Filter cartridge
amaFine TMV

1. Introduction

To maintain safe, balanced pressure during the filling or emptying of a storage vessel, tank vent filter cartridges are essential to help reduce the possibility of contaminating your product. The amaFine TMV filter cartridge is specially designed to be used as a vent filter to protect your product from viruses and micro-organisms. For vent filter housings we refer to the Data Sheet Tank vent filter housing, type AFV1.

Integrity testing
Acceptable limit for the diffusion flow test for a 10" cartridge is 11 ml/min at 0.8 bar. Integrity is verified by diffusion test using IPA 60/40 V/V as wetting agent.
2. Features

- Hydrophobic PTFE membrane
- Absolute filtration rating
- High air flow rates
- Manufactured in controlled environment
- Steamable in situ
- FDA listed material per CFR21
- Bio-Safety per USP-Plastics
- Each cartridge is integrity tested

3. Sterilisation/Sanitation and Food safety

**Sterilisation / sanitisation**
Steam sterilisation cumulative time is 50 hours at 140 °C with cycles of 30 minutes. The cartridges can be sanitised with the standard chemical agents.

**Food safety**
All materials used are listed in the FDA CFR21 regulations.

**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

<table>
<thead>
<tr>
<th>Filter medium</th>
<th>PTFE Membrane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support medium</td>
<td>polypropylene</td>
</tr>
<tr>
<td>Hardware</td>
<td>polypropylene</td>
</tr>
<tr>
<td>Longitudinal weld</td>
<td>ultrasonic welding</td>
</tr>
<tr>
<td>End cap seal</td>
<td>thermally welded</td>
</tr>
<tr>
<td>Gaskets/O-rings</td>
<td>silicone, EPDM, Viton®, other materials on request</td>
</tr>
</tbody>
</table>

**Dimensions**
- External diameter: 70 mm
- Length: see ordering information
- Filtration area: 0.7 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

**Retention ratings absolute**
- In liquid: 0.2 micron
- In dry gas: < 0.02 micron
- Bacterial retention: > 10⁷ CFU/cm² Brevundimona diminuta in liquid as per ASTM F838-83 edition 1993

5. Air flow rate for 10"cartridge at 1 bar

![Graph showing air flow rate vs. pressure drop]

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>amafine TMV</td>
<td>0.2</td>
<td></td>
<td>U=polypropylene</td>
<td>X7</td>
<td>S</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>X7</td>
<td>S=Silicone</td>
</tr>
<tr>
<td>U</td>
<td></td>
<td></td>
<td></td>
<td>X8</td>
<td>E=EPDM</td>
</tr>
<tr>
<td>X7</td>
<td></td>
<td></td>
<td></td>
<td>X28</td>
<td>V=Viton®</td>
</tr>
</tbody>
</table>

X7=SOE with fin end, bayonet and external 226 O-Rings, X8=SOE with fin end and external 222 O-Rings, X28=SOE with fin end, 3 wing bayonet and external 222 O-rings

Filter cartridge amafine TMV

Filtration Group BV
Postbus 35
NL - 7240 AA Lochem
Phone +31 573 297 777
info.FGNL@filtrationgroup.com, www.filtrationgroup.com
03/2017