



MCO-170M-PE

## IncuSafe

Multigas Incubators

161 L



So comfortable, your cells will feel *in vivo*

**IncuSafe**, Class IIa Medical Device Certified Multigas Incubators optimise mammalian cell cultures through variable CO<sub>2</sub> & O<sub>2</sub> control to simulate *in vivo* conditions. The MCO-170M helps to achieve more accurate results and higher reproducibility when culturing cells at controlled physiological oxygen levels.

### Reproduction of *in vivo* conditions

With a unique, solid-state, zirconia sensor for precise oxygen control (1-18%; 22-80%) the MCO-170M Multigas Incubator is able to reproduce the low oxygen concentrations found in many tissues and organs.

### Time-Saving Decontamination

The high-speed decontamination system uses vaporized hydrogen peroxide and UV light to safely clean the chamber in less than 3 hours, with at least a 6 log reduction of major contaminants.

### Ease of Use & Maintenance

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



### Sensitive Cell Culturing

Culturing cells at physiological oxygen levels allows them to grow faster and live longer, and reduces the frequency of mutations.



### Efficient Workflows

Complete laboratory procedures and experiments more efficiently with less incubator downtime. Ideal for commercial applications.



### Intuitive Usability

Control and visibility of the internal conditions, such as CO<sub>2</sub>, O<sub>2</sub> levels, and temperature, is easy with the MCO-170M multigas incubator.

# IncuSafe Multigas Incubators



## Direct Heat and Air Jacket System

Achieves accurate, uniform, and highly responsive temperature control within the chamber, providing exceptional uniformity and rapid recovery after door-openings.

## Zirconia O<sub>2</sub> Sensor

The incubator's unique, solid-state, Zirconia O<sub>2</sub> sensor delivers precise control of physiological oxygen levels during incubation.

## Dual IR CO<sub>2</sub> Sensor

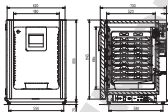
The incubator's Dual IR sensor and PID control enables ultra-fast CO<sub>2</sub> recovery without overshoot, even following multiple door-openings.

## Active Background Decontamination

The exclusive IncuSafe copper-enriched stainless steel alloy interior offers the germicidal properties of copper and the durability of stainless steel. The optional, isolated, SafeCell UV lamp decontaminates circulating air and water in the humidifying pan, without harming cultured cells.

## Condensation Management

With a unique antibacterial coating, the 'dew stick'—controlled by Patbier technology—condenses water on its surface, which then drips into the humidifying pan, preventing unwanted condensation in the chamber and possible contamination.



The MCD-1731A series are certified as a Class II Medical Device (EN 60601-1 and 2017/1302/EC) for medical purposes of cultivating cells, tissues, organs and embryos.



