



# HIGH FLOW TETPOR II Filters

- air / gas filters
- expanded PTFE

HIGH FLOW TETPOR II gas sterilization filters have been developed to benefit from technological advances within the manufacture of PTFE membranes. This new generation of filter sets the standard with an unrivalled combination of efficiency, flow rate and strength.

The HIGH FLOW TETPOR II is validated as a 0.2 micron sterilizing grade filter in liquids through ASTM F838-05 in gas through full retention to an aerosol challenge of MS2 phage. This ensures the filter will guarantee the sterility of your process in the worst-case scenario where the filter may be subjected to bulk liquid due to a process problem. Subtle changes to the structure of the hydrophobic PTFE have also resulted in the production of an extremely robust product now validated for 225 steam sterilization cycles @ 142 °C (287.6 °F). The combination of non-woven supports upstream of the membrane and an expanded net layer downstream has significant benefits. It provides increased protection and service life while guaranteeing zero fibre shedding into the process.

HIGH FLOW TETPOR II is suitable for all sterile gas applications including fermentation inlet and off gas streams, venting, lyophilisers, autoclave vacuum breaks and blow-fill-seal equipment as well as the provision of particle free air within the electronics industry.

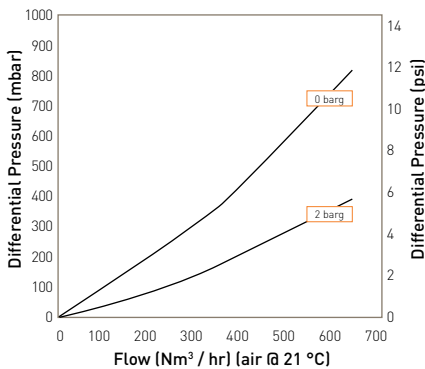
## Features and Benefits

- Optimum pleat configuration
- Fully validated to ASTM 838-05 for liquid bacterial challenge
- Steam sterilizable up to 225 cycles at 142 °C (287.6 °F)
- Fully validated to aerosol and viral challenge
- Unrivalled flow rates combined with low pressure drops
- Integrity testable by all methods including water intrusion test

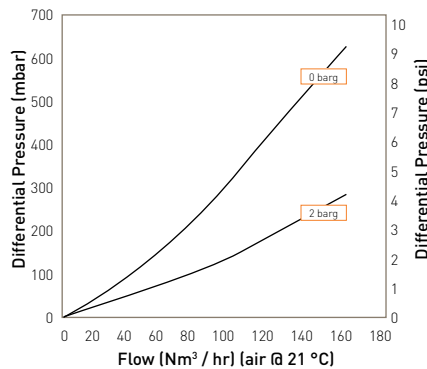


Note: TETPOR is a registered trademark of Parker Hannifin Corporation.

## Performance Characteristics



Flow rates for other sizes available upon request



Flow rates for other sizes available upon request

10" Size (250 mm) Cartridge

A Size (125 mm) Cartridge

## Specifications

### Materials of Construction

- Filtration Membrane: Expanded PTFE
- Upstream Support: Polypropylene
- Downstream Support: Polypropylene
- Inner Support Core: 316L Stainless Steel
- Outer Protection Cage: Polypropylene
- End Caps: Polypropylene
- End Cap Insert: Polysulphone
- Standard o-rings: Silicone

### Biological Safety

Materials conform to the relevant requirements of 21CFR Part 177, EC1935 / 2004 and current USP Plastics Class VI - 121 °C and ISO10993 equivalents.

### Recommended Operating Conditions

The maximum differential pressure in direction of flow (outside to in) is 3.5 barg (50.76 psig) at 60 °C (140 °F).

The maximum recommended continuous inlet air temperature is 60 °C (140 °F).

*Note: HIGH FLOW TETPOR II cartridges can be used as WFI vents in heated housings if changed on a 4-6 monthly basis.*

### Sterilization

HIGH FLOW TETPOR II cartridges can be in situ steam sterilized for up to 225 cycles at 142 °C (287.6 °F).

### Retention Characteristics

HIGH FLOW TETPOR II cartridges have been fully validated as 0.2 micron sterilizing grade filter cartridges, for compressed air and gas applications. They exceed liquid bacterial challenge levels as recommended by ASTM+. In addition, HIGH FLOW TETPOR II is also validated by aerosol bacterial and *MS-2 Coliphage* challenge testing.

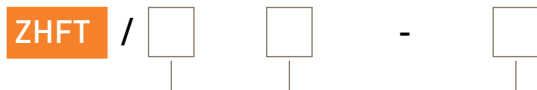
*+ASTM American Society for Testing and Materials*

### Integrity Test Data

All cartridges are integrity tested prior to despatch by the pressure decay and aerosol challenge test methods. Values are for cartridges wetted with 60 / 40 IPA / Water.

Cartridge	Test Pressure		Diffusional Flow (ml / min)	Water Intrusion Test Pressure		Water Intrusion (ml / 10 min)	Water Flow (µl / 10 min)
	(bar)	(psi)		(barg)	(psig)		
D	0.8	11.6	0.6	2.5	36.2	N / A	N / A
C	0.8	11.6	1.1	2.5	36.2	N / A	N / A
B	0.8	11.6	2.8	2.5	36.2	2.3	657
A	0.8	11.6	5.6	2.5	36.2	4.6	1314
K	0.8	11.6	7.70	2.5	36.2	6.4	1828
10"	0.8	11.6	16.50	2.5	36.2	13.5	3857
20"	0.8	11.6	33.00	2.5	36.2	27.0	7714
30"	0.8	11.6	49.50	2.5	36.2	40.5	11571

## Ordering Information



Code   Length (Nominal)		Code   Endcap (10")		Code   O-rings	
D*	1.5" (35 mm)	C	P-7	E	EPDM
C*	2.5" (65 mm)	P	BIO-X Retrofit	P*	PTFE Encapsulated Silicone
B*	2.5" (65 mm)	H	UF Retrofit	S*	Silicone
A*	5" (125 mm)			V	Viton
K	5" (125 mm)				
1	10" (250 mm)				
2	20" (500 mm)				
3	30" (750 mm)				
		Code   Endcap (Demi)			
		H	UF Retrofit		
		T	TRUESEAL		
		W	HF Demi C & D		
		Y	Demi MCY		
		Z	Demi A & B Std		

\* Supplied in packs of 3.

\* Not available on C and D length variants.  
\* Silicone o-ring supplied as standard without having to specify the 'S' code.



01422 377367



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**Prosep Filter Systems Ltd**  
Unit G19, River Bank Way,  
Lowfields Business Park,  
Elland, West Yorkshire  
HX5 9DN

**Phone: 01422 377367**  
email: [sales@prosep.co.uk](mailto:sales@prosep.co.uk)  
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