

ePTFE

ePTFE Membrane Cartridge Filters



ePTFE cartridges are manufactured using a highly hydrophobic ePTFE membrane offering exceptionally high gas flow rates at low pressure differentials.

ePTFE cartridges are recommended for sterile gas filtration and venting applications. The hydrophobic characteristics of the ePTFE membrane makes the ePTFE filter cartridge particularly suitable for wet gas sterilising applications, such as fermenter air feed. For solvent and aggressive chemical filtration applications, these cartridges offer a wide range of chemical compatibility with high thermal stability.

Typical Applications

- Sterile process gases
- Sterile vents
- Fine chemicals and solvents
- Photoresists and developers
- Pure water supply

Features and Benefits

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

Ordering Information

1: Membrane		2: Pore rating		3: Version		4: Length		5: End fitting		6: Seals		7 Additional	
CF-F	ePTFE	20	0.2 µm	R	Rinsed	1	10"	A	Code 3	A	Ethylene Propylene	N	Non-steamable(no insert)
		45	0.45 µm	S	Standard	2	20"	B	Code 7	B	Silicone	P	Pharma Grade
						3	30"	C	Code 8	C	Viton		
						4	40"	F	N SOE	D	Nitrile		
						5	5"	G	G DOE (short)	E	FEP Encap. Viton		
								H	G SOE	G	FEP Encap. Silicone		
								J	216 (218), fin	J	DOE PTFE		
								K	Code 2				
								L	223, fin (no lugs)				
								M	DOE				
								S	Code 28, fin (3 lugs)				
								T	223, flat (no lugs)				
								U	224, fin				
								Y	BS832, flat				

Product Code: 1 2 3 4 5 6 7

Specifications

Materials of Manufacture

Filter membrane:	ePTFE
Membrane support:	Polypropylene
Irrigation mesh (support):	Polypropylene
Drainage layer:	Polypropylene
Inner core:	Polypropylene
Outer support:	Polypropylene
End fittings:	Polypropylene
Sealing:	Fusion bonding

Cartridge Dimensions (Nominal)

Effective Filtration Area:	Up to 0.73m ² (7.8ft ²) per 10" module
Diameter:	70mm (2.8")
Length:	1 module: ePTFE Junior
	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
Rinsed:	Ultra-clean, pulse flushed to give a system resistivity of 18M Ω .cm

Gaskets and O-Rings

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 100 x 20 minute cycles at 135°C (275°F) to 150 x 20 minutes cycles at 125°C (257°F)

Extracables

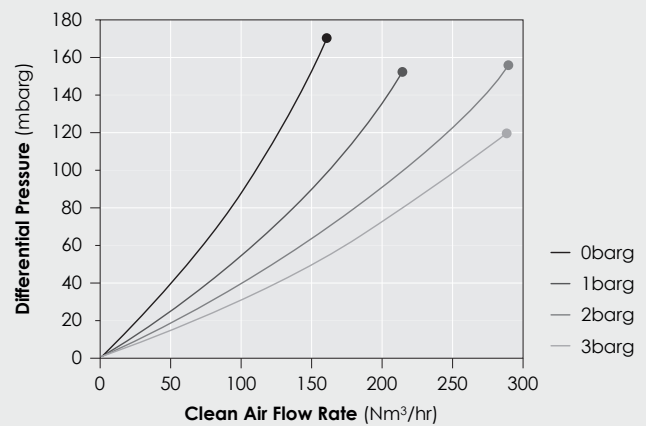
Minimum total extractables. Please refer to the ePTFE Validation Guide.

Integrity Testing

Each ePTFE 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™, 0.2 μ m single cartridge exhibits the flow- Δ P characteristics indicated below.



Clean Water Flow Rates

(after Solvent Pre-wet and Water Flush)

- Typical clean water flow rate:
A 254mm (10") Fluorofil™ single cartridge with 0.2 μ m microbial rating exhibits the flow- Δ P 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.

