INSTRUCTION MANUAL

Continuous Filter Holder and Filtration System

Model No.

VFC 47

Rocker 300C - VFC 47

Tech support

ROCKER

Please read this instruction manual before using this product.

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1. Important Notice

This instrument is designed for laboratory usage only. Please read this manual carefully before installing and operating. The instrument shall not be modified in any way. Any modification will void the warranty and may result in potential hazard. We are not responsible for any injury or damage caused by any non-intended purposes and modifying the instrument without authorization.

1. Check the voltage specified on the name plate and ensure it matches the line voltage in your location.
2. Install the instrument in a clean, dust-less and ventilated area under 40°C.
3. Never use the pump with any corrosives, flammable or toxic material.
4. The pump is not designed to start against applied vacuum. To prevent damage, verify that the inlet of pump is at atmospheric pressure before each start. If necessary, partially unscrew the vacuum regulator knob to vent to atmosphere.
5. This pump has a thermal protection device that automatically shuts-off when overheated.
6. The temperature of the pump surface is very high after use or during work, please don't touch it to avoid being burnt.
7. The pump must not be used to create vacuum and pressure simultaneously.
8. Do not use any lubricant, which may damage the pump.
9. The lab glass bottle can withstand a maximum vacuum of 5 mbar (abs.), recommended for vacuum filtration only. Do NOT exceed the limit!
10. For any issues with instrument, please contact the manufacturer or service agent for assistance. Do NOT disassemble it improperly.
11. Please discard packing materials according to local regulations.
12. Visit the official website and the latest product guide for detailed information.

13. Operating condition

(a) Ambient temperature: 5 ~ 40°C

(b) Relative humidity: 80% RH Max.

(c) Power supply: 100-120V~, 50/60Hz or 200-240V~, 50/60Hz

(d) Altitude: up to 2000 m

(e) Pollution degree: II

(f) Indoor use

Caution: Hot surface

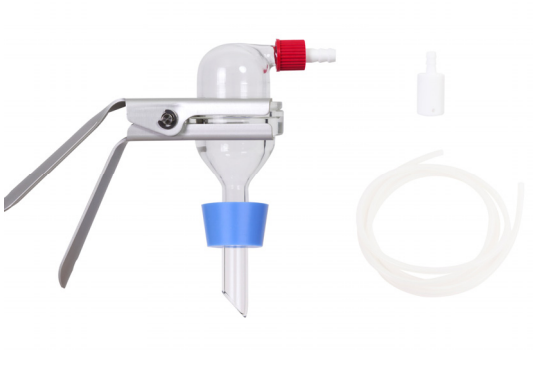
** Before operation, check the compatibility of pump (including pump head, valve plates, and diaphragm) and filtration apparatus materials with used medium.*

** Warning: The PTFE-coated diaphragm and pump head can offer good resistance to a wide range of chemicals except strong acid and alkali.*

2. Unpacking

Please check if the package is complete without any damage before unpacking. When unpacking, please make sure you have all accessories that indicated on the list. If there is any problem, please keep the serial number along with packing case and contact your local distributor immediately for assistance.

(1) VFC 47, Continuous Filter Holder



Standard Package Includes:
Glass Cover
Sintered Glass Support Base, 47 mm
Silicone Stopper (No. 8)
Aluminum Clamp, 47 mm
Silicone Tube Ø 6 x 12 mm
PTFE Sinker
Instruction Manual

(2) Rocker 300C - VFC 47, Continuous Solvent Purification System

Standard Package Includes:
Rocker 300C, PTFE Coated Chemical Resistant Vacuum Pump (with Hoop holder)
VFC 47, Continuous Filter Holder
GL45 Filtration Adaptor
Laboratory Glass Bottle, 1000 mL
Instruction Manual

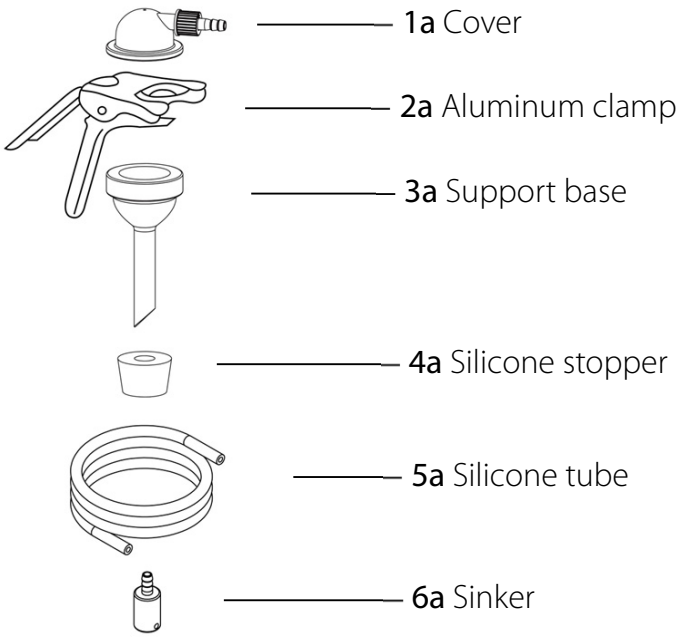
• The sinker and silicone tube are included in VFC 47 Continuous Filter Holder.

