



# EPD Filters

Pleated Polypropylene Depth Media

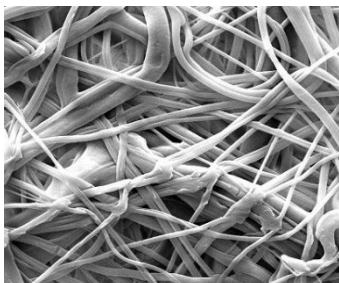


EPD cartridge and capsule filters are constructed with pleated Polypropylene Depth Media for prefiltering critical process liquids including water, chemicals and solvents. EPD products are designed to meet the needs of the electronics and high-purity chemical industries. Pore sizes range from 0.10 to 100  $\mu\text{m}$  and filter sizes scale from laboratory to full production using identical materials to ensure consistent results.

These filters have superior retention and protect downstream filters and processes by removing large amounts of particulate and other contaminants. EPD filters are rated at 99.9% efficiency at the indicated pore size. Designed for high capacity and long life, the EPD is a very cost-effective filter.

EPD filters are pulse power flushed until the rinse effluent reaches 18+ Megohm-cm and less than 3ppb TOC.

Critical Process provides unrivaled delivery times, technical consulting before purchasing, and very competitively priced high-performance products. Our comprehensive testing & analysis and validation services support your team whenever they need it. Your process experts partnering with our filtration experts is how we deliver your company's solution right the first time.



EPD filters are recommended for clarification & prefiltration in:

- Ultrapure DI Water
- Chemicals
- Acids & Bases
- Plating Solutions
- Etch Baths
- Solvents

## Clarification & Prefiltration



**CARTRIDGES – Nominal Dimensions**  
Length: 5 to 40 in. (12.7 to 101.6 cm)  
Outside Diameter: 2.75 in. (7.0cm)



**CAPSULES – Nominal Dimensions**  
Length: 2 to 30 in. (5.1 to 76.2 cm)  
Outside Diameter: 3.50 in. (8.9 cm)

## Maximum Operating Parameters

	CARTRIDGES	CAPSULES
<b>Liquid Operational Pressure</b>	N/A	80 psi at 68 °F (5.51 bard at 20 °C)
<b>Gases Operational Pressure</b>	N/A	60 psi at 68 °F (4.13 bar at 20 °C)
<b>Operating Temperature (water)</b>	180 °F at 30 psid (82 °C at 2.06 bard)	110 °F at 30 psid (43 °C at 2.06 bard)
<b>Forward Differential Pressure</b>	80 psid at 68 °F (5.51 bard at 20 °C) (Liquid and Gas)	Liquid - 80 psid at 68 °F (5.51 bard at 20 °C) Gas - 60 psi at 68 °F (4.13 bar at 20 °C)
<b>Reverse Differential Pressure</b>	50 psid at 68 °F (3.44 bard at 20 °C)	50 psid at 68 °F (3.44 bard at 20 °C)
<b>Recommended Changeout Pressure</b>	35 psid (2.41 bard)	35 psid (2.41 bard)

## Sanitization & Sterilization

<b>Filtered Hot Water*</b>	90 °C (194 °F), 30 minutes, multiple cycles, max 3 psid forward flow	N/A
<b>Inline Steam*</b>	275 °F (135 °C), 30 min, 25+ cycles	N/A
<b>Autoclave*</b>	250 °F (121 °C), 30 min, 25+ cycles	250 °F (121 °C), 30 min, 25+ cycles
<b>Chemical Sanitization</b>	Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite and other selected chemicals.	

\*Cartridge Filters – For all elevated temperature procedures above, a stainless-steel support ring is required.

