Laboratory vent filters

Eliminate contamination in and around your work

cytiva

Introduction

With our broad and innovative vent filter portfolio, we make it easy to maintain the sterility of your laboratory environment while protecting the atmosphere from contaminants.

Our self-contained, compact filter devices are ideal for the removal of airborne bacteria and particulate under dry or moist conditions. Cytiva vent filters contain hydrophobic media, which prevent the entry of water and aerosols into sensitive equipment and cultures. They act as high-efficiency barriers on gas lines and enable air to enter and exit vessels while maintaining environmental sterility. Vent filters play an important role in supporting worker safety and contamination-controlled research environments.

Our vent filter devices combine high-performance membranes with practical design features, including:

- Maximized air flow with effective filtration areas (EFAs) ranging from 4 cm^2 to 2000 cm^2.
- Gamma irradiation options suitable for sterile applications.
- Sterile exchange of air and gases in bioreactor and fermentation systems.
- Rugged polypropylene housings and more for broad chemical compatibility.
- Hydrophobic membrane choices including PTFE, PVDF, and glass laminate.

Our vent filters are well suited for venting bioreactors, fermentation tanks, and carboys; purging sterile gases from culture vessels; filtering sterile air for cell factories; venting sterile collection vessels; and filtering aggressive solvents.

Cytiva's Acro 37 TF, Acro 50, and AcroPak™ 0.2 µm vent filters are bacterial retentive* and integrity testable, making them well suited for applications where sterility is critical. These products are available with PTFE or PVDF membranes that provide a high level of hydrophobicity and consistent performance as sterile barriers.

Complementing these solutions, Cytiva HEPA filters provide high-efficiency particulate air filtration for air supply and exhaust applications, while Cytiva carbon capsules offer adsorption-based contaminant control for high-airflow instrumentation and specialty venting needs, giving laboratories flexible options to address sterility, air quality, and equipment protection requirements.

With our comprehensive line of vent filter products, we make it easy to match filter size and performance to your application's requirements.

PolyVENT 25

This compact, self-contained 25mm vent filter features a 0.2 µm hydrophobic PTFE membrane designed to provide sterile air and gas exchange while resisting moisture and aerosol penetration. The device is suitable for low-flow venting of small laboratory vessels and is commonly supplied with luer-style connections for easy integration.

Bacterial air vents

An economical 37 mm, self-contained, compact vent filter features a 1 µm (nominal) pore size hydrophobic glass laminate membrane to reduce the risk of fiber contamination. It is available in gamma-irradiated and non-sterile versions. The device comes with a stepped hose barb connection.

Acro 37 TF vent device

Compact and easy to integrate, this 37 mm vent filter uses a 0.2 µm PTFE membrane for effective particulate control.

The non-sterile device is autoclavable at 121°C to 123°C (250°F to 253°F) for a maximum of 20 minutes. It can be integrity tested before and after use and can withstand multiple cleaning cycles. The filter has a bacterial retention claim* and comes with a stepped hose barb connection. The Acro 37 TF filter offers an effective filtration area of 7.5 cm^2, helping reduce pressure drop, support consistent venting performance, and extend filter service life.

*Lot samples retain a minimum of 10^7 cfu / cm^2 of B. diminuta per modified ASTM F838, current revision.

Vent devices

Acro 50 vent device with PTFE membrane

These convenient filtration devices are designed for sterilization of air and gases or as a bacterial air vent in pharmaceutical research and laboratory processes. The filter is available in 0.2 µm, 0.45 µm, and 1 µm pore sizes. It is provided non-sterile, can be autoclaved, and can be integrity tested pre- and post-use.

The device is available with stepped hose barb, 1/8-inch MNPT, and 3/8-inch straight pipe connections. All are individually packaged (except PN 4250).

Acro 50 vent device with Emflon™ II PVDF membrane

The Acro 50 vent filter's Emflon II PVDF membrane has a removal rating of 0.2 µm in liquid service and < 0.02 µm particulate for air/gas applications. It has a bacterial retention claim* to assure the sterile passage of air and gas.

The devices are stable with gamma irradiation up to 50 kilogray. They can be autoclaved and integrity tested pre- and post-use.

Polydisc TF filters

A compact, self-contained 50 mm in-line filter incorporating a hydrophobic PTFE membrane, available in 0.1 and 0.2 µm pore sizes.

The non-sterile device is autoclavable at 121°C (250°F) for up to 20 minutes (autoclaving is not recommended for 0.1 µm PTFE variants).

It features a rugged polypropylene housing, low hold-up volume, and is supplied with stepped hose barb connections for easy integration into venting, gas, or low-volume liquid filtration applications.

AcroPak 300 capsule with PTFE membrane

With a large effective filtration area (280 cm^2), the AcroPak 300 capsule is designed for bioreactor venting requiring high air flow rates or chemical and solvent filtration. The filter can be sterilized by autoclaving and can be integrity tested after each autoclave cycle and before use.

