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

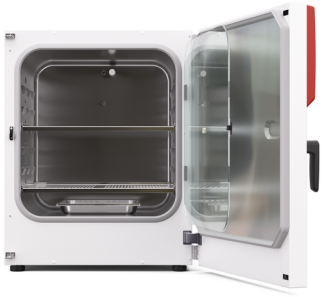
The durable and affordable CB-S series incubators are suitable for routine cell cultivation applications in the field of cell production, particularly in academic settings. They are contamination-proof due to 180°C hot air sterilization and reliably pH-stable thanks to the drift-free infrared CO_2 measurements 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

IMPORTANT FEATURES

- Humidification system with condensation protection
- Tried-and-tested anti-contamination concept with 180°C hot air sterilization
- CO2 sensor with infrared technology
- Seamless stainless steel inner chamber
- CO2 gas mixing jet with Venturi effect
- PID controller with clear LCD display
- Internal data logger; measured values can be read in an open format via USB
- Troubleshooting system with visual and acoustic alarms
- Interfaces: Ethernet, USB, zero-voltage alarm contact

OPTIONAL EQUIPMENT

- Copper interior fittings consisting of copper shelves and copper-plated water pan
- Stacking adapter for secure, space-saving installation
- CO_2 gas tank changer for connecting two gas tanks to one or two incubators
- CO_2 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]	Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
Model CB-S 170					
170	200...230 V 1~ 50/60 Hz -10,0 A	CEE 7/7	Standard	CBS170-230V	9040-0219
			with left-hand hinge	CBS170-230V-L	9040-0220
	100...120 V 1~ 50/60 Hz -16,0 A	NEMA 5-20	Standard	CBS170UL-120V	9040-0221

Interior volume [L]	Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
			with left-hand hinge	CBS170UL-120V-L	9040-0222

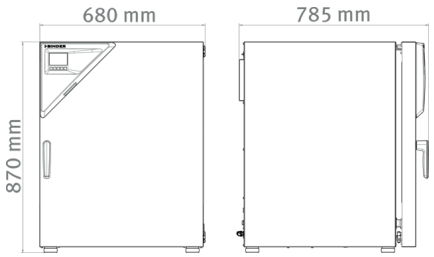
TECHNICAL DATA

Data				
Article Number	9040-0219	9040-0220	9040-0221	9040-0222
Designation	CBS170-230V	CBS170-230V-L	CBS170UL-120V	CBS170UL-120V-L
Option model	Standard	with left-hand hinge	Standard	with left-hand hinge
Performance Data Temperature				
Temperature range	+6 °C above ambient temperature to 50 °C	+6 °C above ambient temperature to 50 °C	+6 °C above ambient temperature to 50 °C	+6 °C above ambient temperature to 50 °C
Temperature uniformity at 37°C	0.3 ± K	0.3 ± K	0.3 ± K	0.3 ± K
Temperature fluctuation at 37°C	0.1 ± K	0.1 ± K	0.1 ± K	0.1 ± K
Recovery time after door was opened for 30 s at 37°C	6 min	6 min	6 min	6 min
Performance Data Climate				
Humidity range	90 ...95 % RH	90 ...95 % RH	90 ...95 % RH	90 ...95 % RH
Gas Data				
CO_2 range	0 ...20 Vol.-% CO_2	0 ...20 Vol.-% CO_2	0 ...20 Vol.-% CO_2	0 ...20 Vol.-% CO_2
CO_2 measuring technology	IR	IR	IR	IR
CO_2 recovery time after door was opened for 30 s at 5 vol. % CO_2	5 min	5 min	5 min	5 min
Electrical data				
Rated Voltage	200...230 V	200...230 V	100...120 V	100...120 V
Power frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Nominal power	1,3 kW	1,3 kW	1,3 kW	1,3 kW
Unit fuse	10,0 A	10,0 A	16,0 A	16,0 A
Phase (Nominal voltage)	1~	1~	1~	1~
Dimensions and weights				
Interior volume	170 L	170 L	170 L	170 L
Net weight of the unit (empty)	96 kg	96 kg	96 kg	96 kg
Load per rack	10 kg	10 kg	10 kg	10 kg
Permitted load	30 kg	30 kg	30 kg	30 kg
Wall clearance back	100 mm	100 mm	100 mm	100 mm
Wall clearance sidewise	50 mm	50 mm	50 mm	50 mm
Housing dimensions not incl. fittings and connections				

Width net	680 mm	680 mm	680 mm	680 mm
Height net	870 mm	870 mm	870 mm	870 mm
Depth net	715 mm	715 mm	715 mm	715 mm
Internal Dimensions				
Interior width	560 mm	560 mm	560 mm	560 mm
Interior height	600 mm	600 mm	600 mm	600 mm
Interior depth	505 mm	505 mm	505 mm	505 mm
Inner doors	1	1	1	1
Unit doors	1	1	1	1
Environment-specific data				
Sound-pressure level	41 dB(A)	41 dB(A)	41 dB(A)	41 dB(A)
Energy consumption at 37°C	45 Wh/h	45 Wh/h	45 Wh/h	45 Wh/h
Fixtures				
Number of shelves (std./max.)	2/6	2/6	2/6	2/6

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	CB-S 170	*	Art.-No.
Access port with silicone plug	back			
	30 mm	•	01	8012-2729
	left			
	30 mm	•	01	8012-2730
	right			
	30 mm	•	01	8012-2731
Analog output 4-20 mA	for temperature and CO_2 values (outputs not adjustable)	•	02	8012-1839

Designation	Description	CB-S 170	*	Art.-No.
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, 9 measuring points at specified temperature	•	-	8012-1549
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	-	8012-1570
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	-	8012-1591
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 lock	lockable door handle	•	-	8012-1014

ACCESSORIES

Designation	Description	CB-S 170	*	Art.-No.
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units.			
	version 4, BASIC edition	•	-	9053-0039
APT-COM™ 4 GLP-Edition	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
APT-COM™ 4 PROFESSIONAL-Edition	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.			
	version 4, PROFESSIONAL edition	•	-	9053-0040
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)	•	-	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
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	•	-	8012-2344
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	-	8012-2250
Qualification documents	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			

Designation	Description	CB-S 170	*	Art.-No.
	Digital in PDF format	•	-	7057-0005
	Hard copy inside folder	•	-	7007-0005
	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
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	•	-	8012-2167
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
Water supply	Set consisting of 6 bottles, each with 1,000 ml of sterile humidification water	•	-	8009-1192

SERVICES

Designation	Description	*	Art.-No.
Calibration services			
Calibration certificate, temperature	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	05	DL30-0140
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	05	DL30-0102
CO_2 calibration	CO_2 calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate	05	DL30-0401
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	05	DL30-0109
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	05	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate	05	DL30-0127
Installation services			
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	DL10-0170
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0540
Maintenance contracts			

Designation	Description	*	Art.-No.
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 test temperature specified by the user in the center of the usable space, including certificate	05	DL20-0975
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	DL20-0875
Maintenance services			
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	DL20-0608
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			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	05	DL50-0020

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.

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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