MCO-170ACL/MCO-170AC

CO_2 Incubators

inCu saFe SafeCell UV (option)

165 L

Optimising cell culture outcomes and reproducibility

PHCbi CO_2 Incubators provide precise control of CO_2 concentration and accurate, uniform, and highly responsive temperature control within the chamber. During cell culturing, the inCu-saFe germicidal interior and optional SafeCell UV lamp continuously work to prevent contamination.

Easier to Clean

The slide-out perforated stainless steel shelves rest securely in integrated shelf channels molded into the left and right sidewalls, eliminating the need for troublesome shelf brackets and clips. Molded shelf channels reduce the amount of interior parts by up to 80%. Perforated shelves promote natural temperature and gas uniformity.

Unified Controller

A central intuitive control panel with graphic user interface simplifies operation and improves visibility of key performance parameters. An OLED input/output display creates an ergonomically-friendly selection of all functions including temperature and CO_2 setpoints and alarm deviation limits for temperature and CO_2. A USB data port permits download of logged performance and event information.

Elimination of Condensation

The innovative Peltier powered dew stick located in the interior chamber draws condensation away from the inner door, outer door and inside inCu-saFe copper-enriched stainless steel surfaces. The dew stick returns moisture to the humidity reservoir and halts contamination before it can destroy cell cultures. Interior temperature control and uniformity are not affected.

Germicidal Barriers

The inCu-saFe copper-enriched stainless steel alloy creates an internal germicidal barrier against airborne contaminants. Unlike pure copper, the inCu-saFe surface will not discolour or corrode due to CO_2 exposure over time. An optional UV lamp automatically destroys airborne contaminants through serial dilution of air that gently circulates through a rear plenum.

Central Management

The microprocessor controller manages all incubator functions and user inputs through an arrow prompted menu. Notifications include actual temperature, actual CO_2, door status, UV status and deviation alarms. CO_2 sensor maintains setpoint to within 0.1% and eliminates any need for periodic calibration.

Reproducibility Assured

Reduction of interior parts and condensation control helps minimise external factors that often complicate efforts to reproduce cell culture and other protocols. Stable temperature and CO_2 are quickly restored to setpoints after door openings, while relative humidity returns to an elevated state to prevent media desiccation.

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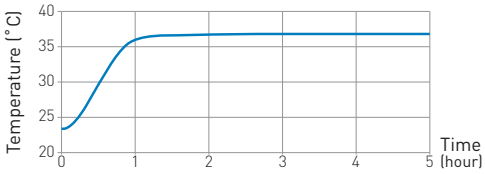
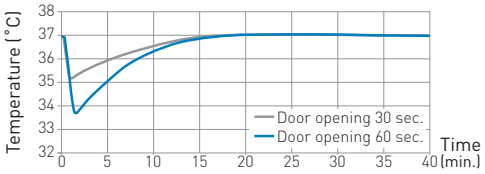
Performance Data*

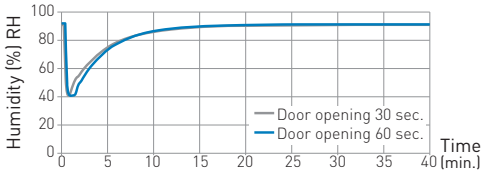
Temperature pull-up characteristics



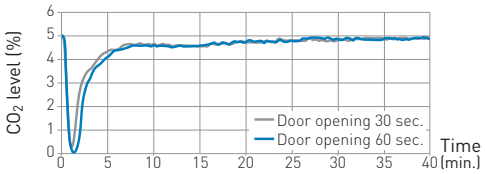
Temperature recovery characteristics



Humidity recovery characteristics

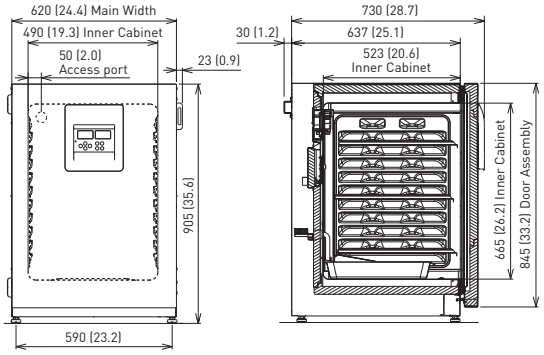


CO_2 level recovery characteristics



Dimensions

Unit : mm (inch)



