

## Model CB 56 | CO<sub>2</sub> incubators with hot air sterilization and heat sterilizable CO<sub>2</sub> sensor

The BINDER CB series CO<sub>2</sub> incubator is the premium class among the CO<sub>2</sub> incubators. It is suitable for all sensitive incubation applications and ensures optimal cell growth. A BINDER CB series CO<sub>2</sub> incubator can perform complex cultivation experiments as well as specific environmental conditions.

### 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 56



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### IMPORTANT FEATURES

- Optimized 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

### OPTIONAL EQUIPMENT

- 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		Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
[L]	[L]					
<b>Model CB 56</b>						
53	53	200...230 V 1~ 50/60 Hz -10,0 A	CEE 7/7	Standard	CB056-230V	9640-0005
		100...120 V 1~ 50/60 Hz -16,0 A	NEMA 5-20	Standard	CB056UL-120V	9640-0007

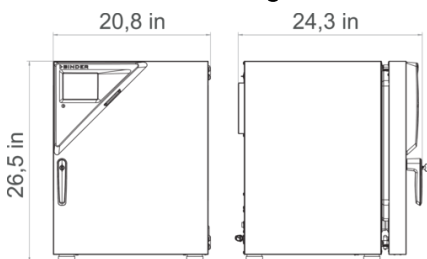
## TECHNICAL DATA

Data		
Designation	CB056-230V	CB056UL-120V
Article Number	9640-0005	9640-0007
Option model	Standard	Standard
Performance Data Temperature		
Temperature range	+4 °C above ambient temperature to 60 °C	+4 °C above ambient temperature to 60 °C
Temperature uniformity at 37°C	0.3 ± K	0.3 ± K
Temperature fluctuation at 37°C	0.1 ± K	0.1 ± K
Recovery time after door was opened for 30 s at 37°C	5 min	5 min
Performance Data Climate		
Humidity range	90 ...95 % r.F.	90 ...95 % r.F.
Gas Data		
CO <sub>2</sub> range	0 ...20 Vol.-% CO <sub>2</sub>	0 ...20 Vol.-% CO <sub>2</sub>
CO <sub>2</sub> measuring technology	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
Electrical data		
Rated Voltage	200...230 V	100...120 V
Power frequency	50/60 Hz	50/60 Hz
Nominal power	0,8 kW	0,8 kW
Unit fuse	10,0 A	16,0 A
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume	53 L	53 L
Net weight of the unit (empty)	53 kg	53 kg
Load per rack	10 kg	10 kg
Permitted load	30 kg	30 kg
Wall clearance back	100 mm	100 mm
Wall clearance sidewise	50 mm	50 mm
Housing dimensions not incl. fittings and connections		

Width net	528 mm	528 mm
Height net	674 mm	674 mm
Depth net	545 mm	545 mm
<b>Internal Dimensions</b>		
Interior width	400 mm	400 mm
Interior height	400 mm	400 mm
Interior depth	330 mm	330 mm
Inner doors	1	1
Unit doors	1	1
<b>Environment-specific data</b>		
Sound-pressure level	41 dB(A)	41 dB(A)
Energy consumption at 37°C	45 Wh/h	45 Wh/h
<b>Fixtures</b>		
Number of shelves (std./max.)	2/3	2/3

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	CB 56	*	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

Designation	Description	CB 56	*	Art.-No.
Analog output 4-20 mA	for temperature and CO <sub>2</sub> values (outputs not adjustable)	•	02	8612-0022
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	•	-	8012-1132
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	-	8012-1550
	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
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 4 inner doors and two shelf levels with one partition wall each	•	-	8612-0029

## ACCESSORIES

Designation	Description	CB 56	*	Art.-No.
APT-COM™ 4	Multi Management Software APT-COM™			
	version 4, BASIC edition	•	–	9053-0039
	version 4, GLP edition	•	–	9053-0042
	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	•	-	9051-0043
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 <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 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	

Designation	Description	CB 56	*	Art.-No.
Rubber pads	set anti-slip feet	•	-	8012-0702
	Stainless steel	•	-	8012-2166
Shelf, perforated	for divided inner door			
	stainless steel	•	-	8012-2058
Stacking adapter	for the thermally isolated stacking of two BINDER CO <sub>2</sub> incubators	•	-	9051-0038
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
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. Travel to be quoted separate.	-	DL30-0401
Temperature calibration	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate Travel to be quoted separate.	-	DL30-0101
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate Travel to be quoted separate.	-	DL30-0102
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate. Travel to be quoted separate. A total of 3 shelves are required.	-	DL30-0109
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate. Travel to be quoted separate. A total of 2 shelves are required.	-	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate. Travel to be quoted separate. A total of 3 shelves are required.	-	DL30-0127
<b>Installation services</b>			
Unit installation	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) Travel to be quoted as separate.	-	DL10-0100
		-	DL10-0110
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming. Travel to be quoted as separate Limited to 3 hours.	-	DL10-0500
		-	DL10-0510
<b>Maintenance services</b>			
BRONZE 3-year maintenance contract	Annual Device Inspection Includes Preventive Maintenance with Calibration Certificate. 10% Discount on Spare Parts and Labor for any additional Services	-	DL20-0710

Designation	Description	*	Art.-No.
	needed Wear + tear parts to be purchased or billed to customer. Travel to be quoted as separate.		
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
Preventive maintenance	One-off maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Checking a test temperature specified by the user in center of usable space without certificate. Wear + tear parts need to be purchased or billed to customer. Travel to be quoted as separate.	–	DL20-0400
		–	DL20-0440
SILVER 3-year maintenance contract	Annual Device Inspection Includes Preventive Maintenance with Calibration Certificate 15% Discount on Spare Parts and Labor for any additional Services needed One additional courtesy visit per year can be used for service visit or operator training. Wear + tear parts to be purchased or billed to customer. Travel to be quoted separate.	–	DL20-0820
<b>Validation services</b>			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder. Travel to be quoted separate.	–	DL41-0200
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder. Travel to be quoted separate.	–	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.

### **BINDER GmbH**

Tuttlingen, Germany  
TEL +49 7462 2005 0  
FAX +49 7462 2005 100  
info@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

### **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 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