

FGD Capsule Filters

Pleated Fiberglass Depth Media



Composite media filter rated at 99% retention at pore size

High contaminant holding capacity as well as excellent retention

Wide range of retention ratings

Protect downstream membrane filters

Applications

- ◆ Wine
- ◆ Beer
- ◆ Bottled Water
- ◆ Soft Drinks
- ◆ Syrups
- ◆ Aseptically Packaged Liquids

FGD capsules are designed using composite media filter modules containing a fiberglass depth media and a final downstream layer of polypropylene depth media to ensure fiber free filtrate. They are rated at 99% retention at the rated pore size and have high contaminant holding capacity. These high performance capsule filters are used in clarification and pre-filtration applications as well as for bioburden reduction.

Applications for FGD capsule filters are clarifying filtration of wine, beer and other fruit juice based products. Bioburden reduction in fermented products such as wine and beer can be done efficiently with the FGD capsules. When used in final filling applications, the filters protect the critical membrane filters downstream. Fiberglass depth media filter modules from each lot are integrity tested during production. Filters are rinsed to assure no manufacturing debris remains in the finished capsules.

Food and Beverage Grade

FGD Capsule Filters - Filtration Area*

| Media | Capsule Length | | | | |
|---------------------------------|--|--|--|---|---|
| | 2" | 5" | 10" | 20" | 30" |
| Pleated Fiberglass Depth | 1.0 ft ² (0.093m ²) | 2.8 ft ² (0.260m ²) | 5.8 ft ² (0.539m ²) | 11.6 ft ² (1.078m ²) | 17.4 ft ² (1.617m ²) |

*Average – Filtration area varies with media thickness and porosity.

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 | 0.30 μm | 0.45 μm | 0.65 μm | 1 μm | 2 μm | 3 μm | 5 μm | 10 μm | 20 μm | 30 μm |
|------------|---------|---------|---------|---------|------|------|------|-------|-------|-------|--------|
| GPM | 0.50 | 0.60 | 1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 3.2 | 3.6 | 4.0 | >4.0 |
| LPM | 1.89 | 2.27 | 3.78 | 4.54 | 6.05 | 7.57 | 9.08 | 12.11 | 13.62 | 15.14 | >15.14 |

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

Construction Materials

| | |
|---------------------------|--|
| Housing | Polypropylene |
| Filtration Media | Pleated Fiberglass and Polypropylene Composite Depth Media |
| 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) |

Integrity Test Information

Representative sample capsule elements are factory tested for integrity before shipment. Field duplication of these tests is not practical because of the absence of commercial portable testing equipment.

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 FGD 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. 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.

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.

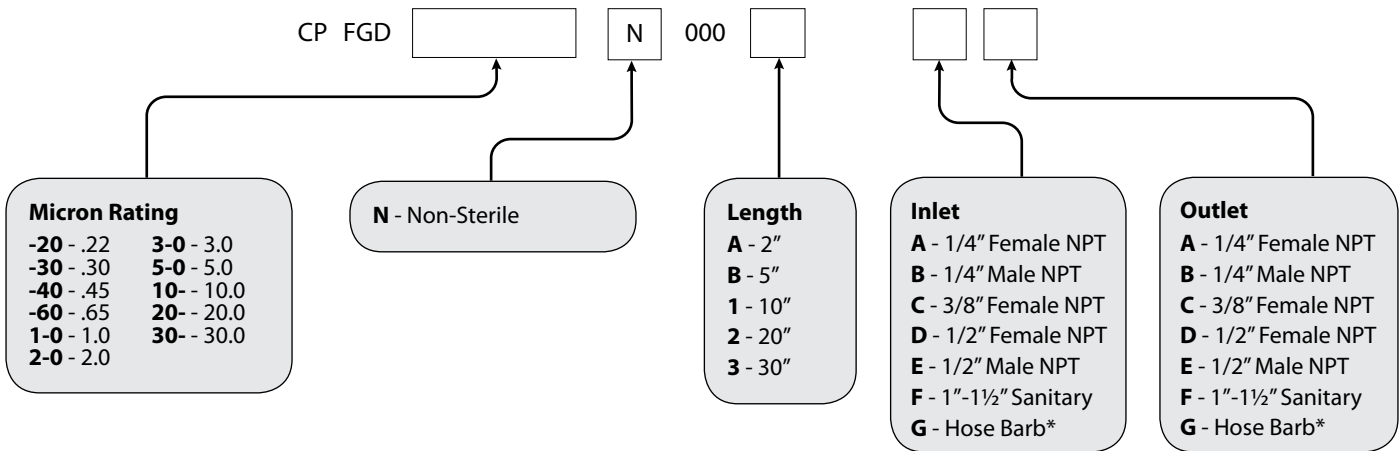
The Critical Process Filtration manufacturing and quality systems meet rigorous ISO 9001:2008 standards. Each operation, including assembly, testing, cleaning, drying and packaging, is done in an appropriately rated clean room. Manufacturing is controlled using a sophisticated manufacturing system that 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: Food & Beverage Grade Pleated Fiberglass Depth Media, 1.0 Micron Rating, Non-Sterile, 10" Length, Sanitary Inlet, Sanitary Outlet = CPFGD1-0N0001FF.



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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