FCWPS Micro Capsule Filters

High Capacity PES Membrane

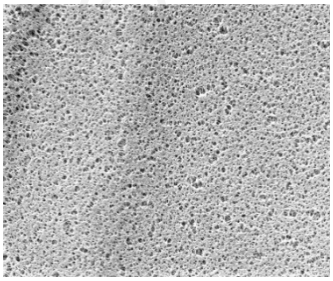
FCWPS Micro Capsule filters are constructed with proprietary high capacity Polyethersulfone (PES) membranes, available in single or dual layers. Designed to comply with all FDA requirements for the food industry, they are used for reducing particles in critical clarification and filling processes found in beer, wine, water and juice production. Pore sizes range from 0.1 to 1.0 µm and filter sizes scale from laboratory to full production using identical materials to ensure consistent results.

Critical Process' FCWPS Micro Capsule filters are hydrophilic and deliver high flow and throughput. Their low binding characteristics make them highly efficient, which is critical to protecting downstream filters from prefouling and extending the life of final filters.

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.

Clarification & Prefiltration

MICRO CAPSULES – Nominal Dimensions
Body Length: 1.9 in. (4.8 cm)
Overall Length: 2.8 to 3.8 in. (7.1 to 9.7 cm)
Outside Diameter: 2.6 in. (6.6 cm)



FCWPS Micro Capsule filters are recommended for the filtration of:

- Wine
- Beer
- Clear Juices
- Bottled Water
- Process Water
- Clean-in-Place Solutions
- Ophthalmics

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Maximum Operating Parameters

	MICRO CAPSULES
Liquid Operational Pressure	80 psi at 68 °F (5.52 bard at 20 °C)
Gases Operational Pressure	60 psi at 68 °F (4.14 bar at 20 °C)
Operating Temperature (water)	110 °F at 30 psid (43 °C at 2.07 bard)
Forward Differential Pressure	Liquid - 80 psid at 68 °F (5.52 bard at 20 °C) Gas - 60 psi at 68 °F (4.14 bar at 20 °C)
Reverse Differential Pressure	50 psid at 68 °F (3.45 bard at 20 °C)
Recommended Changeout Pressure	35 psid (2.41 bard)

Sanitization & Sterilization

Autoclave*	250 °F (121 °C), 30 min, 25+ cycles
Chemical Sanitization	Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite and other selected chemicals.

Extractables
FCWPS Micro Capsule filters typically exhibit low levels of non-volatile residues.

Non-Fiber Releasing
FCWPS Micro Capsule 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.

Single Layer Filtration Area (Nominal)

Area	0.569 ft^2
	529 cm^2

Double Layer Filtration Area (Nominal)

Area	0.45 ft^2
	418 cm^2

Construction Materials

Filtration Media	Single or Dual Layer High Capacity PES Membrane with Polyester Support
Media Support	Polypropylene
End Caps, Center Core, Outer Support Cage, Micro Capsule Housing	Polypropylene
Sealing Method	Thermal Bonding

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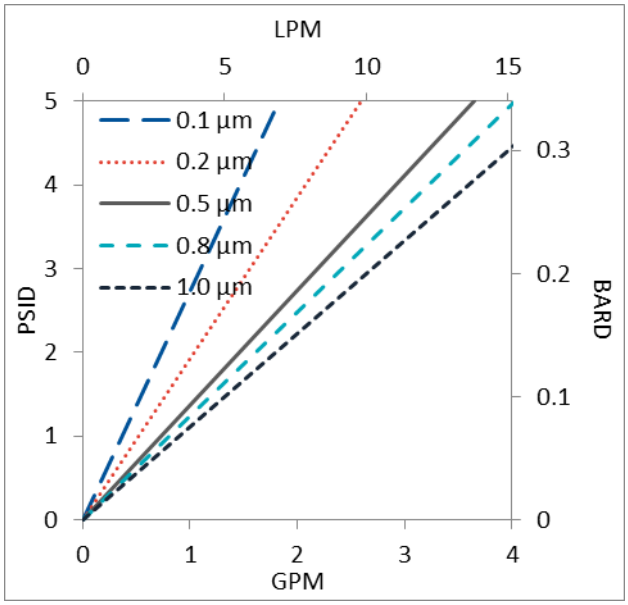
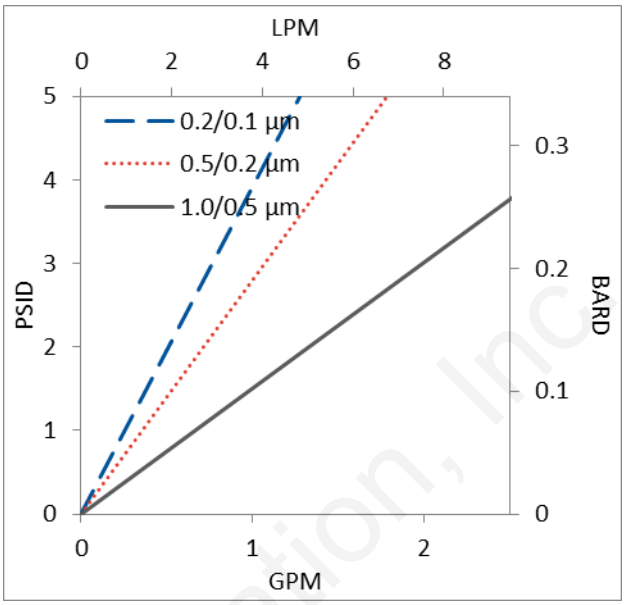
Flow Rates for FCWPS Micro Capsules by Pore Size





Flow rates for Micro Capsule filters are per filter. The test fluid is water at ambient temperature. Flows are tested using a Micro capsule filter with ½" Sanitary inlet and outlet ports. Rates will vary based on end configuration of the Micro capsule.

FCWPS Micro Capsule Filters Ordering Information

All Critical Process filters are configurable to meet customer specifications.
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.

Micro Capsule Filters

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Prefilter Pore Size Code
Blank = no prefilter
-20 = 0.2 µm
-50 = 0.5 µm
-80 = 0.8 µm
1-0 = 1.0 µm

Final Layer Pore Size Code
-10 = 0.1 µm
-20 = 0.2 µm
-50 = 0.5 µm
-80 = 0.8 µm
1-0 = 1.0 µm

Pre-Sterilized or Not
S = Pre-Sterilized
N = Not Sterilized
A = Autoclaved ✣

Inlet
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
4 = Luer Lock
5 = 1/2" Sanitary*
6 = 1/4" MNPT
7 = Side Bleed Valve

Inlet Vent Port
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
4 = Luer Lock
6 = 1/4" MNPT

Outlet
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
3B = 1/2" Hose Barb with Filling Bell
4 = Luer Lock
5 = 1/2" Sanitary*
6= 1/4" MNPT

Outlet Vent Port
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
4 = Luer Lock
6 = 1/4" MNPT
7 = Side Bleed Valve

Side Vent O-Ring**
B = Buna
E = EP
S = Silicone
V = Viton (or FKM)
K = FFKM

*When choosing the Sanitary Inlet/Outlet, the Luer Lock or bleed valve option is required for the Vent Port
** O-Ring is only available on Bleed Valve

✣ Not Validated for Sterility

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