



Graver Technologies

FILTRATION | SEPARATION | PURIFICATION



## Product Specifications

**Media:** Expanded PTFE Membrane

**Inner core, end caps, cage:** Polypropylene

**Support layers:** Polypropylene

**Gaskets/O-Rings:**

Buna-N, EPDM, Silicone, Teflon

Encapsulated Viton (O-Rings only),

Teflon (gaskets), Viton

**O-ring Insert:** PBT

**Micron ratings:** 0.05, 0.1, 0.2, 0.45, 1.0  $\mu\text{m}$

## Dimensions

**Nominal lengths:**

5" 9.75" 10" 20" 30" 40"

12.7 24.8 25.4 50.8 76.2 101.6 cm

**Outside diameter:** 2.7" (6.9 cm)

**Inside diameter:** 1.0" (2.54 cm)

**Surface area:** 8.5 ft<sup>2</sup> (0.79 m<sup>2</sup>)  
per 10" element

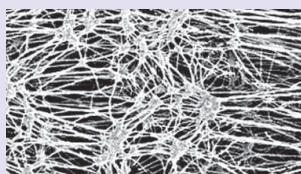
## Operating Parameters

**Maximum operating temperature:**  
203°F (95°C)

**Maximum differential pressure:**  
80 psid @ 70°F (5.5 bar @ 21°C)  
40 psid @ 160°F (2.8 bar @ 71°C)

**Maximum reverse differential pressure:**  
40 psid @ 70°F (2.8 bar @ 21°C)

**Recommended change-out pressure:**  
35 psid (2.4 bar)



# TefTEC™ Series Filter Cartridges

## *Absolute Rated PTFE Membrane Filter Cartridges*

TefTEC cartridge filters are constructed with naturally hydrophobic PTFE membrane and polypropylene support layers and components. The HIMA retentive PTFE membrane offers superior hydrophobicity and water intrusion resistance compared to PVDF and polypropylene membranes, and the cartridge construction offers a cost-effective alternative to all-fluorocarbon filters. TefTEC filters are ideal for gas/vent applications and the filtration of aggressive chemicals and solvents.

## FEATURES & BENEFITS

- High surface area, single-layer construction provides superior flow rates and minimizes filtration system size
- 100% Flushed with 18 M $\Omega$ -cm DI water and integrity tested
- Filters are manufactured, flushed, tested and packaged in an ISO Class 7 Cleanroom Environment
- Each filter element stamped with pore size, lot and serial number for identification and traceability
- Complete qualification guide available
- Available prewet for use with aqueous based chemicals

## CERTIFICATIONS

- USP Class VI: Meets USP Class VI Biological Test for Plastics
- FDA Listed Materials: All materials comply with FDA Title 21 of the Code of Federal Regulations Sections 174.5, 177.1520, and 177.1550 as applicable for food and beverage contact.
- European Directive for Food Contact: European Regulation No. 1935/2004 and European Regulation 10/2011: Tested for migration behavior and is suitable for contact with all kinds of foodstuffs with minimal rinse-up. Data available upon request.

## TYPICAL APPLICATIONS

- |                        |                    |                                |
|------------------------|--------------------|--------------------------------|
| • Aggressive chemicals | • Compressed gases | • Pharmaceutical Intermediates |
| • Strong acids/bases   | • Photoresists     | • Fermentation air             |
| • Solvents             | • Hot DI water     |                                |
| • Tank Vents           |                    |                                |

## PERFORMANCE SPECIFICATIONS

- Steam/Autoclave: Cartridges will withstand at least 100 steam/autoclave thirty-minute cycles @ 275°F (135°C)

