

# CO<sub>2</sub> incubators



C | CB series



# CO<sub>2</sub> incubator CB 170

BINDER CO<sub>2</sub> incubators have always been trendsetters in cutting-edge cell cultivation. The new CB 170 model comes with an enhanced version of the ground-breaking anti-contamination concept but simpler operation. Performance has been improved and the interior is now 12% bigger, though the footprint has stayed the same and the stacking height has been reduced. The CB model is and always will be synonymous with the simple, hassle-free, and contamination-proof incubation of cell cultures.



## KEY FEATURES

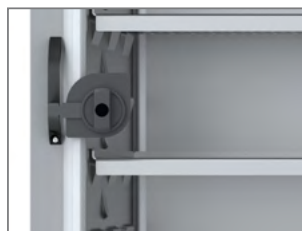
- Range of temperature controller: 4 °C via ambient temperature up to 60 °C
- CO<sub>2</sub> control range: 0–20 vol. % CO<sub>2</sub>
- O<sub>2</sub> control range: 0.2–20 vol % O<sub>2</sub> (variants)
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Intuitive touchscreen controller
- Optimized moisture management with quick recovery times
- 170 liters extra space in the interior while maintaining the same footprint
- Stacking height of just 1.80 m for easy use of the top unit
- Fail-safe CO<sub>2</sub> automatic diagnosis system for protecting cell cultures
- DuoDoor™ system: Unit door and glass door can be opened with one handle

## Advantages at a glance



### Intuitive touchscreen controller

State-of-the-art control technology with time-segment and real-time programming. Internal data logger, measured values can be read out in open format via USB.



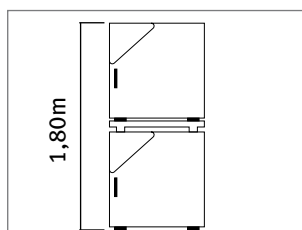
### DuoDoor™ door locking mechanism

Thanks to the new ergonomic door locking mechanism, the unit door and inner glass door can be opened at the same time.



### Moisture management with quick recovery times

Advanced Permadyry™ moisture system with practical water pan allows for faster humidification when the door is opened.



### Convenient lab work

The reduced stacking height allows for easy use of the top unit in the stack.

## TECHNICAL DATA

Description	CB 170
<b>Outer dimensions</b>	
Width net [mm]	680
Height net [mm]	870
Depth net [mm]	715
<b>Internal Dimensions</b>	
Width [mm]	560
Height [mm]	600
Depth [mm]	505
<b>Measures</b>	
Interior volume [L]	170
Net weight of the unit (empty) [kg]	95
permitted load [kg]	30
Load per rack [kg]	10
<b>Performance Data Temperature</b>	
Temperature range 4 °C above ambient temperature to [°C]	60
Temperature variation at 37 °C [± K]	0.3
Temperature fluctuation at 37 °C [± K]	0.1
Recovery time after 30 seconds door open at 37 °C [min]	6
<b>Performance Data Climate</b>	
Humidity range [% RH]	90...95
<b>CO<sub>2</sub>-Data</b>	
CO <sub>2</sub> range [Vol.-% CO <sub>2</sub> ]	0...20
CO <sub>2</sub> measurement	IR
<b>Electrical data</b>	
Nominal power (version 120 V) [kW]	1.4
Nominal power (version 230 V) [kW]	1.4
<b>Fixtures</b>	
Number of shelves (std./max.)	3/6

Interior volume	Fixed power unit fuse	Option model	Version	Art. No.
<b>CB 170 model</b>				
170 L	200...240 V 1~ 50/60 Hz	Standard	CB170-230V	9040-0131
		with O <sub>2</sub> control 0.2–20 % <sup>•</sup>	CB170-230V-O	9040-0132
		with active humidification	CB170-230V-F	9040-0133
		with O <sub>2</sub> control 0.2–20 % and active humidification	CB170-230V-OF	9040-0134
	100...120 V 1~50/60 Hz	Standard	CB170UL-120V	9040-0139
		with O <sub>2</sub> control 0.2–20 % <sup>•</sup>	CB170UL-120V-O	9040-0140
		with active humidification	CB170UL-120V-F	9040-0141
		with O <sub>2</sub> control 0.2–20 % and active humidification	CB170UL-120V-OF	9040-0142

