

# GPVWB Capsule Filters

High Capacity Hydrophobic PVDF Membrane



Optimized high capacity membrane for maximum life

Designed for filtration of air and process gases

Vent filtration for protection of tank contents

Final filtration of solvents, alcohols and other non-aqueous liquids

## Applications

- ◆ Compressed Air
- ◆ Fermentation Air
- ◆ Solvents
- ◆ Tank Ventilation
- ◆ Non-Aqueous Solutions

GPVWB capsules are made with high capacity hydrophobic PVDF membrane. The high capacity membrane provides high dirt holding capacity, excellent throughput and high efficiency particle retention. These capsules are designed for use in the filtration of non- aqueous liquids, solvents, and as compressed gas and vent filters. The capsule media surface area, filter core design, pleat configuration and pleat packing density have been optimized to provide increased life resulting in lower filtration operating costs.

Specific applications for GPVWB capsule filters include filtration of solvents, alcohols and other non-aqueous liquids. The hydrophobic membrane makes it ideal for final filtration of compressed air and process gases, and for vent filtration to prevent contaminants from reaching ingredients in tanks.

## GPVWB Capsule Filters - Filtration Area

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

## Flow Rate / Filtration Area

The following table represents typical water or air/gas flow at a one psi (69 mbar) pressure differential across a single 2 inch capsule with 1.0 ft<sup>2</sup> (0.093 m<sup>2</sup>) of media with 1/2" FNPT ports. The test fluids are water or compressed air 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
<b>Water Flow Rates (gpm)</b>	0.18	0.23	0.42	0.67	1.17
<b>Air/Gas Flow Rates (scfm)</b>	>10	>12	>14	>15	>15

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

## Construction Materials

<b>Housing</b>	Polypropylene
<b>Filtration Media</b>	High Capacity Hydrophobic PVDF Membrane
<b>Media Support</b>	Polypropylene
<b>End Caps</b>	Polypropylene
<b>Center Core</b>	Polypropylene
<b>Outer Support Cage</b>	Polypropylene
<b>Sealing Method</b>	Thermal Bonding

## Maximum Operating Parameters

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

GPVWB 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.

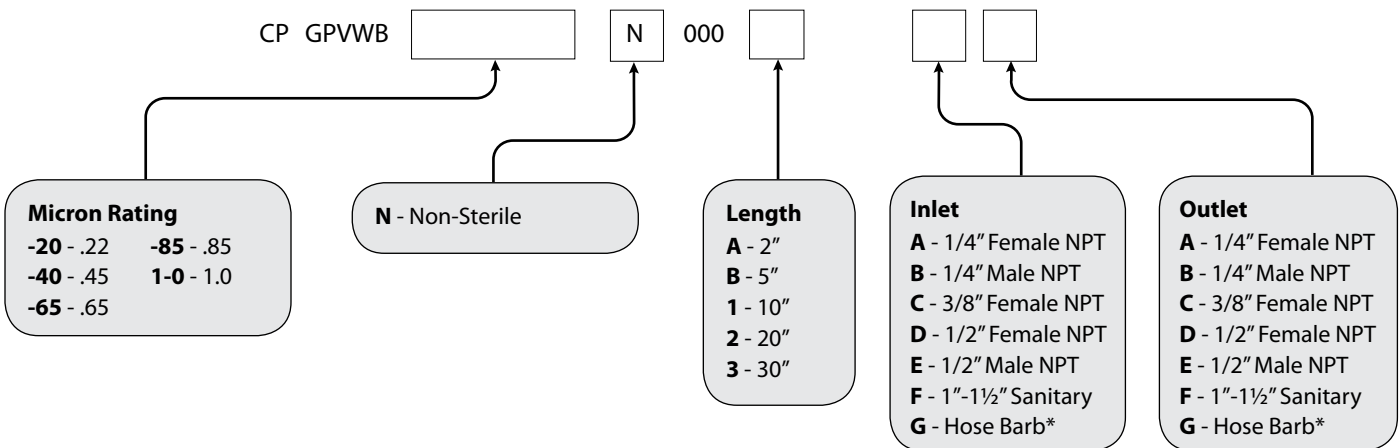
The Critical Process Filtration manufacturing and quality systems meet rigorous ISO 9001:2008 standards. Each operation, including assembly, testing, cleaning, drying and packaging, is done in an appropriately rated clean room. Manufacturing is controlled using a sophisticated manufacturing system that 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 Hydrophobic PVDF Membrane, 0.22 Micron Rating, Non-Sterile, 10" Length, Sanitary Inlet, Sanitary Outlet = CPGPVWB-20N0001FF.



Hose Barb Diameter Ranges\*

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

Request a QUOTE from your area representative



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