REACH-IN CO$_2$ INCUBATORS
7400-25 AND 7400-33 SERIES
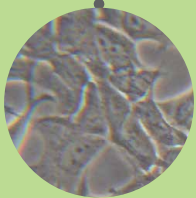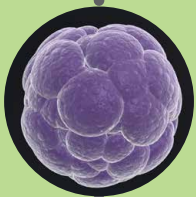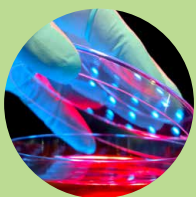
CARON
CO$_2$ INCUBATOR

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CAR*N
Opening Doors for Scientists

Best-in-class Reach-In CO_2 Incubators Optimize Cell Growth through our Superior Design

7" color touchscreen controls: interactive, simple to use with status updates and built-in preventative maintenance.

Tool-less removable interior: stainless steel latches snap interior components together.

High quality stainless steel interior is highly resistent to corrosion and easy-to-clean.

Two access ports (one on each side) provide capability to use probes, sensors, or power cords.

Caron green door handles are aesthetically pleasing and enhance ergonomics.

Heated, triple-pane glass doors prevent condensation.

The water pan system has sliding tracks to make filling and cleaning easy. The pan handles make removing it easy, minimizing spills.

Casters/leveling feet provide easy mobility for installation/relocation and cleaning.

Caron's Reach-In CO_2 Incubators provide the ideal environment for small to large scale, high volume cell culture. Our large capacity units come in 25 ft^3 and 33 ft^3 capacities.

These CO_2 Incubators are designed to provide the most stable and accurately controlled environment for your cell cultures. The Caron design goes further than competitive models that offer basic technologies and few features.

These large capacity incubators are loaded with features, such as: intuitive touchscreen controls, casters and leveling feet, a tool-less removable interior, lockable controls and more!

Our Reach-In units utilize RTD controlled temperature, an Infrared (IR) CO_2 Sensor and elevated humidity, which provide an optimal environment for cell culture conditions and also aid in fast recovery after door openings.

Additionally, many options and accessories offered only by Caron, provide ultimate flexibility for your research allowing you to customize the incubator to your specific needs. Options include, but aren't limited to: gVapor humidity control (steam-free, earth-friendly and vaporized), overnight decontamination cycle, extended temperature range (down to 10°C) and more (see next page for a list of options/accessories).

STANDARD FEATURES & OPTIONAL ACCESSORIES
AT A GLANCE STANDARD FEATURES

- Temperature (10°C above ambient to 60°C) is controlled with a drift-resistant RTD temperature sensor, providing stable temperature control.

- A drift-resistant IR sensor provides quick CO_2 recovery after door openings and an ultra-stable environment where your cell cultures will thrive.

- 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 to the user.

- Relative humidity is achieved with a self-contained water pan system that slides out on tracks for easy removal and includes handles for filling and cleaning, minimizing spills.

- The stainless steel water pan holds 7.7 quarts, providing long running time between refills.

- The adjustable shelves slide out, making samples at the back of the chamber easy to access.

- Caron's gentle horizontal airflow system generates evenly distributed airflow across all shelf locations. Maximum uniformity and recovery are maintained.

- The interior is polished stainless steel, which is highly resistant to corrosion and easy to clean.

- Our "tool-less" interior design allows you to remove the interior components effortlessly for routine cleaning or to set up multiple configurations.

- A heated, triple-pane glass door minimizes condensation for a clear view of your product and aids in fast temperature recovery.

- Units come standard with leveling feet and casters, which make installation and relocation easy.

- Our wide range of accessories allows you to customize the incubator for your application.

OPTIONS & ACCESSORIES

MUST BE FACTORY INSTALLED AT TIME OF INITIAL ORDER

Part No.	Description
DECN301	90°C moist heat decontamination cycle.
EXTD302	Extended temperature range, 10°C to 60°C (gROD).
GASG302	Built-in gas guard detects low gas pressure and automatically switches from primary to secondary tank.
HUMD304	Controlled humidity, ambient to 95% RH, includes display/readout.
OUTL305-1	One internal outlet, 115V 60Hz, NEMA 5-15 (for -1 models).
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 oulet, 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).
OUTL310-1	Three internal outlets, 115V 60Hz, NEMA-5-15 (for -1 models).
OUTL310-2	Three internal outlets, 115V 60Hz, NEMA-5-15 (for -2 models).
OUTL311-3	Three internal outlets, 230V, 50Hz, CEE 7/16 (for -3 models).
OUTL312-3	Three internal outlets, 230V 50Hz, BS1363A (for -3 models).
OUTL313-3	Three internal outlets, 230V 50Hz, AS/NZS 3112 (for -3 models).
OUTL314-2	Three internal outlets, 230V 60Hz, NBR 14136 (for -2 models).
PORT301	Additional 2" access port.
SHLF311	Wire rod shelf kit, set of 4, replaces 25 ft³ standard shelving.
SHLF312	Solid shelf kit, set of 4, replaces 25 ft³ standard shelving.
SHLF316	Wire rod shelf kit, set of 5, replaces 33 ft³ standard shelving.
SHLF317	Solid shelf kit, set of 5, replaces 33 ft³ standard shelving.

