

BENCHTOP GELJACKET™ CO₂ INCUBATOR

7404 SERIES, 10 FT³ (283 LITERS)



GELJACKET™ ACTIVE INSULATION

THE MOST INNOVATIVE TECHNOLOGY FOR CELL CULTURE INCUBATORS IN DECADES



GelJacket™ takes creating an ultra-stable environment for cell growth to a whole new level!

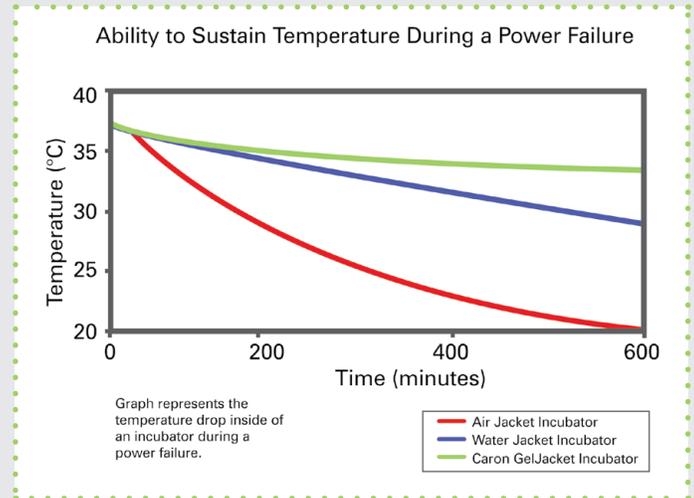
What is GelJacket? GelJacket is the most innovative technological advancement for cell culture incubators in decades! Caron developed this patented* design to create a premium CO₂ incubator geared toward advanced cell culture studies. GelJacket incorporates proprietary gel active insulation, which surrounds the incubator on all sides, creating a top of the line unit with thermal advantages that far surpass any CO₂ incubator on the market today. This new technology includes all of the advantages of modern benchtop units without any of the disadvantages!

How is GelJacket superior to water jacket? Water jacket incubators were the choice of researchers for years, primarily due to the thermal protection offered by the water following door openings and power outages. Caron's new GelJacket incubator far exceeds water jacket thermal protection (see graph) by insulating the incubator with the heat retaining gel.

Water jackets also require frequent maintenance, such as adding algacide, draining and filling. GelJacket's sealed gel requires no maintenance, is lightweight to enhance mobility and has no risk of leaking. In fact, the incubator has rapid reaction to door openings because of the high thermal retention of the gel, making it the safest incubator on the market today.

Water jacket incubators also require manual cleaning because they cannot withstand the pressure created when water is heated to high temperatures during a decon cycle. Caron's incubator is the first to offer thermal protection that surpasses water jacket with the user friendliness of an automatic built-in 90°C moist heat decontamination cycle.

How is GelJacket superior to air jacket/direct heat? GelJacket takes heating and insulating one step further by the gel's ability to enhance temperature stability and uniformity of the incubator. GelJacket technology offers all of the user-friendly features scientists have come to prefer with air jacket/direct heat incubators while transcending the technology of water jacket incubators!



Feature	Water jacket	Direct heat/Air jacket	NEW GelJacket
Heat retention	Good	Poor	Excellent
Temperature stability	Excellent	Good	Excellent
Ease of set-up	Poor	Excellent	Excellent
Ability to sustain power failure	Good	Poor	Excellent
Low maintenance	Poor	Excellent	Excellent
Decon cycle compatible	Poor	Excellent	Excellent
Overall grade	Good	Good	Excellent

*Patent pending

STANDARD FEATURES

AT A GLANCE FEATURES AND BENEFITS

GelJacket CO₂ Incubator Optimizes Cell Growth through our Superior Design



..... Gel insulation surrounds the incubator on all four sides, creating superior thermal uniformity and retention.

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



Stainless steel, tool-less removable interior: highly resistant to corrosion, easy to clean and multiple latches snap interior components together.

..... Caron green door handles are aesthetically pleasing and

..... Lockable, inner glass door for viewing samples.

