



FPVWL Filters

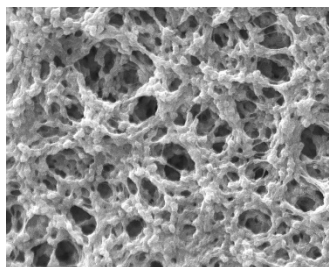
Hydrophilic PVDF Membrane



FPVWL Filters provide a broad range of single layer, hydrophilic, high capacity polyvinylidene fluoride (PVDF) cartridge and capsule filters used for the bacteria control and clarification/prefiltration in aqueous liquids. Pore sizes range from 0.22 to 1.0 μm and the filter devices scale from laboratory to full production using identical materials to ensure consistent results.

The hydrophilic PVDF filters are ideal for filtering aggressive aqueous solutions for bacteria/bioburden control applications. FPVWL filters deliver high flow and throughput with the broad chemical compatibility of a fluoropolymer.

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.



PVDF is the recommended media for bioburden control in:

- Wine
- Beer
- Clear Juices
- Bottled Water
- Aseptically Packaged Liquids

Bioburden Control

Clarification & Prefiltration



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 - 80 psid at 68 °F (5.52 bard 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, 5+ 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	1.0 ft ²	2.8 ft ²	6.0 ft ²	12.0 ft ²	18.0 ft ²	24.0 ft ²	
	0.09m ²	0.26m ²	0.56m ²	1.12m ²	1.68m ²	2.24m ²	

Construction Materials

Filtration Media	Hydrophilic High Capacity Polyvinylidene Fluoride (PVDF) Membrane with polyester support
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

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

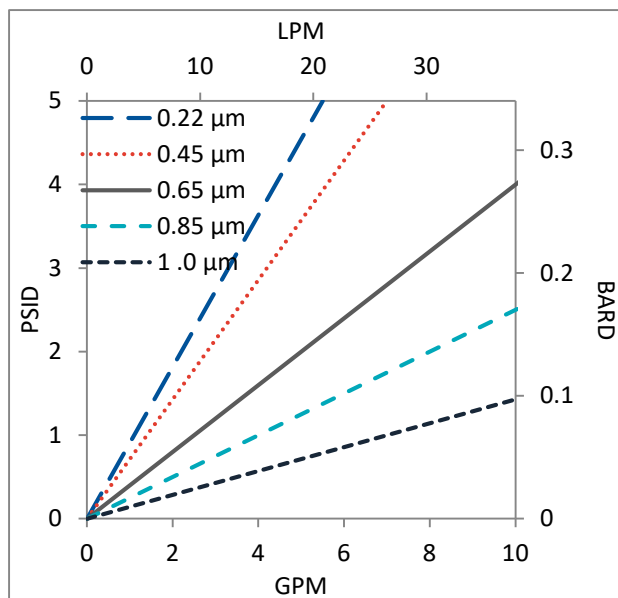
Non-Fiber Releasing

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

FDA and EC Compliance

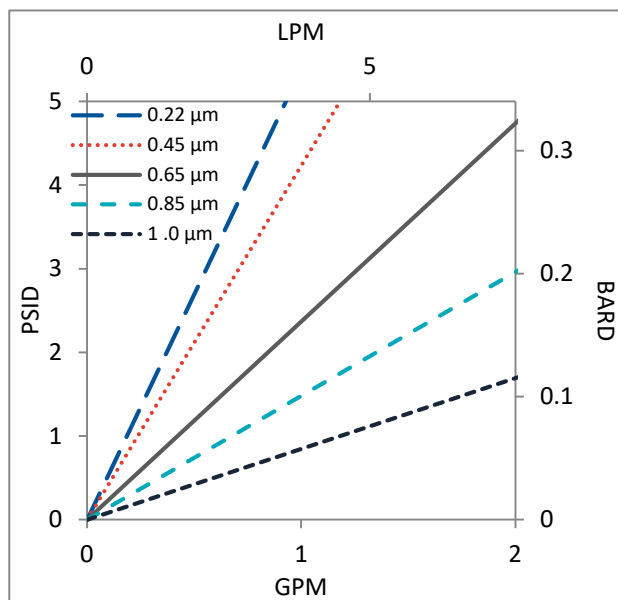
Materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as applicable. All materials used to make the filters are listed in European Commission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

Flow Rates for FPVWL 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 FPVWL 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.

FPVWL Filters Ordering Information

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 or [contact us here](#).

Cartridge Filters

FPVWL 000

Pore Size Code	SS Ring	Length	O-Ring/Gasket Code	End Cap Code*
-20 = 0.22 µm -40 = 0.45 µm -60 = 0.65 µm -80 = 0.80 µm 1-0 = 1.0 µm	S = Ring N = No Ring	05 = 5 in. (12.7 cm) 97 = 9.75 in. (24.8 cm) 01 = 10 in. (25.4 cm) 02 = 20 in. (50.8 cm) 03 = 30 in. (76.2 cm) 04 = 40 in. (101.6 cm)	S = Silicone B = Buna V = Viton (or FKM) T = FEP Encapsulated Viton (or FKM) E = EP R = FEP Encapsulated Silicone	0 = Flat Gasket, DOE 2 = 2-222 O-ring/Plug 4 = 213/119 Internal O-ring/Plug 5 = 2-222 O-ring/Flat 6 = 2-226 O-ring/Flat 8 = 2-222 O-ring/Spear 9 = 2-226 O-ring/Spear

*Additional end configurations available

Capsule Filters

CP FPVWL 000 -

Pore Size Code	Pre-Sterilized or Not	Length	Inlet	Outlet	Side Vent Options
-20 = 0.22 µm -40 = 0.45 µm -60 = 0.65 µm -80 = 0.80 µm 1-0 = 1.0 µm	S = Pre-Sterilized G = Gamma Stable N = Not Sterilized	A = 2" B = 5" 1 = 10" 2 = 20" 3 = 30"	A = 1/4" Female NPT B = 1/4" Male NPT C = 3/8" Female NPT D = 1/2" Female NPT E = 1/2" Male NPT F = 1" Sanitary G = Hose Barb* H = 1 1/2" Sanitary with side vent I = 1/2" Single Stepped Barb with side vent J = 3/4" Single Step Barb with Side Vent Y = 3/8" Compression (JACO®) (Top Luer lock vent only) Z = 6mm Quick Disconnect (Top Luer lock vent only)	A = 1/4" Female NPT B = 1/4" Male NPT C = 3/8" Female NPT D = 1/2" Female NPT E = 1/2" Male NPT F = 1" Sanitary G = Hose Barb* H = 1 1/2" Sanitary with side vent I = 1/2" Single Stepped Barb with side vent IB = 1/2" Single Stepped Barb with filling bell and side vent J = 3/4" Single Step Barb with Side Vent Y = 3/8" Compression (JACO®) (Top Luer lock vent only) Z = 6mm Quick Disconnect (Top Luer lock vent only)	1 = Luer Lock 2 = 1/8" Bleed Valve 3 = 1/4" Bleed Valve

O-Rings
(Bleed Valves Only)
S = Silicone
E = EP
V = Viton
B = Buna
K = FFKM

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



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Data Sheet FPVWLDS Rev D