

# FREEZE/THAW CHAMBERS

7900/7901 SERIES: 25 & 33 CU. FT. CAPACITIES



# PRODUCT LINE OVERVIEW

FREEZE/THAW CHAMBERS DESIGNED FOR A WIDE RANGE OF APPLICATIONS

*Caron's Freeze/Thaw Chambers precisely and automatically control programmed environmental conditions for freeze-thaw stability testing.*

**About Freeze/Thaw Chambers:** Caron's Freeze/Thaw Chambers precisely control a wide temperature range of -25°C to 70°C and (optional) humidity range of 20-95% for reliable and repeatable ramp and soak testing.

Programmable environmental conditions encompass nearly every ambient environment on earth. Setting up and managing ramp and soak profiles is easy and intuitive with Caron's new touchscreen control system. The ramp/soak program includes five profiles with up to 10 steps each (50 total steps). The repeat feature allows multiple and continuous routines so sequences are automatic and versatile for cycling between setpoints.

Common applications for these chambers include: freeze/thaw studies, pharmaceutical drug studies, concrete and asphalt testing, coating and adhesive testing, outdoor weathering tests, stress testing and more! Not only are these Freeze/Thaw Chambers consistently reliable, but they also offer energy



33 ft<sup>3</sup>  
Large capacity, small footprint

25 ft<sup>3</sup>  
Rolls through a standard doorway

## NEW Touchscreen Control System: Dependable, Reliable and Easy-to-use!



The intuitive control panel has a real-time clock, is easy to reach and simple to use with fewer buttons to navigate. Just touch the 7" full-color screen to put command at your fingertips. Our system controls are "smart," using breadcrumb trail navigation to keep track of your location within the menus. The built-in, icon-based status center provides vital information updates, including: alerts, alarms and information statuses, allowing for peace of mind, worry-free operation. All alerts, alarms and information status icons will display in the status bar when initiated, with additional information ready to read by simply selecting the icon. An on-screen trend graph displays seven days of operational data with the push of a button.

Our snooze mode is a convenient new function that allows you to be reminded of alarms at a later time. Additionally, the built-in intelligence avoids nuisance alarms and the password protection feature prevents unauthorized access. **Alerts** warn the operator of an impending problem before it occurs. This gives the user time to react and avoid out-of-spec conditions. Alerts also include messages that provide basic preventative maintenance information, allowing you to service your chamber on a regular basis. By supporting regular service of your Caron chamber, you are enhancing and preserving its reliability.

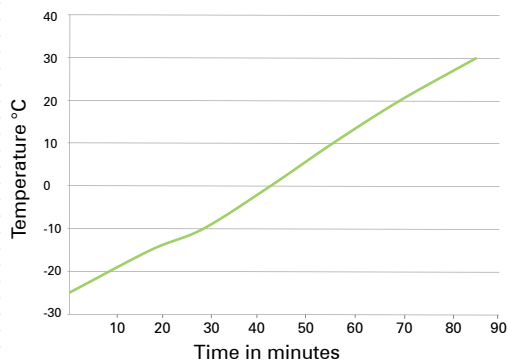
**Information statuses** include important updates, such as in-process information for automated programs and standard program cycles/modes. In the event of variant environmental conditions, **Alarms** visually and audibly alert you of setpoint deviations with the convenient option to silence

