



# CO<sub>2</sub> incubators







CB-S | CBF | CB series

# CO<sub>2</sub> incubators

Series CB-S Solid.Line	Page 6
Series CB	Page 11
Series CBF	Page 17

BINDER CO<sub>2</sub> incubators are safe, reliable, smart, and economical. So they are perfect for every cell culture laboratory. The CB-S series masters common standard applications such as cell production with ease. The CB series is also recommended for cell-based assays and is indispensable to the development of active pharmaceutical ingredient and in the field of medical research. With its high-end features, the CBF series even proves its worth in the GMP environments found in the stem cell research and cell therapy sectors. All models are impressively easy to use and clean and stand out thanks to their pioneering BINDER anti-contamination concept.

## $\mathsf{PRODUCT}\,\mathsf{SELECTION}\,\mathsf{CO_2}\,\mathsf{INCUBATORS}$

Features	Series CB-S Solid.Line > Page 6	Series CB > Page 11	Series CBF > Page 17
Model			
Model 56	-	•	-
Model 170	•	•	•
Model 260	•	•	•
General data			
Temperature range +6 °C above ambient temperature to [°C]	50	-	60
Temperature range +4-6 °C above ambient temperature to [°C]	-	60	_
Temperature range +5-6 °C above ambient temperature to [°C]	-	60	_
Temperature range +5-7 °C above ambient temperature to [°C]	-	-	60
Humidity range [% RH]	9095	9095	5095
Ethernet interface	•	٠	•
USB interface	•	٠	•
Interner Datenlogger	•	•	•
Plug-in system		Flanges	
Humidification system	Water pan	Double water pan	Humidity regulation
CO <sub>2</sub> sensor	IR, plug in	IR, can be sterilized	IR, can be sterilized
Controller and timer functions			
Controller display	LCD	TFT touch	TFT touch
Class 3.1 independent temperature safety device	•	•	•
Temperature alarm, acoustic	•	•	•
Temperature alarm, visual	•	•	•
•Standard equipment			

Standard equipment

#### ADVANTAGES AT A GLANCE



#### RELIABLE

Series CB-S, CB, CBF

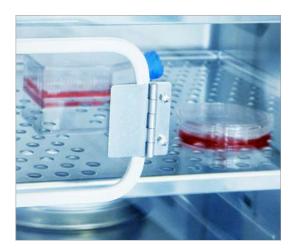
Well-being conditions for the cells at all times thanks to fast and precise CO<sub>2</sub> and temperature control.



COST-EFFECTIVE

Series CB-S, CB, CBF

Affordable hot-air sterilization without consumables.



#### SMART

Series CB-S, CB, CBF

Effortless routine cleaning due to obstacle-free interior with rounded corners.



SAFE

Series CB-S, CB, CBF

Maximum contamination protection due to fanless interior and uncompromising 180 °C sterilization.

#### Series CB-S Solid.Line | 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.



Model CB-S 260

#### 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



#### MAIN FEATURES

- Temperature range: +6 °C above ambient temperature to +50 °C
- Humidity range: 90 to 95% RH
- CO<sub>2</sub> control range: 0 to 20 vol.% CO<sub>2</sub>
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Humidification system with condensation protection
- CO<sub>2</sub> gas mixing jet with Venturi effect
- CO<sub>2</sub> sensor with infrared technology
- LCD to display temperature and CO<sub>2</sub> 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

#### AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
CB-S 170	170	> go2binder.com/en-CB-S170
CB-S 260	267	› go2binder.com/en-CB-S260

### **OPTIONAL EQUIPMENT**

Stacking adapter	Stacking adapters support the space-saving installation and safe stacking of BINDER $\mathrm{CO}_2$ incubators.	
CO2 gas tank changer	Binder Gas Supply Service for connecting two gas tanks to up to two incubators, with audible and visual alarms, as well as zero-voltage alarm output.	17 Juniors
CO <sub>2</sub> - shaker	High-quality solution for the incubation of suspension cell cultures in $CO_2$ incubators. The exclusive use of corrosion-resistant components in the stainless steel housing makes the $CO_2$ incubator suitable for gassed incubators with increased $CO_2$ concentrations and nearly saturated air humidity.	
Copper interior fittings	The kit consists of copper shelves and a copper-plated water pan. The copper equipment reduces the time and effort required for cleaning the incubator while continuing to ensure a high level of resistance to contamination.	
Services	You can access our installation, maintenance, calibration, validation, or warranty services by taking out a Maintenance Service Agreement or by simply getting in touch when you need us. More information is available in the accessories and services chapter.	

