



FreeZone[®]

FREEZE DRYERS & ACCESSORIES



Protecting your
laboratory environment

LABCONCO

FREEZONE® 2.5 LITER BENCHTOP FREEZE DRYERS

SPECIFICATIONS

Application suitability:

- Light sample loads.
- Limited floor space.

All models feature:

- Upright stainless steel collector coil capable of 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 (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 touchscreen 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, German, or Italian), time, time zone, temperature (° C 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.
- 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.

Models conform to the following standards:



FreeZone 2.5 Liter -84° C Benchtop Freeze Dryer 710201000, 4-Port Manifold 7201700, FreeZone Cart 7368700, VACUUBRAND HYBRID* Vacuum Pump 7584000, and miscellaneous glassware.



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

Options include:

- Single 1/3 hp HCFC/CFC-free refrigeration system to cool collector to -50° C (-58° F) or two 1/3 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.
- PTFE-coated collector coil and chamber for processes involving corrosive compounds.
- Region-specific electrical plug configurations.

All models require (not included):

- Vacuum pump with a displacement of at least 98 liters per minute, 0.002 mBar ultimate pressure and fitting suitable for 3/4" ID vacuum hose. See page 20.
- Drying accessory. See page 17.
- Freeze dry glassware if not bulk freeze drying. See page 19.

*VACUUBRAND HYBRID™ is a trademark of VACUUBRAND GMBH + CO KG.

✳ Exclusive feature

FREEZONE® 2.5 LITER BENCHTOP FREEZE DRYERS

CATALOG NUMBER CONFIGURATOR

Use this key to configure the nine digit catalog number to order your FreeZone 2.5 Liter Benchtop Freeze Dryer. For example, a 7102000 is a FreeZone 2.5 Liter -84° C Benchtop Freeze Dryer with -84° C refrigeration, PTFE-coated collector chamber and coil, and North America 115 volt, 20 amp electrical plug.



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STEP 1: 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. Collector is capable of removing 2 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. Collector is capable of removing 2.2 liters of water in 24 hours.*

STEP 2: Select the **collector coil and chamber material** of your freeze dryer. This is the sixth digit of your catalog number.

1 = Non-coated stainless steel

2 = PTFE-coated stainless steel

STEP 3: Select the **electrical configuration and plug type** of your freeze dryer. These are the eighth and ninth digits of your catalog number.

00 = 115V, 60 Hz, with North America 20 amp plug

10 = 230V, 60 Hz, with North America plug

15 = 230V, 60 Hz, with Saudi Arabia plug

30 = 230V, 50 Hz, with Schuko (EU) plug

40 = 230V, 50 Hz, with China/Australia plug

50 = 230V, 50 Hz, with British (UK) plug

70 = 230V, 50 Hz, with India plug

Electrical Requirements

COLLECTOR CAPACITY	REFRIGERATION TEMPERATURE	VOLTS	AMPS
2.5 Liters	-50° C	115	14**
2.5 Liters	-50° C	230	7†
2.5 Liters	-84° C	115	16**
2.5 Liters	-84° C	230	10†

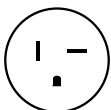
A 20 amp dedicated circuit is required on 115 volt models.

Actual Dimensions & Shipping Weights

REFRIGERATION TEMPERATURE	OVERALL DIMENSIONS (W X D X H)	SHIPPING WEIGHT
-50° C (-58° F)	14.5" x 19.2" x 16.9" (36.8 cm x 48.8 cm x 42.9 cm)	107 lbs. (49 kg)
-84° C (-119° F)	14.5" x 24.5" x 16.9" (36.8 cm x 62.2 cm x 42.9 cm)	133 lbs. (83 kg)

Plug Configurations

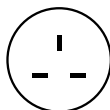
North America,
115V, 60 Hz,
20 amps



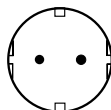
North America,
230V, 60 Hz



Saudi Arabia,
230V, 60 Hz



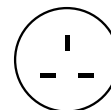
Schuko,
230V, 50 Hz



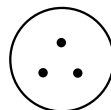
China/Australia,
230V, 50 Hz



British (UK),
230V, 50 Hz



India,
230V, 50 Hz



* 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® 4.5 LITER BENCHTOP FREEZE DRYERS

SPECIFICATIONS

Application suitability:

- Light to moderate sample loads.
- Limited floor space.

All models feature:

- Upright stainless steel collector coil capable of holding 4.5 liters of ice before defrosting. 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 touchscreen 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, German, or Italian), time, time zone, temperature (° C 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.
- 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.



FreeZone 4.5 Liter -105° C Benchtop Freeze Dryer 720401000, 12-Port Drying Chamber 7522800, FreeZone Cart 7368700, Combination Vacuum Pump 7584000, and miscellaneous glassware.



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 (230V, 50 Hz models).

Options include:

- Single 1/3 hp HCFC/CFC-free refrigeration system to cool collector to -50° C (-58° F), two 1/3 hp HCFC/CFC-free refrigeration systems to cool collector to -84° C (-119° F) or two 1/2 hp HCFC/CFC-free refrigeration systems to cool collector to -105° C (-157° F) at 60 Hz or -102° C (-152° F) at 50 Hz. Collectors reaching -50° C include acrylic lid. Collectors reaching -84° C or -105° C include stainless steel lid.
- PTFE-coated collector coil and chamber for processes involving corrosive compounds.
- Region-specific electrical plug configurations.

All models require (not included):

- Vacuum pump with a displacement of at least 98 liters per minute, 0.002 mBar ultimate pressure and fitting suitable for 3/4" ID vacuum hose. See page 20.
- Drying accessory. See page 17.
- Freeze dry glassware if not bulk freeze drying. See page 19.

❖ Exclusive feature

FREEZONE® 4.5 LITER BENCHTOP FREEZE DRYERS

CATALOG NUMBER CONFIGURATOR

Use this key to configure the nine digit catalog number to order your FreeZone 4.5 Liter Benchtop Freeze Dryer. For example, a 700401000 is a FreeZone 4.5 Liter -50° C Benchtop Freeze Dryer with -50° C refrigeration, non-coated collector chamber and coil, and North America 115 volt, 20 amp electrical plug.



STEP 1: 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. Collector is capable of removing 2 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. Collector is capable of removing 4 liters of water in 24 hours.*
- 2** = -105° C (-157° F) at 60 Hz or -102° C (-152° F) at 50 Hz. For low eutectic point samples containing water, acetonitrile or dilute methanol or ethanol. Collector is capable of removing 2.5 liters of water in 24 hours.*

STEP 2: Select the **collector coil and chamber material** of your freeze dryer. This is the sixth digit of your catalog number.

- 1** = Non-coated stainless steel
- 2** = PTFE-coated stainless steel

STEP 3: Select the **electrical configuration and plug type** of your freeze dryer. These are the eighth and ninth digits of your catalog number.

- 00** = 115V, 60 Hz, with North America 20 amp plug
- 10** = 230V, 60 Hz, with North America plug
- 15** = 230V, 60 Hz, with Saudi Arabia plug
- 30** = 230V, 50 Hz, with Schuko (EU) plug
- 40** = 230V, 50 Hz, with China/Australia plug
- 50** = 230V, 50 Hz, with British (UK) plug
- 70** = 230V, 50 Hz, with India plug

Electrical Requirements

COLLECTOR CAPACITY	REFRIGERATION TEMPERATURE	VOLTS	AMPS
4.5 Liters	-50° C	115	14**
4.5 Liters	-50° C	230	7†
4.5 Liters	-84° C & -105° C	115	16**
4.5 Liters	-84° C & -105° C	230	10†

A 20 amp dedicated circuit is required on 115 volt models.

