



Milliflex[®] PLUS Vacuum Pump

High-throughput filtration system for bioburden and water quality testing

- ▶ *Automatic, hands-off filtration reduces testing time*
- ▶ *Sanitary design with autoclavable pump heads*
- ▶ *Modular pump head provides filtration device flexibility*
- ▶ *Internal calibration program ensures accuracy*

Evaluating downstream process quality involves multiple steps, whether in pharmaceutical, beverage, or microelectronic product manufacturing processes. The compact Milliflex PLUS Vacuum Pump streamlines filtration steps during testing to accelerate QC sampling. When used with convenient Milliflex filtration funnels, the pump and Milliflex units comprise an integrated solution for delivering reliable, accurate results in high-throughput production environments.

Easy-to-Use

By following simple prompts that appear in the display window, operators easily and quickly perform IQ and OQ validation and set filtration cycles. For routine sampling, pre-loaded testing programs control the pump through all of the filtration steps automatically. With fluids that require special handling, such as antibiotics or other viscous liquids, a manual mode allows users to customize pump cycles to suit each SOP (standard operating procedure). The pump's small footprint suits tight workspaces and its low profile allows easy access in laminar flow hoods, so filtration can be performed almost anywhere.

High Throughput Testing

Built-in electronics ensure high productivity. In the automatic mode, filtration starts as soon as the specified sample volume is poured into the funnel, and stops after the desired volume has been processed. Vacuum release and dry cycles automatically finish the filtration without requiring any action from the operator.

Sanitization is easy, so there's minimal disruption to workflow. For even greater throughput, a high-volume workstation of up to three Milliflex PLUS pumps can be set-up and used by a single operator. Testing reveals 3 Milliflex PLUS pumps are faster than a 6-place manifold.

System	Time to perform 96 filtrations
3 Milliflex PLUS Pumps	54 min. 22 sec.
6-place standard manifold	65 min. 12 sec.

Consistent Results and Traceability

A unique fluid management system ensures optimal performance and reproducible results. All system components in contact with the sample are either autoclavable or packaged pre-sterilized to ensure the cleanest possible operation for dependable results. An automatic dry cycle removes residual liquid, so cross-contamination is eliminated. Its internal, weight-based calibration system measures and processes samples of equal volume to ensure consistency. Volume is displayed on the control keypad. The pump connects to a PC or printer, allowing all relevant data to be tracked and downloaded for easy report generation after filtration. The catalogue and lot number is laser printed on the lid of every filtration funnel for improved traceability. In addition, each Milliflex tray is affixed with a removable label that includes the lot number, catalogue number, expiration date and data matrix.

Flexibility to Suit All Applications

When testing requirements change, we offer autoclavable pump head adapters for Millipore Sterisure™ and MicropreSure® filter units, for added flexibility. Simply lift off the standard pump head and replace it with the one that fits the device.

Maximizes Milliflex Efficiency and Reliability

Pre-sterilized and ready-to-use Milliflex filter funnel units eliminate time-consuming washing, bagging, autoclaving, and equipment handling. And, because Milliflex units also eliminate membrane handling and transfer steps, there's less risk of extraneous contamination that can lead to false positive results. Featuring up to twice the membrane surface area of standard 47 mm membrane filters (depending on the type of filtration funnel used), Milliflex units provide a faster alternative to other filtration devices.

Designed for Ease of Use and Optimum Sterility

To ensure the highest level of cleanliness, each Milliflex tray containing 8 Milliflex units is double bagged enabling operators to bring and open the outer bag in a controlled environment (laminar flow hood, PSM). Each double-bagged tray is ethylene oxide sterilized enabling quick transfer into controlled environments, simplifying decontamination procedures and saving time. The outer packaging material also protects the units from direct contact with the cardboard box and significantly reduces the risk of damage during shipment.



For even greater throughput, a high-volume workstation of up to three Milliflex PLUS pumps can be set up.

Milliflex PLUS Pump

Select the convenience you need.



Milliflex 100 and 250 Filter Funnel Units (Ethylene Oxide sterilized and packed) — fast filtration and reliable results for bioburden testing.



MicropreSure In-Line Filtration Sampler — sample and filter in one step for continuous in-line sampling.



Sterisure Test Device — pre-sterilized membrane device ideal for pre-enrichment steps in microbial limit testing.

