr>
<td></td>
<td>0.65</td>
<td>40 (1016 mm)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

X3 = SOE with external 222 O-rings, X7=SOE with fin end, bayonet and external 226 O-Rings, X8=SOE with fin end and external 222 O-Rings

Filter cartridge amaFine BC