

FPD Filters

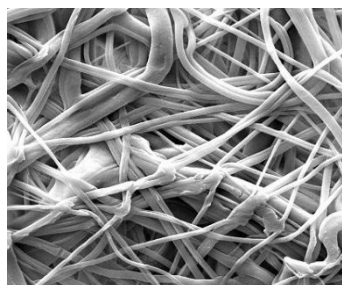
Pleated Polypropylene Depth Media



FPD cartridge and capsule filters are constructed with pleated Polypropylene depth media and designed to comply with all FDA requirements for the food industry. FPD filters are used for wine and beer clarification, as well as prefiltering water, food ingredients, cosmetics, chemicals, air and gases. 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 cartridges have low extractables that may affect the taste of the product or other characteristics such as foaming or brightness. FPD filters have 99.9% retention efficiency at the rated pore size and are designed for high throughput because of our unique graded density construction. This design also allows for filter cleaning and re-use in some applications.

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.

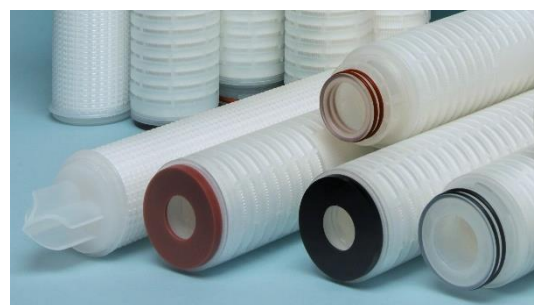


FPD filters are recommended for clarification & prefiltration in:

- Wine (clarification)
- Beer (clarification)
- Bottled Water
- Process Water
- Process Chemicals
- Air & Gases

Clarification & Prefiltration

Particle Filtration



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

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

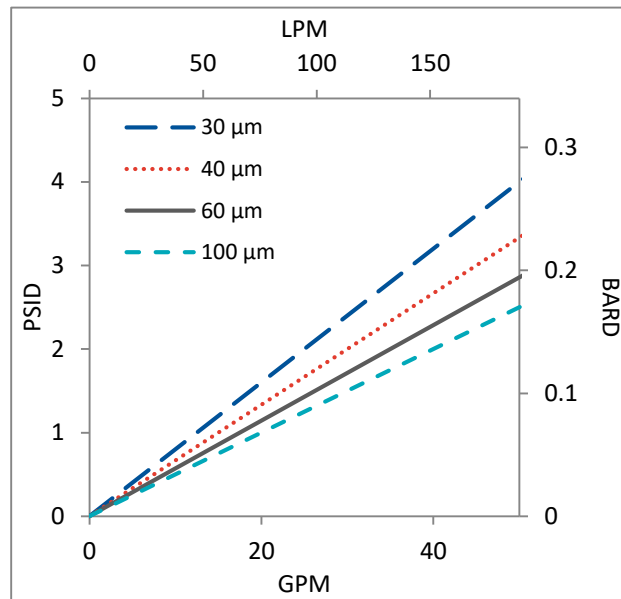
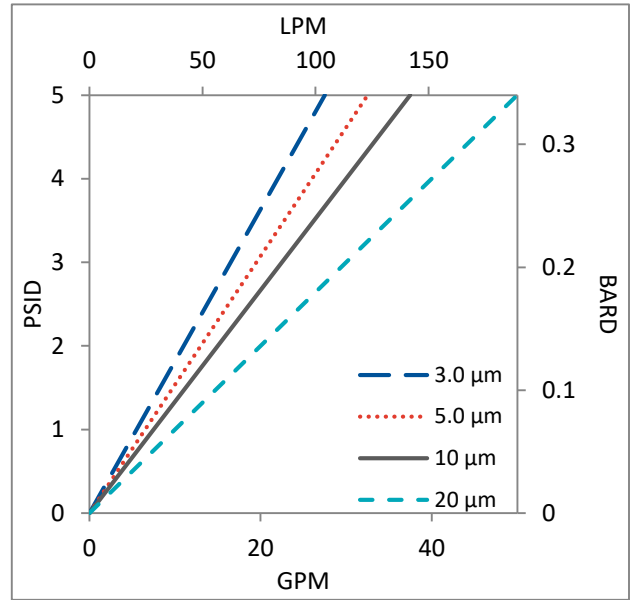
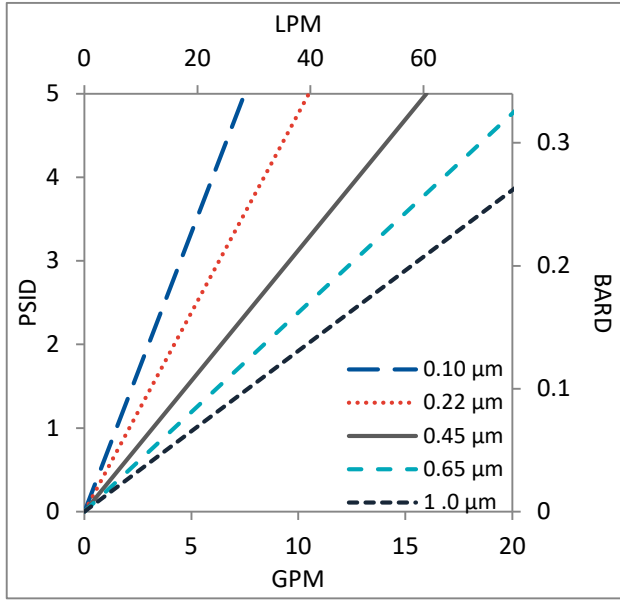
Non-Fiber Releasing