Actual Dimensions & Shipping Weights

REFRIGERATION TEMPERATURE	OVERALL DIMENSIONS (W X D X H)	SHIPPING WEIGHT
-50° C (-58° F)	16.5" x 22.4" x 18.9" (41.9 cm x 56.9 cm x 48.0 cm)	109 lbs. (49 kg)
-84° C (-119° F)	22.5" x 26.5" x 18.5" (57.2 cm x 67.3 cm x 47.0 cm)	166 lbs. (75 kg)
-105° C (-157° F)	22.5" x 26.5" x 18.5" (57.2 cm x 67.3 cm x 47.0 cm)	172 lbs. (78 kg)

Plug Configurations

North America, 115V, 60 Hz, 20 amps	North America, 230V, 60 Hz	Saudi Arabia, 230V, 60 Hz	Schuko, 230V, 50 Hz	China/Australia, 230V, 50 Hz	British (UK), 230V, 50 Hz	India, 230V, 50 Hz

* 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® 8 LITER -50° C BENCHTOP FREEZE DRYERS

SPECIFICATIONS

Application suitability:

- Moderate sample loads.
- Limited floor space.

All models feature:

- Upright stainless steel collector coil capable of removing 4 liters of water in 24 hours and holding 8 liters of ice before defrosting.* Acrylic collector lid, 3/4" thick, has neoprene gasket and 3" diameter port for connection of drying accessories (sold separately).*
- Single 3/4 hp HCFC/CFC-free refrigeration system to cool collector to -50° C (-58° F).

❖ 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 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, German, or Italian), time, time zone, temperature (° C 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.

• 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.



FreeZone 8 Liter -50° C Benchtop Freeze Dryer 700801000, 8-Port Manifold 7201800, FreeZone Cart 7368700, Scroll Vacuum Pump 7587000, and miscellaneous glassware.



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 (230V, 50 Hz models).

Options include:

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

All models require (not included):

- Vacuum pump with a displacement of at least 98 liters per minute, 0.002 mBar ultimate pressure and fitting suitable for 3/4" ID vacuum hose. See page 20.
- Drying accessory. See page 17.
- Freeze dry glassware if not bulk freeze drying. See page 19.

❖ Exclusive feature

FREEZONE® 8 LITER -50° C BENCHTOP FREEZE DRYERS

CATALOG NUMBER CONFIGURATOR

Use this key to configure the nine digit catalog number to order your FreeZone 8 Liter -50° C Benchtop Freeze Dryer. For example, a 700801000 is a FreeZone 8 Liter -50° C Benchtop Freeze Dryer, with non-coated collector chamber and coil, and North America 115 volt, 20 amp electrical plug.



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STEP 1: Select the **collector coil and chamber material** of your freeze dryer. This is the sixth digit of your catalog number.

- 1 = Non-coated stainless steel
- 2 = PTFE-coated stainless steel

STEP 2: Select the **electrical configuration and plug type** of your freeze dryer. These are the eighth and ninth digits of your catalog number.

- 00 = 115V, 60 Hz, with North America 20 amp plug
- 10 = 230V, 60 Hz, with North America plug
- 15 = 230V, 60 Hz, with Saudi Arabia plug
- 30 = 230V, 50 Hz, with Schuko (EU) plug
- 40 = 230V, 50 Hz, with China/Australia plug
- 50 = 230V, 50 Hz, with British (UK) plug
- 70 = 230V, 50 Hz, with India plug

Electrical Requirements

COLLECTOR CAPACITY	REFRIGERATION TEMPERATURE	VOLTS	AMPS
8 Liters	-50° C	115	14**
8 Liters	-50° C	230	7†

A 20 amp dedicated circuit is required on 115 volt models.

Actual Dimensions & Shipping Weights

REFRIGERATION TEMPERATURE	OVERALL DIMENSIONS (W X D X H)	SHIPPING WEIGHT
-50° C (-58° F)	22.5" x 26.5" x 18.5" (57.2 cm x 67.3 cm x 47.0 cm)	130 lbs. (59 kg)

Plug Configurations

North America, 115V, 60 Hz, 20 amps	North America, 230V, 60 Hz	Saudi Arabia, 230V, 60 Hz	Schuko, 230V, 50 Hz	China/Australia, 230V, 50 Hz	British (UK), 230V, 50 Hz	India, 230V, 50 Hz

* 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® 6, 12 & 18 LITER CONSOLE FREEZE DRYERS

SPECIFICATIONS

Application suitability:

- Moderate to large sample loads or numerous sample batches.
- Compatibility with the FreeZone Stoppering Tray Dryer or Bulk 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.
- Console cabinet with interior space for vacuum pump (sold separately) and two-piece, removable front panel with viewing window.
- ❖ Brushed stainless steel and glacier white powder-coated steel exterior with blue accents.
- ❖ Full color, 5" capacitive touchscreen 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, German, or Italian), time, time zone, temperature (°C 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.
 - Line-specific security lock out prevents changes to programs and other system parameters.
- 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.
 - Front-mounted, quick-disconnect drain hose fitting.
 - Internal electrical receptacle for vacuum pump connection.
 - 3-wire electrical cord with plug.
 - 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 (60 Hz models).
- CAN/CSA C22.2 No. 61010-1 (60 Hz models).
- CE Conformity marking (230V, 50 Hz models).

Options include:



FreeZone 6 Liter -50° C Console Freeze Dryer 700611300 and Heated Product Shelves 780801100.



- 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.
- PTFE-coated collector coil and chamber for processes involving corrosive compounds.
- Purge valve for isolating the vacuum pump from the freeze dryer.
- Built-in stainless steel mini vacuum drying chamber, 5.1" w x 13.0" d x 2.5" h (12.9 cm x 33.0 cm 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.)
- Built-in shell freezer with stainless steel bath, 5.5" w x 12.5" d x 7.5" h (30.5 cm x 14.0 cm x 19.0 cm), that includes 1/2 hp HCFC/CFC-free refrigeration system capable of cooling the heat transfer solution to -40° C (-40° F), 3/4" thick high-density polyethylene lid, neoprene gasket and front-mounted, quick-disconnect drain hose fitting.
- Region-specific electrical plug configurations.

All models require (not included):

- Vacuum pump with a displacement of at least 98 liters per minute, 0.002 mBar ultimate pressure and fitting suitable for 3/4" ID vacuum hose. See page 20.
- Drying accessory. See page 17.
- Freeze dry glassware if not bulk freeze drying. See page 19.

❖ Exclusive feature

FREEZONE® 6 & 12 LITER CONSOLE FREEZE DRYERS

CATALOG NUMBER CONFIGURATOR

Use this key to configure the nine digit catalog number to order your FreeZone 6 or 12 Liter Console Freeze Dryer. For example, a 700611300 is a FreeZone 6 Liter -50° C Console Freeze Dryer with -50° C refrigeration, non-coated collector chamber and coil, purge valve and shell freezer and North America 115 volt, 20 amp electrical plug.



STEP 1: Select the **refrigeration temperature** of your freeze dryer's collector. This number 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.*

STEP 2: Select the **capacity** of your freeze dryer's collector. These are the third and fourth digits of your catalog number.

- 06** = 6 Liters
- 12** = 12 Liters

STEP 3: Select the **collector coil and chamber material** of your freeze dryer. This number is the sixth digit of your catalog number.

- 1** = Non-coated stainless steel
- 2** = PTFE-coated stainless steel

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STEP 4: 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.

