Graver Technologies

FILTRATION | SEPARATION | PURIFICATION

ZTEC™ WB Series Filter Cartridges

Pleated Polyethersulfone (PES) Membrane for Critical Filtration in Beverage Applications

Protect your beverage from spoilage. ZTEC WB cartridge filters utilize a special polyethersulfone membrane to provide consistent removal of spoilage organisms and inorganic particulate. The product offers excellent retention efficiency and extended on-stream life making it an ideal filter for the clarification of beer, wine and bottled water. PES membrane available with 0.2, 0.45 and 0.65 µm pore sizes, is designed to meet and surpass the filtration criteria necessary to maintain product quality and characteristics. Produced in an ISO Class 7 cleanroom, the cartridges are integrity tested during production to assure performance and consistency.

Product Specifications

Media: Asymmetric Polyethersulfone Membrane

Inner core, end caps, cage: Polypropylene

Support layers: Spunbonded Polypropylene

Gaskets/O-Rings: Buna-N, EPDM, Silicone, Teflon Encapsulated Viton (O-Rings only), Viton

Micron ratings: 0.2, 0.45, 0.65 µm

Dimensions

Nominal lengths:

9.75"	10"	20"	30"	40"
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: 7.6 ft^2 (0.7 m^2) per 10" element

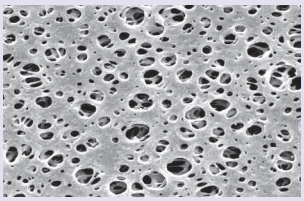
Operating Parameters

Maximum sustained operating temperature:
176°F (80°C) at 20 psid (1.38 bar)

Maximum differential pressure:
80 psid @ 70°F (4.14 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)



FEATURES & BENEFITS

- Manufactured in an ISO Class 7 Cleanroom Environment
- 100% flushed with ultrapure DI water and integrity tested
- Low adsorption of protein, color and flavor components
- Steamable/sanitizable for cleaning and reuse
- High log reduction values for spoilage organisms
- PES membrane provides high capacity contaminant loading
- Complete qualification guide available
- Quick wet treatment available

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 177.2440 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

- White Wine
- Red Wine
- Sparkling Wine
- Wine/Malt Coolers
- Champagne
- Distilled Spirits
- Bottled Water
- Beer

PERFORMANCE SPECIFICATIONS

- Hot DI Water: Filter cartridge will withstand temperatures of 185°F (85°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 50 thirty-minute cycles @ 275°F (135°C).

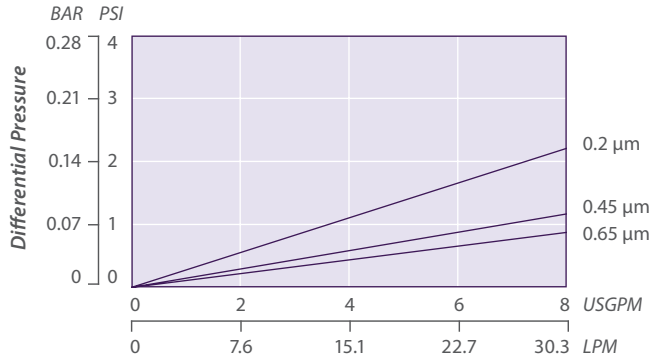
ZTEC WB NOMENCLATURE INFORMATION

Filter Type	Retention Rating (microns)	Nominal Length (inches)	End Configuration	Gasket or O-Ring	Options
ZTEC WB Series	**0.2** **0.45** **0.65**	**–5** **–20** **–9.75*** **–30** **–10** **–40**	**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 **AM** Single Open End, Internal O-Ring	**B** Buna-N **E** EPDM **S** Silicone **T** Teflon encap. Viton (O-Rings only) **V** Viton	–QW Quick Wet Treat-ment
Example: ZTEC WB 0.45–20P2E–QW					
ZTEC WB	0.45	–20	P2	E	–QW

*Available only for DOE (P) configuration

ZTEC WB 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

TYPICAL BACTERIAL RETENTION

0.2 µm	LRV for *Pseudomon aeruginosa* ≥ 11
0.45 µm	LRV for *Lactobacillus brevis* ≥ 7.6 LRV for *Oenococcus oeni* ≥ 10.0
0.65 µm	LRV for *S. cerevisiae* ≥ 8.7

INTEGRITY TEST SPECIFICATIONS

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

Pore Size	Bubble Point	Diffusive Air Flow
0.2 µm	≥ 26 psig (2.1 bar)	≤ 35 cc/min @ 21 psig (1.7 bar)
0.45 µm	≥ 20 psig (1.4 bar)	35 cc/min @ 16 psig (1.1 bar)
0.65 µm	≥ 17 psig (1.2 bar)	≤ 35 cc/min @ 14 psig (1.0 bar)

FOR MORE INFORMATION **GTX-296 10-16**

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