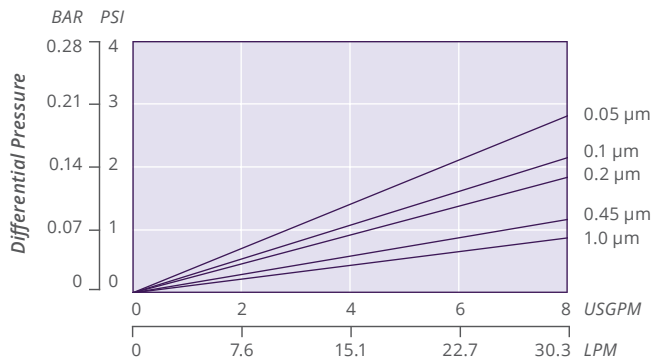
## TefTEC NOMENCLATURE INFORMATION

Filter Type	Retention Rating (microns)		Nominal Length (in)		End Configuration		Gasket or O-Ring	Options
TefTEC Series	0.05	0.45	-5	-20	P	Double Open End	B Buna-N	-W Pre-Wet
	0.1	1	-9.75*	-30	P2	226/Flat Single Open End	E EPDM	
	0.2		-10	-40	P3	222/Flat Single Open End	S Silicone	
					P7	226/Fin Single Open End	T Teflon encap. Viton (O-Rings only)	
					P8	222/Fin Single Open End		
					AM	Single Open End, Internal O-Ring	T Teflon (gaskets)	
					NPC	Double Open End, Internal O-Ring	V Viton	
Example: TefTEC 0.1-20P2S-W								
TefTEC	0.1		-20		P2		S	-W

\*Available only for DOE (P) configuration

### TefTEC FLOW RATE

Typical Flow Rate Clean Water at Ambient Temperature (per 10" cartridge)



For liquids other than water, multiply pressure drop by the fluid viscosity in centipoise

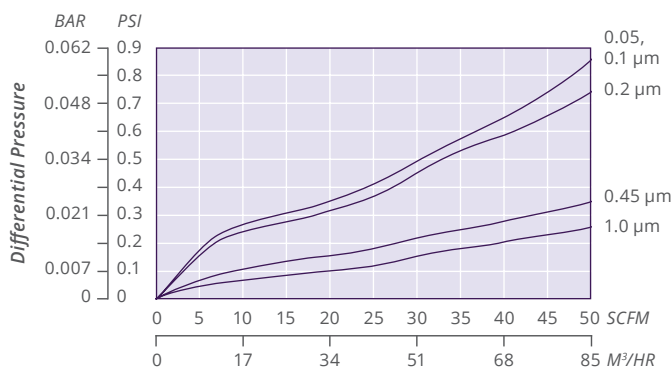
### INTEGRITY TEST SPECIFICATIONS

**Air Diffusion per 10-inch cartridge wet with 60/40 IPA/water.** Contact Graver Technologies for specific method.

Pore Size	Specification
0.05 μm	≤ 50 cc/min @ 22 psig (1.5 bar)
0.1 μm	≤ 50 cc/min @ 18 psig (1.2 bar)
0.2 μm	≤ 35 cc/min @ 12 psig (0.8 bar)
0.45 μm	≤ 15 cc/min @ 5 psig (0.34 bar)
1.0 μm	≤ 15 cc/min @ 3 psig (0.2 bar)

### TefTEC AIR FLOW RATE

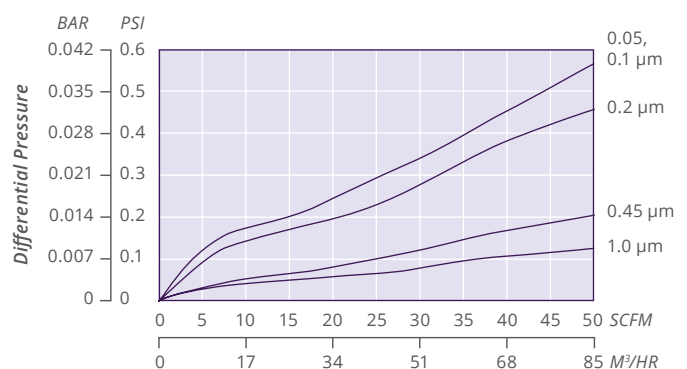
Air Flow Rate (per 10" cartridge)



Test conditions: System pressure at <10 psig (vent), 65°F (18°C), outlet open to atmosphere

### TefTEC AIR FLOW RATE

Air Flow Rate (per 10" cartridge)



Test conditions: System pressure at 30 psig, 65°F (18°C)

### FOR MORE INFORMATION

Customer Service/Technical Support: 1-888-353-0303

China: +86-21-5238-6576 Asia: +65-9671-9966

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Graver Technologies | 302-731-1700 | 800-249-1990  
info@gravertech.com | www.gravertech.com

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