MUST BE FACTORY INSTALLED AT TIME OF INITIAL ORDER (cont.)

SHLF321	Ultra-level glass shelf kit, set of 4, 25 ft³ standard shelving.
SHLF322	Ultra-level glass shelf kit, set of 5, 33 ft³ standard shelving.

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

ALRM302	Remote alarm contacts provides NO & NC dry contacts.
DOOR303	Independent sealed inner door kit , 4 sections, 25 ft³ units.
DOOR307	Independent sealed inner door kit , 5 sections, 33 ft³ units.
DOOR310	Light tight door cover, 25 ft³ units.
DOOR312	Light tight door cover, 33 ft³ units.
LGHT602	UV Germicidal lamp deactivates microorganisms (requires HUMD304).
LOCK301	Outer door lock.
OUTP302	Universal analog output (0-5V, 4-20mA). Provides 2 connections for monitoring temperature and humidity or CO_2.
OUTP303	Universal analog output (0-5V, 4-20mA). Provides 3 connections for monitoring temperature, humidity & CO_2 (requires HUMD304).

REQUIRES CUSTOMER ASSEMBLY/INSTALLATION

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CRSY102	Condensate Recirculating system: provides a pure water source for chambers (requires HUMD304).
REGL101	CO_2 tank regulator. 2-stage, range 0-2,000 PSI. Dual pressure gauges.
SHLF301	1 wire rod shelf and shelf tracks (for 25 & 33 ft³ units).
SHLF302	1 solid shelf and shelf tracks (for 25 & 33 ft³ units).
SHLF320	1 ultra-level glass shelf (SHLF323 or 324 required).
SHLF323	2 stainless steel pilasters, use with SHLF320 or SHLF322, 25 ft³ units.
SHLF324	2 stainless steel pilasters, use with SHLF320 or SHLF 322, 33 ft³ units.

Safe cell and tissue cultures - Optional decontamination cycle

Caron's standard design incorporates the latest technologies to prevent contamination and to keep your cell cultures safe and thriving. The entire interior of the incubator is constructed of high grade polished stainless steel. All of the interior metalwork components are easily removed without the use of tools and the "tool-less" removable interior allows for simplified routine incubator cleaning.

While every precaution is taken to avoid susceptibility to contamination, an easy-to-use, maintenance-free decontamination cycle is optional for added peace of mind (DECN301). Our decontamination cycle uses 90°C moist heat, which is a scientifically proven method for safe and effective decontamination. Some competitive models use dry heat decontamination cycles, however, these methods require the incubator to reach extreme temperatures to decontaminate. These high temperatures are an unnecessary strain on an incubator's interior components and a safety hazard for users.

Caron's unique design further simplifies and accelerates conventional moist heat cycles by adding a drying phase, making it the fastest 90°C moist heat decontamination cycle on the market. This new feature occurs at the end of the decon cycle and pumps HEPA filtered air into the incubator.

The result is a clean, dry incubator with no additional wiping-down required!
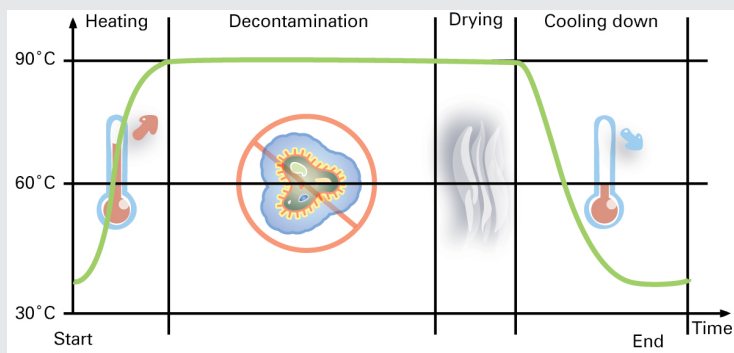
gVapor™ - Our earth-friendly, controlled humidity option

Caron's gVapor is our steam-free humidity system that injects humidity on an as-needed basis, using much less energy than steam-generated humidity systems and less water consumption than elevated humidity systems using a water pan. gVapor™ atomizes water into humidity vapor in small, controlled amounts and quickly recovers humidity after door openings. Additionally, this option includes a readout on our touchscreen display.


gROD™ Refrigeration on Demand - Our earth-friendly extended temperature range option

Our extended temperature range option (EXTD301) offers additional flexibility to your cell culture studies by providing a temperature range of 10°C to 60°C. It is ideal for growing temperature-sensitive cell lines, such as those derived from cold-blooded animals, amphibians, cold water fish, etc.

Our extended temperature range option uses Caron's gROD, Refrigeration on Demand control system, which only operates the refrigeration system when it is needed to maintain the temperature setpoint. Unlike competitive units that run refrigeration constantly to maintain required setpoints, gROD efficiently manages power consumption and saves electricity, making it very energy efficient and practical for any lab.

