VACU-GUARD™ vacuum protection filters

A family of VACU-GUARD devices to meet your specific needs

Protecting your employees, equipment and work area from harmful contaminants is more important than ever. For maximum safety, choose the Whatman VACU-GUARD family of products. These easy-to-use in-line filter devices help to confine and isolate infectious materials in vacuum systems and protect your laboratory.

VACU-GUARD

Features and benefits

- **Excellent performance:** prevents fluid and aerosol contamination of vacuum pumps or aspiration suction systems while eliminating hazardous exhaust.
- **Flexible:** designed for use with 6–10 or 10–12 mm ID tubing.
- **Biosafe:** all materials pass USP Class VI Test for Plastics.



Fig 1. In-line disk filters protect vacuum systems and work areas from aqueous aerosols.

Applications-VACU-GUARD

- Protects vacuum systems from pathogen contamination.
- Protection of work area from airborne pathogens and hazardous vacuum pump exhaust.
- Protects vacuum pumps from aerosol corrosion.

VACU-GUARD 150

Features and benefits

- **Choice of media:** VACU-GUARD 150 capsule filters include all the features and benefits of standard VACU-GUARD disk filters, plus a range of media for specific applications.
- **Added back-up protection:** use as a backup between a cold trap and pump to protect against moisture and organic vapors if cold trap fails.



Fig 2. In-line capsule filters trap chemicals in addition to aqueous aerosols.

Applications-VACU-GUARD 150

- Activated carbon removes organic vapors from air
- Molecular sieve for removal of water and small organic and alkaline molecules from air streams
- Desiccant for use with high velocity acidic air

Table 1. Typical data VACU-GUARD In-Line Disk Filter — 50 and 60 mm

Filtration area	**50 mm:** 16 cm^2 **60 mm:** 25 cm^2
Maximum operating pressure	**50 and 60 mm:** 1 bar (15 psi)
Biosafety	All materials pass USP Class VI test for plastics
Rated retention in air	99.99% particle retention for particles ≥ 0.1 mm
Pore size (in liquid)	**50 and 60 mm:** 0.45 mm
Materials of construction	**Housing:** Polypropylene **Filtration media:** PTFE membrane
Connectors	**50 mm:** 1/4 –3/8" (6 –10 mm) SB (stepped barb) inlet and outlet **60 mm:** 3/8 –1/2" (10 –12 mm) SB inlet and outlet
Flow rates (SLPM)	50 mm (SLPM) / 60 mm (SLPM) 2 psi (0.14 bar)* 15 / 27 4 psi (0.28 bar)* 27 / 57 6 psi (0.41 bar)* 38 / 83 10 psi (0.69 bar)* 53 / 139
Flow direction	Inlet to outlet

Table 2. Typical data VACU-GUARD 150 In-Line Capsule Filter

Product	VACU-GUARD 150 activated carbon	VACU-GUARD 150 desiccant	VACU-GUARD 150 molecular sieve
Chemical trap media	Activated carbon	Anhydrous calcium sulphate	Silico aluminate zeolite
Filter media	PTFE	PTFE	PTFE
Surface area or weight (nominal)	82000 m^2 (carbon)	318 g (desiccant)	363 g (zeolite)
Flow rates (SLPM) (nominal) 0.1 bar (1.45 psi)* 0.5 bar (7.25 psi)*	 210 450	 280 600	 250 570
Maximum operating pressure Dry gas Wet gas	 4 bar (60 psi) 1 bar (14 psi)	 4 bar (60 psi) 1 bar (14 psi)	 4 bar (60 psi) 1 bar (14 psi)
Connectors	**Inlet:** Hose barb for 1/2" (12.7 mm) tube **Outlet:** 3/8 –1/2" (10 –12 mm) step barb		

*Differential pressure

Note: As with any chemical reaction, care should be used to determine the safety and usefulness of VACU-GUARD 150 products prior to routine use. For example, the molecular sieve rapidly heats up when exposed to water.

Table 3. Ordering information-VACU-GUARD

Catalog number	Media	Diameter (mm)	Quantity/pack
6722-5000	PTFE	50	10
6722-5001	PTFE	60	10
6722-1001	Activated carbon/PTFE	—	1
6722-1002	Desiccant/PTFE	—	1
6722-1003	Molecular sieve/PTFE	—	1

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