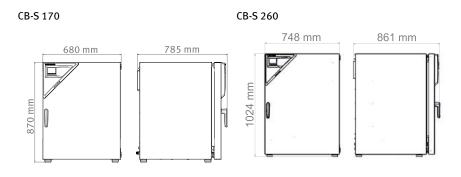
#### **TECHNICAL DATA**

Description	CB-S 170	CB-S 260
Measures		
Interior volume [L]	170	267
Net weight of the unit (empty) [kg]	96	122
Permitted load [kg]	30	40
Load per rack [kg]	10	10
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	50	50
Internal Dimensions		
Width [mm]	560	620
Height [mm]	600	750
Depth [mm]	505	575
Housing dimensions not incl. fittings and connections		
Width net [mm]	680	740
Height net [mm]	870	1020
Depth net [mm]	715	785
Performance Data Temperature		
Temperature range +6 °C above ambient temperature to [°C]	50	50
Temperature variation at 37 °C [± K]	0.3	0.4
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	6	8
Performance Data Climate		
Humidity range [% RH]	9095	9095
CO <sub>2</sub> -Data		
CO <sub>2</sub> range [Vol% CO <sub>2</sub> ]	020	020
CO <sub>2</sub> measurement	IR	IR
Electrical data		
Nominal power (version 120 V) [kW]	1.3	1.5
Nominal power (version 230 V) [kW]	1.3	1.5
Fixtures		
Number of shelves (std./max.)	2/6	2/8

ORDERING INFORMATION [Art. No.] Further details: Go to www.binder-world.com > Search > Enter Article Number

Voltage	Option model	CB-S 170	CB-S 260
200230 V 1~ 50/60 Hz	Standard	9640-0001	9640-0003
100120 V 1~ 50/60 Hz	Standard	9640-0002	9640-0004

#### DIMENSIONS incl. fittings and connections [mm]



#### ORDERING INFORMATION OPTIONS

Designation	Description	CB-S 170	CB-S 260	Art. No.
	back			
	30 mm	•	•	8612-0017
Access port with	left			
silicone plug	30 mm	•	•	8612-0018
	right			
	30 mm	•	•	8612-0019
Analog output 4-20 mA	for temperature and $CO_2$ values (outputs not adjustable)	•	•	8612-0016
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	•	•	8012-1112
	for temperature, measurement in center of chamber at specified temperature	•	•	8012-1131
Calibration certificate,	temperature measurement incl. certificate and 27 measuring points at specified tempera- ture	•	•	8012-1591
temperature	temperature measurement incl. certificate, 15- 18 measuring points at specified tempera- ture	•	•	8012-1570
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	8012-1549
Calibration certificate, temperature and CO <sub>2</sub>	for temperature and CO <sub>2</sub> , temperature measurement in center of chamber, CO <sub>2</sub> measurement performed using test gas at 37 °C and 5 $\%$ CO <sub>2</sub>	•	•	8012-0228
Door hinged on the left	Unit door and standard glass inner door with door hinged on the left	•	•	8612-002
Door lock	lockable door handle	•	•	8612-002

#### ORDERING INFORMATION ACCESSORIES

Designation	Description	CB-S 170	CB-S 260	Art. No.
APT-COM™ 4	for simple logging and documentation requirements with up to 5 networked units.			
BASIC-Edition	version 4, BASIC edition	•	•	9053-0039
APT-COM™ 4 GLP-	for working under GLP-compliant conditions. Measured values are documented in a tam- per-proof way in line with the requirements of FDA Regulation 21 CFR 11.			
Edition	version 4, GLP edition	•	•	9053-0042
APT-COM™ 4	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.			
PROFESSIONAL-Edition	version 4, PROFESSIONAL edition	•	•	9053-0040
-	the base equipped with casters is used for the secure positioning and leveling of a BINDER	•	-	9051-0028
Base	CO <sub>2</sub> incubator	-	•	9051-0044
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

