

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

Series CB-S incubators are suitable for routine cell cultivation applications: They are free from contamination due to 180 °C hot-air sterilization and reliable pH stability thanks to the drift-free infrared CO₂ measurement system.

BENEFITS

- Minimum risk of contamination thanks to +180 °C hot air sterilization
- Stable pH values thanks to drift-free CO₂ IR sensor technology
- High humidity up to 95% RH
- Simple and fast cleaning thanks to a seamless inner chamber



Model 170



Model 170

MAIN FEATURES

- Temperature range: +6 °C above ambient temperature to +50 °C
- Humidity range: 90 to 95% RH
- Auto-sterilization with hot air at +180 °C
- 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 sealed inner door made of tempered safety glass
- Seamless stainless steel inner chamber
- Perforated shelves, stainless steel
- Units are stackable with stacking adapter
- Troubleshooting system with visual and acoustic alarms
- Computer interface: Ethernet
- Zero-voltage alarm contact
- Can be stacked with CB model 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	9040-0189
	100...120 V 1~ 50/60 Hz	Standard	CBS170UL-120V	9040-0190

TECHNICAL DATA

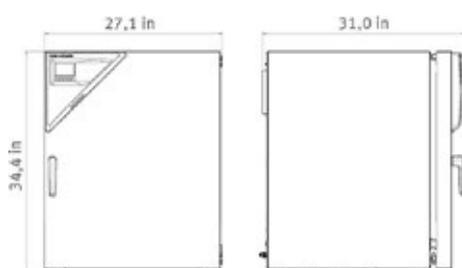
Description	CBS170-230V ¹	CBS170UL-120V ¹
Article Number	9040-0189	9040-0190
Performance Data Temperature		
Temperature range 6 °C above ambient temperature to	50 °C	50 °C
Temperature variation at 37 °C [± K]	0.3	0.3
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	8	8
Performance Data Climate		
Humidity range [% RH]	90...95	90...95

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	CBS170UL-120V ¹
Article Number	9040-0189	9040-0190
CO₂-Data		
CO ₂ range [Vol.-% CO ₂]	0...20	0...20
CO ₂ measurement	IR	IR
CO ₂ Recovery time after 30 seconds door open at 5 Vol.-% CO ₂ [min]	5	5
Electrical data		
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~
Measures		
Interior volume [cu.ft.]	6	6
Net weight of the unit (empty) [lbs]	198	198
Permitted load [lbs]	66	66
Load per rack [lbs]	22	22
Wall clearance back [in]	3.94	3.94
Wall clearance sidewise [in]	1.97	1.97
Internal Dimensions		
Width [in]	22.06	22.06
Height [in]	23.64	23.64
Depth [in]	19.9	19.9
Doors		
Inner doors	1	1
Unit doors	1	1
Housing dimensions not incl. fittings and connections		
Width net [in]	26.79	26.79
Height net [in]	34.28	34.28
Depth net [in]	28.17	28.17
Environment-specific data		
Energy consumption at 37 °C [Wh/h]	45	45
Sound-pressure level [dB(A)]	41	41
Fixtures		
Number of shelves (std./max.)	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	8012-1974
	left		
	30 mm	01	8012-1975
	right		
	30 mm	01	8012-1976
Analog output 4-20 mA	for temperature and CO ₂ values (outputs not adjustable)	02	8012-1977
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	-	8012-1953
Door lock	lockable door handle	-	8012-1014

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units. version 4, BASIC edition	19	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	19	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	19	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 3 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
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
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
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

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Unit installation	Unpacking and setting up of unit, connecting to existing connections, and checking function	13, 18	DL10-0100
Unit instructions	Unit function instructions for operation and programming of the controller	18	DL10-0500
Preventive maintenance			
Maintenance	Functional testing of all electrical and mechanical components, short calibration, documentation in the maintenance schedule	14, 18	DL20-0400
Calibration services			
CO ₂ calibration	CO ₂ calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate	14, 16, 17, 18	DL30-0401
Temperature calibration	Expansion – including certificate, each additional measuring point in center of chamber at specified test temperature	14, 16, 17, 18	DL30-0102
	Temperature calibration with 1 measuring point in center of chamber at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0101
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0127
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0109
Validation services			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	15, 18	DL41-0200
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	15, 18	DL44-0500
Warranty service			
Warranty extension from 2 to 3 years	The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded	–	DL02-0041
Warranty extension from 2 to 5 years	The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded	–	DL02-0042

* 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 Heat resistant only to max. 200 °C.
- 04 Only available on units rated for 230 V.
- 07 The additional heat input may affect the temperature behavior.
- 09 Not in conjunction with the optional access port, door with window and interior lighting.
- 10 Not available on 23-liter units.
- 11 Not available on 23- or 53-liter units.
- 12 Only available on units rated for 230 V or 400 V.
- 13 Installation and connections take place at unit location; transport within the company only upon consultation.
- 14 We recommend a BINDER service contract to cover unit inspections, calibrations and validations.
- 15 OQ according to Yellow Paper = completed factory validation documentation of all OQ checklists.
- 16 Sensor calibration is performed in an accredited calibration laboratory.
- 17 Calibration is performed according to the BINDER factory standard.
- 18 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).
- 19 For additional accessories, refer to the Process documentation chapter.