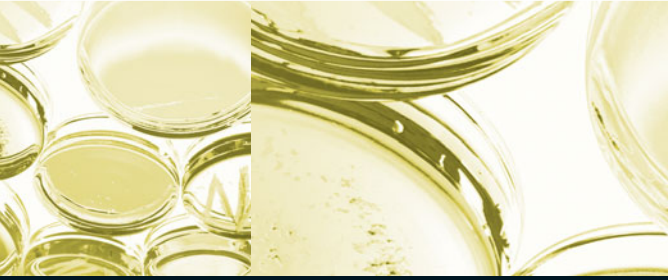


Fisher Scientific **Exclusive**



**NAPCO® Series 8000 –  
Direct Heat and Water Jacket  
CO<sub>2</sub> Incubators**

**Ultimate cell culture protection**

# NAPCO® Series 8000 CO<sub>2</sub> Incubators – Superior Selection, Stability and Protection

CO<sub>2</sub> incubators are essential for optimum cell culture, and versatility is a must. With the NAPCO Series 8000 CO<sub>2</sub> incubators from Thermo, you have the ultimate choice of both water jacket (WJ) and direct heat (DH) technology, giving you the flexibility you can depend on for growing cells.

Thermo's NAPCO Series 8000 CO<sub>2</sub> incubators provide water jacket and direct heat solutions with a range of essential technologies to meet even the most stringent laboratory requirements. With a broad selection, you can choose the incubator to best meet your specific needs. The answer is NAPCO Series 8000 for precise temperature control and stability of all culture parameters.

## NAPCO – the Name to Trust

Thermo is the world leader in analytical instruments and has many

years experience in manufacturing CO<sub>2</sub> incubators. There are over 100,000 Thermo CO<sub>2</sub> incubators in use worldwide. Through its development of numerous contamination prevention advancements, Thermo has established its global leadership in cell culture incubation technologies.

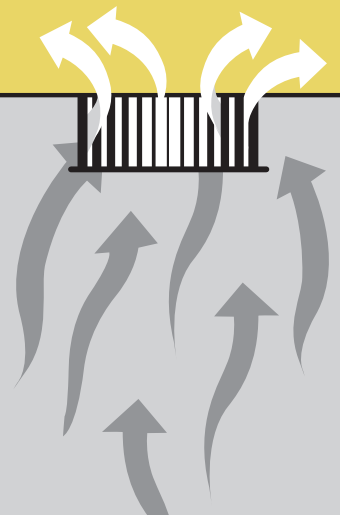
Built to the highest standards of workmanship and backed by Thermo's unsurpassed service and technical support, the NAPCO Series 8000 WJ and DH CO<sub>2</sub> incubators are designed to provide total peace of mind.

# Ultimate

# Protection



As standard feature in every NAPCO incubator, a HEPA filter inside the chamber filters out contaminants. The HEPA filter is located inside the incubator chamber for optimum filtering, easy access, and simple replacement (no tools needed). A built-in preventive maintenance system with adjustable timer notifies you when to replace the filter.



▲ Sturdy stainless steel shelves and supports can be removed without tools for easy cleaning or adjustment.

# Complete Contamination Control

Contamination prevention is better than cure. With the proven contamination prevention technologies of the NAPCO Series 8000 CO<sub>2</sub> incubators, you can save time and money, while keeping your cultures safe.

To minimize risk, Thermo's NAPCO Series 8000 CO<sub>2</sub> incubators are designed with multiple methods of contamination control, from automated heat sterilization to rapid HEPA filtration. These advanced features help you create a safe and stable environment for your critical cultures. Therefore, shutting down your lab to contain contamination is a thing of the past.

## Rapid Response Class 100 cleanroom air quality

Product yields and reliability can be affected by airborne contamination. HEPA Class 100 air quality control reduces particulates to cleanroom levels, minimizing the risk of product loss and downtime. The patented HEPA Filter Airflow System:

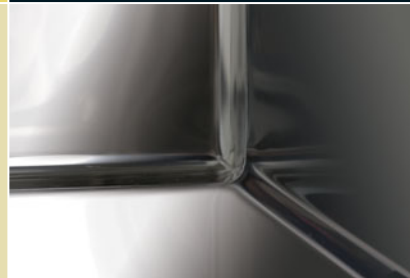
- continuously filters chamber volume to provide an aseptic culturing atmosphere
- filters out airborne biological particulates, the primary sources of lab contamination
- ensures Class 100 air quality is achieved within five minutes of door closure

## Time saving easy cleaning

Every aspect of Thermo's NAPCO Series 8000 CO<sub>2</sub> incubators is designed to be easy to clean.