Designation	Designation Description		CB-S 260	Art. No.
Copper interior fittings	Set consisting of 2 shelves (all-copper) and a water pan (copper-plated),	•	-	8012-1997
Gas cylinder connection set	for CO <sub>2</sub> , 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
	IQ/OQ documents – supporting documents for validation performed by customers, consi- sting 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
Qualification	Hard copy inside folder	•	•	7007-0001
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			
	Digital in PDF format	•	•	7057-0005
	Hard copy inside folder	•	•	7007-0005
Rubber pads	set anti-slip feet	•	•	8012-0702
Shaker "Universal"	Shaker and controller connected via ribbon cable universally applicable 100 – 240 V		•	8012-1771
		•	-	6004-0137
Shelf, perforated	Stainless steel	-	•	6004-0197
		•	-	9051-0035
Stacking adapter	for the thermally isolated stacking of two BINDER $\mathrm{CO}_2$ incubators	-	•	9051-0039
	stable, vibration-free stacking frame on casters with stop brake for safe stacking of two CB	•	_	9051-0040
Stacking frame	series units	_	•	9051-0041
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

#### Series CB | with hot air sterilization and heat sterilizable CO<sub>2</sub> sensor

The powerful and versatile CB CO<sub>2</sub> incubator is suitable for cell-based assays in drug and medical research. This BINDER incubator is even suitable for complex cultivation experiments or individual environments with hypoxic conditions thanks to its comprehensive assortment of options and accessories.



Model CB 170

#### 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



#### MAIN FEATURES

- Optimized double-pan humidification system with condensation protection
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Hot-air sterilizable CO<sub>2</sub> sensor with single-beam infrared technology
- Seamless inner chamber made of stainless steel with flanges as shelf support system
- Fanless interior with Venturi CO<sub>2</sub> gas mixing nozzle
- Intuitive touchscreen controller
- Internal data recording, can be read out in open format via USB interface
- Fault diagnosis system with visual and acoustic alarm
- Interfaces: Ethernet, USB, zero-voltage alarm contact
- Fail-safe CO<sub>2</sub> system for protecting the pH of cell cultures

#### AVAILABLE SIZES

R

Model	Interior volume [L]	Online data sheets
CB 56	53	> go2binder.com/en-CB56
CB 170	170	> go2binder.com/en-CB170
CB 260	267	> go2binder.com/en-CB260

### **OPTIONAL EQUIPMENT**

Stacking adapter	Stacking adapters support the space-saving installation and safe stacking of BINDER $\mathrm{CO}_2$ incubators.	
CO2 gas tank changer	Binder Gas Supply Service for connecting two gas tanks to up to two incubators, with audible and visual alarms, as well as zero-voltage alarm output.	
CO <sub>2</sub> - shaker	High-quality solution for the incubation of suspension cell cultures in $CO_2$ incubators. The exclusive use of corrosion-resistant components in the stainless steel housing makes the $CO_2$ incubator suitable for gassed incubators with increased $CO_2$ concentrations and nearly saturated air humidity.	
Copper interior fittings	The kit consists of copper shelves and a copper-plated water pan. The copper equipment reduces the time and effort required for cleaning the incubator while continuing to ensure a high level of resistance to contamination.	
Services	You can access our installation, maintenance, calibration, validation, or warranty services by taking out a Maintenance Service Agreement or by simply getting in touch when you need us. More information is available in the accessories and services chapter.	
BINDER INDIVIDUAL	Using a BINDER series production product as a basis, we develop individual solutions as a single unit or in small batches. All products are tested, certified, and supplied with a full functional guarantee and warranty. More information is available in the accessories and services chapter.	-