<sup>•</sup>with an alternative O<sub>2</sub> control range 10–95 vol.-% O<sub>2</sub> as an option



Find all details about CO<sub>2</sub> incubators online  
[go2binder.com/en-CB](https://go2binder.com/en-CB)

# CO<sub>2</sub> incubators

Series C	Page 8
Series CB	Page 11
Options and Accessories	Page 14

Every CO<sub>2</sub> incubator from BINDER guarantees optimum, reproducible growth conditions for cell cultures. The proven APT.line™ air jacket system and Permady technology eliminate the risk of condensation. Thanks to 180 °C hot-air sterilization, bacteria and spores are eliminated.

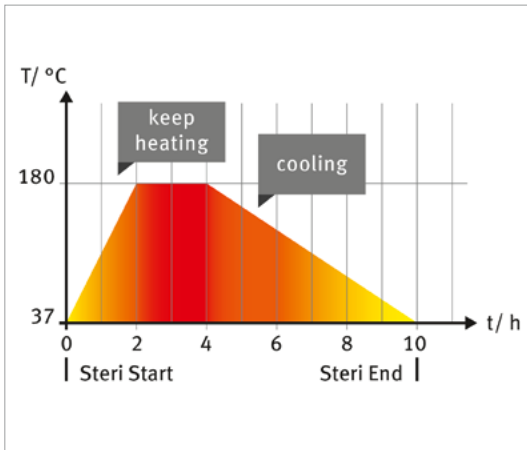
The unique, seamless deep-drawn inner chamber without built-in obstructions makes cleaning very simple. These are important advantages for uniformly good cell and tissue cultivation, which BINDER Series C and CB CO<sub>2</sub> incubators offer as standard.

## PRODUCT SELECTION CO<sub>2</sub> INCUBATORS

Features	Series C › Page 8	Series CB › Page 11
<b>Model</b>		
Model 60	–	•
Model 170	•	•
Model 220	–	•
<b>General data</b>		
Temperature range 7 °C above ambient temperature to [°C]	50	60
Temperature range 4 °C above ambient temperature to [°C]	–	60
Humidity range [% RH]	90...95	
Ethernet interface	–	•
USB interface	–	•
Plug-in system	Wire frame	Flanges
Humidification system	Water pan	Double shell
CO <sub>2</sub> sensor	IR, plug in	IR, can be sterilized
<b>Controller and timer functions</b>		
Controller display	LED	LCD color display/ TFT touch
Class 3.1 independent temperature safety device	•	•
Temperature alarm, acoustic	•	•
Temperature alarm, visual	•	•

