

Centrifugal Vacuum Concentrators and Cold Traps





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An Overview

CentriVap Vacuum Concentrators use a combination of centrifugal force, vacuum and heat to speed evaporation of multiple small samples in applications such as molecular biology, proteomics, genomics, cell biology, microbiology, biochemistry, drug discovery and analytical chemistry. Labconco offers concentrators in two chamber sizes to meet your throughput needs: CentriVap micro IR Vacuum Concentrators and CentriVap Vacuum Concentrators.

CentriVap micro IR Vacuum Concentrators — small, yet complete

For small throughput, small samples such as DNA, and personal use, the CentriVap micro IR Vacuum Concentrator has an infrared-emitting lid to add heat to the chamber and reduce condensation. It has a small footprint yet is packed with features. A rotor that holds 24 each 0.5 ml microcentrifuge tubes is included. A built-in diaphragm vacuum pump aids evaporation. A built-in glass trap collects moisture to protect the pump. A CentriZap™ micro IR strobe light allows the user to view samples while spinning. Everything needed to begin evaporation is provided.

CentriVap Vacuum Concentrators — greater throughput, many choices

CentriVap Vacuum Concentrators with 12" diameter chambers come in a variety of configurations and styles to suit a variety of needs. The larger chamber allows as many as 132 samples to be processed at once. Sample sizes range from a few microliters up to 50 milliliters. In addition, Microtiter Plate Rotors hold up to six standard or three deep-well plates.



Ideal for DNA samples, the CentriVap micro IR Vacuum Concentrator has a small footprint to fit in tight spaces. Weighing only 20 pounds, it is easily transportable from lab to lab.



CentriVap Vacuum Concentrators, such as the Acid-Resistant CentriVap shown above, process up to 132 samples at once.



Refrigerated CentriVap Vacuum Concentrator incorporates a refrigeration system to protect heatsensitive samples.



CentriVap DNA Vacuum Concentrator includes a builtin diaphragm pump and DNA Rotor



CentriVap Mobile System combines the concentrator and cold trap into a portable console.



CentriVap -50 Cold Trap, which reaches -50° C (-58° F), collects moisture during evaporation to protect the vacuum pump.



CentriVap -84 Cold Trap, which reaches -84° C (-119° F), protects the vacuum pump from lower freezing point solvents.



CentriVap -105 Cold Trap, which reaches -105° C (-157° F), protects the vacuum pump from ultra low freezing point solvents.

Some CentriVap Concentrators have additional design features to meet specific application needs. The Refrigerated CentriVap Vacuum Concentrator combines refrigeration with heat to safely evaporate heat-sensitive samples. The Acid-Resistant CentriVap Concentrator, available as a standard benchtop or refrigerated benchtop, is constructed with chemical-resistant components throughout the vapor path for use with samples containing a variety of chemicals.

The CentriVap Mobile System and CentriVap DNA Concentrator house all the components necessary to begin concentration in one convenient cabinet. The CentriVap Mobile System consists of a portable console cabinet with the concentrator, cold trap and space inside for an accessory vacuum pump. The CentriVap DNA Concentrator is a compact benchtop model with a built-in diaphragm pump.

For ease of ordering, Labconco has application-specific CentriVap Systems, each organized under one catalog number. Systems specifically designed for aqueous, acid, solvent or proteomic-based applications are offered.

Programmability and other microprocessor-controlled features make the CentriVap Concentrators easy to use and allow unattended operation. Up to nine different protocols consisting of temperature, heat time and run time may be entered and stored into memory. Programs 1, 2 and 3 as designated by the user may be quickly accessed by pressing one of three Quick-Start™ buttons. To protect sensitive samples from excessive heat exposure after samples have evaporated, the heat time may be programmed to shut off sooner than the run time. An audible alarm alerts the user when the run time has expired.

The microprocessor-controlled heater directs heat from OFF to 100° C upward through the bottom of the chamber. To further speed evaporation, the optional Heat Boost™ feature surrounds the chamber wall with additional heat, at the same user-programmed temperature.

CentriVap Cold Traps — vacuum pump protection

CentriVap -50 Cold Traps help protect the accessory vacuum pump from the corrosive effects of vapors and fumes as they evaporate from the samples. The CentriVap -84 and -105 Cold Traps provide protection from low freezing point solvents. Besides use with concentrators, these cold traps may be coupled with vacuum pumps for use with other applications such as freeze drying or desiccation.





With the smallest footprint available, the CentriVap® micro IR Vacuum Concentrator fits in tight spaces and is ideal for small samples such as DNA and small throughput in molecular biology, proteomics, genomics, genetics, cell biology and drug discovery labs. Weighing only 20 pounds, this personal-sized concentrator may be easily transported from lab to lab.

Everything about the CentriVap micro IR is small except its many features. Its transparent infrared (IR) glass lid directs heat to the samples

to speed evaporation and reduces cross contamination from condensation. The CentriVap micro IR includes a rotor for twenty-four small samples, a CentriZap micro IR strobe light to view samples while the rotor is spinning, a built-in diaphragm pump and glass trap—everything you need to start concentrating. Simply plug it in and it's ready to use.





Features & Benefits

Ideal for small throughput and sample sizes.

The chamber holds one of five different rotors with capacities from 24×0.5 ml microcentrifuge tubes to 8×30 ml vials.

Smallest footprint available.

The shaded area on these pages shows the CentriVap micro IR's actual footprint. Its compact footprint, only 8.8" wide x 10.4" deep x 8.9" high ($22.4 \times 26.4 \times 22.6$ cm), requires little bench space or storage space.

PTFE-coated chamber.

Resists corrosion, adds durability.

IR-emitting glass lid.

Adds heat to the chamber to speed evaporation while helping to prevent condensation that can contribute to sample cross contamination. Glass resists etching from certain chemicals.

CentriZap micro IR strobe light included.

Enables the user to shine a strobe light into the chamber to easily view samples while the rotor is spinning. Samples appear to be standing still. Saves time necessary to stop the rotor and lift the lid to check sample dryness.

PTFE-coated aluminum rotor is included. Accommodates 24 each 1.5 ml microcentrifuge tubes. Other accessory rotors are available.

Built-in PTFE-coated diaphragm pump.

Corrosion-resistant diaphragm pump achieves ultimate vacuum of 160 mBar and pumping capacity of 5.5 liters per minute. Oil-free pump is low maintenance.

Microprocessor-controlled 300-watt heater.

Speeds evaporation by supplying a controlled amount of heat from 35° C to 65° C in 0.1 degree increments. "Standby" setting allows chamber to preheat before sample processing.

Centrifugal motion of 1700 rpm.

Eliminates bumping and foaming common when applying vacuum during evaporation and maximizes recovery of trace solutes.

Quiet operation.

The magnetic induction drive and pump run quietly with low vibration.

Fast evaporation.

Using Rotor 7548500, 24 each 1 ml samples in 1.5 ml microcentrifuge tubes, and the IR lid heat function, fast evaporation times were achieved.

Solvent	Temperature	Dry Time
Acetonitrile	45° C	61 minutes
Methanol	65° C	32 minutes
Water	60° C	145 minutes
Isopropanol	60° C	30 minutes
Ethanol	60° C	39 minutes

Vacuum gauge.

Built-in front-mounted analog vacuum gauge indicates pump function.

Easy-to-read LCD display.

Prompts the user to set heat and time, displays actual temperature during "Standby" and "Run."

75 ml Glass trap.

Protects the pump and the environment. For greater trapping ability, the rear-mounted trap may be placed in an ice bath.

ETL listed.

Model 7701020 carries the ETL Testing Laboratories seal in the U.S. and the ETL-C seal in Canada, signifying it meets or exceeds all requirements of UL Standard 61010A-1 and CAN/CSA C22.2 No. 1010.1.

CE Mark.

All 230 volt models conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.

Reliability guarantee.

Full one year warranty is provided against defects in materials and workmanship.

Shaded area represents actual footprint of the CentriVap* micro IR.



CentriZap™ micro IR strobe light







Controls

LCD display.

Shows set point temperature and time while in set up mode and actual temperature and time while in run mode.

START/STOP button. Press to start or stop a run and to reset the timer.

Heat Selector. Use to select IR only, IR/Heat or Heat only.





Run Mode Selector. Use to select Off, Standby (preheat) or Run mode.

Increase/Decrease buttons.

Press to increase or decrease the last selected set point parameter.

Illuminates during preheating.

POWER light.-Illuminates when in Standby or Run mode.

Optional Accessories



7548500



7548600



7548700



7548800

PTFE-Coated Aluminum Rotors

Hold tubes at an angle to maximize surface area. Easily interchangeable. Rotor 7548500 is included with each CentriVap micro IR. Sample containers are not included. Shipping weight 1.0 lb. (0.5 kg)

7548400	24	0.5 ml	0.5 ml microcentrifuge tubes
7548500	24	1.5 ml	1.5 ml microcentrifuge tubes
7548600	16	10 ml	vials, 18 mm dia. x 65 mm tall
		5 ml	5 ml microcentrifuge tubes
7548700	12	15 ml	vials, 20 mm dia. x 70 mm tall
7548800	8	25 ml	vials, 28 mm dia. x 70 mm tall

^{*}Tubes should be filled no more than 1/3 to 1/2 of tube volume to prevent loss of sample during rotation.

7549000 CentriZap micro IR Strobe Light, Replacement

Enables user to shine a strobe light into the CentriVap micro IR's chamber to easily view samples while the rotor is spinning. Included

with each CentriVap micro IR. Shipping weight 1.0 lb. (0.5 kg)





Specifications

- Compact dimensions. Footprint: 8.8" w x 10.4" d x 8.9" high $(22.4 \times 26.4 \times 22.6 \text{ cm})$. Overall depth, including glass trap: 12.9" (32.8 cm).
- IR-emitting transparent glass lid.
- · PTFE-coated aluminum chamber.
- PTFE-coated aluminum rotor included for 24 each, 1.5 ml microcentrifuge tubes.
- Built-in PTFE-coated diaphragm pump with ultimate vacuum of 160 mBar and displacement capacity of 5.5 liters/minute.
- CentriZap micro IR strobe light included.
- 300-watt heater.
- Microprocessor-controlled programming for run time either continually or in hours and minutes from 0 to 99 hours and 0 to 59 minutes, and heat setting of 35° C to 65° C in 0.1 degree increments.
- Centrifugal motion of 1700 rpm achieved by magnetic induction drive.
- Analog vacuum gauge.
- LCD for programming and actual temperature/time display.
- 75 ml Glass trap.
- One year warranty on materials and workmanship.
- ETL & ETL-C listing on model 7701020.
- CE mark on models 7701030, 7701035 and 7701037.

△WARNING: Cancer - P65Warnings.ca.gov (California only).

• Actual weight 20 lbs. (9 kg). Shipping weight 22 lbs. (10 kg).

Required Accessories (not included)

Sample tubes. Contact your laboratory supply dealer.

Optional Accessories

• Rotors. See page 6.



CentriVap micro IR Vacuum Concentrator 7701020





Ordering Information

Catalog Number	Electrical Specifications	Plug Type
7701020	115 volts, 60 Hz, 2 amps	115 volts, 15 amps
7701030	230 volts, 50/60 Hz, 1 amp	Schuko
7701035	230 volts, 50/60 Hz, 1 amp	British (UK)
7701037	230 volts, 50/60 Hz, 1 amp	China/Australia

Plug Types



115 volts, 15 amps



Schuko



British (UK)

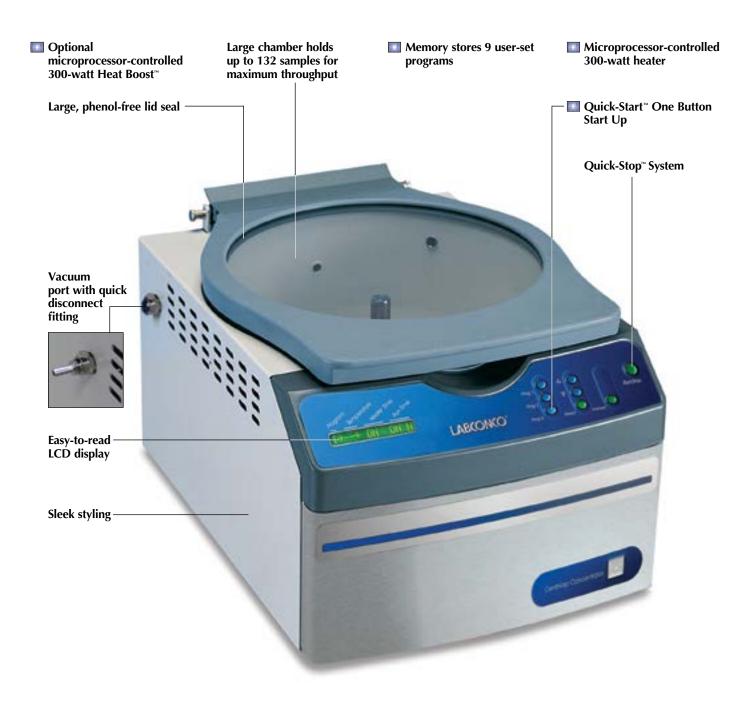


China/ Australia

CENTRIVAP® BENCHTOP VACUUM CONCENTRATORS

CentriVap Benchtop Vacuum Concentrators are designed to rapidly concentrate multiple small samples using centrifugal force, vacuum and heat. You may purchase the individual components separately—concentrator, cold trap, rotor and pump—to suit your individual needs. Or, purchase an application-specific CentriVap System, which includes the concentrator, cold trap, chemical trap

and rotor organized under one catalog number for easy ordering. Aqueous, Solvent or Acid Systems are available. CentriVap Gel Dryer Systems consist of the Labconco Gel Dryer combined with the CentriVap Benchtop Concentrator and Cold Trap. See pages 30 and 31 for System ordering information.