STEP 5: Select the **electrical configuration and plug type** of your freeze dryer. These are the eighth and ninth digits of your catalog number. **The 115 volt configuration is available only on FreeZone 6 Liter Freeze Dryers.**

- 00** = 115V, 60 Hz, with North America 20 amp plug
- 10** = 230V, 60 Hz, with North America plug
- 15** = 230V, 60 Hz, with Saudi Arabia plug
- 30** = 230V, 50 Hz, with Schuko (EU) plug
- 40** = 230V, 50 Hz, with China/Australia plug
- 50** = 230V, 50 Hz, with British (UK) plug
- 70** = 230V, 50 Hz, with India plug

Electrical Requirements

COLLECTOR CAPACITY	REFRIGERATION TEMPERATURE	VOLTS	AMPS
6 Liters	-50° C & -84° C	115	16**
6 Liters	-50° C	230	8†
6 Liters	-84° C	230	10**
12 Liters	-50° C & -84° C	230	9†

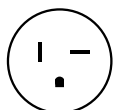
A 20 amp dedicated circuit is required on 115 volt models.

Actual Dimensions & Shipping Weights

REFRIGERATION TEMP.	OVERALL DIMENSIONS (W X D X H)	SHIPPING WT. (6 L)	SHIPPING WT. (12 L)
-50° C (-58° F)	31.8" x 29.6" x 36.6" (80.8 cm x 75.2 cm x 93.0 cm)	255 lbs. (116 kg)	275 lbs. (125 kg)
-84° C (-119° F)	31.8" x 29.6" x 36.6" (80.8 cm x 75.2 cm x 93.0 cm)	270 lbs. (122 kg)	320 lbs. (145 kg)

Plug Configurations

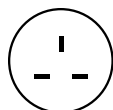
North America,
115 volts, 60 Hz,
20 amps



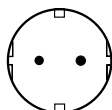
North America,
230 volts, 60 Hz



Saudi Arabia,
230 volts, 60 Hz



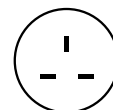
Schuko,
230 volts, 50 Hz



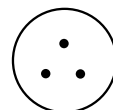
China/Australia,
230 volts, 50 Hz



British (UK),
230 volts, 50 Hz



India,
230 volts, 50 Hz



* 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

CATALOG NUMBER CONFIGURATOR

Use this key to configure the nine digit catalog number to order your FreeZone 18 Liter -50° Console Freeze Dryer capable of removing 10 liters of water in 24 hours.* For example, a 70181 is a FreeZone 18 Liter -50° Console Freeze Dryer with non-coated collector chamber and coil, purge valve and mini chamber and North America 115 volt, 20 amp electrical plug.



7 0 1 8 1

STEP 1: Select the **collector coil and chamber material** of your freeze dryer. This number is the sixth digit of your catalog number.

- 1 = Non-coated stainless steel
- 2 = PTFE-coated stainless steel

STEP 2:

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.

STEP 3: 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 North America plug
- 15 = 230V, 60 Hz, with Saudi Arabia plug
- 30 = 230V, 50 Hz, with Schuko (EU) plug
- 40 = 230V, 50 Hz, with China/Australia plug
- 50 = 230V, 50 Hz, with British (UK) plug
- 70 = 230V, 50 Hz, with India plug

Electrical Requirements

COLLECTOR CAPACITY	REFRIGERATION TEMPERATURE	VOLTS	AMPS
18 Liters	-50° C	230	9†

Actual Dimensions & Shipping Weights

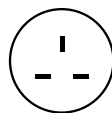
REFRIGERATION TEMPERATURE	OVERALL DIMENSIONS (W X D X H)	SHIPPING WEIGHT
-50° C (-58° F)	31.8" x 29.6" x 36.6" (80.8 cm x 75.2 cm x 93.0 cm)	290 lbs. (49 kg)

Plug Configurations

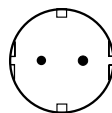
North America,
230V, 60 Hz



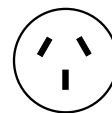
Saudi Arabia,
230V, 60 Hz



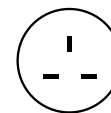
Schuko,
230V, 50 Hz



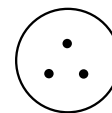
China/Australia,
230V, 50 Hz



British (UK),
230V, 50 Hz



India,
230V, 50 Hz



* 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 4.5 amp maximum vacuum pump rating.

FREEZONE® STOPPERING TRAY DRYERS

SPECIFICATIONS

Application suitability:

- Moderate to large sample loads or numerous sample batches.
- Stoppering vials or serum bottles under vacuum.

All models feature:

- ✳ Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- Acrylic door, 1" thick, with silicone gasket and latch.
- Three processing shelves, each 16.5" w x 12" d (41.9 cm x 30.5 cm) with 196 square inches of area. Spacing between the shelves accommodates containers with stoppers up to a maximum height of 75 mm and minimum height of 38 mm when three shelves are used, a maximum height of 107 mm and minimum height of 56 mm when two shelves are used, and a maximum height of 196 mm and minimum height of 114 mm when one shelf is used.
- Two LED indicators: one for Power/standby and one for In Process.
- Three probes for monitoring sample or shelf temperature.
- Pirani vacuum sensor.
- 3" diameter outlet, located on the bottom of the tray dryer cabinet, for connection to a FreeZone 6, 12 or 18 Liter Console Freeze Dryer (freeze dryer is required and not included).
- 1 hp HCFC/CFC-free refrigeration system and 1000-watt electric heater for cooling and heating fluid medium circulating through channels in the shelves from -40° C to +40° C (-40° to +104° F). Micro-processor controls circulating fluid temperature to ±1° C of set point.
- Stoppering Raise/Lower control knob, vacuum release Open/Close control knob and 1/8" OD backfill port for user-supplied sterile air or inert gas introduction.
- Stoppering mechanism that inflates a diaphragm via atmospheric pressure. **No compressed gas is required.**
- Microprocessor-controlled temperature ramp and hold programming from -40° C to +40° C (-40° to +104° F) and memory to store 30 programs with 16 segments each including number of steps, ramp rate, shelf temperature, hold time and vacuum level.
- ✳ System programming that is displayed on the FreeZone 6, 12 or 18 Liter Freeze Dryer (freeze dryer sold separately or as one catalog number): Manual or Program mode; probe temperatures in ° C or ° F, vacuum in mBar, Pa or Torr; segment of the program that is in progress; time remaining in present segment; alarms for power failure; supply line voltage outside of limits; system temperature variation >±2° C, vacuum variation >0.500 mBar; failure to reach system set point temperature; and program completed.
- ✳ Data logging and storage, when enabled, that stores and displays data in table or chart on the FreeZone 6, 12 or 18 Liter Freeze Dryer (freeze dryer sold separately or as one catalog number). Data logging may be exported via USB or Ethernet from the FreeZone Freeze Dryer.
- Integral support stand.
- Side-mounted power switch.
- Overall dimensions: 33.3" w x 24.6" d x 27.1" h (82.0 cm x 62.4 cm x 68.8 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 (230V, 50 Hz models).



FreeZone 12 Liter -50° C Console Freeze Dryer with FreeZone Stoppering Tray Dryer 701221010.



Options include:

- 6-Port Tray Dryer Manifold, 30.0" w x 16.5" d x 7.0" h (76.2 cm x 41.9 cm x 17.8 cm). Six valves accommodate either 1/2" or 3/4" flask adapters and connect to flasks and other freeze dry glassware. Available only when ordering the FreeZone Stoppering Tray Dryer as a separate component. See page 14.
- Isolation Valve, isolates the tray dryer from the freeze dryer to shorten the time necessary to reestablish working vacuum levels and provide a means for determining end point. Available only when ordering the FreeZone Stoppering Tray Dryer as a separate component. See page 14.
- Region-specific electrical plug configurations.