•Standard equipment

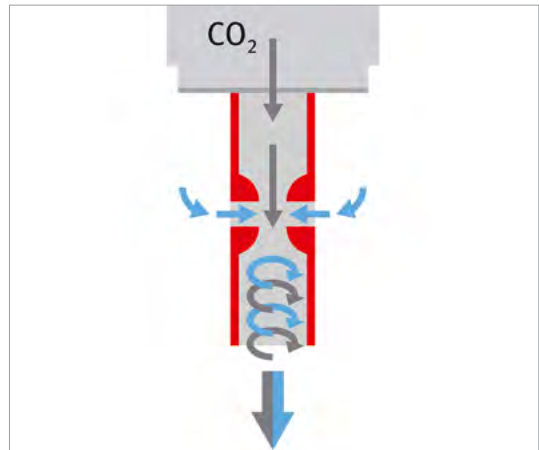
## ADVANTAGES AT A GLANCE



### MINIMAL RISK OF CONTAMINATION

Series C, CB

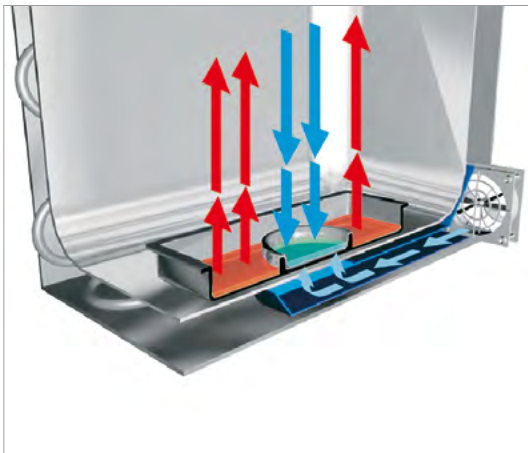
With 180 °C hot-air sterilization, complete sterilization of the entire interior is available at the push of a button. In the CB series, the CO<sub>2</sub> sensor is also sterilized.



### OPTIMUM CELL GROWTH

Series C, CB

Stable pH values thanks to drift-free CO<sub>2</sub> sensor technology and homogeneous CO<sub>2</sub> distribution using the BINDER gas mixing head according to the Venturi principle.



### PATENTED HUMIDITY MANAGEMENT

Series CB

Active humidity management provide high humidity values of 90% to 95% RH with minimal evaporation. The PERMADRY™ double wall humidity system ensures dry interior walls.



### THE "LESS IS MORE" INTERIOR CONCEPT

Series CB

Our interior ensure quick and easy cleaning due to the deep-drawn inner chamber created from a single piece of stainless steel without built-in obstructions. No consumables are required.

## Series CB | with hot air sterilization and heat sterilizable CO<sub>2</sub> sensor

The BINDER CB series CO<sub>2</sub> incubator is the premium class among the CO<sub>2</sub> incubators. It is suitable for all sensitive incubation applications and ensures optimal cell growth. A BINDER CB series CO<sub>2</sub> incubator can perform complex cultivation experiments as well as specific environmental conditions.



Model CB 170

### MAIN FEATURES

- Temperature range: ambient temperature plus 4 °C to 60 °C (CB 170)
- Humidity range: 90 to 95% RH
- CO<sub>2</sub> control range: 0 to 20 vol% CO<sub>2</sub>
- Alternative O<sub>2</sub> control range: 0,2-20 Vol.-% O<sub>2</sub> or 10-95 Vol.-% O<sub>2</sub> (O<sub>2</sub> versions)
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Optimized double-pan humidification system with condensation protection
- CO<sub>2</sub> gas-mixing jet with Venturi effect
- Hot-air sterilizable CO<sub>2</sub> sensor with infrared technology
- Intuitive touchscreen controller (CB 170)

### AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
CB 60	53	› <a href="https://go2binder.com/en-CB60">go2binder.com/en-CB60</a>
CB 170	170	› <a href="https://go2binder.com/en-CB170">go2binder.com/en-CB170</a>
CB 220	210	› <a href="https://go2binder.com/en-CB220">go2binder.com/en-CB220</a>



### TIPS & TRICKS

Benefit from our many years of experience, as demonstrated in our technical papers:

- Tips & Tricks: › [go2binder.com/en-tips-tricks](https://go2binder.com/en-tips-tricks)  
 Case Studies: › [go2binder.com/en-case-studies](https://go2binder.com/en-case-studies)



Find all details online  
[go2binder.com/en-CB](https://go2binder.com/en-CB)