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

FDA and EC Compliance

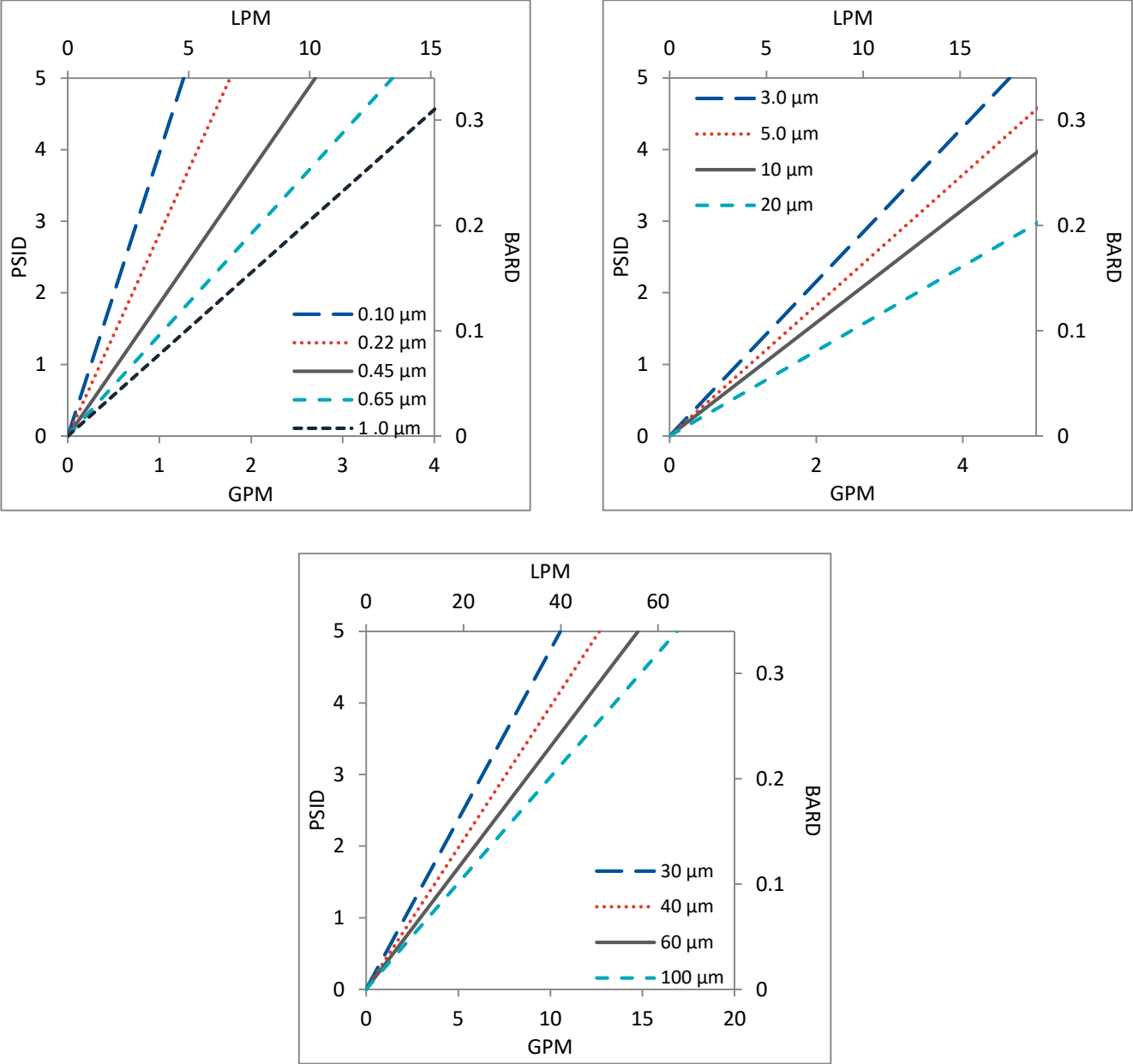
Materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as applicable. All materials used to make the filters are listed in European Commission Regulation EU/10/2011, Annex 1.