## Filtration Area

	CAPSULES	CARTRIDGES AND CAPSULES				CARTRIDGES
Length	2" 5.08cm	5" 12.7cm	10" 25.4cm	20" 50.8cm	30" 76.2cm	40" 101.6cm
Area	1.1 ft <sup>2</sup> 0.10m <sup>2</sup>	2.9 ft <sup>2</sup> 0.27m <sup>2</sup>	6.24 ft <sup>2</sup> 0.58m <sup>2</sup>	12.48 ft <sup>2</sup> 1.16m <sup>2</sup>	18.72 ft <sup>2</sup> 1.74m <sup>2</sup>	24.96 ft <sup>2</sup> 2.32m <sup>2</sup>

## Construction Materials

<b>Filtration Media</b>	Pleated Polypropylene Depth Media
<b>Media Support</b>	Polypropylene
<b>End Caps, Center Core, Outer Support Cage, Capsule Housing</b>	Polypropylene
<b>Sealing Method</b>	Thermal Bonding
<b>O-Rings/Gaskets Cartridges only</b>	Buna, Viton® (or FKM), EPDM, Silicone, FEP Encapsulated Silicone, FEP Encapsulated Viton (or FKM)

## Extractables

EPD filters typically exhibit low levels of non-volatile residues.

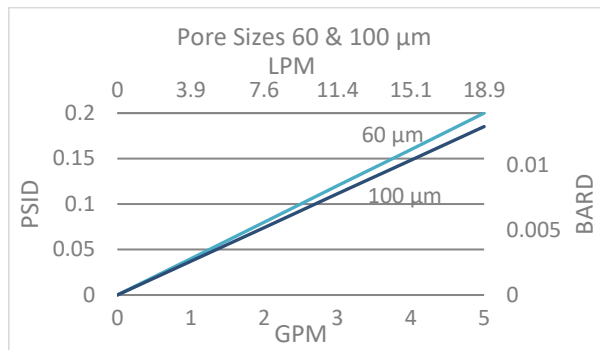
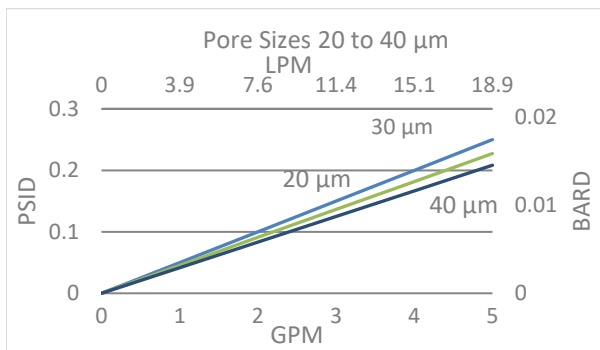
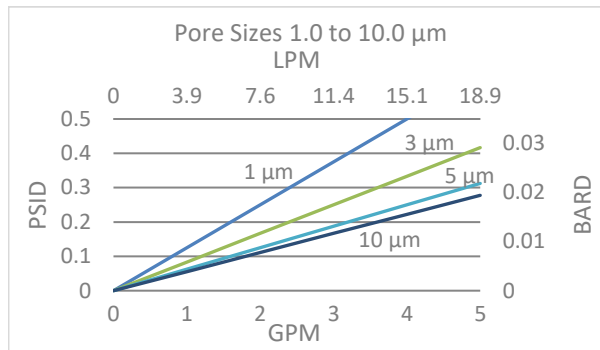
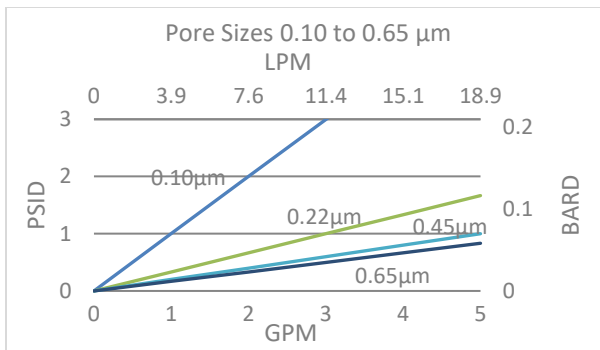
## TOC and Conductivity

EPD filter water effluent conforms with the TOC and water conductivity standards of SEMI Standard F63 after an appropriate flush with ultrapure water.

