



Graver Technologies

Filtration | Separation | Purification

ZTEC™-B Polyethersulfone Membrane Cartridge Filters

Pleated Polyethersulfone (PES) Membrane for Final Filtration of Wine & Beverages

ZTEC-B beverage grade cartridges are inherently hydrophilic and contain no added surfactants or wetting agents that could alter taste in beer, wine, bottled water and other beverages. The PES membrane offers superior flow characteristics, high contaminant capacity and consistent removal of particles and microorganisms. The cartridges are integrity testable to assure reliability, steamable and highly compatible with most cleaning/ sanitizing methods in the beverage industry.

Filter Features–Benefits

- Manufactured in an ISO Class 7 Cleanroom Environment
- 100% flushed with 18 MΩ-cm DI water and integrity tested
- Meets USP Class VI Biological Test for Plastics
- All materials are FDA listed for food and beverage contact
- Repeatably Steamable/Sanitizable
- High retention (LVR>7) of yeast and other spoilage organisms
- Pore size, lot and serial number are stamped on each filter element for identification and traceability

Typical Applications

- Bottled Water
- Beer
- Wines
- Soft Drinks
- Sparkling Wines
- Spirits

Filter Specifications

Media:	Asymmetric Polyethersulfone membrane	
Inner core, end caps, cage:	Polypropylene	
Support layers:	Spunbonded Polypropylene	
Gaskets/O-Rings:	Buna-N, EPDM, Silicone, Viton, Teflon Encapsulated Viton O-Rings	
Micron ratings:	0.2 µm, 0.45 µm, 0.65 µm	
Dimensions and Operating Parameters		
Nominal lengths:	9.75" 10", 20", 30", 40" (24.7, 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:	7.5 ft². (0.7m²) per 10 inch element	
Maximum sustained operating temperature:	180°F (82°C) at 20 psid (1.38 bar)	
Maximum differential pressure:	60 psid @ 80°F (4.14bar @ 27°C) 30 psid @ 160°F (2.07 bar @ 71°C) 15 psid @ 200°F (1.03 bar @ 93.3°C)	
Recommended change-out pressure:	40 psid (2.76 bar)	



Performance Specifications

Hot DI Water

Filter cartridge will withstand temperatures of 203°F (95°C) for up to 30 consecutive minutes.

Cleaning/Sanitization

Compatible with most common chemical cleaning, sanitizing and sterilizing agents and with pH range from 1–14. Consult factory for specific compatibility information.

Steam/Autoclave

Cartridges may be steamed or autoclaved for at least 5 one-hour cycles @ 275°F (135°C).

Typical Bacterial Retention Performance

0.2µm: LRV for *B. diminuta* ≥ 8
 0.45µm: LRV for *S. marcescens* ≥ 11 LRV for *L. brevis* ≥ 10
 0.65µm: LRV for *S. cerevisiae* ≥ 10 LRV for *L. brevis* ≥ 7

Integrity Test Specifications

Minimum Bubble Point values and maximum Diffusive Air Flow (per 10-inch cartridge) values for ZTEC-B filters wet with water:

Pore Size	Bubble Point	Diffusive Air Flow
0.2 µm:	≥ 35psig (2.4 bar)	≤ 20cc/min @ 30psig (2.1 bar)
0.45 µm:	≥ 24psig (1.7 bar)	≤ 20cc/min @ 20psig (1.4 bar)
0.65 µm:	≥ 18psig (1.2 bar)	≤ 20cc/min @ 15psig (1.0 bar)

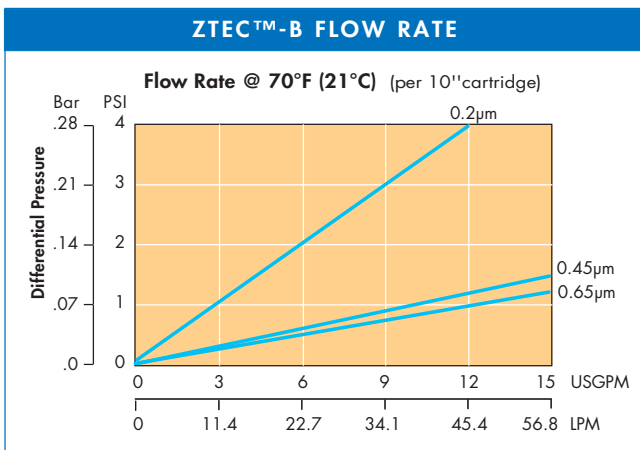
FDA Listed Materials

All materials comply with FDA title 21 of the Code of Federal Regulations Sections 174.5, as applicable for food and beverage contact.

ZTEC-B Nomenclature Information

ZTECB Filter Type ZTEC-B Series Filters	0.2 Retention Rating (microns) 0.2 0.45 0.65	-20 Nominal Length (inches) -9.75 -10 -20 -30 -40	P2 End Configuration P Double Open End P2 226/Flat Single Open End P3 222/Flat Single Open End P7 226/Fin Single Open End P8 222/Fin Single Open End	E Gasket or O-Ring S Silicone B Buna-N E EPDM V Viton T Teflon encap. Viton (O-Rings only)
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Example: ZTECB 0.2-20 P2E



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