All models require (not included):

- FreeZone 6, 12 or 18 Liter Console Freeze Dryer manufactured after June 2017. The FreeZone Stoppering Tray Dryer and Freeze Dryer may be ordered as separate components or together as one catalog number on selected models of FreeZone 6, 12 or 18 Liter Console Freeze Dryers. See pages 12 and 13.
- Vacuum pump with a displacement of at least 163 liters per minute, 0.002 mBar ultimate pressure and fitting suitable for 3/4" ID vacuum hose. See page 20.
- Freeze dry glassware if not bulk freeze drying. See page 19.

✳ Exclusive feature

FREEZONE® 6 & 12 LITER CONSOLE FREEZE DRYERS WITH STOPPERING TRAY DRYER

CATALOG NUMBER CONFIGURATOR

Use this key to configure the nine digit catalog number to order your FreeZone 6 or 12 Liter Console Freeze Dryer with Stoppering Tray Dryer.

For example, a 710622100 is a FreeZone 6 Liter -84° C Console Freeze Dryer with Stoppering Tray Dryer and with -84° C refrigeration, PTFE-coated collector chamber and coil, purge valve, and North America 115 volt, 20 amp electrical plug.



STEP 1: Select the **refrigeration temperature** of your freeze dryer's collector. This number 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.*

STEP 2:

Select the **capacity** of your freeze dryer's collector. These are the third and fourth digits of your catalog number.

06 = 6 Liters

12 = 12 Liters

STEP 3: Select the **collector coil and chamber material** of your freeze dryer. This number is the sixth digit of your catalog number.

1 = Non-coated stainless steel

2 = PTFE-coated stainless steel

7

2

STEP 4: Select the **built-in option** of your freeze dryer. This is the seventh digit of your catalog number.

0 = None

1 = Purge Valve

STEP 5: Select the **electrical configuration and plug type** of your freeze dryer. These are the eighth and ninth digits of your catalog number. **The 115 volt configuration is available only on FreeZone 6 Liter Freeze Dryers.**

00 = 115V, 60 Hz, with North America 20 amp plug

10 = 230V, 60 Hz, with North America plug

15 = 230V, 60 Hz, with Saudi Arabia plug

30 = 230V, 50 Hz, with Schuko (EU) plug

40 = 230V, 50 Hz, with China/Australia plug

50 = 230V, 50 Hz, with British (UK) plug

70 = 230V, 50 Hz, with India plug

Electrical Requirements

COLLECTOR CAPACITY	REFRIGERATION TEMPERATURE	VOLTS	CONSOLE AMPS	TRAY DRYER AMPS
6 Liters	-50° C & -84° C	115	16**	16
6 Liters	-50° C	230	8†	9
6 Liters	-84° C	230	10†	9
12 Liters	-50° C & -84° C	230	9†	9

A 20 amp dedicated circuit is required on 115 volt models.

Actual Dimensions (Tray Dryer mounted on Console) & Shipping Weights (Two Cartons)

REFRIGERATION TEMP.	OVERALL DIMENSIONS (W X D X H)	SHIPPING WT. (6 L)	SHIPPING WT. (12 L)
-50° C (-58° F)	32.4" x 29.6" x 63.7" (82.3 cm x 75.2 cm x 161.8 cm)	678 lbs. (308 kg)	698 lbs. (317 kg)
-84° C (-119° F)	32.4" x 29.6" x 63.7" (82.3 cm x 75.2 cm x 161.8 cm)	693 lbs. (314 kg)	743 lbs. (337 kg)

Plug Configurations

North America,
115V, 60 Hz,
20 amps

North America,
230V, 60 Hz

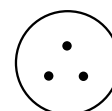
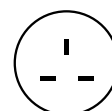
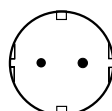
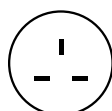
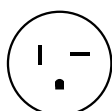
Saudi Arabia,
230V, 60 Hz

Schuko,
230V, 50 Hz

China/Australia,
230V, 50 Hz

British (UK),
230V, 50 Hz

India,
230V, 50 Hz



*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 WITH STOPPERING TRAY DRYER

CATALOG NUMBER CONFIGURATOR

Use this key to configure the nine digit catalog number to order your FreeZone 18 Liter -50° C Console Freeze Dryer with Stoppering Tray Dryer and with -50° C (-58° F) collector capable of removing 10 liters of water in 24 hours. For example, a 701821110 is a FreeZone 18 Liter -50° C Console Freeze Dryer with Stoppering Tray Dryer with non-coated collector chamber and coil, purge valve, and North America 230 volt electrical plug.



STEP 1: Select the **collector coil and chamber material** of your freeze dryer. This number is the sixth digit of your catalog number.

- 1 = Non-coated stainless steel
- 2 = PTFE-coated stainless steel

STEP 2: Select the **built-in option** of your freeze dryer. This is the seventh digit of your catalog number.

- 0 = None
- 1 = Purge Valve



STEP 3: 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 North America plug
- 15 = 230V, 60 Hz, with Saudi Arabia plug
- 30 = 230V, 50 Hz, with Schuko (EU) plug
- 40 = 230V, 50 Hz, with China/Australia plug
- 50 = 230V, 50 Hz, with British (UK) plug
- 70 = 230V, 50 Hz, with India plug

Electrical Requirements

COLLECTOR CAPACITY	REFRIGERATION TEMPERATURE	VOLTS	CONSOLE AMPS	TRAY DRYER AMPS
18 Liters	-50° C	230	9†	9

Actual Dimensions & Shipping Weights

REFRIGERATION TEMPERATURE	OVERALL DIMENSIONS (W X D X H)	SHIPPING WEIGHT
-50° C (-58° F)	32.4" x 29.6" x 63.7" (82.3 cm x 75.2 cm x 161.8 cm)	713 lbs. (323 kg)

Plug Configurations

North America, 230V, 60 Hz	Saudi Arabia, 230V, 60 Hz	Schuko, 230V, 50 Hz	China/Australia, 230V, 50 Hz	British (UK), 230V, 50 Hz	India, 230V, 50 Hz

FREEZONE® STOPPERING TRAY DRYERS

CATALOG NUMBER CONFIGURATOR

Use this key to configure the nine digit catalog number to order your FreeZone Stoppering Tray Dryer separately. For example, a 794801300 is a FreeZone Stoppering Tray Dryer with a 6-Port Manifold, Isolation Valve and North America 115 volt, 20 amp electrical plug. To order your FreeZone Stoppering Tray Dryer and Freeze Dryer together as one catalog number, see pages 12 and 13.



7 9 4 8 0 1 [] [] []

STEP 1: Select **accessories** for your tray dryer. This is the seventh digit of your catalog number.

- 0 = None
- 1 = 6-Port Tray Dryer Manifold
- 2 = Isolation Valve
- 3 = 6-Port Tray Dryer Manifold and Isolation Valve

Electrical Requirements

VOLTS	AMPS
115	16
230	9

STEP 2: Select the **electrical configuration and plug type** of your tray dryer. These are the eighth and ninth digits of your catalog number.