Polycap TF

Provided with effective filtration areas ranging from approximately 430 to 1830cm^2, Polycap TF 36, 75, and 150 capsules are designed for venting, gas filtration, and chemical or solvent filtration across bench- to higher-throughput applications. The hydrophobic PTFE membrane provides broad chemical compatibility, while the capsules can be autoclaved and integrity tested prior to use to support reliable and consistent filtration performance.

Vacushield™ vent device

Incorporating a hydrophobic PTFE membrane, the Vacushield vent device protects valves and pump components from damage due to liquids. The filter allows air and gases to pass through freely while blocking aqueous solutions and aerosol contaminants.

VACU-GUARD vacuum protection filters

Designed for in-line vacuum protection, VACU-GUARD filters help prevent liquids, aerosols, and vapors from reaching sensitive vacuum equipment. Using hydrophobic PTFE membranes or specialized adsorptive media, they maintain unobstructed airflow while reducing the risk of pump damage and system contamination.

The devices are available in 50, 60 mm and capsule formats. The capsules are available with two different choices of chemical trap; one with activated carbon for protection against organic vapor and the other with desiccant (anhydrous calcium sulfate) for protection against acidic air streams.

Vent devices

HEPA-VENT disc filter

Our HEPA-VENT device is a compact 50 mm disc filter; it provides reliable protection during vessel pressure equalization by delivering particulate-free air. The dual-laminated glass microfiber HEPA membrane retains 99.97% of particles ≥0.3 µm, making it well suited for laboratory containers and small process vessels where space, simplicity, and bidirectional air flow during venting and pressure equalization are required.

HEPA-CAP filters

Designed for applications requiring higher air flow and extended service life, our HEPA-CAP filters combine a capsule housing with a dual-laminated glass microfiber HEPA membrane. Available in multiple sizes and connection options, these filters deliver 99.97% retention of particles ≥0.3 µm. They offer increased effective filtration area for venting larger vessels and process containers, supporting bidirectional air flow during filling, emptying, and pressure changes.

Hepa capsule with Versapor™ membrane

The HEPA Versapor Capsule pairs a Versapor acrylic copolymer membrane with HEPA-rated air filtration performance in a versatile capsule format. With a large effective filtration area, it supports high-flow particulate-free air while retaining 99.97% of 0.3 µm aerosol particles.

Carbon capsules

Built for applications where both adsorption and particulate protection matter, the Whatman™ Carbon Cap combines a high-purity activated carbon bed with an integrated HEPA filter. This dual-function design makes it well suited for vacuum pump exhaust, instrument venting, or liquid polishing where removal of organic vapors, chlorine, or color bodies is required alongside fine particle retention.

The Cytiva Carbon capsule offers a straightforward approach to organic removal, using finely divided, acid-rinsed activated carbon in a compact, disposable format. Designed primarily for

liquid-phase purification, it is commonly used to reduce odors, colloids, and trace organics in laboratory water or chemical streams where particulate control is managed elsewhere.

Integrity test kit

The integrity test kit includes pressure gauge, three-way valve and 10 mL syringe. This can be used to verify integrity of a vent device after autoclaving either by use of the Bubble Point Method or Water Breakthrough Test pre- or post-use.

Select the best vent filter for your application

Application	Sterile and bacterial retentive filters	General bacterial filter	Liquid/aerosol protection	Odor, vapor, and organic removal	HEPA filtration*	Carboy venting	Other
	• Acro 50, Emflon II, 0.2 µm • Acro 50, PTFE, 0.2 µm	• 37 mm bacterial air vent	• Vacushield vent device • VACU-GUARD vacuum protection filters	• Whatman Carbon Cap • Cytiva carbon capsule	• HEPA-VENT, glass fiber • HEPA-CAP, glass fiber • HEPA capsule, with Versapor, 1.2 µm *99.97% particle retention at ≥0.3 µm, as per laboratory test conditions.	• Acro 37 • Acro 50, PTFE, chemically resistant membrane • Polydisc TF, 50 mm devices • Acro 50, Emflon II, lightweight device, prevents tube crimping	• Multi-use (autoclavable): PTFE • Gamma-irradiation suitable: Emflon II • High system airflow: Acro 50 (Emflon II) AcroPak 300 Bacterial Air Vent

Air flow options	Low (up to 10 L/min)	Medium (up to 25 L/min)	High (> 25 L/min)
	• PolyVENT 25, PTFE, 0.2 µm • Acro 37 TF vent device, PTFE, 0.2 µm • Acro 50, PTFE, 0.2 µm • Vacushield vent device	• Polydisc TF, PTFE, 50 mm device, 0.1 µm • Polydisc TF, PTFE, 50 mm device, 0.2 µm • Acro 50, PTFE, 0.45 µm • Acro 50, PTFE, 1.0 µm	• Acro 50, Emflon II, 0.2 µm • AcroPak 300, PTFE, 0.2 µm • Bacterial Air Vent, glass laminate, 1 µm (nominal) • Polycap TF 36, 75, and 150 • HEPA-VENT • HEPA-CAP 36, 75, and 150, glass fiber • HEPA capsule, with Versapor, 1.2 µm

