

# Model CB-S 170 | CO<sub>2</sub> incubators with hot air sterilization

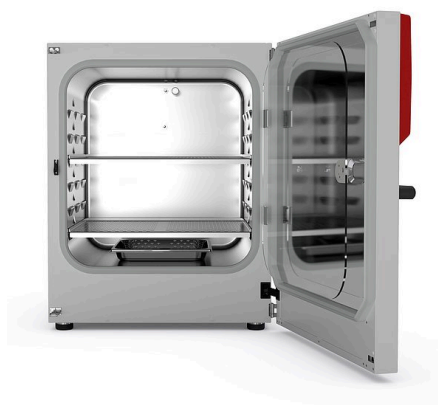
The durable and affordable CB-S series incubators are suitable for routine cell cultivation applications in the field of cell production, particularly in academic settings. They are contamination-proof due to 180 °C hot air sterilization and reliably pH-stable thanks to the drift-free infrared CO<sub>2</sub> measurements conducted in real time.

## BENEFITS

- Safe – cell cultures receive maximum protection against contamination
- Reliable – constant well-being conditions for the cells
- Smart – simple routine cleaning and convenient operation
- Economical – efficient operation without consumables



Model 170



Model 170

## MAIN FEATURES

- Temperature range: +6 °C above ambient temperature to +50 °C
- Humidity range: 90 to 95% RH
- CO<sub>2</sub> control range: 0 to 20 vol.% CO<sub>2</sub>
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Humidification system with condensation protection
- CO<sub>2</sub> gas mixing jet with Venturi effect
- CO<sub>2</sub> sensor with infrared technology
- LCD to display temperature and CO<sub>2</sub> along with additional information and alarms
- Internal data logger, measured values can be read out in open format via USB
- Tightly fitted inner door made of safety glass
- Seamless stainless steel inner chamber
- Perforated shelves, stainless steel
- Troubleshooting system with visual and acoustic alarms
- Interfaces: Ethernet, USB, zero-voltage alarm contact
- Units can be stacked with stacking adapters; the CB-S is suitable for stacking with CB and CBF models of the same size

## OPTIONAL EQUIPMENT

- Copper interior fittings consisting of copper shelves and copper-plated water pan
- Stacking adapter for secure, space-saving installation
- CO<sub>2</sub> gas tank changer for connecting two gas tanks to one or two incubators
- CO<sub>2</sub> shaker with corrosion-resistant components in a stainless-steel housing
- APT-COM Multi Management Software – for managing, recording, and documenting unit parameters
- Services – wide range of services to ensure that the unit functions correctly

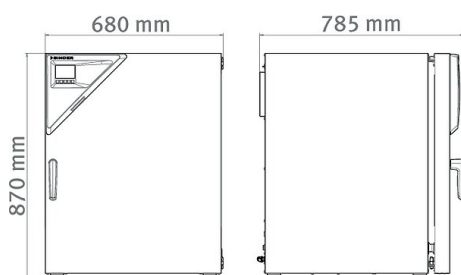
## ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
170	200...230 V 1~ ph 50/60 Hz	Standard	CBS170-230V	9640-0001
	100...120 V 1~ ph 50/60 Hz	Standard	CBS170UL-120V	9640-0002

**TECHNICAL DATA**

Description	CBS170-230V <sup>1</sup>	CBS170UL-120V <sup>1</sup>
<b>Article Number</b>	<b>9640-0001</b>	<b>9640-0002</b>
<b>Performance Data Temperature</b>		
Temperature range +6 °C above ambient temperature to	50 °C	50 °C
Temperature variation at 37 °C [± K]	0.3	0.3
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	6	6
<b>Performance Data Climate</b>		
Humidity range	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
CO <sub>2</sub> measurement	IR	IR
CO <sub>2</sub> Recovery time after 30 seconds door open at 5 Vol.-% CO <sub>2</sub> [min]	5	5
<b>Electrical data</b>		
Rated Voltage [V]	200...230	100...120
Power frequency [Hz]	50/60	50/60
Nominal power [kW]	1.3	1.3
Unit fuse [A]	10	16
Phase (Nominal voltage)	1~	1~
<b>Measures</b>		
Interior volume [L]	170	170
Net weight of the unit (empty) [kg]	96	96
Permitted load [kg]	30	30
Load per rack [kg]	10	10
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	50	50
<b>Internal Dimensions</b>		
Width [mm]	560	560
Height [mm]	600	600
Depth [mm]	505	505
<b>Doors</b>		
Inner doors	1	1
Unit doors	1	1
<b>Housing dimensions not incl. fittings and connections</b>		
Width net [mm]	680	680
Height net [mm]	870	870
Depth net [mm]	715	715
<b>Environment-specific data</b>		
Energy consumption at 37 °C [Wh/h]	45	45
Sound-pressure level [dB(A)]	41	41
<b>Fixtures</b>		
Number of shelves (std./max.)	2/6	2/6

<sup>1</sup> All technical data is specified for unloaded units with standard equipment at an ambient temperature of +22 °C ±3 °C and a power supply voltage fluctuation of ±10%. The temperature data is determined in accordance to BINDER factory standard following DIN 12880, observing the recommended wall clearances of 10 % of the height, width, and depth of the inner chamber. All indications are average values, typical for units produced in series. We reserve the right to change technical specifications at any time.

