

## Vinofil™

### Double Layer Membrane Filters for Wine and Beer Filtration



Vinofil™ membrane cartridges are specifically designed for wine and beer filtration, as a final filter for cold biological stabilisation. Vinofil™ cartridges utilise a double layer of naturally hydrophilic polyethersulfone (PES) membrane with a mirrored asymmetric pore structure, providing graded filtration throughout its depth, resulting in higher throughputs and long service life.

Vinofil™ cartridges exploit the narrow pore size distribution and high void volume of the media to provide a choice of cartridges capable of meeting the requirements of most applications. These cartridges offer high flux rates and low differential pressures, a feature common to polyethersulfone membranes.

Vinofil™ cartridges benefit from the low binding characteristics of polyethersulfone membranes. They are highly resistant to integrity failure caused by steam sterilisation and have excellent compatibility with CIP sterilising agents.

### Typical Applications

- Wine and sparkling wine
- Beer
- Mineral water and soft drinks
- Process water supply

### Ordering Information

Product Code:		1	2	3	4	5	6	7	
<b>1: Membrane</b>	<b>2: Pore rating</b>	<b>3: Version</b>		<b>4: Length (Nominal)</b>		<b>5: End Fitting</b>		<b>6: Seals</b>	<b>7: Additional</b>
VT Vinofil™	20 0.2µm 45 0.45µm 65 0.65µm	R Rinsed S Standard	1 10" (254mm) 2 20" (508mm) 3 30" (762mm) 4 40" (1016mm) 5 5" (125mm)	A Code 3 B Code 7 C Code 8 F N SOE G G DOE (short) H G SOE J 216 (218), fin K Code 2 L 223, fin (no lugs) M DOE S Code 28, fin (3 lugs) T 223, flat (no lugs) U 224, fin V 226, fin W F20 +Code 7 (SS Core) X F20 +Code 2 (SS Core) Y BS832, flat Z F20 +Code Y (SS Core)	A Ethylene Propylene B Silicone C Viton® D Nitrile E FEP Encap. Viton® G FEP Encap. Silicone J DOE PTFE	A N+U N Non-steamable (no insert) P Pharma Grade U Unbranded			

## Features and Benefits

- Guaranteed microbial ratings
- Low binding and fouling
- Will not hydrolyse
- Excellent chemical compatibility
- Cartridge integrity and low TOC levels
- Suitable for steam sterilising
- Full traceability
- Controlled manufacturing environment

## Specifications

### Materials of Manufacture

Filter membranes:	Dual Polyethersulfone
Membrane support:	Polypropylene
Irrigation mesh (support):	Polypropylene
Drainage layer:	Polypropylene
Inner core:	Polypropylene
Outer support:	Polypropylene
End fittings:	Polypropylene
Support ring:	Stainless steel

### Cartridge Dimensions (Nominal)

Effective Filtration Area:	0.48m <sup>2</sup> (5.2ft <sup>2</sup> ) per 10" module
Diameter:	70mm (2.8")
Length:	1 module (short): 125mm (5")
	1 module: 254mm (10")
	2 modules: 508mm (20")
	3 modules: 762mm (30")
	4 modules: 1016mm (40")

### Cartridge Treatment

Standard:	Cleaned and flushed with pyrogen-free water
Rinsed:	Ultra-clean, pulse flushed to give a system resistivity of 18MΩ.cm

### Gaskets and O-Rings

FDA approved Ethylene Propylene, FEP encapsulated, Silicone, Viton® or Nitrile

### Maximum Differential Pressure

Normal flow direction at:	
20°C (68°F):	6.0bar (87psi)
80°C (176°F):	4.0bar (58psi)
100°C (212°F):	3.0bar (44psi)
120°C (248°F):	2.0bar (29psi)
Reverse flow direction at:	
20°C (68°F):	2.1bar (30psi)
80°C (176°F):	1.0bar (15psi)
100°C (212°F):	0.5bar (7psi)

### Operating Temperature

Maximum continuous: 85-90°C (185-194°F)

### Sterilisation

*In situ* steam 80 x 20 minute cycles at 125°C (257°F)  
Hot water 200 x 20 minute cycles at 85-90°C (185-194°F)

### Extractables

Minimum total extractables. Please refer to the Vinofil™ Validation Guide.

### Integrity Testing

Each Vinofil™ module of every cartridge is individually integrity tested using the Diffusive Flow Test, which correlates to the HIMA and ASTM F838-05 bacterial challenge tests. Non-destructive integrity tests, such as Pressure Hold, Diffusive Flow and Bubble Point, can be performed by customers. Please contact us for procedural details.

### Clean Water Flow Rates

- Typical clean water flow rate:  
A 254mm (10") Vinofil™ single cartridge exhibits the flow-ΔP characteristics indicated below, for solutions with a viscosity of 1 centipoise.
- Other solutions:  
For solutions with a viscosity other than 1 centipoise, multiply the indicated differential pressure by the viscosity in centipoise.

