Description
The Protec® RF0.5 capsule filter is a borosilicate glass fiber prefilter that offers a high critical degree of retention and provides outstanding protection of more expensive downstream sterilizing filters. The filter is optimized for bioburden reduction as well as removal of colloidal contaminants, aggregated and non-product proteins, lipids, and other particles in a broad range of biopharmaceutical applications. It is ideal for prefiltration and clarification of biologicals, protein solutions, vaccines, fermentation broths, cell culture media, serum, and plasma fractions.

Materials of Construction
All components of Protec® large capsule filters are either animal component free or in compliance with EMEA/410/01 Rev. 3 (EDQM 5.2.807/2011:50208), and US Code of Federal Regulations 9 CFR 94.18 and 21 CFR 189.5. These materials are listed for food contact use in the Code of Federal Regulations (CFR), Title 21, as below:

- Filtration medium: Borosilicate glass microfiber CFR Title 21, 177.2420
- Upstream support: Polypropylene CFR Title 21, 177.1520
- Downstream support: Polypropylene CFR Title 21, 177.1520
- Outer guard: Polypropylene CFR Title 21, 177.1520
- Core: Polypropylene CFR Title 21, 177.1520
- End caps: Polypropylene CFR Title 21, 177.1520
- Capsule shell: Polypropylene CFR Title 21, 177.1520
- Sealing method: Thermal bonding

Pore Size
0.5 μm

Effective Filtration Area
6.4 ft² (0.59 m²) per 10"

Operating Characteristics
- Operating temperature range: 32 °F to 100 °F (0 °C to 38 °C)
- Maximum temperature rating: 140 °F @ 55 psig (60 °C @ 3.8 bar), liquid service
- Maximum temperature rating: 140 °F @ 35 psig (60 °C @ 2.4 bar), gas service
- Maximum operating pressure: 90 psig @ 100 °F (6.2 bar @ 38 °C), liquid service
- Maximum operating pressure: 60 psig @ 100 °F (4.1 bar @ 38 °C), gas service
- Maximum reverse pressure: 15 psig @ 100 °F (1.0 bar @ 38 °C)

Sterilization
Autoclave: 121 to 135 °C (15 to 30 psi, 1 to 2 bar), 30 to 60 min, ≥ 3 cycles.
Capsules must not be in-line steam sterilized.

Biological Safety
Protec® filters meet the requirements as specified in the current USP <88> Class VI plastics and USP <87> cytotoxicity tests. No adhesives or surfactants are used in the construction of Protec® filter capsules.

Quality Assurance
Protec® filters comply with the Food and Drug Administration Code of Federal Regulations, Title 21, Parts 210 and 211. Product is manufactured and packaged in a cleanroom facility that, through voluntary compliance, meets or exceeds FDA Good Manufacturing Practice Standards. To ensure product reliability, Meissner’s Quality Assurance staff continually audits the manufacturing process for conformance to its Quality Management System. Each Protec® filter is integrity tested during manufacture and is clearly marked with filter type, lot number, and serial number.
Ordering Guide

Sterile Filter Option
- Standard capsule: CR
- Sterile capsule: GR

Housing Material Designator
Gamma-stable polypropylene, animal component free (ACF): 2

Vent/Drain Ports
- Inline Configuration
- No vents/drains
- 0
- Vent/drain at inlet and outlet
- 2
- Vent/drain at outlet
- 4
- SPD vent/drain at inlet/outlet
- K
- SPD vent/drain, outlet only
- L
- T-style Configuration
- No vent; no drain
- 0
- No vent; standard 1/4" drain plug
- 1
- Standard vent valve; std. drain plug
- 2
- Standard vent & drain plug; 3/4" sanitary gage port
- 3
- Standard vent; no drain
- 4
- Standard vent; no drain; gage port
- 5
- No vent; no drain; gage port
- 6
- No vent; sanitary drain valve
- A
- Standard vent; sanitary drain valve
- B
- Standard vent; sanitary drain valve; gage port
- C

Inlet/Outlet Connections
- 00 1" sanitary flange
- 02 1" sanitary flange in & 3/8" hose barb out
- 08 1" sanitary flange in & 3/4" hose barb out
- 09 1" sanitary flange in & 9/16" hose barb out
- 0C 1" sanitary flange in & 1/2" hose barb out
- 0D 1" sanitary flange in & 1" hose barb out
- 22 3/8" hose barb
- 77 3/4" sanitary flange
- 88 3/4" hose barb
- 99 9/16" hose barb
- AA 1/2" male Flaretek®
- BB 3/4" male Flaretek®
- CC 1/2" hose barb
- DD 1" hose barb

Body Style
- N Inline configuration
- T T-style configuration

Filter Length
- 1 10"
- 2 20"
- 3 30"
- 4 40"
- 5 50"

Product | Filter Grade | Retention Rating
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Protec® borosilicate glass microfiber media | RF | 0.5 μm

Additional information about this filter product is available in the Protec® Green Docs document at www.meissner.com/green-docs.

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