- polished stainless steel interior with 100% covered corners saves cleaning time and reduces contamination risk
- an adjustable timer, signals when the easy-to-access HEPA filter needs replacement
- disposable snap-fit blower/scroll mounting, stainless steel shelves and supports, and HEPA filters can all be removed easily without tools

Clear and precise: the intuitive user interface provides easy to use controls for all settings, as well as feedback on all vital information via the Message Center and alarm array



Polished stainless steel interior with 100% covered corners is easy to clean, saving time and reducing contamination risk.



# NAPCO Series 8000 WJ

## Simply More Security



### Maximum thermal protection

With a triple wall construction and large volume of water, NAPCO Series 8000 WJ CO<sub>2</sub> incubators provide unsurpassed temperature stability and protection against heat loss. To ensure the safety of your cultures, the water jacket technology holds the temperature for extended periods of time, which is critical during power failures. Under test conditions, the temperature dropped initially at only 1 °C per hour and just 7.6 °C in 10 hours.

Thermo's NAPCO Series 8000 WJ CO<sub>2</sub> incubators also provide fast temperature recovery. The patented, heated, dual pane glass inner door is more responsive than standard doors and minimizes condensation.

### Easy set up

Set up is simple. The incubator Message Center controls are powerful and intuitive, providing a host of features. These include remote alarm contacts and an optional digital rH display, enabling continual monitoring for humidity dependent applications.

### Choice of sensor

All NAPCO Series 8000 CO<sub>2</sub> incubators can be fitted with either thermal conductivity (T/C) or infrared (IR) CO<sub>2</sub> sensors, to suit the exact user requirements.

# Water Jacket

**System Configuration** – Configure Audible On/Off, Access Code, HEPA Filter Change Reminder, Remote Alarm Contacts, Tracking Low Temp and High and Low CO<sub>2</sub> Alarms.

**Main Switch** – Series 8000 DH on front Series 8000 WJ on side

Alarms

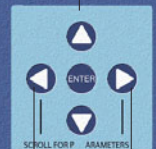
Mode Select

Message Center

Heater On Indicator

Programming buttons

Temperature Display/  
rH display (optional)



**Run** – CLASS 100 timing reminder appears after door is closed for five minutes, message changes to describe alarm conditions

**Setpoint** – Set Temp, Overtemp, CO<sub>2</sub>

**Calibration** – Calibrate Temp, CO<sub>2</sub>, rH (optional)

Scroll for Program Parameters

Gas Inject Indicator

CO<sub>2</sub> Display/O<sub>2</sub> Display (optional)

# NAPCO Series 8000 DH

Culture with Confidence



## On-demand sterilization

The NAPCO Series 8000 DH CO<sub>2</sub> incubators include an easy-to-use, safe and proven sterilization system to destroy all forms of microbial life inside the chamber. The automatic high temperature decontamination cycle is ideal for overnight sterilization and ensures consistent sterilization time after time. Audible alarms and access codes ensure laboratory and product safety as well as security.

## The mobile answer

NAPCO Series 8000 DH CO<sub>2</sub> incubators are light in weight. With the roller base accessory, these advanced incubators can be moved quickly to where needed within your laboratory.

## Easy to configure and use

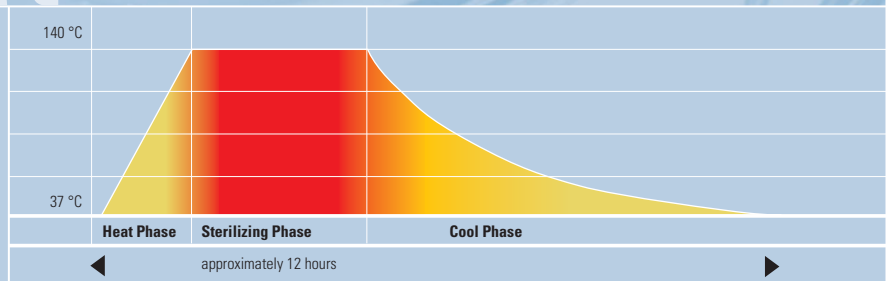
The NAPCO Series 8000 CO<sub>2</sub> incubators use a microprocessor controlled monitoring system Message Center. The message center is highly intuitive and

extremely user friendly. For example, the sterilization cycle is started by the simple press of one button. Options available include a digital rH display, to enable continual monitoring for humidity dependent applications.

