

# **INSTRUCTION MANUAL**



Model: SF 1 / SF 3 / SF 5 / SF 10 / SF 11 / SF 30 / SF 52 / SFC 142

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<br>Filter Holder                                             | Stainless Steel Filtration Apparatus                              |                                                             |                                                               | Continuous<br>Filter Holder |
|---------------------|------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------|-----------------------------|
|                     | SF 1/3/5                                                                     | SF 10 / 30                                                        | SF 11                                                       | SF 52                                                         | SFC 142                     |
| Filter diameter     | 47 mm                                                                        | 47 mm                                                             | 47 mm                                                       | 47 mm                                                         | 142 mm                      |
| 1. Funnel           | 100/300/500 mL                                                               | 100 / 300 mL                                                      | 100 mL                                                      | 500 mL                                                        | Cover                       |
| 2. Membrane support | Yes                                                                          | Yes                                                               | Yes                                                         | Yes                                                           | Yes                         |
| 3. Support base     | Yes                                                                          | Yes                                                               | Yes                                                         | Yes                                                           | Yes                         |
| 4. Silicone stopper | No. 8                                                                        | No. 16                                                            | No. 8                                                       | No. 18                                                        | No. 8                       |
| Accessory           | -                                                                            | 5. Overflow protection                                            | 5. Silicone fixing sucker                                   | -                                                             | 5. Tube & sinker            |
| Vacuum bottle       | -                                                                            | 6. 1200 ml PC bottle                                              | 6. 1000 ml receiver flask with drain                        | 6. 2000 ml receiver flask with drain                          | -                           |
|                     | $ \begin{array}{c c} -1 \\ \hline -2 \\ \hline -3 \\ \hline -4 \end{array} $ | $ \begin{array}{c} -1 \\ -2 \\ -3 \\ -4 \\ -5 \\ -6 \end{array} $ | $ \begin{array}{c} -1 \\ -2 \\ -3 \\ -4 \\ -6 \end{array} $ | $ \begin{array}{c c} -1 \\ -2 \\ -3 \\ -4 \\ -6 \end{array} $ | -1 $-2$ $-3$ $-4$           |

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) SF support base, except for SFC 142, is also compatible with Pall 4870 (100mL) and 4871 (250mL) disposable funnels.

#### 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.
- C. Rinse all parts thoroughly. Final rinse should be done with distilled or deionized water.
- D. Store in a clean, dry place.
- 2. Sterilization
- I. Autoclave
- A. Make sure to separate funnel lid and stopper from the filer holder when autoclaved.
- B. 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)







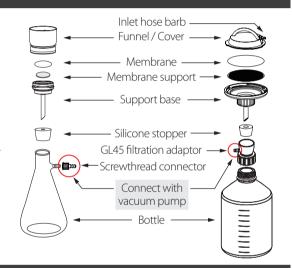




- A. Flame the support base and membrane support with lab burner.
- B. Put the funnel or cover upside down on the desk and flame it from the bottom.
- C. Wear THICK glove to lift up the heated funnel or cover and put it on the support base.
- D. Flame the interior wall of the funnel from bottom to top circularly. (skip this step when using SFC 142)
- E. Wait until the stainless steel filter holder cools down to the room temperature then start a filtration.
- \* Flame the filter holder until no obvious globule retain.

### **Usage Guide**

- 1. Insert the filter holder into flask or bottle by silicone stopper.
- 2. Seat the membrane support in the support base and place the membrane on it.
- 3. Connect the funnel and cover to support base by twisting clockwise.
  - For SFC 142: Simply placing the cover on support base is sufficient for filtration.
- 4. Connect vacuum pump to flask's side arm or filtration adaptor, then pour the sample into the filter holder.
  - For SFC 142: Use tubing to connect the inlet hose barb to the sample for continuous filtration.
- 5. Power on the pump to start filtration.



## **Ordering Information**

| 180100-10                                                         | SF 1, Stainless Steel Filter Holder (100 mL)                         | 180100-11     | 100 mL Stainless steel lid                                 |  |  |
|-------------------------------------------------------------------|----------------------------------------------------------------------|---------------|------------------------------------------------------------|--|--|
| 180100-30                                                         | SF 3, Stainless Steel Filter Holder (300 mL)                         | 180100-13     | 300 mL / 500 mL Stainless steel lid                        |  |  |
| 180100-50                                                         | SF 5, Stainless Steel Filter Holder (500 mL)                         | 180100-31     | Stainless steel support screen, 47 mm                      |  |  |
| 180200-S1                                                         | SFC 142, Continuous Filter Holder                                    | 180200-31     | Stainless steel support screen, 142 mm                     |  |  |
| 180200-32                                                         | Stainless steel sinker                                               | 180300-68     | Silicone tube Ø 8 x 14 mm, 200 cm                          |  |  |
| 167300-08                                                         | Receiver Flask with Drain, 1000 mL                                   | 197000-69 / 7 | <b>197000-69 / 70</b> Laboratory glass bottle, 10 L / 20 L |  |  |
| 167200-13                                                         | Receiver Flask with Drain, 2000 mL                                   | 197100-65     | GL45 filtration adaptor                                    |  |  |
| 167110-16                                                         | Silicone stopper (No. 8)                                             | 167110-16-1   | Silicone stopper (No. 8) for SFC 142                       |  |  |
| 167100-20                                                         | PALL A/ E Glass Fiber Membrane Filter, 47mm, 1 µm, 100/PK            |               |                                                            |  |  |
| 167100-52-1                                                       | Whatman ME 25 (MCE) membrane, 47 mm, 0.45 μm, 100/PK                 |               |                                                            |  |  |
| 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    |               |                                                            |  |  |
| <b>201PES-142-022-50</b> RONE PES membrane, 142 mm, 0.2 μm, 50/PK |                                                                      |               |                                                            |  |  |
| 201NY-142-022-50 RONE Nylon membrane, 142 mm, 0.2 µm, 50/PK       |                                                                      |               |                                                            |  |  |