PHCbi

Life Science Innovator Since 1966

MCO-50AICL-PA

1.8 cu.ft. | 50 L

MCO-50AICL-PA

cellIQ™

CO_2 Incubator

inCu saFe | IR dual sensor | SafeCell UV | H_2O_2 decontamination

The Cell-IQ MCO-50AICL-PA incubator is engineered to precisely and accurately control CO_2 and temperature for optimal culturing conditions. This incubator features standard and optional passive and active contamination mitigation systems with a three-hour H_2O_2 vapor option for thorough and complete resolution of bacteria and viruses in a compact design that can be double or triple stacked.

Responsive Performance

A stable and uniform temperature is maintained by the Direct Heat and Air Jacket system. CO_2 is quickly restored to setpoints after door openings, while relative humidity returns to an elevated state to prevent media desiccation. A streamlined interior maximizes space and reduces contamination risk while improving ease of maintenance. A Peltier dew stick provides optimal humidity control by removing condensation from the interior chamber.

Contamination Control

Exclusive inCu-saFe® alloy interior provides the germicidal properties of copper with the corrosion resistance of stainless steel. Optional SafeCell™ UV light, safely destroys contaminants at the humidification source from behind a plenum wall. A high-speed H_2O_2 vapor decontamination option utilizes a combination of vaporized hydrogen peroxide and UV light to permeate and safely clean the chamber in less than 3 hours to achieve a minimal 6 log reduction of major contaminants. H_2O_2 vapor is reduced to water vapor by the UV light.

Event Management

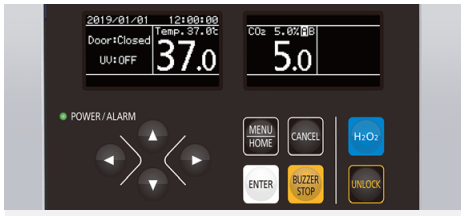
The microprocessor controller manages and records incubator functions and user inputs through an arrow prompted touchscreen menu. Events and parameters include temperature, CO_2, humidity, door open/close status and timing, UV status and parameter deviation alarms. Dual infrared CO_2 sensor maintains setpoint to within 0.15% or better and requires minimal calibration.

Precision Gas Sensor Dual IR CO_2

Unaffected by temperature or humidity changes, the dual infrared CO_2 sensor continuously calibrates for control and accuracy. Dual sensors deliver real-time chamber CO_2 density readings for optimal recovery after door openings. A white LED graphic user interface control panel delivers full control over inner chamber environment and alarms.

Easy to Clean

Integrated inCu-saFe shelf design facilitates a seamless interior chamber that mitigates contamination while remaining easy to clean and remaining corrosion free. Shelf channels are molded into the sidewalls, minimizing moving parts and eliminating the need for brackets and clips.



Advanced Touchpanel Controller

An intuitive controller provides full control over interior incubator chamber parameters. Temperature, CO_2 and humidity setpoints and alarm deviations are controlled on a white LED graphic user interface control panel for ease of use, even with gloved hands. Standard USB data port permits convenient transfer of logged performance.

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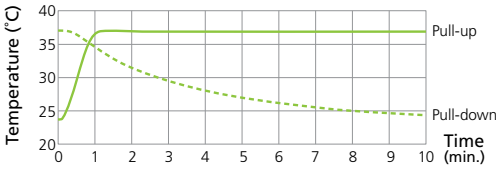
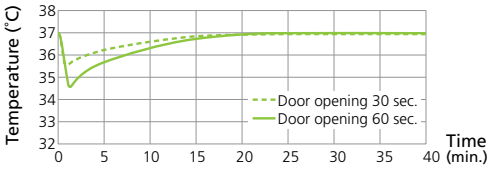
Time-Saving Decontamination

The high-speed decontamination system uses vaporized hydrogen peroxide and UV light. It cleans the chamber of the incubator safely in less than 3 hours, achieving a minimal 6 log reduction of all contaminants.

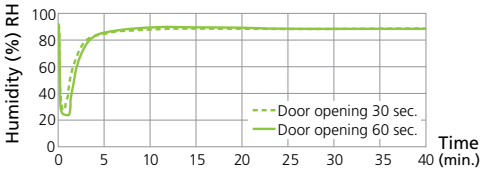
Temperature Pull-Down/Pull-Up Characteristics