# Direct Heat

## High Temperature Uniformity

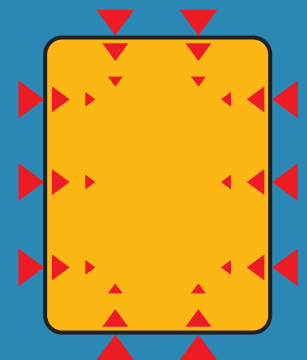
Temperature uniformity contributes to an ideal culturing environment. The NAPCO Series 8000 CO<sub>2</sub> incubator provides directed airflow and direct chamber heating to maintain optimum uniformity. During the sterilization cycle, the same system ensures that your incubator's entire chamber is sterilized – all contamination is eliminated.



**Direct Heat Sterilization Cycle** – 120 minutes at 140°C – ensures the elimination of all microorganisms and fungal spores from every incubator surface (ANSI/AAMI/ISO 11134). This claim has been validated with suspensions from *B. subtilis* spores calibrated for dry heat processes, because these are most resistant against dry heat sterilization and therefore the recommended indicator organism (U.S. Pharmacopoeia, ch. 1035). All spores applied to the different surfaces of the incubator – chamber wall (stainless steel), door (glass) and door gasket (tempered silicone), have been reliably eliminated with the sterilization cycle after 120 minutes at 140°C.



▲ The sterilization cycle starts with the simple press of the white button! During the heat sterilization process, the Microprocessor Control/Monitoring System's message center guides you through the cycle with start-up and cycle status messages. The three sterilization cycle phases are heat, sterilizing (hold), and cool.



▲ Stable and uniform temperature distribution through heating of all 6 sides of the chamber, during incubation as well as during the sterilization cycle

# Accessories

Accessories are customer installed unless indicated otherwise. In addition to providing a standard line of equipment and accessories, we will manufacture custom accessories to meet your specific requirements. Contact us for details.

## NAPCO Series 8000 Water Jacket CO<sub>2</sub> Incubators

Cat No.	Description
15-497-016	Stainless Steel Shelf and Channels
15-497-022	Replacement HEPA filter ( <b>Fig. 02</b> )
15-497-023	HEPA Value Pack (four filters)
15-497-026	10 Disposable In-Line Filters
15-495-024	HEPA Filter Replacement Kit (inline and access port filters)
15-497-025	Decontamination Kit
15-497-013	Independent inner Glass Door Kit
15-497-015	Door Lock for Inner Glass Door
15-497-020	CO <sub>2</sub> Gas Regulator ( <b>Fig. 03</b> )
15-497-021	N <sub>2</sub> Gas Regulator
15-497-019	Auto Gas Tank Interchange
15-497-018	Roller Base ( <b>Fig. 01</b> )
15-497-017	Floor Stand

## NAPCO Series 8000 Direct Heat CO<sub>2</sub> Incubators

Cat No.	Description
15-497-016	Stainless Steel Shelf and Channels
15-497-022	Replacement HEPA filter ( <b>Fig. 02</b> )
15-497-023	HEPA Value Pack (four filters)
15-497-026	10 Disposable In-Line Filters
15-495-024	HEPA Filter Replacement Kit (inline and access port filters)
15-497-013	Independent inner Glass Door Kit
15-497-020	CO <sub>2</sub> Gas Regulator ( <b>Fig. 03</b> )
15-497-019	Auto Gas Tank Interchange
15-497-027	Roller Base ( <b>Fig. 01</b> )

**Fig. 01 | Roller Base**

Heavy-duty, dual-castor base with swivel-locks and leveling feet, raising unit by 3.0" (7.6 cm). Supports up to two stacked units.



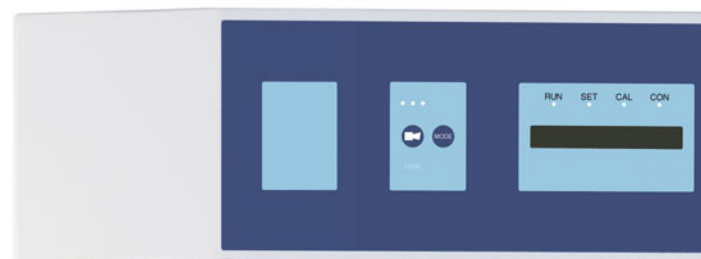
**Fig. 02 | HEPA Air-Filter**

The High Efficiency Particulate Air-filter (HEPA) removes more than 99.97% of all particles 0.3 microns and greater in size. Consequently, 'Class 100' air quality (<100 particles per cubic foot of air) is achieved within 5 minutes of door closure.



