

User Guide

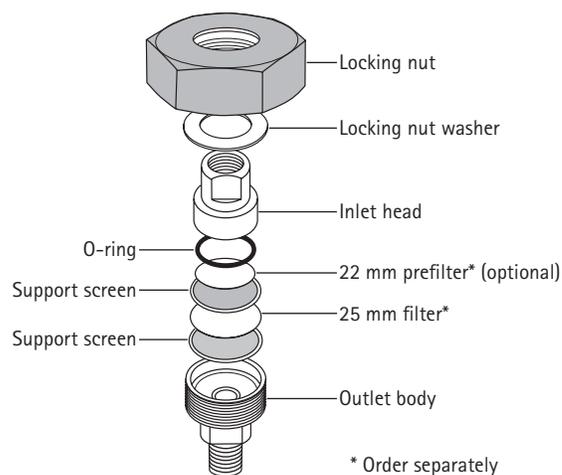
Gas Line 25 mm Filter Holder

Cat. No. XX4002500

Introduction

The Gas Line 25 millimeter (mm) Filter Holder is an in-line filter holder for low pressure gases. The locking nut closure allows filter changes without disconnecting the holder from the plumbing system. Photo-etched screens provide bidirectional support to prevent filter damage if reverse-flow surges occur in the line. The filter holder can be autoclaved with a filter installed for clarification/sterilization applications that do not require removing the filter intact for further use. This filter holder is also a component of the Filterjet™ Solvent Dispenser (cat. no. XX6702500).

Diagram of Filter Holder



Filter Holder Installation

Flexible Tubing

1. Wrap the male threads (1/4 in. national pipe thread (NPT)) of the filter holder outlet body with polytetrafluoroethylene (PTFE) tape. Attach a 1/4 in. NPT female tubing adapter (user-supplied) to the outlet body.
2. Wrap the male threads of a 1/4 in. NPT tubing adapter (e.g., cat. no. XX6700L11) with PTFE tape and attach to the inlet head.
3. Tighten tubing adapters with a wrench.
4. Attach inlet and outlet tubing and secure with clamps.

Rigid Tubing

1. Wrap the male threads (1/4 in. NPT) of the filter holder outlet body with PTFE tape. Attach a 1/4 in. NPT female × 1/4 in. outer diameter (OD) tubing adapter (user-supplied) to the filter holder outlet body.
2. Wrap the male threads of a 1/4 in. NPT × 1/4 in. OD tubing adapter (e.g., cat. no. XX6702507) with PTFE tape. Attach the tubing adapter to the filter holder inlet head.
3. Complete the tubing connections to install filter holder in gas line.

NOTE: When installing filter holder with rigid tubing, leave enough free length at the connection to allow tubing to bend without damage.

Filter Loading

1. Hold the outlet body of installed holder, unscrew the locking nut, and separate the two sections of the holder.
2. Pry the O-ring out from the outlet body with smooth-tip forceps.
3. Tilt the outlet body until two support screens drop out.
4. Return the outlet body to its normal position, and replace one support screen.
5. Place a 25 mm diameter filter of appropriate pore size on top of the lower support screen with smooth-tip forceps. Place the second support screen on top of the filter.
6. Replace the O-ring on top of the upper support screen.

NOTE: When using a 22 mm diameter depth-type prefilter to extend the life of the final filter, place it inside the inner diameter of the O-ring after placing the O-ring in the holder.

7. Place the inlet head into the outlet body recess.
8. Place the locking nut washer over the inlet head, then add the locking nut and thread it onto the outlet body.
9. Hold the outlet body with a wrench; tighten locking nut with a second wrench.

NOTE: If filter holder is to be autoclaved, finger tighten only. Do not tighten with wrenches until after holder has been removed from autoclave and cooled.

Autoclaving

When autoclaving with the filter in place, it is important that the steam be able to access both sides of the filter at the same time, so that there is no differential pressure across the filter, especially while it is hot. To ensure that there are no flow restrictions on the filter holder inlet and outlet, make sure that all valves (if installed) are fully opened and that tubing (if attached) is not kinked. If tubing ends are wrapped, use wrapping material that breathes freely. Make sure that any tubing used is autoclavable and can withstand the maximum filtering pressure.

NOTE: Outlet tubing length should not exceed 1.2 meters (4 ft). If autoclaving the inlet tubing at the same time, it should be no longer than the outlet tubing.

1. Remove holder from connected plumbing. Make sure all components are completely dry.
2. Install the required filter as directed in the Filter Holder Installation section and reassemble the holder.
3. Wrap the holder with lint-free autoclave paper and autoclave for 15 minutes at 121 °C and 1 bar (15 psi).
4. After the filter holder has cooled, tighten with wrenches and replace it in the plumbing line using aseptic technique to maintain sterility.

Maintenance

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

1. Remove holder from plumbing system.
2. Disassemble it completely including inlet and outlet connectors.

NOTE: After use, a heavily contaminated filter can stick in the outlet body. Tilt the outlet body and tap it against a hard surface to dislodge the filter and screen.

3. Remove all PTFE wrapping from the threads.
4. Clean components with a sponge, hot water, and a non-abrasive cleanser. Clean threaded parts, recesses, and orifices with a stiff bristle brush to remove all traces of contaminants.

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

5. Rinse all parts thoroughly with hot running tap water, followed by two cold-water rinses. Use laboratory-grade water for the final rinse.
6. 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 generate 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 diameter
Prefilter diameter	22 mm diameter (depth prefilter)
Effective filter area	Approximately 4.6 cm ² (0.7 in ²)
Connections	1/4 in. NPT female inlet, 1/4 in. NPT male outlet
Dimensions	38.1 mm (1.5 in.) wide × 49.3 mm (1.9 in.) tall
Weight	109 g (3.8 oz)
Materials of construction	Inlet head: 304 stainless steel Outlet body: 304 stainless steel Filter support screens: 316 stainless steel Locking nut: anodized aluminum Locking nut washer: PTFE O-ring: fluoroelastomer

Typical Filter Flow Rates

For typical air 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 Gas Line 25 mm Filter Holder, replacement parts, and accessories. See Technical Assistance for contact information. You can also buy products on-line at www.millipore.com/products.

Description	Catalogue Number
Gas Line 25 mm Filter Holder	XX4002500
Replacement parts kit for Gas Line 25 mm Filter Holder (5 PTFE washers, 5 fluoroelastomer O-rings, 5 support screens)	XX40025RK
O-ring, 2-021, fluoroelastomer (6/pk)	XX4002516
Support screen (1/pk)	XX3002510
Accessories	
Adapter, 1/4 in. NPT male to 1/4 in. OD tubing (1/pk)	XX6702507
Tubing adapter, 1/4 in. NPT male to hose barb (2/pk)	XX6700L11
PTFE tape, 1.3 × 660 cm (0.5 × 260 in.)	TP0001326
Filter forceps, stainless steel, blunt end (3/pk)	XX6200006P

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Standard Warranty

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M11040, Rev. 10/15