PolyVENT

Whatman™ disposable filter

Instructions for Use

Introduction

Important

Read these instructions carefully before using the products.

Intended use

The products are intended for research use only, and shall not be used in any clinical or *in vitro* procedures for diagnostic purposes.

Background

Description

PolyVENT is a family of in-line disposable filters intended for critical venting of vessels. The filters are constructed from single standardized set of materials, polypropylene housing and hydrophobic polytetrafluoroethylene (PTFE) membrane.

PolyVENT is intended for single use. Reuse is the responsibility of the operator who should protect the filter from cross contamination and detect loss of integrity by appropriate testing.

Typical applications

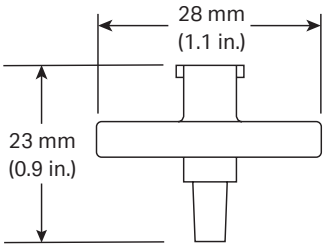
PolyVENT is widely used in scientific, research, and industrial environments. Depending on the applications, PolyVENT can either protect the environment from contaminants in the vessel or the contents of the vessel from external contamination. This product is suitable for the following applications:

- Venting culture vessels, including bottles, flasks, or small bioreactors.
- Venting vessels for mixing, dispensing, storage, or transport.
- Isolation of gaseous and aerosol contaminants on incubators, autoclaves, lyophilizers, ethylene oxide (EtO) sterilizers, or fermentors.

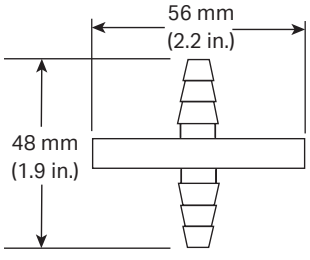
Technical information

Illustration of PolyVENT

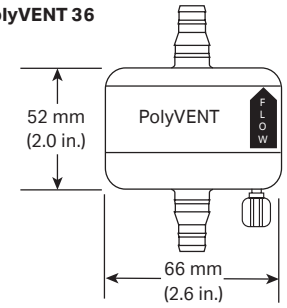
PolyVENT 25 MM



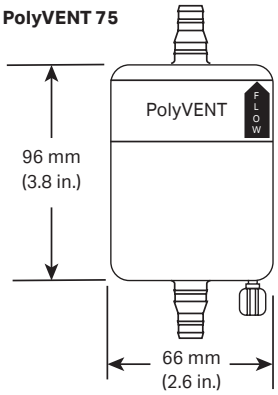
PolyVENT 50 MM



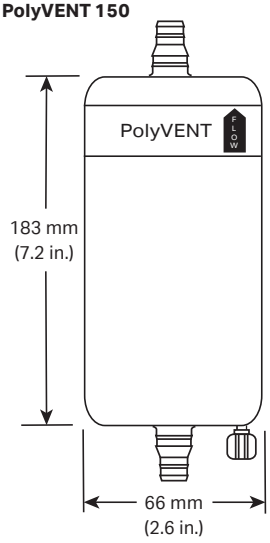
PolyVENT 36



PolyVENT 75



PolyVENT 150

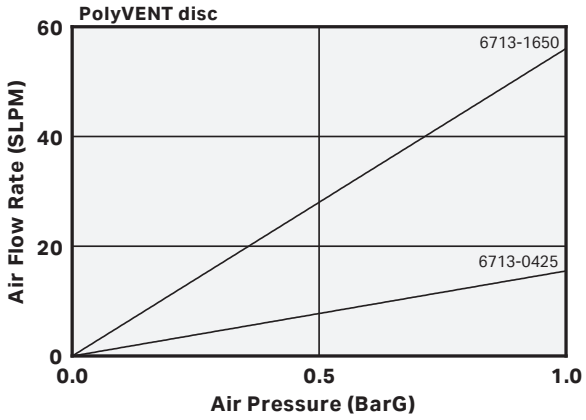


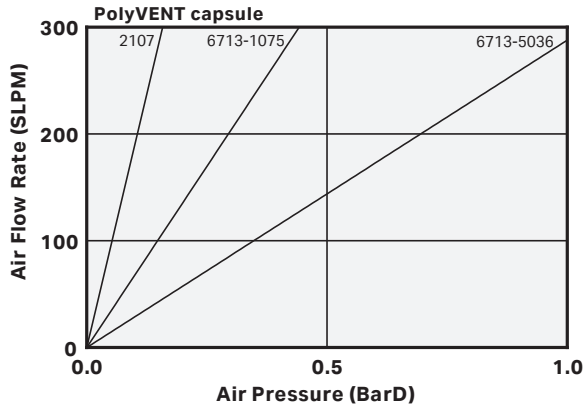
Technical data

Housing and support:	Polypropylene
Filter media:	PTFE 0.2 µm
Particle retention:	99.9% retention of all particulates ≥ 0.1 µm in air/gas and aqueous solutions
Effective filtration area:	See *Ordering information* for details
Inlet/outlet connections:	See *Ordering information* for details
Total length with connections:	See *Ordering information* for details

