

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

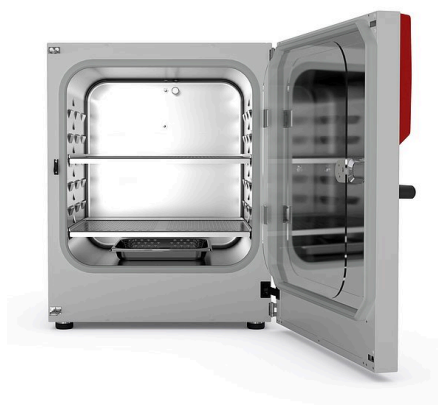
Series CB-S incubators are suitable for routine cell cultivation applications: They are free from contamination due to 180 °C hot-air sterilization and reliable pH stability thanks to the drift-free infrared CO₂ measurement system.

BENEFITS

- Maximum usable space with minimal footprint and excellent ease of use
- Minimum risk of contamination thanks to uncompromising hot air sterilization
- Fanless, easy-to-clean hygienic interior without fixtures
- 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
- 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 CB models of the same size using a stacking adapter

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

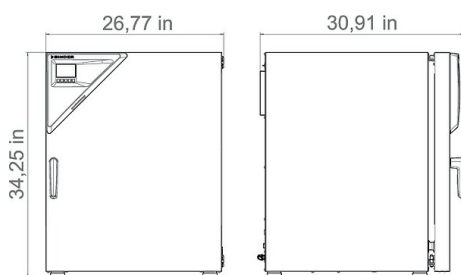
ORDERING INFORMATION

| 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 |
| 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. |
|---|---|----|-----------|
| Calibration certificate, temperature | temperature measurement incl. certificate and 27 measuring points at specified temperature | - | 8012-1591 |
| | back | | |
| | 30 mm | 01 | 8012-1974 |
| | for temperature and CO ₂ values (outputs not adjustable) | 02 | 8012-1977 |
| | 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 |
| | for temperature; for extending the measurement in center of chamber to include another test temperature | - | 8012-1112 |
| | left | | |
| Options/Accessories | 30 mm | 01 | 8012-1975 |
| | lockable door handle | - | 8012-1014 |
| | Measurement in center of chamber at specified temperature | - | 8012-1131 |
| | right | | |
| | 30 mm | 01 | 8012-1976 |
| | 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 |
| | Unit door and standard glass inner door with door hinged on the left | - | 8012-1953 |

* Notes › See last page

ACCESSORIES

| Designation | Description | * | Art.-No. |
|----------------------------------|------------------------------------|----|-----------|
| | Multi Management Software APT-COM™ | | |
| Multi Management Software | version 4, BASIC edition | 19 | 9053-0039 |
| | version 4, GLP edition | 19 | 9053-0042 |
| | version 4, PROFESSIONAL edition | 19 | 9053-0040 |

* Notes › See last page

| Designation | Description | * | Art.-No. |
|---------------------|---|---|-----------|
| | Stainless steel | - | 6004-0137 |
| | concentrated, for gentle remove of residual contaminants; 1 kg | - | 1002-0016 |
| | 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 |
| | for CO ₂ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose | - | 8012-0014 |
| | 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 |
| | for the thermally isolated stacking of two BINDER CO ₂ incubators | - | 9051-0035 |
| | 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 | | |
| Options/Accessories | 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 |
| | Set consisting of 3 shelves (all-copper) and a water pan (copper-plated), more information. | - | 8012-1997 |
| | set of 4 anti-slip feet, for safe stacking of units | - | 8012-0702 |
| | Shaker and controller connected via ribbon cable, universally applicable, 100 – 240 V, 50/60 Hz | - | 8012-1771 |
| | stable, vibration-free stacking frame on casters with locking brake for the safe stacking of two CO ₂ incubators | - | 9051-0040 |
| | the base equipped with casters is used for the secure positioning and leveling of a BINDER CO ₂ incubator | - | 9051-0028 |

* Notes › See last page

SERVICES

| Designation | Description | * | Art.-No. |
|-------------------------------|--|----------------|-----------|
| Installation services | | | |
| Services | Unit function instructions for operation and programming of the controller | 18 | DL10-0500 |
| | Unpacking and setting up of unit, connecting to existing connections, and checking function | 13, 18 | DL10-0100 |
| Preventive maintenance | | | |
| Services | Executive of equipment inspection according to maintenance plan | 14, 18 | DL20-0400 |
| Calibration services | | | |
| Services | CO ₂ calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate | 14, 16, 17, 18 | DL30-0401 |
| | 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 with 18 measuring points at a specified test temperature, including certificate | 14, 16, 17, 18 | DL30-0118 |
| | Temperature measurement with 27 measuring points at a specified test temperature, including certificate | 14, 16, 17, 18 | DL30-0127 |
| | Temperature measurement with 9 measuring points at a specified test temperature, including certificate | 14, 16, 17, 18 | DL30-0109 |
| Validation services | | | |
| Services | Execution of IQ/OQ in accordance with qualification folder | 15, 18 | DL41-0200 |
| | Execution of IQ/OQ/PQ in accordance with qualification folder | 15, 18 | DL44-0500 |
| Warranty service | | | |
| Services | The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded | - | DL02-0041 |
| | 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.

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