**DIMENSIONS incl. fittings and connections [mm]****OPTIONS**

Designation	Description	*	Art.-No.
<b>Access port with silicone plug</b>	back		
	30 mm	01	8612-0017
	left		
	30 mm	01	8612-0018
<b>Analog output 4-20 mA</b>	right		
	30 mm	01	8612-0019
<b>Analog output 4-20 mA</b>	for temperature and CO <sub>2</sub> values (outputs not adjustable)	02	8612-0016
<b>Calibration certificate, expanded</b>	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1112
<b>Calibration certificate, temperature</b>	for temperature, measurement in center of chamber at specified temperature	-	8012-1131
	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1591
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1570
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1549
<b>Calibration certificate, temperature and CO<sub>2</sub></b>	for temperature and CO <sub>2</sub> , temperature measurement in center of chamber, CO <sub>2</sub> measurement performed using test gas at 37 °C and 5 % CO <sub>2</sub>	-	8012-0228
<b>Door hinged on the left</b>	Unit door and standard glass inner door with door hinged on the left	-	8612-0020
<b>Door lock</b>	lockable door handle	-	8612-0021

\* Notes › See last page

**ACCESSORIES**

Designation	Description	*	Art.-No.
<b>APT-COM™ 4 BASIC-Edition</b>	for simple logging and documentation requirements with up to 5 networked units. version 4, BASIC edition	-	9053-0039
<b>APT-COM™ 4 GLP-Edition</b>	for working under GLP-compliant conditions. Measured values are documented in a tamper-proof way in line with the requirements of FDA Regulation 21 CFR 11. version 4, GLP edition	-	9053-0042
<b>APT-COM™ 4 PROFESSIONAL-Edition</b>	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units. version 4, PROFESSIONAL edition	-	9053-0040
<b>Base</b>	the base equipped with casters is used for the secure positioning and leveling of a BINDER CO <sub>2</sub> incubator	-	9051-0028
<b>Cleaning kit</b>	for equipment maintenance and disinfection, consisting of pH-neutral detergent (1000 g, concentrate), spray disinfectant (500 ml, ready-to-use solution), lint-free cleansing tissues, protective gloves, and protective glasses	-	8012-0503
<b>Copper interior fittings</b>	Set consisting of 2 shelves (all-copper) and a water pan (copper-plated), more information.	-	8012-1997
<b>Gas cylinder connection set</b>	for CO <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0014
<b>Gas tank changer</b>	external, BINDER Gas Supply Service, for connecting 2 gas tanks (CO <sub>2</sub> , N <sub>2</sub> or O <sub>2</sub> ), with audible and visual alarms, as well as zero-voltage alarm output	-	8012-0408
<b>pH-neutral detergent</b>	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016

\* Notes › See last page

Designation	Description	*	Art.-No.
<b>Qualification documents</b>	IQ/OQ documents – supporting documents for validation performed by customers, consisting of: IQ/OQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, CO <sub>2</sub> , O <sub>2</sub> , pressure, depending on unit		
	Digital in PDF format	–	7057-0001
	Hard copy inside folder	–	7007-0001
	IQ/OQ/PQ documents – supporting documents for validation performed by customers, according to customer requirements, PQ section added to qualification folder IQ/OQ; parameters: temperature, CO <sub>2</sub> , O <sub>2</sub> – or pressure, depending on unit		
	Digital in PDF format	–	7057-0005
	Hard copy inside folder	–	7007-0005
<b>Rubber pads</b>	set anti-slip feet	–	8012-0702
<b>Shaker „Universal“</b>	Shaker and controller connected via ribbon cable, universally applicable, 100 – 240 V, 50/60 Hz	–	8012-1771
<b>Shelf, perforated</b>	Stainless steel	–	6004-0137
<b>Stacking adapter</b>	for the thermally isolated stacking of two BINDER CO <sub>2</sub> incubators	–	9051-0035
<b>Stacking frame</b>	stable, vibration-free stacking frame on casters with stop brake for safe stacking of two CB series units	–	9051-0040
<b>WLAN kit</b>	The kit contains a client bridge that establishes a wireless connection between BINDER units and APT-COM4, LIMS, or customer-specific software via an Ethernet interface. It provides an alternative solution in situations where units need to be positioned in locations without an on-site Ethernet connection. In secured networks, installation and configuration must be performed by the customer's IT service.	–	8500-0164

\* Notes › See last page

## SERVICES

Designation	Description	*	Art.-No.
<b>Installation services</b>			
Unit commissioning	Connect the unit to the customer-side connections (electricity, water, wastewater, gas), basic functions check, brief operating instructions. (excl.: unpacking, setup, controller instructions, programming, installation work)	05	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0500
<b>Maintenance contracts</b>			
<b>Maintenance services</b>			
BRONZE 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts	05	DL20-0710
GOLD 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, replacement of wear parts, calibration of one temperature and CO <sub>2</sub> value, including certificate	05	DL20-0940
Maintenance	One-off maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Calibration of a test temperature specified by the user in center of usable space without certificate	05	DL20-0400
SILVER 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, calibration of one test temperature specified by the user in the center of the usable space, without certificate	05	DL20-0820
<b>Calibration services</b>			
Calibration certificate, temperature	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	03, 04, 05	DL30-0101
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	03, 04, 05	DL30-0102
CO <sub>2</sub> calibration	CO <sub>2</sub> calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate	03, 04, 05	DL30-0401
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0127
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0109

\* Notes › See last page

Designation	Description	*	Art.-No.
<b>Validation services</b>			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	05	DL41-0200
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	05	DL44-0500
<b>Warranty service</b>			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	-	DL50-0020

\* Notes › See last page

**NOTES**

- 01 Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge.
- 02 UL mark is not granted when this option is used.
- 03 Sensor calibration is performed in an accredited calibration laboratory.
- 04 Calibration is performed according to the BINDER factory standard.
- 05 Quoted prices do not include travel costs. Please refer to the chapter on BINDER Service for travel costs for your region. Quoted prices for services performed in Switzerland do not include a country-specific added fee (available on request).

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