- 00 = 115V, 60 Hz, with North America 20 amp plug
- 10 = 230V, 60 Hz, with North America plug
- 15 = 230V, 60 Hz, with Saudi Arabia plug
- 30 = 230V, 50 Hz, with Schuko (EU) plug
- 40 = 230V, 50 Hz, with China/Australia plug
- 50 = 230V, 50 Hz, with British (UK) plug
- 70 = 230V, 50 Hz, with India plug

Shipping Weights

ACCESSORIES INCLUDED:	SHIPPING WEIGHT
None	423 lbs. (192 kg)
6-Port Tray Dryer Manifold	438 lbs. (199 kg)
Isolation Valve	431 lbs. (195 kg)
6-Port Tray Dryer Manifold and Isolation Valve	458 lbs. (208 kg)

Plug Configurations

North America, 115V, 60 Hz	North America, 230V, 60 Hz	Saudi Arabia, 230V, 60 Hz	Schuko, 230V, 50 Hz	China/Australia, 230V, 50 Hz	British (UK), 230V, 50 Hz	India, 230V, 50 Hz

FREEZONE® BULK TRAY DRYERS

SPECIFICATIONS

Application suitability:

- Moderate to large bulk sample loads or numerous sample batches.

All models feature:

- ✳ Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- Acrylic door, 1" thick, with silicone gasket and latch.
- Three shelves, each 12.7" w x 16.6" d (32.2 cm x 42.2 cm) with 210 square inches of area. Chamber may accommodate two additional shelves (sold separately).
- ✳ 200-watt heater on each shelf for heating to +60° C (+140° F). A microprocessor maintains system temperature within 3° C of set point. (Shelves are not cooled by the Bulk Tray Dryer. Samples must be prefrozen.)
- Three sensor probes for monitoring sample temperature. Connections for two additional sensors are provided (additional sensors sold separately).
- ✳ System programming that is displayed on the FreeZone 6, 12 or 18 Liter Freeze Dryer (freeze dryer sold separately): Manual or Program mode; probe temperatures in ° C or ° F, vacuum in mBar, Pa or Torr; segment of the program that is in progress; time remaining in present segment; alarms for power failure; shelf temperature variation >±3° C; failure to reach shelf set point temperature ±3° C; and program completed.
- ✳ Data logging and storage, when enabled, that stores and displays data in table or chart on the FreeZone 6, 12 or 18 Liter Freeze Dryer (freeze dryer sold separately). Data logging may be exported via USB or Ethernet from the FreeZone Freeze Dryer.
- Vacuum release valve with knob for venting the chamber so the chamber door may be opened.
- Side-mounted power switch.
- ✳ Integral support stand with attachment port for connection to FreeZone 6, 12 or 18 Liter Console Freeze Dryer of your choice (freeze dryer sold separately). The stand elevates the Tray Dryer above the work surface of the Freeze Dryer to allow unobstructed access to the collector compartment.
- Overall dimensions: 32.2" w x 21.5" d x 27.1" h (81.8 cm x 54.6 cm x 68.8 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 (230V, 50 Hz models).

Options include:

- 6-Port Tray Dryer Manifold, 30.0" w x 16.5" d x 7.0" h (76.2 cm x 41.9 cm x 17.8 cm). Six valves accommodate either 1/2" or 3/4" flask adapters and connect to flasks and other freeze dry glassware.
- Isolation Valve, isolates the tray dryer from the freeze dryer to shorten the time necessary to reestablish working vacuum levels and provide a means for determining end point.
- Region-specific electrical plug configurations.



FreeZone Bulk Tray Dryer with 6-Port Manifold 780601100 and FreeZone 12 Liter -50° C Console Freeze Dryer 701211010.



All models require (not included):

- FreeZone 6, 12 or 18 Liter Console Freeze Dryer manufactured after June 2017.
- Vacuum pump with a displacement of at least 163 liters per minute, 0.002 mBar ultimate pressure, and fitting suitable for 3/4" ID vacuum hose. See page 20.
- Freeze dry glassware if not bulk freeze drying. See page 19.

✳ Exclusive feature

FREEZONE® BULK TRAY DRYERS

CATALOG NUMBER CONFIGURATOR

Use this key to configure the nine digit catalog number to order your FreeZone Bulk Tray Dryer. For example, a 780601300 is a FreeZone Bulk Tray Dryer with a 6-Port Manifold, Isolation Valve and North America 115 volt, 15 amp electrical plug.



7 8 0 6 0 1 [] [] []

STEP 1: Select **accessories** for your tray dryer. This is the seventh digit of your catalog number.

- 0 = None
- 1 = 6-Port Tray Dryer Manifold
- 2 = Isolation Valve
- 3 = 6-Port Tray Dryer Manifold and Isolation Valve

Electrical Requirements

VOLTS	AMPS
115	8
230	4

STEP 2: Select the **electrical configuration and plug type** of your tray dryer. These are the eighth and ninth digits of your catalog number.

- 00 = 115V, 60 Hz, with North America 15 amp plug
- 10 = 230V, 60 Hz, with North America plug
- 15 = 230V, 60 Hz, with Saudi Arabia plug
- 30 = 230V, 50 Hz, with Schuko (EU) plug
- 40 = 230V, 50 Hz, with China/Australia plug
- 50 = 230V, 50 Hz, with British (UK) plug
- 70 = 230V, 50 Hz, with India plug

Shipping Weights

ACCESSORIES INCLUDED:	SHIPPING WEIGHT
None	248 lbs. (112 kg)
6-Port Tray Dryer Manifold	263 lbs. (119 kg)
Isolation Valve	256 lbs. (116 kg)
6-Port Tray Dryer Manifold and Isolation Valve	283 lbs. (128 kg)

Plug Configurations

North America, 115V, 60 Hz, 15 amps	North America, 230V, 60 Hz	Saudi Arabia, 230V, 60 Hz	Schuko, 230V, 50 Hz	China/Australia, 230V, 50 Hz	British (UK), 230V, 50 Hz	India, 230V, 50 Hz

