FreeZone® 6, 12 & 18 Liter Console Freeze Dryers

Specifications

❉ USB port and Ethernet connection
❉ End-Zone compatible (End-Zone Starter Kit sold separately. See page 47)
❉ Vacuum control valve
❉ Vacuum break valve
❉ Patented* moisture sensor
❉ Console cabinet with interior space for vacuum pump (sold separately) and two-piece, removable front panel with viewing window
❉ Stainless steel and powder-coated steel exterior
❉ Quick-disconnect drain hose fitting with hose connector. 18”, 1/4” ID silicone tubing and clamp included
❉ Clear acrylic chamber lid, 3/4” thick, with neoprene gasket
❉ Interior electrical receptacle for vacuum pump connection
❉ 3/4” OD vacuum connection, 36” of 3/4” ID vacuum hose and two clamps

Models conform to the following standards:
❉ UL Standard 61010-1 (1 15/230V, 60 Hz models)
❉ CAN/CSA C22.2 No. 61010-1 (1 15/230V, 60 Hz models)
❉ CE Conformity marking (230V, 50 Hz models)

Options include:
❉ Single 3/4 hp, 1 hp or 1-1/2 hp HCFC/CFC-free refrigeration system to cool collector to -50° C (-58° F) or two 1/3 hp or 3/4 hp HCFC/CFC-free refrigeration systems to cool collector to -84° C (-119° F). Collectors reaching -50° C include acrylic lid. Collectors reaching -84° C include stainless steel lid
❉ Purge valve
❉ PTFE-coated collector coil and chamber for corrosive compounds
❉ Built-in shell freezer with stainless steel bath, 5.5” w x 12.5” d x 7.5” h (30.5 x 14.0 x 19.0 cm), that includes 1/2 hp HCFC/CFC-free refrigeration system to cool heat transfer solution to -40° C (-40° F), 3/4” thick high-density polyethylene lid, neoprene gasket and quick-disconnect drain hose fitting and 18”, 1/4” ID silicone tubing with clamp
❉ Built-in stainless steel mini vacuum drying chamber, 5.1” w x 13.0” d x 2.5” h (12.9 x 33.0 x 6.4 cm), that includes 50-watt heater with microprocessor control to +60° C (+140° F), 3/4” thick clear acrylic lid and neoprene gasket. (Chamber is not cooled.)
❉ Region-specific electrical plug configurations

All models require (not included):
❉ Vacuum pump with a displacement of at least 98 L/min, 0.002 mBar ultimate pressure and fitting for 3/4” ID vacuum hose. See pages 41-44
❉ Drying accessory. See pages 23, 26-27 & 31-39
❉ Freeze dry glassware if not bulk freeze drying. See pages 46, 48 & 50

Application suitability:
❉ Moderate to large sample loads or numerous sample batches
❉ Compatible with the FreeZone Stoppering Tray Dryer or Bulk Tray Dryer (tray dryer sold separately)

All models feature:
❉ Upright stainless steel collector coil capable of holding 6, 12 or 18 liters of ice before defrosting. Collector lid, 3/4” thick, has neoprene gasket
❉ Full color, 5” capacitive touch screen with Lyo-Works OS:
  - Real time display of collector temperature, vacuum level and optional End-Zone end point detection
  - Automatic and manual start-up modes for collector cool down and vacuum pull down
  - Vacuum set point, alerts, diagnostic tests, user manual, defrost control and optional drying accessory control
  - Data logging stores and displays data in table or graph format, and may be exported via USB
  - Settings include language (English, Spanish, French, German, or Italian), time, temperature (°C or °F) and vacuum (mBar, Torr or Pa)
  - Alerts can be emailed to user-entered addresses via Ethernet connection
  - Maintenance alert settings for vacuum pump and refrigeration
  - Security lock-out

*Labconco exclusive feature

*U.S. Patent No. 6,968,631
FreeZone® 6 & 12 Liter Console Freeze Dryers

Ordering Information

Catalog Number Configurator:
Use this key to configure the nine digit catalog number to order your FreeZone 6 or 12 Liter Console Freeze Dryer.

Select the **REFRIGERATION TEMPERATURE** of your freeze dryer’s collector. This is the second digit of your catalog number.
- **0** = -50°C (-58°F). For samples containing water. Not for use with samples containing acetonitrile, methanol or ethanol. FreeZone 6 Liter collector is capable of removing 4 liters of water and FreeZone 12 Liter collector is capable of removing 8 liters of water in 24 hours.
- **1** = -84°C (-119°F). For low eutectic point samples containing water or acetonitrile. Not for use with samples containing methanol or ethanol. FreeZone 6 Liter or 12 Liter collector is capable of removing 4 liters of water in 24 hours.

Select the **CAPACITY** of your freeze dryer’s collector. These are the third and fourth digits of your catalog number.
- **06** = 6 L
- **12** = 12 L

Select the **COLLECTOR COIL and CHAMBER MATERIAL** of your freeze dryer. This is the sixth digit of your catalog number.
- **1** = Stainless steel
- **2** = PTFE-coated stainless steel

Select the **BUILT-IN OPTION** of your freeze dryer. This is the seventh digit of your catalog number.
- **0** = None
- **1** = Purge Valve
- **2** = Purge Valve and Mini Chamber. Add 20 lbs. (9 kg) to shipping weight shown below.
- **3** = Purge Valve and Shell Freezer (FreeZone 6 Liter -50°C Freeze Dryers only). Add 80 lbs. (36 kg) to shipping weight shown below.

