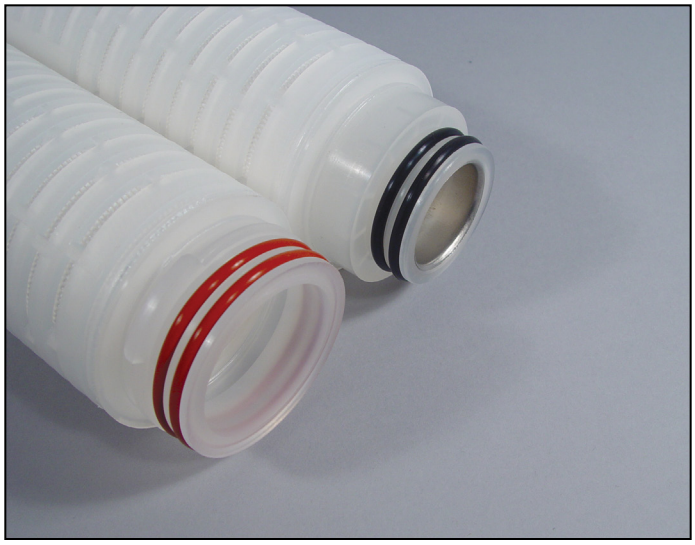
EPS Cartridge Filters

Polyethersulfone (PES) Membrane

CRITICAL PROCESS FILTRATION, INC.



EPS Filter Cartridges with symmetric polyethersulfone (PES) membrane are power flushed, low particle, low extractable filter cartridges that are resistant to most acids and bases and capable of handling strong sanitization agents. High flow rates make PES membrane filters a good choice for central DI systems. This membrane will also handle filtration of compatible chemicals and solvents at elevated temperatures. To remove manufacturing debris and minimize extractables, each cartridge module is pulse power flushed until the rinse effluent reaches 18+ Megohm-cm and less than 3 ppb TOC. Each cartridge module is also individually tested for integrity.

Construction Materials

Filtration Media	Symmetric Polyethersulfone (PES) Membrane
Media Support	Polypropylene
End Caps	Polypropylene
Center Core	Polypropylene
Outer Support Cage	Polypropylene
Sealing Method	Thermal Bonding
O-rings	Buna, Viton® (or FKM), EP, Silicone, FEP Encapsulated Silicone, FEP Encapsulated Viton (or FKM)

Dimensions

Length	5 to 40 in. (12.7 to 101.6 cm) nominal
Outside Diameter	2.75 in. (7.0 cm) nominal
Filtration Area	7.0 ft^2 (0.65 m^2) per 10 in. length

Applications

- UP DI Water
- Acids and Bases
- Plating Solutions
- Etch Baths
- Chemicals
- Solvents
- Process Water

Integrity Test Specifications

Per 10-in. length, water-wetted membrane

Pore Size	Air Diffusion Rate
0.03 µm	< 30 cc/min at 60 psig (4.1 barg)
0.10 µm	< 30 cc/min at 48 psig (3.3 barg)
0.22 µm	< 30 cc/min at 35 psig (2.4 barg)
0.45 µm	< 30 cc/min at 20 psig (1.4 barg)

Maximum Operating Parameters

Differential Pressure	
• **Forward**	50 psid (3.4 bard) at 20 °C (68 °F)
• **Reverse**	40 psid (2.7 bard) at 20 °C (68 °F)
Operating Temperature	82 °C (180 °F) at 10 psid (0.69 bard) in water
Recommended Changeout Pressure	35 psid (2.4 bard)

Sanitization/Sterilization

Filtered Hot Water	90 °C (194 °F), 30 minutes, multiple cycles, max 3 psid forward flow
Autoclave	121 °C (250 °F), 30 min, multiple cycles
In-line Steam	135 °C (275 °F), 30 min, multiple cycles

For all elevated temperature procedures above, a stainless steel support ring is required.

Chemical Sanitization

Performed using industry standard concentrations of hydrogen peroxide, paracetic acid, sodium hypochlorite and other selected chemicals.

Electronics Grade

Total Performance

Critical Process Filtration, Inc. is a vertically integrated manufacturer of filtration products to industries in which filtration is considered a critical part of the manufacturing process. We supply a complete line of products and services to help you cost effectively satisfy all your filtration requirements from a single source.

Extractables

The levels of extractables in aqueous extracts from E-grade filters are below 3ppb of TOC after product rinse during manufacturing. E-grade filters typically exhibit very low levels of non-volatile residues during startup.

Quality Assurance and Standards

Our goal is to ensure our customers the greatest possible value for their filtration dollar. Our state of the art manufacturing facility and quality management system both meet ISO 9001:2008 standards. Each operation from assembly and test to cleaning, drying, and packaging is done in appropriately rated clean rooms. A sophisticated MRP system collects and processes real time data from manufacturing centers and inspection points. This allows variable and attribute data to be quickly and easily analyzed driving constant improvements in both quality and cost.

