

Model CB-S 170 | CO₂ incubators with hot air sterilization

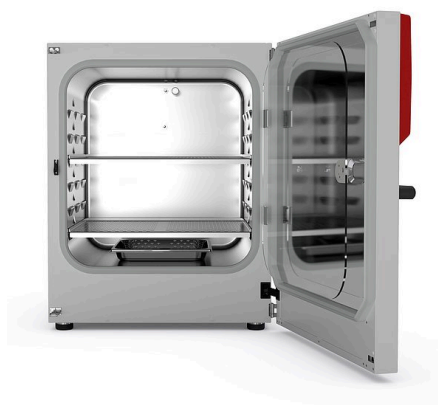
The durable and affordable CB-S series incubators are suitable for routine cell cultivation applications in the field of cell production, particularly in academic settings. They are contamination-proof due to 180 °C hot air sterilization and reliably pH-stable thanks to the drift-free infrared CO₂ measurements 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
- CO₂ control range: 0 to 20 vol.% CO₂
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Humidification system with condensation protection
- CO₂ gas mixing jet with Venturi effect
- CO₂ sensor with infrared technology
- LCD to display temperature and CO₂ 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
- CO₂ gas tank changer for connecting two gas tanks to one or two incubators
- CO₂ 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 [cu.ft.]	Voltage	Option model	Version	Art.-No.
6	200...230 V 1~ 50/60 Hz	Standard	CBS170-230V	9640-0001
		with Access port 30 mm left	CBS170-230V-D	9640-0029
	100...120 V 1~ 50/60 Hz	Standard	CBS170UL-120V	9640-0002
		with Access port 30 mm left	CBS170UL-120V-D	9640-0030

TECHNICAL DATA

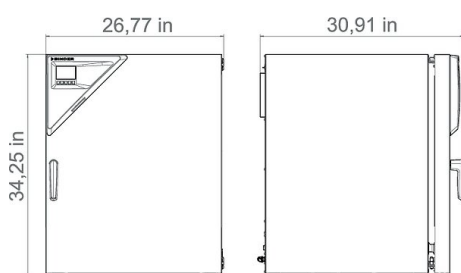
Description	CBS170-230V ¹	CBS170-230V-D ¹	CBS170UL-120V ¹	CBS170UL-120V-D ¹
Article Number	9640-0001	9640-0029	9640-0002	9640-0030
Performance Data Temperature				
Temperature range +6 °C above ambient temperature to	50 °C	50 °C	50 °C	50 °C
Temperature variation at 37 °C [± K]	0.3	0.3	0.3	0.3
Temperature fluctuation at 37 °C [± K]	0.1	0.1	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	6	6	6	6
Performance Data Climate				
Humidity range	90...95	90...95	90...95	90...95
CO₂-Data				
CO ₂ range [Vol.-% CO ₂]	0...20	0...20	0...20	0...20
CO ₂ measurement	IR	IR	IR	IR
CO ₂ Recovery time after 30 seconds door open at 5 Vol.-% CO ₂ [min]	5	5	5	5
Electrical data				
Rated Voltage [V]	200...230	200...230	100...120	100...120
Power frequency [Hz]	50/60	50/60	50/60	50/60
Nominal power [kW]	1.3	1.3	1.3	1.3
Unit fuse [A]	10	10	16	16
Phase (Nominal voltage)	1~	1~	1~	1~
Measures				
Interior volume [cu.ft.]	6	6	6	6
Net weight of the unit (empty) [lbs]	212	212	212	212
Permitted load [lbs]	66	66	66	66
Load per rack [lbs]	22	22	22	22
Wall clearance back [in]	3.94	3.94	3.94	3.94
Wall clearance sidewise [in]	1.97	1.97	1.97	1.97
Internal Dimensions				
Width [in]	22.06	22.06	22.06	22.06
Height [in]	23.64	23.64	23.64	23.64
Depth [in]	19.9	19.9	19.9	19.9
Doors				
Inner doors	1	1	1	1
Unit doors	1	1	1	1
Housing dimensions not incl. fittings and connections				
Width net [in]	26.79	26.79	26.79	26.79
Height net [in]	34.28	34.28	34.28	34.28
Depth net [in]	28.17	28.17	28.17	28.17

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 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.

Description	CBS170-230V ¹	CBS170-230V-D ¹	CBS170UL-120V ¹	CBS170UL-120V-D ¹
Article Number	9640-0001	9640-0029	9640-0002	9640-0030
Environment-specific data				
Energy consumption at 37 °C [Wh/h]	45	45	45	45
Sound-pressure level [dB(A)]	41	41	41	41
Fixtures				
Number of shelves (std./max.)	2/6	2/6	2/6	2/6

- 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 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.
Access port with silicone plug	back 30 mm	01	8612-0017
	left 30 mm	01	8612-0018
	right 30 mm	01	8612-0019
Analog output 4-20 mA	for temperature and CO ₂ values (outputs not adjustable)	02	8612-0016
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1112
Calibration certificate, temperature	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
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	-	8012-0228
Door hinged on the left	Unit door and standard glass inner door with door hinged on the left	-	8612-0020
Door lock	lockable door handle	-	8612-0021

* 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
Cleaning kit	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
Copper interior fittings	Set consisting of 2 shelves (all-copper) and a water pan (copper-plated), more information.	-	8012-1997
Gas cylinder connection set	for CO ₂ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0014

* Notes › See last page

Designation	Description	*	Art.-No.
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 „Universal“	Shaker and controller connected via ribbon cable, universally applicable, 100 – 240 V, 50/60 Hz	-	8012-1771
Shelf, perforated	Stainless steel	-	6004-0137
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
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
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

* Notes › See last page

Designation	Description	*	Art.-No.
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