

## INSTRUCTION MANUAL

Model : SF 1 / SF 3 / SF 5 / SF 10 / SF 11 / SF 30 / SF 52



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               | Stainless Steel Filter Holder | Stainless Steel Filtration Apparatus |                                      |                                      |
|---------------------|-------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
|                     | SF 1 / 3 / 5                  | SF 10 / 30                           | SF 11                                | SF 52                                |
| 1. Funnel           | 100 / 300 / 500 ml            | 100 / 300 ml                         | 100 ml                               | 500 ml                               |
| 2. Membrane support | Yes                           | Yes                                  | Yes                                  | Yes                                  |
| 3. Support base     | Yes                           | Yes                                  | Yes                                  | Yes                                  |
| 4. Silicone stopper | No. 8                         | No. 16                               | No. 8                                | No. 18                               |
| Accessory           | -                             | 5. Overflow protection               | 5. Silicone fixing sucker            | -                                    |
| Vacuum bottle       | -                             | 6. 1200 ml PC bottle                 | 6. 1000 ml receiver flask with drain | 6. 2000 ml receiver flask with drain |
|                     |                               |                                      |                                      |                                      |

**Note: (1) SF filter holders are made of SS316, able to be fast sterilized by flame, is much more effective than autoclave.**

**(2) SF, Stainless steel funnel lid is optional.**

**(3) Support base is also compatible with Pall 4870 (100ml) and 4871 (250ml) disposable funnels.**

## Maintenance

## 1. Cleaning

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

## 2. Sterilization

## I. Autoclave

- Make sure to separate funnel lid and stopper from the filter holder when autoclaved.
- Autoclave at 121 - 123 °C (250 -253 °F) at 1.0 bar (100 kPa, 15 psi) for 15 - 20 min.

\*The rubber drain hose of SF 11 and SF 52 is not autoclavable, please remove it before autoclave.

## II. Flame Sterilization (apply only on stainless steel material filter holder)



A. Flame the support base and membrane support with lab burner.

B. Put the funnel upside down on the desk and flame it from the bottom.

C. Wear THICK glove to life up the heated funnel and put it on the support base.

D. Flame the interior wall of the funnel from bottom to top circularly.

E. Wait until the stainless steel filter holder cools down to the room temperature then start a filtration.

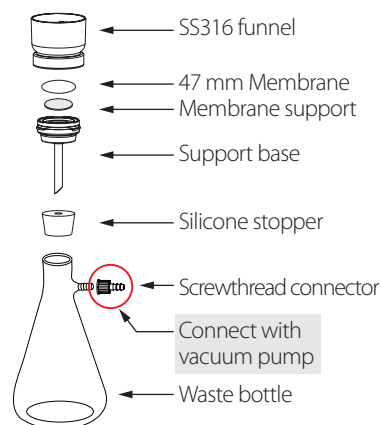
\* Flame part of filter holder until no obvious globule retain.

\* Time for flame sterilization varies according to sample condition.

## Usage Guide

1. Insert the stem of filter holder into flask or manifold by silicone stopper.
2. Seat the membrane support in the support base and place the membrane on it.
3. Connect the funnel and assembled support base together by twisting clockwise.
4. Connect with vacuum pump by side arm of flask and power on the pump to start the filtration.

- Membrane guide on the support base helps position membrane easily.
- Forceps access points on support base help retrieve membrane without damage.



## Ordering Information

|              |  |
|--------------|--|
| 180100-10    | SF 1, Stainless Steel Filter Holder (100 ml)         |
| 180100-30    | SF 3, Stainless Steel Filter Holder (300 ml)         |
| 180100-50    | SF 5, Stainless Steel Filter Holder (500 ml)         |
| 180100-31    | Stainless steel support screen                       |
| 180100-11    | 100 ml Stainless steel lid                           |
| 197000-31-PC | PC Bottle, 1200 ml                                   |
| 167300-08    | Receiver Flask with Drain, 1000 ml                   |
| 167200-13    | Receiver Flask with Drain, 2000 ml                   |
| 167110-17    | Silicone stopper (No. 16)                            |
| 167100-20    | PALL A/ E Glass Fiber Membrane Filter, 1 um (100/PK) |
| 167100-52    | PALL GN-6 Metrice Membrane Filter, grid (200/PK)     |

|           |                                     |
|-----------|-------------------------------------|
| 180100-01 | Stainless steel funnel, 100 ml      |
| 180100-03 | Stainless steel funnel, 300 ml      |
| 180100-05 | Stainless steel funnel, 500 ml      |
| 180100-00 | Stainless steel support base        |
| 180100-13 | 300 ml / 500 ml Stainless steel lid |
| 197000-39 | Overflow Protection                 |
| 167200-45 | Silicone Fixing Sucker              |
| 167110-16 | Silicone stopper (No. 8)            |
| 167110-18 | Silicone stopper (No. 18)           |