## TECHNICAL DATA

Description	CB 60	CB 170	CB 220
<b>Outer dimensions</b>			
Width net [mm]	580	680	740
Height net [mm]	720	870	1070
Depth net [mm]	545	715	715
<b>Internal Dimensions</b>			
Width [mm]	400	560	560
Height [mm]	400	600	750
Depth [mm]	330	505	500
<b>Measures</b>			
Interior volume [L]	53	170	210
Net weight of the unit (empty) [kg]	68	95	132
permitted load [kg]	30	30	30
Load per rack [kg]	10	10	10
<b>Performance Data Temperature</b>			
Temperature range 4 °C above ambient temperature to [°C]	–	60	–
Temperature range 7 °C above ambient temperature to [°C]	60	–	60
Temperature variation at 37 °C [± K]	0.3	0.3	0.4
Temperature fluctuation at 37 °C [± K]	0.1	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	4	6	5
<b>Performance Data Climate</b>			
Humidity range [% RH]	90...95	90...95	90...95
<b>CO<sub>2</sub>-Data</b>			
CO <sub>2</sub> range [Vol.-% CO <sub>2</sub> ]	0...20	0...20	0...20
CO <sub>2</sub> measurement	IR	IR	IR
<b>Electrical data</b>			
Nominal power (version 120 V) [kW]	1	1.4	0
Nominal power (version 230 V) [kW]	1	1.4	1.5
<b>Fixtures</b>			
Number of shelves (std./max.)	2/3	3/6	3/8

## ORDERING INFORMATION [Art. No.]

**Further details:** Go to [www.binder-world.com](http://www.binder-world.com) > Search > Enter Article Number

Voltage	Option model	CB 60	CB 170	CB 220
200...240 V 1 50/60 Hz	Standard	9040-0088	9040-0131	9040-0096
	with 4x divided inner door	9040-0104	–	–
	with O <sub>2</sub> control	9040-0090	–	9040-0098
	with O <sub>2</sub> control and with 4x divided inner door	9040-0106	–	–
	mit O <sub>2</sub> control 0,2-20%	–	9040-0132	–
	with 6x divided inner door	–	9040-0131 8012-1844	9040-0108
	with O <sub>2</sub> control and with 6x divided inner door	–	9040-0132 8012-1844	9040-0110

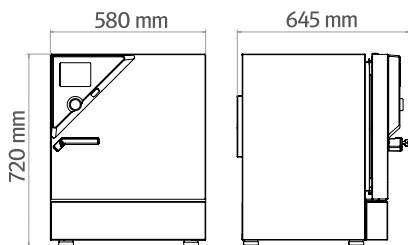


Voltage	Option model	CB 60	CB 170	CB 220
100...120 V 1 50/60 Hz	Standard	9040-0089	9040-0139	9040-0097
	with 4x divided inner door	9040-0105	-	-
	with O <sub>2</sub> control	9040-0091	-	9040-0099
	with O <sub>2</sub> control and with 4x divided inner door	9040-0107	-	-
	mit O <sub>2</sub> control 0,2-20%	-	9040-0140	-
	with 6x divided inner door	-	9040-0139 8012-1844	9040-0109
	with O <sub>2</sub> control and with 6x divided inner door	-	9040-0140 8012-1844	9040-0111

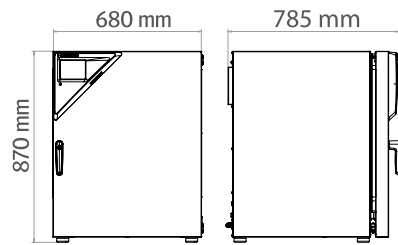
► You will find a selection of options, accessories and services suitable for each product on page 14

### DIMENSIONS incl. fittings and connections [mm]

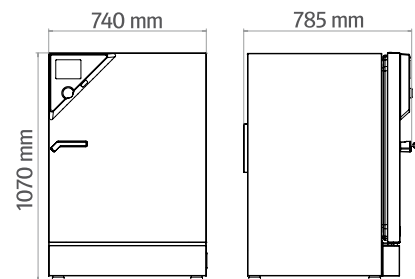
CB 60



CB 170



CB 220



## EXCERPT FROM OPTIONS AND ACCESSORIES

### Multiple-split inner door

Split glass doors and special corresponding shelf racks make it possible to divide the space for different experiments. The interior chamber atmosphere remains stable.

