Polycap HD

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

Polycap HD is a disposable in-line filter that provides high filtration efficiency in the pre-filtration range between gross filters and micro-porous membrane filtration.

Polycap HD is an all polypropylene filter. The filter media is monofilament anisotropic polypropylene (MAPP), a microfine continuous polypropylene material formed into a variety of media by varying the diameter of the filaments and the density of the layers.

Polycap HD is intended for single use. Reuse is not recommended and can lead to cross contamination of solutions filtered.

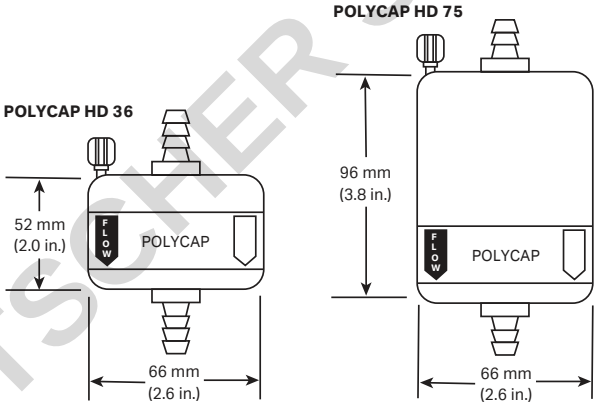
Typical applications

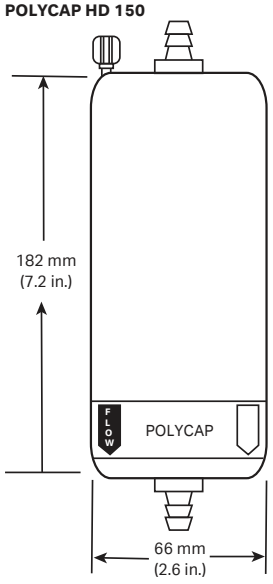
Polycap HD is intended to be used for the following applications:

- General fine filtration for most liquids and gases requiring 20.0 µm down to 0.45 µm filtration retention
- Pre-filtration to extend the life of reverse osmosis, ultrafiltration, or microfiltration membranes
- Semiconductor and magnetic media
- Inks and pigments
- Provide clean air or gas in laboratory equipment
- Photographic solutions (e.g., emulsions or rinse water)
- Filtration in food and beverage industries

Technical information

Illustration of Polycap HD



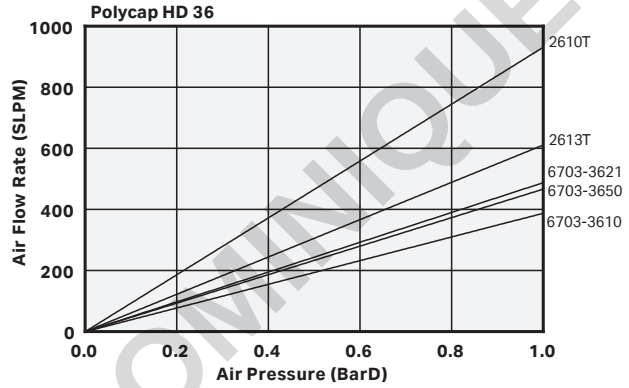


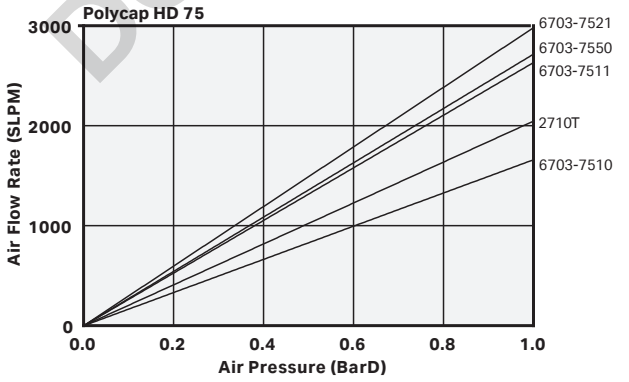
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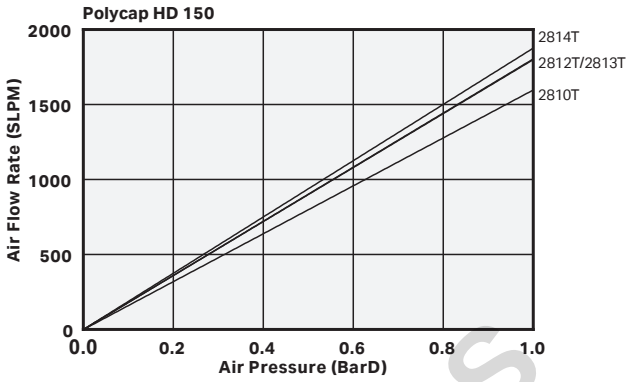
Technical data

