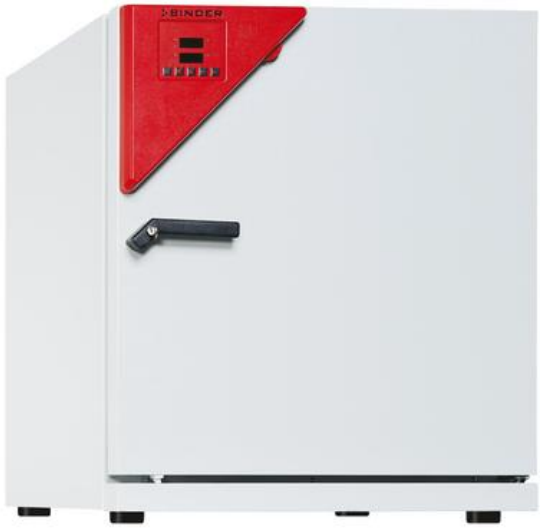
The STANDARD CO2 incubator

The BINDER C 150 is the fitting CO2 incubator for routine applications for cell cultivation: contamination-free thanks to 180 °C hot-air sterilization, this CO2 incubator is reliably pH-stable thanks to the drift-free FPI infrared measuring system. In addition, the BINDER C 150 distinguishes itself by its high temperature precision with excellent dynamics and eliminates the risk of condensation when storing tissue cultures - even in high humidity.



Advantages:

- Hot air sterilization at 180 °C
- Seamless, deep-drawn inner chamber made of stainless steel
- Unique BINDER technology (patented air jacket system, etc.)

Areas of application:


Biotechnology


Basic Research / Research Institutes


Clinics / University Hospitals

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Features	Customer benefits	Characteristics
Sterilization	• Complete elimination of bacteria, spores, etc. • Reliable sterilization of the atmosphere and all surfaces • Minimal sterilization costs	**180 °C hot air sterilization** • Standards compliance, meets all relevant standards • Automatic sterilization process
APT.line™ heating technology	• Optimal, uniform cell growth throughout the inner chamber	**Preheating chamber with VENTAIR™ air jacket** • Homogeneous temperature distribution • Rapid recovery after temperature drop • Accurate temperature control
Gas distribution	• Stable pH value	**Gas mixing head with venturi effect** • Homogeneous CO2 distribution • Fast effective aeration
Inner chamber concept	• Easy cleaning • Fully usable volume 150 l • No Provides no sources of contamination.	**Seamless, deep-drawn inner chamber** • Integrated shelf support system • Burr-free stainless steel perforated sheets with tilt protection
CO2 measurement	• Stable pH value even with frequent door opening • Long-term stable system • Low maintenance costs	**Single-beam infrared sensor** • Rapid response time • Measures CO2 in real-time • Independent of gas and humidity
Operating costs	• Minimal operating costs • Time savings	• Minimal work and material costs for sterilization

- Air jacket system assuring temperature accuracy and best cell growth
- Temperature range from 7 °C above ambient up to 50 °C
- Water pan with built-in condensation control maintains dry interior walls
- Standard-compliant hot air sterilization at 180 °C (DIN 58947)
- Seamless deep-drawn inner chamber made of stainless steel with integrated shelf support system
- Drift-free infrared CO2 measurement system
- Microprocessor with LED display for temperature and CO2 concentration
- Various alarm and status displays
- Automatic diagnostic system with visual and audible alarm, as well as zero-voltage relay contact for central monitoring
- Lockable controller keyboard via 3-digit password
- Independent temperature safety device class 3.1 (DIN 12880) with optical and audible temperature alarm
- Patented Gas mixing nozzle
- Tightly-fitted inner glass door
- Door lock
- Door hinged right or left
- Units are stackable with stacking adapter
- 3 perforated shelves, stainless steel
- BINDER test confirmation
- Two BINDER CO2-incubators, stacked
- Two incubators C 150 series, incl. stacking adapter, ensuring direct thermal decoupled stacking

C 150

Exterior dimensions	
Housing	
Width (mm)	680
Height (incl. feet/castors) (mm)	820
Depth (plus connections and fittings) (mm)	820
Depth (incl. connections and fittings) (mm)	920
Wall clearance, rear (mm)	100
Wall clearance, side (mm)	50

