



FreeZone® 1 Liter Benchtop Freeze Dry Systems

FEATURES & BENEFITS

Rear-mounted 3/4" vacuum connection extends vertically, requiring less space.

❖ *Benchtop cabinet* has small footprint. Compact cabinet of durable powder-coated steel with brushed stainless steel front panel and four rubber feet fits easily atop a countertop or laboratory cart.

Attachment lid makes connection of accessories easy. Select from accessory drying chambers and manifolds (sold separately).

Upright, stainless steel collector chamber speeds and simplifies defrost. Hot water may be poured into the chamber, or collected ice may be allowed to melt overnight. Models are available with PTFE-coated collector coil and chamber for additional corrosion resistance.

HCFC/CFC-free refrigeration system ensures rapid, environmentally-safe cooling. The condensing module cools the collector coil to **-50° C (-58° F)**, ideal for freeze drying aqueous samples. The system uses a non-flammable refrigerant that contains no ozone-damaging hydrochlorofluorocarbons (HCFCs) or chlorofluorocarbons (CFCs).

❖ *LCD* displays system set-up and operating parameters.

Easy-to-follow operating instructions are printed on the right-hand side.

Collector drain hose is accessible from the left-hand side for convenient disposal of defrosted material. It extends about 9 inches and retracts within the cabinet when not in use.

Factory wired. All models include a 3-wire cord with 20 amp NEMA plug.

Automatic start-up is quick and easy to use. Turning on the main power switch, located on the right-hand side, initiates the collector cool-down and vacuum pull-down sequence if automatic mode is selected. If manual mode is selected, turning on the main power switch initiates collector cool-down, but the vacuum pump must be turned on by pressing the vacuum switch.

Rear-mounted electrical receptacle allows connection of the vacuum pump (sold separately).



ETL listed. Models for operation on 115 volts, 60 Hz or 230 volts, 60 Hz carry the ETL mark signifying they are certified to UL and CAN/CSA standards for laboratory equipment.



CE marking. All 230 volt, 50 Hz models conform to the CE (European Community) directives.

❖ *Exclusive feature*



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SPECIFICATIONS

All models feature:

- Upright stainless steel collector coil capable of removing 1 liter of water in 24 hours and holding 1 liter of ice before defrosting.*
- 1/3 hp HCFC/CFC-free refrigeration system to cool collector to **-50° C (-58° F)**. For aqueous samples. Not for use with samples containing acetonitrile, methanol or ethanol.
- ❖ Compact benchtop design with a small footprint.
- ❖ Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- ❖ LCD for display of set-up and operating parameters. It may be user-configured to select either automatic or manual mode operation and to display vacuum in mBar, Pa or Torr and temperature in ° F or ° C. It also displays total duration of refrigeration system operation and time since the refrigeration system was serviced, and the duration of vacuum pump operation and time since the vacuum pump was serviced (in hours).
- Automatic start-up for collector cool-down and vacuum pull-down when programmed for automatic mode.
- Side-mounted, retractable, 9" collector drain hose.
- Clear acrylic lid, 3/4" thick, with 3" diameter attachment port for connection of drying accessories (sold separately).
- Side-mounted power switch, rear-mounted electrical receptacle (for vacuum pump connection) and 3-wire cord with 20 amp plug.
- 3/4" OD vacuum connector, three feet of 3/4" ID vacuum hose and two clamps.
- Overall dimensions: 12.6" w x 17.9" d x 16.9" h (32.0 cm x 45.4 cm x 42.9 cm).

Models conform to the following standards:

- UL Standard 61010-1 (60 Hz models).
- CAN/CSA C22.2 No. 61010.1 (60 Hz models).
- CE Conformity marking (230 volts, 50 Hz models).

Options include:

- PTFE-coated collector coil and chamber for processes involving corrosive compounds.
- Domestic or international electrical configuration.

All models require (not included):

- Vacuum pump with a displacement of at least 86 liters per minute, 0.002 mBar ultimate pressure and fitting suitable for 3/4" ID vacuum hose. See pages 57-59.
- Drying accessory. See pages 52-54.
- Freeze dry glassware if not bulk freeze drying. See pages 60-63.



FreeZone 1 Liter Benchtop Freeze Dry System 7740020, 12-Port Drying Chamber 7522800, Portable Table 8025000 and miscellaneous glassware.



See ordering information on page 33.

* 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.

❖ Exclusive feature