Features & Benefits

Sleek styling.

Brushed stainless steel front panel and blue accents enhance appearance. Compact design has a small footprint.

Microprocessor-controlled centrifugal motion.

Centrifugal force eliminates bumping and foaming common when applying vacuum during evaporation and maximizes recovery of trace solutes. Centrifugal motion is provided by a brushless motor capable of achieving up to 1725 rpm.

Quick-Stop™ System.

Once run time has expired or the RUN/STOP button is pressed, within seconds the vacuum pump stops, the valve opens to bleed air into the chamber, and the rotor stops.

Automatic vacuum release valve.

Prevents loss of sample by releasing the vacuum before the rotor stops and during power failures. The larger valve takes less time to release the vacuum.

Lid latch with safety sensor.

Locks the lid in place when the rotor is turning and prevents start up when the lid is open.

Larger chamber holds more samples for greater throughput.

The 12" diameter chamber accommodates a variety of rotors that hold up to 132 samples. The 6-Place Microtiter Plate Rotor holds six standard 96-well plates or three deep well plates. Thick-wall aluminum chamber is powder-coated for chemical resistance.

Large, phenol-free lid seal.

Ensures good vacuum without potential for phenol contamination.

Acrylic lid is standard; glass lid is optional.

When applications involve solvents which attack acrylic, order CentriVap Concentrator with glass lid.

Built-in vacuum delay.

Prevents bumping by allowing the rotor to achieve speed before applying vacuum.

Microprocessor-controlled 300-watt heater.

Speeds evaporation by supplying a controlled amount of heat from OFF up to a maximum of 100° C in one degree increments.

■ Optional microprocessor-controlled 300-watt Heat Boost.

Surrounds chamber wall to provide additional heat from OFF up to a maximum of 100° C in one degree increments. Unlike radiant lid heaters, heat is supplied within the chamber, decreasing the risk of burn injury.

■ Quick-Start[™] One Button Start Up saves time.

Pressing just one button starts the rotor, the heater, the timers and the vacuum pump. Three separate Quick-Start Buttons store one user-set program each.

Easy-to-read LCD display.

Prompts the user to set program parameters and displays program number, actual and set point temperatures, heat time remaining, run time remaining, and if optional Heat Boost is activated.

Heat and run times are set separately.

Each from 1 to 999 minutes, so that heat may be programmed to shut down sooner than the run to protect heat-sensitive samples from excessive heat exposure after the solvent has evaporated. Once user-set run time has expired, all functions cease.

PREHEAT button.

Pressing the button activates the heater to begin elevating to set point temperature. When in the preheat mode, the operator can monitor actual heat. Once set point temperature has been reached, samples can be added and program started.

Memory stores 9 user-set programs.

Parameters of temperature, heat time and run time can be easily set with the touch of a few buttons. In addition, the user may alter temperature and times while the program is in progress.

Audible alarm signals completion of set point run time.

If it is desired to have the CentriVap run continuously without a set point time, the user may use the increase button until ON is displayed under RUN TIME.

Electrical receptacle.

Allows connection of accessory vacuum pump so that pump may be activated from control panel and vacuum delay utilized.

Vacuum port with quick disconnect fitting.

Allows connection of a gauge to the CentriVap for monitoring vacuum level. Vacuum gauge and 1/4" ID tubing are required (not included). Contact Labconco for vacuum gauge recommendations.

ETL listed.

The CentriVap Concentrators carry the ETL Testing Laboratories seal in the U.S. and the ETL-C seal in Canada, signifying they meet or exceed all requirements of UL Standard 61010A-1 and CAN/CSA C22.2 No. 1010.1.

International electrical configurations available.

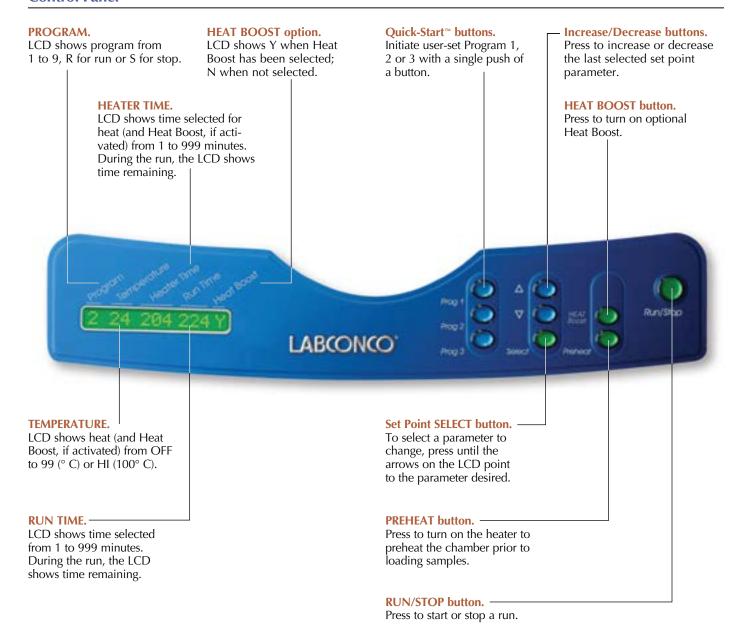
All 230 volt models conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.

Reliability guarantee.

Full one year warranty is provided against defects in materials and workmanship.



Control Panel



Optional Accessories

■ Optional CentriZap[™] Strobe Light.

Enables the user to shine a strobe light into the chamber to easily view samples while the rotor is spinning. Samples appear to be standing still. The gun plugs into an outlet on the back of the CentriVap. A holster bracket is supplied and attaches to the right side of the CentriVap. See page 34.

Optional Glass Lid.

Provides additional protection from solvents and corrosives that attack acrylic. See page 35.



CentriZap Strobe Light allows the user to check sample status without stopping the rotor and opening the lid.

Specifications

- Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- · Acrylic lid or glass lid, depending on model.
- · Lid latch with safety sensor.
- · Phenol-free lid gasket.
- · Powder-coated aluminum chamber.
- 300-watt heater.
- Microprocessor-controlled programming for run time from 1 to 999 minutes, heat from OFF to HI (100° C) in one degree increments, heat time from 1 to 999 minutes, and optional Heat Boost on/off. Memory stores 1 to 9 programs.
- LCD for display of program number, actual and set point temperature, heater time remaining, run time remaining, and optional Heat Boost activation.
- Control panel with RUN/STOP button, PREHEAT button, optional HEAT BOOST button, set point SELECT button, increase/decrease buttons, and 3 Quick-Start buttons.
- Centrifugal motion provided by a brushless motor capable of achieving up to 1725 rpm.
- Quick-Stop System to stop vacuum pump, open valve to bleed air into the chamber and stop the rotor within seconds after time expires or RUN/STOP button is pressed.
- · Automatic vacuum release valve.
- Built-in vacuum delay allows rotor to achieve speed before applying vacuum.
- Audible alarm to signal completion of set point run time.
- 1/2" OD aluminum hose fitting for connection to vacuum tubing.
 Vacuum pump is not included.
- Vacuum port with quick disconnect fitting for 1/4" ID tubing.
- An electrical receptacle on the back for connection to an accessory vacuum pump.
- ETL & ETL-C listing on 115 volt, 60 Hz models.
- CE mark on 230 volt, 50/60 Hz models.

△ WARNING: Cancer - P65Warnings.ca.gov (California only).

- Overall dimensions with closed lid: 14.7" wide x 19.3" deep x 11.7" high $(37.3 \times 49.0 \times 29.6 \text{ cm})$.
- Actual weight 42 lbs. (19 kg). Shipping weight 48 lbs. (22 kg).

CentriVap Benchtop Vacuum Concentrator 7810010





Built-in Option

 300-watt Heat Boost from OFF to HI (100° C) in one degree increments, for 1 to 999 minutes, depending on set points programmed for heater.

Required Accessories (not included)

- Diaphragm or Rotary Vane Vacuum Pump. See page 34.
- CentriVap Cold Trap (if using a Rotary Vane Pump). See pages 20-21.
- Rotor. See pages 32-33.
- Sample tubes. Contact your laboratory supply dealer.

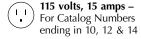
Other Accessories (See pages 33-34)

- CentriZap Strobe Light
- Vacuum Controller
- Glass Lid
- Laboratory Carts

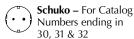
Ordering Information

Catalog Number	Electrical Requirements	Receptacle & Plug Type	Heat Boost	Glass Lid
7810010	115 volts, 50/60 Hz, 12 amps**	115 volts, 15 amps		
7810011	230 volts, 50/60 Hz, 6 amps ⁺	North America, 230 volts		
7810012	115 volts, 50/60 Hz, 12 amps**	115 volts, 15 amps	•	
7810013	230 volts, 50/60 Hz, 6 amps ⁺	North America, 230 volts	•	
7810014	115 volts, 50/60 Hz, 12 amps**	115 volts, 15 amps		•
7810015	230 volts, 50/60 Hz, 6 amps ⁺	North America, 230 volts		•
7810030*	230 volts, 50/60 Hz, 6 amps ⁺	Schuko		
7810031*	230 volts, 50/60 Hz, 6 amps ⁺	Schuko	•	
7810032*	230 volts, 50/60 Hz, 6 amps ⁺	Schuko		•
7810034*	230 volts, 50/60 Hz, 6 amps ⁺	British (UK)		
7810035*	230 volts, 50/60 Hz, 6 amps ⁺	British (UK)	•	
7810036*	230 volts, 50/60 Hz, 6 amps ⁺	British (UK)		•
7810038*	230 volts, 50/60 Hz, 6 amps ⁺	China/Australia		
7810039*	230 volts, 50/60 Hz, 6 amps ⁺	China/Australia	•	
7810040*	230 volts, 50/60 Hz, 6 amps ⁺	China/Australia		•

See pages 30-31 for ordering information on CentriVap Systems consisting of the individual components bundled under one catalog number.



North America, 230 volts – For Catalog Numbers ending in 11, 13 & 15



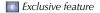


British (UK) – For Catalog Numbers ending in 34, 35 & 36



China/Australia – For Catalog Numbers ending in 38, 39 & 40

*International electrical configuration **System amperage shown includes 8 amp maximum vacuum pump rating †System amperage shown includes 4.5 amp maximum vacuum pump rating



labconco.com

REFRIGERATED CENTRIVAP® VACUUM CONCENTRATORS

The Refrigerated CentriVap Vacuum Concentrator is designed to rapidly concentrate multiple small heat-sensitive samples, such as RNA and proteins, using centrifugal force, vacuum and controlled temperature. This CentriVap is the only **commercially available concentrator that combines a refrigeration system that cools to -4° C with a heater that warms to +100° C to achieve the user's selected set point temperatures.** The Refrigerated CentriVap is also part of the CentriVap Proteomic System, which includes the con-

centrator, cold trap and DNA rotor organized under one catalog number. See page 31 for System ordering information.

For heat-sensitive samples that contain chemicals such as 0.1 to 1% TFA, hydrochloric acid, acetic acid, hydrobromic acid, ammonium hydroxide and sodium hydroxide, Acid-Resistant Refrigerated CentriVap Concentrators are available, which include a PTFE-coated chamber and other acid-resistant components.





Features & Benefits

PREHEAT/COOL button.

Pressing the button activates the refrigeration system and heater to reach set point temperature. When in the preheat/cool mode, the operator can monitor actual temperature. Once set point temperature has been reached, samples can be added and program started.

- Programming holds two temperatures and times.
 - Set points for the first and second temperatures and run times are selected separately. A lower temperature may be programmed for the second run time to protect heat-sensitive samples from excessive heat exposure after the solvent has evaporated. Once the user-set second run time has expired, all functions cease.
- Microprocessor-controlled cooling and heating.

Speeds evaporation while protecting heat-sensitive samples by supplying a controlled amount of cooling or heat from -4° C up to a maximum of +100° C in one degree increments. A temperature sensor monitors the chamber to regulate the activation of the HCFC/CFC-free refrigeration system and/or the 300-watt heater.

Microprocessor-controlled centrifugal motion.

Centrifugal force eliminates bumping and foaming common when applying vacuum during evaporation and maximizes recovery of trace solutes.

Memory stores 9 user-set programs.

Parameters of temperature and run time can be easily set with the touch of a few buttons. In addition, the user may alter temperature and times while the program is in progress.

Quick-Start™ One Button Start Up saves time.

Pressing just one button starts the rotor, the refrigeration and/or heater, the timers and the vacuum pump. Three separate Quick-Start Buttons store one user-set program each.

Quick-Stop™ System.

Once run time has expired or the RUN/STOP button is pressed, within seconds the vacuum pump stops, the valve opens to bleed air into the chamber, and the rotor stops.

Automatic vacuum release valve.

Prevents loss of sample by releasing the vacuum before the rotor stops and during power failures. The larger valve takes less time to release the vacuum.

Built-in vacuum delay.

Prevents bumping by allowing the rotor to achieve speed before applying vacuum.

Audible alarm signals completion of set point run time.

If it is desired to have the CentriVap run continuously without a set point time, the user may use the increase button until ON is displayed under RUN TIME.

Vacuum port with quick disconnect fitting.

Allows connection of a gauge to the CentriVap for monitoring vacuum level. Vacuum gauge and 1/4" ID tubing are required (not included). Contact Labconco for vacuum gauge recommendations.

Sleek styling.

Brushed stainless steel front panel and blue accents enhance appearance. Compact design has a small foot print.

Acrylic lid is standard; glass lid is provided on Acid-Resistant models and also available as an option.

