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

IMPORTANT FEATURES

- Temperature range: +6°C above ambient temperature to +50°C
- Humidity range: 90 to 95% RH
- CO₂ control range: o 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

OPTIONAL EQUIPMENT

- pan
- Stacking adapter for secure, space-saving installation

- 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 ٠
- Perforated shelves, stainless steel ٠
- · 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
- Copper interior fittings consisting of copper shelves and copper-plated water Co, shaker with corrosion-resistant components in a stainless-steel housing
 - APT-COM Multi Management Software for managing, recording, and documenting unit parameters
 - CO₂ gas tank changer for connecting two gas tanks to one or two incubators 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	ArtNo.
Model CB-S 170					
			Standard	CBS170UL-120V	9640-0002
170	100120 V 1~ 50/60 Hz -16,0 A	NEMA 5-20	with Access port 30 mm left	CBS170UL-120V-D	9640-0030

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Interior volume [L]	Power supply - unit fuse	Plug*	Version	Model version	ArtNo.
			Standard	CBS170-230V	9640-0001
	200230 v 1~ 50/60 HZ -10,0 A	200230 V 1~ 50/60 Hz -10,0 A CEE 7/7 with 7	with Access port 30 mm left	CBS170-230V-D	9640-0029

Data sheet	Model	CB-S 170	
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TECHNICAL DATA

Data				
Designation	CBS170-230V	CBS170-230V-D	CBS170UL-120V	CBS170UL-120V-D
Article Number	9640-0001	9640-0029	9640-0002	9640-0030
Option model	Standard	with Access port 30 mm left	Standard	with Access port 30 mm left
Performance Data Temperature				
Temperature range	+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	9095 % RH	9095 % RH	9095 % RH	9095 % RH
Gas Data				
CO ₂ range	020 Vol% CO ₂	o20 Vol% CO ₂	020 Vol% CO ₂	o20 Vol% CO ₂
CO ₂ measuring technology	IR	IR	IR	IR
$\rm CO_2$ recovery time after door was opened for 30 s at 5 vol. $\%$ $\rm CO_2$	5 min	5 min	5 min	5 min
Electrical data				
Rated Voltage	200230 V	200230 V	100120 V	100120 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. fitting	I			

Housing dimensions not incl. fittings and connections

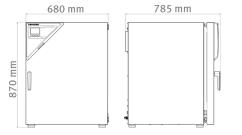




Width net	680 mm	680 mm	680 mm	680 mm
Height net	870 mm	870 mm	870 mm	870 mm
Depth net	715 mm	715 mm	715 mm	715 mm
Internal Dimensions				
Interior width	560 mm	560 mm	560 mm	560 mm
Interior height	600 mm	600 mm	600 mm	600 mm
Interior depth	505 mm	505 mm	505 mm	505 mm
Inner doors	1	1	1	1
Unit doors	1	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 $\pm 10\%$. 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	*	ArtNo.
	back			
	- 30 mm	•	01	8612-0017
	left			
Access port with silicone plug	30 mm	•	01	8612-0018
	right			
	30 mm	•	01	8612-0019

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Designation	Description	CB-S 170	*	ArtNo.
Analog output 4-20 mA	for temperature and $\rm CO_2$ 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, 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 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

ACCESSORIES

Designation	Description	CB-S 170	*	ArtNo.
	for simple logging and documentation requirements with up to 5 networked units.			
APT-COM™ 4 BASIC-Edition	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.			
Edition	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

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Designation	Description	CB-S 170	*	ArtNo.
	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
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
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 $BINDERCO_2$ 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
	Set consisting of 6 bottles, each with 1,000 ml of sterile humidification water			
Water supply	for versions with active humidification	•	-	8009-1192

SERVICES

Description	*	ArtNo.
Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	-	DL30-0140
Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	-	DL30-0102
$\rm CO_2$ calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate	-	DL30-0401
Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	-	DL30-0109
Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	-	DL30-0118
Temperature measurement with 27 measuring points with a set value specified by the user, including certificate	-	DL30-0127
	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate CO ₂ calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate Temperature measurement with 9 measuring points with a set value specified by the user, including certificate Temperature measurement with 18 measuring points with a set value specified by the user, including certificate Temperature measurement with 18 measuring points with a set value specified by the user, including certificate Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate . Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate . CO2 calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate . Temperature measurement with 9 measuring points with a set value specified by the user, including certificate . Temperature measurement with 18 measuring points with a set value specified by the user, including certificate . Temperature measurement with 18 measuring points with a set value specified by the user, including certificate . Temperature measurement with 12 measuring points with a set value specified by the user, including certificate .

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Designation	Description	*	ArtNo.
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)	-	DL10-0110
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0510
Maintenance contracts			
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	-	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	-	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	-	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	-	DL20-0608
Validation services			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	-	DL41-0200
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	-	DL44-0500
Warranty service			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	-	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.
- O5 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 info@binder-world.com www.binder-world.com

BINDER Asia Pacific (Hong Kong) Ltd.

Kowloon, Hong Kong, P.R. China TEL +852 39070500 asia@binder-world.com www.binder-world.com

BINDER Inc.

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

BINDER Environmental Testing

Equipment (Shanghai) Co., Ltd. Shanghai, P.R. China TEL +86 21 685 808 25 china@binder-world.com www.binder-world.com