



MCO-171AICD / MCO-171AICUVD

CO₂ Incubators

165 L



*Standard for Model No. including UV

Easy-to-Use 11 hours. 180°C Dry Heat Sterilising Model

PHCbi's dry heat sterilising CO₂ incubator inside the chamber. With heat dissipation and maximum current lowering functions, two units can be stacked on top of each other with one delivering dry heat sterilising while the other is for culture purposes. This eliminates bothersome sensor removal before sterilising and recalibrating temperature/CO₂ gas concentration after sterilising, offering an ideal incubator that fulfills dry heat sterilising inside the chamber.

Stacking Enables Simultaneous Dry Heat Sterilisation and Cultivation to Lower Heat Dissipation

A single heater with excellent heat resistance ensures efficient power usage during incubation and dry heat sterilisation, helping to reduce maximum current draw. Fiberglass insulation minimises heat dissipation from the frame, and two units can be stacked so that one unit can be used for dry heat sterilisation while the other performs normal incubation. This allows research to proceed safely and efficiently even in a limited space.



UV-LED Lamp Delivers Long-Lasting Performance

A UV-LED germicidal lamp emitting 250 nm to 290 nm light is positioned in the rear duct and switches on to sterilise water used for humidifying. The lamp does not use harmful mercury and delivers better sterilising compared to conventional UV lamps. (Based on our test results)



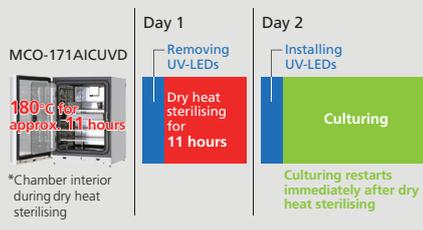
Inner Compartment Integrated Shelf Support Structure Improves Cleaning Ease and Increases Storage

Cleaning the chamber is easier and more efficient as the shelf support section and inner boxes are integrated to minimise the interior items used. It is now possible to place 20 100ø mm Petri dishes onto one tray. The advanced product design now effectively combines high cleanability and storage.



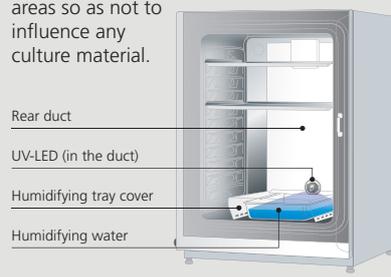
180°C Dry Heat Sterilising for Approximately 11 Hours

The new structural design enabling quick in-chamber temperature rising and reducing temperature distribution variations provides dry heat sterilising lasting approximately 11 hours. As no recalibrating temperature and post-sterilising CO₂ gas concentration are needed, restarting normal culturing immediately after sterilising can be conducted.



Saves Replacing Germicidal Lamp Time and Reduces Running Costs

The use of a long-lasting LED lamp eliminates regular replacement of germicidal lamps even with 30-times daily door openings (except for malfunctions). The lamps are installed in the rear duct for only irradiating humidifying water. The tray cover also suppresses UV leaking to culturing areas so as not to influence any culture material.



Centralised Management of Functions & Improved Usability

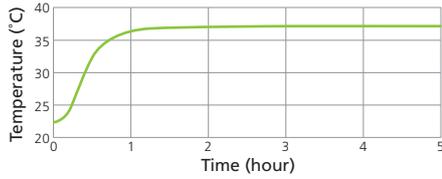
The 7-inch WVGA full-colour LCD touch panel allows efficiently managing functions from a central point. The USB port next to the panel enables easily transferring logged data to memory devices. The reversible door that opens and closes to the left or right now has an improved easy-to-grasp handle. Easy to hold with one hand