# FEATURES, BENEFITS & ACCESSORIES

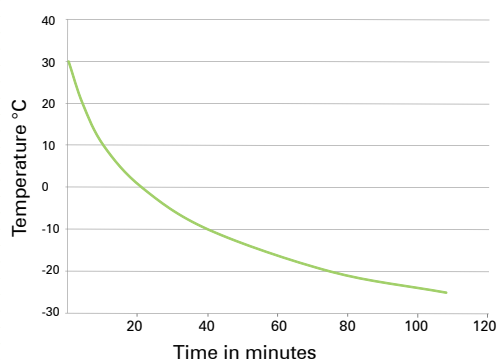
OPTIMUM UNIFORMITY, STABILITY AND PERFORMANCE

- A temperature range of -25°C to 70°C and humidity range (optional) from 20% to 95% offers the flexibility to simulate a broad range of environmental conditions.
  - The 7" color touchscreen is intuitive and features easy-to-read icons and a familiar, user-friendly display that can be operated with gloves on.
  - The user interface includes a configurable status center with built-in information updates, alerts and alarms to communicate a wide range of status conditions.
  - Ramp and soak programming is built into the touchscreen control system, making it easy to setup automatic freezing and thawing cycles for repeatable, accurate studies. Setup an infinite number of loops and a ramp rate based on real time.
  - gROD™, Refrigeration on Demand, efficiently manages power consumption and saves electricity.
  - Humidified models use Caron's gVapor™, which delivers controlled humidity vapor on an as-needed basis without wasting energy or producing heat.
  - In the event of a power failure, non-volatile memory allows the chamber to return to its original setpoint when power is restored.
  - The interior is comprised of stainless steel, which is easy to clean and highly resistant to corrosion.
  - These chambers are designed with high R, CFC-free foam insulation, making them energy efficient.
  - Our tool-less removable interior uses stainless steel latches, making it easy to clean and reconfigure.
  - Caron green door handles are aesthetically pleasing and enhance ergonomics.
  - The glass doors are heated, triple-pane and Argon-filled, minimizing condensation for a clear view inside.
- Caron's carefully designed horizontal airflow system generates gentle, evenly distributed airflow across shelf locations. Temperature uniformity and rapid recovery are always maintained, even under heavy loads.
- The stainless steel shelves slide into place and are adjustable, making them easy to clean and relocate.
  - Two access ports (one on each side) make validation easy and provide convenient access for instrumentation.

Temperature Ramp-up Speed



Temperature Ramp-down Speed



## OPTIONAL ACCESSORIES (CONTINUED ON BACK)

MUST BE FACTORY INSTALLED AT TIME OF INITIAL ORDER	
DLOG301	Data logging & storage to a USB flash drive; 1 year data storage.
LGHT321-4	Light package with (6) 24 W fluorescent lights, 2 lights per bank, 3 banks, day/night timer (for 25 ft <sup>3</sup> models).
LGHT322-4	Light package with (8) 24 W fluorescent lights, 2 lights per bank, 4 banks, day/night timer (for 33 ft <sup>3</sup> models).
LGHT324	Interior LED lighting with day/night timer.
LOCK301	Outer door lock.
OUTL305-2	One internal outlet, 115V 60Hz, NEMA 5-15 (for -2 models).
OUTL306-3	One internal outlet, 230V 50Hz, CEE 7/16 (for -3 models).
OUTL307-3	One internal outlet, 230V 50Hz, BS1363A (for -3 models).
OUTL308-3	One internal outlet, 230V 50Hz, AS/NZS 3112 (for -3 models).
OUTL309-2	One internal outlet, 230V 60Hz, NBR 14136 (for -2 models).
OUTL310-2	3 internal outlets, 115V 60Hz, NEMA-5-15 (for -2 models).
OUTL311-3	3 internal outlets, 230V 50Hz, CEE 7/16 (for -3 models).
OUTL312-3	3 internal outlets, 230V 50Hz, BS1363A (for -3 models).
OUTL313-3	3 internal outlets, 230V 50Hz, AS/NZS 3112 (for -3 models).
OUTL314-2	3 internal outlets, 230V 60Hz, NBR 14136 (for -2 models).
PORT301	Additional 2" access port.
SHLF311	Wire rod shelf kit, set of 4, replaces standard shelving (for 25 ft <sup>3</sup> models).
SHLF312	Solid shelf kit, set of 4, replaces standard shelving (for 25 ft <sup>3</sup> models).
SHLF313	Heavy-duty perforated shelf kit, set of 4, replaces standard shelving (for 25 ft <sup>3</sup> models).

