porvair filtration group

Fluorofil™ F20 Junior

Sterilising-grade ePTFE Membrane Cartridge Filters for Small-Scale Applications

Fluorofil™ F20 Junior cartridges are manufactured using a highly hydrophobic ePTFE membrane and are designed for retrofitting into existing Junior-style housings. The enhanced ePTFE membrane offers exceptionally high gas flow rates at low pressure differentials.

Fluorofil™ F20 Junior cartridges are recommended for small-scale sterile gas filtration and venting applications. The hydrophobic characteristics of the ePTFE membrane makes the Fluorofil™ Junior filter cartridge particularly suitable for wet gas sterilising applications, such as small-scale fermenter air feed.

For small-scale solvent and aggressive chemical filtration applications, Fluorofil™ Junior cartridges offer a wide range of chemical compatibility with high thermal stability.

Ordering Information

Product Code: 1 **F** 2 3 4

1: Configuration	
J	J-Style
S	S-Style
L	L-Style
N	N-Style

2: Pore rating	
20	0.2µm

3: Length	
15	43mm (1.5")
25	77.5mm (2.5")
50	136mm (5")

4: Seals (J/L Style)	
A	Ethylene Propylene
B	Silicone
C	Viton®
D	Nitrile
E	FEP Encap. Viton®
G	FEP Encap. Silicone

Typical Applications

- Sterile vents
- Small-scale sterile process gases
- Small-scale fine chemicals and solvents
- Small-scale photoresists and developers
- Aggressive chemical solutions including acids, alkalis, solvents and etchants.

Features and Benefits

- Validated with *B. diminuta* >10^7 cfu/cm^2
- 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

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
Internal adaptor support ring:	Stainless steel

Cartridge Dimensions (Nominal)

Effective Filtration Area:
0.26m² (2.80ft²) per 5" length.

Diameter: 56mm (2.2")

Lengths: 43mm (1.5")
77.5mm (2.5")
136mm (5")

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

J-style: Silicone (other materials are available on request)

S-style: Not supplied

L-style: Silicone (other materials are available on request)

N-style: Silicone (other materials are available on request)

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)

Operating Temperature

Maximum continuous: 80°C (176°F)

Sterilisation

In situ Steam 100 x 20 minute cycles at 135°C (275°F)

Extractables

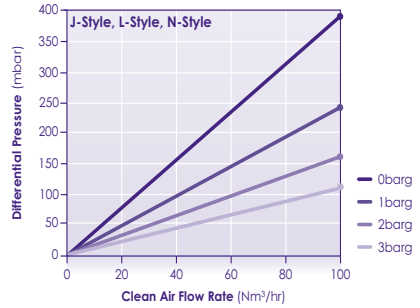
Minimum total extractables. Please refer to the Fluorofil™ F20 Validation Guide.

Integrity Testing

Each Fluorofil™ F20 Junior 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. Procedural details are available from **Porvair**.

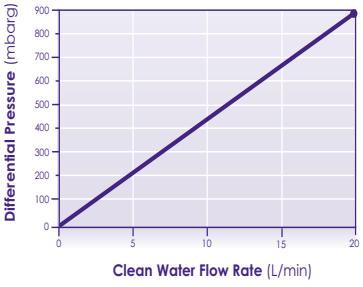
Gas Flow Rates

- Typical clean air flow rate:
  A 136mm (5") Fluorofil™ Junior, 0.2µm 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 136mm (5") Fluorofil™ Junior cartridge (J-style) with 0.2µm 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.



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