INSTRUCTION MANUAL

Continuous Filter Holder and Filtration System

Model No.

SFC 142

Rocker 400 - SFC 142

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 chemical, 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. To ensure proper function of the Prote™ device, the pump must be installed on a flat, level surface and should not be moved during operation. If the buoy closes during use, manually reset it by removing and reinstalling the filter cartridge.
6. The filter cartridge absorbs moisture and dust. Replace the cartridge to maintain pumping efficiency when it becomes dirty or color-changing.
7. This pump has a thermal protection device that automatically shuts-off when overheated.
8. The temperature of the pump surface is very high after use or during work, please don't touch it to avoid being burnt.
9. The pump must not be used to create vacuum and pressure simultaneously.
10. Do not use any lubricant, which may damage the pump.
11. The lab glass bottle can withstand a maximum vacuum of 5 mbar (abs.), recommended for vacuum filtration only. Do NOT exceed the limit!
12. For any issues with instrument, please contact the manufacturer or service agent for assistance. Do NOT disassemble it improperly.

13. Please discard packing materials according to local regulations.
14. Visit the official website and the latest product guide for detailed information.
15. 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 piston seal) and filtration apparatus materials with used medium.*

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) SFC 142, Continuous Filter Holder

Standard Package Includes:
Stainless Steel Cover
Stainless Steel Support Screen, 142 mm
Stainless Steel Support Base, 142 mm
Silicone Stopper (No. 8)
Silicone Tube Ø 8 x 14 mm, 200 cm
Stainless Steel Sinker
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(2) Rocker 400 - SFC 142, Continuous Vacuum Filtration System

Standard Package Includes:
Rocker 400, Oil Free Vacuum Pump
SFC 142, Continuous Filter Holder
GL45 Filtration Adaptor
Laboratory Glass Bottle, 10 L
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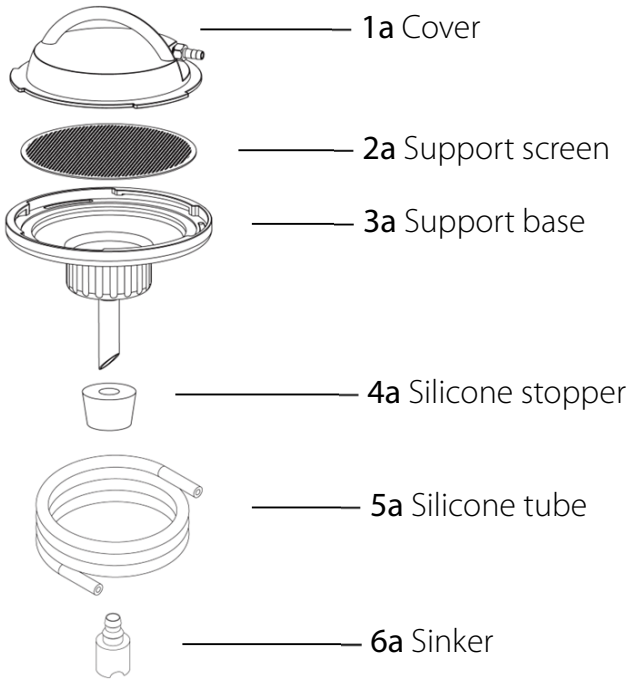
• The sinker and silicone tube are included in SFC 142 Continuous Filter Holder.

• An optional 20 L laboratory glass bottle (Cat. No. 197000-70) is available.

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

3. Main Part Diagram

(1) SFC 142, Continuous Filter Holder



Item	Designation	Item	Designation
1a	Cover	4a	Silicone Stopper (No. 8)
2a	Support Screen	5a	Silicone Tube Ø 8 x 14 mm
3a	Support Base	6a	Sinker

(2) Rocker 400, Vacuum Pump

Item	Designation	Item	Designation
1b	Power Switch	5b	Moisture Trap
2b	Air Outlet	6b	Vacuum Regulator
3b	Air Inlet	7b	Prote™ Filter Cartridge
4b	Vacuum Gauge		

- Rocker 400 vacuum pumps are equipped with copper muffler(s) at the air outlet(s).

(3) Parts Material List

- SFC 142, Continuous Filter Holder

Part	Material	Part	Material
Filter Holder	SS304, PTFE	Tube	Silicone
Sinker	SS304	(opt.) Bottle	Borosilicate Glass

- Rocker 400, Oil Free Vacuum Pump

Part	Material	Part	Material
Pump Head	Aluminum alloys	Piston Seal	PTFE complex
Valve Plate(s)	FKM		

- 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 SFC 142 Continuous Filter Holder as shown below.

- The GL45 filtration adapter and bottle are not included with the purchase of a SFC 142.

(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).

