Graver Technologies

Filtration | Separation | Purification

ZTEC™-E Polyethersulfone Membrane Cartridge Filters

Pleated Polyethersulfone (PES) Membrane for Final Filtration of Ultrapure Water

ZTEC-E microelectronics grade cartridges represent Graver's latest development in ultrapure water filtration technology. The filters are inherently hydrophilic and contain no added surfactants or wetting agents that could contaminate pure and ultrapure water streams. The PES membrane offers superior flow characteristics, high contaminant capacity and consistent removal of sub-micron particles. The cartridges exhibit rapid rinse-up to 18 MΩ-cm resistivity and single digit ppb levels of TOC.

Filter Features–Benefits

- Manufactured, flushed, tested and packaged, in an ISO Class 7 Cleanroom Environment.
- Filters are100% flushed with 18 MΩ-cm DI water and integrity tested.
- Resistivity rinse-up to 18 MΩ-cm and single digit ppb TOC levels with minimal throughput.
- Available in a variety of end cap/adapter configurations to fit all industry-standard housings.
- Pore size, lot and serial number are stamped on each filter element for identification and traceability.

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:	*0.03 µm, 0.1 µm, 0.2 µm, 0.45 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:	*7.6 ft.² (0.7 m²) per 10-inch element*
Maximum differential pressure:	*60 psid @ 80°F (4.14bar @ 27°C) 30 psid @ 160°F (2.07 bar @ 71°C) 15 psid @ 203°F (1.03 bar @ 95°C)*
Maximum reverse differential pressure:	*40 psid @ 70°F (2.8 bar @ 21°C)*
Recommended change-out pressure:	*35 psid (2.4 bar)*

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.

Rinse-Up Volumes

- Resistivity rinse-up to 18 MΩ-cm: <30 minutes at a flow of 3 gpm per 10-inch element.
- Rinse-up to single digit ppb TOC in <120 minutes at a flow of 3 gpm per 10-inch element.

Integrity Test Specifications

Maximum Diffusive Air Flow (per 10-inch cartridge) values for ZTEC-E filters wet with water:

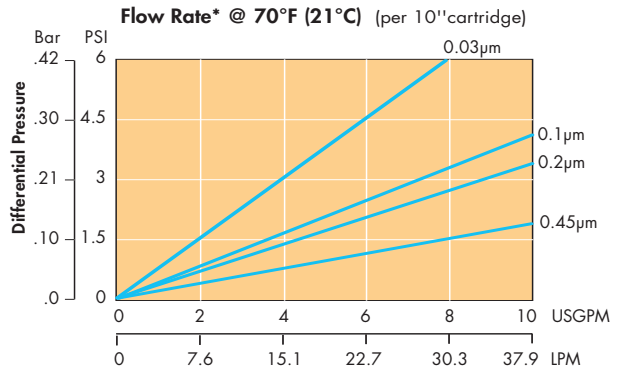
0.03 µm: ≤ 50 cc/min @ 45 psig (3.1 bar)
0.1 µm: ≤ 50 cc/min @ 40 psig (2.8 bar)
0.2 µm: ≤ 35 cc/min @ 30 psig (2.1 bar)
0.45 µm: ≤ 35 cc/min @ 20 psig (1.4 bar)

ZTEC-E Nomenclature Information

ZTEC-E	0.45	-30	P8	T
Filter Type ZTEC-E Series Filters		**Nominal Length (inches)** **-9.75** **-10** **-20** **-30** **-40**		**Gasket or O-Ring** **S** Silicone **B** Buna-N **E** EPDM **V** Viton **T** Teflon encap. Viton (O-Rings only)
	Retention Rating (microns) **0.03** **0.1** **0.2** **0.45**		**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 **AM** Single open end, internal O-Ring	

Example: ZTEC-E 0.45-30 P8T

ZTEC™-E FLOW RATE



For more information

Graver Technologies Customer Service: **1-888-353-0303**
Technical Support: **1-800-510-0932**
E-mail us at **info@gravertech.com**
Graver Technologies Europe (UK): **+44-1424-777791**

DISTRIBUTED BY:

Graver Technologies
200 Lake Drive
Glasgow,
DE 19702 U.S.A.
302-731-1700
800-249-1990
Fax: 302-369-0938
e-mail: info@gravertech.com
web site: www.gravertech.com

ISO 9001:2008
FM 38860