The glass lid option is recommended when applications involve solvents that attack acrylic.

Lid latch with safety sensor.

Locks the lid in place when the rotor is turning and prevents start up when the lid is open.

Large chamber holds multiple samples for maximum throughput. The 12" diameter chamber accommodates a variety of rotors that hold up to 132 samples. The accessory Microtiter Plate Rotor holds four standard 96-well plates or two deep well plates. Thick-wall aluminum chamber is powder-coated for chemical resistance. Acid-Resistant models includes a PTFE-coated aluminum chamber for resistance to more corrosive chemicals such as dilute TFA.

Large, phenol-free lid seal.

Ensures good vacuum without potential for phenol contamination.

Easy-to-read LCD display.

Prompts the user to set program parameters and displays program number, actual and set point temperatures, heat time remaining, and run time remaining.

Electrical receptacle.

Allows connection of accessory vacuum pump so that pump may be activated from control panel and vacuum delay utilized.

ETL listed.

The CentriVap Concentrators carry the ETL Testing Laboratories seal in the U.S. and the ETL-C seal in Canada, signifying they meet or exceed all requirements of UL Standard 61010A-1 and CAN/CSA C22.2 No. 1010.1.

International electrical configurations available.

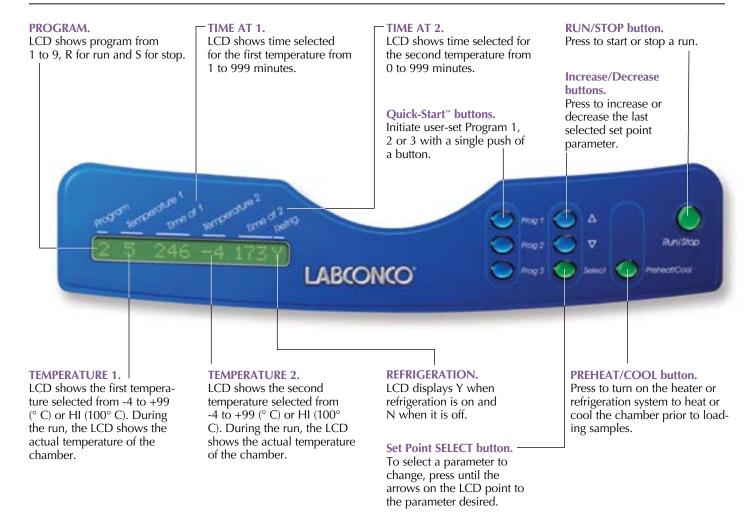
All 230 volt models conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.

Reliability guarantee.

Full one year warranty is provided against defects in materials and workmanship.



Control Panel



Optional Accessory

■ Optional CentriZap[™] Strobe Light.

Enables the user to shine a strobe light into the chamber to easily view samples while the rotor is spinning. Samples appear to be standing still. The gun plugs into an outlet on the back of the CentriVap. A holster bracket is supplied and attaches to the right side of the CentriVap. See page 34.



CentriZap Strobe Light allows the user to check sample status without stopping the rotor and opening the lid.



Specifications

- Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- · Acrylic lid or glass lid, depending on model.
- · Lid latch with safety sensor.
- · Phenol-free lid gasket.
- Powder-coated aluminum chamber or PTFE-coated aluminum chamber with Hastelloy* shaft, depending on the model.
- 300-watt heater to heat chamber to +100° C.
- HCFC/CFC-free refrigeration system to cool chamber to -4° C.
- Sensor that reads chamber temperature.
- Microprocessor-controlled programming for "Temperature 1" from -4° C to +100° C, "Temperature 1" time from 1 to 999 minutes or indefinite, "Temperature 2" from -4° C to +100° C, and "Temperature 2" time from 0 to 999 minutes or indefinite. Memory stores 1 to 9 programs.
- LCD for display of program number, set point and actual "Temperature 1 and 2," set point and time remaining for "Temperature 1 and 2," and refrigeration activation ("Y" or "N").
- Control panel with RUN/STOP button, PREHEAT/ COOL button, set point SELECT button, increase/ decrease buttons, and 3 Quick-Start buttons.
- Centrifugal motion provided by a brushless motor capable of achieving up to 1725 rpm.
- Quick-Stop System to stop vacuum pump, open valve to bleed air into the chamber and stop the rotor within seconds after time expires or RUN/STOP button is pressed.
- Automatic vacuum release valve.
- Built-in vacuum delay allows rotor to achieve speed before applying vacuum.
- Audible alarm to signal completion of set point run time.
- 1/2" OD aluminum hose fitting for connection to vacuum tubing. Vacuum pump is not included.
- Vacuum port with quick disconnect fitting for 1/4" ID tubing.
- Electrical receptacle on the back to connect accessory vacuum pump to the system.
- ETL & ETL-C listing on 115 volt & 230 volt, 60 Hz models.
- CE mark on 230 volt, 50 Hz models.

Ordering Information

△ WARNING: Cancer - P65Warnings.ca.gov (California only).

Refrigerated CentriVap Vacuum Concentrator 7310020





- Overall dimensions with closed lid: 14.3" wide x 21.7" deep x 16.6" high (36.4 x 55.1 x 42.2 cm).
- Actual weight 95 lbs. (43 kg). Shipping weight 108 lbs. (49 kg).

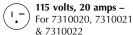
Required Accessories (not included)

- Diaphragm or Rotary Vane Vacuum Pump. See page 34.
- CentriVap Cold Trap (if using a Rotary Vane Vacuum Pump). See pages 20-21.
- Rotor. See page 32-33.
- Sample tubes. Contact your laboratory supply dealer.

Other Accessories (See pages 32-35)

- CentriZap™ Strobe Light
- Vacuum Controller
- Laboratory Carts

Catalog Number	Electrical Requirements	Receptacle & Plug Type	Glass Lid	Acid-Resistant
7310020	115 volts, 50/60 Hz, 16 amps ⁺	115 volts, 20 amps		
7310021	115 volts, 50/60 Hz, 16 amps ⁺	115 volts, 20 amps	•	
7310022	115 volts, 50/60 Hz, 16 amps ⁺	115 volts, 20 amps	•	•
7310030**	230 volts, 50 Hz, 8 amps**	Schuko		
7310031**	230 volts, 50 Hz, 8 amps**	Schuko	•	
7310032**	230 volts, 50 Hz, 8 amps**	Schuko	•	•
7310035**	230 volts, 50 Hz, 8 amps ⁺⁺	British (UK)		
7310036**	230 volts, 50 Hz, 8 amps**	British (UK)	•	
7310034**	230 volts, 50 Hz, 8 amps ⁺⁺	British (UK)	•	•
7310037**	230 volts, 50 Hz, 8 amps ⁺⁺	China/Australia		
7310038**	230 volts, 50 Hz, 8 amps**	China/Australia	•	
7310039**	230 volts, 50 Hz, 8 amps ⁺⁺	China/Australia	•	•
7310040	230 volts, 60 Hz, 8 amps ⁺⁺	North America, 230 volts		
7310041	230 volts, 60 Hz, 8 amps**	North America, 230 volts	•	
7310042	230 volts, 60 Hz, 8 amps [™]	North America, 230 volts	•	•



North America, 230 volts - For 7310040, 7310041 & 7310042



Schuko - For 7310030, 7310031 & 7310032



British (UK) -For 7310034, 7310035 & 7310036



China/Australia -For 7310037, 7310038 & 7310039

^{**}International electrical configuration †System amperage shown includes 8 amp maximum vacuum pump rating



^{*}Hastelloy® is a registered trademark of Haynes International.

ACID-RESISTANT CENTRIVAP® VACUUM CONCENTRATORS

Using centrifugal force, vacuum and controlled heat, the Acid-Resistant CentriVap Vacuum Concentrator, with chemical-resistant components throughout the vapor path,

rapidly concentrates multiple small samples containing chemicals such as 0.1 to 1% TFA, hydrochloric acid, acetic acid, hydrobromic acid, ammonium hydroxide and sodium hydroxide.







Features & Benefits

Durable acid-resistant components.

The aluminum chamber is PTFE-coated, the lid is glass and other components in the vapor path are constructed of acid-resistant materials for long life. See page 33 for ordering information on Acid-Resistant Rotors.

Microprocessor-controlled centrifugal motion.

Centrifugal force eliminates bumping and foaming common when applying vacuum during evaporation and maximizes recovery of trace solutes.

Memory stores 9 user-set programs.

Parameters of temperature, heat time and run time can be easily set with the touch of a few buttons. In addition, the user may alter temperature and times while the program is in progress.

□ Quick-Start™ One Button Start Up saves time.

Pressing just one button starts the rotor, the heater, the timers and the vacuum pump. Three separate Quick-Start Buttons store one user-set program each.

Quick-Stop™ System.

Once run time has expired or the RUN/STOP button is pressed, within seconds the vacuum pump stops, the valve opens to bleed air into the chamber, and the rotor stops.

Automatic vacuum release valve.

Prevents loss of sample by releasing the vacuum before the rotor stops and during power failures. The larger valve takes less time to release the vacuum.

Built-in vacuum delay.

Prevents bumping by allowing the rotor to achieve speed before applying vacuum.

Microprocessor-controlled 300-watt heater.

Speeds evaporation by supplying a controlled amount of heat from ambient (OFF) up to a maximum of 100° C in one degree increments.

Heat and run times are set separately.

Each from 1 to 999 minutes or indefinite, so that heat may be programmed to shut down sooner than the run to protect heat-sensitive samples from excessive heat exposure after the solvent has evaporated. Once user-set run time has expired, all functions cease.

PREHEAT button.

Pressing the button activates the heater to begin elevating to set point temperature. When in the preheat mode, the operator can monitor actual heat. Once set point temperature has been reached, samples can be added and program started.

Audible alarm signals completion of set point run time.

If it is desired to have the CentriVap run continuously without a set point time, the user may use the increase button until ON is displayed under RUN TIME.

Vacuum port with quick disconnect fitting.

Allows connection of a gauge to the CentriVap for monitoring vacuum level. Vacuum gauge and 1/4" ID tubing are required (not included). Contact Labconco for vacuum gauge recommendations.

Sleek styling.

Brushed stainless steel front panel and blue accents enhance appearance. Compact design has a small foot print.

Lid latch with safety sensor.

Locks the lid in place when the rotor is turning and prevents start up when the lid is open.

Large, phenol-free lid seal.

Ensures good vacuum without potential for phenol contamination.

Large chamber holds multiple samples for maximum throughput.

The 12" diameter chamber accommodates a variety of rotors, which hold up to 132 samples. The accessory Microtiter Plate Rotor holds four standard 96-well plates or two deep well plates.

Easy-to-read LCD display.

Prompts the user to set program parameters and displays program number, actual and set point temperatures, heat time remaining, run time remaining, and if optional Heat Boost is activated.

PREHEAT button.

Pressing the button activates the heater to begin elevating to set point temperature. When in the preheat mode, the operator can monitor actual heat. Once set point temperature has been reached, samples can be added and program started.

Electrical receptacle.

Allows connection of accessory vacuum pump so that pump may be activated from control panel and vacuum delay utilized.

FTI listed

The CentriVap Concentrators carry the ETL Testing Laboratories seal in the U.S. and the ETL-C seal in Canada, signifying they meet or exceed all requirements of UL Standard 61010A-1 and CAN/CSA C22.2 No. 1010.1.

International electrical configurations available.

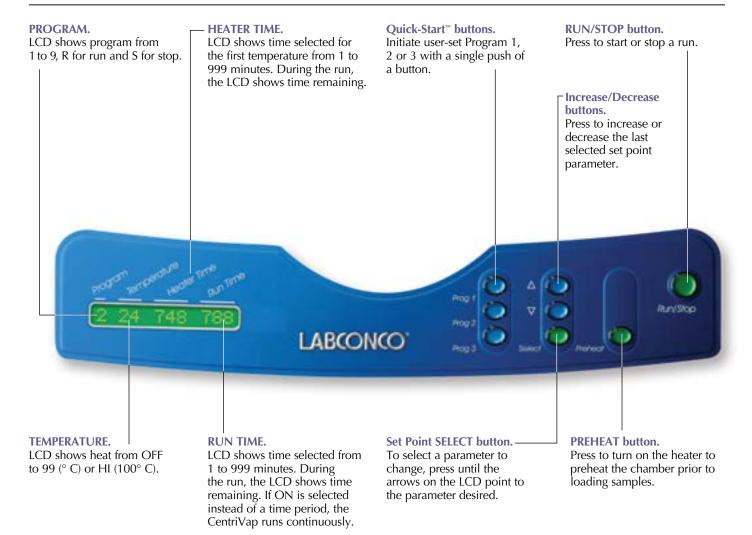
All 230 volt models conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.

Reliability guarantee.

Full one year warranty is provided against defects in materials and workmanship.



Control Panel



Optional Accessories

■ Optional CentriZap[™] Strobe Light.

Enables the user to shine a strobe light into the chamber to easily view samples while the rotor is spinning. Samples appear to be standing still. The gun plugs into an outlet on the back of the CentriVap. A holster bracket is supplied and attaches to the right side of the CentriVap. See page 34.

Acid-Resistant Rotors.

PTFE-coated aluminum rotors resist degradation from exposure to harsh chemicals. Six different rotors are offered. See page 33.



CentriZap Strobe Light allows the user to check sample status without stopping the rotor and opening the lid.



