

Model CB 60 | CO₂ incubators with hot air sterilization and heat sterilizable CO₂ sensor

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 CB series CO₂ incubator can perform complex cultivation experiments as well as specific environmental conditions.

BENEFITS

- Maximum usable space with minimal footprint and excellent ease of use
- Minimum risk of contamination thanks to uncompromising hot-air sterilization
- Fanless, easy-to-clean hygienic interior without fixtures
- Stable pH values thanks to drift-free CO₂ IR sensor technology
- Low evaporation of the medium due to high levels of humidity and quick recovery time



Model 60

MAIN FEATURES

- Temperature range: from 4 °C above ambient temperature up to 60 °C
- Humidity range: 90 to 95% RH
- CO₂ control range: 0 to 20 vol.% CO₂
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Optimized double-pan humidification system with condensation protection
- CO₂ gas-mixing jet with Venturi effect
- Hot-air sterilizable CO₂ sensor with single-beam infrared technology
- Intuitive touchscreen controller
- Internal data recording, can be read out in open format via USB interface
- Fail-safe CO₂ system for protecting the pH of cell cultures
- DuoDoor™ system: Unit door and glass door can be opened with one handle
- Tightly fitted inner door made of safety glass
- Lockable door handle
- Seamless inner chamber made of stainless steel with flanges as shelf support system
- Perforated shelves, stainless steel
- Troubleshooting system with visual and acoustic alarms
- Interfaces: Ethernet, USB, zero-voltage alarm contact
- Units can be stacked with CB-S models of the same size using a stacking adapter

OPTIONAL EQUIPMENT

- Versions with O₂ control range: 0.2 to 20 vol.% O₂ or 10 to 95 vol.% O₂
- Versions with humidity control range: 50 to 95% RH due to active humidification
- Convenient water supply with reusable tubular bags, pre-filled single-liter water bottle, or water container set with magnetic holder, for versions with active humidification
- Multi-sectional glass doors with special shelves for dividing up the space to accommodate different experiments
- Stacking adapter for secure, space-saving installation
- CO₂ gas tank changer for connecting two gas tanks to one or two incubators
- CO₂ shaker with corrosion-resistant components in a stainless-steel housing
- APT-COM Multi Management Software – for managing, recording, and documenting unit parameters
- Services – wide range of services to ensure that the unit functions correctly

ORDERING INFORMATION

Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
1.9	200...230 V 1~ 50/60 Hz	Standard	CB060-230V	9040-0088
		with O ₂ control	CB060-230V-0	9040-0090
		with 4x divided inner door	CB060-230V-G	9040-0104
		with O ₂ control and with 4x divided inner door	CB060-230V-GO	9040-0106
	100...120 V 1~ 50/60 Hz	Standard	CB060UL-120V	9040-0089
		with O ₂ control	CB060UL-120V-0	9040-0091
		with 4x divided inner door	CB060UL-120V-G	9040-0105
		with O ₂ control and with 4x divided inner door	CB060UL-120V-GO	9040-0107

TECHNICAL DATA (Version 1-4 from 8)

Description	CB060-230V ¹	CB060-230V-0 ¹	CB060-230V-G ¹	CB060-230V-GO ¹
Article Number	9040-0088	9040-0090	9040-0104	9040-0106
Performance Data Temperature				
Temperature range +7 °C above ambient temperature to	60	60	60	60
Temperature variation at 37 °C [± K]	0.3	0.3	0.3	0.3
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]	4	4	4	4
Performance Data Climate				
Humidity range [% RH]	90...95	90...95	90...95	90...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]		8		8
Electrical data				
Rated Voltage [V]	200...230	200...230	200...230	200...230
Power frequency [Hz]	50/60	50/60	50/60	50/60
Nominal power [kW]	1	1	1	1
Unit fuse [A]	10	10	10	10
Phase (Nominal voltage)	1~	1~	1~	1~
Measures				
Interior volume [cu.ft.]	1.9	1.9	1.9	1.9
Net weight of the unit (empty) [lbs]	139	143	143	150
Permitted load [lbs]	66	66	66	66
Load per rack [lbs]	22	22	22	22
Wall clearance back [in]	3.94	3.94	3.94	3.94
Wall clearance sidewise [in]	1.97	1.97	1.97	1.97

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	CB060-230V ¹	CB060-230V-0 ¹	CB060-230V-G ¹	CB060-230V-G0 ¹
Article Number	9040-0088	9040-0090	9040-0104	9040-0106
Internal Dimensions				
Width [in]	15.76	15.76	15.76	15.76
Height [in]	15.76	15.76	15.76	15.76
Depth [in]	13	13	13	13
Doors				
Inner doors	1	1	4	4
Unit doors	1	1	1	1
Housing dimensions not incl. fittings and connections				
Width net [in]	22.85	22.85	22.85	22.85
Height net [in]	28.37	28.37	28.37	28.37
Depth net [in]	21.47	21.47	21.47	21.47
Environment-specific data				
Energy consumption at 37 °C [Wh/h]	80	80	80	80
Fixtures				
Number of shelves (std./max.)	2/3	2/3	2/3	2/3

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.