**Fig. 03 | Two-Stage CO<sub>2</sub> Gas Regulator**

Regulators with barbed connection and shut off valve.



**Thermo**  
ELECTRON CORPORATION

## NAPCO Series 8000 WJ CO<sub>2</sub> Incubators Specifications and Ordering Information



Technical Specifications	
<b>Temperature</b>	
Control	±0.1 °C
Range	5 °C above ambient to 55 °C (131 F)*
Uniformity	±0.2 °C @ 37 °C (98.6 F)
Tracking Alarm	User-programmable high/low
<b>Temperature Safety</b>	
Sensor	Precision thermistor
Controller	Independent analog electronic
Setability	0.1 °C
<b>CO<sub>2</sub>/O<sub>2</sub></b>	
CO <sub>2</sub> /O <sub>2</sub> Control	Better than ±0.1 %
CO <sub>2</sub> Range	0-20 %
O <sub>2</sub> Range	1-20 %
Inlet Pressure	15 PSIG (1.0 bar)
CO <sub>2</sub> Sensor	T/C or IR
O <sub>2</sub> Sensor	Fuel cell
Readability & Setability	0.1 %
Tracking Alarm	User-programmable high/low
<b>Humidity</b>	
rH	Ambient to 95 % @ 37 °C (98.6 F)
Humidity Pan	3.2 qt. (3.0 liters) standard
Display (opt.)	In 1% increments
<b>Fittings</b>	
Fill Port	3/8" hose (barbed)
Drain Port	1/4" hose (barbed)
Access Port with filter	1.3" (3.3 cm) with removable silicone plug
CO <sub>2</sub> Inlet	1/4" hose (barbed)
<b>Unit Heat Load</b>	
115 V	344 BTUH (100 Watt)
<b>Shelves (Continued)</b>	
Dimensions	18.5" x 18.5" (47.0 cm x 47.0 cm)
Construction	Stainless steel, perforated
Surface Area	2.4 sq. ft. (0.2 sq. m)
Max. per Chamber	40.8 sq. ft. (3.8 sq. m)
Standard, Maximum	4, 17
Water Jacket Volume	11.7 gal. (43.5 liters)
<b>Construction</b>	
Interior Volume	6.5 cu. ft. (184.1 liters)
Interior	Type 304, mirror finish, stainless steel
Exterior	18 gauge, cold-rolled steel, powder coated
Outer Door Gasket	Four-sided, molded, magnetic vinyl
Inner Door Gasket	Removable, cleanable, feather-edged, silicone
<b>Electrical</b>	
All	115 V, 50/60 Hz, 3.6 FLA (Operating range 90-125 V)
Circuit Breaker/Power Switch	6 Amps/2 Pole
Convenience	75 Watts max. (one per Receptacle chamber)
Plug	115 V: NEMA 5-15P Plug
Alarm Contacts	Power interruption; deviation of temp., CO <sub>2</sub> , O <sub>2</sub> , rH; customer connections through jack on back of unit
Data Outputs (opt.)	RS-485, 0-1 V, 0-5 V, 4-20 milliamp (select one)
<b>Dimensions</b>	
Exterior (w x h x f-b) inch/cm	26.0 x 39.5 x 25.0 / (66.0 x 100.3 x 63.5)
Interior (w x h x f-b) inch/cm	21.3 x 26.8 x 20.0 / (54.1 x 68.1 x 50.8 )
<b>Weight</b>	
Net	265 lbs. (120.2 kg)
Net Operational	365 lbs. (165.6 kg)
Shipping (Motor)	324 lbs. (147.0 kg)

Ordering Information							
Cat No.*	CO <sub>2</sub>	O <sub>2</sub>	Voltage	Cat No.*	CO <sub>2</sub>	O <sub>2</sub>	Voltage
15-497-001	TC	–	115 VAC	15-497-002	TC	–	115 VAC; rH display
15-497-003	IR	–	115 VAC	15-497-004	IR	–	115 VAC; rH display
15-497-005	TC	yes	115 VAC	15-497-006	TC	yes	115 VAC; rH display
15-497-007	IR	yes	115 VAC	15-497-008	IR	yes	115 VAC; rH display

\* Right hand door swings are available upon request

\* Right hand door swings are available upon request

### Choice of T/C or IR Sensor

Select a T/C sensor when chamber temp and rH are relatively constant. Typically, a T/C sensor has a longer life than an IR sensor.

