

# cellIQ™

MCO-233AICUV-PA

CO<sub>2</sub> Incubator with UV-LED Decontamination

8.1 cu.ft. | 230 L



MCO-233AICUV-PA



Precision incubation requires both the proper balance of CO<sub>2</sub> and temperature inside the incubator. This next-generation incubator goes beyond traditional incubation by enhancing both data capture and troubleshooting capabilities. Its advanced onboard display and user interface do more than log basic readings—they track alarms and their resolution, overlay multiple data parameters simultaneously, and monitor the duration of incubator activities for deeper operational insight.

## Passive, Continuous Contamination Control

Contamination control is built-in and always active — no initiation required. Integrated shelving with rounded corners and edges minimizes harborage points, while a proprietary antimicrobial copper-stainless steel alloy (inCu-saFe) inhibits surface contamination. UV-LED decontamination of the humidification tray water provides continuous protection between and during incubation cycles.

## Air-Jacketed System & Dual IR Sensor

Effective temperature control and uniformity start with an air-jacketed chamber that eliminates the need for water jacket refills, reducing maintenance requirements and removing a potential source of contamination. A Dual IR sensor provides no drift in CO<sub>2</sub> measurements as a result of fluctuating humidity levels compared to traditional TC sensors.

## Secure Access Control and Data Logging

This unit provides comprehensive activity logs and user access controls. Incubator operations can be reviewed through parameter data logs with overlaid metrics. Individual users can be assigned to each unit with key locks preventing unauthorized changes to settings. This ensures stable operation, while an optional electronic lock provides an added layer of security for your cell culture work.



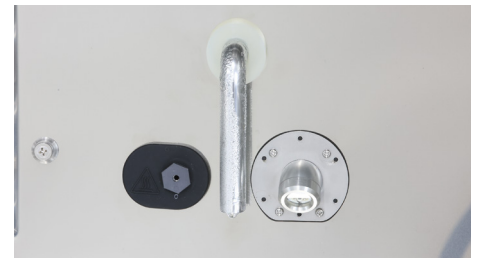
## Redesigned Display and Graphics

The new 7-inch color LCD touch panel has an updated interface with clear icons and refined graphics for intuitive operation. It consolidates notifications, troubleshooting tools, data logging, and access to the instruction manual via QR code in a single display.



## Enhanced Monitoring Options

Standard 4-20 mA module tracks CO<sub>2</sub> levels, temperature, and door openings. Additional outputs support integration with building management systems, while a USB port provides connectivity to LabSVIFT®, PHCbi's lab monitoring solution.



## Greener Decontamination

A long-life UV-LED bulb continuously decontaminates water in the humidifying pan between door openings and during incubation — eliminating consumable waste from HEPA filters which require replacement and don't deactivate contaminants.

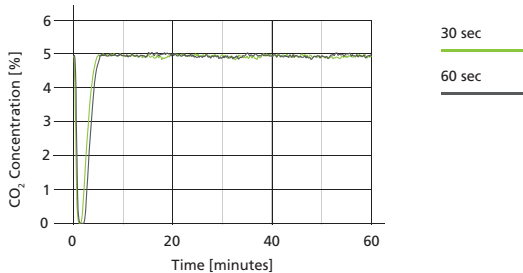


Model MCO-233AICUV-PA shown above and a closer look inside.

### Advanced Design and Operational Features

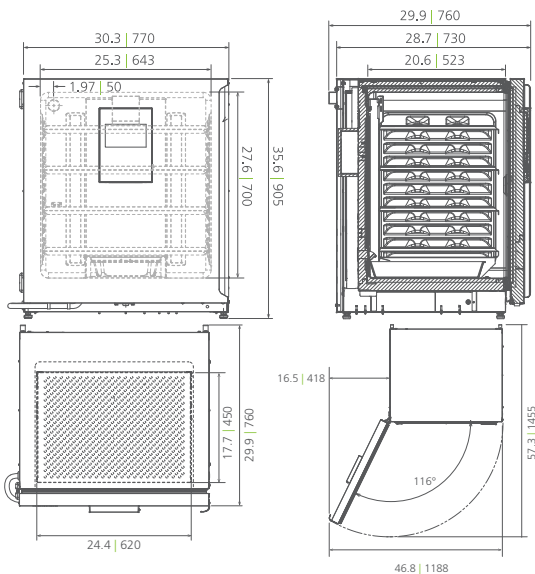
This CO<sub>2</sub> incubator provides precise environmental control with uniform temperature and gas distribution for consistent, reproducible cultures. A multilayer contamination control system—combining UV-LED decontamination, antimicrobial surfaces, and integrated shelving—reduces risk and protects samples. Built-in access control and data logging ensure secure use, detailed tracking, and continuous monitoring of key parameters. With the addition of LabSVIFT®, users can gain centralized access to performance data and audit trails, supporting traceability and regulatory compliance.

