

Memtrex* FE Capsules

FACT SHEET

with PTFE membrane



Figure 1: Memtrex FE Capsule Filters

Description and Use

Memtrex FE capsule filters (CMFE) consistently achieve absolute filtration with low extractables. Constructed using a 100% PTFE membrane, they are especially designed for reliable general chemical and air filtration (Figure 1).

Typical Applications

Memtrex FE capsule filters are specifically designed for chemical and vent filtration applications, including:

- Acids, base, and oxidant filtration
- Bulk chemical filtration
- Sterile venting
- Electronics grade chemical filtration
- Process air and gas filtration

Features and Benefits

- Ideal for aggressive chemicals, air and process gas filtration and vent uses
- Highly hydrophobic membranes with low extractables
- Individually integrity tested during manufacturing

Available Absolute Micron Ratings

Memtrex FE Capsule Filters are available in absolute micron ratings of: 0.1, 0.20.45 and 1.0 μ m.

Materials of Construction

- Filtration Media: Hydrophobic Teflon (PTFE) Membrane
- Membrane Support Layers: Polypropylene Microfiber
- Structural Components: Polypropylene

Table 1 details the dimensions, and Table 2 shows the operational limits of the Memtrex FE Capsule Filters. Table 3 details the results of integrity testing at various micron ratings and test pressures.

Table 1: Dimensions

Diameter: 3.5" (9 cm)		
Capsule Size	Effective Filtration	Area Length ¹
Small	0.8 ft ² (748 cm ²)	3.5–5.0" (9–13 cm)
Medium	3.0 ft ² (2806 cm ²)	7.6–9.1" (19–23 cm)
Large	5.9 ft ² (5500 cm ²)	11.5–13.0" (29–33 cm)

¹ Varies with connection style

Table 2: Operational Limits

Maximum Operational Pressure	80 psi (5.5 bar) @ 70°F (21°C) in Liquid
	55 psi (3.8 bar) @ 70°F (21°C) in Gas
Maximum Differential Pressure	60 psi (4.1 bar) @ 70°F (21°C)
Maximum Operating Temperature	110°F (43°C) at $\leq$ 30 psi (2.0 bar) Operating Pressure

Table 3: Integrity Testing

Water intrusion is < 1.8 cc/min per ft ² of effective filtration area	
Micron Rating	Test Pressure
0.1 µm	40 psi (2.8 bar)
0.2 µm	30 psi (2.1 bar)
0.45 µm	20 psi (1.4 bar)
1.0 µm	5 psi (0.3 bar)

Additional Information

Memtrex FE Capsule filters may be sanitized with a variety of commonly used chemical agents. The capsules may be repeatedly autoclaved at 257°F (125°C) for 30 minutes at up to 5 cycles.

Veolia Water Technologies certifies that the materials contained in its Memtrex FE Capsule filters meet U.S. FDA requirements for food contact under the applicable regulations in 21 CFR. For further information, contact the Veolia Technical Services Department. Memtrex FE filters meet the test criteria for USP class VI-121°C Plastics.

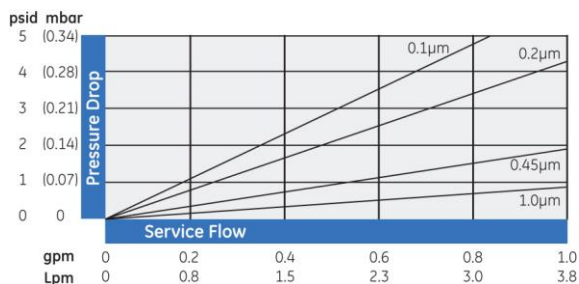


Figure 2: Memtrex FE small capsule flow rate performance in clean water.²

Figures 2, 3 and 4 show the test data results of flow performance for the small, medium and large Memtrex FE Capsule Filters using a 10-inch length filter.

Veolia filter capsules are designed and manufactured for resistance to a wide range of chemical solutions. Conditions will vary with each application and users should carefully verify chemical compatibility. Consult Table 4 below for ordering information or contact your Veolia distributor for more information.

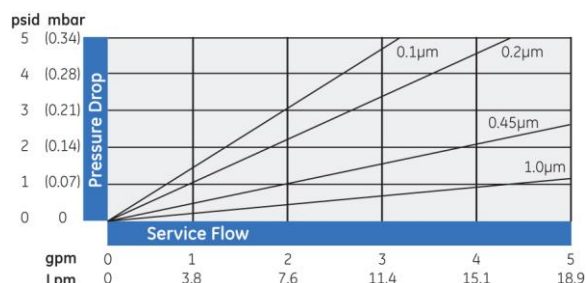


Figure 3: Memtrex FE medium capsule flow rate performance in clean water.²

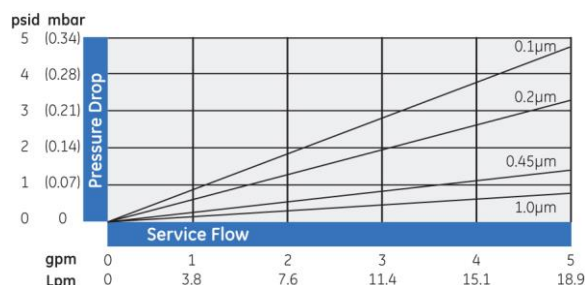


Figure 4: Memtrex FE large capsule flow rate performance in clean water.²

²Data based on 10 inch length filter

Table 4: Ordering Information

Type	Absolute Micron Rating	Capsule Size	Connections ³
CMFE	91 = 0.1 µm 92 = 0.2 µm 94 = 0.45 µm 01 = 1.0 µm	08 = small (0.8 ft ²) 30 = medium (30. ft ²) 59 = large (5.9 ft ²)	L = ¼" – ½" (6.3 – 12.7 mm) hose barb M = 3/8" (9.5 mm) hose barb R = ¼" (6.3 mm) NPT male W = ½" (12.7 mm) NPT male Y = 1.5" (38.1 mm) sanitary flange

³ Choose an inlet and outlet connections



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