



FreeZone 4.5 Liter -50C Benchtop Freeze Dryers

FreeZone 4.5 Liter Benchtop Freeze Dryers are designed for lyophilizing light to moderate sample loads. The compact design is ideal for labs with limited floor space.

The upright stainless steel collector coil holds 4.5 liters of ice before defrosting. A single 1/3 hp HCFC/CFC-free refrigeration system cools the collector to -50° C (-58° F), suitable for aqueous samples.

Lyo-Works™ OS provides a real time display of collector temperature, vacuum level and optional End-Zone™ end point detection system, shown on a 5" full color, capacitive touch screen. Models with PTFE-coated collectors that can withstand corrosive compounds are available.

- [Stay Connected](#)
- [View Real-Time Sample Data](#)
- [Get Consistent, High Quality Results](#)
- [Make Challenging Samples Easy](#)

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Remote notification, data collection, and optional End-Zone™ end point detection with Lyo-Works™ OS on freeze dryer. Suitable for lyophilizing aqueous samples.

Additional Features & Specifications

Features (All Models)

- Upright stainless steel collector coil capable of holding 4.5L of ice before defrosting. Acrylic collector lid, 3/4" thick, has neoprene gasket and 3" diameter port for connection of drying accessories (sold separately).
- Compact benchtop design with a small footprint.
- Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- 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 system.
 - Start-up mode for collector cool-down and vacuum pull-down (automatic or manual).
 - Operating mode (standby or run).
 - Vacuum set point, alerts, diagnostic tests, user manual, defrost control, and optional drying accessory parameters.
 - Data logging stores and displays data in table or chart format, and may be exported via USB or Ethernet.
 - Settings include language (English, Spanish, French,

or ° F), and vacuum (mBar, Torr, or Pa).

- Alerts are programmable to send via Ethernet connection to user-entered email addresses.
- Display settings include brightness, touch sounds (on/off), and screen time out in minutes (on/off).
- Maintenance alert settings include vacuum pump oil change, refrigeration cleaning, total operating hours and line voltage offset.
- Level-specific security lock-out prevents changes to programs and other system parameters.
- Hot gas defrost with auto shut off at +60° C (+140° F).
- 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 and lanyard with hose connector. 18", 1/4" ID silicone tubing and clamp included.
- 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.

Options Include

- PTFE-coated collector coil and chamber for processing involving corrosive compounds.
- Region-specific electrical plug configurations.

Required Accessories (Not Included)

- Vacuum pump with a displacement of at least 98 L/min, 0.002 mBar ultimate pressure and fitting suitable for 3/4" ID vacuum hose.
- Small Tray Dryer or other drying accessory.
- Freeze dry glassware if not bulk freeze drying.

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700402040

Region: International

Collector Temperature: -50° C,
-58° F

Ice Holding Capacity: 4.5L

Options Included: Corrosion-
Resistant Collector

Plug Type: China/Australia

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700402050

Region: International

Collector Temperature: -50° C,
-58° F

Ice Holding Capacity: 4.5L

Options Included: Corrosion-
Resistant Collector

Plug Type: British (UK)

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700402070

Region: International

Collector Temperature: -50° C,
-58° F

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700401000

Region: U.S. and Canada

Collector Temperature: -50° C,
-58° F

Options Included: Corrosion-Resistant Collector

Plug Type: India

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700401010

Region: U.S. and Canada, International

Collector Temperature: -50° C, -58° F

Ice Holding Capacity: 4.5L

Plug Type: North America, 230V

Style: Benchtop

Plug Type: North America, 115V

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700401015

Region: International

Collector Temperature: -50° C, -58° F

Ice Holding Capacity: 4.5L

Plug Type: Saudi Arabia

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700401030

Region: International

Collector Temperature: -50° C, -58° F

Ice Holding Capacity: 4.5L

Plug Type: Schuko

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700401040

Region: International

Collector Temperature: -50° C, -58° F

Ice Holding Capacity: 4.5L

Plug Type: China/Australia

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700401050

Region: International

Collector Temperature: -50° C, -58° F

Ice Holding Capacity: 4.5L

Plug Type: British (UK)

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Catalog # 700401070

Region: International

Collector Temperature: -50° C, -58° F

Ice Holding Capacity: 4.5L

Plug Type: India

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)

[FreeZone 4.5 Liter -50C Benchtop Freeze Dryer](#)



Region: U.S. and Canada

Collector Temperature: -50° C,
-58° F

Ice Holding Capacity: 4.5L

Options Included: Corrosion-
Resistant Collector

Plug Type: North America, 115V

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop
Freeze Dryer](#)



Catalog # 700402015

Region: International

Collector Temperature: -50° C,
-58° F

Ice Holding Capacity: 4.5L

Options Included: Corrosion-
Resistant Collector

Plug Type: Saudi Arabia

Style: Benchtop

Region: U.S. and Canada,
International

Collector Temperature: -50° C,
-58° F

Ice Holding Capacity: 4.5L

Options Included: Corrosion-
Resistant Collector

Plug Type: North America, 230V

Style: Benchtop

[FreeZone 4.5 Liter -50C Benchtop
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Catalog # 700402030

Region: International

Collector Temperature: -50° C,
-58° F

Ice Holding Capacity: 4.5L

Options Included: Corrosion-
Resistant Collector

Plug Type: Schuko

Style: Benchtop

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