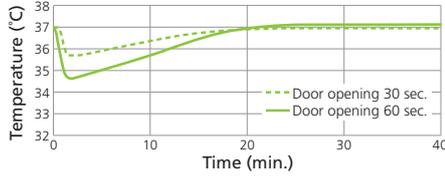
Performance Data

AT 23°C, SV 37°C, CO₂: 5 %, 115V/60Hz, no load

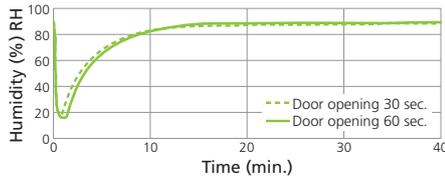
Temperature pull-up characteristics



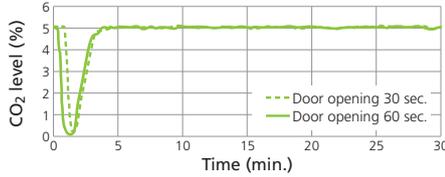
Temperature recovery characteristics



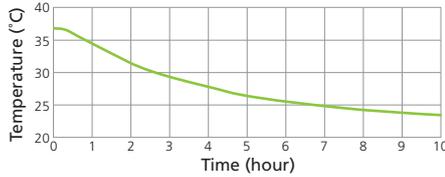
Humidity recovery characteristics



CO₂ level recovery characteristics

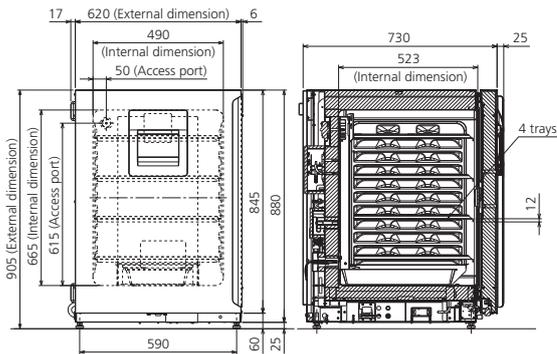


Temperature curve when power failure occurs



Dimensions

Unit : mm



Model Number	MCO-171AICD		MCO-171AICUVD	
	-PE		-PE	-PA
External dimensions (W x D x H) ¹⁾	mm	620 x 755 x 905		
Internal dimensions (W x D x H)	mm	490 x 523 x 665		
Volume	litres	165		
Net weight	kg	80		
Performance				
Temperature control range & fluctuation	°C	AT +5 to +50, ±0.1 (AT: 5°C to 35°C)		
Temperature uniformity ²⁾	°C	±0.25		
CO ₂ control range & fluctuation ²⁾	%	0 to 20, ±0.1		
Humidity level & fluctuation	% RH	95, ±5		
Control				
Temperature sensor		Thermistor		
CO ₂ sensor		Dual IR		
Display		Colour LCD touchscreen		
Construction				
Exterior material		Painted steel (Bottom and rear cover have no paint.)		
Interior material		Stainless steel copper-enriched alloy		
Insulation material		Glass-wool insulation		
Heating method		Heater jacket system		
Sterilisation method ³⁾		Dry heat sterilisation, 180°C, 11 hours		
Outer door	qty	1, Field-reversible		
Electric door lock with password		Standard		
Inner door		1		
Shelves		4 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	qty	1		
Access port position		On the back side		
Access port diameter	∅ mm	30		
Alarms (V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm)				
Power failure		R		
Temperature deviation		V-B-R		
High temperature		V-B-R		
CO ₂ deviation		V-B-R		
Door open		V-B		
Electrical and Noise Level		MCO-171AICD	MCO-171AICUVD	
		-PE	-PE	-PA
Power supply	V	220 - 240	220 - 240	110 - 120
Frequency	Hz	50/60	50/60	60
Noise level ⁴⁾	dB [A]	25		
Options				
UV System Set		MCO-LUVSD-PW (Standard in MCO-171AICUVD)		
Gas Regulator		MCO-010R-PW		
Gas Auto Changer		MCO-21GCP-PW		
Tray (same as that of standard accessory)		MCO-170ST-PW		
Half Tray		MCO-255T-PW		
Reinforced Additional Tray (InCu-safe®)		MCO-170RT-PW		
Double-stacking Bracket ⁵⁾		MCO-170PS-PW		
Stacking Plate ⁵⁾		MCO-170SB-PW, MCO-230SB-PW		
Roller Base		MCO-170RB-PW		
Optional Communication Systems		MCO-171AICD	MCO-171AICUVD	
		-PE	-PE	-PA
Interface Board ⁶⁾ ; for LAN		MTR-L03-PW		
Interface Board ⁶⁾ ; for RS-232C/RS-485		MTR-480-PW		
Interface Board (4-20mA)		MCO-420MA-PW		Standard
Quality Management System⁷⁾		MCO-171AICD	MCO-171AICUVD	
		-PE	-PE	-PA
Certification		ISO9001		

1) Exterior dimensions of main cabinet only, excluding handle and other external projections. 2) Ambient temperature 23°C, setting 37°C, CO₂ 5 %, no load. 3) Dry heat sterilisation can be performed only for the chamber and inner attachments with standard specifications, not for any other objects. 4) Nominal value. 5) If stacking two incubators, make sure the double-stacking dedicated securing hardware and spacer are used. 6) Only for the Data acquisition system MTR-5000 user. MCO-171AICD series can only be fitted with one communications interface. 7) MCO-171AICD and MCO-171AICUVD are for laboratory use.

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.

PHC Corporation, Biomedical Division

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

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