

Model CBF 170 | CO₂ incubators with hot air sterilization and humidity regulation

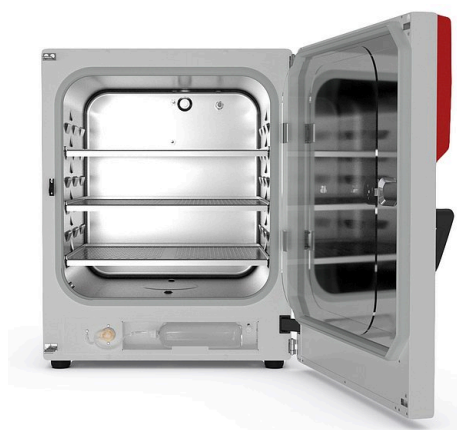
The BINDER CB series CO₂ incubator is the premium class among the CO₂ incubators. It is suitable for all sensitive incubation applications and ensures optimal cell growth. A BINDER CO₂ incubator of the CB series is up to even complex cultivation experiments or individual environments.

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

- Contamination-safe humidification system without water pan
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Hot-air sterilizable CO₂ sensor with single-beam infrared technology
- Seamless inner chamber made of stainless steel with flanges as shelf support system
- Fanless interior with Venturi CO₂ gas mixing nozzle
- Intuitive touchscreen controller
- Internal data logger, measured values can be read out in open format via USB
- Troubleshooting system with visual and acoustic alarms
- Interfaces: Ethernet, USB, zero-voltage alarm contact
- Fail-safe CO₂ system for protecting the pH of cell cultures

OPTIONAL EQUIPMENT

- O₂ control with O₂ control ranges: 0.2 to 20 vol.% O₂ or 10 to 95 vol.% O₂
- Multi-sectional glass doors with special shelves for dividing up the space to accommodate different experiments
- Stacking adapter for secure, space-saving installation
- Gas tank changer for connecting two gas tanks to one or two incubators

ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
170	200...230 V 1~ ph 50/60 Hz	Standard	CBF170-230V	9640-0017
		with O ₂ control 0.2–20%	CBF170-230V-O	9640-0018
	100...120 V 1~ ph 50/60 Hz	Standard	CBF170UL-120V	9640-0019
		with O ₂ control 0.2–20%	CBF170UL-120V-O	9640-0020

TECHNICAL DATA

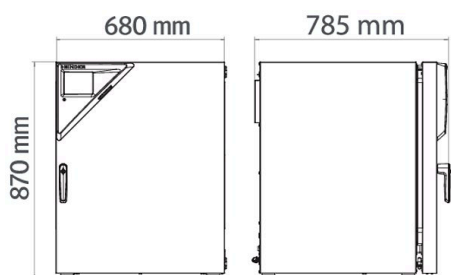
Description	CBF170-230V ¹	CBF170-230V-0 ¹	CBF170UL-120V ¹	CBF170UL-120V-0 ¹
Article Number	9640-0017	9640-0018	9640-0019	9640-0020
Performance Data Temperature				
Temperature range +6 °C above ambient temperature to	60 °C	60 °C	60 °C	60 °C
Temperature variation at 37 °C [± K]	0.4	0.4	0.4	0.4
Temperature 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	50...95	50...95	50...95	50...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
O₂-Data				
Standard O ₂ control ranges: O ₂ range [Vol.-% O ₂]		0.2...20		0.2...20
O ₂ control ranges with option: O ₂ range [Vol.-% O ₂]		10...95		10...95
O ₂ Recovery time after 30 seconds door open at 5 Vol.-% O ₂ [min]		12		12
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]	1.4	1.4	1.4	1.4
Unit fuse [A]	10	10	16	16
Phase (Nominal voltage)	1~	1~	1~	1~
Measures				
Interior volume [L]	170	170	170	170
Net weight of the unit (empty) [kg]	95	95	95	95
Permitted load [kg]	30	30	30	30
Load per rack [kg]	10	10	10	10
Wall clearance back [mm]	100	100	100	100
Wall clearance sidewise [mm]	50	50	50	50
Internal Dimensions				
Width [mm]	560	560	560	560
Height [mm]	600	600	600	600
Depth [mm]	505	505	505	505
Doors				
Inner doors	1	1	1	1
Unit doors	1	1	1	1
Housing dimensions not incl. fittings and connections				
Width net [mm]	680	680	680	680
Height net [mm]	870	870	870	870
Depth net [mm]	715	715	715	715