- The GelJacket series has a minimal footprint, fits on a sturdy benchtop and is stackable for optimum use of your laboratory space.
- A temperature range of 10°C above ambient to 60°C is controlled with a drift-resistant RTD temperature sensor, providing stable temperature control over long periods of time.
- The layer of proprietary high-energy absorbing gel surrounds the entire incubator and blankets it with heat, retaining the interior temperature even during power failures.
- Caron's earth-friendly gVapor™ creates controlled humidity. It is unlike conventional steam generator humidification systems because it delivers controlled humidity vapor on an as-needed basis without wasting energy or generating heat.
- A drift-resistant IR sensor provides quick CO₂ recovery after door openings and an ultra-stable environment where your cell cultures will thrive.
- Our "tool-less" interior design allows you to remove the interior components effortlessly for routine cleaning or to set up multiple configurations for your cell research.
- The shelves are adjustable and slideable, making samples at the back of the chamber easy to access.

- 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.
- The rapid Decontamination Cycle cleans the incubator overnight with the push of a button, minimizing downtime.
- Caron's gentle horizontal airflow system generates evenly distributed airflow across all shelf locations. Maximum uniformity and rapid recovery are maintained.
- The interior consists of polished stainless steel, which is highly resistant to corrosion and allows for an easy and effective cabinet wipe down.
- Our extended temperature range option provides refrigeration/cooling to 10°C for cell culture studies that require lower temperatures and to accommodate shakers or rockers inside.
- Our wide range of accessories allows you to customize the incubator for your application.

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.

DECON CYCLE, CONTROLLED HUMIDITY, IR SENSOR

TOP OF THE LINE STANDARD CONTROLS FOR A SUPERIOR INCUBATOR

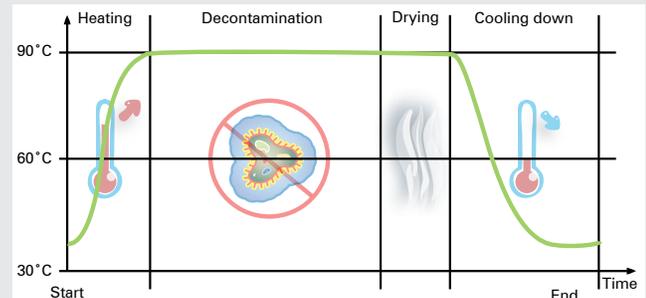
Designed to Control Contamination

Caron's design incorporates the latest technologies to prevent contamination and to keep your cell cultures safer than ever. The entire interior of the incubator is constructed of high-grade polished stainless steel and all of the interior metalwork components are easily removed without the use of tools. The unique "tool-less" removable interior allows for simple, routine incubator cleaning.

90°C Moist Heat Decontamination Cycle

While every precaution is taken to avoid contamination, an easy-to-use, maintenance-free decontamination cycle is standard with the GelJacket for added peace of mind. Our 90°C moist heat decon cycle is a time-tested, safe and effective method of decontamination. Not only does it kill contaminants quickly, but it is a scientifically proven method for safe and effective decontamination.

Some competitive models offer dry heat decontamination cycles, however, dry, high heat requires extreme temperatures as high as 180°C that cause unnecessary strain on an incubator's interior components. Additionally, the high temperatures can pose safety risk to users.



Caron's design is safe, highly reliable and addresses contamination concerns head-on. A decon cycle progress graph will display, so you know the exact phase operating and how much time is left until completion. In fact, our design 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. Our drying phase occurs as the final stage of the decon cycle and pumps HEPA filtered air into the incubator. The result is a clean, dry incubator that is cool and ready for immediate use - no additional wipe down is required!

Controlled Humidity

Caron's gVapor controlled humidity allows the user the ability to select a precise RH setpoint and the humidity readout is displayed. gVapor is earth friendly, too, because it produces humidity without generating heat or wasting water, saving energy and natural resources.