Housing and support:	Polypropylene
Filter media:	MAPP
Pore size:	See *Ordering information* for details
Hold-up volume:	Polycap HD 36 - 10 mL with air purge Polycap HD 75 - 22 mL with air purge Polycap HD 150 - 43 mL with air purge
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:	Autoclavable at 121°C (250°F) for 20 minutes at 0.1 MPa (1.0 bar, 15 psi).
Maximum operating pressure:	0.41 MPa (4.1 bar, 60 psi)
Maximum operating temperature:	60°C (140°F)
Flow direction:	Venting applications: bidirectional Fluid filtration: inlet to outlet
Biosafety:	Materials pass USP Class VI

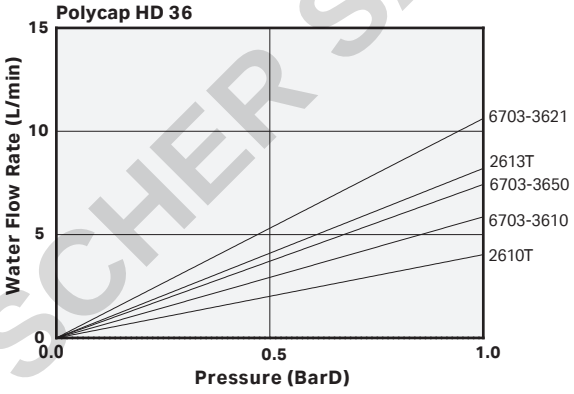
Typical air flow rate

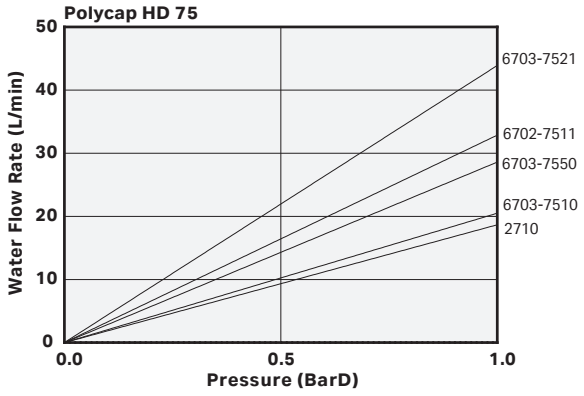


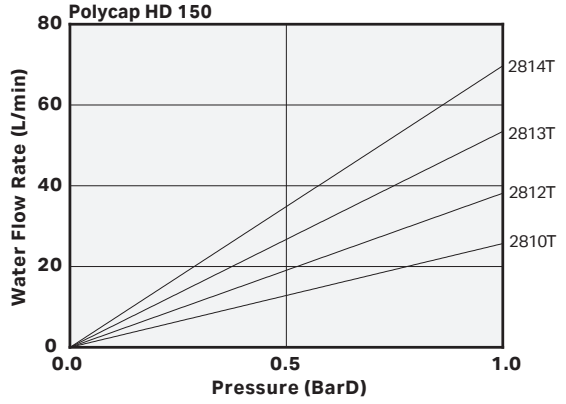




Typical water flow rate







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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

Step	Action
1	Securely connect the inlet port to the vessel, leaving the outlet open to the atmosphere. **a.** For filters with stepped barb connections, secure connections using band clamps. **b.** For filters with threaded connections, hand-tighten the connection to the vessel.
2	Change filter if there is condensation or contact with fluid preventing sufficient air flow.

