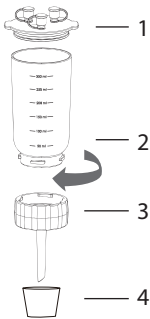
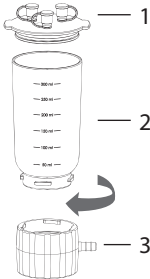
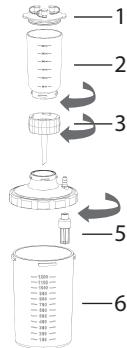
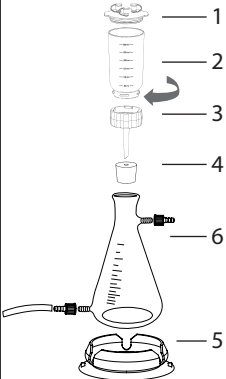


INSTRUCTION MANUAL

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

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

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"> 1. Lock the support base directly on the opening of the bottle. 2. Place 47 mm membrane on the center of support screen and lock the funnel onto the support base. 3. Connect with vacuum pump by hose barb on bottle and power on the pump to start the filtration. 	<ol style="list-style-type: none"> 1. Insert the support base into silicone stopper deeply and insert the stopper into the opening of the flask. 2. Place 47 mm membrane on the center of support screen and lock the funnel onto the support base. 3. Connect with vacuum pump by side arm of flask and power on the pump to start the filtration. 	<ol style="list-style-type: none"> 1. Lock the storage bottle adaptor directly on the opening of the GL45 bottle. 2. Place 47 mm membrane on the center of support screen and lock the funnel onto the adaptor. 3. Connect with vacuum pump by hose barb on filter holder and power on the pump to start the filtration.

- 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.

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 μ 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 μ m, 100/PK		
167100-52-1	Whatman ME 25 (MCE) membrane, 47 mm, 0.45 μ m, 100/PK		