Specifications

- Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- Glass lid.
- · Lid latch with safety sensor.
- Phenol-free lid gasket.
- PTFE-coated aluminum chamber with Hastelloy* shaft.
- 300-watt heater.
- Microprocessor-controlled programming for run time from 1 to 999 minutes, heat from OFF to HI (100° C) in one degree increments, and heat time from 1 to 999 minutes. Memory stores 1 to 9 programs.
- · LCD for display of program number, actual and set point temperature, heater time remaining, and run time remaining.
- Control panel with RUN/STOP button, PREHEAT button, set point SELECT button, increase/decrease buttons, and 3 Quick-Start buttons.
- Centrifugal motion provided by a brushless motor capable of achieving up to 1725 rpm.
- Quick-Stop System to stop vacuum pump, open valve to bleed air into the chamber and stop the rotor within seconds after time expires or RUN/STOP button is pressed.
- Automatic vacuum release valve.
- Built-in vacuum delay allows rotor to achieve speed before applying vacuum.
- Audible alarm to signal completion of set point run time.
- 1/2" OD aluminum hose fitting for connection to vacuum tubing. Vacuum pump is not included.
- Vacuum port with quick disconnect fitting for 1/4" ID tubing.
- Electrical receptacle on the back to connect accessory vacuum pump to the system.
- ETL & ETL-C listing on 115 volt, 60 Hz models.
- CE mark on 230 volt, 50 Hz models.

△WARNING: Cancer - P65Warnings.ca.gov (California only).

- Overall dimensions with closed lid: 14.7" wide x 19.3" deep x 11.7" high (37.3 x 49.0 x 29.7 cm).
- Actual weight 45 lbs. (20 kg). Shipping weight 65 lbs. (29 kg).



Acid-Resistant CentriVap Vacuum Concentrator 7810016





Required Accessories

- Diaphragm or Rotary Vane Vacuum Pump. See page 34.
- **CentriVap Cold Trap** (if using a Rotary Vane Vacuum Pump). See pages 20-21.
- Rotor. See pages 32-33.
- Sample tubes. Contact your laboratory supply dealer.

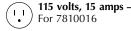
Other Accessories (See pages 33-36)

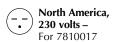
- CentriZap Strobe Light
- Vacuum Controller
- Laboratory Carts

Ordering Information

Catalog Number	Electrical Requirements	Receptacle & Plug Type	Glass Lid
7810016	110/115 volts, 50/60 Hz, 12 amps ⁺	115 volts, 15 amps	•
7810017	230 volts, 50/60 Hz, 6 amps ⁺	North America, 230 volts	•
7810033**	230 volts, 50/60 Hz, 6 amps ⁺⁺	Schuko	•
7810037**	230 volts, 50/60 Hz, 6 amps ⁺⁺	British (UK)	•
7810041**	230 volts, 50/60 Hz, 6 amps ⁺⁺	China/Australia	•

See page 30 for ordering information on CentriVap Acid Concentrator System consisting of the individual components bundled under one catalog number.









*Hastelloy® is a registered trademark of Haynes International, Inc. **International electrical configuration †System amperage shown includes 8 amp maximum vacuum pump rating ††System amperage shown includes 4.5 amp maximum vacuum pump rating





CentriVap Cold Traps are an integral part of every CentriVap Aqueous, Acid, Solvent or Gel Dryer System. The Traps may also be used as a separate component in other laboratory applications such as freeze drying and desiccation. These cold traps protect the

vacuum pump by trapping moisture, vapors and corrosive fumes as they evaporate from the samples. Three collector temperatures are offered: -50° C, -84° C and -105° C and selection should be based on the freezing point of the solvents being trapped.

Features and Benefits

HCFC/CFC-free refrigeration system.

Has a high capacity 1/3 hp compressor to lower cold trap temperature to -50° C (-58° F) in less than 30 minutes and accelerate start up procedures. The -84 Cold Traps have two compressors to lower cold trap temperature to -84° C (-119° F) in less than 40 minutes. The -105 Cold Traps have two compressors to lower cold trap temperature to -105 (-157° F) in less than 40 minutes.

Reliability guarantee.

Full one year warranty is provided against defects in materials and workmanship.

LABCONCO

Acrylic or stainless steel lid.

Has two Quick-Disconnect fittings for 1/2" ID hose for connecting the Cold Trap and Concentrator. Lid is acrylic on -50 Cold Traps and stainless steel on -84 and -105 Cold Traps.

Four liter stainless steel collector.

Holds up to four liters of liquid and accommodates an optional Glass Insert 7397605 for use with corrosives.



Displays relative collector coil temperature. Green LED lights indicate conditions are right — for beginning a process.

Sleek styling.

Brushed stainless steel front panel and blue accents — enhance appearance.

r coil lights ght ———

Collector drain.

Corrosion-resistant nylon valve and stainless steel plumbing speed clean up and eliminate need for glass insert with non-corrosives.

Optional Secondary Chemical Traps.

Trap Inserts for removing acids, moisture, radiochemicals and solvents minimize release of contaminants into the atmosphere.

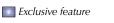
ETL listed.

The 115 and 230 volt, 60 Hz CentriVap Cold Traps carry the ETL Testing Laboratories seal in the U.S. and the ETL-C seal in Canada, signifying it meets or exceeds all requirements of UL Standard 61010A-1 and CAN/CSA C22.2 No. 1010.1.

International electrical configuration available.

The 230 volt, 50 Hz models conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.





-50 Cold Trap Specifications

- Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- HCFC/CFC-free refrigeration system with 1/3 hp compressor lowers cold trap to -50° C (-58° F) in less than 30 minutes.
- · 4-liter stainless steel collector.
- Lid with two Quick-Disconnect fittings for 1/2" ID hose, rubber gasket and insulating cover.
- · Stainless steel drain port with nylon valve.
- · Grounding clip.
- Temperature graph that illuminates green when the collector coil reaches operating temperature of -40° C (-40° F).
- ON/OFF power switch.
- ETL & ETL-C listings on 115 volt models.
- CE mark on 230 volt, 50 Hz models.

△ WARNING: Cancer - P65Warnings.ca.gov (California only).

- Overall dimensions: 14.5" wide x 24.2" deep x 13.8" high (36.8 x 61.4 x 35.0 cm).
- Actual weight 70 lbs. (32 kg). Shipping weight 80 lbs. (36 kg).

-84 Cold Trap Specifications

Specifications are the same as for the -50 Cold Trap listed above except for the following differences.

- HCFC/CFC-free refrigeration system with two 1/3 hp compressors lowers cold trap to -84° C (-119° F) in less than 40 minutes.
- Temperature graph that illuminates green when the collector coil reaches operating temperature of -65° C (-85° F).
- Overall dimensions: 14.5" wide x 22.0" deep x 20.9" high (36.8 x 55.9 x 53.1 cm).
- Actual weight 135 lbs. (61 kg). Shipping weight 142 lbs. (64 kg)





CentriVap -84 Cold Trap 7460020 CentriVap -105 Cold Trap 7385020



-105 Cold Trap Specifications

Specifications are the same as for the -50 Cold Trap listed above except for the following differences.

- HCFC/CFC-free refrigeration system with two 1/3 hp compressors lowers cold trap to -105° C (-157° F) in less than 40 minutes.
- Temperature graph that illuminates green when the collector coil reaches operating temperature of -65° C (-85° F).
- Overall dimensions: 24.1" wide x 23.9" deep x 17.6" high (61 x 60 x 45 cm).
- Actual weight 150 lbs. (68 kg). Shipping weight 170 lbs. (77 kg)

Accessories (See pages 32-35.)

- **Clear Canisters and Chemical Trap Inserts**
- Glass Trap
- **Two-Port Manifold** Stainless Steel Lid

Ordering Information

Catalog Number	Description	Temperature	Lid	Electrical Requirements	Receptacle & Plug Type
7811020	-50 Cold Trap	-50° C (-58° F)	Acrylic	115 volts, 60 Hz, 5.4 amps	115 volts, 60 Hz
7811021	-50 Cold Trap	-50° C (-58° F)	Stainless Steel	115 volts, 60 Hz, 5.4 amps	115 volts, 60 Hz
7811030*	-50 Cold Trap	-50° C (-58° F)	Acrylic	230 volts, 50 Hz, 2.4 amps	Schuko
7811031*	-50 Cold Trap	-50° C (-58° F)	Stainless Steel	230 volts, 50 Hz, 2.4 amps	Schuko
7811040	-50 Cold Trap	-50° C (-58° F)	Acrylic	230 volts, 60 Hz, 2.4 amps	North America, 230 volts
7811041	-50 Cold Trap	-50° C (-58° F)	Stainless Steel	230 volts, 60 Hz, 2.4 amps	North America, 230 volts
7811035*	-50 Cold Trap	-50° C (-58° F)	Acrylic	230 volts, 50 Hz, 2.4 amps	British (UK)
7811036*	-50 Cold Trap	-50° C (-50° F)	Stainless Steel	230 volts, 50 Hz, 2.4 amps	British (UK)
7811037*	-50 Cold Trap	-50° C (-58° F)	Acrylic	230 volts, 50 Hz, 2.4 amps	China/Australia
7811038*	-50 Cold Trap	-50° C (-58° F)	Stainless Steel	230 volts, 50 Hz, 2.4 amps	China/Australia
7460020	-84 Cold Trap	-84° C (-119° F)	Stainless Steel	115 volts, 60 Hz, 12 amps	115 volts, 60 Hz
7460030*	-84 Cold Trap	-84° C (-119° F)	Stainless Steel	230 volts, 50 Hz, 6 amps	Schuko
7460040	-84 Cold Trap	-84° C (-119° F)	Stainless Steel	230 volts, 60 Hz, 6 amps	North America, 230 volts
7460035*	-84 Cold Trap	-84° C (-119° F)	Stainless Steel	230 volts, 50 Hz, 6 amps	British (UK)
7460037*	-84 Cold Trap	-84° C (-119° F)	Stainless Steel	230 volts, 50 Hz, 6 amps	China/Australia
7385020	-105 Cold Trap	-105° C (-157° F)	Stainless Steel	115 volts, 60 Hz, 12 amps	115 volts, 60 Hz
7385030*	-105 Cold Trap	-105° C (-157° F)	Stainless Steel	230 volts, 50 Hz, 6 amps	Schuko
7385040	-105 Cold Trap	-105° C (-157° F)	Stainless Steel	230 volts, 60 Hz, 6 amps	North America, 230 volts
7385035*	-105 Cold Trap	-105° C (-157° F)	Stainless Steel	230 volts, 50 Hz, 6 amps	British (UK)
7385037*	-105 Cold Trap	-105° C (-157° F)	Stainless Steel	230 volts, 50 Hz, 6 amps	China/Australia

See pages 30-31 for ordering information on CentriVap Systems consisting of the individual components bundled under one catalog number.



115 volts, 15 amps -For Catalog Numbers ending in 20



North America, 230 volts -For Catalog Numbers ending in 40



Schuko -For Catalog Numbers ending in 30



British (UK) -For Catalog Numbers ending in 35



China/Australia -For Catalog Numbers ending in 37

^{*}International electrical configuration

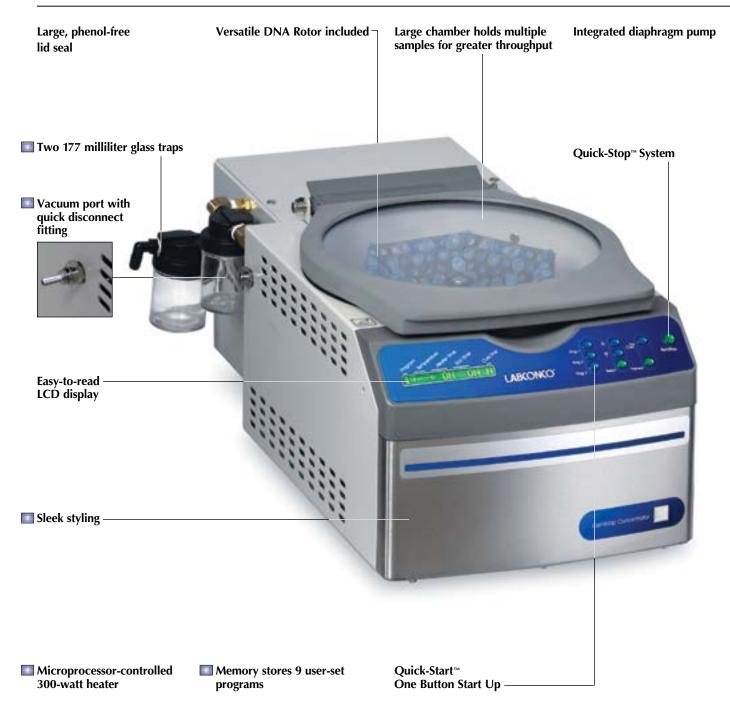


CENTRIVAP® DNA VACUUM CONCENTRATORS

CentriVap DNA Vacuum Concentrators are expressly designed to speed evaporation of solvents from DNA samples and other very small samples. More compact than ever, the benchtop cabinet

houses the concentrator, DNA Rotor, diaphragm vacuum pump, two glass traps and all connecting tubing. No additional components are required to begin processing.

Features and Benefits







•

Features and Benefits

Sleek styling.

Brushed stainless steel front panel and blue labeling enhance appearance. Compact design incorporates a built-in diaphragm vacuum pump.

Microprocessor-controlled centrifugal motion.

Centrifugal force eliminates bumping and foaming common when applying vacuum during evaporation and maximizes recovery of trace solutes.

Quick-Stop™ System.

Once run time has expired or the RUN/STOP button is pressed, within seconds the vacuum pump stops, the valve opens to bleed air into the chamber, and the rotor stops.

Automatic vacuum release valve.

Prevents loss of sample by releasing the vacuum before the rotor stops and during power failures. The larger valve takes less time to release the vacuum.

Lid latch with safety sensor.

