



EPD Filters

Pleated Polypropylene Depth Media

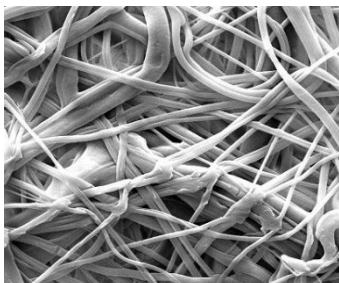


EPD cartridge and capsule filters are constructed with pleated Polypropylene Depth Media for prefiltering critical process liquids including water, chemicals and solvents. EPD products are designed to meet the needs of the electronics and high-purity chemical industries. Pore sizes range from 0.10 to 100 μm 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 fine particle removal in:

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

Fine Particle Removal



CARTRIDGES – Nominal Dimensions

Length: 5 to 40 in. (12.7 to 101.6 cm)
Outside Diameter: 2.75 in. (7.0 cm)



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
Liquid Operational Pressure	N/A	80 psi at 68 °F (5.52 bard at 20 °C)
Gases Operational Pressure	N/A	60 psi at 68 °F (4.14 bar at 20 °C)
Operating Temperature (water)	180 °F at 30 psid (82 °C at 2.07 bard)	110 °F at 30 psid (43 °C at 2.07 bard)
Forward Differential Pressure	80 psid at 68 °F (5.52 bard at 20 °C) (Liquid and Gas)	Liquid - 80 psid at 68 °F (5.52 bard at 20 °C) Gas - 60 psi at 68 °F (4.14 bar at 20 °C)
Reverse Differential Pressure	50 psid at 68 °F (3.45 bard at 20 °C)	50 psid at 68 °F (3.45 bard at 20 °C)
Recommended Changeout Pressure	35 psid (2.41 bard)	35 psid (2.41 bard)

Sanitization & Sterilization

Filtered Hot Water*	90 °C (194 °F), 30 minutes, multiple cycles, max 3 psid forward flow	N/A
Inline Steam*	275 °F (135 °C), 30 min, 25+ cycles	N/A
Autoclave*	250 °F (121 °C), 30 min, 25+ cycles	250 °F (121 °C), 30 min, 25+ cycles
Chemical Sanitization	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 (Nominal)

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

Construction Materials

Filtration Media	Pleated Polypropylene Depth Media
Media Support	Polypropylene
End Caps, Center Core, Outer Support Cage, Capsule Housing	Polypropylene
Sealing Method	Thermal Bonding
O-Rings/Gaskets Cartridges only	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.

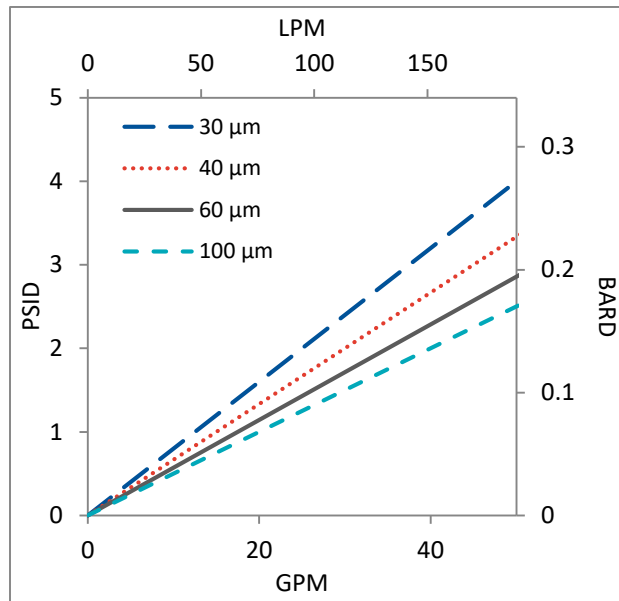
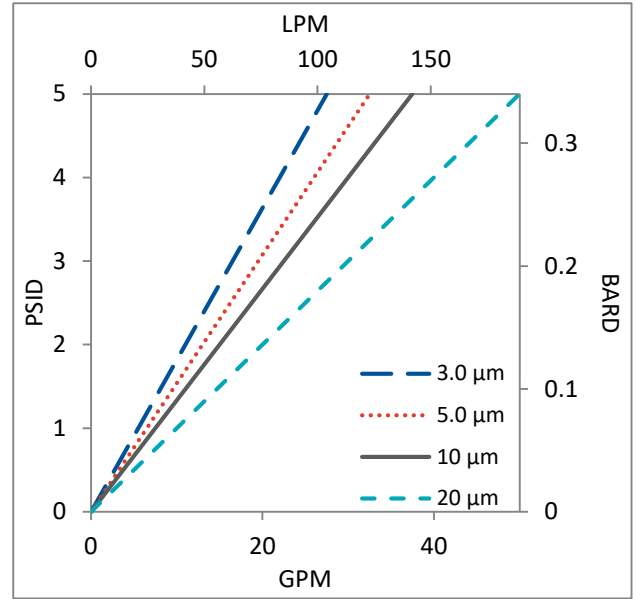
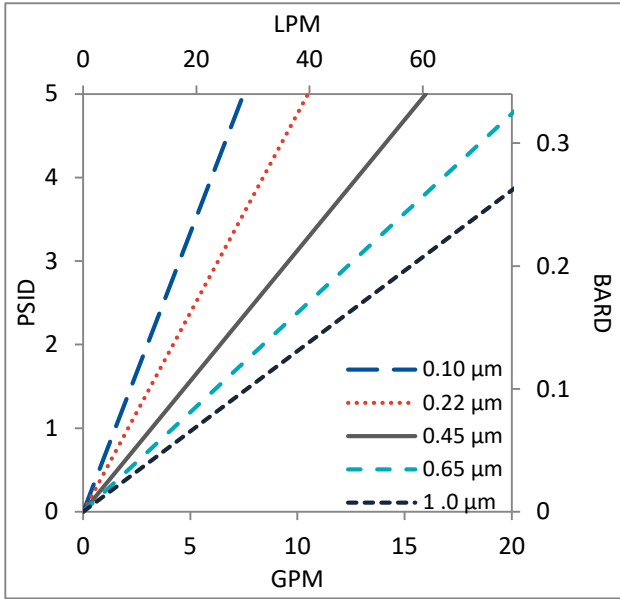
TOC and Conductivity

