

ВАКУУМНЫЙ НАСОС MILLIFLEX PLUS



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Notice

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Application

The VHP Resistant Milliflex® PLUS Pump is designed to perform filtrations of samples inside an isolator. The pump is compatible with the isolator environment. The housing and the external parts are VHP resistant.

Operator and Equipment safety

All employees who will operate and/or be near the Milliflex® Plus Pump VHP must comply with the following:

- Read and understand the user guide of the pump before using this pump. Failure to follow operating instructions could result in user injury or damage to the instrument.
- Read and understand all maintenance instructions in this user guide before performing maintenance on the pump. Failure to follow instructions could result in user injury or damage to the instrument.
- Any alteration of the pump from factory specification may cause unsafe conditions, and will void the product warranty.
- Any attempt to use the pump in a manner not specified in this user guide may result in damage to the instrument, operator injury, and will void the product warranty.
- Do not attempt to open and repair the pump. Service should be performed by trained and authorized personnel only.
- Place the pump on a clean, flat, stable, horizontal surface, away from any source of excessive heat and close to an easily accessible, properly grounded power supply outlet.
- The Milliflex® Plus Pump VHP must be installed and used in a clean and dry area.
- The product is not intended to be used in explosive atmosphere.
- Do not expose the power supply to liquid. If this happens, immediately switch off and disconnect the pump from the power outlet, wipe up the liquid.
- Use only accessories and replacement parts designed for the pump. Using accessories not designed for the pump could result in user injury or damage to the instrument.
- When filtrating hazardous liquids, wear and use proper protective clothing and equipment for the handling and the disposal of the liquid to be filtrated.
- The system power cord is the main system disconnecting device, and must be easily accessible at all times.
- To avoid damaging the power cord or the outlet, it is recommended that you pull on the plug and not on the cord to unplug the system from a wall outlet or an electrical connector.
- Make sure the power cord is not a tripping hazard. Make sure that it is not gripped too tightly at the plug, the outlet or the point where it is connected to the system.
- Before use, check that the hoses are not unplugged, folded, or damaged.
- In case of skin contact with the filtrated liquid, refer to the safety datasheet of the filtrated liquid for first aid measures.
- Dispose the filtrated liquids according to local regulations.
- Do not use the Milliflex® Plus Pump VHP to filtrate flammable products.
- Before cleaning, shut down the Milliflex® Plus Pump VHP and switch off and disconnect the power supply from power source.
- Use only the power supply (model FRA072-S24-4) designed for the pump.
- The power supply must be connected to the earthing system.
- The electrical installation must comply with local standards, power supply voltage: 100–240 Volt AC, 50–60 Hz.
- Use an electrical surge protector to prevent damage to the system.
- Milliflex® Plus Pump VHP System is designed for indoor use only.
- **Use and storage temperatures**
 - The Milliflex® Plus Pump VHP and/or its accessories must be kept away from any heat source. Do not expose the system to direct sunlight or to temperatures outside the ranges of values are given below.
 - Use and storage temperatures are given below:

System operation	System storage	Altitude
10 to 40 °C	0 to 40 °C	<2000 m

- Maximum relative humidity (storage and operation) 80% at temperatures up to 31 °C, then linear decrease to 50% RH at 40 °C.

- System dismantling—WEEE directive:

In accordance with to the European Union Directive 2012/19/EC on Waste Electric and Electronic Equipment (WEEE), the presence of this logo on the product indicates that it should not be disposed of in the normal waste stream but collected separately.