## Non-Fiber Releasing

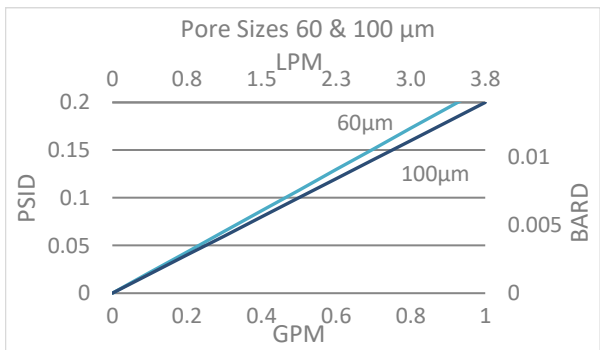
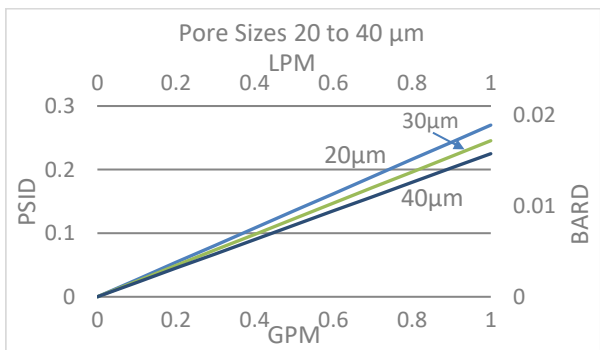
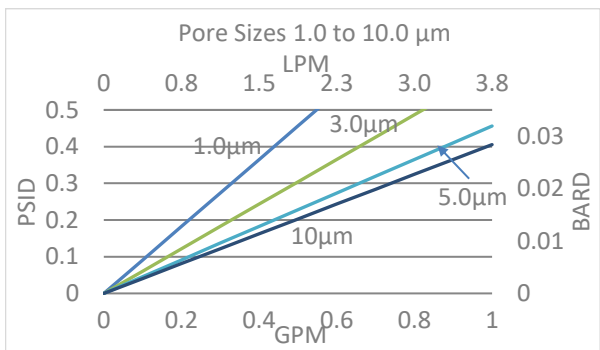
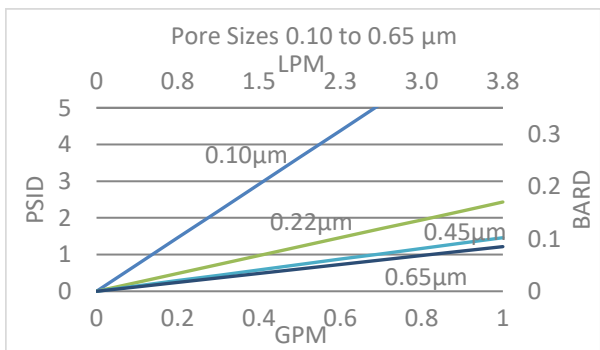
EPD filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters.

## Flow Rates for EPD Cartridges



Flow rates for Cartridge filters are per 10-inch length. The test fluid is water at ambient temperature.

