



Incubators

CO₂-Incubators

CB



CB 170 for even better results

Constant climate chambers: K = Kühlen/cooling, B = Brutschrank/incubator, F = Feuchte oder Klima/humidity or climate, P = Photostabilitätstests, LQC = Light Quantum Control, M = Material, APT = Advanced Pre-heating Technology

NEW CO₂ Incubator CB 170



CB 170

News on the CB 170

- ▶ Bigger inner volume: 170 L with same footprint
- ▶ Temperature range: 4 °C over room temperature to 60 °C
- ▶ CO₂-range: 0,2 Vol.-% up to 20 Vol.-% CO₂
- ▶ Intuitive menu navigation with touchscreen-controller (MB2)
- ▶ Optimized Humidity management with short recovery times
- ▶ Convenient upper chamber operation due to lower stack height
- ▶ Automatic diagnosis system Fail Safe for cell culture pH protection
- ▶ DuoDoor-System: Open outer door and inner door in one go



Keeping the good ones

- ▶ Well-proven CB anti-contamination concept :
Hot air sterilization at 180 °C
- ▶ Fanless inner chamber design, hygienic interior
- ▶ Permadyr© humidification
- ▶ Deep drawn inner chamber with beads



▶ **Available from 08/2018**

Controller ... not only for KBF/KMF and MKx

▶ MB2 controller

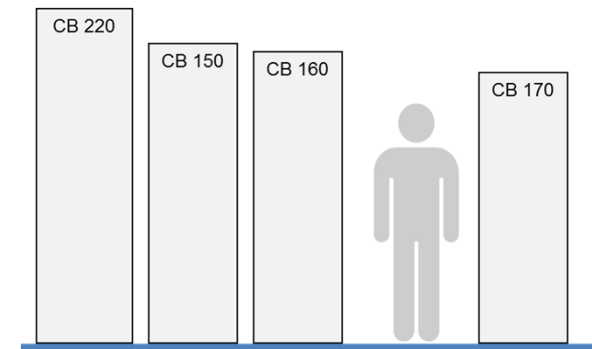
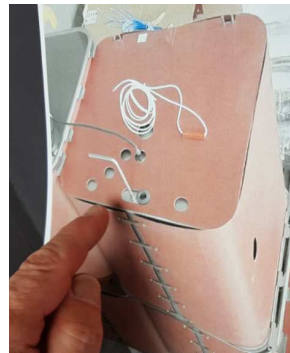
- ▶ Microprocessor controller feat. intuitive menu navigation
- ▶ 5,7" display with touchscreen
- ▶ USB port for configuration file transfer
- ▶ Internal data logger for recording measurement data
- ▶ Read-out of recorded data via USB port in open format
- ▶ Password protection
- ▶ Read access via web browser
- ▶ Alarm message via email
- ▶ Ethernet interface



Proven technology of a CO₂-Incubator in new optics

► Differences to the CB 160

- Silicon jacket heating system
- Bigger interior volume
 - 150 L → 170 L interior volume (6 ft³)
- Handy water double-pan
 - Better humidity recovery time
- New sterilizable Infrared-CO₂-Sensor
 - No tools needed for exchange
- „Failsafe“ for the safety of the Cell-cultures
- New closing mechanism
 - Ergonomic Handle-Design
 - „DualDoor“ for easier door opening
- Lower stacking height (1,80m)
 - Better usability
- Touchscreen Controller
 - Intuitive usability



The New CB 170 –Technical Data

	CB 160	CB 170	C 170
Article Number	9040-0092	9040-0132	9040-0112
Inner Volume	150 L	170 L	170 L
Outer Width	680 mm	680 mm	740 mm
Outer Height	920 mm	870 mm	870 mm
Outer Depth (plus handle bar)	715 mm	715 mm	715 mm
Temperature Range	$T_U + 7\text{ °C} \dots 60\text{ °C}$	$T_U + 4\text{ °C} \dots 60\text{ °C}$	$T_U + 7\text{ °C} \dots 50\text{ °C}$
Temperature Uniformity	$\pm 0,3\text{ °C}$	$\pm 0,3\text{ °C}$	$\pm 0,3\text{ °C}$
Temperature Fluctuation	$\pm 0,1\text{ °C}$	$\pm 0,1\text{ °C}$	$\pm 0,1\text{ °C}$
Temperature Recovery Time	5 / 8* min	~5 / 8* min	6 min
Humidity (steady-state)	90 ... 95 % r.F.	90 ... 95 % r.F.	90 ... 95 % r.F.
Humidity Recovery (up to 90 % RH)	45 min	~xx min	60 min
CO ₂ Control Range	0 ... 20 Vol.-%	0 ... 20 Vol.-%	0 ... 20 Vol.-%
CO ₂ Recovery Time	5 min	5 min	7 min