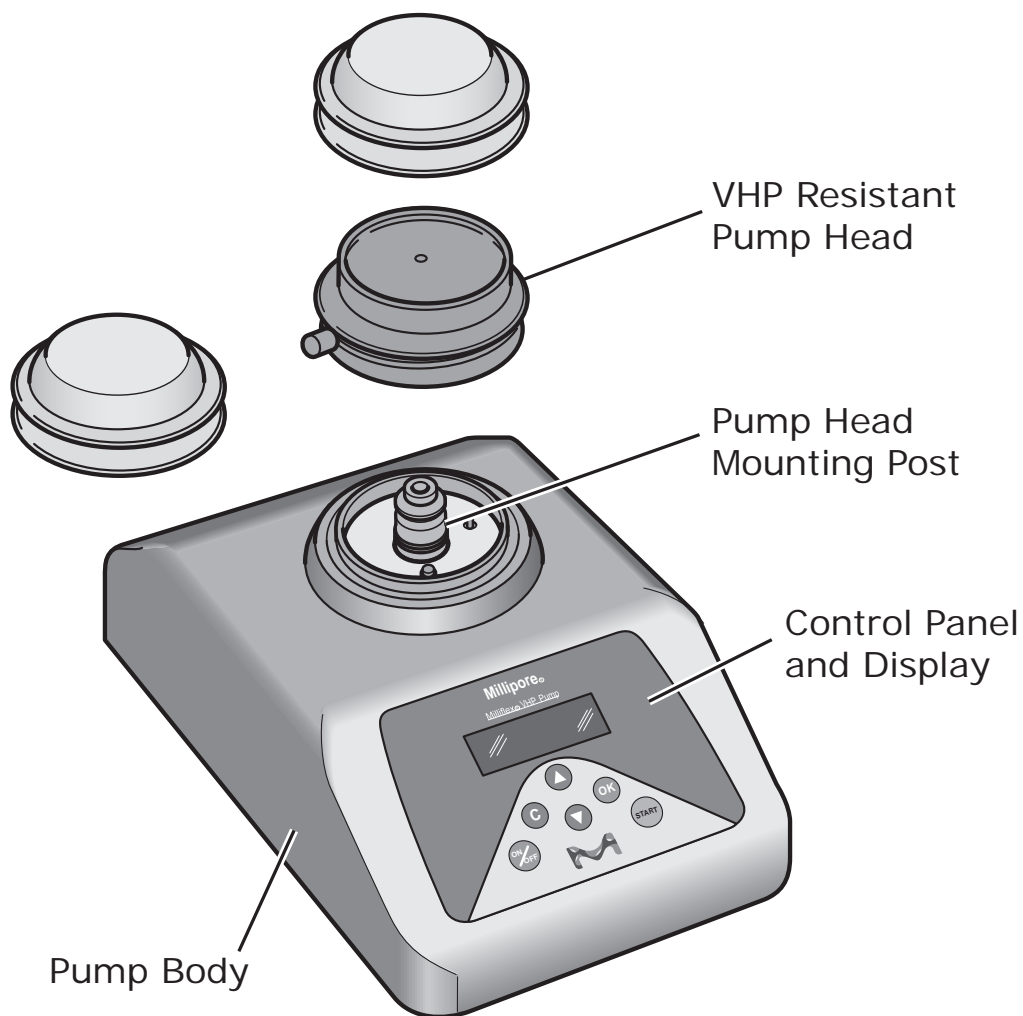


System description

A. VHP Pump (MXPPLUVHP)

The Milliflex® Plus VHP pump is composed of the following elements:

- The pump body
- The pump head with its protective cover (MXPHEAVHP)
- A lead to protect the pump when the pump head is not in place (to be used for assembling the pumps with the manifold tray)



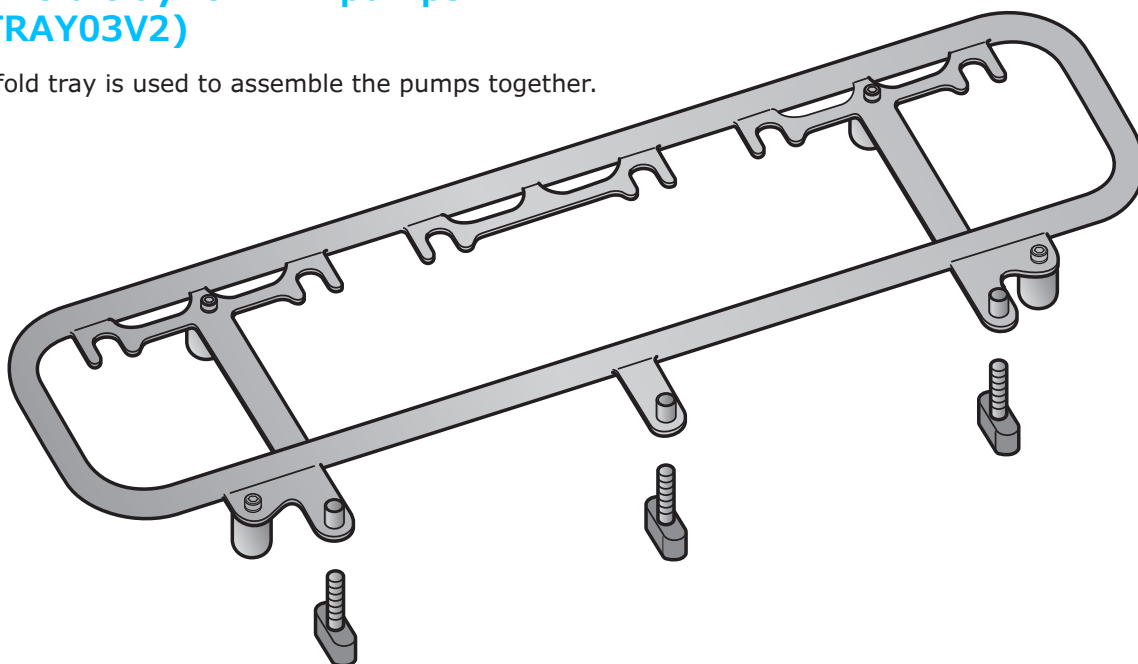
The pump comes with the following documents:

- User Guide PF12640
- Certificate of conformity for the pump (MXPPLUVHPCOQ) and the pump head (MXPHEAVHPCOQ)

Note: The VHP resistant pump (MXPPLUVHP) is compatible with the VHP resistant pump head (MXPHEAVHP) only. These items are designed for use with Milliflex® filtration devices only.

B. Manifold tray for VHP pumps (MXPTRAY03V2)

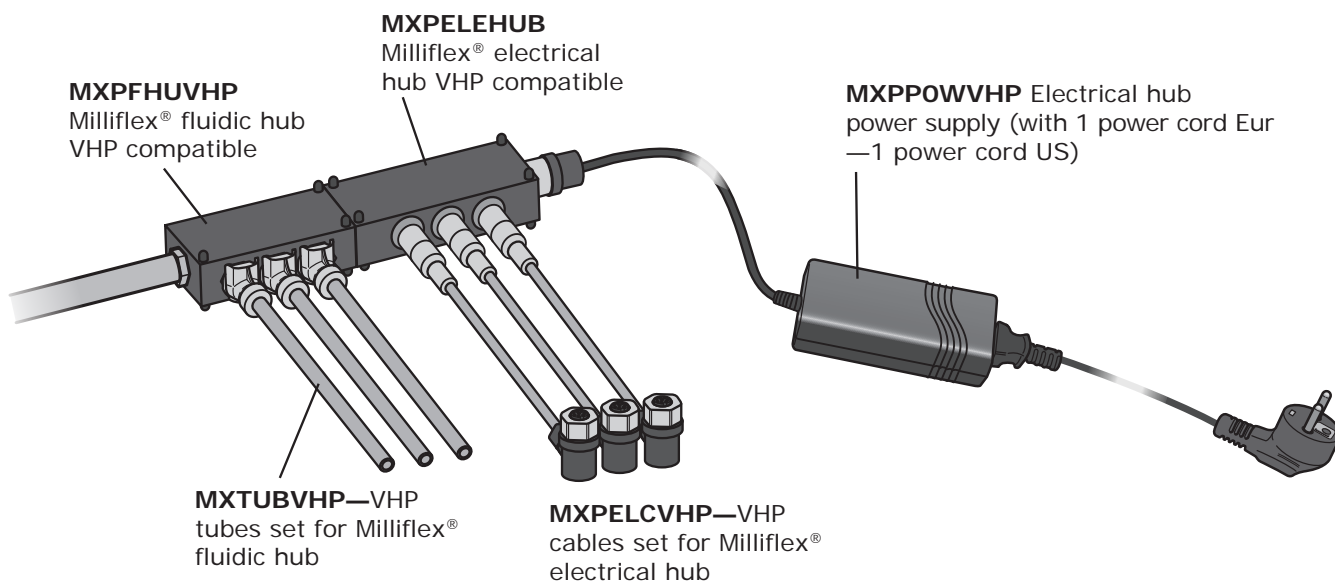
The manifold tray is used to assemble the pumps together.