PERFORMANCE & DESIGN
TECHNOLOGY INNOVATION FROM THE INDUSTRY LEADER
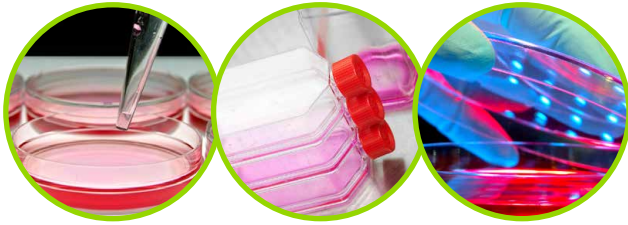
The 7" **full-color touchscreen** is simple to use with fewer buttons to navigate. System controls are smart, setup is fast and status updates allow for peace of mind and worry-free operation for the lifetime of your product.

EASY TO USE
The user interface is intuitive and features easy-to-read icons and a familiar, user-friendly display that can be operated with gloves on. Breadcrumb trail navigation visually keeps track of your location within the menus.

STATUS CENTER & UPDATES
The configurable status center has built-in information updates, alerts and alarms to communicate a wide range of status conditions to the user.

BUILT-IN PREVENTIVE MAINTENANCE
Status alerts include a built-in preventive maintenance feature, which include real-time reminders for basic service updates such as filter changes and annual calibrations. Regular maintenance enhances and preserves the reliability of your incubator.

CONVENIENT SETTINGS
Our snooze mode is a convenient function that allows you to be reminded of alarms at a later time with built-in intelligence to avoid nuisance alarms.

More About Our Status Updates:

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 to provide basic preventative maintenance information, allowing you to service your chamber on a regular basis, which ultimately enhances and preserves your product's reliability.

Info 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 and/or snooze the alarm.

SPECIFICATIONS

Model	7400-25-1	7400-25-2	7400-25-3	7400-33-1	7400-33-2	7400-33-3
Temperature Range	10°C above ambient to 60°C					
Temperature Control	±0.1°C					
Temperature Uniformity	±0.3°C					
Temperature Sensor	RTD					
Humidity Range (with standard water pan)	Elevated up to 95% @ 37°C					
Controlled Humidity Range (with optional HUMD304)	Ambient to 95% RH, ±3% RH					
CO_2 Range	0-20% CO_2					
CO_2 Control	±0.1% CO_2					
CO_2 Sensor	Infrared CO_2 Sensor					
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	Powder Coated Cold Rolled Steel					
Work Space	25 ft³ (708 liters)			33 ft³ (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	115V 60 Hz 16A	208/230V 60 Hz 10A	230V 50 Hz 10A	115V 60 Hz 16A	208/230V 60 Hz 10A	230V 50 Hz 10A
Shipping Weight lbs.	725		825**	775		1,050**
Shipping Weight kg.	329		374**	352		476**

Specifications are based on 20°C ambient and standard voltage. Specifications are subject to change without notice.
*Add 2.75" for handle. **Includes Export Shipping Crate.

IR SENSOR SPECS

Caron's CO_2 incubators utilize a single beam, **dual-wavelength IR CO_2 sensor**, providing you with the most accurate, time-tested technology in the field of CO_2 measurements.

Why is your CO_2 sensor important? Most competitive models utilize a Thermal Conductivity (T/C) sensor, which does not solely read CO_2 levels. In fact, T/C sensors are affected by temperature, humidity and CO_2. Because T/C sensors rely on all environmental systems for CO_2 readings, the CO_2 levels after a typical thirty second door opening can take up to thirty minutes to recover. Also, T/C sensors need re-calibrated any time a setpoint is changed.

Caron's IR sensor offers unmatched precision control and stability over wide temperature and relative humidity ranges. This sensor's integrity is not affected by setpoint changes and, therefore, does not require re-calibration
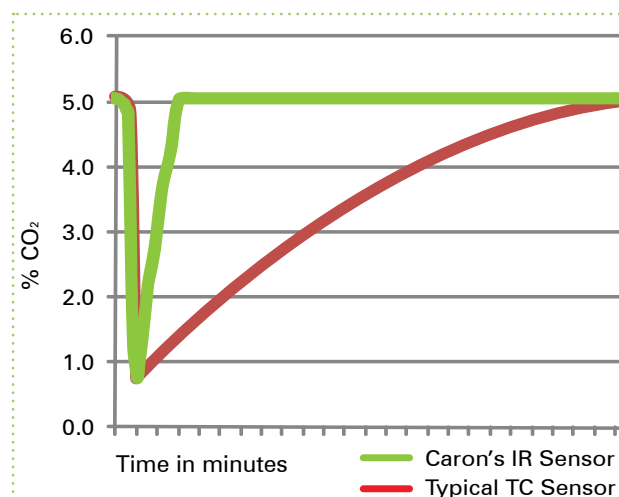
Typical CO_2 response to a thirty second door opening.

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