Series CB

### Stacking adapter

Stacking adapters support the safe positioning and stacking of BINDER CO<sub>2</sub> incubators.

Series C, CB

### CO<sub>2</sub> gas tank changer

External, Binder Gas Supply Service, for connecting 2 gas tanks, with audible and visual alarms, as well as zero-voltage alarm output.

Series C, CB

### CO<sub>2</sub> - shaker

High-quality solution for the incubation of suspension cell cultures in CO<sub>2</sub> incubators. The exclusive use of corrosion-resistant components in the stainless steel housing makes the CO<sub>2</sub> incubator suitable for gassed incubators with increased CO<sub>2</sub> concentrations and nearly saturated air humidity.

Series C, CB

### Copper interior fittings

Set consisting of 3 shelves (all-copper) and a water pan (copper-plated)

Series C

### Services

You can access our installation, maintenance, calibration, validation, or warranty services by taking out a Maintenance Service Agreement or by simply getting in touch when you need us.

More information is available in the accessories and services chapter.

Series C, CB

### BINDER INDIVIDUAL

Using a BINDER series production product as a basis, we develop individual solutions as a single unit or in small batches. All products are tested, certified, and supplied with a full functional guarantee and warranty. More information is available in the accessories and services chapter.

Series C, CB

► All extras online [go2binder.com/en-options](https://go2binder.com/en-options)



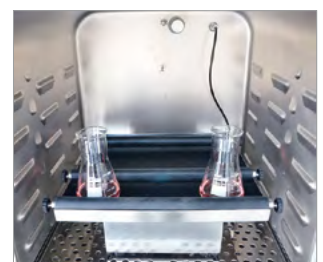
Multiple-split inner door



Stacking adapter



CO<sub>2</sub> gas tank changer



BINDER CO<sub>2</sub> - shakers

# BINDER products

CO<sub>2</sub> incubators

Incubators

Cooling incubators

Growth chambers

Ultralow temperature freezers

Drying and heating chambers

Safety drying chambers

Vacuum drying chambers

Constant climate chambers

Dynamic climate chambers



Never miss a product novelty -  
Subscribe and keep up to speed with  
the BINDER monthly newsletter.

**Subscription**

[go2binder.com/en-newsletter-subscription](http://go2binder.com/en-newsletter-subscription)



Best conditions for your success

## **BINDER GmbH**

Tuttlingen, Germany

Tel +49 7462 2005 0  
Fax +49 7462 2005 100  
[info@binder-world.com](mailto:info@binder-world.com)  
[www.binder-world.com](http://www.binder-world.com)

## **BINDER Asia Pacific (Hong Kong) Ltd.**

Kowloon, Hong Kong, P.R. China

Tel +852 39070500  
Fax +852 39070507  
[asia@binder-world.com](mailto:asia@binder-world.com)  
[www.binder-world.com](http://www.binder-world.com)

## **BINDER Environmental Testing Equipment (Shanghai) Co., Ltd.**

Shanghai, P.R.China

Tel +86 21 685 808 25  
Fax +86 21 685 808 29  
[china@binder-world.com](mailto:china@binder-world.com)  
[www.binder-world.com](http://www.binder-world.com)

## **Representative Office for CIS**

Moscow, Russia

Tel +7 495 988 15 16  
Fax +7 495 988 15 17  
[russia@binder-world.com](mailto:russia@binder-world.com)  
[www.binder-world.ru](http://www.binder-world.ru)

## **BINDER Inc.**

Bohemia, NY, USA

Tel +1 631 224 4340  
Fax +1 631 224 4354  
[usa@binder-world.com](mailto:usa@binder-world.com)  
[www.binder-world.us](http://www.binder-world.us)