FREEZONE® ACCESSORIES

END-ZONE™ KITS, TRAY DRYERS, CHAMBERS, MANIFOLDS & SHELVES

CATALOG NUMBER	DESCRIPTION	SHIPPING WT. LBS./KG
NEW 780901000	End-Zone Starter Kit. Includes holder for up to six sensors, 2 vacuum sensors with communication cables, 1 valve adapter, 1 top for 600 ml or larger Fast-Freeze Flasks.	3.0/1.4
NEW 780902000	End-Zone Add-On Kit. Includes 1 each vacuum sensor with communication cable and 1 each top for 600 ml or larger Fast-Freeze Flasks.	3.0/1.4
NEW 780701000	Small Tray Dryer, 3 heated shelves, 15.3" w x 18.5" d x 18.1" h, 115 volts, 60 Hz, North America	120/54
NEW 780701010	Small Tray Dryer, 3 heated shelves, 15.3" w x 18.5" d x 18.1" h, 60 Hz, North America	120/54
NEW 780701015	Small Tray Dryer, 3 heated shelves, 15.3" w x 18.5" d x 18.1" h, 230 volts, 60 Hz, Saudi Arabia	120/54
NEW 780701030	Small Tray Dryer, 3 heated shelves, 15.3" w x 18.5" d x 18.1" h, 230 volts, 50 Hz, Schuko	120/54
NEW 780701040	Small Tray Dryer, 3 heated shelves, 15.3" w x 18.5" d x 18.1" h, 230 volts, 50 Hz, China/Australia	120/54
NEW 780701050	Small Tray Dryer, 3 heated shelves, 15.3" w x 18.5" d x 18.1" h, 230 volts, 50 Hz, British (UK)	120/54
NEW 780701070	Small Tray Dryer, 3 heated shelves, 15.3" w x 18.5" d x 18.1" h, 230 volts, 50 Hz, India	120/54
7522800	12-Port Drying Chamber, 8.0" dia. x 9.75" h	11/5
NEW 7522801	12-Port Drying Chamber, PTFE-coated, 8" dia. x 9.75" h	11/5
7522900	16-Port Drying Chamber, 13.0" dia. x 13.0" h	21/10
NEW 7522901	16-Port Drying Chamber, PTFE-coated, 13.0" dia. x 13.0" h	21/10
7868020	Clear Stoppering Chamber, 13.5" dia. x 23.0" h, 115 volts, 50/60 Hz	30/14
7868030	Clear Stoppering Chamber, 13.5" dia. x 23.0" h, 230 volts, 50/60 Hz	30/14
7569000	Mini Stoppering Chamber, to accommodate up to (48) 2 ml or (8) 30 ml serum vials	15/7
NEW 7318700	Clear Chamber, Tall, 12.0" dia. x 24.6" h	20/9
NEW 7318702	Clear Chamber, Short, 12.0" dia. x 16.8" h	17/8
NEW 7318800	Clear Chamber with 8 Valves, Tall, 12.0" dia. x 23.0" h	25/11
NEW 7318802	Clear Chamber with 8 Valves, Short, 12.0" dia. x 15.3" h	22/10
NEW 7201700	4-Port Manifold, 8.6" w x 8.6" d x 11.2" h	5.5/2.5
NEW 7201800	8-Port Manifold, 8.6" w x 8.6" d x 15.7" h	8.5/3.9
NEW 7201900	14-Port Manifold, 24.3" w x 10.6" d x 10.3" h, for use with FreeZone Console Freeze Dryers	21/10
7522300	20-Port Manifold, 27.4" w x 8.7" d x 11.0" h	15/7
NEW 7202000	28-Port Manifold, 24.3" w x 10.6" d x 18.3" h, for use with FreeZone Console Freeze Dryers	38/17
NEW 7317100	Product Shelves, Short, 3 each 10.0" dia. shelves, 10.4" w x 10.9" d x 9.8" h	4.5/2.0
NEW 7317200	Product Shelves, Tall, 5 each 10" dia. shelves, 10.4" w x 10.9" d x 17.5" h	7.0/3.2
NEW 780801000	Heated Product Shelf Chamber, 3 shelves, 115 volt, 60 Hz, North America, 10.0" dia. x 17.0" h	80/36
NEW 780801010	Heated Product Shelf Chamber, 3 shelves, 230 volt, 60 Hz, North America, 10.0" dia. x 17.0" h	80/36
NEW 780801015	Heated Product Shelf Chamber, 3 shelves, 230 volt, 60 Hz, Saudi Arabia, 10.0" dia. x 17.0" h	80/36
NEW 780801030	Heated Product Shelf Chamber, 3 shelves, 230 volt, 50 Hz, Schuko, 10" dia. x 17.0" h	80/36
NEW 780801040	Heated Product Shelf Chamber, 3 shelves, 230 volt, 50 Hz, China/Australia, 10.0" dia. x 17.0" h	80/36
NEW 780801050	Heated Product Shelf Chamber, 3 shelves, 230 volt, 50 Hz, British (UK), 10.0" dia. x 17.0" h	80/36
NEW 780801070	Heated Product Shelf Chamber, 3 shelves, 230 volt, 50 Hz, India, 10.0" dia. x 17.0" h	80/36
NEW 780801100	Heated Product Shelf Chamber, 5 shelves, 115 volt, 60 Hz, North America, 10.0" dia. x 24.6" h	85/39
NEW 780801110	Heated Product Shelf Chamber, 5 shelves, 230 volt, 60 Hz, North America, 10.0" dia. x 24.6" h	85/39
NEW 780801115	Heated Product Shelf Chamber, 5 shelves, 230 volt, 60 Hz, Saudi Arabia, 10.0" dia. x 24.6" h	85/39
NEW 780801130	Heated Product Shelf Chamber, 5 shelves, 230 volt, 50 Hz, Schuko, 10.0" dia. x 24.6" h	85/39
NEW 780801140	Heated Product Shelf Chamber, 5 shelves, 230 volt, 50 Hz, China/Australia, 10.0" dia. x 24.6" h	85/39
NEW 780801150	Heated Product Shelf Chamber, 5 shelves, 230 volt, 50 Hz, British (UK), 10.0" dia. x 24.6" h	85/39
NEW 780801170	Heated Product Shelf Chamber, 5 shelves, 230 volt, 50 Hz, India, 10.0" dia. x 24.6" h	85/39
NEW 736582000	Replacement Temperature Probe for use with Heated Product Shelf Chambers	0.5/0.2



End-Zone Starter Kit 780901000



Tray Dryer 780701000



12-Port Drying Chamber 7522801



16-Port Drying Chamber 7522901



Tall Clear Chamber with 8 Valves 7318800



4-Port Manifold 7201700



8-Port Manifold 7201800



28-Port Manifold 7202000



Heated Product Shelf Chamber 780801000

The accessories shown above may be used with the FreeZone® Freeze Dryers, Stoppering Tray Dryers and Bulk Tray Dryers described in this brochure. Contact Labconco for compatibility of accessories designated NEW with pre-2016 FreeZone Freeze Dry Systems.

