

## ePTFE Junior

ePTFE Membrane Cartridge Filters for  
Small-Scale Applications



**ePTFE 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.**

ePTFE Junior cartridges are recommended for smallscale sterile gas filtration and venting applications. The hydrophobic characteristics of the ePTFE membrane makes the ePTFE 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, ePTFE 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

- Zeta potential
- High filtration area
- Guaranteed removal ratings
- Suitable for steam and hot water sanitisation
- Full traceability
- Controlled manufacturing environment

## Ordering Information

1: Configuration		2: Pore rating		3: Length		4: Seals	
CF-J	J-Style	20	0.2 µm	25	77.5mm (2.5")	A	Ethylene Propylene
CF-S	S-Style	45	0.45 µm	50	136mm (5")	B	Silicone
CF-L	L-Style	65	0.65 µm			C	Viton
						D	Nitrile
						E	FEP Encap. Viton
						G	FEP Encap. Silicone
						J	DOE PTFE

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

# 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 <sup>2</sup> (2.05ft <sup>2</sup> ) per 5" length.
Diameter:	56mm (2.2")
Lengths:	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)

## 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 70 x 25 minute cycles at 135°C (275°F)

## Extractables

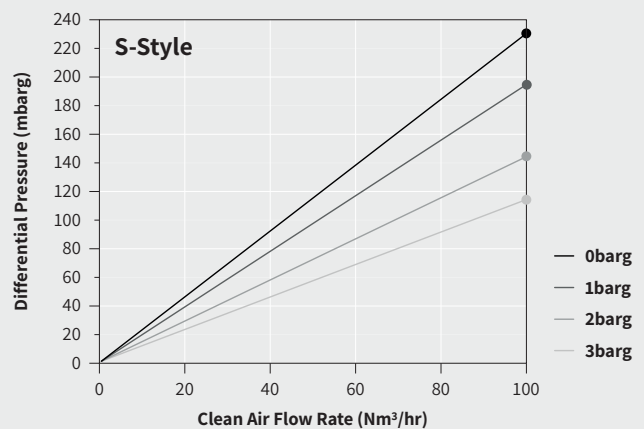
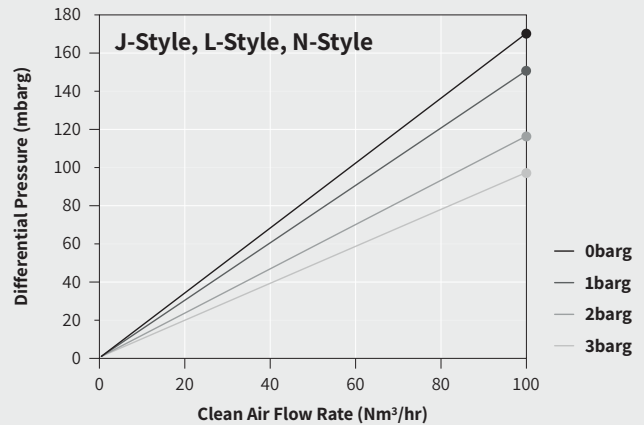
Minimum total extractables. Please refer to the ePTFE Validation Guide.

## Integrity Testing

Each ePTFE 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 the supplier.

## Gas Flow Rates

- Typical clean air flow rate:  
A 136mm (5") ePTFE Junior 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") ePTFE 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.