Interior dimensions	
Width (mm)	500
Height (mm)	600
Depth (mm)	500
Interior volume (l)	150
Stainless steel shelf (number standard/max.)	3 / 6
Dimensions of perforated shelves, width x depth (mm)	491 x 442
Dimensions (external dimensions) shelves width x depth (mm)	495 x 444
Weight (kg)	95

Temperature data	
Temperature range from 7 °C above ambient temperature to (°C)	50
Temperature variation at 37 °C (± K)	0,4
Temperature fluctuation (± K)	0,1
Recovery time after door was opened for 30 sec. at 37 °C (min) 1)	5

CO2 data	
CO2 range (Vol.-% CO2)	0-20
Setting accuracy (Vol.-% CO2)	0,1
Recovery time after door was opened for 30 sec. 5 vol. % (min.) 1) 2)	7
CO2 measurement	IR
Connection hose nozzle for CO2 DN 6 for hose with internal diameter (mm)	6

Humidity data	
Humidity (±2 % RH)	95

C 150

Electrical data	
IP protection class acc. to EN 60529	IP 20
Voltage (± 10%) 50/60 Hz (V)	230
Nominal power (kW)	1,4
Energy consumption at 37 °C (W) 2)	110

1) To 98% of the set value
2) The specified recovery times of the gas concentration in the inner chamber after the door was opened is based on a connection pressure of 2.0 bar.

All technical data are specified for units with standard equipment at an ambient temperature of 25 °C and a line voltage fluctuation of ±10%. The temperature data is determined in accordance to factory standard following DIN 12880, respecting the recommended wall clearances of 10% of the height, width and depth of the inner chamber. All figures are typical average values for series devices. We reserve the right to alter technical specifications at any time.

BINDER Gas Supply Service

The external tank changer makes automatic changeover to a second tank possible once the first tank is empty. It has acoustic and visual alarms and is equipped with a zero-voltage alarm output for extreme notification systems. It can be used for maximum two CO2 incubators and is suitable for CO2, O2 and N2 tanks.

Silicone access ports

For introducing external measuring instruments into the chamber. The access ports have a diameter of 30 mm and can be sealed on both sides using a silicone plug. They can be positioned on the back, left, and right sides.

Base on casters

Lockable adjustable feet and stable casters for stability on uneven floors and easy repositioning for a BINDER CO2-incubator of the series C or CB.

Cleaning kit

Special cleaning set:

- Gentle stainless steel cleaner with long-term protection
- Clinically approved disinfectant
- Cleaning cloths

Calibration certificate for temperature and CO2

Calibration certificate for temperature and CO2 (temperature measurement in center / CO2 measurement performed using analyzed test gas at 37 °C and 5% CO2).

C 150

Silicone access port with two silicone plugs, 30 mm, left side	O
Silicone access port with two silicone plugs, 30 mm, right side	O
Perforated shelf, stainless steel	O
Base on casters	O
Stacking adapter C 150 / CB 150, for direct thermal decoupled stacking of two CB 150 / C 150 unit combinations	O
Stacking adapter for direct thermal decoupled stacking of two C 150 CO2 incubators	O
Calibration certificate for temperature and CO2 (temperature measurement in center / CO2 measurement performed using analyzed test gas at 37 °C and 5% CO2)	O
Temperature measurement acc. to DIN 12880 (27 measuring points) at 37 °C or at specified temperature with measuring protocol and certificate	O
BINDER Gas Supply Service external gas tank replacement for connecting 2 gas tanks, either CO2 or N2, with audible and visual alarms, as well as potential-free alarm output	O
Gas tank connection set for CO2 consisting of a gas tank pressure regulator (max. pressure 10 bar) with connection parts and 5 m hose	O
4 - 20 mA analog outputs for temperature and CO2 measurements (e.g. chart recorder connection) with 6-pin DIN socket (output not adjustable)	O
Cleaning kit for equipment maintenance and disinfection, consisting of pH-neutral detergent (1000 g concentrate), spray disinfectant (500 ml / ready-to-use solution) and lint-free cleansing tissues	O
Manual for Primary Human Cell Culture, in English	O

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