

## 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 260



Model 170

### IMPORTANT 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 90 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]	Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
<b>Model CBF 260</b>					
267	200...230 V 1~ 50/60 Hz -10,0 A	CEE 7/7	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~ 50/60 Hz -16,0 A	NEMA 5-20	Standard	CBF260UL-120V	9640-0023

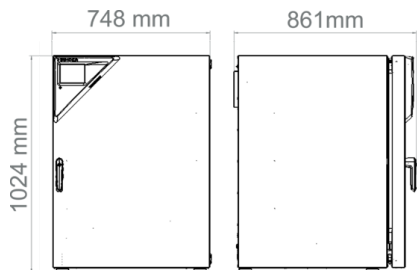
Interior volume [L]	Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
			with O <sub>2</sub> control 0.2–20%	CBF260UL-120V-0	9640-0024
			with O <sub>2</sub> control 0.2–20% and cell therapy compartmentalization	CBF260UL-120V-OZ	9640-0026

## TECHNICAL DATA

Data						
Designation	CBF260-230V	CBF260-230V-O	CBF260-230V-OZ	CBF260UL-120V	CBF260UL-120V-O	CBF260UL-120V-OZ
Article Number	9640-0021	9640-0022	9640-0025	9640-0023	9640-0024	9640-0026
Option model	Standard	with O <sub>2</sub> control 0.2–20%	with O <sub>2</sub> control 0.2–20% and cell therapy compartmentalization	Standard	with O <sub>2</sub> control 0.2–20%	with O <sub>2</sub> control 0.2–20% and cell therapy compartmentalization
Performance Data Temperature						
Temperature range	+6 °C above ambient temperature to 60 °C	+6 °C above ambient temperature to 60 °C	+6 °C above ambient temperature to 60 °C	+6 °C above ambient temperature to 60 °C	+6 °C above ambient temperature to 60 °C	+6 °C above ambient temperature to 60 °C
Temperature uniformity at 37°C	0.4 ± K	0.4 ± K	0.4 ± K	0.4 ± K	0.4 ± K	0.4 ± K
Temperature fluctuation at 37°C	0.1 ± K	0.1 ± K	0.1 ± K	0.1 ± K	0.1 ± K	0.1 ± K
Recovery time after door was opened for 30 s at 37°C	6 min	6 min	6 min	6 min	6 min	6 min
Performance Data Climate						
Humidity range	50...95 % RH	50...95 % RH	50...95 % RH	50...95 % RH	50...95 % RH	50...95 % RH
Gas Data						
CO <sub>2</sub> range	0...20 Vol.-% CO <sub>2</sub>	0...20 Vol.-% CO <sub>2</sub>	0...20 Vol.-% CO <sub>2</sub>	0...20 Vol.-% CO <sub>2</sub>	0...20 Vol.-% CO <sub>2</sub>	0...20 Vol.-% CO <sub>2</sub>
CO <sub>2</sub> measuring technology	IR	IR	IR	IR	IR	IR
CO <sub>2</sub> recovery time after door was opened for 30 s at 5 vol. % CO <sub>2</sub>	5 min	5 min	5 min	5 min	5 min	5 min
Standard O <sub>2</sub> control range		0.2...20 Vol.-% O <sub>2</sub>	0.2...20 Vol.-% O <sub>2</sub>		0.2...20 Vol.-% O <sub>2</sub>	0.2...20 Vol.-% O <sub>2</sub>
O <sub>2</sub> control ranges with option: O <sub>2</sub> range		10...90 Vol.-% O <sub>2</sub>	10...90 Vol.-% O <sub>2</sub>		10...90 Vol.-% O <sub>2</sub>	10...90 Vol.-% O <sub>2</sub>
O <sub>2</sub> recovery time after door was opened for 30 s at 5 vol. % O <sub>2</sub>		15 min	15 min		15 min	15 min
Electrical data						
Rated Voltage	200...230 V	200...230 V	200...230 V	100...120 V	100...120 V	100...120 V
Power frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Nominal power	1,5 kW	1,5 kW	1,5 kW	1,5 kW	1,5 kW	1,5 kW
Unit fuse	10,0 A	10,0 A	10,0 A	16,0 A	16,0 A	16,0 A

