The Cell-IQ MCO-50M-PA multigas incubator is engineered to precisely and accurately control CO₂, O₂, and temperature for optimal culturing conditions. Contamination control is achieved through multiple passive and active decontamination capabilities in a compact design. Multiple units can be double, or triple stacked for a range of applications that demand sample isolation, including stem cell research and in vitro fertilization.

Responsive Performance
A stable and uniform temperature is maintained by the Direct Heat and Air Jacket system. CO₂ and O₂ are 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 H₂O₂ 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. H₂O₂ 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, CO₂, O₂, humidity, door open/close status and timing, UV status and parameter deviation alarms. Precision CO₂ and O₂ sensors maintain setpoints to within 0.15% and 0.2% respectively.

Precision Gas Sensors
Dual IR CO₂ and Zirconia O₂
Unaffected by temperature or humidity changes, the dual infrared CO₂ sensor continuously calibrates for control and accuracy. The solid-state Zirconia sensor delivers a long-term precise and accurate oxygen control range of 1% to 18% and 22% to 80% without periodic calibration. 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, CO₂, O₂ 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.

PHC Corporation of North America
**cellIQ CO₂/O₂ Multigas Incubator**

**Time-Saving Decontamination**

The high-speed H₂O₂ vapor decontamination system uses a combination of vaporized hydrogen peroxide and UV light to permeate and safely clean the chamber in less than 3 hours to achieving a minimal 6 log reduction of major contaminants. H₂O₂ vapor is reduced to water vapor by the UV light following the nebulizer sequence.

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**Temperature Response**

![Temperature Response Graph](image)

**Temperature Recovery**

![Temperature Recovery Graph](image)

**Humidity Recovery**

![Humidity Recovery Graph](image)

**CO₂ Recovery**

![CO₂ Recovery Graph](image)

**O₂ Recovery**

![O₂ Recovery Graph](image)

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**Dimensions**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>inches</td>
<td>mm</td>
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</tbody>
</table>

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**Options**

- SafeCell UU Light System
- Hydrogen Peroxide (H₂O₂) Vapor Board
- Outer Door—Access Electronic Lock
- Automatic CO₂ Cylinder Changeover System
- 4-20mA Analog Output
- InCu-saFe Shelf
- Double Stack Bracket
- Roller Base
- Stacking Plate
- Wireless, Cloud-Based, Automatic Data Management
- LabAlert® Monitoring System

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**Certification**

QPS Listed

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**Performance**

- Warranty: 3 years parts and labor
- Temperature Control Range and Fluctuation: +5 above ambient to +35, ± 0.1
- Temperature Uniformity: ± 0.25
- CO₂ Control Range and Fluctuation: 0% to 20%, ± 0.15
- O₂ Control Range and Fluctuation: 1% to 18%, ± 0.2
- Humidity Level & Fluctuation: 95% RH at 37°C, ± a 5 (natural evaporation with humidifying pan)

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**Construction**

- Exterior Material: Painted steel (rear cover coated steel)
- Interior Material: Stainless steel copper enriched alloy
- Door Open: 1; Field reversible
- Inner Door: 1; Sealing tempered glass with positive latch
- Shelves: 2; Stainless steel copper enriched alloy
- 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

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**Decontamination Control**

- H₂O₂-safe Chamber, Reuse, Shelves, Shelves Channels: passive
- SafeCell UU Light System: optional
- Hydrogen Peroxide (H₂O₂) Vapor: active
- Decontamination Control: (V=Visual Alarm, Buzzer Alarm, R=Remote Alarm)
- Power Failure: R
- Temperature Deviation: high
- Gas Deviation: CO₂/O₂
- Supply Empty: CO₂
- Door Open: V-B

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**Electrical and Noise Level**

- Power Supply: 115V, 60Hz, NEMA 5-15P requires NEMA 5-15R receptacle
- Noise Level: 29 dB(A)

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**Specifications**

- Exterior dimensions of main cabinet only, excluding handle and other external projections
- Current warranty offered at time of printing and may be subject to change; US and Canada only
- Ambient temperature 23°C, setting 37°C, CO₂, 5%, no load, air temperature measured at incubator center
- The optimum performance may not be obtained if the ambient temperature is not above 15°C
- Nominal value – Background noise 20 dB(A)
- MCO-50M-PA requires MCO-50HB-PA, MCO-170EL-PA, MCO-50HP-PW and MCO-170UVS-PA for H₂O₂ decontamination
- If stacking two incubators, make sure the double stacking dedicated secure hardware and spacer are used
- 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.