Locks the lid in place when the rotor is turning and prevents start up when the lid is open.

Large chamber holds multiple samples for maximum throughput.

The 12" diameter chamber accommodates a variety of rotors which hold up to 132 samples. The accessory Microtiter Plate Rotor holds four standard 96-well plates or two deep well plates. Thick-wall aluminum chamber is powder-coated for chemical resistance.

Versatile DNA Rotor included.

Accommodates up to 60 each 1.5 ml and 72 each 0.5 ml microcentrifuge tubes. Other accessory rotors are shown on pages 32-33.

Large phenol-free lid seal.

Ensures good vacuum without potential for phenol contamination.

Two 177 milliliter glass traps.

Protect the vacuum pump and the environment. One is located between the chamber and the vacuum pump. The other is located at the pump's exhaust outlet.

Integrated diaphragm pump.

Corrosion-resistant. Achieves vacuum of 7 mBar and has a pumping capacity of 38 liters per minute. The built-in pump is easily removed for service.

Vacuum port with quick disconnect fitting.

Allows connection of a gauge to the CentriVap for monitoring vacuum level. Vacuum gauge and 1/4" ID tubing are required (not included). Contact Labconco for vacuum gauge recommendations.

Built-in vacuum delay.

Prevents bumping by allowing the rotor to achieve speed before applying vacuum.

Microprocessor-controlled 300-watt heater.

Speeds evaporation by supplying a controlled amount of heat from OFF up to a maximum of 100° C in one degree increments.

Quick-Start™ One Button Start Up saves time.

Pressing just one button starts the rotor, the heater, the timers and the vacuum pump. Three separate Quick-Start buttons store one user-set program each.

Easy-to-read LCD display.

Prompts the user to set program parameters and displays program number, actual and set point temperatures, heat time remaining and run time remaining.

Heat and run times are set separately.

Each from 1 to 999 minutes so that heat may be programmed to shut down sooner than the run to protect heat-sensitive samples from excessive heat exposure after the solvent has evaporated. Once user-set time has expired, all functions cease.

PREHEAT button.

Pressing the button activates the heater to begin elevating to set point temperature. When in the preheat mode, the operator can monitor actual heat. Once set point temperature has been reached, samples may be added and program started.

Memory stores 9 user-set programs.

Parameters of temperature, heat time and run time can be easily set with the touch of a few buttons. In addition, the user may alter temperature and times while the program is in progress.

Audible alarm signals completion of set point run time.

If it is desired to have the CentriVap run continuously without a set point time, the user may use the increase button until ON is displayed under RUN TIME.

ETL listed.

The 115 volt CentriVap DNA Concentrator carries the ETL Testing Laboratories seal in the U.S. and the ETL-C seal in Canada, signifying it meets or exceeds all requirements of UL Standard 61010A-1 and CAN/CSA C22.2 No. 1010.1.

International electrical configurations available.

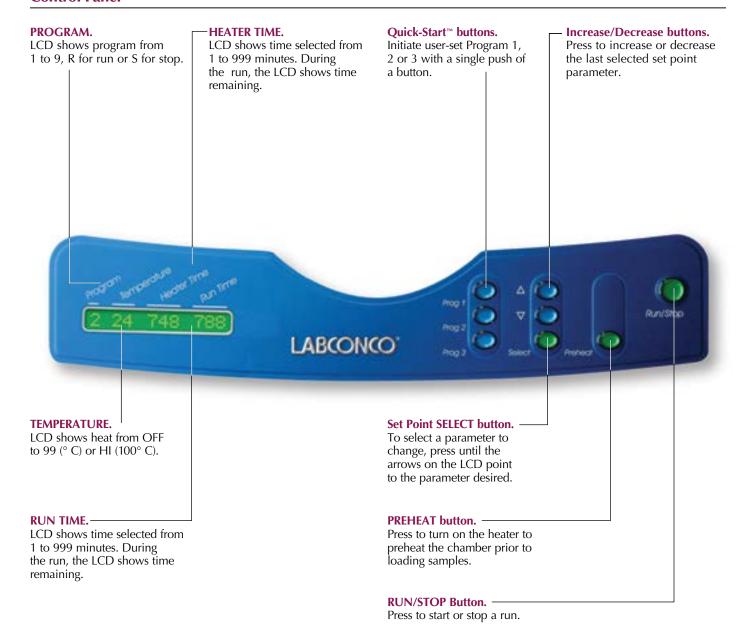
The 230 volt model conforms to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.

Reliability guarantee.

Full one year warranty is provided against defects in materials and workmanship.



Control Panel



Optional Accessories

■ Optional CentriZap[™] Strobe Light.

Enables the user to shine a strobe light into the chamber to easily view samples while the rotor is spinning. Samples appear to be standing still. The gun plugs into an outlet on the back of the CentriVap. A holster bracket is supplied and attaches to the right side of the CentriVap. See page 34.

Optional Glass Lid.

Provides additional protection from solvents and corrosives that attack acrylic. See page 35.



CentriZap Strobe Light allows the user to check sample status without stopping the rotor and opening the lid.



Specifications

- Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- Acrylic lid.
- · Lid latch with safety sensor.
- Phenol-free lid gasket.
- · Powder-coated aluminum chamber.
- 300-watt heater.
- Microprocessor-controlled programming for run time from 1 to 999 minutes, heat from OFF to HI (100° C) in one degree increments and heat time from 1 to 999 minutes. Memory stores 1 to 9 programs.
- LCD for display of program number, actual and set point temperature, heater time remaining and run time remaining.
- Control panel with RUN/STOP button, PREHEAT button, set point SELECT button, increase/decrease buttons, and 3 Quick-Start buttons.
- Centrifugal motion provided by a brushless motor capable of achieving up to 1725 rpm.
- Quick-Stop System to stop vacuum pump, open valve to bleed air into the chamber and stop the rotor within seconds after time expires or RUN/STOP button is pressed.
- Built-in diaphragm pump achieves vacuum of 7 mBar and has displacement capacity of 38 liters per minute. All wetted parts are PTFE or other chemical-resistant fluoropolymers.
- Automatic vacuum release valve.
- Built-in vacuum delay allows rotor to achieve speed before applying vacuum.
- Audible alarm to signal completion of set point run time.
- Two 177 milliliter glass traps.
- Vacuum port with quick disconnect fitting for 1/4" ID tubing.
- Includes DNA Rotor 7462900.
- ETL & ETL-C listing on 115 volt, 60 Hz model.
- CE mark on 230 volt, 50/60 Hz model.

△WARNING: Cancer - P65Warnings.ca.gov (California only).

- Overall dimensions with closed lid: 15.1" wide x 28.5" deep x 11.2" high (38.3 x 72.4 x 28.4 cm).
- Actual weight 80 lbs. (36 kg). Shipping weight 100 lbs. (45 kg).



CentriVap DNA Centrifugal Concentrator 7970010





Required Accessories (not included)

• Sample tubes. Contact your laboratory supply dealer.

Other Accessories (see pages 32-35)

- 🔲 CentriZap Strobe Light
- Rotors
- Clear Canisters and Chemical Trap Inserts
- Vacuum Controller
- Glass Lid
- Laboratory Carts

Ordering Information

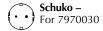
Catalog Number	Electrical Requirements	Receptacle & Plug Type
7970010	115 volts, 60 Hz, 12 amps	115 volts, 15 amps
7970011	230 volts, 50/60 Hz, 6 amps	North America, 230 volts
7970030*	230 volts, 50/60 Hz, 6 amps	Schuko
7970035*	230 volts, 50/60 Hz, 6 amps	British (UK)
7970037*	230 volts, 50/60 Hz, 6 amps	China/Australia



115 volts, 15 amps – For 7970010

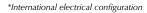


North America, 230 volts – For 7970011















CentriVap Mobile Systems combine the separate concentrator and cold trap components into one space-saving console and include casters for portability from laboratory to laboratory. A rotor and

solvent trap are also included with the CentriVap Mobile Systems. The interior can accommodate a vacuum pump—the only additional component necessary to begin concentrating.

Features and Benefits





Features and Benefits

Sleek compact, mobile cabinet.

Brushed stainless steel front panel and blue accents enhance appearance. Mounted on 2-inch diameter hard rubber casters, the 13.75" wide cabinet may be moved easily from one work location to another. Uses less space than most carts yet houses the accessory vacuum pump.

Microprocessor-controlled centrifugal motion.

Centrifugal force eliminates bumping and foaming common when applying vacuum during evaporation and maximizes recovery of trace solutes.

■ Quick-Stop™ System.

Once run time has expired or the RUN/STOP button is pressed, within seconds the vacuum pump stops, the valve opens to bleed air into the chamber, and the rotor stops.

Automatic vacuum release valve.

Prevents loss of sample by releasing the vacuum before the rotor stops and during power failures. The larger valve takes less time to release the vacuum.

Lid latch with safety sensor.

Locks the lid in place when the rotor is turning and prevents start up when the lid is open.

Larger chamber holds more samples for greater throughput.

The 12" diameter chamber accommodates a variety of rotors that hold up to 132 samples. The accessory Microtiter Plate Rotor holds four standard 96-well plates or two deep well plates. Thick-wall aluminum chamber is powder-coated for chemical resistance. PTFE-coated chambers provide added corrosion resistance. Contact Labconco for ordering information.

Glass lid with large, phenol-free lid seal.

Glass resists solvents that attack acrylic. Lid seal ensures good vacuum without potential for phenol contamination.

Versatile 12-13 mm Rotor included.

Holds $92+12 \times 75$ mm or 13×75 mm tubes, $64\ 12 \times 95$ mm or 13×100 mm tubes, $16\ 12 \times 55$ mm tubes, and $40\ 1.5$ ml or 2.0 ml microcentrifuge tubes. Other accessory rotors are shown on pages 32-33.

Built-in vacuum delay.

Prevents bumping by allowing the rotor to achieve speed before applying vacuum.

Microprocessor-controlled 300-watt heater.

Speeds evaporation by supplying a controlled amount of heat from OFF up to a maximum of 100° C in one degree increments.

Optional microprocessor-controlled 300-watt Heat Boost™.

Allows additional controlled heat from OFF up to a maximum of 100° C in one degree increments.

Quick-Start™ One Button Start Up saves time.

Pressing just one button starts the rotor, the heater, the timers and the vacuum pump. Three separate Quick-Start Buttons store one user-set program each.

Easy-to-read LCD display.

Prompts the user to set program parameters and displays program number, actual and set point temperatures, heat time remaining, run time remaining, and if optional Heat Boost is activated.

Heat and run times are set separately.

Each from 1 to 999 minutes, so that heat may be programmed to shut down sooner than the run to protect heat-sensitive samples from excessive heat exposure after the solvent has evaporated. The RUN TIME turns off all functions after the user-set period of time has expired.

PREHEAT button.

Pressing the button activates the heater to begin elevating to set point temperature. When in the preheat mode, the operator can monitor actual heat. Once set point temperature has been reached, samples may be added and program started.

Memory stores 9 user-set programs.

Parameters of temperature, heat time and run time can be easily set with the touch of a few buttons. In addition, the user may alter temperature and times while the program is in progress.

Audible alarm signals completion of set point run time.

If it is desired to have the CentriVap run continuously without a set point time, the user may use the increase button until ON is displayed under RUN TIME.

Four liter stainless steel collector.

Holds up to four liters of liquid and accommodates an optional Glass Insert 7397605 for use with corrosives (sold separately).

Collector drain

Corrosion-resistant nylon valve and stainless steel plumbing speed clean up and eliminate need for glass insert with non-corrosives.

Built-in chemical trap canister.

Cutout in front panel provides at-a-glance trap monitoring. System includes one Solvent Trap Insert 7815200. Other inserts are available.

Electrical receptacle.

Allows connection of accessory vacuum pump so that the pump may be activated from the control panel and the vacuum delay utilized.

Vacuum port with quick disconnect fitting.

Allows connection of a gauge to the CentriVap for monitoring vacuum level. Vacuum gauge and 1/4" ID tubing are required (not included). Contact Labconco for vacuum gauge recommendations.

HCFC/CFC-free refrigeration system.

The high capacity 1/3 hp compressor lowers cold trap temperatures to -50° C in less than 30 minutes and accelerates start up procedures. The system uses a CFC-free refrigerant that is environmentally friendly and does not harm the ozone layer.

ETL listed.

The 115 volt, 60 Hz CentriVap Mobile Systems carry the ETL Testing Laboratories seal in the U.S. and the ETL-C sea in Canada, signifying they meet or exceed all requirements of UL Standard 61010A-1 and CAN/CSA C22.2 No. 1010.1.

International electrical configurations available.

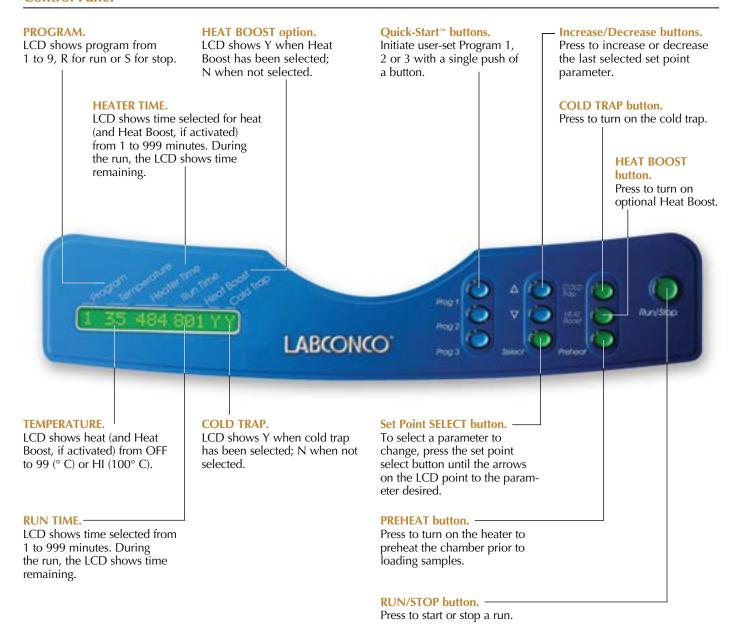
All 230 volt, 50 Hz models conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.