Select an IR sensor when temp and rH levels are changed frequently. With either sensor, elevated rH is critical to prevent desiccation.



## NAPCO Series 8000 DH CO<sub>2</sub> Incubators Specifications and Ordering Information



Technical Specifications	
<b>Temperature</b>	
Control	±0.1 °C
Range	5 °C above ambient to 50 °C (122 F)*
Uniformity	±0.3 °C @ 37 °C (98.6 F)
Tracking Alarm	User-programmable high/low
<b>Overtemperature</b>	
Sensor	Precision thermistor
Setability	0.1 °C
Function	Shuts off heat
<b>Temperature Safety</b>	
Sensor	Precision thermistor
Controller	Independent analog electronic
<b>CO<sub>2</sub></b>	
CO <sub>2</sub> Control	Better than ±0.1 %
CO <sub>2</sub> Range	0-20 %
Inlet Pressure	15 PSIG (1.0 bar)
Sensor	T/C or IR
Readability & Setability	0.1 %
Tracking Alarm	User-programmable high/low
<b>Humidity</b>	
rH	Ambient to 95 % @ 37 °C (98.6 F)
Humidity Pan	3.2 qt. (3.0 liters) standard
Display (opt.)	In 1% increments
<b>Fittings</b>	
Access Port	1.3" (3.3 cm) with removable silicone plug with filter
CO <sub>2</sub> Inlet	1/4" hose (barbed)
<b>Unit Heat Load</b>	
115 V	293 BTUH (86 Watt)
<b>Shelves</b>	
Dimensions	18.5" x 18.5" (47.0 cm x 47.0 cm)
Construction	Stainless steel, perforated
Surface Area	2.4 sq. ft. (0.2 sq. m)
Max. per Chamber	36.0 sq. ft. (3.3 sq. m)
Standard, Maximum	4, 15
<b>Construction</b>	
Interior Volume	6.5 cu. ft. (184.1 liters)
Interior	Type 304, mirror finish, stainless steel
Exterior	18 gauge, cold-rolled steel, powder coated
Outer Door Gasket	Four-sided, molded, magnetic vinyl
Inner Door Gasket	Removable, cleanable, feather-edged, silicone
<b>Electrical</b>	
All	115 V, 50/60 Hz, 9.6 FLA (Operating range 90-125 V)
Circuit Breaker/Power Switch	12 Amps/2 Pole
Convenience/Receptacle	75 Watts max. (matches cabinet voltage)
Plug	115 V: NEMA 5-15P Plug
Alarm Contacts	Power interruption; deviation of temp, CO <sub>2</sub> , rH; customer connections through jack on back of unit
Data Outputs (opt.)	RS-485, 0-1 V, 0-5 V, 4-20 milliamp (select one)
<b>Dimensions</b>	
Exterior (w x h x f-b)	26.3" x 39.5" x 25.0" (66.8 cm x 100.3 cm x 63.5 cm)
Interior (w x h x f-b)	21.3" x 26.8" x 20.0" (54.1 cm x 68.1 cm x 50.8 cm)
<b>Weight</b>	
Net	260 lbs. (117.9 kg)
Shipping (Motor)	315 lbs. (142.9 kg)

Ordering Information		
Cat No.*	CO <sub>2</sub>	Voltage
15-497-009	TC	115 VAC
15-497-011	IR	115 VAC
15-497-010	TC	115 VAC; rH display
15-497-012	IR	115 VAC; rH display

\* Right hand door swings are available upon request

### Choice of T/C or IR Sensor

Select a T/C sensor when chamber temp and rH are relatively constant. Typically, a T/C sensor has a longer life than an IR sensor.

Select an IR sensor when temp and rH levels are changed frequently. With either sensor, elevated rH is critical to prevent desiccation.



For customer service, call 1-800-766-7000.

To fax an order, use 1-800-926-1166.

To order online: [www.fishersci.com](http://www.fishersci.com)

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