All extras online go2binder.com/en-options

#### **TECHNICAL DATA**

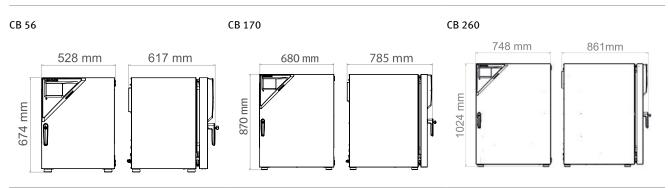
Description	CB 56	CB 170	CB 260
Measures			
Interior volume [L]	53	170	267
Net weight of the unit (empty) [kg]	53	98	125
Permitted load [kg]	30	30	40
Load per rack [kg]	10	10	10
Wall clearance back [mm]	100	100	100
Wall clearance sidewise [mm]	50	50	50
Internal Dimensions			
Width [mm]	400	560	620
Height [mm]	400	600	750
Depth [mm]	330	505	575
Housing dimensions not incl. fittings and connections			
Width net [mm]	528	680	740
Height net [mm]	674	870	1020
Depth net [mm]	545	715	785
Performance Data Temperature			
Temperature range +4-6 °C above ambient temperature to [°C]	60	60	-
Temperature range +5-6 °C above ambient temperature to [°C]	-	-	60
Temperature variation at 37 °C [± K]	0.3	0.3	0.4
Temperature fluctuation at 37 °C [± K]	0.1	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	5	6	6
Performance Data Climate			
Humidity range [% RH]	9095	9095	9095
CO <sub>2</sub> -Data			
CO <sub>2</sub> range [Vol% CO <sub>2</sub> ]	020	020	020
CO <sub>2</sub> measurement	IR	IR	IR
Electrical data			
Nominal power (version 120 V) [kW]	0.8	1.4	1.5
Nominal power (version 230 V) [kW]	0.8	1.4	1.5
Fixtures			
Number of shelves (std./max.)	2/3	3/6	3/8

#### ORDERING INFORMATION [Art. No.]

Further details: Go to www.binder-world.com > Search > Enter Article Number

Voltage	Option model	CB 56	CB 170	CB 260
200230 V 1~ 50/60 Hz	Standard	9640-0005	9640-0009	9640-0013
	with O <sub>2</sub> control 0.2–20%	9640-0006	9640-0010	9640-0014
400 40014 50/6011-	Standard	9640-0007	9640-0011	9640-0015
100120 V 1~ 50/60 Hz	with O <sub>2</sub> control 0.2–20%	9640-0008	9640-0012	9640-0016

#### DIMENSIONS incl. fittings and connections [mm]



#### ORDERING INFORMATION OPTIONS

Designation	Description	CB 56	CB 170	CB 260	Art. No.
	back				
	30 mm	•	•	•	8612-002
Access port with	left				
silicone plug	30 mm	•	•	•	8612-002
	right				
	30 mm	•	•	•	8612-002
Analog output 4-20 mA	for temperature and $CO_2$ values (outputs not adjustable)	•	•	•	8612-002
Calibration certificate O <sub>2</sub>	for versions with $\rm O_2$ control; a measuring point in center of chamber at a specified $\rm O_2$ percentage value	-	•	•	8012-022
	for temperature, measurement in center of chamber at specified temperature	•	•	٠	8012-113
Calibration certificate,	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	8012-159
temperature	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	8012-157
	temperature measurement incl. certificate, 9 measuring points at specified tempe- rature	•	•	•	8012-155
Calibration certificate, temperature and CO <sub>2</sub>	for temperature and CO <sub>2</sub> , temperature measurement in center of chamber, CO <sub>2</sub> measurement performed using test gas at 37 °C and 5 % CO <sub>2</sub>	•	•	•	8012-123
	modular, expandable roller bottle system for cell cultivation, 4 roller bottles	-	•	-	8612-002
CELLROLL Set	modular, expandable roller bottle system for cell cultivation, 6 roller bottles	-	-	•	8612-002
Door hinged on the left	Unit door and standard glass inner door with door hinged on the left	•	•	•	8612-003
Electric access port	8-pin, for low voltage with LEMO socket (coverable) and LEMO plug (max. 24 V – 2 A)	•	•	•	8612-003
	Cell therapy compartmentalization, consisting of 4 inner doors and two shelf levels with one partition wall each	•	-	-	8612-002
Inner door, divided	Cell therapy compartmentalization, consisting of 6 inner doors and three shelf levels with one partition wall each	-	•	-	8612-003
	Cell therapy compartmentalization, consisting of 8 inner doors and four shelf levels with one partition wall each	-	-	•	8612-003
0 <sub>2</sub> control range	alternative to the standard range, for controlling O <sub>2</sub> concentrations between 10 and 95 vol. %, only in conjunction with option models with O <sub>2</sub> control	•	•	•	8612-002
Quick sample access	vewing window (13 x 25 cm) in the inner door for quick access	-	•	•	8612-003

