

GPVWL Capsule Filters

High Capacity PVDF Membrane



Excellent throughput with high efficiency retention

High quality filtration of process water, specialty chemicals, inks and dyes

Optimized membrane design

Applications

- ◆ Process Water
- ◆ DI Water
- ◆ Inks & Dyes
- ◆ Specialty Chemicals

GPVWL capsule filters are hydrophilic and manufactured with high capacity polyvinylidene fluoride (PVDF) membrane. The proprietary membrane casting process creates a thick membrane with high dirt holding capacity, excellent retention characteristics and high flow rates. GPVWL capsules are used for critical applications in the processing of a wide range of liquids.

Applications for GPVWL capsule filters include removal of particulate contaminants from purified process water, final filtration of DI water, inks, dyes and specialty chemicals.

PVDF membrane is particularly suited for high volume filtration of product streams that contain elements that can adsorb to the media, such as preservatives. The very low binding characteristics of PVDF make it a good choice for inks, dyes, specialty chemicals and service fluids.

GPVWL 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)

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 GPVWL 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 GPVWL capsule 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.

Integrity Test Information

Representative samples from each manufacturing lot are tested for integrity to ensure consistent performance.

Extractables

GPVWL capsule filters generally 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.

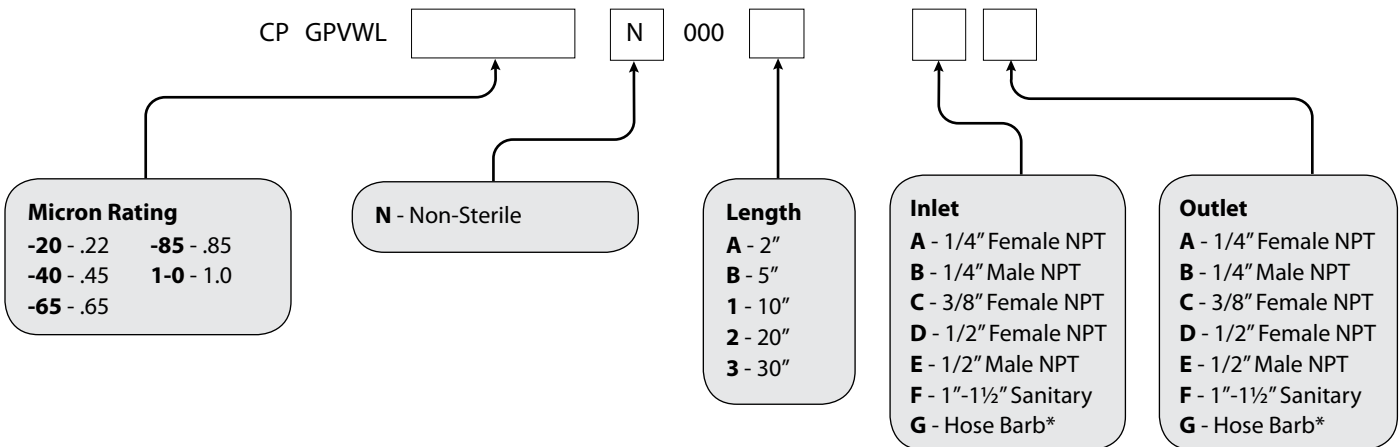
The Critical Process Filtration manufacturing and quality systems meet rigorous ISO 9001:2008 standards. Each operation, including assembly, testing, cleaning, drying and packaging, is done in an appropriately rated clean room. Manufacturing is controlled using a sophisticated manufacturing system that 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.

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.

Ordering Information

Capsule order number example: General Service Grade High Capacity PVDF Membrane, 0.22 Micron Rating, Non-Sterile, 10" Length, Sanitary Inlet, Sanitary Outlet = CPGPVWL-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)

Request a QUOTE from your area representative



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