

User Guide

Millex®-GP50 Filter

SLGPB5010 with filling bell (10/pack)
SLGP05010 without filling bell (10/pack)

Do not use this product as an in-line filter for intravenous administration.
 For Laboratory Use Only. Single Use Only.

Introduction

The bi-directionally supported Millex®-GP50 filter is a sterile filter for aqueous solutions. It removes microorganisms, particles, precipitates, and undissolved powders larger than 0.22 µm. The sterile Millex®-GP50 filter is non-pyrogenic and non-toxic. This single use product consists of a 0.22 µm polyethersulfone membrane filter sealed in an acrylic housing.

Typical applications include the sterile filtration of tissue culture media, additives, buffers, and water.

Cautions

- Do not re-sterilize or reuse the Millex®-GP50 filter; it is a single use only device.
- Do not use if the filter packaging is visibly damaged.
- Do not use the Millex®-GP50 filter at temperatures above 45 °C (113 °F) to ensure proper filtration.
- Use hose clamps when using Millex®-GP50 filter with a pressure vessel to avoid blowing the tubing off the filter.
- Do not exceed operating pressures of 50 psig (3.44 bars) when using Millex®-GP50 filter with a peristaltic pump.
- Do not use the Millex®-GP50 filter to filter emulsions or suspensions since it was not designed for that purpose.
- Do not use it to filter 5 mg or less of active drug materials unless binding studies have been performed.
- Use caution with syringes smaller than 10 cc; the pressure generated in these syringes may exceed the 50 psig limit of the Millex®-GP50 filter.
- Do not use the Millex®-GP50 filter to filter solutions in both directions.

Diagram of the Millex®-GP50 Filter with Filling Bell

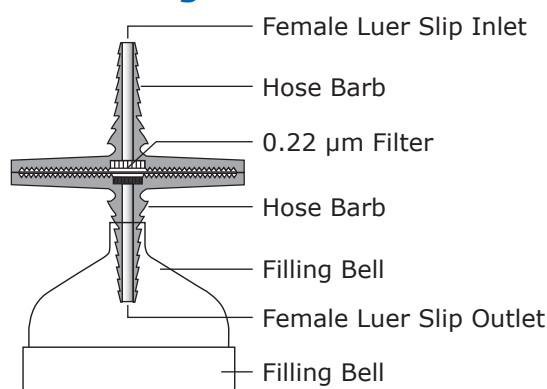
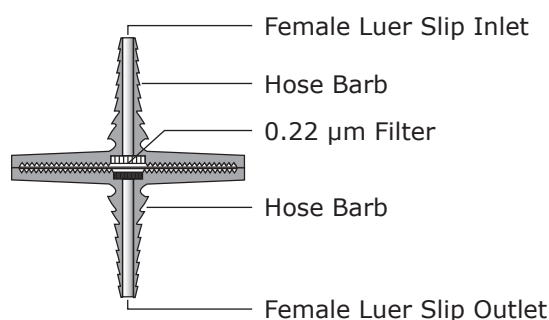


Diagram of the Millex®-GP50 Filter without Filling Bell



Compatible Solutions

The Millex®-GP50 filter is compatible with most aqueous solutions, including:

- Acetic acid (5%)
- Aqueous buffers
- Cell culture media
- Clorox® bleach (5% solution)
- Sodium hydroxide (10%)
- Sulfuric acid (20%)
- Water

Many factors like variability in temperature, concentrations, and duration of exposure affect chemical compatibility of filtration devices. For more information on chemical compatibility, visit [this link](#).

How to Use the Millex®-GP50 Filter with a Pressure Vessel

1. Fill a 5 L pressure vessel with the solution to be filtered.
2. Prepare the pressure vessel. For best results, pressurize the vessel at 15–20 psig (1–1.5 bars). This generates an average flow rate of approximately 350 mL/min.
3. Fit a 4 mm to 9.5 mm I.D. silicone rubber or latex tube over the connector. The fit should be snug. Attach hose clamps.
4. Peel open the pouch containing the Millex®-GP50 filter using aseptic technique.
5. Withdraw the filter from the pouch and attach the tubing to the inlet using aseptic technique.
6. Connect the filter to a ring stand and place a sterile collection flask under it.
7. Turn on the pressure vessel. When finished, discard the Millex®-GP50 filter appropriately.

How to Use the Millex®-GP50 Filter with a Peristaltic Pump

1. Fill a 5 L container with the solution to be filtered.
2. Prepare a peristaltic pump. For best results, use a pump drive and pump head that delivers a constant speed of 60 rpm. This generates an average flow rate of 100 mL/min. Load the peristaltic pump head with 3/16 in. (4.8 mm) I.D. silicone tubing.
3. Follow steps 3 through 6 in the previous procedure, "How to Use the Millex®-GP50 Filter with a Pressure Vessel."
4. Turn on the peristaltic pump. When finished, discard the Millex®-GP50 filter appropriately.

How to Use the Millex®-GP50 Filter with a Syringe

1. Fill the syringe with the solution you want to filter. Hold the syringe with the top pointed up and slowly expel air from the syringe until the liquid starts to exit.
2. Peel open the pouch containing the Millex®-GP50 filter using aseptic technique.
3. Insert the syringe firmly into the inlet of the Millex®-GP50 filter and twist slightly to ensure a tight connection.
4. Hold the syringe with the filter pointing up, and slowly expel air from the filter until the liquid starts to exit from the filter.
5. Invert the filter and push the plunger to deliver the filtered solution into an appropriate container.

Specifications

Materials

Housing	Acrylic
Membrane	Hydrophillic polyethersulfone (PES) membrane, type GP
Filling bell	Polycarbonate

Dimensions

Inlet to outlet	72 mm (2.8 in.)
Diameter	62 mm (2.4 in.)
Filtration area	19.6 cm ² (3.0 in ²)

Pore size	0.22 µm
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Temperature limit	45 °C (113 °F)
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Pressure limit	50 psig (3.44 bars) inlet and differential maximum
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Filtration volume	4 – 8 L
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Connections	Stepped hose barb 1/2 – 1/4 in. Female Luer slip at both ends
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Water flow rate	350 mL/min at 15 psi
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Sterilization	Gamma irradiated
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