#### ORDERING INFORMATION ACCESSORIES

for simple logging and documentation requirements with up to 5 networked units.				
version 4, BASIC edition	•	•	•	9053-003
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	•	•	•	9053-004
convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.				
version 4, PROFESSIONAL edition	•	•	•	9053-004
	•	-	-	9051-004
	-	•	-	9051-002
	-	-	•	9051-004
Set consisting of 3 shelves (all-copper) and a water pan (copper-plated),	-	•	-	8012-1918
for $CO_2$ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	•	•	•	8012-001
for $N_2$ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	•	•	•	8012-001
for $\rm O_2,$ consisting of a gas tank pressure regulator with connection parts and 5-meter hose	•	•	•	8012-001
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	•	•	•	8012-040
concentrated, for gentle remove of residual contaminants; 1 kg	•	•	•	1002-001
IQ/OQ documents – supporting documents for validation performed by custo- mers, consisting of: IQ/OQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, CO <sub>2</sub> , O <sub>2</sub> , pressure, depending on unit				
Digital in PDF format	•	•	•	7057-000
Hard copy inside folder	•	•	•	7007-000
$IQ/OQ/PQ$ 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	•	•	•	7057-000
Hard copy inside folder	•	•	•	7007-000
set anti-slip feet	•	•	•	8012-0702
Shaker and controller equipped with LEMO connectors, exclusively for CB with electric access port, 100 – 240 V, 50/60 Hz	-	•	•	8012-1772
Shaker and controller connected via ribbon cable, universally applicable, 100 – 240 V, 50/60 Hz	_	•	•	8012-1771
	•	-	-	6004-013
Stainless steel	_	•	-	6004-013
	-	-	•	6004-019
for divided inner door				
stainless steel	•	-	-	8012-2058
	-	•	-	8012-1888
Stainless steel, divided	_	_	•	8012-1996
	•	_	_	9051-0038
for the thermally isolated stacking of two PINDED CO, incubators	_	•	_	9051-003
for the thermally isolated stacking of two BINDER $\mathrm{CO}_2$ incubators	_	_	•	9051-003
stable, vibration-free stacking frame on casters with stop brake for safe stacking	-	-	•	9051-003
	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 convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units. version 4, PROFESSIONAL edition the base equipped with casters is used for the secure positioning and leveling of a BINDER CO <sub>2</sub> incubator Set consisting of 3 shelves (all-copper) and a water pan (copper-plated), for CO <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose for N <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose for O <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose external, BINDER Gas Supply Service, for connecting 2 gas tanks (CO <sub>2</sub> , N <sub>2</sub> or O <sub>2</sub> ), with audible and visual alarms, as well as zero-voltage alarm output concentrated, for gentle remove of residual contaminants; 1 kg IQ/Q documents – supporting documents for validation performed by custo- mers, consisting of IQ/QQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, CO <sub>2</sub> , O <sub>2</sub> , pressure, depending on unit Digital in PDF format Hard copy inside folder IQ/QQ/PQ documents – supporting documents for validation performed by customers, according to customer requirements, PQ section added to qualification folder IQ/QQ; parameters: temperature, CO <sub>2</sub> , O <sub>2</sub> – or pressure, depending on unit Digital in PDF format Hard copy inside folder Shaker and controller equipped with LEMO connectors, exclusively for CB with electric access port, 100 – 240 V, 50/60 Hz Shaker and controller connected via ribbon cable, universally applicable, 100 – 240 V, 50/60 Hz	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       •         convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.       •         version 4, PROFESSIONAL edition       •         the base equipped with casters is used for the secure positioning and leveling of a BINDER CO <sub>2</sub> incubator       •         Set consisting of 3 shelves (all-copper) and a water pan (copper-plated),       -         for O <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose       •         for O <sub>1</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose       •         for O <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose       •         for O <sub>1</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose       •         for O <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose       •         for O <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose       •         for O <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose       •         for O <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose       •         for O <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts a	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. <ul> <li>version 4, GLP edition</li> <li>Convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.</li> <li>version 4, PROFESSIONAL edition</li> <li>Exercise equipped with casters is used for the secure positioning and leveling of a BINDER CO, incubator</li> <li>Gotto a security of a security of a secure position of a secure position of a secure part of the secure part of the</li></ul>	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       ••••         convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.       ••••         version 4, PROFESSIONAL edition       ••••         the base equipped with casters is used for the secure positioning and leveling of a BINDER CO_incubator       ••••         for CO_, consisting of a gas tank pressure regulator with connection parts and 5-meter hose       ••••         for V_, consisting of a gas tank pressure regulator with connection parts and 5-meter hose       ••••         for Q_, consisting of a gas tank pressure regulator with connection parts and 5-meter hose       ••••         for Q_, consisting of a gas tank pressure regulator with connection parts and 5-meter hose       ••••         for Q_, consisting of a gas tank pressure regulator with connection parts and 5-meter hose       ••••         for Q_, consisting of a gas tank pressure regulator with connection parts and 10/00 checklists incl. calibration guide and comprehensive unit documents for validation performed by custo-mers, consisting of IQ/OQ checklists incl. calibration guide and comprehensive unit documents or parting documents for validation performed by custo-mers, acousting of IQ/OQ checklists incl. calibration guide and comprehensive unit documents - supporting documents for validation performed by custo-mers, acousting of IQ/OQ checklists incl. calibration guide and comprehensive unit documents - supporting document