FREEZONE® ACCESSORIES

MISCELLANEOUS ACCESSORIES



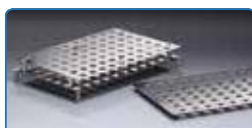
FreeZone Cart 7368700



Heated Shelf 7301600



Microwell Plate Holder 7369600



Test Tube/Microcentrifuge Tube Rack 7370001



Test Tube/Microcentrifuge Tube Rack 7379001



Support Grid 7516200



Slant Freeze Flask Holder 7369700

CATALOG NUMBER	DESCRIPTION	SHIPPING WT. LBS./KG
MISCELLANEOUS ACCESSORIES		
NEW 7368700	FreeZone Cart, 28.0" w x 28.0" d x 31.3" h. Accommodates loads up to 450 lbs. (204 kg)	120/54
NEW 7369700	Slant Freeze Flask Holder, adjustable angle from 5° to 35°	3.5/1.6
7426400	Support Shelves, 7.4" w x 12.0" d, for attachment to FreeZone Benchtop Freeze Dryers. One pair.	2.0/0.9
FREEZONE SMALL, BULK AND STOPPERING TRAY DRYER ACCESSORIES		
NEW 730152000	Heated Shelf, 115 volts, 50/60 Hz, 10.6" w x 12.0" d, for use with Small Tray Dryers	15/7
NEW 730152010	Heated Shelf, 230 volts, 50/60 Hz, 10.6" w x 12.0" d, for use with Small Tray Dryers	15/7
NEW 736581000	Replacement Temperature Probe, for use with FreeZone Stoppering Tray Dryers, Bulk Tray Dryers and Small Tray Dryers	0.5/0.2
NEW 7377900	Small Tray, 10.3" w x 11.6" d x 0.9" h, for use with Tray Dryers	2.5/1.1
FREEZONE BULK AND STOPPERING TRAY DRYER ACCESSORIES		
NEW 730151000	Heated Shelf, 115 volts, 50/60 Hz, 12.7" w x 17.0" d, for use with FreeZone Bulk Tray Dryers	15/7
NEW 730151010	Heated Shelf, 230 volts, 50/60 Hz, 12.7" w x 17.0" d, for use with FreeZone Bulk Tray Dryers	15/7
NEW 736581000	Replacement Temperature Probe, for use with FreeZone Stoppering Tray Dryers, Bulk Tray Dryers and Small Tray Dryers	0.5/0.2
7756200	Large Tray, 11.5" w x 15.0" d x 0.8" h	3.0/1.4
7756100	Tray with Slide-Out Bottom, 12.0" w x 14.0" d, for use with FreeZone Stoppering and Bulk Tray Dryers	5.0/2.3
7756300	Shelf Spacers, 9.0" w x 13.0" d x 2.5" h. One pair. For use with FreeZone Stoppering Tray Dryers.	3.0/1.4
TEST TUBE HOLDERS AND RACKS		
NEW 7369600	Microwell Plate Holder	2.0/0.9
7439300	Microcentrifuge Tube Holder, 3.0" w x 2.25" d x 1.0" h, for up to (12) 1.7 tubes	0.6/0.3
NEW 7370000	Test Tube Rack, rectangular, for (70) 12-13 mm tubes, 7.4" w x 15.0" d x 2.0" h	2.8/1.3
NEW 7370001	Test Tube/Microcentrifuge Tube Rack, rectangular, for (70) 12-13 mm tubes and adapter plate for microcentrifuge tubes, 7.4" w x 15.0" d x 2.0" h	3.5/1.6
NEW 7379000	Test Tube Rack, round, for (104) 12-13 mm tubes, 9.0" dia. x 1.0" h	2.3/1.0
NEW 7379001	Test Tube/Microcentrifuge Tube Rack, round, for (104) 12-13 mm tubes and with adapter plate for microcentrifuge tubes, 9.0" dia. x 1.0" h	2.8/1.3
7516200	Support Grid Tray, 7.0" w x 7.0" d. Grid holds 144 containers of 12 mm dia.	2.5/1.1
OPTIONAL LIDS		
NEW 7207400	Stainless Steel Lid, 14.0" dia., with neoprene gasket and 3" dia. hole for direct connection of drying accessories to collector. For FreeZone 4.5, 6, 8, 12 and 18 Liter Freeze Dryers.	5.0/2.3
NEW 7207500	Stainless Steel Lid, 10.1" dia., with neoprene gasket and 3" dia. hole for direct connection of drying accessories to collector. For FreeZone 2.5 Liter Benchtop Freeze Dryers.	5.0/2.3
NEW 7808200	Acrylic Lid, 14.0" dia., with neoprene gasket and 3" dia. hole for direct connection of drying accessories to collector. For FreeZone 6, 12 and 18 Liter Console Freeze Dryers.	3.5/1.6
7439902	Glass Lid, 14.0" dia., with neoprene gasket, for FreeZone 6, 12 and 18 Liter Freeze Dryers and 16-Port Drying Chamber	3.5/1.6
7439900	Glass Lid, 9.25" dia., with neoprene gasket, for 12-Port Drying Chamber	2.0/0.9

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FREEZONE® ACCESSORIES

FAST-FREEZE® FLASKS, AMPULES, SERUM BOTTLES & ACCESSORIES

CATALOG NUMBER	DESCRIPTION	SHIPPING WT. LBS./KG
7540000	Fast-Freeze Flask, Clear, 40 ml, with rubber top and 34 mm dia. x 76 mm h glass bottom	1.0/0.5
7540200	Fast-Freeze Flask, Clear, 80 ml, with rubber top and 34 mm dia. x 115 mm h glass bottom	1.0/0.5
7540300	Fast-Freeze Flask, Clear, 120 ml, with rubber top and 59.2 mm dia. x 68 mm h glass bottom	1.0/0.5
7540400	Fast-Freeze Flask, Clear, 150 ml, with rubber top and 59.2 mm dia. x 85 mm h glass bottom	1.0/0.5
7540600	Fast-Freeze Flask, Clear, 300 ml, with rubber top and 59.2 mm dia. x 145 mm h glass bottom	1.5/0.7
7540800	Fast-Freeze Flask, Clear, 600 ml, with rubber top and 90.2 mm dia. x 135 mm h glass bottom	2.0/0.9
7541100	Fast-Freeze Flask, Clear, 750 ml, with rubber top and 90.2 mm dia. x 162 mm h glass bottom	2.0/0.9
7540900	Fast-Freeze Flask, Clear, 900 ml, with rubber top and 90.2 mm dia. x 190 mm h glass bottom	2.2/1.0
7541000	Fast-Freeze Flask, Clear, 1200 ml, with rubber top and 90.2 mm dia. x 240 mm h glass bottom	4.0/1.8
7541200	Fast-Freeze Flask, Clear, 2000 ml, with rubber top and 90.2 mm dia. x 380 mm h glass bottom	4.0/1.8
NEW 7540601	Fast-Freeze Flask, Amber, 300 ml, with rubber top and 59.2 mm dia. x 145 mm h glass bottom	1.5/0.7
NEW 7540801	Fast-Freeze Flask, Amber, 600 ml, with rubber top and 90.2 mm dia. x 135 mm h glass bottom	2.0/0.9
NEW 7541101	Fast-Freeze Flask, Amber, 750 ml, with rubber top and 90.2 mm dia. x 162 mm h glass bottom	2.0/0.9
NEW 7540901	Fast-Freeze Flask, Amber, 900 ml, with rubber top and 90.2 mm dia. x 190 mm h glass bottom	2.2/1.0
7545000	Fast-Freeze Flask Adapter, Glass, straight, for 1/2" flask top to 1/2" valve	0.5/0.2
7545600	Fast-Freeze Flask Adapter, Glass, 45° bend, for 1/2" flask top to 1/2" valve	0.5/0.2
7545200	Fast-Freeze Flask Adapter, Glass, straight, for 3/4" flask top to 3/4" valve	0.5/0.2
7545800	Fast-Freeze Flask Adapter, Glass, 45° bend, for 1/2" flask top to 1/2" valve	0.5/0.2
7545400	Fast-Freeze Flask Adapter, Glass, straight, for 3/4" flask top/valve to 1/2" valve/flask top	0.5/0.2
7546000	Fast-Freeze Flask Adapter, Glass, 45° bend, for 3/4" flask top/valve to 1/2" valve/flask top	0.5/0.2
7547000	Fast-Freeze Flask Adapter, Stainless Steel, straight, for 1/2" flask top to 1/2" valve	0.5/0.2
7547400	Fast-Freeze Flask Adapter, Stainless Steel, 45° bend, for 1/2" flask top to 1/2" valve	0.5/0.2
7547200	Fast-Freeze Flask Adapter, Stainless Steel, straight, for 3/4" flask top to 3/4" valve	0.5/0.2
7547600	Fast-Freeze Flask Adapter, Stainless Steel, 45° bend, for 3/4" flask top to 3/4" valve	0.5/0.2
NEW 7379400	Tube Holder, for 9 each 17 mm x 120 mm tubes. Fits inside 900 ml or larger flask.	1.0/0.5
NEW 7379500	Tube Holder, for 4 each 30 mm x 115 mm tubes. Fits inside 900 ml or larger flask.	1.0/0.5
7442600	Tube Holder, for 15 each 12 or 13 mm tubes. Fits inside 750 ml or larger flask.	1.0/0.5
7442700	Tube Holder, for 30 each 2 ml microcentrifuge tubes. Fits inside 750 ml or larger flask.	1.0/0.5
7543300	Flask Holder, Small. Prevent sample meltback. Compatible with inner flasks 7542000 (40 ml) and 7542200 (80 ml) and outer flasks 7541100 (750 ml) and 7540900 (900 ml).	1.0/0.5
7543400	Flask Holder, Large. Prevents sample meltback. Compatible with inner flasks 7542300 (120 ml), 7542400 (150 ml) and 7542600 (300 ml) and outer flasks 7541100 (750 ml) and 7541000 (1200 ml).	1.0/0.5
7540100	Fast-Freeze Glassware Kit. Includes (1) 7540800 (600 ml), (1) 7540600 (300 ml), (1) 7547200 (stainless steel straight adapter) and (1) 7547600 (stainless steel 45° bend adapter).	5.0/2.3
NEW 7205100	Ampule Pod, with (15) 1/4" ID tubing ports, 15 plugs, 2 clamps and (1) 7547200 Adapter	2.5/1.1
NEW 7205101	Ampule Pod, with (15) 3/8" ID tubing ports, 15 plugs, 2 clamps, and (1) 7547200 Adapter	2.5/1.1
7572710	Ampule, Straight, 1 ml. Package of 100.	3.0/1.4
7570610	Ampule, Flat-Bottom, pre-scored, 1 ml. Package of 100.	3.0/1.4
7570810	Ampule, Flat-Bottom, pre-scored, 2 ml. Package of 100.	3.0/1.4
7571010	Ampule, Flat-Bottom, 5 ml. Package of 100.	3.0/1.4
7571210	Ampule, Flat-Bottom, pre-scored, 10 ml. Package of 100.	3.0/1.4
7593401	Ampule Valve Adapters. Package of 10.	0.5/0.2
7762700	Three Way Ampule Adapter	0.5/0.2
7543800	29/32 Stainless Steel Adapter	1.0/0.5
7575010	Serum Bottles, 2 ml. 13 mm corkage. Package of 100.	2.0/0.9
7575210	Serum Bottles, 3 ml. 13 mm corkage. Package of 100.	2.0/0.9
7573010	Serum Bottles, 5 ml. 20 mm corkage. Package of 100.	2.0/0.9
7573210	Serum Bottles, 10 ml. 20 mm corkage. Package of 100.	2.0/0.9
7573410	Serum Bottles, 20 ml. 20 mm corkage. Package of 100.	2.0/0.9
7573610	Serum Bottles, 30 ml. 20 mm corkage. Package of 100.	2.0/0.9
7573810	Serum Bottles, 50 ml. 20 mm corkage. Package of 100.	4.0/1.8
7574010	Serum Bottles, 100 ml. 20 mm corkage. Package of 100.	5.0/2.3
7574210	Serum Bottles, 125 ml. 20 mm corkage. Package of 100.	5.0/2.3
7576010	Split Stoppers. For 13 mm corkage. Package of 100.	1.0/0.5
7576210	Split Stoppers. For 20 mm corkage. Package of 100.	1.0/0.5
7577010	Aluminum Seals. For 13 mm corkage. Package of 100.	1.0/0.5
7577110	Aluminum Seals. For 20 mm corkage. Package of 100.	1.0/0.5
7543900	Aseptic Adapter, for use with 120 ml to 2000 ml Fast-Freeze Flasks	0.5/0.2