• An optional 500 mL laboratory glass bottle (Cat. No. 197000-58) is available.

• The bottle can withstand a maximum vacuum of 5 mbar (abs.), recommended for vacuum filtration only.

3. Main Part Diagram

(1) VFC 47, Continuous Filter Holder



Item	Designation	Item	Designation
1a	Cover	4a	Silicone Stopper (No. 8)
2a	Aluminum Clamp	5a	Silicone Tube Ø 6 x 12 mm
3a	Sintered Glass Support Base	6a	Sinker

(2) Rocker 300C, PTFE Coated Chemical Resistant Vacuum Pump

Item	Designation	Item	Designation
1b	Power Switch	4b	Vacuum Gauge
2b	Air Outlet	5b	Moisture Trap
3b	Air Inlet	6b	Vacuum Regulator

(3) Parts Material List

- VFC 47, Continuous Filter Holder

Part	Material	Part	Material
Filter Holder	Borosilicate glass	Tube	Silicone
Inlet Hose Barb	PP, Silicone	(opt.) Bottle	Borosilicate Glass
Sinker	PTFE		

- Rocker 300C, PTFE Coated Chemical Resistant Vacuum Pump

Part	Material	Part	Material
Pump Head	PTFE coated	Diaphragm	PTFE coated
Valve Plate(s)	FKM		

- If compatibility issues arise, replace the part with suitable material, such as PTFE tubing.
- Listed materials exclude parts not in direct contact with the filtrate, refer to the official website for the latest information.

4. Installation and Operation

(1) Installation

A. Assemble the VFC 47 Continuous Filter Holder as shown below.

- The GL45 filtration adapter and bottle are not included with the purchase of a VFC 47.

(2) Operation

A. Turn on the pump, block the inlet (3b), and regulate the desired vacuum by vacuum regulator (6b).

- A trap bottle is recommended to connect before pump when handling moisture-rich samples.

B. Screw the GL45 filtration adaptor onto a laboratory glass bottle, and insert the filter holder on it using a silicone stopper (4a).

C. Place a membrane on the support base (3a), assemble the cover (1a) onto support base, and clamp them securely.

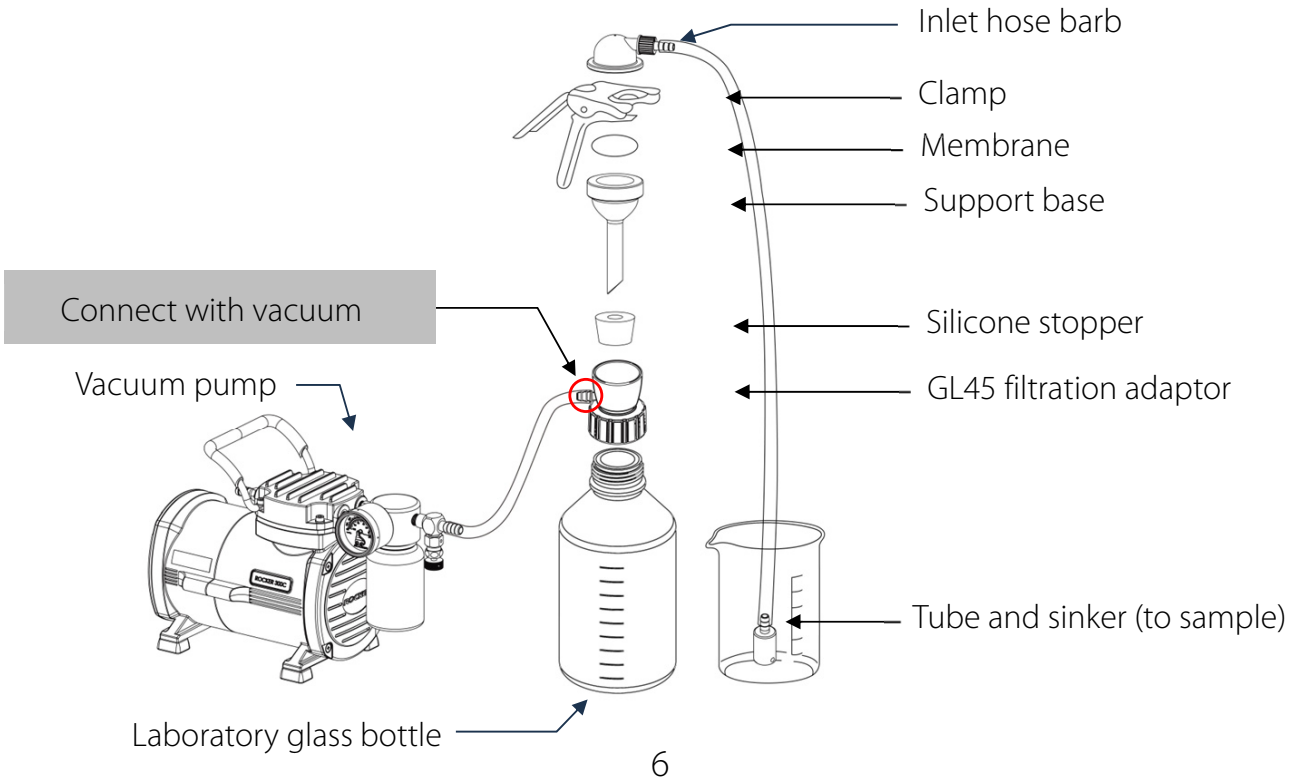
D. Connect the GL45 filtration adaptor to pump inlet (3b) using a silicone tube.