Designation	Description	CB 56	CB 170	CB 260	Art. No.
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 net- works, installation and configuration must be performed by the customer's IT service.	•	•	•	8500-0164

#### Series CBF | with hot air sterilization and humidity regulation

The BINDER CBF is the high-end  $CO_2$  incubator with humidity control that is suitable for all sensitive incubation applications in GMP environments. It ensures consistent results including in cell-based assays with multiwell plates. This BINDER incubator is even suitable for complex cultivation experiments or individual environments with hypoxic conditions thanks to its comprehensive assortment of options and accessories.



Model CBF 170

#### 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



#### MAIN FEATURES

- Contamination-safe humidification system without water pan
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Hot-air sterilizable CO<sub>2</sub> sensor with single-beam infrared technology
- Seamless inner chamber made of stainless steel with flanges as shelf support system
- Fanless interior with Venturi CO<sub>2</sub> 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 CO<sub>2</sub> system for protecting the pH of cell cultures

#### AVAILABLE SIZES

R

Model	Interior volume [L]	Online data sheets
CBF 170	170	> go2binder.com/en-CBF170
CBF 260	267	> go2binder.com/en-CBF260

#### **OPTIONAL EQUIPMENT**

Metal panel with 4/6/8 glass doors and special corresponding shelf racks with partition wall make it possible to divide the space for different culture processing applications. Particularly suitable for critical applications such as cell therapy, gene therapy or stem cell research.	
Stacking adapters support the space-saving installation and safe stacking of BINDER $\mathrm{CO}_2$ incubators.	
Binder Gas Supply Service for connecting two gas tanks to up to two incubators, with audible and visual alarms, as well as zero-voltage alarm output.	The second secon
High-quality solution for the incubation of suspension cell cultures in $CO_2$ incubators. The exclusive use of corrosion-resistant components in the stainless steel housing makes the $CO_2$ incubator suitable for gassed incubators with increased $CO_2$ concentrations and nearly saturated air humidity.	
You can access our installation, maintenance, calibration, validation, or warranty services by taking out a Maintenance Service Agreement or by simply getting in touch when you need us. More information is available in the accessories and services chapter.	
Using a BINDER series production product as a basis, we develop individual solutions as a single unit or in small batches. All products are tested, certified, and supplied with a full functional guarantee and warranty. More information is available in the accessories and services chapter.	-
	<ul> <li>wall make it possible to divide the space for different culture processing applications. Particularly suitable for critical applications such as cell therapy, gene therapy or stem cell research.</li> <li>Stacking adapters support the space-saving installation and safe stacking of BINDER CO<sub>2</sub> incubators.</li> <li>Binder Gas Supply Service for connecting two gas tanks to up to two incubators, with audible and visual alarms, as well as zero-voltage alarm output.</li> <li>High-quality solution for the incubation of suspension cell cultures in CO<sub>2</sub> incubators. The exclusive use of corrosion-resistant components in the stainless steel housing makes the CO<sub>2</sub> incubator suitable for gassed incubators with increased CO<sub>2</sub> concentrations and nearly saturated air humidity.</li> <li>You can access our installation, maintenance, calibration, validation, or warranty services by taking out a Maintenance Service Agreement or by simply getting in touch when you need us. More information is available in the accessories and services chapter.</li> <li>Using a BINDER series production product as a basis, we develop individual solutions as a single unit or in small batches. All products are tested, certified, and supplied with a full functional guarantee and warranty. More information is available in the accessories and</li> </ul>