Flow Rates for FPD 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 FPD Capsules by Pore Size



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.

FPD 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

FPD 000

Pore Size Code	SS Ring	Length	O-Ring/Gasket Code	End Cap Code*
-10 = 0.10 µm	S = Ring	05 = 5 in. (12.7 cm)	S = Silicone	0 = Flat Gasket, DOE
-20 = 0.22 µm	N = No Ring	97 = 9.75 in. (24.8 cm)	B = Buna	2 = 2-222 O-ring/Plug
-40 = 0.45 µm		01 = 10 in. (25.4 cm)	V = Viton (or FKM)	4 = 213/119 Internal O-ring/Plug
-60 = 0.65 µm		19 = 19.5 in. (49.5 cm)	T = FEP Encapsulated Viton (or FKM)	5 = 2-222 O-ring/Flat
1-0 = 1.0 µm		02 = 20 in. (50.8 cm)	E = EPDM	6 = 2-226 O-ring/Flat
3-0 = 3.0 µm		29 = 29.25 in. (74.3 cm)	R = FEP Encapsulated Silicone	8 = 2-222 O-ring/Spear
5-0 = 5.0 µm		03 = 30 in. (76.2 cm)		9 = 2-226 O-ring/Spear
10- = 10 µm		04 = 40 in. (101.6 cm)		
20- = 20 µm				
30- = 30 µm				
40- = 40 µm				
60- = 60 µm				
999 = 100 µm				

*Additional end configurations available

Capsule Filters

CP FPD N 000

Pore Size Code	Length	Inlet	Outlet
-10 = 0.10 µm	A = 2"	A - 1/4" Female NPT	A - 1/4" Female NPT
-20 = 0.22 µm	B = 5"	B - 1/4" Male NPT	B - 1/4" Male NPT
-40 = 0.45 µm	1 = 10"	C - 3/8" Female NPT	C - 3/8" Female NPT
-60 = 0.65 µm	2 = 20"	D - 1/2" Female NPT	D - 1/2" Female NPT
1-0 = 1.0 µm	3 = 30"	E - 1/2" Male NPT	E - 1/2" Male NPT
3-0 = 3.0 µm		F - 1"-1½" Sanitary	F - 1"-1½" Sanitary
5-0 = 5.0 µm		G - Hose Barb*	G - Hose Barb*
10- = 10 µm			
20- = 20 µm			
30- = 30 µm			
40- = 40 µm			
60- = 60 µm			
999 = 100 µm			

*Fits hoses/tubes with inner diameter 11/32 to 9/16 inches

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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Data Sheet FPDDS Rev-