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

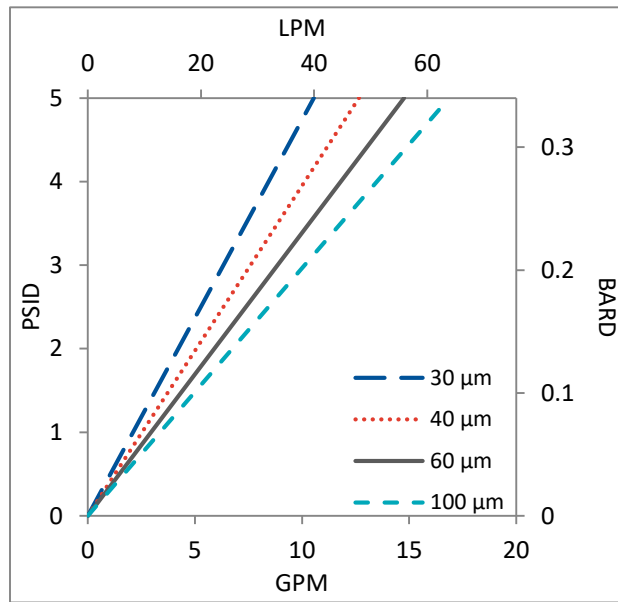
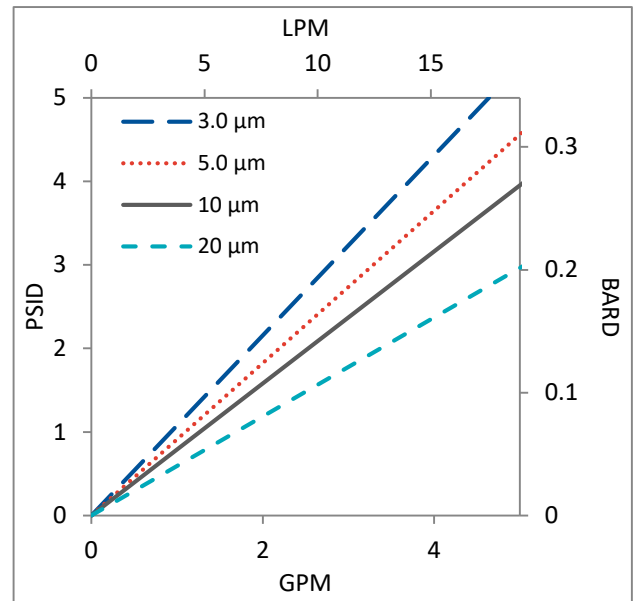
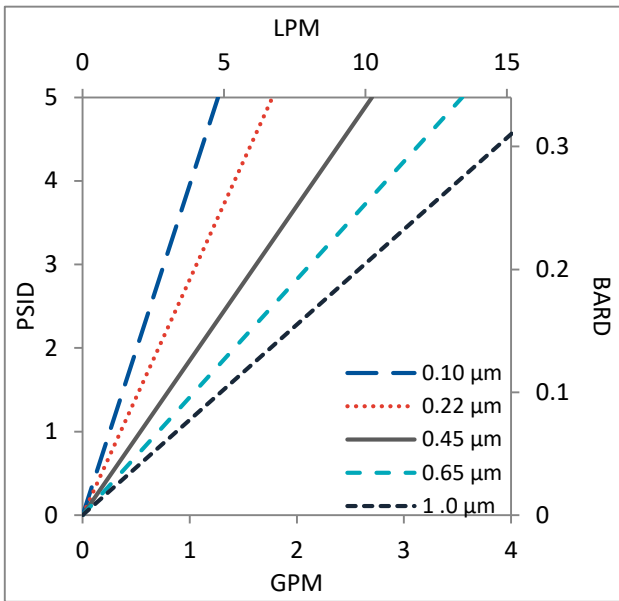
EPD filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters.

