Filter cartridge
amaFine VM

1. Introduction

The amaFine VM membrane cartridge is specially designed for the wine industry. The specially designed polyethersulphone membrane together with the borosilicate microfibre prefilter makes the amaFine VM a reliable and testable membrane filter for yeast and mould reduction. 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. Although specially designed for the wine industry, the amaFine VM is also suitable in many other food and beverage applications.
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. Sanitation and Food safety

Sterilisation/sanitisation/regeneration
Steam sterilisation cumulative time is 40 hours at 121 ºC with cycles of 30 minutes. Hot water sanitisation with max. 80 ºC water. The cartridges can be sanitised with the standard chemical agents. The amaFine VM filter cartridges can be regenerated with a 2% NaOH solution at 25 ºC.

Food safety

4. Product/Performance specifications

Filter medium: hydrophilic polyethersulfone
Pre-filter medium: borosilicate microfibre
Support medium: polypropylene
Hardware: polypropylene
Longitudinal weld: ultrasonic welding
End cap seal: thermally welded
Gaskets/O-rings: silicone, EPDM, Viton®

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 ºC
Operating: 2.0 bar at 25 ºC
Maximum operating temperature: 65 ºC

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5. Water flow rate for 10" cartridge

<table>
<thead>
<tr>
<th>Cartridge Code</th>
<th>Absolute rating in liquids</th>
<th>Recommended wine flow rate at 0.1 bar Δp [l/h per 10&quot;]</th>
<th>Bacterial retention</th>
<th>Acceptable limit for pressure hold test* on 10&quot; cartridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM 0.45</td>
<td>0.45 micron</td>
<td>300</td>
<td>≥10^10 Leuconostoc oenos</td>
<td>≤ 0.10 bar @ 1.1 bar</td>
</tr>
<tr>
<td>VM 0.65</td>
<td>0.65 micron</td>
<td>350</td>
<td>≥10^9 Leuconostoc oenos</td>
<td>≤ 0.12 bar @ 0.9 bar</td>
</tr>
<tr>
<td>VM 0.8</td>
<td>0.8 micron</td>
<td>400</td>
<td>≥10^11 Saccharomyces cerevisiae</td>
<td>≤ 0.12 bar @ 0.6 bar</td>
</tr>
<tr>
<td>VM 1.2</td>
<td>1.2 micron</td>
<td>450</td>
<td>≥10^10 Saccharomyces cerevisiae</td>
<td>≤ 0.12 bar @ 0.5 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>amafine VM</td>
<td>0.45</td>
<td>10 (254 mm)</td>
<td>U=polypropylene</td>
<td>X3</td>
<td>S=Silicone</td>
</tr>
<tr>
<td></td>
<td>0.65</td>
<td>20 (508 mm)</td>
<td></td>
<td>X7</td>
<td>E=EPDM</td>
</tr>
<tr>
<td></td>
<td>0.8</td>
<td>30 (762 mm)</td>
<td></td>
<td>X8</td>
<td>V=Viton</td>
</tr>
<tr>
<td></td>
<td>1.2</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

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