All extras online go2binder.com/en-options

#### **TECHNICAL DATA**

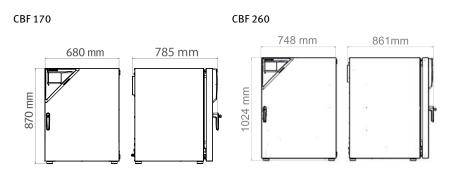
Description	CBF 170	CBF 260
Measures		
Interior volume [L]	170	267
Net weight of the unit (empty) [kg]	95	125
Permitted load [kg]	30	40
Load per rack [kg]	10	10
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	50	50
Internal Dimensions		
Width [mm]	560	620
Height [mm]	600	750
Depth [mm]	505	575
Housing dimensions not incl. fittings and connections		
Width net [mm]	680	740
Height net [mm]	870	1020
Depth net [mm]	715	785
Performance Data Temperature		
Temperature range +5-7 °C above ambient temperature to [°C]	60	-
Temperature range +6 °C above ambient temperature to [°C]	-	60
Temperature variation at 37 °C [± K]	0.3	0.4
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	6	6
Performance Data Climate		
Humidity range [% RH]	9095	9095
CO <sub>2</sub> -Data		
CO <sub>2</sub> range [Vol% CO <sub>2</sub> ]	020	020
CO <sub>2</sub> measurement	IR	IR
Electrical data		
Nominal power (version 120 V) [kW]	1.4	1.5
Nominal power (version 230 V) [kW]	1.4	1.5
Fixtures		
Number of shelves (std./max.)	3/6	3/8

#### ORDERING INFORMATION [Art. No.]

Further details: Go to www.binder-world.com > Search > Enter Article Number

Voltage	Option model	CBF 170	CBF 260
200230 V 1~ 50/60 Hz	Standard	9640-0017	9640-0021
	with O <sub>2</sub> control 0.2–20%	9640-0018	9640-0022
	with $O_2$ control 0.2–20% and cell therapy compartmentalization	-	9640-0025
	Standard	9640-0019	9640-0023
100120 V 1~ 50/60 Hz	with O <sub>2</sub> control 0.2–20%	9640-0020	9640-0024
	withO <sub>2</sub> control 0.2–20% and cell therapy compartmentalization	-	9640-0026

#### DIMENSIONS incl. fittings and connections [mm]



#### ORDERING INFORMATION OPTIONS

Designation	Description	CBF 170	CBF 260	Art. No.
	back			
	30 mm	•	•	8612-0025
Access port with sili-	left			
cone plug	30 mm	•	•	8612-0026
	right			
	30 mm	•	•	8612-0027
Analog output 4-20 mA	for temperature and CO <sub>2</sub> values (outputs not adjustable)	•	•	8612-0022
Calibration certificate O <sub>2</sub>	for versions with $O_2$ control; a measuring point in center of chamber at a specified $O_2$ percentage value	•	•	8012-0229
	for temperature, measurement in center of chamber at specified temperature	•	•	8012-1132
Calibration certificate,	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	8012-1592
temperature	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 <sub>2</sub>	for temperature and CO <sub>2</sub> , temperature measurement in center of chamber, CO <sub>2</sub> measurement performed using test gas at 37 °C and 5 $\%$ CO <sub>2</sub>	•	•	8012-1235
CELLROLL Set	modular, expandable roller bottle system for cell cultivation, 4 roller bottles	•	-	8612-0023
CELLROLL Set	modular, expandable roller bottle system for cell cultivation, 6 roller bottles	-	•	8612-0024
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
Innerdeer divided	Cell therapy compartmentalization, consisting of 6 inner doors and three shelf levels with one partition wall each	•	-	8612-0030
Inner door, divided	Cell therapy compartmentalization, consisting of 8 inner doors and four shelf levels with one partition wall each	_	•	8612-0031
O <sub>2</sub> 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	vewing window (13 x 25 cm) in the inner door for quick access	•	•	8612-0032

