

Bioflo PT Junior

ePTFE Membrane Cartridge Filters for Small-Scale Applications

Bioflo PT 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 (see graph).

The Junior range are available in two formats: J-style, a single open-ended element with a single internal o-ring seal on the downstream end cap and S-style, a single open-ended element incorporating an integral flange on the downstream end cap.

Bioflo PT Junior cartridges are recommended for smallscale sterile gas filtration and venting applications. The hydrophobic characteristics of the ePTFE membrane makes the Bioflo PT 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, Bioflo PT Junior cartridges offer a wide range of chemical compatibility with high thermal stability. Suitable for the most demanding microfiltration applications, the cartridges can be used for the small-scale filtration of aggressive chemical solutions including acids, alkalis, solvents and etchants.

Bioflo PT Juniors can be used in scale-up bench-top experiments and pilot plant evaluations to confirm suitability in new process applications.



Typical Applications

- Sterile vent
- Small-scale sterile process gases
- Small-scale fine chemicals and solvents
- Small-scale photoresists and developers

Features and Benefits

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

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)

Diameter:	56 mm (2.2")
Lengths:	77.5 mm (2.5")
	136 mm (5")

Effective Filtration Area

Absolute Microbial Rating (in Liquids)	Effective Filtration Area (for 5" Cartridges)
0,2 µm	0.19 m ² (2.05ft ²)

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.

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

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

Extractables

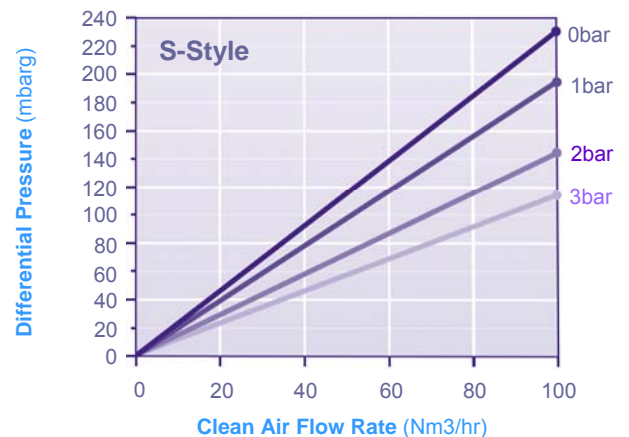
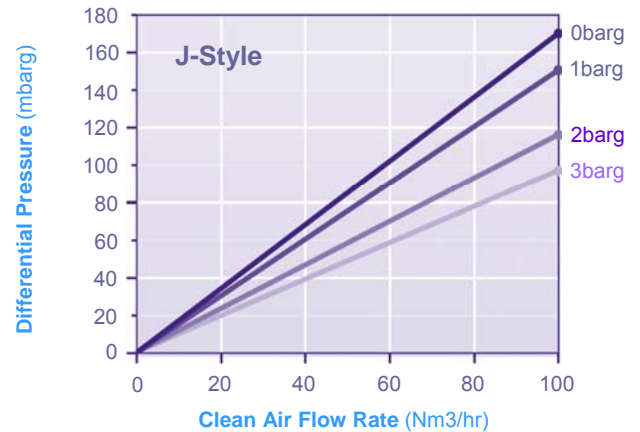
Minimum total extractables. Please refer to the Bioflo PT Validation Guide.

Integrity Testing

Each Bioflo PT 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 Envirogen.

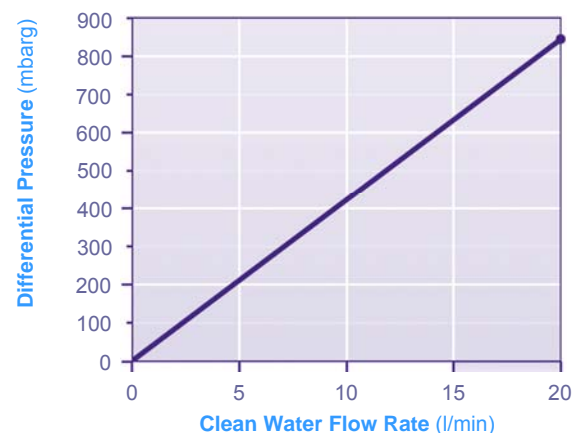
Gas Flow Rates

- Typical clean air flow rate:
A 136mm (5") Bioflo PT Junior cartridge exhibits the flow-ΔP characteristics indicated below



Clean Water Flow Rates

- Typical clean water flow rate:
A 136mm (5") Bioflo PT Junior cartridge (J-style) with 0.2 µm microbial rating exhibits the flow-ΔP characteristics indicated below, for solutions with a viscosity of 1 centipoise.
- Other solutions:
For solutions with a viscosity of greater than 1 centipoise, multiply the indicated differential pressure by the viscosity in centipoise.



PART NUMBER

Code	Micron Rating	Length		Seals	
PTJ	10 = 0,1 micron	25	2,5"	A	Ethylene Propylene
	20 = 0.2 micron	50	5"	B	Silicone
	45 = 0.45 micron			C	Viton®

NOTE: Standard Versions

1025B,

2025A, 2025B, 2025C,

4525A, 4525B, 4525C,

2050B,

4550B



UK Office:

Envirogen Group
 Unit 14a Bromyard Road
 Trading Estate
 Bromyard Road, Ledbury
 Herefordshire HR8 1NS
 Tel: +44 (0) 1531 636328
 E: info@envirogengroup.com
www.envirogengroup.com



Italian Office:

Envirogen Group Italy S.p.A
 Viale De GASPERI,88/B
 20017 Mazzo di Rho Milano
 Tel: +39 (0)2 93959.1
 E: info.it@envirogengroup.com
www.envirogengroup.com



USA Office:

Envirogen Technologies
 Two Kingwood Place
 700 Rockemad Dr. Suite 105
 Kingwood, TX 7739
 Tel: +1 877.312.8950
 E: info@envirogen.com
www.envirogen.com