Model Number		MCO-170ACL-PA	MCO-170ACL-PE	MCO-170AC-PK
External dimensions (W x D x H)[1]	mm	620 x 730 x 905		
Internal dimensions (W x D x H)	mm	490 x 523 x 665		
Volume	litres	165		
Net weight	kg	74		
Performance				
Temperature control range and fluctuation	°C	AT +5 to +50[2], ±0.1		
Temperature uniformity[3]	°C	±0.25		
CO_2 setting range and fluctuation[3]	%	0 to 20, ±0.15		
Humidity level and fluctuation	% RH	95, ±5		
Control				
Temperature sensor		Thermistor		
CO_2 sensor		Thermal conductivity		
Display		Digital (white graphic OLED)		
Construction				
Exterior material		Painted steel (rear cover not painted)		
Interior material		Stainless steel copper-enriched alloy		
Insulation material		Styrene AcryloNitrile copolymer		
Heating method		Direct Heat & Air Jacket System		
Outer door		1		
Field reversible door		Included		
Inner door		1 (tempered glass)		
Trays		3 x stainless steel copper-enriched alloy		
Shelf dimensions (W x D x H)	mm	470 x 450 x 12		
Max. load per shelf	kg	7		
Access port		1		
Access port position		Rear upper left		
Access port diameter	Ø mm	30		
Alarms		(V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm)		
Power failure		R		
Out of temperature setting		V-B-R		
High temperature		V-B-R		
Out of CO_2 setting		V-B-R		
Door open		V-B		
Electrical and Noise Level		MCO-170ACL-PA	MCO-170ACL-PE	MCO-170AC-PK
Power supply	V	110-120	220-240	220
Frequency	Hz	60	50 / 60	60
Noise level[4]	dB [A]	29		
Options				
UV system set		MCO-170UVS-PA / MCO-170UVS-PE		
CO_2 gas pressure regulator		MCO-010R-PW		
Automatic CO_2 cylinder changeover system		MCO-21GC-PW		
Small door		MCO-170ID-PW		
Tray		MCO-170ST-PW		
Half tray		MCO-25ST-PW		
Double stacking bracket		MCO-170PS-PW		
Stacking plate		MCO-170SB-PW		
Roller base		MCO-170RB-PW		
Optional Communication Systems				
Ethernet interface (LAN)[5]		MTR-L03-PW		
Digital interface (RS232C/RS485)[5]		MTR-480-PW		
Analogue interface (4–20 mA)		MCO-420MA-PW		
Quality Management System[6]		MCO-170ACL-PA	MCO-170ACL-PE	MCO-170AC-PK
Certification		ISO9001		ISO13485

1) External dimensions of main cabinet only, excluding handle and other external projections.
2) When set temperature is 37°C, ambient temperature must be 32°C or less. Regardless of ambient temperature, the maximum of temperature control range is always 50°C.
3) The measurement condition complies with PHCbi specified measuring method.
4) Nominal value.
5) Only for the data acquisition system MTR-5000 user.
6) MCO-170ACL is for laboratory use.

- The optimum performance may not be obtained if the ambient temperature is not above 15°C.
- Appearance and specifications are subject to change without notice.

* Ambient temperature: 23°C, setting: 37°C, CO_2: 5 %, no load

Caution: PHC Corporation guarantees this product under certain warranty conditions. However, please note that PHC Corporation shall not be responsible for any loss or damage to the contents of the product.

Preservation Equipment, Experimental Environment Equipment, Dispensary Equipment, Culturing Equipment and Drying & Sterilising Equipment for General Laboratory use
The management of the design, development, production and servicing of the above.

Freezers, Refrigerators, Incubators, and Drying and Sterilising Equipment for Medical use
The management of the design, development, production and distribution of the above.

PHC Corporation, Biomedical Division is certified for:
Environmental management system: ISO14001

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