Filter media	PTFE	PVDF	Glass laminate	Versapor (acrylic copolymer)	Activated carbon
	0.2 µm PTFE membrane; all bacterial retention tested to assure sterile air/gas flow	Emflon II - Gamma irradiated, the 0.2 µm PVDF membrane can be bacterial retention tested with superior hydrophobicity	Economical choice plus provides high air flow rates	Versapor - Porous membrane delivers high air flow rates at low differential pressure and extends filter life HEPA capsule with Versapor membrane is designed to provide bacteria-free air for sterile applications	High-purity, high-efficiency, acid washed, granular-activated carbon acts as an adsorption medium, removes noxious odors, oil mists, and contaminants

Ordering information

Description	Quantity/pack	Product code
Whatman PolyVENT 25 mm filter, PTFE membrane, 0.2 µm	50	6713-0425
Whatman Polycap TF 36 capsule, PTFE membrane, 0.2 µm, 1/4-3/8" stepped barb	5	2601
Whatman Polycap TF 36 capsule, PTFE membrane, 0.2 µm, FNPT inlet and outlet	5	2601T
Whatman HEPA-CAP 36 capsule, glass microfiber, FNPT inlet and outlet	5	2609T
Whatman Polycap TF 36 capsule, PTFE membrane, 0.2 µm, 3/8-1/2" stepped barb	1	6710-3602
Whatman Polycap TF 36 capsule, PTFE membrane, 0.2 µm, 1/4-3/8" stepped barb	1	6700-3602
Whatman HEPA-CAP 36 capsule, glass microfiber, 1/4-3/8" stepped barb	1	6702-3600
Acro 37 vent device with PTFE membrane, 37 mm, 0.2 µm	24	4464
Acro 37 vent device with PTFE membrane, 37 mm, 0.2 µm	200	4465
Bacterial air vent device, 37 mm, 1.0 µm	24	4210-N
Acro 50 vent device with Emflon II PVDF membrane, 50 mm, 0.2 µm, no vent	100	A50V002P2NV
Acro 50 vent device with Emflon II PVDF membrane, 50 mm, 0.2 µm, no vent	300	A50V002NV300
Acro 50 vent device with PTFE membrane, 50 mm, 0.2 µm, stepped hose barb	72	4250
Acro 50 vent device with PTFE membrane, 50 mm, 0.2 µm, stepped hose barb	18	4251
Acro 50 vent device with PTFE membrane, 50 mm, 0.2 µm, 1/8 in. MNPT connection	18	4400
Whatman HEPA-VENT disc filter, glass microfiber, 50 mm , 1/4 to 3/8" stepped barb	10	6723-5000
Acro 50 vent device with PTFE membrane, 50 mm, 0.45 µm, stepped hose barb	18	4256
Vacushield vent device, PTFE membrane, 50 mm, 0.2 µm	3	4402
Whatman Polydisc TF, PTFE membrane, 50 mm, 0.1 µm	10	6720-5001
Whatman Polydisc TF, PTFE membrane, 50 mm, 0.2 µm	10	6720-5002
Acro 50 Vent Device with Emflon II PVDF, 50 mm, 0.2 µm	3	A50V002P2
VACU-GUARD inline disc filter, PTFE membrane, 50 mm, 0.45 µm	10	6722-5000
VACU-GUARD inline disc filter, PTFE membrane, 60 mm, 0.45 µm	10	6722-5001
Whatman Carbon Cap 75 with activated carbon	1	6704-7500
Whatman HEPA-CAP 75 capsule, glass microfiber, FNPT inlet and outlet	5	2709T
Whatman Polycap TF 75 capsule, PTFE membrane, 0.2 µm, MNPT inlet and outlet	5	2702T

cont.

Description	Quantity/pack	Product code
Whatman HEPA-CAP 75 capsule, glass microfiber, 3/8-1/2" stepped barb	1	6702-7500
Whatman Polycap TF 150 capsule, PTFE membrane, 1.0 µm, FNPT inlet and outlet	5	2804T
Whatman Carbon Cap 150 with activated carbon	1	6704-1500
AcroPak 300 capsule with PTFE membrane, 0.2 µm	3	12082
HEPA capsule with Versapor membrane, 1.2 µm	1	12144
AcroPak 300 capsule with PTFE membrane, 0.2 µm	100	12085
Carbon Capsule	1	12011

Explore our complete range of vent devices and capsule filters. Scan or click the QR code to learn more.

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