

## DATASHEET

### CELLCARE CO<sub>2</sub> INCUBATORS



The new BioAir CellCare family of incubators provide outstanding performances to offer a stabilized environment perfectly suited to cell and tissue cultures, taking into consideration the most sophisticated needs of those working in this area, both with continuous and batch cultures.

The advanced direct heating system and carefully designed inner chamber allow for a perfect environment for cells' growth while at the same time granting an easy operation and maintenance to the users.

## Choose you size

The CellCare family includes 2 different sizes of incubators: a smaller 50L (CellCare MINI) unit and a medium sized 188L (CellCare MIDI).

The large internal capacity of the 188 lt version, provides an effectively exploitable space of 140 lt (a value that leads to an effective capacity / space ratio that no other manufacturer can boast) thanks to the particular design of the rack and the 4-shelf system which ensures a support surface of 0.23 m<sup>2</sup> for each shelf.

Both units are designed with a fully seamless structure and removable shelving system for a simple and effective cleaning.

## The best technology for your cell culturing needs

The accuracy and precision of the temperature are ensured by 4 direct, validated and independently controlled heating elements, positioned on the 6 sides of the chamber, capable of measuring and controlling the temperature with a difference of 0.1 degrees with respect to the fixed value.

The CO<sub>2</sub> percentage is accurately maintained by a latest generation IR sensor, providing a very stable and precise measurement. The sensor is able to withstand the 180°C of the decontamination cycle, requiring no protection or additional care from the user, avoiding any risk of damaging it.

The humidity remains constantly at 95% by means of a 2.5 lt stainless steel tray, heated by the element placed on the bottom. A sensor (optional) constantly monitors the presence of water, warning the user when a refill is needed.

The integrated 180°C dry-heat decontamination system completes the package providing state-of-the-art sterilization when necessary.

## Main features

- Direct heating system providing a fine control of the temperature for improved uniformity
- Internal chamber in AISI304 stainless steel
- No welds and rounded corners with a wide radius for better cleanability
- Shelf support system easily removable without equipment
- Stacking system to stack 2 incubators
- Solid shelves increasing temperature uniformity near the flasks/petri dishes
- High temperature dry-heat decontamination cycle (180 °C for 2h)
- Passive air circulation without the need for filter systems, reducing maintenance complexity and costs
- Inner glass door
- Door opening to the left or right

- IR independent humidity technology for CO<sub>2</sub> sensors with no need of protection or removal during HT decon cycle
- CO<sub>2</sub> recovery time and rapid temperature (<5min)
- Passive humidification (water tank included in stainless steel with optional water level sensor)
- Electronic door lock allows to block the door allowing only authorized personnel to access the incubator via a password and automatically locks the door during HT decontamination cycle.
- Internal log of events and parameters graphs (temperature, CO<sub>2</sub>%, O<sub>2</sub>%) viewable on the display, with USB exporting capability
- Ability to export data via RJ45 for connection to external monitoring and data logging systems (4-20mA analog ports available as an option)
- Access port on the back of the incubation chamber – diameter 25mm
- Sampling port for calibration control without disturbing the inner atmosphere
- Optional O<sub>2</sub> control system for hypoxic experiments (0-21%)

### Control system

The CellCare is controlled via a full colour 7" touch-screen. The following parameters are always displayed:

- Current temperature and set point (unit 0.1°C)
- Current CO<sub>2</sub> concentration and set point (unit 0.1%)
- Current O<sub>2</sub> concentration and set point (if optional O<sub>2</sub> module is installed) (unit 0.1%)
- Current RH% concentration and set point (if optional RH% control system is installed) (unit 1%)

The system allows to set alarm thresholds for the following parameters:

- Temperature outside of set-point
- CO<sub>2</sub>% outside of set-point
- O<sub>2</sub>% outside of set-point (if optional O<sub>2</sub> module is installed)
- RH% outside of set-point (if optional RH% control system is installed)
- Water level too low (if optional water level sensor is installed)
- Door open for too long

All alarms are described in the user interface and have an acoustic signal. The two most recent active alarms are reported in the home-page while a list of all the alarms with their onset and resolution times can be accessed via a dedicated page on the control panel. The list of alarms is downloadable on a USB stick.

### Accessories

- Support stand with castors (height 540mm)
- Support stand with castors (height 200mm)
- Stacking kit (requires 200mm support stand)
- Inner glass door divided in sections (3 sections for MINI, 4 sections for MIDI)

## TECHNICAL SPECIFICATIONS

	CellCare MINI	CellCare MIDI
Inner volume (gross/net) L	50L/46L	188.6L/140L
External size (WxDxH) mm	566 x 619 x 790	696 x 769 x 1085
Weight (net/package)	110Kg/150Kg	160Kg/200Kg
Number of shelves	3	4
Shelf size (WxD)	370 x 280	500 x 450
Door opening side	Left or right	
Feet	4 adjustable feet for levelling	
Temperature range	RT+5°C to 60°C	
Temperature regulation	0.1°C	
Temperature max deviation	+/-0.3°C	
Uniformity recovery time	5 min	
CO2 range	0-20%	
CO2 regulation	0.1%	
CO2 max deviation	+/- 0.3%	
Required gas pressure	1.5 – 3 bar	
O2 range (optional)	0-25%	
O2 regulation	0.1%	
O2 max deviation	+/- 0.3%	
Decontamination temp.	Max 180°C	
Decontamination time at max temp	2hrs	
Decontamination type	High temperature – dry heat	
Power supply	220-240V – 50/60Hz – single phase	
Power consumption (max)	760W	1800W
Power consumption (at setpoint with closed door)	max. 100W/h	
Current (peak)	4A	9A
Noise level	N/A – no moving parts	
Vibration	N/A – no moving parts	
Interfaces	USB A – RJ45 – Free volt	
Gas connections	Located on the back of the unit	
Stackable	Yes (max 2 units)	
Useful life	10 years	

## Normatives and conformities

CellCare units are designed and built in conformity with the following european directives:

- 2014/35/EU Low Voltage Directive
- 2014/30/EU Electromagnetic Compatibility Directive
- 2011/65/EU Rohs Directive

the following harmonized european standards have been applied:

- EN 61010-1:2010 +A1:2019  
Safety requirements for electrical equipment for measurement, control and laboratory use.  
Part 1: General requirements.
- EN 61010-2-010:2014  
Safety requirement for electrical equipment for measurement, control and laboratory use. Part 2-010: Particular requirements for laboratory equipment for heating materials.
- EN 61326-1:2013  
Electrical equipment for measurement, control and laboratory use - EMC requirements. Part 1: General requirements.