

Model CB 170 | CO₂ incubators with hot air sterilization and heat sterilizable CO₂ sensor

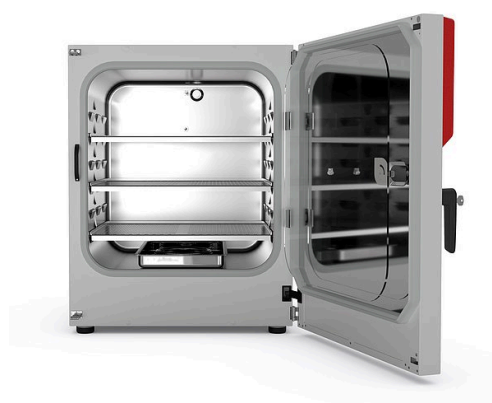
The powerful and versatile CB CO₂ incubator is suitable for cell-based assays in drug and medical research. This BINDER incubator is even suitable for complex cultivation experiments or individual environments with hypoxic conditions thanks to its comprehensive assortment of options and accessories.

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

- Optimized double-pan humidification system with condensation protection
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Hot-air sterilizable CO₂ sensor with single-beam infrared technology
- Seamless inner chamber made of stainless steel with flanges as shelf support system
- Fanless interior with Venturi CO₂ gas mixing nozzle
- Intuitive touchscreen controller
- Internal data recording, can be read out in open format via USB interface
- Fault diagnosis system with visual and acoustic alarm
- Interfaces: Ethernet, USB, zero-voltage alarm contact
- Fail-safe CO₂ system for protecting the pH of cell cultures

OPTIONAL EQUIPMENT

- O₂ control with O₂ control ranges: 0.2 to 20 vol.% O₂ or 10 to 95 vol.% O₂
- Multi-sectional glass doors with special shelves for dividing up the space to accommodate different experiments
- Stacking adapter for secure, space-saving installation
- Gas tank changer for connecting two gas tanks to one or two incubators

ORDERING INFORMATION

Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
6	200...230 V 1~ 50/60 Hz	Standard	CB170-230V	9640-0009
		with Access port 30 mm left	CB170-230V-D	9640-0027
		with O ₂ control	CB170-230V-O	9640-0010
	100...120 V 1~ 50/60 Hz	Standard	CB170UL-120V	9640-0011
		with Access port 30 mm left	CB170UL-120V-D	9640-0028
		with O ₂ control 0.2–20%	CB170UL-120V-O	9640-0012

TECHNICAL DATA

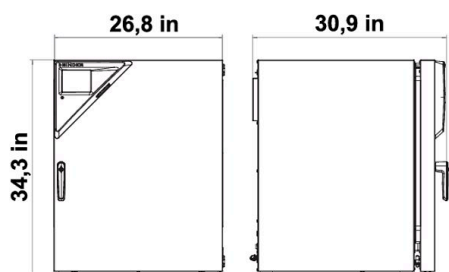
Description	CB170-230V ¹	CB170-230V-D ¹	CB170-230V-O ¹	CB170UL-120V ¹	CB170UL-120V-D ¹	CB170UL-120V-O ¹
Article Number	9640-0009	9640-0027	9640-0010	9640-0011	9640-0028	9640-0012
Performance Data Temperature						
Temperature range +4 °C above ambient temperature to [°C]	60	60		60	60	
Temperature range +6 °C above ambient temperature to [°C]			60			60
Temperature variation at 37 °C [± K]	0.3	0.3	0.3	0.3	0.3	0.3
Temperature fluctuation at 37 °C [± K]	0.1	0.1	0.1	0.1	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	6	6	6	6	6	6
Tabellen						
Humidity range	90...95	90...95	90...95	90...95	90...95	90...95
CO ₂ Recovery time after 30 seconds door open at 5 Vol.-% CO ₂ [min]	5	5	5	5	5	5
O ₂ Recovery time after 30 seconds door open at 5 Vol.-% O ₂ [min]			10			10
Energy consumption at 37 °C [Wh/h]	55	55	55	55	55	55
CO₂-Data						
CO ₂ range [Vol.-% CO ₂]	0...20	0...20	0...20	0...20	0...20	0...20
CO ₂ measurement	IR	IR	IR	IR	IR	IR
O₂-Data						
Standard O ₂ control ranges: O ₂ range [Vol.-% O ₂]			0.2...20			0.2...20
O ₂ control ranges with option: O ₂ range [Vol.-% O ₂]			10...95			10...95
Electrical data						
Rated Voltage [V]	200...230	200...230	200...230	100...120	100...120	100...120
Power frequency [Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Nominal power [kW]	1.4	1.4	1.4	1.4	1.4	1.4
Unit fuse [A]	10	10	10	16	16	16
Phase (Nominal voltage)	1~	1~	1~	1~	1~	1~
Measures						
Interior volume [cu.ft.]	6	6	6	6	6	6
Net weight of the unit (empty) [lbs]	216	216	216	216	216	216
Permitted load [lbs]	66	66	66	66	66	66
Load per rack [lbs]	22	22	22	22	22	22
Wall clearance back [in]	3.94	3.94	3.94	3.94	3.94	3.94
Wall clearance sidewise [in]	1.97	1.97	1.97	1.97	1.97	1.97
Internal Dimensions						
Width [in]	22.06	22.06	22.06	22.06	22.06	22.06
Height [in]	23.64	23.64	23.64	23.64	23.64	23.64
Depth [in]	19.9	19.9	19.9	19.9	19.9	19.9
Doors						
Inner doors	1	1	1	1	1	1
Unit doors	1	1	1	1	1	1

1 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 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.

