

# Model CBF 260 | CO<sub>2</sub> incubators with hot air sterilization and humidity regulation

The BINDER CBF is the high-end CO<sub>2</sub> 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.

## 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 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

## OPTIONAL EQUIPMENT

- O<sub>2</sub> control with O<sub>2</sub> control ranges: 0.2 to 20 vol.% O<sub>2</sub> or 10 to 95 vol.% O<sub>2</sub>
- 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.
267	200...230 V 1~ ph 50/60 Hz	Standard	CBF260-230V	9640-0021
		with O <sub>2</sub> control 0.2–20%	CBF260-230V-O	9640-0022
		with O <sub>2</sub> control 0.2–20% and cell therapy compartmentalization	CBF260-230V-OZ	9640-0025
	100...120 V 1~ ph 50/60 Hz	Standard	CBF260UL-120V	9640-0023
		with O <sub>2</sub> control 0.2–20%	CBF260UL-120V-O	9640-0024
		with O <sub>2</sub> control 0.2–20% and cell therapy compartmentalization	CBF260UL-120V-OZ	9640-0026

## TECHNICAL DATA

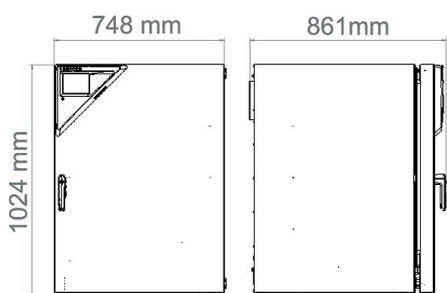
Description	CBF260-230V <sup>1</sup>	CBF260-230V-O <sup>1</sup>	CBF260-230V-OZ <sup>1</sup>	CBF260UL-120V <sup>1</sup>	CBF260UL-120V-O <sup>1</sup>	CBF260UL-120V-OZ <sup>1</sup>
<b>Article Number</b>	<b>9640-0021</b>	<b>9640-0022</b>	<b>9640-0025</b>	<b>9640-0023</b>	<b>9640-0024</b>	<b>9640-0026</b>
<b>Performance Data Temperature</b>						
Temperature range +6 °C above ambient temperature to	60 °C	60 °C	60 °C	60 °C	60 °C	60 °C
Temperature variation at 37 °C [± K]	0.4	0.4	0.4	0.4	0.4	0.4
Temperature fluctuation at 37 °C [± K]	0.1	0.1	0.1	0.1	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	6	6	6	6	6	6
<b>Performance Data Climate</b>						
Humidity range	50...95	50...95	50...95	50...95	50...95	50...95
<b>CO<sub>2</sub>-Data</b>						
CO <sub>2</sub> range [Vol.-% CO <sub>2</sub> ]	0...20	0...20	0...20	0...20	0...20	0...20
CO <sub>2</sub> measurement	IR	IR	IR	IR	IR	IR
CO <sub>2</sub> Recovery time after 30 seconds door open at 5 Vol.-% CO <sub>2</sub> [min]	5	5	5	5	5	5
<b>O<sub>2</sub>-Data</b>						
Standard O <sub>2</sub> control ranges: O <sub>2</sub> range [Vol.-% O <sub>2</sub> ]		0.2...20	0.2...20		0.2...20	0.2...20
O <sub>2</sub> control ranges with option: O <sub>2</sub> range [Vol.-% O <sub>2</sub> ]		10...95	10...95		10...95	10...95
O <sub>2</sub> Recovery time after 30 seconds door open at 5 Vol.-% O <sub>2</sub> [min]		15	15		15	15
<b>Electrical data</b>						
Rated Voltage [V]	200...230	200...230	200...230	100...120	100...120	100...120
Power frequency [Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Nominal power [kW]	1.5	1.5	1.5	1.5	1.5	1.5
Unit fuse [A]	10	10	10	16	16	16
Phase (Nominal voltage)	1~	1~	1~	1~	1~	1~
<b>Measures</b>						
Interior volume [L]	267	267	267	267	267	267
Net weight of the unit (empty) [kg]	125	125	125	125	125	125
Permitted load [kg]	40	40	40	40	40	40
Load per rack [kg]	10	10	10	10	10	10
Wall clearance back [mm]	100	100	100	100	100	100
Wall clearance sidewise [mm]	50	50	50	50	50	50
<b>Internal Dimensions</b>						
Width [mm]	620	620	620	620	620	620
Height [mm]	750	750	750	750	750	750
Depth [mm]	575	575	575	575	575	575
<b>Doors</b>						
Inner doors	6	6	6	6	6	6
Unit doors	1	1	1	1	1	1
<b>Housing dimensions not incl. fittings and connections</b>						
Width net [mm]	740	740	740	740	740	740
Height net [mm]	1020	1020	1020	1020	1020	1020
Depth net [mm]	785	785	785	785	785	785

