Data Sheet

CO_2 Incubators | MCO-170AICD/AICDL/AICUVD/AICUVDL

Precise & Regulated Environment
InCu-saFe® and SafeCell UV both function to prevent contamination. Direct Heat System and melamine foam insulation ensure optimal temperature distribution throughout the chamber while the Dual IR sensor controls the CO_2 level.

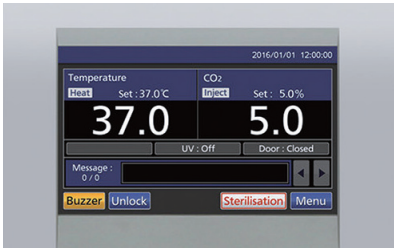
Dual Heat Sterilisation
Dual heat sterilisation utilises the incubator's two heaters during the 180°C sterilisation process, which takes 11 hours. Because there is no effect on temperature inside stacked incubators due to low heat dissipation, cell culturing can continue uninterrupted.

Improved Use & Maintenance
A colour LCD touchscreen panel allows full control, even with gloved hands. Transfer of data is easy via a USB port. The easy-to-clean incubator interior features fully rounded corners and integrated shelf supports.

Model Number		MCO-170AICD/MCO-170AICDL/MCO-170AICUVD/MCO-170AICUVDL			
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	79 (MCO-170AICD) / 80 (MCO-170AICUVD/MCO-170AICUVDL)			
Performance					
Temperature control range and fluctuation	°C	AT +5 to +50[2] (AT 5°C–35°C)			
Temperature uniformity[2]	°C	±0.25			
CO_2 setting range and fluctuation[2]	%	0 to 20, ±0.15			
Humidity level and fluctuation	% RH	95 ±5 (Natural evaporation with humidifying pan)			
Control					
Temperature sensor		Thermistor			
Sensor	CO_2	Dual IR			
Display		Colour LCD touchscreen			
Construction					
Exterior material		Painted Steel (rear cover not painted)			
Interior material		Stainless Steel Copper-Enriched Alloy			
Insulation material		Melamine resin foam			
Heating method		Heater jacket			
Sterilisation method[3]		Dry heat sterilisation, 180°C, 11 hours			
Outer door	qty	1 (Field reversible door)			
Inner door	qty	1 (tempered glass)			
Shelves	qty	4 x stainless steel copper-enriched alloy			
Shelf dimensions (W x D x H)	mm	475 x 450 x 12			
Max. load-per shelf	kg	7			
Access port	qty	1 (on the back side / Ø 30 mm)			
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			
High/Low gas density		V-B-R			
Door open		V-B			
Electrical and Noise Level		**MCO-170AICD MCO-170AICUVD**	**MCO-170AICDL**	**MCO-170AICUVDL**	
		-PK	**-PE**	**-PE**	**-PA**
Power supply	V	220	220-240		110-120
Frequency	Hz	60	50 / 60		60
Power Consumption (230V/50Hz)	kWh/day	1.367 (during cultivation) 2.887 (during dry heat sterilization)			
Noise level[4]	dB (A)	25			
Options					
UV system set		MCO-170UVSD-PE (MCO-170AICUVD/MCO-170AICUVDL Standard equipment)			
Gas regulator		MCO-010R-PW			
Gas auto changer		MCO-21GCP-PW			
STD gas auto calibration kit		MCO-SGP-PW			
Tray		MCO-170ST-PW			
Half tray		MCO-25ST-PW			
Double stacking bracket[5]		MCO-170PS-PW			
Stacking plate[5]		MCO-170SB-PW			
Roller base		MCO-170RB-PW			
Optional Communication Systems					
Digital interface (RS232C/RS485)[6]		MTR-480-PW			
Ethernet interface (LAN)[6]		MTR-L03-PW			
Analogue interface (4–20 mA)		MCO-420MA-PW			
Quality Management System[7]		**MCO-170AICD MCO-170AICUVD**	**MCO-170AICDL**	**MCO-170AICUVDL**	
		-PK	**-PE**	**-PE**	**-PA**
Certification		ISO13485	ISO9001		

1) External dimensions of main cabinet only, excluding handle and other external projections.
2) Ambient temperature 23°C, setting 37°C, CO_2 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-170AICD series can only be fitted with one communications interface.
7) MCO-170AICDL and MCO-170AICUVDL are 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.

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 stored in the product.



Intuitive Usability
Easy control and visibility of the internal conditions such as CO_2 level and temperature.