Description	CB170-230V ¹	CB170-230V-D ¹	CB170-230V-O ¹	CB170UL-120V ¹	CB170UL-120V-D ¹	CB170UL-120V-O ¹
Article Number	9640-0009	9640-0027	9640-0010	9640-0011	9640-0028	9640-0012
Housing dimensions not incl. fittings and connections						
Width net [in]	26.79	26.79	26.79	26.79	26.79	26.79
Height net [in]	34.28	34.28	34.28	34.28	34.28	34.28
Depth net [in]	28.17	28.17	28.17	28.17	28.17	28.17
Environment-specific data						
Sound-pressure level [dB(A)]	41	41	41	41	41	41
Fixtures						
Number of shelves (std./max.)	3/6	3/6	3/6	3/6	3/6	3/6

1 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 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.
Access port with silicone plug	back 30 mm	01	8612-0025
	left 30 mm	01	8612-0026
	right 30 mm	01	8612-0027
	Analog output 4-20 mA	for temperature and CO ₂ values (outputs not adjustable)	02
Calibration certificate O ₂	for versions with O ₂ control; a measuring point in center of chamber at a specified O ₂ percentage value	-	8012-0229
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	-	8012-1132
	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1592
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1571
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1550
Calibration certificate, temperature and CO ₂	for temperature and CO ₂ , temperature measurement in center of chamber, CO ₂ measurement performed using test gas at 37 °C and 5 % CO ₂	-	8012-1235
CELLROLL Set	modular, expandable roller bottle system for cell cultivation, 4 roller bottles	-	8612-0023
Door hinged on the left	Unit door and standard glass inner door with door hinged on the left	-	8612-0034
Electric access port	8-pin, for low voltage with LEMO socket (coverable) and LEMO plug (max. 24 V – 2 A)	-	8612-0033
Inner door, divided	Cell therapy compartmentalization, consisting of 6 inner doors and three shelf levels with one partition wall each	-	8612-0030
O ₂ control range	alternative to the standard range, for controlling O ₂ concentrations between 10 and 95 vol. %, only in conjunction with option models with O ₂ control	-	8612-0028
Quick sample access	viewing window (13 x 25 cm) in the inner door for quick access	-	8612-0032

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.
Base	the base equipped with casters is used for the secure positioning and leveling of a BINDER CO ₂ incubator	-	9051-0028
Copper interior fittings	Set consisting of 3 shelves (all-copper) and a water pan (copper-plated), more information.	-	8012-1918
Gas cylinder connection set	for CO ₂ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0014
	for N ₂ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0016
	for O ₂ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0015
Gas tank changer	external, BINDER Gas Supply Service, for connecting 2 gas tanks (CO ₂ , N ₂ or O ₂), with audible and visual alarms, as well as zero-voltage alarm output	-	8012-0408
Multi Management Software	Multi Management Software APT-COM™		
	version 4, BASIC edition	-	9053-0039
	version 4, GLP edition	-	9053-0042
	version 4, PROFESSIONAL edition	-	9053-0040
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
Qualification documents	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 ₂ , O ₂ , 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 ₂ , O ₂ – or pressure, depending on unit		
	Digital in PDF format	-	7057-0005
	Hard copy inside folder	-	7007-0005
Rubber pads	set anti-slip feet	-	8012-0702
Shaker „Professional“	Shaker and controller equipped with LEMO connectors, exclusively for CB with electric access port, 100 – 240 V, 50/60 Hz	-	8012-1772
Shaker „Universal“	Shaker and controller connected via ribbon cable, universally applicable, 100 – 240 V, 50/60 Hz	-	8012-1771
	Stainless steel	-	6004-0137
Shelf, perforated	for divided inner door		
	Stainless steel, divided	-	8012-1888
Stacking adapter	for the thermally isolated stacking of two BINDER CO ₂ incubators	-	9051-0035
Stacking frame	stable, vibration-free stacking frame on casters with stop brake for safe stacking of two CB series units	-	9051-0040
WLAN kit	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.
Installation services			
Unit installation	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
Maintenance services			
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 ₂ 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

* Notes › See last page

Designation	Description	*	Art.-No.
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
Calibration services			
CO ₂ calibration	CO ₂ calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate	03, 04, 05	DL30-0401
O ₂ calibration	O ₂ calibration with 1 measuring point in center of chamber at a specified O ₂ percentage value, including certificate	03, 04, 05	DL30-0402
Temperature calibration	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
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
Validation services			
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
Warranty service			
Warranty extension from 2 to 3 years	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).

BINDER GmbH

Tuttlingen, Germany
TEL +49 7462 2005 0
FAX +49 7462 2005 100
info@binder-world.com
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
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
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
www.binder-world.com

BINDER Inc.

Bohemia, NY, USA
TEL +1 631 224 4340
FAX +1 631 224 4354
usa@binder-world.com
www.binder-world.us