*acc. to new factory standard

~ preliminary data

Starting to new Horizons – The future of the CB

	E3	E6	E7	Release Date
Small Standard Big	CB 53	CB 60	CB 56	January 2019
	CB 150	CB 160	CB 170	August 2018
	CB 210	CB 220	CB 260	November 2018
Small	53 L	53 L	53 L	
Standard	150 L	150 L	170 L	
Big	210 L	210 L	260 L	



The CB 170 will replace the CB 160

- ▶ Planned release date CB 170: August 2018
- ▶ Planned phase-out CB 160: December 2018
- ▶ Options: O₂-control, divided inner door, door with left hinge

▶ Outlook end of 2018 / beginning of 2019

- Models CB 56 and CB 260
- Option : active steam humidification with 15 min recovery time
- Accessories: Copper Equipment (Copper shelves and coppered water-pan)

Exclusive positioning of the CB with available Options

▶ CB

- ▶ Door with left hinge
- ▶ Active steam humidification, no water-pan
- ▶ Copper shelves and coppered water-pan
- ▶ Shelves made of stainless steel
- ▶ Interior socket
- ▶ Interface converter
- ▶ Shaker
- ▶ Gas cylinder connection set
- ▶ CO₂ gas tank changer
- ▶ Anti - slip rubber pads
- ▶ Electric access port
- ▶ Stacking adapter
- ▶ Door-lock
- ▶ Bases with casters

▶ C

- ▶ Gas cylinder connection set
- ▶ CO₂ gas tank changer
- ▶ Anti - slip rubber pads
- ▶ Ethernet-interface Stacking adapter
- ▶ Door-lock
- ▶ Bases with casters



Comparison BINDER – Memmert

	BINDER CB 170	Memmert ICO150med*
Inner Volume	170 L	156 L
Housing	Powder-coated galvanized steel	Stainless steel
Stackability	Stack height 1,95 m (6,4 ft) with base and stacking pieces	Stack height 2,28 m (7,5 ft) with base and stacking pieces
Inner Chamber	Deep-drawn chamber with integrated shelf support and coved corners	Seamlessly welded chamber with coved corners
Interior Concept	Fanless System	Fan-driven convection
Temperature Range	4 °C above ambient temperature til 60 °C	5 °C above ambient temperature til 50 °C
Humidity Range	Steady-state 90-95 % r.H. via Permadyr® double water pan	Steady-state 88-97 % r.H. via water pan (Peltier Cold Spot)
Humidity Control (Option)	Active Humidity Control 50-95 % RH	Active Humidity Control 40-97 % RH
CO ₂ Control Range	0-20 % CO ₂	0-20 % CO ₂
O ₂ Control Range (Option)	0,2-20 % or 10-95 % O ₂	1-20 % O ₂
Controller	State-of-the-art touchscreen controller	Battery-buffered ControlCOCKPIT with touch-sensitive spots
Data Logging	Internal data logger stores USB-downloadable data for temperature, CO ₂ , O ₂ , humidity, messages, alarms in open format	Fail-proof FDA-compliant data storage of temperature, CO ₂ , O ₂ , humidity, door openings
Alarm	Class 3.1 independent temperature safety device (DIN 12880) with visual and acoustic alarm, zero-voltage alarm contact, alarm via email	Class 3.1 independent temperature safety device (DIN 12880) with visual and acoustic alarm, zero-voltage alarm contact, alarm via GSM
Sterilization	Sterilization of the inner chamber incl. all fixtures and sensors at 180 °C 2h	Sterilization of the inner chamber incl. all fixtures and sensors at 180 °C 1h
Registrations	CE, cUL	VDE-GS, Medical Device CE 0197, cUL