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	CBF260-230V <sup>1</sup>	CBF260-230V-O <sup>1</sup>	CBF260-230V-OZ <sup>1</sup>	CBF260UL-120V <sup>1</sup>	CBF260UL-120V-O <sup>1</sup>	CBF260UL-120V-OZ <sup>1</sup>
Article Number	9640-0021	9640-0022	9640-0025	9640-0023	9640-0024	9640-0026
Environment-specific data						
Energy consumption at 37 °C [Wh/h]	65	65	65	65	65	65
Sound-pressure level [dB(A)]	41	41	41	41	41	41
Fixtures						
Number of shelves (std./max.)	3/8	3/8	3/8	3/8	3/8	3/8

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.

## 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 <sub>2</sub> values (outputs not adjustable)	02
Calibration certificate O <sub>2</sub>	for versions with O <sub>2</sub> control; a measuring point in center of chamber at a specified O <sub>2</sub> 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 <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, 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
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 <sub>2</sub> concentrations between 10 and 95 vol. %, only in conjunction with option models with O <sub>2</sub> 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.
<b>APT-COM™ 4 BASIC-Edition</b>	for simple logging and documentation requirements with up to 5 networked units. version 4, BASIC edition	-	9053-0039
<b>APT-COM™ 4 GLP-Edition</b>	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
<b>APT-COM™ 4 PROFESSIONAL-Edition</b>	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units. version 4, PROFESSIONAL edition	-	9053-0040
<b>Base</b>	the base equipped with casters is used for the secure positioning and leveling of a BINDER CO <sub>2</sub> incubator	-	9051-0044
<b>Convenient water supply</b>	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
<b>Gas cylinder connection set</b>	for CO <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0014
	for N <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0016
	for O <sub>2</sub> , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0015
<b>Gas tank changer</b>	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	-	8012-0408
<b>pH-neutral detergent</b>	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
<b>Qualification documents</b>	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 <sub>2</sub> , O <sub>2</sub> , 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 <sub>2</sub> , O <sub>2</sub> – or pressure, depending on unit Digital in PDF format	-	7057-0005
	Hard copy inside folder	-	7007-0005
<b>Rubber pads</b>	set anti-slip feet	-	8012-0702
<b>Shaker „Professional“</b>	Shaker and controller equipped with LEMO connectors, exclusively for CB with electric access port, 100 – 240 V, 50/60 Hz	-	8012-1772
<b>Shaker „Universal“</b>	Shaker and controller connected via ribbon cable, universally applicable, 100 – 240 V, 50/60 Hz	-	8012-1771
<b>Shelf, perforated</b>	Stainless steel	-	6004-0197
	for divided inner door Stainless steel, divided	-	8012-1996
<b>Stacking adapter</b>	for the thermally isolated stacking of two BINDER CO <sub>2</sub> incubators	-	9051-0039
<b>Stacking frame</b>	stable, vibration-free stacking frame on casters with stop brake for safe stacking of two CB series units	-	9051-0041
<b>Water supply</b>	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
<b>WLAN kit</b>	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.
<b>Installation services</b>			
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
<b>Maintenance contracts</b>			
<b>Maintenance services</b>			
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 <sub>2</sub> 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
<b>Calibration services</b>			
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 <sub>2</sub> calibration	CO <sub>2</sub> calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate	03, 04, 05	DL30-0401
O <sub>2</sub> calibration	O <sub>2</sub> calibration with 1 measuring point in center of chamber at a specified O <sub>2</sub> 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
<b>Validation services</b>			
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
<b>Warranty service</b>			
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).

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