Model C 170 | CO_2 incubators with hot air sterilization

Series C incubators are suitable for routine cell cultivation applications: They are free from contamination due to 180 °C hot-air sterilization and reliable pH stability thanks to the drift-free infrared CO_2 measurement system.

BENEFITS

- Minimum risk of contamination thanks to 180 °C hot-air sterilization
- Stable pH values thanks to drift-free CO_2 IR sensor technology
- High humidity up to 95% RH
- Simple and fast cleaning thanks to a seamlessly deep-drawn inner chamber

Model 170

Model 170

MAIN FEATURES

- Temperature range: room temperature plus 6 °C to 50 °C
- Humidity range: 90 to 95% RH
- Auto-sterilization with hot air at 180 °C
- Humidification system with condensation protection
- CO_2 gas-mixing jet with Venturi effect
- CO_2 sensor with infrared technology
- LCD to display temperature and CO_2 along with additional information and alarms
- Tightly-sealed inner door made of tempered safety glass
- Seamless, deep-drawn inner stainless steel chamber
- 3 perforated stainless steel shelves
- Units are stackable with stacking adapter
- Troubleshooting system with visual and audible alarms
- Computer interface: Ethernet
- Zero-voltage alarm contact
- Stack-compatible with CB 170

ORDERING INFORMATION

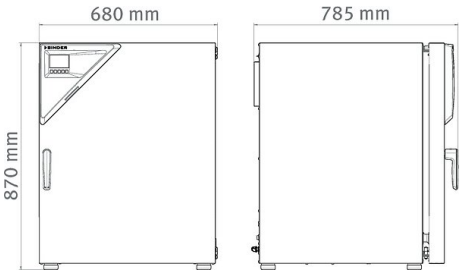
Interior volume [L]	Voltage	Option model	Version	Art.-No.
170	230 V 1~ ph 50/60 Hz	Standard	C170-230V	9040-0163
	120 V 1~ ph 50/60 Hz	Standard	C170UL-120V	9040-0164

TECHNICAL DATA

Description	C170-230V[1]	C170UL-120V[1]
Article Number	9040-0163	9040-0164
Performance Data Temperature		
Temperature range 6 °C above ambient temperature to	50 °C	50 °C
Temperature variation at 37 °C [± K]	0.3	0.3
Temperature fluctuation [± K]	0.1	0.1
Recovery time after 30 seconds door open at 37 °C [min]	8	8
Performance Data Climate		
Humidity range [% RH]	90…95	90…95
CO_2-Data		
CO_2 range [Vol.-% CO_2]	0…20	0…20
CO_2 measurement	IR	IR
CO_2 Recovery time after 30 seconds door open at 5 Vol.-% CO_2 [min]	5	5
Electrical data		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	50/60
Nominal power [kW]	1.3	1.3
Unit fuse [A]	10	10
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume [L]	170	170
Net weight of the unit (empty) [kg]	90	90
Permitted load [kg]	40	40
Load per rack [kg]	10	10
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	50	50
Internal Dimensions		
Width [mm]	560	560
Height [mm]	600	600
Depth [mm]	505	505
Doors		
Inner doors	1	1
Unit doors	1	1
Housing dimensions not incl. fittings and connections		
Width net [mm]	680	680
Height net [mm]	870	870
Depth net [mm]	715	715
Environment-specific data		
Energy consumption at 37 °C [Wh/h]	45	45
Sound-pressure level [dB(A)]	41	41
Fixtures		
Number of shelves (std./max.)	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 in accordance 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	8012-1974
	left		
	30 mm	01	8012-1975
	right		
	30 mm	01	8012-1976
Analog output 4-20 mA	for temperature and CO_2 values (outputs not adjustable)	02	8012-1977
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	–	8012-1112
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	–	8012-1131
	temperature measurement incl. certificate and 27 measuring points at specified temperature	–	8012-1591
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	–	8012-1570
	temperature measurement incl. certificate, 9 measuring points at specified temperature	–	8012-1549
Calibration certificate, temperature and CO_2	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	–	8012-0228
Door hinged on the left	Unit door and standard glass inner door with door hinged on the left	–	8012-1953
Door lock	lockable door handle	–	8012-1014

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units.		
	version 4, BASIC edition	19	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	19	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	19	9053-0040
Base	the base equipped with casters is used for the secure positioning and leveling of a BINDER CO_2 incubator	–	9051-0028
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
Copper interior fittings	Set consisting of 3 shelves (all-copper) and a water pan (copper-plated),more information.	–	8012-1765
Gas cylinder connection set	for CO_2, 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

* Notes › See last page

Designation	Description	*	Art.-No.
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016
Rubber pads	set anti-slip feet	–	8012-0702
Shelf, perforated	Stainless steel	–	6004-0142
Stacking adapter	for the thermally isolated stacking of two BINDER CO_2 incubators	–	9051-0035

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Unit installation	Unpacking and setting up of unit, connecting to existing connections, and checking function	13, 18	DL10-0100
Unit instructions	Unit function instructions for operation and programming of the controller	18	DL10-0500
Preventive maintenance			
Maintenance	Functional testing of all electrical and mechanical components, short calibration, documentation in the maintenance schedule	14, 18	DL20-0400
Calibration services			
Calibration CO_2	including certificate, CO_2 measurement with analyzed test gas at 5 % or at specified value	14, 16, 17, 18	DL30-0401
Temperature calibration	Expansion – including certificate, each additional measuring point in center of chamber at specified test temperature	14, 16, 17, 18	DL30-0102
	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 18 measuring points	including certificate, 18 measuring points at specified temperature	14, 16, 17, 18	DL30-0118
Temperature measurement 27 measuring points	including certificate, 27 measuring points at specified temperature	14, 16, 17, 18	DL30-0127
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL30-0109
Validation services			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	15, 18	DL41-0200
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	15, 18	DL44-0500
Qualification folder IQ/OQ	supporting documents for validation performed by customer, consisting of: IQ/OQ checklists, unit schematics, QM certificate in accordance with ISO 9001	15, 18	8012-0875
Qualification folder IQ/OQ/PQ	supporting documents for validation performed by customer, in accordance with customer's requirement, extension of Qualification folder IQ/OQ by chapter PQ	15, 18	8012-0962
Warranty service			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	–	DL02-0041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	–	DL02-0042

* 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 Heat resistant only to max. 200 °C.
04 Only available on units rated for 230 V.
07 The additional heat input may affect the temperature behavior.
09 Not in conjunction with the optional access port, door with window and interior lighting.
10 Not available on 23-liter units.
11 Not available on 23- or 53-liter units.
12 Only available on units rated for 230 V or 400 V.
13 Installation and connections take place at unit location; transport within the company only upon consultation.
14 We recommend a BINDER service contract to cover unit inspections, calibrations and validations.
15 OQ according to Yellow Paper = completed factory validation documentation of all OQ checklists.
16 Sensor calibration is performed in an accredited calibration laboratory.
17 Calibration is performed according to the BINDER factory standard.
18 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).
19 For additional accessories, refer to the Process documentation chapter.

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

Representative Office for CIS
Moscow, Russia
TEL +7 495 988 15 16
FAX +7 495 988 15 17
russia@binder-world.com
www.binder-world.ru

BINDER Environmental Testing
Equipment (Shanghai) Co., Ltd.
Shangha, P.R. China
TEL +86 21 685 808 25
FAX +86 21 685 808 29
china@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