

## 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

## 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®
<i>Dimensions</i>	
External diameter	: 70 mm
Length	: see ordering information
Filtration area	: 0.7 m <sup>2</sup> /10" cartridge
<i>Maximum recommended differential pressure</i>	
Design	: 5.0 bar at 25 °C
Operating	: 2.0 bar at 25 °C
Maximum operating temperature	: 65 °C

## 3. Sanitation and Food safety

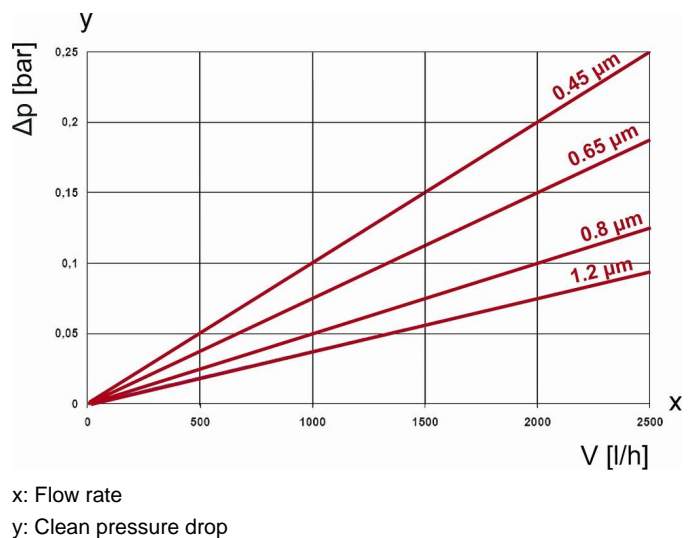
### Sterilisation/sanitisation/regeneration

Steam sterilisation cumulative time is 40 hours at 121 °C with cycles of 30 minutes. Hot water sanitisation with max. 80 °C 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 °C.

### Food safety

The filter cartridges meet the European Directives 82/711/EEC, 85/572/EEC, 89/109/EEC, 93/8/EEC, 97/48/EEC, 2001/61/EC, 2002/16/EC, 2002/72/EC and 2004/19/EC for food contact and global migration. All materials used are listed in the FDA CFR21 regulations.

## 5. Water flow rate for 10" cartridge



Cartridge Code	Absolute rating in liquids	Recommended wine flow rate at 0.1 bar Δp [l/h per 10"]	Bacterial retention	Acceptable limit for pressure hold test* on 10" cartridge
VM 0.45	0.45 micron	300	≥10 <sup>10</sup> Leuconostoc oenos	≤ 0.10 bar @ 1.1 bar
VM 0.65	0.65 micron	350	≥10 <sup>9</sup> Leuconostoc oenos	≤ 0.12 bar @ 0.9 bar
VM 0.8	0.8 micron	400	≥10 <sup>11</sup> Saccharomyces cerevisiae	≤ 0.12 bar @ 0.6 bar
VM 1.2	1.2 micron	450	≥10 <sup>10</sup> Saccharomyces cerevisiae	≤ 0.12 bar @ 0.5 bar

\* 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

amafine VM	0.45	20	U	X3	S
<b>Cartridge type</b>	<b>Micron rating [μm]</b>	<b>Nominal length [inch]</b>	<b>Hardware material</b>	<b>Cartridge style</b>	<b>O-Ring material</b>
	0.45		U=polypropylene	X3	S=Silicone
	0.65	10 (254 mm)		X7	E=EPDM
	0.8	20 (508 mm)		X8	V=Viton
	1.2	30 (762 mm)			
		40 (1016 mm)			

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