

## Specifications Required for Bench-Top Lyophilizer and Minor Equipment

Sl. No.	Qty	Description
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1.0	1	<b>FreeZone 2.5 Liter -84°C Benchtop FreezeDryer system with Stainless steel coil, 230 V, 50 Hz</b>
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### FEATURES/

### SPECIFICATIONS

- Upright stainless steel collector coil capable of removing 2.2 Liters of water in 24 hours and holding 2.5 liters of ice before defrosting. Collector lid, 3/4" thick, has neoprene gasket and 3" diameter port for connection of drying accessories
- Two 1/3 hp HCFC/CFC-free refrigeration system to cool collector to -84°C (-119°F) with stainless steel lid. Collectors reaching -84°C include stainless steel lid.
- Compact benchtop design with a small footprint.
- Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- Full color, 5" capacitive touchscreen
- Hot gas defrost.
- On/standby switch.
- Moisture sensor that prevents refrigeration or vacuum start-up when moisture is detected in the drain line.
- Vacuum control valve that maintains vacuum level set point.
- Vacuum break valve that bleeds air into the system when power to the freeze dryer or vacuum pump is shut off. If a power outage less than approximately 5 minutes occurs, the freeze dryer will restart and the refrigeration and vacuum system will resume operation once power is restored. If the power failure is more than approximately 5 minutes and the collector warms above safe limits, the freeze dryer will not automatically restart.
- Side-mounted USB port and rear-mounted Ethernet connection.
- Side-mounted, quick-disconnect drain hose fitting.
- Rear-mounted electrical receptacle for vacuum pump connection.
- 3-wire electrical cord with plug.
- 3/4" OD vacuum connection, 50" of 3/4" ID vacuum hose and two clamps.

- CE Conformity marking (230V, 50 Hz models).

2.0

1 **4-Port Manifold**

For use with any FreeZone Freeze Dryer. 8.6" w x 8.6" d x 11.2" h (21.8 x 21.8 x 28.4 cm). Type 304 stainless steel, complete with four neoprene valves with molded plastic knobs that accommodate 1/2" and 3/4" adapters for connection of flasks.

3.0

1 **Rotary Vane Vacuum Pump**

- **Displacement capacity – 98 L/ minute**
- **Ultimate vacuum ( partial pressure )  $2 \times 10^{-3}$  mbar (1.5 micron)**
- On/ off switch
- Two inlet adapters (1/2" and 3/4" OD)
- Mode selector with two positions: High vacuum and high throughput
- Gas ballast with three position : Closed, Low Flow And High flow.
- Single phase direct drive motor, totally enclosed and Fan cooled. Should the motor overheat, the thermal Overload device switches off the pump. When the pump Cools down, the motor automatically restarts.
- Isolation valve seals the inlet to prevent oil and air Contamination of the system in the event of power failure
- Cast aluminum casting and rubber feet.
- Retractable lifting handles.
- Includes four each one-liter bottles of vacuum pump oil  
And one exhaust filter with oil mist and odor filter elements.

***Kindly Note: 4 -6 Nos. of Flask with suitable adaptors and 4 feet class second -Type A2 biosafety cabinet should be supplied with the system.***