Sealing method:	Heat-fused
Autoclavable:	121ºC (250ºF) for 20 minutes at 0.1 MPa (1.0 bar, 15 psi)
Maximum operating pressure:	0.2 MPa (2.0 bar, 29 psi)
Operating temperature:	Ambient
Flow direction:	Install for primary flow from inlet to outlet. Bidirectional use for low pressure applications up to 0.1 MPa (1.0 bar, 14.5 psi) in the reverse direction.
Biosafety:	Materials pass USP Class VI

Typical air flow rate





Operating Instructions

Safety

When considering the specific factors of your application, see *Technical data* for correct use. Make sure not to exceed the Maximum operating pressure and follow temperature or chemical compatibility recommendations.

CAUTION
If the Maximum operating pressure is exceeded, bursting of the device can occur resulting in loss of sample or personal injury.

Venting

For venting applications, connect the inlet port of the PolyVENT to the vessel, leaving the outlet open to the atmosphere. The connection is made by securing the tubing to the filter ports using band clamps.

Note: *Change filter if there is condensation or contact with fluid preventing sufficient air flow.*

In-line

To use the PolyVENT for in-line application, securely connect both ports of the filter into the flow stream such that the orientation flows from inlet to outlet. The connections are made by securing the tubing to the filter ports using band clamps.

Note: *Change filter if there is condensation or contact with fluid preventing sufficient air flow.*

Water Breakthrough Test

Water Breakthrough Test (WBT) is performed to determine the gross integrity of the filter. WBT can be performed on filters installed on the vessel (*in situ*) by limiting the pressure being applied in the reverse direction. Alternatively, WBT can be performed in the forward flow direction to the water intrusion value of the membrane material.

Note: *WBT is not designed to be definitive for pore size.*

Note: *Do not perform WBT following the use of alcohol.*

WBT in reverse flow direction

Follow these steps to perform WBT in the reverse flow direction.

Step	Action
1	Fill the outlet of the filter with sterile water.
2	Gently apply pressure at maximum 0.03 MPa (0.3 bar, 5.0 psi) in outlet to inlet direction. ***Note:*** *Do not exceed the pressure above to prevent breaching the integrity of the membrane and filter while applying pressure in the reverse direction (outlet to inlet).*
3	Hold the controlled pressure for 15 seconds. *Result:* An integral membrane should hold water.

WBT in forward flow direction

Follow these steps to perform WBT in the forward flow direction.

Step	Action
1	Fill the inlet of the filter with laboratory grade or deionized water.
2	Gently apply pressure at an increasing rate of 0.14 MPa (1.4 bar, 20 psi) per minute until a pressure of 0.2 MPa (2.0 bar, 29 psi) is reached.
3	Hold the controlled pressure for 15 seconds. *Result:* An integral membrane should hold water.

Ordering information

Product Code	Product Name	EFA[1] (cm^2)	Inlet/Outlet Connections	Total Length with Connections	Qty./Pk.
6713-0425	PolyVENT 25 MM	4	FLL/MLL[2]	23 mm (0.9 in.)	50
6713-1650	PolyVENT 50 MM	16	SB[3]	48 mm (1.9 in.)	10
6713-1651	PolyVENT 50 MM	16	SB	48 mm (1.9 in.)	100
6713-5036	PolyVENT 36	450	SB	92 mm (3.6 in.)	1
2103	PolyVENT 36	450	½ SB[4]	97 mm (3.8 in.)	1
6713-1075	PolyVENT 75	950	½ SB	162 mm (6.4 in.)	1
2107	PolyVENT 150	1940	½ SB	221 mm (8.7 in.)	1
2108	PolyVENT 150	1940	Sanitary[5]	234 mm (9.2 in.)	1

1 Effective Filtration Area

2 FLL/MLL: 3 mm (⅛ in.) male luer/female luer lock

3 SB: 6 to 10 mm (¼ to ⅜ in.) stepped barb

4 ½ SB: 10 to 12 mm (⅜ to ½ in.) stepped barb

5 Sanitary: 1 ½ in. sanitary flange

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90880-CDM AD V:6 04/2023