

# FCWPS Capsule Filters

High Capacity PES Membrane



Excellent flow rates with excellent retention characteristics

Remove organic contaminants from wine, beer, bottled water

Protect processes by removing organic contaminants from water, CIP solutions

Low product adsorption to preserve flavor

## Applications

- ◆ Wine
- ◆ Beer
- ◆ Juices
- ◆ Bottled Water
- ◆ Process Water
- ◆ Clean in Place Solutions
- ◆ Aseptically Packaged Liquids

FCWPS capsule filters are hydrophilic and manufactured with high capacity polyethersulfone (PES) membrane. The proprietary membrane casting process creates a thick membrane with high contaminant holding capacity, excellent retention characteristics and high flow rates.

FCWPS capsules are used to remove organic and other contamination in the critical clarification and filling filtration processes for wine, beer, bottled water and aseptically packaged products. FCWPS capsules also see service in removing organic and other contaminants from process water and clean in place solutions used in piping and other systems.

High capacity PES membrane is particularly suited for the filtration of products that contain elements that can adsorb to media, such as flavor elements and proteins. The lower binding characteristics of PES avoid adsorption and make it a good choice for filtration of beer and wine.

Food and Beverage Grade

## FCWPS Capsule Filters - Filtration Area

Media	Capsule Length				
	2"	5"	10"	20"	30"
<b>High Capacity PES Membrane</b>	0.9 ft <sup>2</sup> (836cm <sup>2</sup> )	3.0 ft <sup>2</sup> (2788cm <sup>2</sup> )	6.0 ft <sup>2</sup> (5574cm <sup>2</sup> )	12.0 ft <sup>2</sup> (11148cm <sup>2</sup> )	18.0 ft <sup>2</sup> (16722cm <sup>2</sup> )

## 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 ft<sup>2</sup> (930 cm<sup>2</sup>) 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	1.2 μm
<b>GPM</b>	0.18	0.21	0.68	1.05
<b>LPM</b>	0.68	0.79	2.57	3.97

\* 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 Polyethersulfone (PES) 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, multiple cycles

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

**Note** ..... FCWPS 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.

## Extractables

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

## Ordering Information

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

## Quality Assurance and Standards

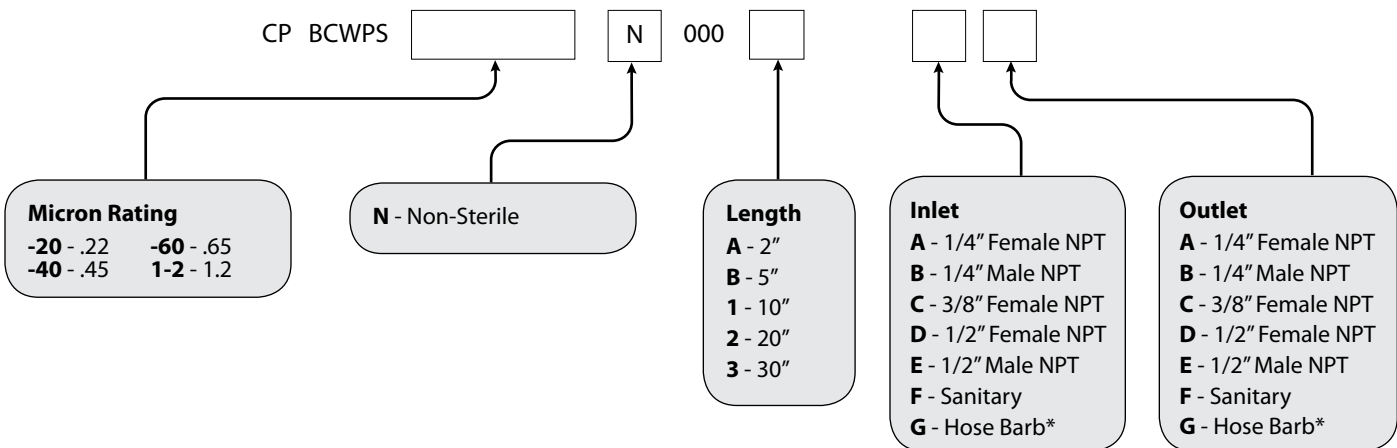
Critical Process Filtration uses state of the art computer controlled equipment to consistently produce high quality products as well as significantly reduce hand operations that can compromise quality. All manufacturing and testing is continuously monitored in real time so that data can be quickly and 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 are integrity tested before manufacturing lot release.

## 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.



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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