Reliability guarantee.

Full one year warranty is provided against defects in materials and workmanship.



Control Panel



Optional Accessory

■ Optional CentriZap[™] Strobe Light.

Enables the user to shine a strobe light into the chamber to easily view samples while the rotor is spinning. Samples appear to be standing still. The gun plugs into an outlet on the back of the CentriVap. A holster bracket is supplied and attaches to the right side of the CentriVap. See page 34.



CentriZap Strobe Light allows the user to check sample status without stopping the rotor and opening the lid.

Specifications

- Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents and four 2" diameter hard rubber casters. Removable front panel provides access to interior space for vacuum pump (sold separately).
- Glass lid.
- · Lid latch with safety sensor.
- Phenol-free lid gasket.
- Powder-coated aluminum chamber.
- 300-watt heater.
- Microprocessor-controlled programming for run time from 1 to 999 minutes, heat from OFF to HI (100° C) in one degree increments, heat time from 1 to 999 minutes, cold trap on/off, and optional Heat Boost on/off. Memory stores 1 to 9 programs.
- LCD for display of program number, actual and set point temperature, heater time remaining, run time remaining, cold trap activation and optional Heat Boost activation. When the cold trap is activated the LCD flashes Y until the collector coil reaches operating temperature of -40° C (-40° F) at which time the Y glows continuously.
- Control panel with RUN/STOP button, PREHEAT button, COLD TRAP button, optional HEAT BOOST button, set point SELECT button, increase/decrease buttons, and 3 Quick-Start buttons.
- Centrifugal motion provided by a brushless motor capable of achieving up to 1725 rpm.
- Quick-Stop System to stop vacuum pump, open valve to bleed air into the chamber and stop the rotor within seconds after time expires or RUN/STOP button is pressed.
- Automatic vacuum release valve.
- Built-in vacuum delay allows rotor to achieve speed before applying vacuum.
- Audible alarm to signal completion of set point run time.
- 1/2" OD aluminum hose fitting for connection to vacuum tubing. Vacuum pump is not included.
- Vacuum port with quick disconnect fitting for 1/4" ID tubing.
- HCFC/CFC-free refrigeration system with 1/3 hp compressor lowers cold trap to -50° C (-58° F) in less than 30 minutes.
- · 4-liter stainless steel collector with acrylic lid with two Quick-Disconnect fittings for 1/2" ID hose, rubber gasket and insulating cover.
- Front-mounted stainless steel collector drain port with nylon valve and grounding clip.
- Built-in clear canister to accommodate chemical trap insert. Cutout in front panel provides at-a-glance trap monitoring.
- Includes one Solvent Trap Insert 7815200 and 12-13 mm Rotor
- Electrical receptacle on the back to connect accessory vacuum pump to the system.



CentriVap Mobile System 7812013





- ETL & ETL-C listings on 115 volt, 60 Hz models.
- CE mark on 230 volt, 50 Hz models.
- △ WARNING: Cancer P65Warnings.ca.gov (California only).
- Overall dimensions with closed lid: 14.1" wide x 27.9" deep x 38.2" high (35.8 x 70.9 x 97.0 cm).
- Actual weight 155 lbs. (70 kg). Shipping weight 210 lbs. (95 kg).

Built-in Option

300-watt Heat Boost from OFF to HI (100° C) in one degree increments, for 1 to 999 minutes, depending on set points programmed for heater.

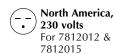
Required Accessories (not included)

- Diaphragm or Rotary Vane Vacuum Pump. See page 34.
- Sample tubes. Contact your laboratory supply dealer.

Other Accessories (See pages 32-35)

- CentriZap Strobe Light
 - Rotors
- Vacuum Controller
- Chemical Traps
- Glass Trap

- - 115 volts, 20 amps For 7812010 & 7812013









Ordering Information

Catalog Number	Electrical Requirements	Receptacle & Plug Type	Heat Boost
7812010	115 volts, 60 Hz, 16 amps**	115 volts, 20 amps	
7812011*	230 volts, 50 Hz, 8 amps ⁺	Schuko	
7812012	230 volts, 60 Hz, 8 amps ⁺	North America, 230 volts	
7812013	115 volts, 60 Hz, 16 amps**	115 volts, 20 amps	•
7812014*	230 volts, 50 Hz, 8 amps ⁺	Schuko	•
7812015	230 volts, 60 Hz, 8 amps ⁺	North America, 230 volts	•
7812035*	230 volts, 50 Hz, 8 amps ⁺	British (UK)	
7812036*	230 volts, 50 Hz, 8 amps ⁺	British (UK)	•
7812037*	230 volts, 50 Hz, 8 amps ⁺	China/Australia	
7812038*	230 volts, 50 Hz, 8 amps ⁺	China/Australia	•

^{*}International electrical configuration **System amperage shown includes 8 amp maximum vacuum pump rating †System amperage shown includes 4.5 amp maximum vacuum pump rating

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Ordering Information



CentriVap Concentrator Systems include all components needed for operation except the vacuum pump, which is sold separately. **\triangle WARNING:** Cancer - P65Warnings.ca.gov (California only).

Catalog Number	System Type	Electrical Requirements*	Components Included		Accessories Required
	Aqueous		Clear Canister Moisture Insert 12-13 mm Rotor Vacuum Tubing and 6 Clamps <i>p</i>	7460900 7814900 7455100 lus the following:	
7982010		115 V, 60 Hz, 12 amps* 115 V, 60 Hz, 5.4 amps [#] 115 V, 15 amp plugs	Benchtop Concentrator -50 Cold Trap	7810010 7811020	Vacuum Pump 20 amp dedicated circuit
7982011 [†]		230 V, 50 Hz, 6 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ Schuko plugs	Benchtop Concentrator -50 Cold Trap	7810030 7811030	Vacuum Pump 10 amp dedicated circuit
7982012		230 V, 60 Hz, 6 amps** 230 V, 60 Hz, 2.4 amps ⁺⁺ North America, 230 V plugs	Benchtop Concentrator -50 Cold Trap	7810011 7811040	Vacuum Pump 10 amp dedicated circuit
7982035 [†]		230 V, 50 Hz, 6 amps** 230 V, 50 Hz, 2.4 amps [#] British (UK) plugs	Benchtop Concentrator -50 Cold Trap	7810034 7811035	Vacuum Pump 10 amp dedicated circuit
7982037 ⁺		230 V, 50 Hz, 6 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ China/Australia plugs	Benchtop Concentrator -50 Cold Trap	7810038 7811037	Vacuum Pump 10 amp dedicated circuit
	Acid		Clear Canister Acid Insert Acid-Resistant 12-13 mm Rotor Glass Trap Vacuum Tubing and 6 Clamps <i>p</i>	7460900 7814800 7455101 7397605 lus the following:	
7983013		115 V, 60 Hz, 12 amps* 115 V, 60 Hz, 5.4 amps ⁺⁺ 115 V, 15 amp plugs	Acid-Resistant Concentrator -50 Cold Trap	7810016 7811020	Vacuum Pump 20 amp dedicated circuit
7983014 ⁺		230 V, 50 Hz, 6 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ Schuko plugs	Acid-Resistant Concentrator -50 Cold Trap	7810033 7811030	Vacuum Pump 10 amp dedicated circuit
7983015		230 V, 60 Hz, 6 amps** 230 V, 60 Hz, 2.4 amps ⁺⁺ North America, 230 V plugs	Acid-Resistant Concentrator -50 Cold Trap	7810017 7811040	Vacuum Pump 10 amp dedicated circuit
7983035 ⁺		230 V, 50 Hz, 6 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ British (UK) plugs	Acid-Resistant Concentrator -50 Cold Trap	7810037 7811035	Vacuum Pump 10 amp dedicated circuit
7983037 ⁺		230 V, 50 Hz, 6 amps** 239 V, 50 Hz, 2.4 amps ⁺ China/Australia plugs	Acid-Resistant Concentrator -50 Cold Trap	7810041 7811037	Vacuum Pump 10 amp dedicated circuit

^{*}System amperage shown includes 8 amp maximum vacuum pump rating thremational electrical configuration the territorial requirements for Cold Trap **System amperage shown includes 4.5 amp maximum vacuum pump rating thremational electrical configuration three territorial requirements for Cold Trap



Ordering Information

Catalog Number	System Type	Electrical Requirements*	Components Included		Accessories Required
	Solvent		Clear Canister Solvent Insert 12-13 mm Rotor Vacuum Tubing and 6 Clamps <i>plus the fol</i> .	7460900 7815200 7455100 lowing:	
7995810		115 V, 60 Hz, 12 amps* 115 V, 60 Hz, 5.4 amps ⁺ 115 V, 15 amp plugs	Benchtop Concentrator with Glass Lid -84 Cold Trap	7810014 7460020	Vacuum Pump 20 amp dedicated circuit
7995811 ⁺		230 V, 50 Hz, 6 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ Schuko plugs	Benchtop Concentrator with Glass Lid -84 Cold Trap	7810032 7460030	Vacuum Pump 10 amp dedicated circuit
7995812		230 V, 60 Hz, 6 amps** 230 V, 60 Hz, 2.4 amps ⁺⁺ North America, 230 V plugs	Benchtop Concentrator with Glass Lid -84 Cold Trap	7810015 7460040	Vacuum Pump 10 amp dedicated circuit
7995835 [†]		230 V, 50 Hz, 6 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ British (UK) plugs	Benchtop Concentrator with Glass Lid -84 Cold Trap	7810036 7460035	Vacuum Pump 10 amp dedicated circuit
7995837 [†]		230 V, 50 Hz, 6 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ China/Australia plugs	Benchtop Concentrator with Glass Lid -84 Cold Trap	7810040 7460037	Vacuum Pump 10 amp dedicated circuit
	Proteomi	С	DNA Rotor Vacuum Tubing and 6 Clamps <i>plus the foli</i>	7462900 lowing:	
7989600		115 V, 60 Hz, 16 amps* 115 volts, 60 Hz, 5.4 amps ⁺⁺ 115 volts, 20 & 10 amp plugs	Refrigerated Concentrator with Glass Lid -50 Cold Trap with Stainless Steel Lid	7310021 7811021	Vacuum Pump 20 amp dedicated circuit plus 10 amp dedicated circuit
7989601 ⁺		230 V, 50 Hz, 8 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ Schuko plugs	Refrigerated Concentrator with Glass Lid -50 Cold Trap with Stainless Steel Lid	7310031 7811031	Vacuum Pump 15 amp dedicated circuit
7989602		230 V, 60 Hz, 8 amps** 230 V, 60 Hz, 2.4 amps ⁺⁺ North America, 230 V plugs	Refrigerated Concentrator with Glass Lid -50 Cold Trap with Stainless Steel Lid	7310041 7811041	Vacuum Pump 15 amp dedicated circuit
7989635 ⁺		230 V, 50 Hz, 8 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ British (UK) plugs	Refrigerated Concentrator with Glass Lid -50 Cold Trap with Stainless Steel Lid	7310036 7811036	Vacuum Pump 15 amp dedicated circuit
7989637 ⁺		230 V, 50 Hz, 8 amps** 230 V, 50 Hz, 2.4 amps ⁺⁺ China/Australia plugs	Refrigerated Concentrator with Glass Lid -50 Cold Trap with Stainless Steel Lid	7310038 7811038	Vacuum Pump 15 amp dedicated circuit

^{*}System amperage shown includes 8 amp maximum vacuum pump rating
**System amperage shown includes 4.5 amp maximum vacuum pump rating
†International electrical configuration
††Electrical requirements for Cold Trap





Hexagonal Rotor 7450700



12-17 mm Rotor 7455000



12-13 mm Rotor 7455100



28 mm Rotor 7455200



DNA Rotor 7462900



High Capacity Micro Rotor 7553500

Metal Rotors for Tubes

Rotors hold tubes at an angle to maximize surface area. Depending on the rotor, made of anodized aluminum or PTFE-coated metal with polypropylene hub. Easily interchangeable. The 12-13 mm Rotor 7455100 is included with each CentriVap Aqueous, Solvent, and Mobile System. The 12-13 mm Rotor 7455101 is included with each Acid System. The DNA Rotor 7462900 is included with each CentriVap DNA Concentrator. Sample containers are not included. Contact Labconco for ordering information on custom rotors. Shipping weight 2.5 lbs. (1.1 kg)

Aluminum Rotor Cat. #	PTFE-coated Rotor Cat. #		Number of Holes	Number of Tubes*	Tube Volume†	Tube Description
7450700	7450701	Hexagonal	132	132 132	1.5 ml 2.0 ml	1.5 ml microcentrifuge tubes 2.0 ml microcentrifuge tubes
7455000	7455001	12-17 mm	52 24	52 52 44 36 36 36 36 24 24 18 18	2 ml 5 ml 3 ml 5-6 ml 5-6 ml 10 ml 11-15 ml 5 ml 15-19 ml 14 ml 12-15 ml	12.2 x 46.5 mm 13 x 51 mm 12 x 55 mm 12 x 75 mm 12 x 95 mm 13 x 75 mm 13 x 100 mm 16 x 100 mm 5 ml microcentrifuge tubes 16 x 125 mm 17 x 95 mm 17 x 100 mm 17 x 120 mm
7455100	7455101	12-13 mm	40 108	40 40 16 100 ⁺⁺ 64 100 ⁺⁺ 64	1.5 ml 2.0 ml 3 ml 5 ml 5 ml 6 ml 10 ml	1.5 ml microcentrifuge tubes 2.0 ml microcentrifuge tubes 12 x 55 mm 12 x 75 mm 12 x 95 mm 13 x 75 mm 13 x 100 mm
7455200	7455201	28 mm	32 12	32 32 12 12 12	1.5 ml 2.0 ml 40-50 ml 40-50 ml 50 ml	1.5 ml microcentrifuge tubes 2.0 ml microcentrifuge tubes 28 x 115 mm 28 x 135 mm 28 x 140 mm
7462900	7462901	DNA	72 60	72 60 60	0.5 ml 1.5 ml 2.0 ml	0.5 ml microcentrifuge tubes 1.5 ml microcentrifuge tubes 2.0 ml microcentrifuge tubes
7553500	7553501	High Capacity Micro	o 148	148	1.5-2.0 ml	1.5 or 2.0 ml autosampler vials, approximately 12 mm x 35 mm

^{*}Rotors do not necessarily hold all the tubes described simultaneously.

