Whatman Polycap HD

Heavy Duty Disposable Filter Capsule
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.

Capsule Filter for High Debris Laden Solutions

The Polycap HD (Heavy Duty) family of disposable filter capsules offers both high filtration efficiency and extreme purity . This combination of desirable features is available in six filtration ratings and in three sizes. For further details, see *cytiva.com*.

These capsule filters provide the field of laboratory filtration with a unique capability. They offer a broad capability between the gross paper filters and the microporous membranes used for absolute filtration.

Polycap HD Features

Total Polypropylene Construction (Housing, filter media, and support systems)

- High purity of final product
- BIOSAFE USP Class VI
- Materials are FDA approved for Food & Beverage contact
- Fast Rinse up to 18 Megohm
- Solvents/chemicals are broadly compatible

Bonded & Sealed with Advanced Fusion Technology No mold releases, glues, powdered metals, adhesives, epoxies, or other extraneous materials are used in the fabrication of the Polycap HD family of capsules. This reduces structure failures and leaching (contamination) of the filtrate.

Rugged polypropylene materials and solidly engineered supports allow for use within broad ranges of solutions, pH, temperatures, time, and pressures in the forward and reverse direction.

Integral & Disposable Reduces equipment costs, eliminates clean up time, ensures installation integrity and purity.

Manual vent with luer lock can function to bleed air from upstream, and serve as an injection or sample port.

MAPP Monofilament Anisotropic Polypropylene Microfine continuous filament PP material is formed into a variety of media by varying the filament's diameter and the layer density. Using a series of graded media layers an optimum matrix of Retention, High Flow, and Long Life is achieved.

Polycap 36 HD

Product code	Product	Rating
6703-3610	Polycap 36 HD	1.0 µm
6703-3650	Polycap 36 HD	5.0 µm
6703-3611	Polycap 36 HD	10.0 µm
6703-3621	Polycap 36 HD	20.0 µm

Effective Filtration Area – 400cm^2 (62 in^2)

Connectors – Stepped hose barb for 6 to 10mm (1/4 to 3/8 inch) ID hose and accepts male luers.

Housing Volume – 70 mL, with air purge less than 2 mL is non-recoverable.

Packaged one per pack

Polycap 75 HD

Product code	Product	Rating
6703-7510	Polycap 75 HD	1.0 µm
6703-7550	Polycap 75 HD	5.0 µm
6703-7511	Polycap 75 HD	10.0 µm
6703-7521	Polycap 75 HD	20.0 µm

Effective Filtration Area – 820cm^2 (127 in^2)

Connectors – Stepped hose barb for 10-12mm (3/8- 1/2 inch) ID tubing.

Housing Volume – 125 mL, with air purge less than 2 mL of solution is non-recoverable.

Packaged one per pack

Typical Applications for Polycap HD Disposable Filter Devices

General Fine Filtration

Most liquids/gases requiring 20.0 µm down to 0.2 µm filtration retention. For details of 0.45 µm and 0.2 µm filters, see *cytiva.com*.

Prefiltration extends life of RO/UF/MF membranes.

Semiconductor/Magnetic Media

Solvents • Acids • Bases • Etchants • Photoresists • Strippers • Gases • Air Guns/Cleaning Wands • Coatings • Oxide Dispersions • Media Chemicals • DI Water

Inks for ink jet or printers/plotters

Laboratories

Clean air/gas for instruments/environments Analytical Reagents "Batch or In line" • Solvents • Buffers Diluents

Sample prep for Ground Water • Process Solutions Effluents

Photographic Emulsions, Make-up, or Rinse water

Food & Beverage

Feed water polishing • Final Filtration Syrup • Oils Syrup • Spirits • Process Water • Beverages • Wine Juices • Bottled Water

Pharmaceutical • Cosmetic • Personal Care

Water to wash/rinse • Vials, glassware & tanks • Vessels Service & Make-up water • General perfiltration • Gases used to dry/blow off or as an inert stabilizer • Process Filtration • Stability • Polishing • Scavenging

Table 1. TECHNICAL DATA: Polycap HD Filter Device

Product code	Product	FILTER			Connections		Air Flow SLPM 1.0 bar (14.5)	Pk. Qty.
		Rated (1) (nominal)	Media	Area	Inlet	Outlet		
6703-3610	Polycap 36 HD	1.0µm	MAPP	400cm^2 (62 in^2)	6-10mm (1/4-3/8") SB	6-10mm (1/4-3/8") SB	111	1
6703-3650	Polycap 36 HD	5.0µm	MAPP	400cm^2 (62 in^2)	6-10mm (1/4-3/8") SB	6-10mm (1/4-3/8") SB	117	1
6703-3611	Polycap 36 HD	10.0µm	MAPP	400cm^2 (62 in^2)	6-10mm (1/4-3/8") SB	6-10mm (1/4-3/8") SB	126	1
6703-3621	Polycap 36 HD	20.0µm	MAPP	400cm^2 (62 in^2)	6-10mm (1/4-3/8") SB	6-10mm (1/4-3/8") SB	133	1
6703-7510	Polycap 75 HD	1.0µm	MAPP	820cm^2 (127 in^2)	10-12mm (3/8-1/2") SB	10-12mm (3/8-1/2") SB	640	1
6703-7550	Polycap 75 HD	5.0µm	MAPP	820cm^2 (127 in^2)	10-12mm (3/8-1/2") SB	10-12mm (3/8-1/2") SB	850	1
6703-7511	Polycap 75 HD	10.0µm	MAPP	820cm^2 (127 in^2)	10-12mm (3/8-1/2") SB	10-12mm (3/8-1/2") SB	890	1
6703-7511	Polycap 75 HD	20.0µm	MAPP	820cm^2 (127 in^2)	10-12mm (3/8-1/2") SB	10-12mm (3/8-1/2") SB	975	1

Manufactured without the use of mold releases, glues, powder metal, adhesives, epoxies or other extraneous materials.

