User Guide

Microsyringe 25 mm Filter Holder

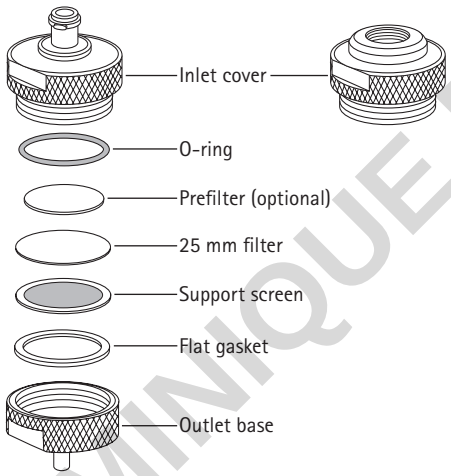
Cat. Nos. XX3002500 (Luer Inlet) and XX3002514 (NPT Inlet)

Introduction

Microsyringe 25 mm Filter Holders with Luer or NPT (national pipe thread) inlets are used with a 25 mm diameter microporous filter for clarifying or sterilizing small volumes of liquids. With the Luer inlet filter holder, the sample is delivered to the holder through a syringe with a male Luer-Lok™ connection. With the NPT inlet filter holder, the sample is delivered to the holder through a pressurized vessel with a ¼ in. NPT male connector. The filter holder is solvent resistant stainless steel, and can be autoclaved with the filter in place for clarification/sterilization applications that do not require removing the filter intact for further use.

Filter Loading

The Luer inlet and NPT inlet microsyringe filter holders have the same components except for the inlet cover.



1. Unscrew the inlet cover from the outlet base, using the wrenches if necessary.
2. Remove the O-ring, stainless support screen, and flat gasket.
3. Inspect the gasket, O-ring, and sealing surfaces for damage; imperfections can cause leaks during filtration. Replace damaged parts if necessary.
4. Place the flat gasket in the base and place the support screen on top of it.
5. Using smooth-tip forceps, place a 25 mm diameter filter on the support screen, then place the O-ring on top of the filter. If a depth-type prefilter (22 mm) is required to extend the life of the final filter, center the prefilter disc on top of the final filter before adding the O-ring.
6. Screw the cover down into the base and tighten firmly with the wrenches so that the filter is securely sealed.

Operation

CAUTION: Do not exceed the maximum inlet pressure of 6.9 bar (100 psi) and differential pressure of 3.4 bar (50 psi).

Luer Inlet Operation

1. Draw the unfiltered sample into the syringe.
2. Attach the Luer-Lok™ inlet of the holder to syringe. If required, attach a hypodermic needle to the holder outlet for dispensing the filtered liquid.
3. Press the syringe plunger to filter the sample.

NOTE: When using a syringe smaller than 10 mL, the syringe should have a Luer-Lok™ connection (not Luer-slip) to avoid leakage at the higher pressures generated by small syringes.

NPT Inlet Operation

1. Place the unfiltered sample into an appropriate pressure reservoir.
2. Attach a ¼ in. NPT male connector to the reservoir outlet tubing and wrap it with polytetrafluoroethylene (PTFE) tape. Attach the male connector to the ¼ in. NPT female inlet of the filter holder.
3. Begin filtration by applying low pressure to the reservoir so that the liquid flows slowly into the holder. Then raise the pressure to obtain the desired filtration rate.

Autoclaving

1. Make sure that all inner surfaces of the filter holder are completely dry, then assemble the holder with a filter in place. Tighten partially.
2. Wrap the holder with lint-free autoclave paper, and autoclave for 15 minutes at 121 °C and 1 bar (15 psi).
3. After the unit has cooled, fully tighten it with the supplied wrenches, being careful not to touch the outlet tube. Use aseptic techniques when making any outlet connections, such as attaching a hypodermic needle.
4. Follow the directions in the Operation section for making inlet connections, then proceed with filtration.

Maintenance

Clean the filter holder regularly. Frequency of cleaning will depend on the level of contamination in the fluid being filtered.

1. Disassemble the holder and inspect all components for signs of damage. Grit embedded in PTFE surfaces can sometimes be dislodged without injuring the surface, but it is preferable to replace the O-ring or gasket.
2. For the NPT inlet filter holder, remove all PTFE tape from the connector threads.
3. Clean all components thoroughly with a sponge, hot water, and a nonabrasive cleanser. Scrub threaded parts, recesses, and orifices with a stiff bristle brush and use a pipe cleaner to remove contaminants from inlet and outlet orifices.

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Maintenance, continued

CAUTION: To avoid component damage, never use steel wool or abrasive materials on any part of the filter holder.

4. Rinse all parts thoroughly with hot running water, then rinse several times with cold laboratory-grade water.
5. Allow the components to air dry while disassembled.

CAUTION: Do not wipe dry with paper or cloth, as this leaves fibers and lint on the surfaces and also generates electrostatic forces that can attract more dirt. Filtered compressed air can be used to facilitate drying.

Specifications

Maximum pressure	Inlet: 6.9 bar (100 psi) Differential: 3.4 bar (50 psi)
Filter diameter	25 mm
Prefilter diameter	22 mm (thick depth prefilter)
Effective filter area	Approximately 4.1 cm^2 (0.64 in^2)
Weight	Luer inlet: 89.4 g (3.2 oz) NPT inlet: 82.7 g (2.9 oz)
Connections	Female Luer-Lok™ or ¼ in. female NPT inlet, male Luer-slip outlet
Dimensions	Diameter: 31.8 mm (1.25 in.) Length (Luer inlet): 36.1 mm (1.4 in.) Length (NPT inlet): 30.2 mm (1.2 in.)
Materials of construction	Inlet cover: 316 stainless steel Support screen: 316 stainless steel Outlet base: 316 stainless steel Flat gasket: PTFE O-ring: PTFE

Typical Filter Flow Rates

For typical flow rates and available microporous membrane filters, go to www.millipore.com and enter the family name (*Durapore*, *MF-Millipore*, *Fluoropore*, etc. + *membrane filters*) in the search box.

Statement Regarding Compliance with the Pressure Equipment Directive, 97/23/EC

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Product Ordering Information

This section lists the catalogue numbers for Microsyringe 25 mm Filter Holders, replacement parts, and accessories. See Technical Assistance for contact information. You can purchase these products on-line at www.millipore.com/products.

Filter Holder Description	Catalogue Number
Microsyringe 25 mm Filter Holder with Luer Inlet (includes inlet cover [1], outlet base [1], O-ring [1], support screen [1], flat gasket [1], wrench [2])	XX3002500
Microsyringe 25 mm Filter Holder with NPT Inlet (includes inlet cover [1], outlet base [1], O-ring [1], support screen [1], flat gasket [1], wrench [2])	XX3002514
Replacement Parts	
Microsyringe 25 mm Filter Holder Replacement Parts Kit (includes O-ring [2], flat gasket [2], support screen [2], wrench [2])	XX30025RK
Support screen (1/pk)	XX3002510
Flat gasket, PTFE (10/pk)	XX3002502
Accessories	
PTFE tape, 1.3 × 660 cm (0.5 ×260 in.) roll	TP0001326
Filter forceps, stainless steel, blunt end (3/pk)	XX6200006P
Plastic syringe, 20 mL capacity (12/pk)	XX1102012
Plastic syringe, 50 mL capacity (5/pk)	XX1105005

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Standard Warranty

The applicable warranty for the products listed in this publication may be found at www.millipore.com/terms ("Conditions of Sale").

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