[†]Tubes should be filled no more than 1/3 to 1/2 of tube volume to prevent loss of sample during rotation. ††Rotor holds a maximum of 92 each 12 or 13 x 75 mm tubes when 16 each 12 x 55 mm tubes are also loaded.



4-Place Microtiter Plate Rotor 7461900



6-Place Microtiter Plate Rotor 7553000

Microtiter Plate Rotors

Depending on the rotor, made of anodized aluminum or PTFE-coated metal with polypropylene hub. Easily interchangeable. **Microtiter Plates are not included.** Shipping weight 2.5 lbs. (1.1 kg)

Aluminum Rotor Cat. #	PTFE-coated Rotor Cat. #	Description	Capacity	Plate Description
7461900	7461901	4-Place Microtiter Plate	4 2	standard microtiter plates deep well microtiter plates
7553000	7553001	6-Place Microtiter Plate	6 3	standard microtiter plates deep well microtiter plates



15 x 45 mm Rotor 7824702

Acid-Resistant Thermoplastic Rotors

Thermoplastic rotors hold tubes at an angle to maximize surface area. Easily interchangeable. **Sample containers are not included.** Shipping weight 3.0 lbs. (1.4 kg)

Catalog Number	Description	Number of Holes	Number of Tubes	Container Volume*	Tube Description
7824700	12 x 32 mm	66	66	2 ml	auto sample vials, 12 x 32 mm
7824702	15 x 45 mm	56	56	4 ml	auto sample vials, 15 x 45 mm

^{*}Containers should be filled no more than 1/3 to 1/2 of total volume to prevent loss of sample during rotation.



Pear-shaped Flask Rotor 7553100

Metal Rotors for Pear-Shaped Flasks

Depending on the rotor, made of anodized aluminum or PTFE-coated metal with polypropylene hub. Easily interchangeable. **Flasks are not included. Contact your laboratory supply dealer.** Shipping weight 2.5 lbs. (1.1 kg)

Aluminum Rotor Cat. #	PTFE-coated Rotor Cat. #	Description	Number of Holes/Flasks
7553100	7553101	Rotor for use with 100 ml* Pear-shaped Flasks	8



100 ml Pear-shaped Flask 7551600

7551600 100 ml Pear-Shaped Flask

Borosilicate glass 100 milliliter flask with 19/22 STJ. Shipping weight 0.5 lb. (0.2 kg)

^{*}Containers should be filled no more than 1/3 to 1/2 of tube volume to prevent loss of sample during rotation.



CentriZap Strobe Light 7464300



Diaphragm Vacuum Pump 7393000



Rotary Vane Direct Drive Vacuum Pump 1472100



Clear Polypropylene Canister with mounting bracket 7460900 with Solvent Trap Insert 7815200



Clear Polypropylene Canister with stand 7815300 with Solvent Trap Insert 7815200

7464300 CentriZap Strobe Light

Enables user to shine a strobe light into the CentriVap's chamber to easily view samples while the rotor is spinning. Includes mounting holster and hardware for attachment to the right side of the CentriVap. Shipping weight 2.0 lbs. (0.9 kg)

Diaphragm Vacuum Pumps

The wetted parts of these pumps are PTFE or other fluoropolymers for corrosion resistance. Vacuum outlet is 1/2 OD.

Catalog Number	Electrical Specifications	Vacuum (mBar)	Displacement Capacity (liters/minute)	Shipping Weight (lbs./kg)	Solvents Used
7393000	115V, 60 Hz, 3.5 amps	1.5	63	40/18	
7393001*	230V, 50/60 Hz, 2.0 amps	1.5	57/63**	40/18	
7359020	115V, 50/60 Hz, 3.5 amps	7	33/38**	38/17	
7359030*	230V, 50/60 Hz, 2.0 amps	7	33/38**	38/17	

- Aqueous and high boiling point ▲ Volatile and low boiling point
- Combination of solvents

Rotary Vane Direct Drive Vacuum Pumps

These pumps are two-stage and oil-sealed with gas ballast control. Isolation valve seals the inlet to prevent oil and air contamination of the system in the event of power failure. Oil mist exhaust filter, vacuum pump oil and inlet adapters suitable for 1/2" OD and 3/4" OD are provided.

Catalog Number	Electrical Specifications	Ultimate Vacuum (Partial Pressure) (mBar)	Displacement Capacity at 60 Hz (liters/minute)	Shipping Weight (lbs./kg)	Solvents Used
1472100	115V, 50/60 Hz, 4.6 amps	2 x 10 ⁻³	117	62/28	•
7739402*	230V, 50/60 Hz, 2.4 amps	2 x 10 ⁻³	117	65/30	

- Aqueous and high boiling point * International electrical configuration
- Volatile and low boiling point
- Combination of solvents

Chemical Traps

Traps are connected between the cold trap and the accessory vacuum pump to provide additional protection to the vacuum pump.

Catalog Number	Description
7460900	Clear Polypropylene Canister with mounting bracket. Attaches to the CentriVap Cold Trap. Includes 17" PVC tubing and two clamps. Accommodates any trap insert listed below. △WARNING: Cancer - P65Warnings.ca.gov (California only). Shipping weight 5.0 lbs. (2.3 kg)
7815300	Clear Polypropylene Canister with stand. Recommended when more than one chemical trap is required. Accommodates any trap insert listed below. Shipping Weight 5.0 lbs. (2.3 kg)
7814800	Acid Trap Insert. Contains acid neutralizing desiccant which changes from off-white to purple when exhausted. Shipping weight 4.0 lbs. (1.8 kg)
7814900	Moisture Trap Insert. Contains desiccant which changes from blue to pink when exhausted. Shipping weight 4.0 lbs. (1.8 kg)
7815000	Radioisotope Trap Insert. Contains activated carbon. Shipping weight 4.0 lbs. (1.8 kg)
7815200	Solvent Trap Insert. Contains molecular sieve. Shipping weight 4.0 lbs. (1.8 kg)
7995600	Ammonia Trap Insert. Contains impregnated carbon. Shipping weight 4.0 lbs. (1.8 kg)



Vacuum Controller 7991000



Glass Trap 7397605



Three-Way Valve 7474000



Two-Port Manifold 7397700



Portable Table 8025000

7991000 Vacuum Controller

Provides manual control and monitoring of vacuum levels. Analog gauge shows vacuum from 0-30" Hg. At the end of concentration, the control valve may be opened to break the vacuum. For use with Diaphragm Vacuum Pumps only. Shipping weight 3.0 lbs. (1.4 kg)

7397605 Glass Trap

Protects CentriVap Cold Trap reservoir and lid from corrosives. Included with CentriVap Acid Systems. Not compatible with pre-2005 Cold Traps or Mobile Systems. Shipping weight 4.0 lbs. (1.8 kg)

7456600 Glass Lid

May be installed in place of the acrylic lid on the CentriVap Concentrator when applications involve solvents which attack acrylic. Included on CentriVap Solvent System and selected models of CentriVap Benchtop Concentrators. Shipping weight 8.0 lbs. (3.6 kg)

7386700 Stainless Steel Lid

May be installed in place of the acrylic lid on -50 CentriVap Cold Trap when applications involve solvents which attack acrylic. Included on CentriVap Solvent and Proteomic Systems and -84 and -105 CentriVap Cold Traps. Shipping weight 8.0 lbs. (3.6 kg)

7814300 Bleed Valve

Bleeds vacuum manually when using the Cold Trap with other laboratory equipment. Shipping weight 0.5 lb. (0.25 kg)

7814500 Vacuum Tubing Kit

Two each 1/2" ID vacuum tubing, 48" length, and 4 tubing clamps. **△WARNING:** Cancer - P65Warnings.ca.gov (California only). Shipping weight 50 lbs. (23 kg). Shipping weight 6.0 lbs. (2.7 kg)

7474000 Three-Way Valve

Allows connection of other laboratory equipment to CentriVap System. Polypropylene, 0.5" OD. Shipping weight 0.5 lb. (0.25 kg)

7397700 Two-Port Manifold

Two-port manifold has neoprene rubber valves to allow freeze drying of small volume samples in freeze dry flasks, serum bottles or ampules. Connects to CentriVap Cold Trap, Ultra-Low Cold Trap or Mobile System. Requires use of Rotary Vane Pump. Not compatible with pre-2005 Cold Traps or Mobile Systems. Shipping weight 1.0 lb. (0.5 kg)

8025000 Portable Table

Chemical-resistant, two shelf cart accommodates the CentriVap DNA Concentrator. The shelves are high pressure laminate and the frame is powder-coated steel with 3-inch diameter casters. Supports loads up to 400 pounds. Lifetime warranty. 19" w x 34.9" d x 36.4" high (48 x 89 x 92 cm). **\(\Delta WARNING: \)** Cancer - P65Warnings.ca.gov (California only). Shipping weight 50 lbs. (23 kg)



Variable Height Bench 8075000

8075000 Variable Height Bench

Chemical-resistant table with 5-inch diameter, toe-locking casters has height adjustment from 29.6 to 37.1". High pressure laminate work surface and frame of powder-coated steel. Supports loads up to 540 pounds. Lifetime warranty. 38" w x 28" d (97 x 71 cm). Shipping weight 105 lbs. (48 kg)

8060000 Mobile Bench

Chemical-resistant table with 5-inch diameter, toe-locking casters. High pressure laminate work surface and frame of powder-coated steel. Supports loads up to 540 pounds. Lifetime warranty. 48" w x 24" d x 37.2" high (122 x 61 x 94 cm). Shipping weight 105 lbs. (48 kg)

The rates below apply to CentriVap Benchtop Concentrators, Acid-Resistant CentriVap Concentrators and CentriVap Mobile Systems.

	Tube Size (ml)	Number of Samples	Sample Size (ml)	Heater Temp (° C)	Heat Boost	Vacuum Pump	Time to Dry (min)	Cold Trap
Methylene	50	12	25	45	No	Diaphragm	88	Yes
Chloride boiling point 40° C	15	18	10	45	No	Diaphragm	56	Yes
	50	12	25	45	No	Diaphragm	106	Yes
Toluene	50	12	25	100	No	Diaphragm	53	Yes
boiling point 111° C	15	18	10	45	No	Diaphragm	75	Yes
	15	18	10	100	No	Diaphragm	34	Yes
	50	12	25	45	No	Diaphragm	157	Yes
Acetonitrile	15	18	10	45	No	Diaphragm	105	Yes
boiling point 82° C	15	18	10	100	No	Diaphragm	52	Yes
	1.5	132	1	45	No	Diaphragm	50	Yes
	1.5	132	1	100	No	Diaphragm	24	Yes
	50	12	25	45	No	Diaphragm	210	Yes
Methanol	15	18	10	45	No	Diaphragm	150	Yes
boiling point 65° C	1.5	132	1	35	No	Diaphragm	85	Yes
	1.5	132	1	45	No	Diaphragm	75	Yes
	1.5	132	1	60	No	Diaphragm	63	Yes
	1.5	132	1	75	No	Diaphragm	52	Yes
	1.5	132	1	100	No	Diaphragm	37	Yes
	50	12	25	100	No	Diaphragm	409	Yes
Water	50	12	25	45	No	Diaphragm	1435	Yes
boiling point 100° C	15	18	10	45	No	Diaphragm	849	Yes
	1.5	132	1	45	No	Diaphragm	402	Yes
	1.5	132	1	60	No	Diaphragm	288	Yes
	1.5	132	1	75	No	Diaphragm	170	Yes
	1.5	132	1	100	No	Diaphragm	123	Yes
Isopropanol	15	18	10	45	No	Diaphragm	117	Yes
boiling point 100° C	15	18	10	100	No	Diaphragm	52	Yes

Diaphragm Pump is rated at 22 mBar ultimate vacuum and 82 liter/minute displacement. Chamber was preheated to set temperature prior to each run.



The rates below apply to the Refrigerated CentriVap Concentrators.