# SPECIFICATIONS & OPTIONAL ACCESSORIES

Model Number	7900-25-2	7900-25-3	7901-25-2	7901-25-3	7900-33-2	7900-33-3	7901-33-2	7901-33-3
Temperature Range	-25°C to 70°C							
Temperature Control	±0.1°C							
Temperature Uniformity @ 20°C	±0.3°C							
Temperature Sensor	3-wire RTD							
Humidity Range	20 to 95% RH		N/A		20 to 95% RH		N/A	
Humidity Control	±2% RH*		N/A		±2% RH*		N/A	
Humidity Sensor	Capacitive		N/A		Capacitive		N/A	
Interior Dimensions	32" W x 27" D x 52.7" H (81.3 cm x 68.6 cm x 133.9 cm)				32" W x 27" D x 65.7" H (81.3 cm x 68.6 cm x 166.9 cm)			
Interior Construction	Type 304, 2B Finish, Solid Stainless Steel							
Exterior Dimensions	35.5" W x 33.3" D** x 77.1" H (90.2 cm x 84.6 cm x 195.8 cm)				35.5" W x 33.3" D** x 90.1" H (90.2 cm x 84.6 cm x 228.9 cm)			
Exterior Construction	Cold Rolled Steel, Powder Coated							
Work Space	25 cu. ft. (708 Liters)				33 cu. ft. (934 Liters)			
# of Shelves	4 Standard; 25 Maximum				5 Standard; 31 Maximum			
Shelf Construction	Type 304, Perforated Stainless Steel, Electropolished							
Shelf Dimensions	29.25" W x 24.45" D (74.3 cm x 62.1 cm)							
Electrical	208/230, 60 Hz, 12A	230V 50 Hz, 12A	208/230V 60 Hz, 12A	230V 50 Hz, 12A	208/230V 60 Hz, 12A	230V 50 Hz, 12A	208/230V 60 Hz, 12A	230V 50 Hz, 12A
Shipping Weight lbs.	785	925***	880	1,030***	755	895***	865	1,015***
NOTE: Specifications are subject to change without notice; based on 20°C ambient & standard voltage. Humidity non-condensing. * ±3% when setpoint is above 90% RH. **Add 2.75" for handle. ***Includes export shipping crate.								

## MUST BE FACTORY INSTALLED AT TIME OF INITIAL ORDER (CONTINUED)

SHLF316	Wire rod shelf kit, set of 5, replaces standard shelving (33 ft³).
SHLF317	Solid shelf kit, set of 5, replaces standard shelving (33 ft³).
SHLF318	Heavy-duty perforated shelf kit, set of 5, replaces standard shelving (33 ft³).
SHLF323	Pilaster kit (set of 2) for use with SHLF303, SHLF313, SHLF320 & SHLF321 (25 ft³).
SHLF324	Pilaster kit (set of 2) for use with SHLF303, SHLF318, SHLF320 & SHLF322 (33 ft³).

## CAN BE RETRO-FITTED IN THE FIELD BY A QUALIFIED TECHNICIAN

ALRM302	Remote alarm contacts provides NO & NC dry contacts.
BOTL301	9.5 L carboy water fill bottle, cap, tubing & fittings (7900 Models).
OUTP301	Universal analog output (0-5V, 4-20mA). Provides 1 connection for monitoring temperature (7901 Models).
OUTP302	Universal analog output (0-5V, 4-20mA). Provides 2 connections for monitoring temp. & humidity (7900 Models).
PUMP301	Drain water pump, 115V (for 7900 Models).
RCDR318	Built-in temp recorder. Thermal printer, 10", 7 day, 24 hr. (7901 Models).
RCDR319	Built-in temp/humidity recorder. Thermal printer, 10", 7 day, 24 hr. (7900 Models).
RCDR322	Side-mounted temp recorder. Thermal printer, 12", 7 day, 24 hr. (7901 Models).
RCDR323	Side-mount temp/humidity recorder. Thermal printer, 12", 7 day, 24 hr. (7900 Models).

## REQUIRES CUSTOMER ASSEMBLY/INSTALLATION

CRSY102	Condensate Recirculator provides water source (7900 Models).
FLTR301	Condenser air filter replacement kit.
SHLF300	Additional perforated shelf kit with 2 shelf tracks.
SHLF301	Additional wire rod shelf kit, 2 shelf tracks.
SHLF302	Additional solid shelf kit, 2 shelf tracks.
SHLF303	Additional heavy-duty perforated shelf kit. Requires SHLF313, SHLF318, SHLF323 or SHLF324.