E. Connect the filter holder's inlet hose barb to sinker using tubing, then place the sinker (6a) into sample container for continuous filtration.

- If silicone tube is incompatible with medium, replace it with a suitable material, such as PTFE.

F. Power on the pump to start filtration.

- The glass bottle can withstand a max. vacuum of 5 mbar (abs.). Do NOT exceed the limit!



5. Maintenance

1. The vacuum pump is not autoclavable. Please clean the surface by pure water or 75% ethanol.
2. After finishing the experiment, please remove the liquid in the moisture trap and keep pumping the air for at least 2 minutes to withdraw the residual steam.
3. Please remove the liquid in the moisture trap after every use. If the liquid in moisture trap is more than 70%, please stop the experiment immediately to empty the liquid.
4. Filtration apparatus and accessories are autoclavable (121°C, 1 bar, 20 min). Please make sure to rinse the apparatus with pure water and separate each part before autoclave.
5. Valve plate(s), O-ring(s), silicone tube(s), and diaphragm are consumables, it is recommended to replace them on a yearly basis or as needed to ensure good operation.

• How to clean the VFC 47 Continuous Filter Holder

1. Disassemble the filter holder and vacuum bottle completely.
2. Soak all parts in clean water. Avoid abrasive cleansers. If necessary, use a soft bristle brush or sponge to remove residues.
3. Rinse all parts thoroughly. Final rinse should be done with distilled or deionized water.
4. Store in a clean, dry place.

6. Troubleshooting

Problem	Reason and Solution
Failed to start	• Loose plug → Reconnect plug to power supply. • Wrong voltage → Reconnect to power specified on name plate. • Vacuum exists → Release vacuum and restart. • Switch is broken → Contact distributor for assistance.
Failed to adjust vacuum	• Loose regulator → Tighten regulator by yourself or contact distributor for assistance. • Faulty vacuum regulator → Contact distributor for assistance. • Faulty vacuum gauge → Contact distributor for assistance.
Poor vacuum	• Improperly vacuum setting → Adjust the vacuum regulator. • Air leakage → Replace or tighten the tubing and accessories that possible leaks.
Low filtration speed	• Improperly vacuum setting → Adjust the vacuum regulator. • Air leakage → Replace or tighten the tubing and accessories that possible leaks. • Unsuitable membrane → Change an appropriate membrane. • Membrane is blocked → Replace a new membrane.
Others	• Contact distributor for assistance.

Ordering information

189303-11(22)	Rocker 300C - VFC 47, Continuous Solvent Purification System, AC110V, 60Hz (AC220V, 50Hz)
167200-S4	VFC 47, Continuous Filter Holder (47 mm)
167210-36-05	PTFE sinker
197000-65	GL45 filtration adaptor
167210-01	Glass cover
167230-03	Sintered glass support base, 47 mm (including No.8 silicone stopper)
167230-07	Glass support base, 47 mm (to be used with SS support screen and PTFE gasket)
167230-31	SS support screen, 47 mm
167230-41	PTFE gasket
167240-01	Aluminum clamp, 47 mm
167100-16-1	Silicone stopper (No.8)
167200-38	Silicone tube, Ø 6 x 12 mm, 100 cm
197000-58	Laboratory glass bottle, 500 mL
197000-59	Laboratory glass bottle, 1000 mL
167100-52-1	Whatman ME 25 (MCE) membrane, 47 mm, 0.45 µm, 100/PK
167100-20	PALL A/E glass fiber membrane filter, 47 mm, 1 µm, 100/PK

• Vacuum Pump

189300-11(22)	Rocker 300C, PTFE Coated Chemical Resistant Vacuum Pump, AC110V,60Hz (AC 220V,50Hz)
189400-11(22)	Rocker 400C, PTFE Coated Chemical Resistant Vacuum Pump, AC110V,60Hz (AC 220V,50Hz)
189410-11(22)	Rocker 410C, PTFE Coated Chemical Resistant Vacuum Pump, AC110V,60Hz (AC 220V,50Hz)
167300-11(22)	Rocker 300, Vacuum Pump, AC110V,60Hz (AC 220V,50Hz)
167400-11(22)	Rocker 400, Vacuum Pump, AC110V,60Hz (AC 220V,50Hz)
167410-11(22)	Rocker 410, Vacuum Pump, AC110V,60Hz (AC 220V,50Hz)
169300-11(22)	Chemker 300, Vacuum Pump, AC110V,60Hz (AC 220V,50Hz)

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