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Model Number	MCD-170M-PE	MCD-170MUN-PE	MCD-170MUN-PE
External Dimensions (W x D x H) <sup>1</sup>	mm	488 x 710 x 416	
Internal Dimensions (W x D x H)	mm	488 x 620 x 665	
Volume	liters	161	
Net Weight	kg	75	
<b>Performance</b>			
Temperature Control Range & Fluctuation	°C	AT 15 - 41.1 ±0.1	
Temperature Uniformity <sup>2</sup>	°C	±0.25	
CO <sub>2</sub> Control Range & Fluctuation <sup>3</sup>	%	0 - 20 ±0.15	
O <sub>2</sub> Control Range & Fluctuation <sup>4</sup>	%	1 - 16 and 10 - 16 ±0.2	
Humidity Level & Fluctuation <sup>5</sup>	%RH	45 ±3	
Sanitization Method		UV, Decontamination	
<b>Control</b>			
Temperature Sensor		Thermistor	
CO <sub>2</sub> sensor		Dual IR	
O <sub>2</sub> Sensor		State-of-the-Art Zirconia Sensor	
Display		7.0" Touch Screen	
<b>Construction</b>			
Exterior Material		Painted Steel (interior not included)	
Interior Material		316L Stainless Steel Copper-Enriched Alloy	
Insulation Material		Expandable Polyurethane Beads	
Heating Method		Direct Heat & Air Jacket System	
Caster Door Lock	Optional	Optional	Standard
Field Reversible Door		Included	
Inner Doors	Optional	4-gang only - made of tempered glass	
Shelving	Optional	3 x Stainless Steel Copper-Enriched Alloy	
Shelf Dimensions (W x D x H)	mm	ATL x 458 x 17	
Max. Load per Shelf <sup>6</sup>	kg	?	
Max. Shelf Capacity	Optional	1	
Access Point	Optional	1	
Access Point Position		Right Upper Left	
Access Point Diameter	Ømm	41	
<b>Alarms</b> IR = Borehole Alarm, V = Visual Alarm, B = Buzzer Alarm			
Power Failure		B	
Out of Ranges (re-Setting)		V&B	
High Temperature		V&B	
Out of CO <sub>2</sub> Setting		V&B	
Out of O <sub>2</sub> Setting		V&B	
Door open		V&B	
<b>Electrical and Noise Levels</b>			
Input Supply	V	230	
Frequency	Hz	50	
Noise Level <sup>7</sup>	dB	25	
<b>Options</b>			
SafeCell UV System	MCD-170UV-PC <sup>8</sup>	Standard	
H <sub>2</sub> O Decontamination Board	MCD-170H2O-PC <sup>9</sup>	Standard	
Electric Door Lock with Password	MCD-170EL-PC <sup>10</sup>	Standard	
H <sub>2</sub> O Vapor Generator	MCD-170V-PC <sup>11</sup>		
H <sub>2</sub> O Reagent, pack of 6 bottles	MCD-H202-PC		
Multiple Inner Doors	Standard		
CO <sub>2</sub> Gas Pressure Regulator	MCD-170R-PC		
O <sub>2</sub> Gas Pressure Regulator	MCD-170R-PC		
Automatic CO <sub>2</sub> Cylinder Changeover System	MCD-170C-PC		
Semi-automatic air-purifier Gas Cabinet Kit	MCD-170S-PC		
IncuSafe <sup>®</sup> Shelf	MCD-170S2-PC		
IncuSafe <sup>®</sup> Roll Top System	MCD-170TS-PC		
Double Stacking Tracker <sup>12</sup>	MCD-170DS-PC		
Stacking Plate <sup>13</sup>	MCD-170SP-PC		
Roller Gate	MCD-170RG-PC		
<b>Optional communication systems<sup>14</sup></b>			
Analogous interface (Modbus)	MCD-170IF-PC		

Appearance and specifications are subject to change without notice.

<sup>1</sup> External dimensions in mm, unless noted. Do not include shipping container.  
<sup>2</sup> Standard program at 37°C CO<sub>2</sub> 5% O<sub>2</sub> RH, no load.  
<sup>3</sup> Standard at 37°C.

<sup>4</sup> O<sub>2</sub> 21% (no load) or as setpoint on the incubator. O<sub>2</sub> 21% (no load) or as setpoint on the incubator. O<sub>2</sub> 21% (no load) or as setpoint on the incubator.

<sup>5</sup> Humidity level in %RH, unless noted. Do not include shipping container.

<sup>6</sup> Max. load per shelf in kg, unless noted. Do not include shipping container.

<sup>7</sup> Noise level in dB(A), unless noted. Do not include shipping container.

<sup>8</sup> UV system is optional. Do not include shipping container.

<sup>9</sup> H<sub>2</sub>O decontamination board is optional. Do not include shipping container.

<sup>10</sup> Electric door lock with password is optional. Do not include shipping container.

<sup>11</sup> H<sub>2</sub>O vapor generator is optional. Do not include shipping container.

<sup>12</sup> Double stacking tracker is optional. Do not include shipping container.

<sup>13</sup> Stacking plate is optional. Do not include shipping container.

<sup>14</sup> Analogous interface (Modbus) is optional. Do not include shipping container.