

FluorofilTMPlus

High Flow Sterile Gas Filters with ePTFE Membrane



FluorofilTM Plus cartridges are manufactured using a highly hydrophobic ePTFE membrane. The enhanced ePTFE membrane offers exceptionally high gas flow rates at low pressure differentials.

FluorofilTM Plus cartridges are recommended for sterile gas filtration and venting applications. The hydrophobic characteristics of the ePTFE membrane makes the FluorofilTM Plus filter cartridge particularly suitable for wet gas sterilising applications, such as fermenter air feed.

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Ordering Information

Product Code:

The construction of the Fluorofil[™] Plus cartridge has design features that allow higher membrane surface area, lower pressure drops and incorporates a stainless steel core for greater mechanical strength when operated at higher temperatures.

Typical Applications

- Sterile process gases
- Sterile vents
- Biotechnology
- Powder handling and tabletting

1: Membrane		2: Pore rating		3: Version		4: Length		5: End Fitting		6: Seals		7: Additional	
F Fluorofil [™]	Fluorofil™	10	0.1µm	S Standard	Standard	(Nominal) 1 10" (254mm)	W	F20 +Code 7 (SS Core)	Α		А	N+U	
		20 C	0.2µm					Х	F20 +Code 2 (SS Core)	В	Propylene Silicone	Р	Pharma Grade
						2	20" (508mm)	Z	F20 +Code Y (SS Core)	C	Viton®	U	Unbrandeo
						3	30"			D	Nitrile		
						(762mm)		Е	FEP				
						4	40" (1016mm)			Encap. Viton®			
						5	5"			G	FEP Encap.		
							(125mm)				Silicone		
										J	DOE PTFE		

Features and Benefits

- Guaranteed microbial ratings
- Bacterial spores and viruses
- Mechanical strength
- Steam sterilisation
- Cartridge integrity and low TOC levels
- Full traceability
- Controlled manufacturing environment

Specifications

Materials of Manufacture

Filter membrane:	ePTFE
Membrane support:	Polypropylene
Irrigation mesh (support):	Polypropylene
Drainage layer:	Polypropylene
Inner core:	316/316L stainless steel
Outer support:	Polypropylene
End fittings:	Polypropylene
Sealina:	Fusion bondina

Cartridge Dimensions (Nominal)

Effective Filtration Area:

0.8m² (8.6ft²) per 10" module

Diameter:	70mm	(2 8'')

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Length:	1 module:	127mm (5'')
	1 module:	254mm (10'')
	2 modules:	508mm (20'')
	3 modules:	762mm (30'')
	4 modules:	1016mm (40'')

Cartridge Treatment

Standard: Cleaned and flushed, without further treatment

Gaskets and O-Rings

1.0

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)
125°C (257°F):	1.5bar (22psi)
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:

80°C (176°F)

Sterilisation

In situ steam 500 x 30 minute cycles at 135°C (275°F). In situ steam cycles for 200 hours at 142°C (286°F).

Extractables

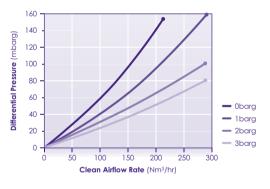
Minimum total extractables. Please refer to the Fluorofil™ Plus Validation Guide.

Integrity Testing

Each Fluorofil™ Plus 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 Diffusive Flow, Water Intrusion, Pressure Hold and Bubble Point, can be performed by customers. Please contact us for procedural details.

Gas Flow Rates

• Typical clean air flow rate: A 254mm (10") Fluorofil[™] Plus single cartridge exhibits the flow- Δ P characteristics indicated below.



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