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 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	CBF170-230V ¹	CBF170-230V-0 ¹	CBF170UL-120V ¹	CBF170UL-120V-0 ¹
Article Number	9640-0017	9640-0018	9640-0019	9640-0020
Environment-specific data				
Energy consumption at 37 °C [Wh/h]	55	55	55	55
Sound-pressure level [dB(A)]	41	41	41	41
Fixtures				
Number of shelves (std./max.)	3/6	3/6	3/6	3/6

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DIMENSIONS incl. fittings and connections [mm]



OPTIONS

Designation	Description	*	Art.-No.
Access port with silicone plug	back		
	30 mm	01	8612-0025
	left		
	30 mm	01	8612-0026
	right		
	30 mm	01	8612-0027
Analog output 4-20 mA	for temperature and CO ₂ values (outputs not adjustable)	02	8612-0022
Calibration certificate O ₂	for versions with O ₂ control; a measuring point in center of chamber at a specified O ₂ percentage value	-	8012-0229
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	-	8012-1132
	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1592
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1571
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1550
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	-	8012-1235
CELLROLL Set	modular, expandable roller bottle system for cell cultivation, 4 roller bottles	-	8612-0023
Door hinged on the left	Unit door and standard glass inner door with door hinged on the left	-	8612-0034
Electric access port	8-pin, for low voltage with LEMO socket (coverable) and LEMO plug (max. 24 V – 2 A)	-	8612-0033
Inner door, divided	Cell therapy compartmentalization, consisting of 6 inner doors and three shelf levels with one partition wall each	-	8612-0030
O ₂ control range	alternative to the standard range, for controlling O ₂ concentrations between 10 and 95 vol. %, only in conjunction with option models with O ₂ control	-	8612-0028
Quick sample access	viewing window (13 x 25 cm) in the inner door for quick access	-	8612-0032

* 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	-	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
Convenient water supply	Set consisting of 10 liter water container with magnetic holder, hose adapter with practical quick coupling and water stop function, flexible positioning, enables water to be supplied to multiple CB units simultaneously via a water container, not pre-filled. for versions with active humidification	-	8009-1128
Copper interior fittings	Set consisting of 3 shelves (all-copper) and a water pan (copper-plated), more information.	-	8012-1918
Gas cylinder connection set	for CO ₂ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0014
	for N ₂ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0016
	for O ₂ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0015
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
Shaker „Professional“	Shaker and controller equipped with LEMO connectors, exclusively for CB with electric access port, 100 – 240 V, 50/60 Hz	-	8012-1772
Shaker „Universal“	Shaker and controller connected via ribbon cable, universally applicable, 100 – 240 V, 50/60 Hz	-	8012-1771
	Stainless steel	-	6004-0137
Shelf, perforated	for divided inner door	-	8012-1888
	Stainless steel, divided	-	8012-1888
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 10 bottles, each with 1,000 ml of sterile humidification water, including peristaltic tubing, connectors, and fine gas filters for versions with active humidification	-	8009-1104
	Set consisting of 12 empty, refillable tubular bags including peristaltic tubing, connectors, and fine gas filters for versions with active humidification	-	8009-1058
	Set consisting of 3 empty, refillable tubular bags including peristaltic tubing, connectors, and fine gas filters for versions with active humidification	-	8009-1083
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 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	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0500
Maintenance contracts			
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, 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			
Calibration certificate, temperature	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
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
O ₂ calibration	O ₂ calibration with 1 measuring point in center of chamber at a specified O ₂ percentage value, including certificate	03, 04, 05	DL30-0402
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
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			
1-year warranty extension	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