Unlike elevated humidity achieved solely on evaporation, gVapor rapidly recovers humidity by injecting it as needed, making environmental conditions recover up to 5X faster than typical water pan systems. Water pan systems can be a source for contamination and they also create condensation. gVapor only injects humidity as needed, and doesn't require sitting water inside your incubator, giving your incubator the precise humidity needed without creating unnecessary condensation or acting as a harbor for contamination.

Precise CO₂ IR Sensor

Caron's CO₂ incubators utilize a single beam, **dual-wavelength IR CO₂ sensor**, providing you with the most accurate, time-tested technology in the field of CO₂ measurements. Most competitive models utilize a Thermal Conductivity (T/C) sensor, which does not solely read CO₂ levels. In fact, T/C sensors are affected by temperature, humidity and CO₂. Because T/C sensors rely on all environmental systems for CO₂ readings, the CO₂ levels after a typical thirty second door opening can take up to thirty minutes to recover.

Additionally, 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 when setpoints are changed. The facts confirm that IR sensors are far superior to T/C.



SPECIFICATIONS AND OPTIONAL ACCESSORIES

Model	7404-10-1	7404-10-2	7404-10-3
Temperature Range	10°C above ambient to 60°C		
Temperature Control	±0.1°C		
Temperature Uniformity	±0.3°C		
Temperature Sensor	RTD		
Humidity Range	Ambient to 95%RH		
Humidity Control	±3% RH		
Humidity Sensor	Capacitive		
CO ₂ Range	0-20% CO ₂		
CO ₂ Control	±0.1% CO ₂		
CO ₂ Sensor	Infrared CO ₂ Sensor		
Interior Dimensions	23" W x 25.8" D x 29.8" H (58.4 cm x 65.5 cm x 75.7 cm)		
Interior Construction	Type 304, 2B Finish, Solid Stainless Steel		
Exterior Dimensions	44.5" W x 31.7" D* x 37" H (112.3 cm x 82.8 cm x 92.7 cm)		
Exterior Construction	Cold Rolled Steel, Powder Coated		
Work Space	10 cu. ft. (283 Liters)		
# of Shelves	3 Standard; 15 Maximum		
Shelf Construction	Type 304, Perforated Stainless Steel, Electropolished		
Shelf Dimensions	22.5" W x 25.4" D (57.2 cm x 64.5 cm)		
Electrical	115V, 60 Hz, 12A	208/230V, 60 Hz, 8A	230V, 50 Hz, 6A
Shipping Weight	450 lbs.		750 lbs.**

Specifications are subject to change without notice. *Add 2.75" for handle. ** Includes export shipping crate.

MUST BE FACTORY INSTALLED AT TIME OF INITIAL ORDER

Part No.	Description
EXTD301	Extended temperature range, 10°C to 60°C (gROD).
GASG302	Built-in gas guard detects low gas pressure.
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 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).
PORT301	Additional 2" access port.
SHLF314	Wire rod shelf kit, set of 3, replaces standard shelving.
SHLF315	Solid shelf kit, set of 3, replaces standard shelving.

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

ALRM301	Remote alarm contacts provides NO & NC dry contacts.
BOTL301	Carboy water fill bottle with cap, 4 liters. Universal holder mounts on side or top of unit. Includes tubing and fittings.
CSTR301	Four swivel casters; two locking and two non-locking.
LGHT602	UV Germicidal Lamp deactivates microorganisms in-line with humidity water supply.
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 .
PUMP301	Drain water pump ,115V.
SHLF307	Heavy-duty reinforced floor.

REQUIRES CUSTOMER ASSEMBLY/INSTALLATION

CRSY102	Earth-friendly condensate recirculating system.
REGL101	CO ₂ tank regulator. 2-stage, range 0-2,000 PSI. Dual pressure gauges.
SHLF304	1 additional sliding perforated shelf and shelf tracks.
SHLF305	1 sliding wire rod shelf and shelf tracks.
SHLF306	1 sliding solid shelf and shelf tracks.
STCK301	Stacking kit.
TABL101	Table, 30"x48"x35" base, sliding doors, 14 ga. stainless steel top.