

FPVWL Capsule Filters

High Capacity PVDF Membrane



Remove bacterial and particles from wine, beer, bottled water and juices

Ultra-low product adsorption to preserve flavor

Applications

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

FPVWL Capsules are hydrophilic and manufactured using high capacity polyvinylidene fluoride (PVDF) membrane. The proprietary membrane casting process creates a thick membrane with high capacity for holding contaminants, excellent retention characteristics, high flow rates and low protein binding. PVDF membrane provides excellent throughput and is available in multiple retention ratings to help protect product quality and assure consumer safety.

Applications for FPVWL capsule filters are removal of organic contaminants from beer, wine, bottled water, and aseptically packaged products like juices. Our food & beverage grade PVWL membrane capsules are used in aseptic filling applications to protect the critical final filters that remove spoilage organisms and keep products safe.

PVDF membrane is particularly suited for filtration of products that contain elements that can adsorb to media, such as proteins. The very low binding characteristics of PVDF make it an especially good choice for filtration of beer and wine.

FPVWL Capsule Filters - Filtration Area

Media	Capsule Length				
	2"	5"	10"	20"	30"
High Capacity PVDF Membrane	1.0 ft ² (0.093m ²)	3.0 ft ² (0.279m ²)	6.0 ft ² (0.557m ²)	12.0 ft ² (1.115m ²)	18.0 ft ² (1.672m ²)

Flow Rate / Filtration Area

The following table represents typical water flow at a one psi (69 mbar) pressure differential across a single 2 inch capsule with 1.0 ft² (0.093 m²) of media with 1/2" FNPT ports. The test fluid is water at ambient temperature. Higher pressure drops are acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Pore Size	0.22 μm	0.45 μm	0.65 μm	0.85 μm	1.0 μm
GPM	0.18	0.23	0.42	0.67	1.17
LPM	0.68	0.87	1.59	2.54	4.43

* For approximate flow rates for 5" through 30" capsules, refer to the appropriate cartridge data sheet

Construction Materials

Housing	Polypropylene
Filtration Media	High Capacity Polyvinylidene fluoride (PVDF) Membrane
Media Support	Polypropylene
End Caps	Polypropylene
Center Core	Polypropylene
Outer Support Cage	Polypropylene
Sealing Method	Thermal Bonding

Maximum Operating Parameters

Liquid Operational Pressure	80 psi (5.5 bar) at 20 °C (68 °F)
Gases Operational Pressure	60 psi (4.1 bar) at 20 °C (68 °F)
Operating Temperature	43 °C (110 °F) at 30 psi (2.1 bar) in water
Forward Differential Pressure	50 psid (3.4 bard) at 20 °C (68 °F)
Reverse Differential Pressure	40 psid (2.7 bard) at 20 °C (68 °F)
Recommended Changeout Pressure	35 psid (2.4 bard)

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.

Sanitization/Sterilization

Autoclave.....250° F (121° C), 30 min, 5+ cycles

Chemical Sanitization Industry standard concentrations of hydrogen peroxide, paracetic acid, sodium hypochlorite and other selected chemicals.

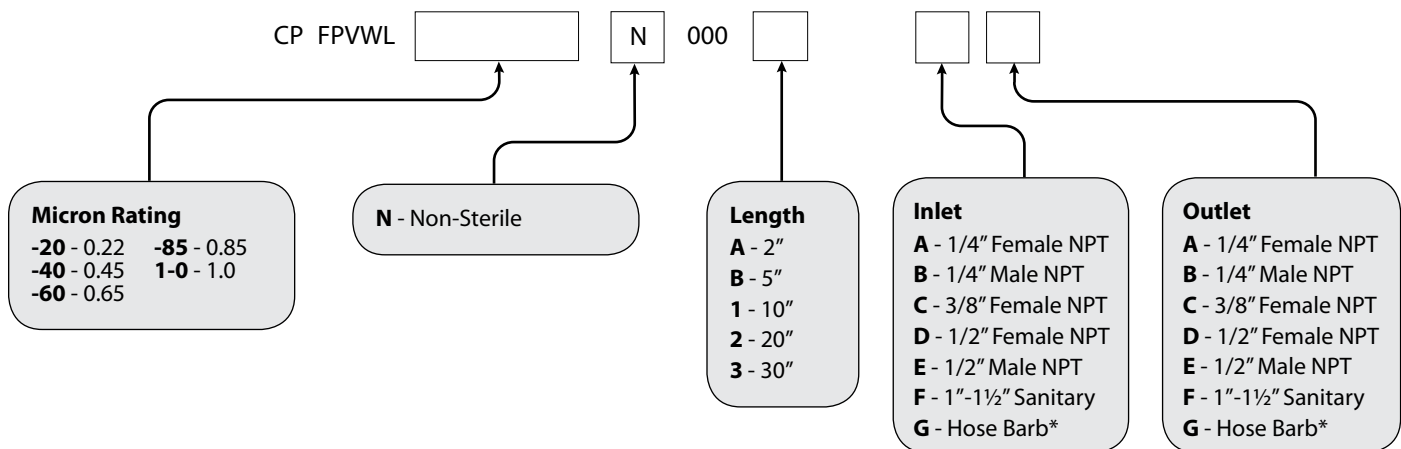
Note FVPWL capsules are not to be used in steam.

FDA and EC Compliance

All Critical Process Filtration capsule filters are designed to meet the FDA requirements for processing food and beverage products. The materials used to construct food & beverage grade filters are 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 appropriate. Membrane filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters All materials used to make the filters are listed in European Commission Regulation EU/10/2011, Annex 1.

Ordering Information

Capsule order number example: Food & Beverage Grade High Capacity PVDF Membrane, 0.22 Micron Rating, Non-Sterile, 10" Length, Sanitary Inlet, Sanitary Outlet = CFPVWL-20N0001FF.



Hose Barb Diameter Ranges*

	Minimum	Maximum
Outer Diameters	11/32" (8.6mm)	9/16" (14.0mm)
Inner Diameters	5/32" (4.0mm)	13/32" (10.5mm)

Extractables

Food & beverage grade filters typically exhibit low levels of non-volatile residues.

Quality Assurance and Standards

Critical Process Filtration uses state of the art computer controlled equipment to consistently produce high quality products as well as significantly reduce hand operations that can compromise quality. All manufacturing and testing is continuously monitored in real time so that data can be quickly and easily analyzed to facilitate improvements in both quality and cost.

The Critical Process Filtration manufacturing and quality systems meet rigorous ISO 9001:2008 standards. Each operation, including assembly, testing, cleaning, drying and packaging, is done in an appropriately rated clean room. Manufacturing is controlled using a sophisticated manufacturing system that networks work stations, manufacturing centers and inspection points. During the manufacturing and inspection processes, data is collected in real time to allow continuous quality monitoring and full traceability of all materials and processes.

Representative capsule filter assemblies from each manufacturing lot are integrity tested before lot release.

Request a QUOTE from your area representative



Critical Process Filtration, Inc.

One Chestnut Street • Nashua, NH 03060
Tel: 603.880.4420 • Fax: 603.880.4536

criticalprocess.com • sales@criticalprocess.com

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