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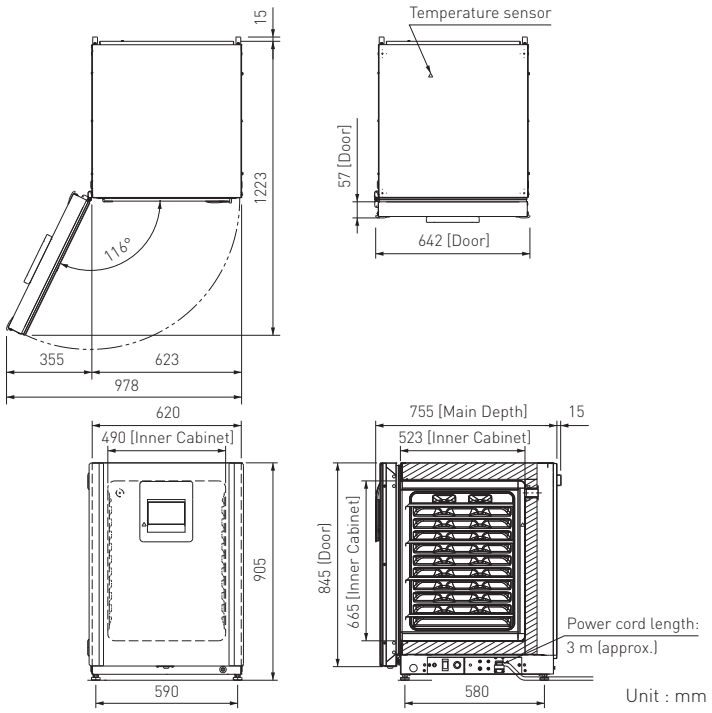
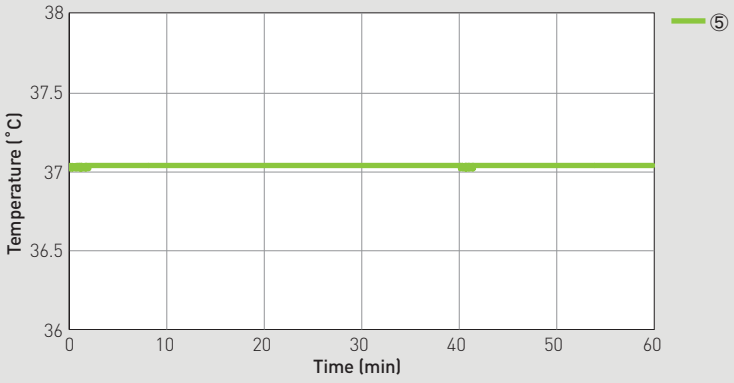
Life Science Innovator Since 1966

Dimensions



Temperature Stability

Condition: SV37°C, AT23°C, CO_2 0%, 220V 50Hz, no load



Internal Temperature Uniformity (Reference Data)

Distribution data

Temperature of the cycle in each area (SV37°C, air temperature)

Conditions

Load: Unloaded

Ambient temperature 23°C, CO_2 0%, 220V 50Hz

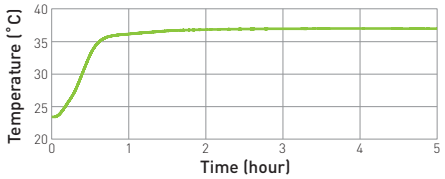
Unit:°C

	①	②	③	④	⑤	⑥	⑦	⑧	⑨
Chamber temp. at nine point (Ave.) <Pt:100Ω>	37.16	37.10	36.91	36.94	37.03	37.01	36.94	37.07	36.90

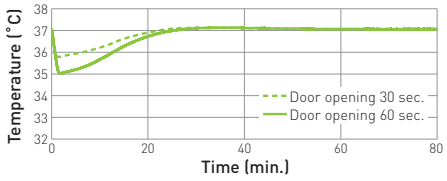
Performance Data

AT23°C, SV37°C, CO_2: 5 %, 220V/50Hz, no load

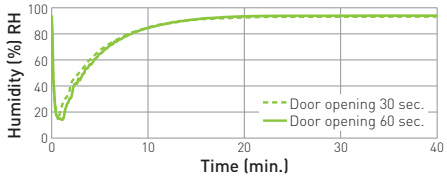
Temperature pull-up characteristics



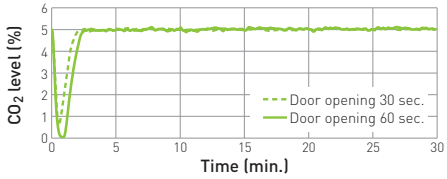
Temperature recovery characteristics



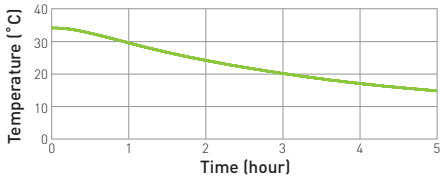
Humidity recovery characteristics



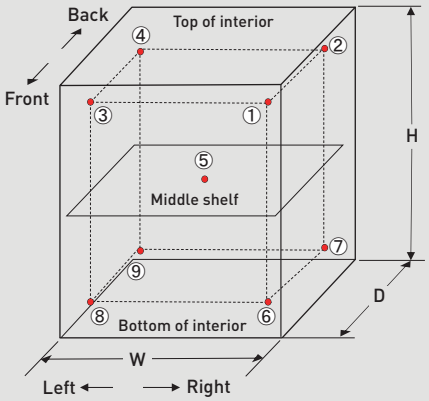
CO_2 level recovery characteristics



Temperature decrease characteristics when power failure occurs



Temperature uniformity - 9 points measuring



(Note) Disclaimer

• Specification may change without notice. • The performance data was measured by inhouse test data of PHC. • The Performance data is a reference data and not guaranteed.
• Not all the products available in all countries.

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