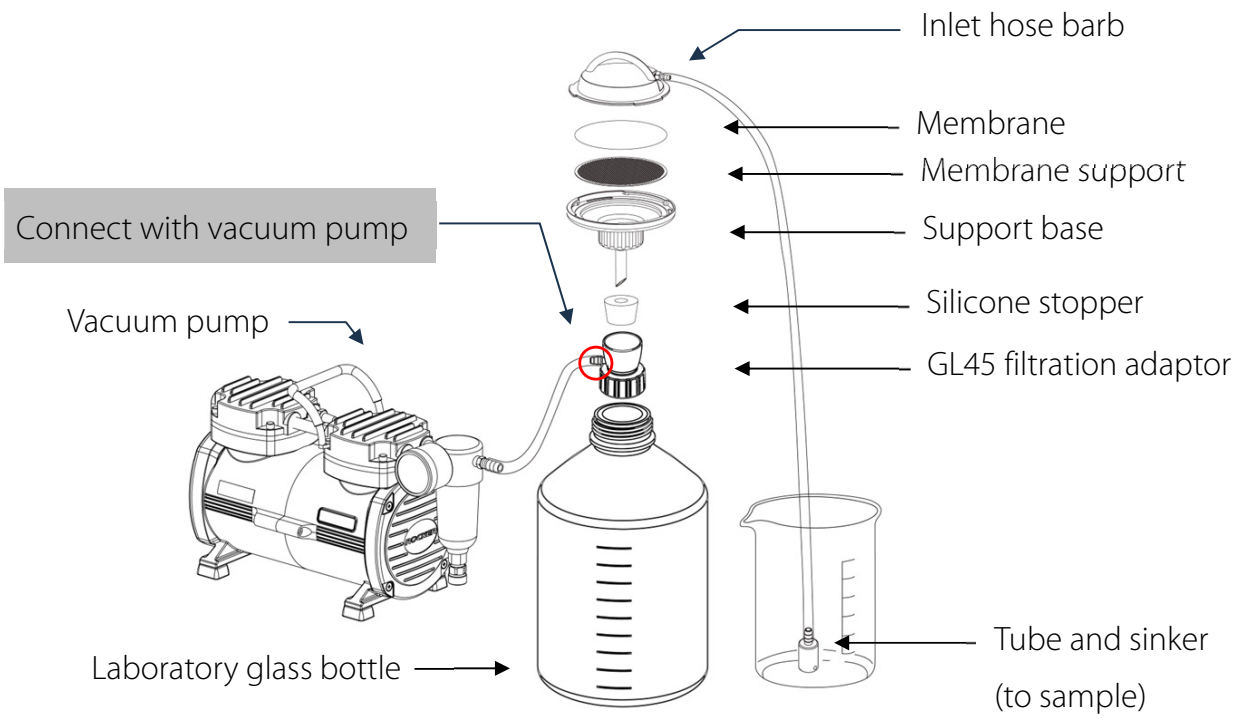
C. Place a 142 mm membrane on the support screen (2a), assemble the cover (1a) onto support base (3a), and twist clockwise to secure.

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.

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 muffler are consumables, it is recommended to replace them on a yearly basis or as needed to ensure good operation.

• How to clean the SFC 142 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.

• How to reset the Prote™ protection device (Rocker 400)

1. Remove the moisture trap (5b) and filter cartridge (7b) by rotating clockwise.
2. Disassemble the filter cartridge (7b) to ensure the buoy is not closed.
3. Reinstall all components, filter cartridge and moisture trap back.

• How to replace cartridge (Rocker 400)

1. Please replace the cartridge when it becomes dirty or color-changing.
2. Please remove the moisture trap (5b) by rotating it clockwise.
3. Replace the cartridge by the same way.

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. • Clogged muffler → Replace a new muffler. • 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

167405-11(22)	Rocker 400 - SFC 142, Continuous Vacuum Filtration System, AC110V, 60Hz (AC220V, 50Hz)
180200-S1	SFC 142, Continuous Filter Holder (142 mm)
180200-31	Stainless steel support screen, 142 mm
180200-32	Stainless steel sinker
197000-65	GL45 filtration adaptor
167100-16-1	Silicone stopper (No.8)
180300-68	Silicone tube, Ø 8 x 14 mm, 200 cm
197000-69	Laboratory glass bottle, 10 L
197000-70	Laboratory glass bottle, 20 L
201PAL60305	PALL Supor™ PES membrane disc filters, 142 mm, 0.2 µm, tabbed, 25/PK
201PAL66604	PALL Nylaflo™ Nylon membrane disc filters, 142 mm, 0.2 µm, 25/PK
201PES-142-022-50	RONE PES membrane, 142 mm, 0.2 µm, 25/PK
201NY-142-022-50	RONE Nylon membrane, 142 mm, 0.2 µm, 25/PK

• Vacuum Pump

167400-11(22)	Rocker 400 Vacuum Pump, AC110V,60Hz (AC 220V,50Hz)
167410-11(22)	Rocker 410 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)

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