Flow Rates for EPD Cartridges by Pore Size



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

Flow Rates for EPD Capsules by Pore Size



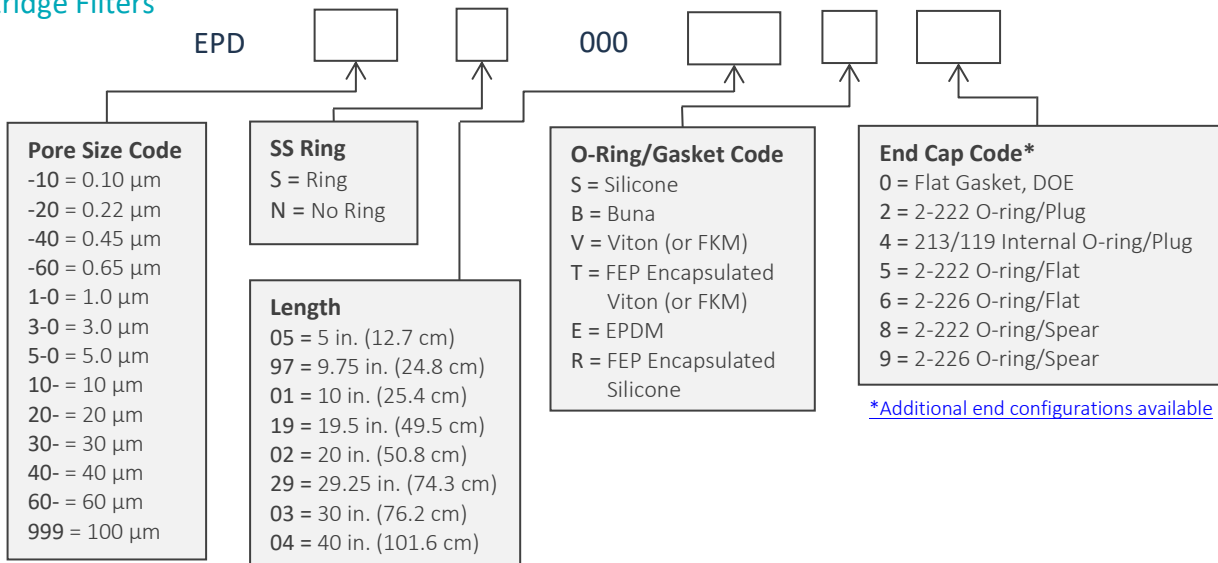
Flow rates for Capsule filters are tested using a 2" capsule filter with 1" sanitary inlet and outlet ports. The test fluid is water at ambient temperature. Flow rates for larger capsules will scale with filtration area. Rates will vary based on end configuration of the capsule.

EPD Filters Ordering Information

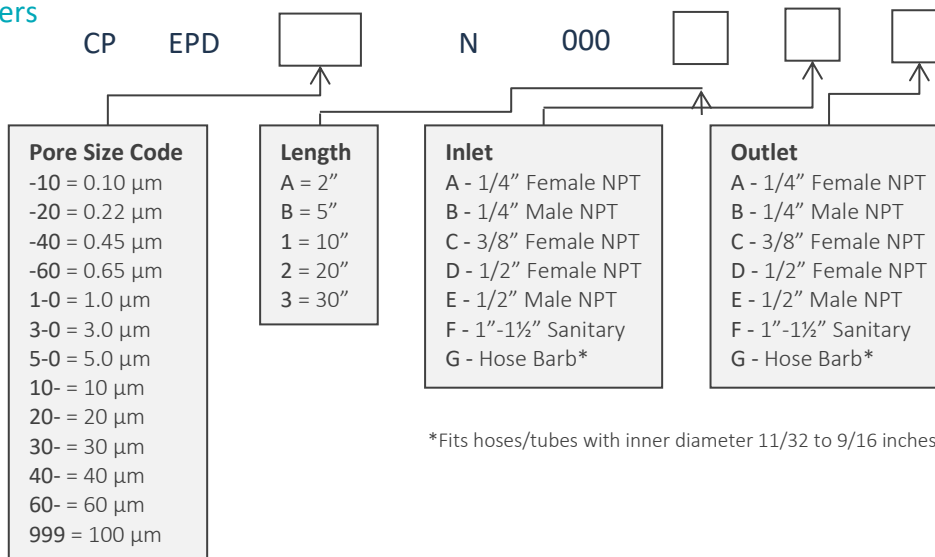
All Critical Process filters are configurable to meet customer specifications.
Fill in the corresponding codes in the boxes below to build your Part Number.

To consult with one of our technical team members, request a quote or place an order:
call (603) 880-4420 Ext. 106, or send an email to sales@criticalprocess.com

Cartridge Filters



Capsule Filters



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.



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