porvair filtration group

Fluorofil™Plus

High Flow Sterile Gas Filters with ePTFE Membrane

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

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

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

Ordering Information

Product Code: 1 2 3 4 5 6 7

1: Membrane	
F	Fluorofil™

2: Pore rating	
20	0.2µm

3: Version	
S	Standard

4: Length (Nominal)	
1	10" (254mm)
2	20" (508mm)
3	30" (762mm)
4	40" (1016mm)
5	5" (125mm)

5: End Fitting	
W	F20 +Code 7 (SS Core)
X	F20 +Code 2 (SS Core)
Z	F20 +Code Y (SS Core)

6: Seals	
A	Ethylene Propylene
B	Silicone
C	Viton®
D	Nitrile
E	FEP Encap. Viton®
G	FEP Encap. Silicone
J	DOE PTFE

7: Additional	
A	N+U
P	Pharma Grade
U	Unbranded

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
Sealing:	Fusion bonding

Cartridge Dimensions (Nominal)

Effective Filtration Area:
0.8m² (8.6ft²) 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

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

Extractables

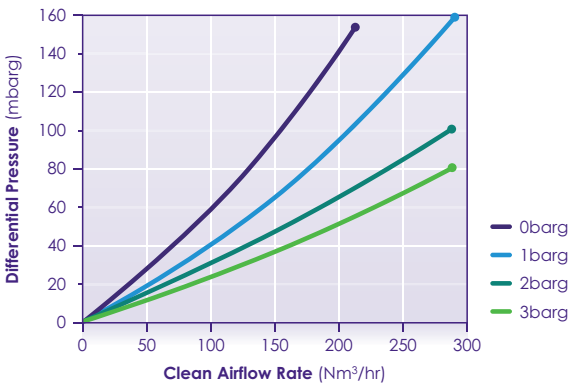
Minimum total extractables. Please refer to the Fluorofil™ Plus Validation Guide.

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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