Specifications

Milliflex PLUS Pump

Materials

<i>Frame:</i>	Polyester with 30% glass fiber
<i>Key pad including display:</i>	Polyester
<i>Sleeve protector:</i>	Polyester

Dimensions

<i>Height without head:</i>	130 mm (5 in.)
<i>Height with head:</i>	135 mm (5.23 in.)
<i>Width:</i>	170 mm (6.69 in.)
<i>Depth:</i>	270 mm (10.6 in.)
<i>Weight without head:</i>	2.65 kg (5.84 lb)
<i>Weight with head:</i>	3.60 kg (7.91 lb)

Power	24–30 V DC, 25 W
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Sanitization

<i>External surface:</i>	Alcohol wipe
<i>Internal flow:</i>	Bleach 250 ppm, Peracetic acid 0.125%, Alcohol 70%

Regulatory Compliance	CE mark
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Milliflex PLUS Pump Adapters

Material	Stainless steel 316L
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Sanitization	Autoclave
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Ordering Information

Description	Qty/Pk	Catalogue No.
Milliflex PLUS Pump		
Milliflex PLUS Pump single head kit	1	MXPP LUS 01
Milliflex PLUS Pump double head kit	1	MXPP LUS 02
Milliflex PLUS Pump triple head kit	1	MXPP LUS 03
Milliflex PLUS Adapters		
MicropreSure adapter	1	MSPH EAD 01
Sterisure adapter	1	MSTH EAD 01

Ordering information continued next page.

Ordering Information (Continued)

Description	Qty/Pk	Catalogue No.
Milliflex PLUS Pump Accessories		
Additional Milliflex head	1	MXPH EAD 01
Milliflex PLUS pump	1	MXPP UMP 01
Milliflex PLUS Printer	1	MXPP PRN 01
Manifold tray for 2 pumps	1	MXPP TRY 02
Manifold tray for 3 pumps	1	MXPP TRY 03
Power supply for 1 pump	1	MXPP OVR 01
Power supply for 2 or 3 pumps	1	MXPP OVR 02
Sleeve protector for 1 pump	2	MXPP SLS 01
Sleeve protector for 2 pumps	2	MXPP SLS 02
Sleeve protector for 3 pumps	2	MXPP SLS 03

Milliflex Expendables

Milliflex filter funnel unit, 100 mL, sterilized and packed

0.45 µm MCE white gridded membrane	24	MXHA WG1 24
0.45 µm MCE black gridded membrane	24	MXHA BG1 24
0.45 µm PVDF white plain membrane	24	MXHV WP1 24
0.22 µm MCE white gridded membrane	24	MXGS WG1 24

Milliflex filter funnel unit, 250 mL, sterile

0.45 µm MCE white gridded membrane	24	MXHA WG2 24
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Milliflex pre-filled media cassettes

S Medium	48	MXSM SMM 48
R2A Agar	48	MXSM CRA 48
Tryptic Soy Agar	48	MXSM CTS 48
Plate Count Agar	48	MXSM PCA 48
Cetrimide	48	MXSM C E T 48
Sabouraud Chloramphenicol Agar	48	MXSM CSP 48
Sabouraud Dextrose Agar	48	MXSM CSD 48
MacConkey Agar	24	MXSM CMC 24
Baird Parker Agar	48	MXSM BPA 48
m-Endo	48	MXSM END 48
TGE	48	MXSM TGE 48

MicropreSure In-Line Filtration Sampler, Sterile, for Pharmaceutical Market

0.45 µm MCE white gridded membrane	48	MSHA WGS 48
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MicropreSure In-Line Filtration Sampler, Pre-Sterilized, for Beverage Applications

0.45 µm MCE white gridded membrane	48	MSHA WGT 48
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Sterisure Test Devices

0.45 µm MCE white membrane	20 (10x2)	TTHA OF2 10
0.45 µm PVDF white membrane	20 (10x2)	TTHV OF2 10

To Place an Order or Receive Technical Assistance

For additional information call your nearest Millipore office:

In the U.S. and Canada,
call toll-free **1-800-MILLIPORE**
(1-800-645-5476)

In the U.S., Canada and Puerto Rico,
fax orders to **1-800-MILLIFX**
(1-800-645-5439)

Internet: www.millipore.com

Tech Service:

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