### Comparison of CO<sub>2</sub> Recovery Speed After Door Opening (30 and 60 seconds)



### Dimensions

Unit : inch | mm



Model Number		MCO-233AICUV-PA
External Dimensions (W × D × H) <sup>1)</sup>	inches   mm	30.3 × 28.7 × 35.6   770 × 730 × 905
Internal Dimensions (W × D × H)	inches   mm	25.3 × 20.6 × 27.6   643 × 523 × 700
Volume	cu.ft.   liters	8.1   230
Net Weight	lbs   kg	174   80
<b>Performance</b>		
Warranty <sup>2)</sup>		3 years parts and labor, 5 years CO <sub>2</sub> sensor
Temperature Control Range and Fluctuation <sup>3)</sup>	°C	+5 above ambient to +50, ± 0.1
Temperature Uniformity <sup>3)</sup>	°C	± 0.25
CO <sub>2</sub> Control Range and Fluctuation <sup>3)</sup>	%	0 to 20, ± 0.15
Passive Humidity Control & Fluctuation	% RH	95% at 37 °C ± 5
<b>Control</b>		
Controller		Microprocessor
Temperature Sensor		Thermistor
Display		Color LCD touchscreen readable in 0.1 increments
Gas Sensor	CO <sub>2</sub>	Dual beam IR
<b>Construction</b>		
Exterior Material		Painted steel (rear cover coated steel)
Interior Material		Stainless steel copper enriched alloy
Outer Door	qty	1; Field Reversible Door
Inner Door	qty	1 (sealing tempered glass with positive latch)
Humidity Pan	qty	1 (stainless steel)
Shelves	qty	4 (stainless steel copper enriched alloy)
Shelf Dimension (W × D × H)	inches   mm	24.4 × 17.7 × 0.5   620 × 450 × 12
Max. Load per Shelf	lbs   kg	15   7
Max. Total Load	lbs   kg	61.6   28
Max. Shelf Capacity	qty	10
Access Port / Position	qty	1; rear upper left
Access Port Diameter	inches   mm	1.2   30 (with silicone (non-VOC) stopper)
Leveling Feet	qty	4
<b>Decontamination Control</b>		
InCu-safe Chamber, Plenum, Shelves	passive	Included (stainless steel copper enriched alloy)
SafeCell UV Light System	passive/active	LED-based; MCO-LUVS-PA (included)
Hydrogen Peroxide (H <sub>2</sub> O <sub>2</sub> ) Vapor	active	Optional
<b>Alarms (V=Visual Alarm, A=Audible Alarm, R=Remote Alarm)</b>		
Power Failure		A-R
Temperature Deviation	high/low	V-A-R
Gas Deviation	CO <sub>2</sub> high/low	V-A-R
Supply Empty	CO <sub>2</sub>	V-A-R
Door Open	open/closed	V-A-R
<b>Electrical and Noise Level</b>		
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires NEMA 5-15R receptacle
Noise Level <sup>4)</sup>	dB(A)	25
<b>Options</b>		
Hydrogen Peroxide (H <sub>2</sub> O <sub>2</sub> ) Vapor Board		MCO-HK-PW (optional) <sup>6)</sup>
Outer Door - Password Access Electronic Lock		MCO-170EL-PW (optional)
H <sub>2</sub> O <sub>2</sub> Vapor Generator		MCO-50HP-PW
H <sub>2</sub> O <sub>2</sub> Reagent	6 pack	MCO-20H2O2-PV
CO <sub>2</sub> Gas Pressure Regulator	psi	0 – 15; MCO-100L
Automatic CO <sub>2</sub> Cylinder Changeover System		MCO-21GCP-PW
InCu-safe Shelf		MCO-230ST-PW
InCu-safe Shelf-Reinforced	lbs   kg	66   30 (MCO-230RT-PW)
Double Stacking Bracket <sup>5)</sup>		MCO-230PS-PW
Stacking Plate		MCO-230SB-PW
Roller Base		MCO-230RB-PW
<b>Communication and Monitoring System</b>		
Wireless, Cloud-Based, Automatic Data Management		LabSVIFT® Gen 3 Compatible
4-20mA Analog Output		Included; Temperature 25-50 °C   CO <sub>2</sub> Density 0-20%
MODBUS Interface Board		MTR-MODB1-PW

<sup>1)</sup> Exterior dimensions of main cabinet only, excluding handle and other external projections  
<sup>2)</sup> Current warranty offered at time of printing and may be subject to change; US and Canada only  
<sup>3)</sup> Ambient temperature 23°C, setting 37°C, CO<sub>2</sub> 5%, no load  
<sup>4)</sup> Nominal value, background noise 20 dB(A)  
<sup>5)</sup> If stacking two incubators, make sure the appropriate securing hardware is used  
<sup>6)</sup> The purchase of the vapor generator and H<sub>2</sub>O<sub>2</sub> reagent is still required for decontamination

Note: Additional options available.

Specifications are subject to change without notice.  
 For latest specification information, contact PHC Corporation of North America at info@us.phchd.com.  
 Performance data herein is based on independent testing at time of publication.

