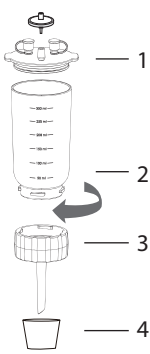
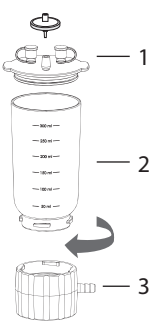
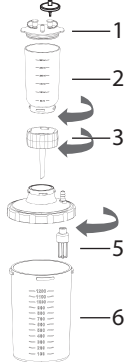
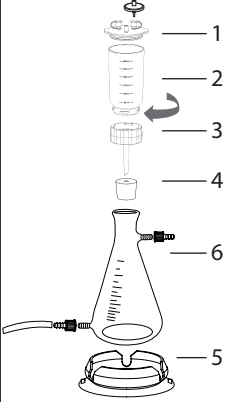


# INSTRUCTION MANUAL

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. 16	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

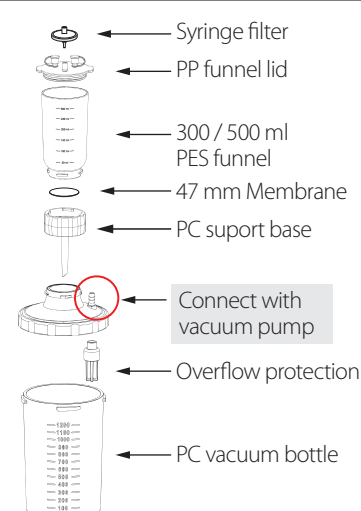
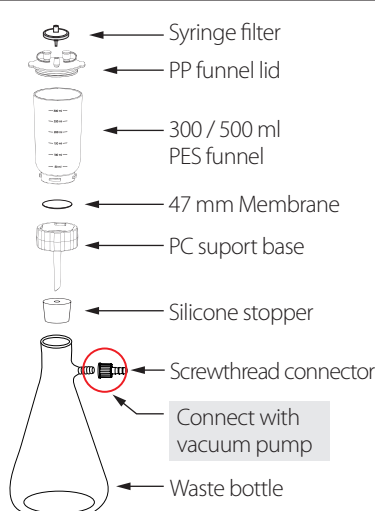
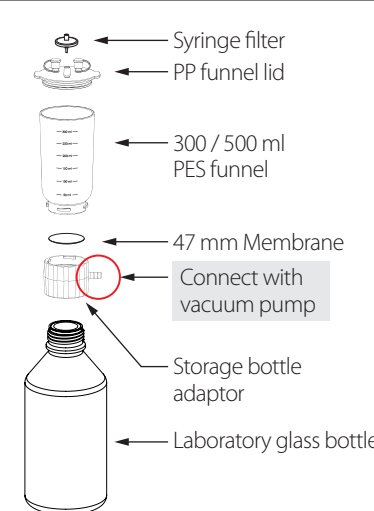
### 1. Cleaning

- 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.
  - \* Proceed with cleaning and maintenance after every use.

### 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 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 for LF 3/5: Syringe filter, PP funnel lid, 300 / 500 ml PES funnel, 47 mm Membrane, PC support base, Connect with vacuum pump, Overflow protection, PC vacuum bottle.</p>	 <p>Labels for LF 3a/5a (Waste bottle): Syringe filter, PP funnel lid, 300 / 500 ml PES funnel, 47 mm Membrane, PC support base, Silicone stopper, Screwthread connector, Connect with vacuum pump, Waste bottle.</p>	 <p>Labels for LF 3a/5a (Laboratory glass bottle): Syringe filter, PP funnel lid, 300 / 500 ml PES funnel, 47 mm 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>	

## 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
197000-37	Membrane Support Screen for LF Funnel	194225-01	PTFE Syringe Filter, 25 mm, 0.2 µm
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, 1 µm (100/PK)		
167100-52	PALL GN-6 Metrcel Membrane Filter, grid (200/PK)		