



0.2 µm VTV-grade Standard Capsule Filter — CS(2), CL(2), CJ2 Model

Description

The Steridyne® VTV0.2 is a hydrophobic PVDF membrane filter optimized for critical air and gas applications. This sterilizing grade filter is virus retentive and ideal for pharmaceutical gases, bioreactor air and sterile venting. Encapsulated Steridyne® filters withstand irradiation and are applicable for integration into single-use systems needing aeration or gas exhaust. The filter is 100% integrity tested during manufacture and has the added benefit of quality certification that meets the critical demands of the pharmaceutical, biotechnology and related industries.

Materials of Construction

All components of the filter are either animal component free or in compliance with EMA/410/01 Rev. 3 (EDQM 5.2.8 07/2011:50208), 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:

Membrane:	Polyvinylidene fluoride (PVDF)	CFR Title 21, 177.2510
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 0.2 µm

Minimum Bubble Point 18 psi (1.24 bar), 60% IPA/40% water
17 psi (1.17 bar), 70% IPA/30% water

Maximum Diffusion Rate CS: 3.0 mL/min @ 15 psig (1.03 bar), 60% IPA/40% water
CL: 6.3 mL/min @ 15 psig (1.03 bar), 60% IPA/40% water
CJ: 9.8 mL/min @ 15 psig (1.03 bar), 60% IPA/40% water

Maximum Water Intrusion Rate CS: 0.1 mL/min water @ 20 psig (1.38 bar)
CL: 0.2 mL/min water @ 20 psig (1.38 bar)
CJ: 0.3 mL/min water @ 20 psig (1.38 bar)
Specification can vary by instrumentation; consult factory.

Typical Air Flow Rate CS: 2.86 scfm @ 1 psid (3.52 Nm³/hr @ ΔP 50 mbar)
CL: 5.51 scfm @ 1 psid (6.79 Nm³/hr @ ΔP 50 mbar)
CJ: 9.50 scfm @ 1 psid (11.70 Nm³/hr @ ΔP 50 mbar)

Bacterial Retention >10⁷ per cm² removal of *Brevundimonas diminuta* per ASTM F838

Operating Characteristics

Operating temperature range:	32 °F to 100 °F (0 °C to 38 °C)
Maximum temperature rating:	160 °F @ 35 psig (71 °C @ 2.4 bar)
Maximum operating pressure:	75 psig @ 100 °F (5.2 bar @ 38 °C), liquid service
Maximum operating pressure:	50 psig @ 100 °F (3.4 bar @ 38 °C), gas service
Maximum reverse pressure:	15 psig @ 100 °F (1.0 bar @ 38 °C)

Sterilization

Autoclave: 121 °C to 135 °C (15 to 30 psi, 1 to 2 bar), 30 to 60 minutes, ≥ 3 cycles.

Irradiation: 25 to 40 kGy once. Do not autoclave irradiated capsules. Capsules must not be in-line steam sterilized.

Biological Safety

Steridyne® filters meet the requirements as specified in the current USP <88> Class VI plastics, <87> cytotoxicity and pyrogenicity tests. No binders, adhesives, or surfactants are used in its construction. Filters comply with Commission Regulation (EU) No 10/2011.

Quality Assurance

Each Steridyne® VTV0.2 filter is supplied with a Certificate of Quality verifying the high standards and superior performance of the product. Steridyne® 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 Steridyne® filter is integrity tested during manufacture and is clearly marked with filter type, lot number, and serial number.

Ordering Guide

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* C/J filters are animal component free (ACF) and only available with a Gamma-stable polypropylene housing.

**3/4" sanitary flange fitting option is only available for CS2, CL2, and CJ2 Capsules.

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

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