



We reserve the right to change the technical data of this specification without notice.

#### **Main applications**

Air, Gases and Vent sterile filtration. Pharma downstream Pharma upstream

Dairy Wine Beer Food & beverage

Chemical

#### **Characteristics**

- Dual layer pleated expanded PTFE filter membrane
- Polypropylene hardware and filter media support
- High flowrate with low pressure drop
- High filter area
- · Suitable for high temperature severe sterilisation
- Wide chemical compatibility
- Materials conform to CFR21 Part 177
- USP Class VI requisition
- Conform to 1935/2004/CE Directive
- Free from fibers release
- Fabricated in clean room
- 100% integrity tested



## **Specifications**

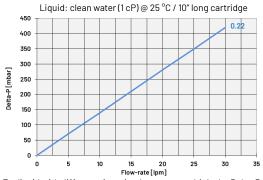
SPECIFICATIONS				
Grade	0.20			
Filtration rating (µm)	0.2µm			
Filter media	Double layer hydrophobic PTFE membrane			
Filter media supports	Polypropylene			
End caps material	Polypropylene			
Cage material	Polypropylene			
Core material	Reinforced polypropylene or 316L-SS			
OD	69mm			
Nominal length	5" to 40"			
EFA	$5'' \ge 0.36 \text{ m}^2 - 10'' \ge 0.74 \text{ m}^2$			
Max. working temperature	80 °C			
Max. Delta-P (forward)	5.2 bar @ 25 °C - 2.7 bar @ 80 °C			
Max. Delta-P (reverse)	2.1 bar @ 25 °C - 1.6 bar @ 80 °C			
Recommended replacement Delta-P 2.4 bar @ 25 °C				

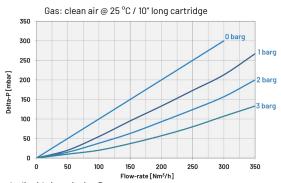


# **TFAD SERIES**

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#### Flow-rate vs. Delta-P information





For liquid with different viscosity than water multiply the Delta-P by the liquid viscosity in cP. For gases different than air: Delta-P = DP from graph x gas viscosity (cP) / 0.018 cP (air viscosity).

#### **Biological safety and extractable**

Bacteria Endotoxin  $\leq 0.25$  EU/ml Extractable  $\leq 40$  mg/10 inch

### Integrity test data

Pore size	Bubble point	Diffusion @ 20 °C / 10"	WIT @ 20 °C / 10"	Challenge Microorganism
0.20µm	≥ 1.0 bar	≤ 20 ml/min @ 0.8 bar	≤ 1.0 ml/min @ 2.6 bar	Brevundimonas Diminuita (ATCC 19146)

Bubble point and diffusion, tested with 60% IPA and 40% water.

#### Regulatory compliance

The manufacturing materials comply with the requirements of:

- CFR21 Part 177
- USP88 Class VI
- 1935/2004/CE for food products contact

- ASTM F838-83
- ISO 10993-Part 1, 5
- EN 285:2015

## **Sterilisation**

Steam sterilisation in place: up to 126  $^{\circ}$ C for 60 minutes, 100 cycles @ 0.3 bar Delta-P

up to 140 °C for 60 minutes, 40 cycles @ 0.3 bar Delta-P

Steam sterilization in autoclave: up to 126  $^{\circ}$ C for 60 minutes, 100 cycles

up to 140 °C for 60 minutes, 40 cycles

In case of sterilisation with steam in place (SIP) or in autoclave, the end caps with SS insert must be selected.

After sterilisation, always cooldown at operating temperature the filter cartridges prior to use.

Contact us for any further information.

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