

# INSTRUCTION MANUAL

Model : LF 3 / LF 5 / LF 3a / LF 5a / LF 30 / LF 31



▶ WATCH VIDEO

Carefully check if the shipping carton is damaged before unpacking. Please check the items according to standard package list. If you have any question, please preserve serial no. & shipping carton and contact your dealer for quick solution.

Model	Spin-Lock Filter Holder		PES Filtration Apparatus	
	LF 3 / 5	LF 3a / 5a	LF 30	LF 31
1. Funnel lid	Yes	Yes	Yes	Yes
2. Funnel	300 / 500 mL	300 / 500 mL	300 mL	300 mL
3. Support base	Yes	Yes	Yes	Yes
4. Silicone stopper	No. 8	-	-	No. 8
Accessory	-	-	5. Overflow protection	5. Silicone fixing sucker
Vacuum bottle	-	-	6. 1200 mL PC bottle	6. 1000 mL receiver flask with drain

**Note:** (1) PES Filter Holder LF 3a / 5a are designed for the laboratory glass bottle filtration  
 (2) The glass flask can withstand a maximum vacuum of 5 mbar (abs.), recommended for vacuum filtration only.  
 Do NOT exceed the limit!

## Maintenance

### 1. Cleaning

- A. Disassemble the filter holder and vacuum bottle completely.
- B. Soak all parts in clean water. Avoid abrasive cleansers.  
 If necessary, use a soft bristle brush or sponge to remove residues.  
 \* Do NOT use any detergents which may cause polyether sulfone (PES) to crack, thereby reducing life of the product.
- C. Rinse all parts thoroughly. Final rinse should be done with distilled or deionized water.
- D. Store in a clean, dry place.

### 2. Sterilization

- A. Make sure to separate funnel lid and stopper from the filter holder when autoclaved.
- B. Autoclave at 121 - 123 °C (250 - 253 °F) at 1.0 bar (100 kPa, 15 psi) for 15 - 20 min.  
 \* Do NOT autoclave with aluminum foil. It is always recommended to autoclave the funnels in autoclave paper and bags.  
 \* The rubber drain hose of LF 31 is not autoclavable, please remove it before autoclave.

## Usage Guide

LF 3 / 5 Spin-Lock Filter Holder	LF 3a / 5a Spin-Lock Filter Holder	
<p>Labels: PP funnel lid, PES funnel, Membrane, PC support base, Connect with vacuum pump, Overflow protection, PC vacuum bottle.</p>	<p>Labels: PP funnel lid, PES funnel, Membrane, PC support base, Silicone stopper, Screwthread connector, Connect with vacuum pump, Waste bottle.</p>	<p>Labels: PP funnel lid, PES funnel, Membrane, Connect with vacuum pump, Storage bottle adaptor, Laboratory glass bottle.</p>
<ol style="list-style-type: none"> <li>1. Lock the support base directly on the opening of the bottle.</li> <li>2. Place 47 mm membrane on the center of support screen and lock the funnel onto the support base.</li> <li>3. Connect with vacuum pump by hose barb on bottle and power on the pump to start the filtration.</li> </ol>	<ol style="list-style-type: none"> <li>1. Insert the support base into silicone stopper deeply and insert the stopper into the opening of the flask.</li> <li>2. Place 47 mm membrane on the center of support screen and lock the funnel onto the support base.</li> <li>3. Connect with vacuum pump by side arm of flask and power on the pump to start the filtration.</li> </ol>	
<ol style="list-style-type: none"> <li>1. Lock the storage bottle adaptor directly on the opening of the GL45 bottle.</li> <li>2. Place 47 mm membrane on the center of support screen and lock the funnel onto the adaptor.</li> <li>3. Connect with vacuum pump by hose barb on filter holder and power on the pump to start the filtration.</li> </ol>		

- LF Filter Holder supports both  $\Phi 47$  mm and  $\Phi 50$  mm membranes.
- If a funnel lid is necessary during filtration, open a cap and insert a syringe filter for venting.
- ROCKER glass flask can withstand a max. vacuum of 5 mbar (abs.). Do **NOT** exceed the limit!

## Ordering Information

197000-01	LF 3, Spin-Lock Filter Holder (300 mL)	197000-02	LF 3a, Spin-Lock Filter Holder (300 mL)
197000-06	LF 5, Spin-Lock Filter Holder (500 mL)	197000-07	LF 5a, Spin-Lock Filter Holder (500 mL)
197000-34	PES funnel, 300 mL	197000-56	PES funnel, 500 mL
197000-35	PC support base	197000-38	Storage bottle adaptor for LF 3a / 5a
197000-37	Membrane support screen for LF funnel	194225-01	PTFE syringe filter, 25 mm, 0.2 $\mu$ m
197000-36	PP lid kit for LF 3 / 3a	200300-36	PP lid kit for LF 5 / 5a
167110-16	Silicone stopper (No.8)	167110-17	Silicone stopper (No.16)
197000-31-PC	PC bottle, 1200 mL	197000-39	Overflow protection
167300-08	Receiver flask with drain, 1000 mL	167200-45	Silicone fixing sucker
197010-30	LF 30, PES Filtration Set	197010-31	LF 31, PES Filtration Set
167100-20	PALL A/E glass fiber membrane filter, 47 mm, 1 $\mu$ m, 100/PK		
167100-52-1	Whatman ME 25 (MCE) membrane, 47 mm, 0.45 $\mu$ m, 100/PK		