Fast-Freeze Flask 7540901



Tube Holder 7379400



Tube Holder 7379500



Ampule Pod 7205100

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FREEZONE® ACCESSORIES

VACUUM PUMPS & MISCELLANEOUS PUMP ACCESSORIES



Liquid Nitrogen
Secondary Trap 7394800



Dry Ice Secondary Trap 7538000



Clear Polypropylene Canister
7815302 with Solvent Trap Insert
7815200



PrimeMate Oil Change System
7357020

CATALOG NUMBER	DESCRIPTION	SHIPPING WT. LBS./KG
1472100	General Purpose Rotary Vane Vacuum Pump, 117 liters per minute at 60 Hz, 115 volts, 50/60 Hz with 115 volt NEMA 5-15P plug	62/28
7739402	General Purpose Rotary Vane Vacuum Pump, 117 liters per minute at 60 Hz, 230 volts, 50/60 Hz with 230 volt reverse IEC plug	62/28
1467700	General Purpose Rotary Vane Vacuum Pump, 195 liters per minute at 60 Hz, 115 volts, 50/60 Hz with NEMA 5-15P plug	65/30
7739403	General Purpose Rotary Vane Vacuum Pump, 195 liters per minute at 60 Hz, 230 volts, 50/60 Hz with 230 volt reverse IEC plug	65/30
NEW 1473500	Oil Return Kit, for General Purpose Rotary Vane Vacuum Pumps	05./0.2
7584000	Combination Rotary Vane/Diaphragm Vacuum Pump, 115 liters per minute at 60 Hz, 115 volts, 60 Hz with NEMA 5-15P plug	64/29
7584002	Combination Rotary Vane/Diaphragm Vacuum Pump, 115 liters per minute at 60 Hz, 230 volts, 50/60 Hz with 230 volt reverse IEC plug	64/29
NEW 7587000	Scroll Vacuum Pump, 189 liters per minute at 60 Hz, 115 volts, 50/60 Hz with NEMA 5-15P plug	59/26
NEW 7587002	Scroll Vacuum Pump, 189 liters per minute at 60 Hz, 230 volts, 50/60 Hz with reverse IEC plug	59/26
NEW 7587300	Pump Silencer, for Scroll Vacuum Pumps	2.0/0.9
7394800	Liquid Nitrogen Secondary Trap	24/11
7538000	Dry Ice Secondary Trap, 7.8" dia. x 9.75" h, 3/4" OD inlet/outlet connections. 3.1 liter volume. 900 ml ice trapping capacity.	9.0/4.1
7538200	Dry Ice Secondary Trap, 7.8" dia. x 9.75" h, 1/2" OD inlet/outlet connections. 3.1 liter volume. 900 ml ice trapping capacity.	9.0/4.1
7538400	Dry Ice Secondary Trap, 6.6" dia. x 7.8" h, 1/2" OD inlet/outlet connections. 1.92 liter volume. 200 ml ice trapping capacity.	9.0/4.1
NEW 7815302	Clear Polypropylene Canister with stand. Barbed 3/4" OD fittings. Trap Insert is required.	5.0/2.1
7814800	Acid Trap Insert. Acid neutralizing desiccant. For use with Canister 7815302.	4.0/1.8
7814900	Moisture Trap Insert. Moisture desiccant. For use with Canister 7815302.	4.0/1.8
7815000	Radioisotope Trap Insert. Activated carbon. For use with Canister 7815302.	4.0/1.8
7815200	Solvent Trap Insert. Molecular sieve. For use with Canister 7815302.	4.0/1.8
7815600	Ammonia Trap Insert. Impregnated carbon. For use with Canister 7815302.	4.0/1.8
7357020	PrimeMate™ Oil Change System, 115 volts, 60 Hz, North America	32/15
7357030	PrimeMate™ Oil Change System, 230 volts, 50/60 Hz, Schuko	32/15
7357035	PrimeMate™ Oil Change System, 230 volts, 50/60 Hz, British (UK)	32/15
7357037	PrimeMate™ Oil Change System, 230 volts, 50/60 Hz, China/Australia	32/15
7357040	PrimeMate™ Oil Change System, 230 volts, 50/60 Hz, North America	32/15
7358900	Battery Pack for PrimeMate™ 7357020 and 7357040	7.0/3.2
7358901	Battery Pack for PrimeMate™ 7357030	7.0/3.2
7358902	Battery Pack for PrimeMate™ 7357035	7.0/3.2
7358903	Battery Pack for PrimeMate™ 7357037	7.0/3.2



General Purpose Rotary Vane
Vacuum Pump 1472100



Combination Rotary Vane/Diaphragm
Vacuum Pump 7584000



Scroll Vacuum Pump 7587000



Protecting your
laboratory environment

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