Flow Rate

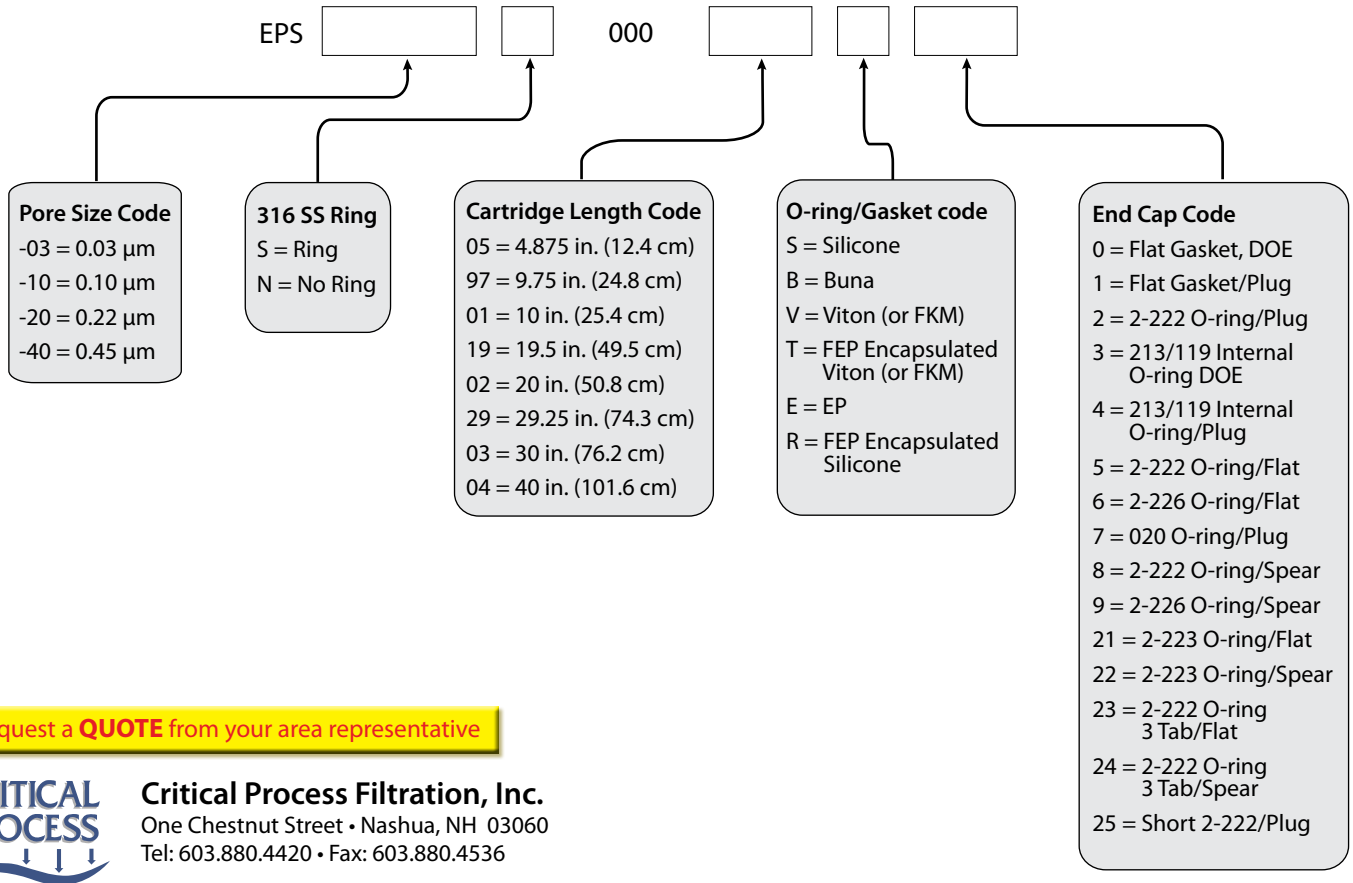
The Typical Flow Rates table represents typical water flow at a 1 psid (69 bard) pressure differential across a single 10 in. cartridge element. The test fluid is water at ambient temperature. Extrapolation for housings with multiple elements and higher pressure drops is acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Typical Flow Rates

Pore Size	0.03 µm	0.10 µm	0.22 µm	0.45 µm
GPM	1.5	2.5	3.2	6.0
LPM	5.67	9.46	12.11	22.71

Ordering Information

Cartridge order numbers have several variables from pore size to end cap type. For example, Electronics Grade Symmetric PES Membrane, 0.10 Micron Rating, No SS Support Ring, 20" Length, FEP Encapsulated Viton (or FKM) O-Rings, 2-222/Flat End Cap Configuration = EPS-10N00002T5.



Request a **QUOTE** from your area representative

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