TECHNICAL DATA (Version 5-8 from 8)

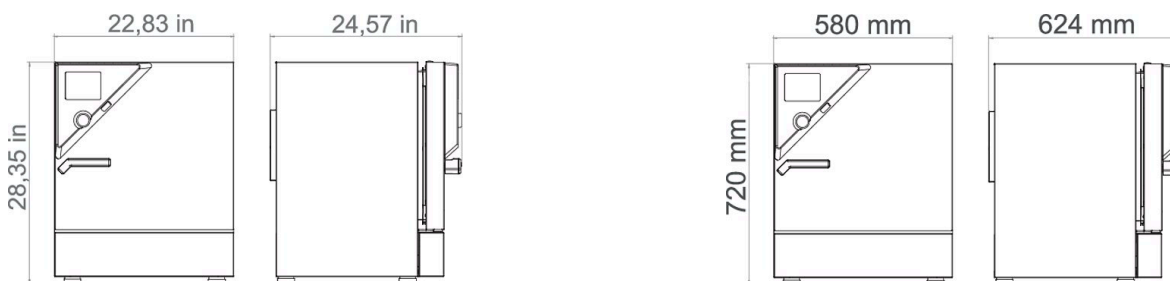
Description	CB060UL-120V ¹	CB060UL-120V-0 ¹	CB060UL-120V-G ¹	CB060UL-120V-G0 ¹
Article Number	9040-0089	9040-0091	9040-0105	9040-0107
Performance Data Temperature				
Temperature range +7 °C above ambient temperature to	60	60	60	60
Temperature variation at 37 °C [± K]	0.3	0.3	0.3	0.3
Temperature fluctuation at 37 °C [± K]	0.1	0.1	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	4	4	4	4
Performance Data Climate				
Humidity range [% RH]	90...95	90...95	90...95	90...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]		8		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.

Description	CB060UL-120V ¹	CB060UL-120V-0 ¹	CB060UL-120V-G ¹	CB060UL-120V-G0 ¹
Article Number	9040-0089	9040-0091	9040-0105	9040-0107
Electrical data				
Rated Voltage [V]	100...120	100...120	100...120	100...120
Power frequency [Hz]	50/60	50/60	50/60	50/60
Nominal power [kW]	1	1	1	1
Unit fuse [A]	16	16	16	16
Phase (Nominal voltage)	1~	1~	1~	1~
Measures				
Interior volume [cu.ft.]	1.9	1.9	1.9	1.9
Net weight of the unit (empty) [lbs]	139	143	143	150
Permitted load [lbs]	66	66	66	66
Load per rack [lbs]	22	22	22	22
Wall clearance back [in]	3.94	3.94	3.94	3.94
Wall clearance sidewise [in]	1.97	1.97	1.97	1.97
Internal Dimensions				
Width [in]	15.76	15.76	15.76	15.76
Height [in]	15.76	15.76	15.76	15.76
Depth [in]	13	13	13	13
Doors				
Inner doors	1	1	4	4
Unit doors	1	1	1	1
Housing dimensions not incl. fittings and connections				
Width net [in]	22.85	22.85	22.85	22.85
Height net [in]	28.37	28.37	28.37	28.37
Depth net [in]	21.47	21.47	21.47	21.47
Environment-specific data				
Energy consumption at 37 °C [Wh/h]	80	80	80	80
Fixtures				
Number of shelves (std./max.)	2/3	2/3	2/3	2/3

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.
Calibration certificate, temperature	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1592
	8-pin, for low voltage with LEMO socket (coverable) and LEMO plug (max. 24 V – 2 A)	-	8012-0826
Options/Accessories	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	-	8012-1106
	back		
	30 mm	01	8012-1390
	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
	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1113
	for versions with O ₂ control; a measuring point in center of chamber at a specified O ₂ percentage value	-	8012-0229
	left		
	30 mm	01	8012-1391
	Measurement in center of chamber at specified temperature	-	8012-1132
	right		
	30 mm	01	8012-1392
	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	
Waterproof, switched flush-mounting box (CA ₃ GD) for nominal voltage in unit interior, with cover and corresponding plug (nominal voltage; max. 500 W; max. 90 °C; protection class IP67)	07	8012-0823	

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.	
Multi Management Software	Multi Management Software APT-COM™			
	version 4, BASIC edition	19	9053-0039	
	version 4, GLP edition	19	9053-0042	
	version 4, PROFESSIONAL edition	19	9053-0040	
Options/Accessories	Stainless steel	-	6004-0136	
	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016	
	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	
	for CO ₂ , consisting of a gas tank pressure regulator with connection parts and 5-meter hose	-	8012-0014	
	for divided inner door			
	stainless steel	-	6004-0140	
	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	
	for the thermally isolated stacking of two BINDER CO ₂ incubators	-	9051-0037	
	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		
set of 4 anti-slip feet, for safe stacking of units	-	8012-0702		
the base equipped with casters is used for the secure positioning and leveling of a BINDER CO ₂ incubator	-	9051-0031		

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Services	Unit function instructions for operation and programming of the controller	18	DL10-0500
	Unpacking and setting up of unit, connecting to existing connections, and checking function	13, 18	DL10-0100
Preventive maintenance			
Services	Executive of equipment inspection according to maintenance plan	14, 18	DL20-0400
Calibration services			
Services	CO ₂ calibration at a specified value, measurements are taken with analyzed test gas at 5%, including certificate	14, 16, 17, 18	DL30-0401
	Expansion – including certificate, each additional measuring point in center of chamber at specified test temperature	14, 16, 17, 18	DL30-0102
	O ₂ calibration with 1 measuring point in center of chamber at a specified O ₂ percentage value, including certificate	14, 16, 17, 18	DL30-0402
	Temperature calibration with 1 measuring point in center of chamber at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0101
	Temperature measurement with 18 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0118
	Temperature measurement with 27 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0127
	Temperature measurement with 9 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0109
Validation services			
Services	Execution of IQ/OQ in accordance with qualification folder	15, 18	DL41-0200
	Execution of IQ/OQ/PQ in accordance with qualification folder	15, 18	DL44-0500
Warranty service			
Services	The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded	–	DL02-1041
	The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded	–	DL02-1042

* Notes › See last page

NOTES

01	Hinweise
02	Hinweise
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