C. Milliflex® Plus pump VHP Hub kit (MXPHUBKIT)

The VHP Hub kit is composed of:

- Some components for the electrical parts: electrical hub, cables set and power supply
- Some components for the fluidic parts: fluidic hub and tubes set



System Specifications

Materials of Construction	Housing	Stainless steel 316 L	
	Key pad	Polyester	
	Screen window	Polyester with coating	
	Drying valve o-ring	Viton® elastomer	
	Liquid pump housing	Polypropylene	
	Liquid pump membrane	PTFE	
	Liquid pump valve	Viton elastomer	
	Pump head	Stainless steel 316 L with local Teflon® coating	
	Fluidic connections	Polyamide	
	Fluidic tubing	Silicone	
	Pump head cover	Polyacetal	
	Seal (O-ring between pump and pump head)	EPDM	
	Bottom plate seal	Silicone	
	Dimensions		Single
Width		170 mm	585 mm
Depth		265 mm	265 mm
Height without head		162 mm	167 mm
Height with head		170 mm	175 mm
Weight without head		4.4 kg	14.3 kg
Weight with head		5.2 kg	16.8 kg
Electrical	Power supply input	100–240 V — 50–60 Hz — 1.8 A	
	Power supply output	24 V VDC—3.0 A	
	Pump input	24 VDC	
	Pump power	25 VA	
	Electrical Hub	24 VDC/75 VA	
Vacuum	≥ 0.4 bar (11.8 inches of Hg)		
Flow rate	7 to 16 seconds for 100 mL of Milli-Q® grade sterile water filtered through a Milliflex® MXHAWG124 funnel		
TimeAccuracy	± 2 seconds in 5 minutes		
OperationalRequirements	Temperature	10 °C to 40 °C (50 °F to 104 °F)	
	Relative humidity	See chapter 3—Operator and Equipment Safety	
	Altitude	< 2,000 Meters (6,561 feet)	
	Pollution degree	II	
	Main supply voltage	± 10% of the nominal voltage	
	Transient over voltages	Over voltage category II	
Regulatory Information	Millipore SAS certifies that the VHP Resistant Milliflex® PLUS pump is designed and manufactured in application of:		
	2014/30/EU Relating to electromagnetic compatibility		
	2014/35/EU Relating to electrical equipment designed for use within certain voltage		
	2011/65/EU Relating to the restriction of the use of certain hazardous substances (ROHS) in electrical and electronic equipment		

Ordering Information

Catalogue No.	Description	Qty./Pk
MXPP0LVHP	Milliflex® PLUS Pump VHP Resistant	1
MXPHEAVHP	Milliflex® PLUS Pump Head VHP Resistant	1
MXPFHUVHP	Milliflex® Fluidic Hub VHP Compatible	1
MXPELEHUB	Milliflex® Electrical Hub VHP compatible	1
MXPTUBVHP	VHP tubes set for Milliflex® Fluidic Hub	3
MXPELCVHP	VHP Cables set for Milliflex® Electrical Hub	3
MXPP0WVHP	Electrical Hub Power Supply	1
MXPTRAY03V2	Milliflex® VHP Tray for 3 Pumps	1
MXPSPL001	Supply set for one Milliflex® PLUS Pump VHP	1
FTPF01866	Power cord for Europe	
FTPF02471	Power cord for North America, Central America Brazil Mexico	
SIMCABLE1	Power cord for United Kigdom, Ireland, Malaysia, Singapore, Hong Kong	
SIMCABLE2	Power cord for Denmark	
SIMCABLE3	Power cord for India, South Africa	
SIMCABLE4	Power cord for Switzerland	
SIMCABLE7	Power cord for Japan	
SIMCABLE8	Power cord for Australia, China, New Zealand, Argentina	
SIMCABLE9	Power cord for Italy	

Kits information

Kit No./Description	Components	Qty
MXPHUBKIT Milliflex® Plus Pump VHP Hub kit	MXPFHUVHP	1
	MXPELEHUB	1
	MXPTUBVHP	1
	MXPELCVHP	1
	MXPP0WVHP	1
MXPVHPKIT Milliflex® VHP 3 heads kit	MXPPLUVHP	3
	MXPTRAY03V2	1
	MXPFHUVHP	1
	MXPELEHUB	1
	MXPTUBVHP	1
	MXPELCVHP	1
	MXPP0WVHP	1

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