Phase (Nominal voltage)	1~	1~	1~	1~	1~	1~
<b>Measures</b>						
Interior volume	267 L	267 L	267 L	267 L	267 L	267 L
Net weight of the unit (empty)	126 kg	126 kg	126 kg	126 kg	126 kg	126 kg
Load per rack	10 kg	10 kg	10 kg	10 kg	10 kg	10 kg
Permitted load	40 kg	40 kg	40 kg	40 kg	40 kg	40 kg
Wall clearance back	100 mm	100 mm	100 mm	100 mm	100 mm	100 mm
Wall clearance sidewise	50 mm	50 mm	50 mm	50 mm	50 mm	50 mm
<b>Housing dimensions not incl. fittings and connections</b>						
Width net	740 mm	740 mm	740 mm	740 mm	740 mm	740 mm
Height net	1,020 mm	1,020 mm	1,020 mm	1,020 mm	1,020 mm	1,020 mm
Depth net	785 mm	785 mm	785 mm	785 mm	785 mm	785 mm
<b>Internal Dimensions</b>						
Interior width	620 mm	620 mm	620 mm	620 mm	620 mm	620 mm
Interior height	750 mm	750 mm	750 mm	750 mm	750 mm	750 mm
Interior depth	575 mm	575 mm	575 mm	575 mm	575 mm	575 mm
Inner doors	1	1	8	1	1	8
Unit doors	1	1	1	1	1	1
<b>Environment-specific data</b>						
Sound-pressure level	41 dB(A)	41 dB(A)	41 dB(A)	41 dB(A)	41 dB(A)	41 dB(A)
Energy consumption at 37°C	65 Wh/h	65 Wh/h	65 Wh/h	65 Wh/h	65 Wh/h	65 Wh/h
<b>Fixtures</b>						
Number of shelves (std./max.)	3/8	3/8	3/8	3/8	3/8	3/8

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	CBF 260	*	Art.-No.
	back			
	30 mm	•	01	8612-0025
	left			
Access port with silicone plug	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	8612-0022
CELLROLL Set	modular, expandable roller bottle system for cell cultivation, 6 roller bottles	•	-	8612-0024
	for temperature, measurement in center of chamber at specified temperature	•	-	8012-1132
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	-	8012-1550
Calibration certificate, temperature	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	-	8012-1571
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	-	8012-1592
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
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
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

Designation	Description	CBF 260	*	Art.-No.
O <sub>2</sub> control range	alternative to the standard range, for controlling O <sub>2</sub> concentrations between 10 and 90 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

## ACCESSORIES

Designation	Description	CBF 260	*	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 <sub>2</sub> incubator	•	-	9051-0044
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
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
	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
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	•	-	8012-2344
Qualification 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 <sub>2</sub> , O <sub>2</sub> – or pressure, depending on unit			
	Digital in PDF format	•	-	7057-0005
	Hard copy inside folder	•	-	7007-0005
	IQ/OQ documents – supporting documents for validation performed by customers, consisting of: IQ/OQ checklists incl. calibration guide and			

Designation	Description	CBF 260	*	Art.-No.
	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
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	•	-	8012-2183
Shelf, perforated	for divided inner door			
	Stainless steel, divided	•	-	8012-1996
Stacking adapter	for the thermally isolated stacking of two BINDER CO <sub>2</sub> incubators	•	-	9051-0039
Stacking frame	stable, vibration-free stacking frame on casters with stop brake for safe stacking of two CB series units	•	-	9051-0041
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.	•	-	8012-2262
	Set consisting of 12 empty, refillable tubular bags including peristaltic tubing, connectors, and fine gas filters			
	for versions with active humidification	•	-	8012-2255
Water supply	Set consisting of 3 empty, refillable tubular bags including peristaltic tubing, connectors, and fine gas filters			
	for versions with active humidification	•	-	8012-2256
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	-	8012-2250

## SERVICES

Designation	Description	*	Art.-No.
<b>Calibration services</b>			
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	–	DL30-0401
Calibration certificate, temperature	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	–	DL30-0101
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	–	DL30-0102

Designation	Description	*	Art.-No.
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	–	DL30-0402
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	–	DL30-0109
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	–	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate	–	DL30-0127
<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)	–	DL10-0100
		–	DL10-0120
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	–	DL10-0500
		–	DL10-0510
<b>Maintenance contracts</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	–	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, testing of all key functions, replacement of wear parts, calibration of one temperature and CO <sub>2</sub> value, including certificate	–	DL20-0940
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	–	DL20-0820
<b>Maintenance services</b>			
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	–	DL20-0400
		–	DL20-0450
<b>Validation services</b>			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	–	DL41-0210
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	–	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

- 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.

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