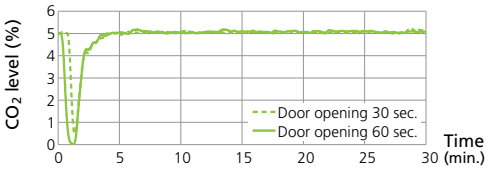
Temperature Recovery Characteristics



Humidity Recovery Characteristics

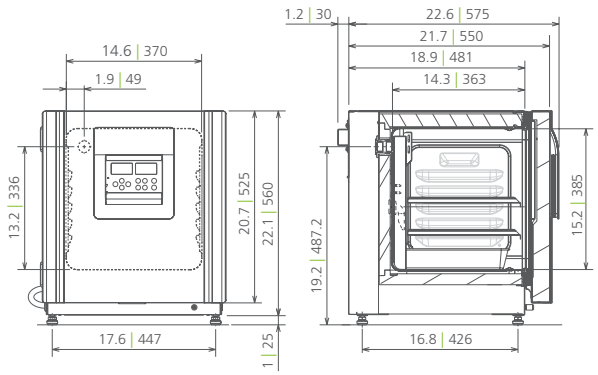


CO_2 Level Recovery Characteristics



Dimensions

Unit : inch | mm



Model Number		MCO-50AICL-PA	With Optional UV Decontamination	With Optional H_2O_2 Decontamination
External Dimensions (W × D × H) [1]	inches | mm	18.9 × 21.7 × 23.0 | 480 × 550 × 585		
Internal Dimensions (W × D × H)	inches | mm	14.6 × 14.3 × 15.2 | 370 × 363 × 385		
Volume	cu.ft. | liters	1.8 | 50		
Net Weight	lbs | kg	99 | 45		
Performance				
Warranty [2]		3 years parts and labor		
Temperature Control Range and Fluctuation [3]	°C	+5 above ambient to +50, ± 0.1		
Temperature Uniformity [3]	°C	± 0.25		
CO_2 Control Range and Fluctuation [3]	%	0 to 20, ± 0.15		
Humidity Level & Fluctuation	% RH	95 at 37°C, ± 5 (natural evaporation with humidifying pan)		
Control				
Controller		Microprocessor – digital with soft keys		
Temperature Sensor		Thermistor		
Display	qty	White graphic OLED – (temperature, CO_2) readable to 0.1 increments		
Sensor	CO_2	Dual IR		
Construction				
Exterior Material		Painted steel (rear cover coated steel)		
Interior Material		Stainless steel copper enriched alloy		
Outer Door	qty	1; Field reversible		
Inner Door	qty	1; Sealing tempered glass with positive latch		
Humidity Pan		1; Stainless steel		
Shelves	qty	2; Stainless steel copper enriched alloy		
Shelf Dimension (W x D x H)	inches | mm	13.9 × 12.1 × 0.5 | 353 × 308 × 12		
Max. Load per Shelf	lbs | kg	15.4 | 7		
Max. Total Load	lbs | kg	30.9 | 14		
Max. Shelf Capacity	qty	5		
Access Port / Position	qty	1; On back wall, upper left side		
Access Port Diameter	inches | mm	1.2 | 30 with silicone (non-VOC) stopper		
Leveling Feet	qty	4		
Decontamination Control				
InCu-saFe Chamber, Air Plenum and Shelves	passive	Included (stainless steel copper enriched alloy)		
SafeCell UV Light System	passive/active	Optional	Included	Included
Hydrogen Peroxide (H_2O_2) Vapor	active	Optional	Optional	Included
Alarms		(V=Visual Alarm, Buzzer Alarm, R=Remote Alarm)		
Power Failure		R		
Temperature Deviation	high	V-B-R		
Gas Deviation	CO_2	V-B-R		
Supply Empty	CO_2	V-B-R		
Door Open		V-B		
Electrical and Noise Level				
Power Supply		115V, 1Ø, 60Hz, NEMA 5-15P requires NEMA 5-15R receptacle		
Noise Level [4]	dB(A)	29		
Options				
SafeCell UV Light System		MCO-170UVS-PA	Included	Included
Hydrogen Peroxide (H_2O_2) Vapor Board		MCO-50HB-PW [5]	MCO-50HB-PW [5]	Included [5]
Outer Door–Password Access Electronic Lock		MCO-170EL-PW [5]	MCO-170EL-PW [5]	Included [5]
H_2O_2 Vapor Generator		MCO-50HP-PW [5]		
H_2O_2 Reagent	package of 6	MCO-5H2O2-PV		
CO_2 | N_2 Gas Pressure Regulator	psi	0 – 15; MCO-100L		
Automatic CO_2 Cylinder Changeover System		MCO-50GC-PW		
4-20mA Analog Output		MCO-420MA-PW		
inCu-saFe Shelf		MCO-50ST-PW (stainless steel copper enriched alloy)		
Double Stacking Bracket [6]		MCO-170PS-PW (two required for stacking three MCO-50 series incubators)		
Roller Base		MCO-50RB-PW		
Stacking Plate		MCO-50SB-PW		
Optional Communication System				
Wireless, Cloud-Based, Automatic Data Management		LabAlert® Monitoring System		
Quality Management System				
Certification		QPS Listed		

[1] Exterior dimensions of main cabinet only, excluding handle and other external projections
[2] Current warranty offered at time of printing and may be subject to change; US and Canada only
[3] Ambient temperature 23°C, setting 37°C, CO_2 5%, no load, air temperature measured at incubator center
- MCO-50AICL-PA is for laboratory use
- The optimum performance may not be obtained if the ambient temperature is not above 15°C

[4] Nominal value – Background noise 20 dB(A)
[5] MCO-50AICL-PA requires MCO-50HB-PW, MCO-170EL-PW, MCO-50HP-PW and MCO-170UVS-PA for H_2O_2 decontamination
[6] If stacking two incubators, make sure the double stacking dedicated secure hardware and spacer are used
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.

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