	Tube Size (ml)	Number of Samples	Sample Size (ml)	Chamber Temp (° C)	Vacuum Pump	Time to Dry (min)	Time to Dry (hr)	Cold Trap
Water	1.5	132	1	100	Rotary Vane	131	2.18	Yes
boiling point 100° C	1.5	132	1	75	Rotary Vane	207	3.45	Yes
0.	1.5	132	1	45	Rotary Vane	299	4.98	Yes
	1.5	132	1	25	Rotary Vane	627	10.45	Yes
	1.5	132	1	15	Rotary Vane	794	13.23	Yes
	1.5	132	1	5	Rotary Vane	1160	19.33	Yes
	1.5	132	1	-4	Rotary Vane	1485	24.75	Yes
Ethanol	1.5	132	1	100	Rotary Vane	34	0.57	Yes
boiling point 40° C	1.5	132	1	75	Rotary Vane	45	0.75	Yes
01	1.5	132	1	60	Rotary Vane	55	0.92	Yes
	1.5	132	1	45	Rotary Vane	70	1.17	Yes
	1.5	132	1	25	Rotary Vane	95	1.58	Yes
	1.5	132	1	15	Rotary Vane	120	2.00	Yes
	1.5	132	1	5	Rotary Vane	160	2.67	Yes
	1.5	132	1	-4	Rotary Vane	190	3.17	Yes

Rotary Vane Pump is rated at 2.0 x 103 mBar ultimate vacuum and 195 liter/minute displacement. Chamber was preconditioned to set temperature prior to each run.

The rates below apply to the CentriVap DNA Concentrators.

	Tube Size (ml)	Number of Samples	Sample Size (ml)	Heater Temp (° C)	Time to Dry (min)	Ballast
Acetonitrile boiling point 82° C	1.5 1.5 1.5 1.5	132 132 132 132	1 1 1 1	45 60 75 24	56 41 34 30	Open Open Open Open
Methanol boiling point 65° C	1.5 1.5 1.5 1.5 1.5	132 132 132 132 132	1 1 1 1	35 45 60 75 100	82 60 50 37 28	Open Open Open Open Open
Water boiling point 100° C	1.5 1.5 1.5 1.5	132 132 132 132	1 1 1 1	45 60 75 100	403 260 188 123	Open Open Open Open
Methylene Chloride boiling point 40° C	1.5 1.5 1.5 1.5	132 132 132 132	1 1 1 1	45 60 75 100	23 18 14 12	Open Open Open Open
Ethanol boiling point 78° C	1.5 1.5 1.5 1.5	132 132 132 132	1 1 1 1	45 60 75 100	70 48 36 25	Open Open Open Open



Companion Products

Equipment that requires a vacuum pump for operation, such as the Labconco Vacuum Desiccator, may share the CentriVap Cold Trap or Mobile System. The CentriVap Cold Trap, which helps to protect the vacuum pump from moisture and other corrosive solvents, may be placed between the vacuum pump and any of these products. The Three-Way Valve 7474000 allows the cold trap and vacuum pump to service two instruments.



5530000 Vacuum Desiccator

Provides a cubic foot of interior space for storage of humidity sensitive materials. Vacuum tested to 29" Hg. Body is constructed of molded fiberglass reinforced polyester. **\(\Delta WARNING: \)** Cancer - P65Warnings.ca.gov (California only). Shipping weight 46 lbs. (21 kg).



FreeZone® Freeze Dryers

The CentriVap Benchtop Concentrator may be connected to an existing freeze dry system through a manifold valve and 1/2" freeze dry valve adapter. The freeze dryer's collector then serves as a cold trap for the CentriVap Concentrator. Labconco's FreeZone line of freeze dryers includes lyophilizers with capacities up to 18 liters. A full line of accessory glassware, drying chambers and manifolds provide a complete freeze dry system. Contact Labconco for more information on these products.

Visit labconco.com or call Labconco at 1-800-821-5525 for additional information about these quality products for your laboratory.



Fume Hoods & Ductless Enclosures



HEPA-Filtered Safety Cabinets, Enclosures & Clean Benches



Balance & Bulk Powder Enclosures



Nanotechnology Enclosures



Laboratory Animal Research Stations



Glove Boxes



Forensic Enclosures



Glassware Washers



Water Purification Systems



Freeze Dry Systems



Multiple Sample Evaporation Systems



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Laboratory Carts & Benches

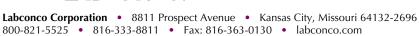


Blood Drawing Chairs



Vacuum Desiccator









CentriVap® Complete™ Vacuum Concentrators

The all-in-one CentriVap Complete Vacuum Concentrator houses every component you need to begin processing multiple samples: vacuum concentrator, -50° C cold trap, diaphragm pump, rotor and CentriZap™ strobe light. Just add your samples in the containers of your choice and start concentrating.

Using centrifugal force, vacuum and controlled heat, the CentriVap Complete speeds concentration of samples

used in a variety of applications found in molecular biology, proteomics, genomics, cell biology, microbiology, biochemistry, drug discovery and analytical chemistry. Acid-resistant models are available for corrosive chemical use. Other models feature Heat Boost™, which surrounds the chamber wall, to further speed evaporation of high boiling point solvents.



and program LCD display and control panel.

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Solvent	Temperature	Dry Time
Acetonitrile	75° C	63 minutes
Methanol	60° C	92 minutes
Water	100° C	188 minutes
Isopropanol	75° C	55 minutes
Ethanol	75° C	61 minutes
Methylene Chloride	45° C	40 minutes

Fast evaporation. Using Rotor 7455100, 30 each 5 ml samples in 13×100 mm tubes, and temperature settings noted at left, fast evaporation times were achieved.



Exclusive feature

© CentriVap® Complete™ Vacuum Concentrators

Specifications

- Brushed stainless steel and glacier white, epoxy-coated steel exterior with blue accents.
- Glass lid, lid latch with safety sensor, and phenol-free lid gasket.
- Epoxy-coated or PTFE*-coated aluminum chamber, depending on the model.
- 300-watt heater.
- Microprocessor-controlled programming for run time from 1 to 999 minutes, heat from OFF to HI (100° C) in one degree increments, heat time from 1 to 999 minutes, cold trap on/off, and optional Heat Boost on/off. Memory stores 1 to 9 programs.
- LCD for display of program number, actual and set point temperature, heater time remaining, run time remaining, cold trap activation and optional Heat Boost activation.
 When the cold trap is activated, the LCD flashes Y until the collector coil reaches operating temperature of -40° C (-40° F) at which time the Y glows continuously.
- Control panel with RUN/STOP button, PREHEAT button, COLD TRAP button, optional HEAT BOOST button, set point SELECT button, increase/decrease buttons, and 3 Quick-Start buttons.
- Centrifugal motion provided by a brushless motor capable of achieving up to 1725 rpm.
- Quick-Stop System to stop vacuum pump, open valve to bleed air into the chamber and stop the rotor within seconds after time expires or RUN/STOP button is pressed.
- Built-in diaphragm pump that achieves 7 mBar and has displacement capacity of 38 liters per minute. All wetted parts are PTFE or other chemical-resistant fluoropolymers.
- Automatic vacuum release valve.
- Built-in vacuum delay allows rotor to achieve speed before applying vacuum.
- Audible alarm to signal completion of set point run time.

- HCFC/CFC-free refrigeration system with 1/3 hp compressor lowers cold trap to -50° C (-58° F) in less than 30 minutes.
- 4-liter stainless steel collector and lid with rubber gasket and insulating cover. Collector and lid are Teflon*-coated on Acid-Resistant models.
- Right hand-side mounted 3/8" hose barb drain port with nylon valve.
- Right hand-side mounted gas ballast access port.
- Vacuum port with quick disconnect fitting for 3/8" ID tubing.
- 177 milliliter glass trap.
- Includes 12-13 mm Aluminum Rotor 7455100 or 12-13 mm Teflon*-coated Metal Rotor 7455101, depending on model.
- Includes CentriZap strobe light with holster.
- ETL & ETL-C listing on 115 and 230 volt, 60 Hz models.
- CE mark on 230 volts, 50 Hz models.

△WARNING: Cancer - P65Warnings.ca.gov (California only).

- Overall dimensions with closed lid: 26.1" wide x 22.7" deep x 16.9" high $(66.4 \times 57.7 \times 42.9 \text{ cm})$.
- Actual weight 145 lbs. (66 kg). Shipping weight 170 lbs. (77 kg).

Required Accessories (not included)

· Sample containers.

Optional Accessories

Rotors. See back page.

Plug Types



115 volts, 15 amps



China/Australia





North America, 230 volts



British (UK)

Ordering Information

Catalog Number	Electrical Requirements	Plug Type	Heat Boost	Acid-Resistant**
7315020	115 volts, 60 Hz, 12 amps	115 volts, 15 amps		
7315021	115 volts, 60 Hz, 12 amps	115 volts, 15 amps		•
7315022	115 volts, 60 Hz, 12 amps	115 volts, 15 amps	•	
7315023	115 volts, 60 Hz, 12 amps	115 volts, 15 amps	•	•
7315030 [†]	230 volts, 50 Hz, 6 amps	Schuko		
7315031 ⁺	230 volts, 50 Hz, 6 amps	Schuko		•
7315032 ⁺	230 volts, 50 Hz, 6 amps	Schuko	•	
7315033 [†]	230 volts, 50 Hz, 6 amps	Schuko	•	•
7315040	230 volts, 60 Hz, 6 amps	North America, 230 volts		
7315041	230 volts, 60 Hz, 6 amps	North America, 230 volts		•
7315042	230 volts, 60 Hz, 6 amps	North America, 230 volts	•	
7315043	230 volts, 60 Hz, 6 amps	North America, 230 volts	•	•
7315060 ⁺	230 volts, 50 Hz, 6 amps	British (UK)		
7315061 ⁺	230 volts, 50 Hz, 6 amps	British (UK)		•
7315062 ⁺	230 volts, 50 Hz, 6 amps	British (UK)	•	
7315063 ⁺	230 volts, 50 Hz, 6 amps	British (UK)	•	•
7315070 [†]	230 volts, 50 Hz, 6 amps	China/Australia		
7315071 [†]	230 volts, 50 Hz, 6 amps	China/Australia		•
7315072 ⁺	230 volts, 50 Hz, 6 amps	China/Australia	•	
7315073 ⁺	230 volts, 50 Hz, 6 amps	China/Australia	•	ě

^{*}Polytetrafluoroethylene

†International electrical configuration



^{**}Chamber, rotor, collector and collector lid are PTFE-coated.





Hexagonal Rotor 7450700



28 mm Rotor 7455200



4-Place Microtiter Plate Rotor 7461900



6-Place Microtiter Plate Rotor 7553000



12-17 mm Rotor 7455000



Pear-shaped Flask Rotor 7553100



Rotors

Rotors are made of anodized aluminum, PTFE*-coated metal with polypropylene hubs or thermoplastic. Easily interchangeable. The 12-13 mm Rotor 7455100 is included with each CentriVap Complete Concentrator with catalog number ending in "0" or "2." The 12-13 mm Rotor 7455101 is included with each CentriVap Complete Concentrator with catalog number ending in "1" or "3." **Sample containers are** not included. Contact Labconco for ordering information on custom rotors. Shipping weight 2.5 lbs. (1.1 kg)

Aluminum Rotor Cat. #	PTFE*-coate Rotor Cat.		lumber f Holes	Capacity**	Container Volume [†]	Container Description
7450700	7450701	Hexagonal	132	132 132	1.5 ml 2.0 ml	1.5 ml microcentrifuge tubes 2.0 ml microcentrifuge tubes
7455000	7455001	12-17 mm	52	52 52 44 36 36 36 36 24 24 18 18	2 ml 5 ml 3 ml 5-6 ml 6 ml 10 ml 11-15 ml 5 ml 15-19 ml 14 ml 12-15 ml	12.2 x 46.5 mm 13 x 51 mm 12 x 55 mm 12 x 75 mm 12 x 95 mm 13 x 75 mm 13 x 100 mm 16 x 100 mm 5 ml microcentrifuge tubes 16 x 125 mm 17 x 95 mm 17 x 100 mm 17 x 120 mm
7455100	7455101	12-13 mm	40 108	40 40 16 100 ⁺⁺ 64 100 ⁺⁺ 64	1.5 ml 2.0 ml 3 ml 5 ml 5 ml 6 ml 10 ml	1.5 ml microcentrifuge tubes 2.0 ml microcentrifuge tubes 12 x 55 mm 12 x 75 mm 12 x 95 mm 13 x 75 mm 13 x 100 mm
7455200	7455201	28 mm	32 12	32 32 12 12 12	1.5 ml 2.0 ml 40-50 ml 40-50 ml 50 ml	1.5 ml microcentrifuge tubes 2.0 ml microcentrifuge tubes 28 x 115 mm 28 x 135 mm 28 x 140 mm
7462900	7462901	DNA	72 60	72 60 60	0.5 ml 1.5 ml 2.0 ml	0.5 ml microcentrifuge tubes1.5 ml microcentrifuge tubes2.0 ml microcentrifuge tubes
7461900	7461901	4-Place Microtiter Plate	-	4 2	_	standard microtiter plates deep well microtiter plates
7553000	7553001	6-Place Microtiter Plate	_	6 3	_	standard microtiter plates deep well microtiter plates
7553100	7553101	Pear-Shaped Flask, 100 m	l 8	8	100 ml	100 ml pear-shaped flasks

Thermoplastic Rotor Cat. #	Description	Number of Holes	Capacity**	Container Volume [†]	Container Description
7824700	12 x 32 mm	66	66	2 ml	auto sample vials, 12 x 32 mm
7824702	15 x 45 mm	56	56	4 ml	auto sample vials, 15 x 45 mm

^{*}Polytetrafluoroethylene

^{**}Rotor holds a maximum of 92 each 12 or 13 x 75 mm tubes when 16 each 12 x 55 ml tubes are also loaded.



12 x 45 mm Rotor 7824702



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^{**}Rotors do not necessarily hold all the containers described simultaneously.

[†]Containers should be filled no more than 1/3 to 1/2 of maximum volume to prevent loss of sample during rotation.