

# INSTRUCTION MANUAL

Model: VF 20 / 21

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

Model	Borosilicate Glass Filtration Apparatus for Evaporation
	VF 20 / 21
Filter diameter	47 mm / 50 mm
1. Funnel	300 mL
2. Aluminum clamp	Yes
3. Membrane support	VF 20: Sintered glass / VF 21: SS screen
4. Support base	Yes
5. Vacuum bottle	1000 mL Evaporating flask, TS 24/40

*Note: (1) An additional PTFE gasket, placed under membrane support, is included in VF 21.*

*(2) Filtration sets and flasks are available with various sizes and joints, contact us for options.*

## 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

- A. Ensure each part is disassembled before autoclaving.
- B. Autoclave at 121 - 123 °C (250 -253 °F) at 1.0 bar (100 kPa, 15 psi) for 15 - 20 min.

# Usage Guide

**VF 20 / 21**

1. Place the evaporating flask securely on a holder or rack, and clamp it with a flask clamp if necessary.
2. Connect the support base to flask using the joint.
3. Place the membrane on the support base, put the funnel on top and clamp them together.
4. Connect vacuum pump to screwthread connector.
  - Ensure the screwthread connector (red) is attached to the support base before connecting to vacuum pump.
5. Power on the pump to start filtration.

## Ordering Information

167200-20	VF 20, Glass Filtration Set for Evaporation	167230-31	SS support screen, 47 mm
167200-21	VF 21, Glass Filtration Set for Evaporation	167230-41	PTFE gasket, 47 mm
167120-31-1	300 mL Glass Filter Holder for VF 20	167240-01	Aluminum clamp, 47 mm
167120-33-1	300 mL Glass Filter Holder for VF 21	167200-38	Silicone tube Ø 6 x 12 mm, 100 cm
167250-10	Evaporating flask, 1000 mL, TS 24/40		
189300-11(22)	Rocker 300C, PTFE Coated Chemical Resistant Vacuum Pump, AC110V, 60Hz (AC220V, 50Hz)		
169300-11(22)	Chemker 300, Chemical Resistant Vacuum Pump, AC110V, 60Hz (AC220V, 50Hz)		
167100-52-1	Whatman ME 25 (MCE) membrane, 47 mm, 0.45 µm, 100/PK		
167100-20	PALL A/E glass fiber membrane filter, 47 mm, 1 µm, 100/PK		