

Fluorofil™ F20

Sterilising-grade ePTFE Membrane Cartridge Filters



Fluorofil™ F20 cartridges are manufactured using a highly hydrophobic ePTFE membrane offering exceptionally high gas flow rates at low pressure differentials.

Fluorofil™ F20 cartridges are recommended for sterile gas filtration and venting applications. The hydrophobic characteristics of the ePTFE membrane makes the Fluorofil™ F20 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
- Photoresists and developers
- Solvent API

Features and Benefits

- Validated with *B. diminuta* >10⁷ cfu/cm²
- Bacterial spores and virus retention
- Designed for multi-cycle in situ steam
- 100% integrity tested prior to dispatch
- Aggressive chemicals resistant
- Full traceability
- USP class VI approved
- Uses FDA compliant materials
- Non-Fibre releasing

Ordering Information

Product Code:		1	2	3	4	5	6	7																									
1: Membrane	2: Pore rating	3: Version		4: Length (Nominal)		5: End Fitting		6: Seals	7: Additional																								
F Fluorofil™	20 0.2µm	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)	U 224, fin	V 226, fin	Y BS832, flat	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

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 0.79m ² (8.5ft ²) per 10" module	
Diameter:	70mm (2.8")	
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
Rinsed:	Ultra-clean, pulse flushed to give a system resistivity of 18MΩ.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 minute cycles at 125°C (257°F).

Extractables

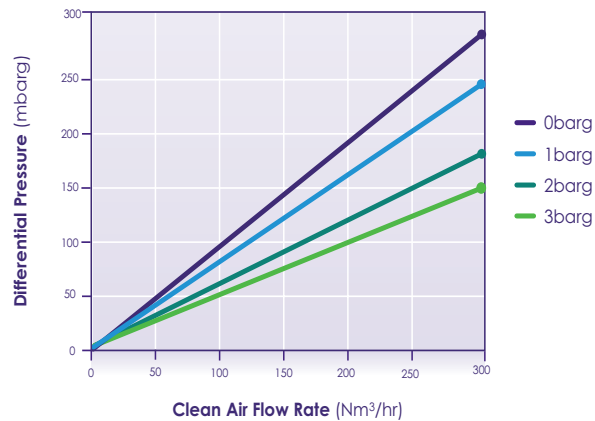
Minimum total extractables. Please refer to the Fluorofil™ Validation Guide.

Integrity Testing

Each Fluorofil™ F20 module of every cartridge is individually integrity tested using the Diffusive Flow Test, which correlates to the HIMA and ASTM F838-20 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™, 0.2µm single cartridge exhibits the flow-ΔP characteristics indicated below.



Clean Water Flow Rates

(after Solvent Pre-wet and Water Flush)

- Typical clean water flow rate:
A 254mm (10") Fluorofil™ F20 single cartridge with 0.2µm microbial rating 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.