In-line use

Step	Action
1	Securely connect both ports of the filter into the flow stream using flow arrows to guide orientation of the filter system. **a.** For filters with stepped barb connections, secure connections using band clamps. **b.** For filters with threaded connections, hand-tighten the connections of both ports.
2	Change filter if there is condensation or contact with fluid preventing sufficient air flow.

Filtering solution

Step	Action
1	Securely connect both ports of the filter into the flow stream using flow arrows to guide the orientation of the filter system. **a.** For filters with stepped barb connections, secure connections using band clamps. **b.** For filters with threaded connections, hand-tighten the connections of both ports.
2	Fill the filter slowly and at a low pressure, allowing air to escape through the loosened vent valve until the filter is filled with fluid.
3	Tighten the vent valve.
4	Ramp the pressure slowly until the desired flow rate is achieved, taking care not to exceed the Maximum operating pressure of the filter.
5	When filtration is complete, make sure to release all pressure from the test stand before loosening band clamps or fittings, and removing tubing from the filter.

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Ordering information

Product Code	Product Name	EFA [1] (cm^2)	Pore Size (µm)	Inlet/Outlet Connections	Total Length with Connections	Qty./Pk.
2610T	Polycap HD 36	360	0.45	FNPT[2]	56 mm (2.2 in.)	5
6703-3610	Polycap HD 36	360	1	SB[3]	92 mm (3.6 in.)	1
2611	Polycap HD 36	360	1	SB	92 mm (3.6 in.)	5
2611T	Polycap HD 36	360	1	FNPT	56 mm (2.2 in.)	5
6703-3650	Polycap HD 36	360	5	SB	92 mm (3.6 in.)	1
2612T	Polycap HD 36	360	5	FNPT	56 mm (2.2 in.)	5
6703-3611	Polycap HD 36	360	10	SB	92 mm (3.6 in.)	1
2613T	Polycap HD 36	360	10	FNPT	56 mm (2.2 in.)	5
6703-3621	Polycap HD 36	360	20	SB	92 mm (3.6 in.)	1
2614T	Polycap HD 36	360	20	FNPT	56 mm (2.2 in.)	5
2710	Polycap HD 75	730	0.45	HB[4]	142 mm (5.6 in.)	5
6703-7510	Polycap HD 75	730	1	½ SB[5]	162 mm (6.4 in.)	1
2711T	Polycap HD 75	730	1	FNPT	101 mm (4.0 in.)	5
6703-7550	Polycap HD 75	730	5	½ SB	162 mm (6.4 in.)	1
2712	Polycap HD 75	730	5	HB	142 mm (5.6 in.)	5
2712M	Polycap HD 75	730	5	MNPT[6]	141 mm (5.5 in.)	5
2712T	Polycap HD 75	730	5	FNPT	101 mm (4.0 in.)	5
6703-7511	Polycap HD 75	730	10	½ SB	162 mm (6.4 in.)	1
2713	Polycap HD 75	730	10	HB	142 mm (5.6 in.)	5
2713T	Polycap HD 75	730	10	FNPT	101 mm (4.0 in.)	5
6703-7521	Polycap HD 75	730	20	½ SB	162 mm (6.4 in.)	1
2714	Polycap HD 75	730	20	HB	142 mm (5.6 in.)	5
2714T	Polycap HD 75	730	20	FNPT	101 mm (4.0 in.)	5
2810	Polycap HD 150	1530	0.45	HB	221 mm (8.7 in.)	5
2810T	Polycap HD 150	1530	0.45	FNPT	180 mm (7.1 in.)	5
2812T	Polycap HD 150	1530	5	FNPT	180 mm (7.1 in.)	5
2813	Polycap HD 150	1530	10	HB	221 mm (8.7 in.)	5
2813T	Polycap HD 150	1530	10	FNPT	180 mm (7.1 in.)	5
2814T	Polycap HD 150	1530	20	FNPT	180 mm (7.1 in.)	5

[1] EFA: Effective Filtration Area

[2] FNPT: ⅜ in. female NPT threaded connection

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

[4] HB: 12 mm (½ in.) hose barb

[5] ½ SB: 10 to 12 mm (⅜ to ½ in.) stepped barb

[6] MNPT: ¼ in. male NPT threaded connection

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