

Fluorofil™ Junior

ePTFE Membrane
Cartridge Filters for
Small-Scale Applications



Fluorofil™ 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™ 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.

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

- High filtration area
- Guaranteed removal ratings
- Suitable for steam sterilisation
- Full traceability
- Controlled manufacturing environment

Ordering Information

Product Code: 1 F 2 3 4

1: Configuration		2: Pore rating		3: Length		4: Seals (J/L Style)	
J	J-Style	20	0.2µm	15	43mm (1.5")	A	Ethylene Propylene
S	S-Style	45	0.45µm	25	77.5mm (2.5")	B	Silicone
L	L-Style			50	136mm (5")	C	Viton®
N	N-Style					D	Nitrile
						E	FEP Encap. Viton®
						G	FEP Encap. Silicone

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:	0.19m ² (2.05ft ²) 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)
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Sterilisation

Autoclave 100 x 20 minute cycles at 135°C (275°F)

Extractables

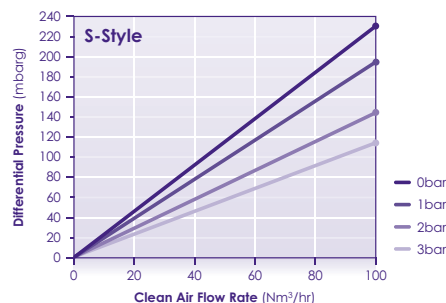
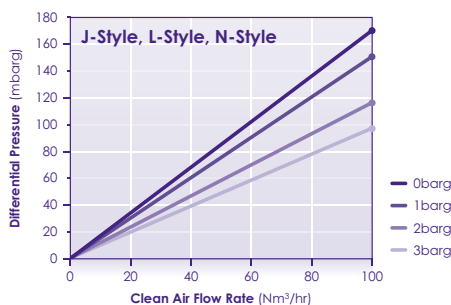
Minimum total extractables. Please refer to the Fluorofil™ Validation Guide.

Integrity Testing

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

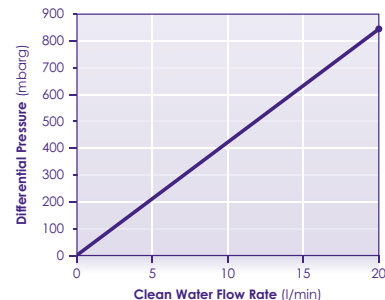
Gas Flow Rates

- Typical clean air flow rate:
A 136mm (5") Fluorofil™ Junior, 0.2µm cartridge exhibits the flow-ΔP 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-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.



PFG722/Rev13:Nov24