Select the **ELECTRICAL CONFIGURATION and PLUG TYPE** of your freeze dryer. These are the eighth and ninth digits of your catalog number. **The 115V configuration is available only on FreeZone 6 Liter Freeze Dryers.**
- **00** = 115V, 60 Hz, with 20A plug for North America
- **10** = 230V, 60 Hz, with plug for North America
- **15** = 230V, 60 Hz, with plug for Saudi Arabia
- **30** = 230V, 50 Hz, with Schuko plug
- **40** = 230V, 50 Hz, with plug for China/Australia
- **50** = 230V, 50 Hz, with plug for Great Britain (UK)
- **70** = 230V, 50 Hz, with plug for India

### Electrical Requirements

<table>
<thead>
<tr>
<th>Collector Capacity</th>
<th>Refrigeration Temperature</th>
<th>Volts</th>
<th>Amps</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 L</td>
<td>-50°C &amp; -84°C</td>
<td>115</td>
<td>16**</td>
<td>Requires 20 amp dedicated circuit</td>
</tr>
<tr>
<td>6 L</td>
<td>-50°C</td>
<td>230</td>
<td>8†</td>
<td></td>
</tr>
<tr>
<td>6 L</td>
<td>-84°C</td>
<td>230</td>
<td>10**</td>
<td></td>
</tr>
<tr>
<td>12 L</td>
<td>-50°C &amp; -84°C</td>
<td>230</td>
<td>9†</td>
<td></td>
</tr>
</tbody>
</table>

### Plug Configurations

- **115V, 60 Hz, 20A for North America**
- **230V, 60 Hz for North America**
- **230V, 60 Hz for Saudi Arabia**
- **230V, 50 Hz Schuko**
- **230V, 50 Hz for China/Australia**
- **230V, 50 Hz for Great Britain (UK)**
- **230V, 50 Hz for India**

### Actual Dimensions & Shipping Weights

<table>
<thead>
<tr>
<th>Refrigeration Temperature</th>
<th>Overall Dimensions (w x d x h)</th>
<th>Shipping Weight (6 L)</th>
<th>Shipping Weight (12 L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-50°C (-58°F)</td>
<td>31.8&quot; x 29.6&quot; x 36.6&quot; (80.8 x 75.2 x 93.0 cm)</td>
<td>255 lbs. (116 kg)</td>
<td>275 lbs. (125 kg)</td>
</tr>
<tr>
<td>-84°C (-119°F)</td>
<td>31.8&quot; x 29.6&quot; x 36.6&quot; (80.8 x 75.2 x 93.0 cm)</td>
<td>270 lbs. (122 kg)</td>
<td>320 lbs. (145 kg)</td>
</tr>
</tbody>
</table>

*Freeze drying rate will be lower for samples other than shell-frozen plain water. For optimum performance, room temperature should be 21°C (70°F) or colder.

**System amperage shown includes 8 amp maximum vacuum pump rating.

†System amperage shown includes 4.5 amp maximum vacuum pump rating.
FreeZone® 18 Liter -50° C Console Freeze Dryers

Ordering Information

Catalog Number Configurator:
Use this key to configure the nine digit catalog number to order your FreeZone 18 Liter -50° C Console Freeze Dryer capable of removing 10 liters of water in 24 hours:**

7 0 1 8 1 ☐ ☐ ☐ ☐

Select the COLLECTOR COIL and CHAMBER MATERIAL of your freeze dryer. This is the sixth digit of your catalog number.
1 = Stainless steel
2 = PTFE-coated stainless steel

Select the BUILT-IN OPTION of your freeze dryer. This is the seventh digit of your catalog number.
0 = None
1 = Purge Valve
2 = Purge Valve and Mini Chamber. Add 15 lbs. (7 kg) to shipping weight shown below.

Select the ELECTRICAL CONFIGURATION and PLUG TYPE of your freeze dryer. These are the eighth and ninth digits of your catalog number.
10 = 230V, 60 Hz, with plug for North America
15 = 230V, 60 Hz, with plug for Saudi Arabia
30 = 230V, 50 Hz, with Schuko plug
40 = 230V, 50 Hz, with plug for China/Australia
50 = 230V, 50 Hz, with plug for Great Britain (UK)
70 = 230V, 50 Hz, with plug for India

Electrical Requirements

<table>
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<th>Volts</th>
<th>Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 L</td>
<td>-50° C</td>
<td>230</td>
<td>9*</td>
</tr>
</tbody>
</table>

Plug Configurations

- 230V, 60 Hz for North America
- 230V, 60 Hz for Saudi Arabia
- 230V, 50 Hz Schuko
- 230V, 50 Hz for China/Australia
- 230V, 50 Hz for Great Britain (UK)
- 230V, 50 Hz for India

Actual Dimensions & Shipping Weights

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</thead>
<tbody>
<tr>
<td>-50° C (-58° F)</td>
<td>31.8&quot; x 29.6&quot; x 36.6&quot; (80.8 x 75.2 x 93.0 cm)</td>
<td>290 lbs. (132 kg)</td>
</tr>
</tbody>
</table>

*System amperage shown includes 4.5 amp maximum vacuum pump rating.
**Freeze drying rate will be lower for samples other than shell-frozen plain water. For optimum performance, room temperature should be 21° C (70° F) or colder.
Authorised distributor

In Australia:
For customer service, call 1300-735-292
To fax an order, use 1800-067-639
To email an order, ordersau@thermofisher.com

In New Zealand:
For customer service, call 0800-933-966
To fax an order, use 0800-329-246
To email an order, ordersnz@thermofisher.com