Pressure Rating: Housing burst 4.1 bar (60 psi)
P across filter 3 bar (45 psi)

Housing: Polypropylene

Filter Media: Polypropylene (MAPP)

Support Screens: Polypropylene787

Center Core: Polypropylene

End Caps: Polypropylene

Minimum Hold-up Volume: with air purge less than 2ml.

Retention Efficiency: 98% or greater of filter rating, tested by AC fine dust method in water; 99.9% in air.

Maximum Operating Temp: 60°C (140°F).

Labeling: Fully labeled for good manufacturing records including product identification and lot no. hot stamped into each capsule.

Biosafe: All materials pass USP Class VI.

Housing Volume: Polycap 36, 70 mL; Polycap 75, 125 mL.

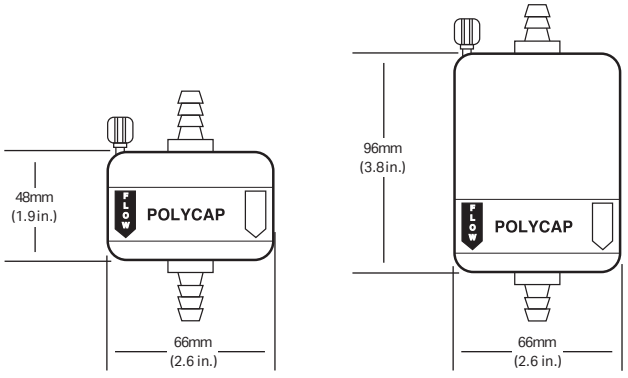
DIRECTIONS FOR USE

Step	Action
1	Select correct capsule based on filter efficiency and size from technical data chart.
2	Determine safety and suitability from chart and/or through experimentation.
3	Use Hose clamps for higher pressures.
4	**Ensure full filter capacity is being used**, i.e., in liquid applications eliminate all air from capsule by running solutions at pressures above 0.5 bar or (7.3 psi) either at the start of flow or continuously; Invert the capsule and allow to fill from inlet side to insure air is eliminated from both inlet side and the downstream side of capsule; use manual vent to exhaust air on inlet side.
5	To maximize recovery of filtered solution purge housing with air at end of filtration.

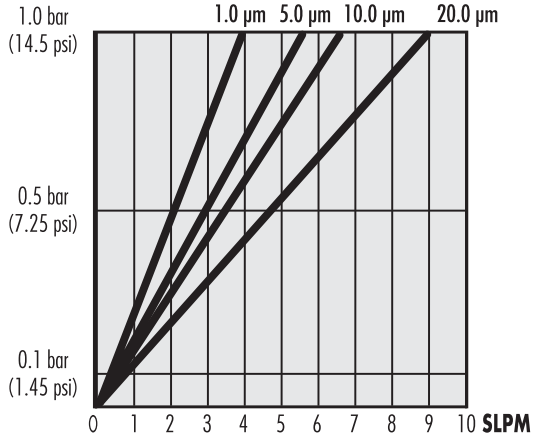
Chemical resistance summary[1]

Classes of Substances 20°C (68°F)	Polypropylene Guide[1] for use
Acids, dilute	Long Term
Acids, concentrated	One Month
Alcohols	Long Term
Aldehydes	One Month
Bases	Long Term
Esters	One Week
Hydrocarbons, aliphatic	One Month
Hydrocarbons, aromatic	One Week
Hydrocarbons, halogenated	One Week
Ketones	One Month
Oxidizing agents, strong	One Week

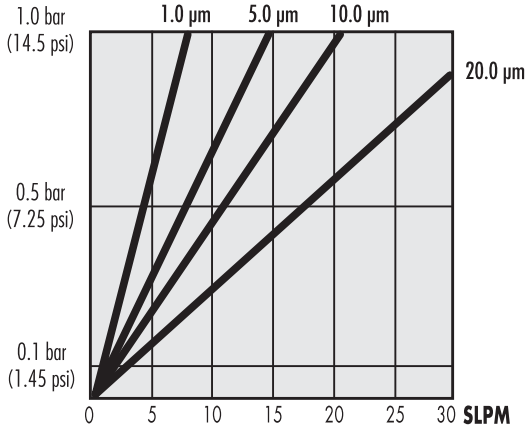
[1] Published as a general guide only. Due to time, temperature, and stress variations the user must evaluate the specific product and application to determine the appropriateness of use.



Typical Liquid Flow Rates, Polycap HD 36mm



Typical Liquid Flow Rates, Polycap HD 75mm



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For local office contact information, visit cytiva.com/contact

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