## Flow Rates for EPD Capsules

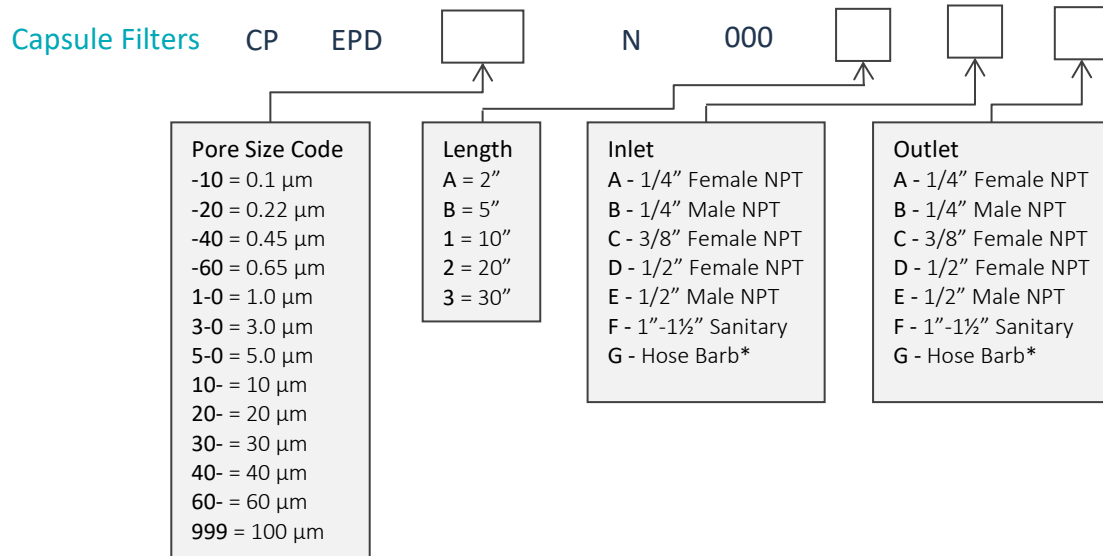
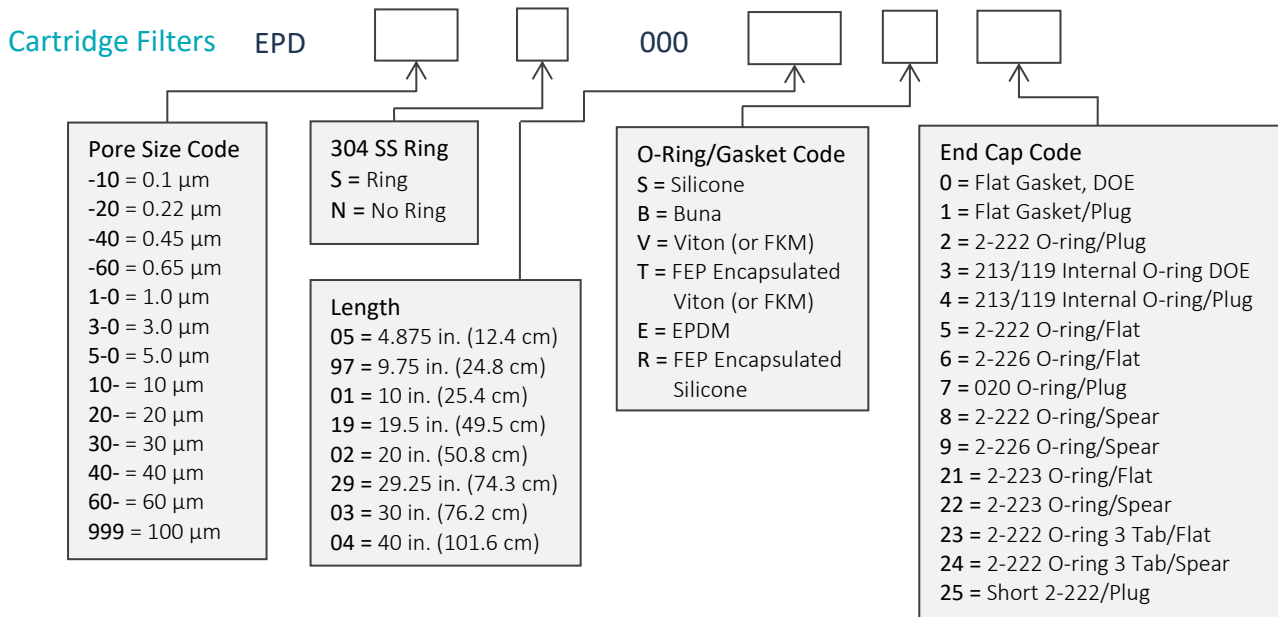


Flow rates for Capsule filters are per square foot of membrane area. The test fluid is water at ambient temperature. Flows are tested using a 2" capsule filter with 1/2" FNPT inlet and outlet ports. Rates will vary based on end configuration of the capsule.

## EPD Filters Ordering Information

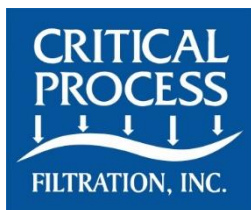
All Critical Process filters are configurable to meet customer specifications.  
Fill in the corresponding codes in the boxes below to build your Part Number.

To consult with one of our technical team members, request a quote or place an order:  
call (603) 880-4220 Ext. 106, or send an email to [sales@criticalprocess.com](mailto:sales@criticalprocess.com)



### Housings

CPF offers Model CSH sanitary housings in Single-Round (Inline and T-Style) and Multi-Round (3, 6, 8, 12 and 21-round) configurations.



One Chestnut Street  
Nashua, NH 03060  
603.880.4420  
FAX: 603.880.4536  
CriticalProcess.com

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