#### ORDERING INFORMATION ACCESSORIES

Designation	Description	CBF 170	CBF 260	Art. No.
APT-COM™ 4	for simple logging and documentation requirements with up to 5 networked units.			
BASIC-Edition	version 4, BASIC edition	•	•	9053-0039

Designation	Description	CBF 170	CBF 260	Art. No.
APT-COM™ 4	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.			
GLP-Edition	version 4, GLP edition	•	•	9053-004
APT-COM™ 4	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.			
PROFESSIONAL-Edition	version 4, PROFESSIONAL edition	•	•	9053-004
Pasa	the base equipped with casters is used for the secure positioning and leveling of a BINDER	•	-	9051-002
Base	CO <sub>2</sub> incubator	-	•	9051-004
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	•	•	8009-112
Copper interior fittings	Set consisting of 3 shelves (all-copper) and a water pan (copper-plated),	•	-	8012-191
	for CO <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	•	•	8012-001
Gas cylinder connection set	for $N_2$ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	•	•	8012-001
561	for $O_2$ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	•	•	8012-001
Gas tank changer	external, BINDER Gas Supply Service, for connecting 2 gas tanks (CO <sub>2</sub> , N <sub>2</sub> or O <sub>2</sub> ), with audible and visual alarms, as well as zero-voltage alarm output	•	•	8012-040
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	•	1002-001
	IQ/OQ documents – supporting documents for validation performed by customers, consi- sting 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	•	•	7057-000
Qualification	Hard copy inside folder	•	•	7007-000
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			
	Digital in PDF format	•	•	7057-000
	Hard copy inside folder	•	•	7007-000
Rubber pads	set anti-slip feet	•	•	8012-070
Shaker "Professional"	Shaker and controller equipped with LEMO connectors, exclusively for CB with electric access port, $100 - 240 V$ , $50/60 Hz$	•	•	8012-177
Shaker "Universal"	Shaker and controller connected via ribbon cable, universally applicable, 100 – 240 V, 50/60 Hz	•	•	8012-177
	Chainlann shael	•	-	6004-013
	Stainless steel	-	•	6004-019
Shelf, perforated	for divided inner door			
	Challens should divide d	•	-	8012-188
	Stainless steel, divided	-	•	8012-199
Staaking adaptas	for the thermally indicted stabilize of two DINDED CO. in what we	•	-	9051-003
Stacking adapter	for the thermally isolated stacking of two BINDER $\mathrm{CO}_2$ incubators	-	•	9051-003
Ctooling from o	stable, vibration-free stacking frame on casters with stop brake for safe stacking of two CB	•	-	9051-004
Stacking frame	series units	-	•	9051-004
	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	•	•	8009-110
Water supply	Set consisting of 12 empty, refillable tubular bags including peristaltic tubing, connectors, and fine gas filters			
	for versions with active humidification	•	•	8009-105
	Set consisting of 3 empty, refillable tubular bags including peristaltic tubing, connectors, and fine gas filters			
	for versions with active humidification		•	8009-108

Designation	Description	CBF 170	CBF 260	Art. No.
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

#### **BINDER** products

CO <sub>2</sub> incubators
Incubators
Cooling incubators
Growth chambers
Ultralow temperature freezers
Drying and heating chambers
Safety drying chambers
Vacuum drying chambers
Constant climate chambers
Dynamic climate chambers
Battery test chambers
Multi Management Software
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#### Best conditions for your success

#### BINDER GmbH

Tuttlingen, Germany

Tel +49 7462 2005 0 info@binder-world.com www.binder-world.com

Helago-CZ s.r.o. Kladská 1082 500 03 Hradec Králové Tel.: 495 220 229, 495 220 394 Fax: 495 220 154 <u>http://www.helago-cz.cz</u> E-mail: info@helago-cz.cz BINDER Asia Pacific (Hong Kong) Ltd. Kowloon, Hong Kong, P.R. China

Tel +852 39070500 asia@binder-world.com

BINDER Environmental Testing Equipment (Shanghai) Co., Ltd. Shanghai, P.R.China

Tel +86 21 685 808 25 china@binder-world.com Representative Office for CIS Moscow, Russia

Tel +7 495 988 15 16 russia@binder-world.com

BINDER Inc. Bohemia, NY, USA

Tel +1 631 224 4340 usa@binder-world.com