

## Model B 28 | Standard-Incubators with mechanical adjustment

With the B series incubator, you get a reliable and powerful unit in a solid configuration at a very attractive price.

### BENEFITS

- Safe and reproducible results even under high batch throughputs in long-term operation
- Inner glass door for a stable atmosphere



Model 28



Model 28

### IMPORTANT FEATURES

- Temperature range: +30 °C to +70 °C
- Hydro-mechanical thermostat
- Class 1 temperature limitation device
- Inner door made of tempered safety glass
- 2 chrome-plated racks

### ORDERING INFORMATION

Interior volume [L]	Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
<b>Model B 28</b>					
28	230 V 1~ 50/60 Hz -6,3 A	CEE 7/7	Standard	Bo28-230V	9010-0002
	120 V 1~ 60 Hz -6,3 A	NEMA 5-15	Standard	Bo28-120V	9010-0067

**TECHNICAL DATA**

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Designation

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Article Number

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Option model

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Temperature range

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Temperature range without illumination cassettes

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Temperature range with 100% illumination

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Temperature uniformity dependent on set value

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Temperature uniformity at -80°C

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Temperature uniformity with 100% illumination

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Temperature uniformity without illumination cassettes

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Temperature uniformity at 37°C

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Temperature uniformity at 100°C

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Temperature uniformity at 150°C

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Temperature fluctuation dependent on set value

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Temperature fluctuation at -80°C

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Temperature fluctuation at 37°C

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Temperature fluctuation with 100% illumination

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Temperature fluctuation without illumination cassettes

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Temperature fluctuation at 100°C

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Temperature fluctuation at 150°C

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Heating up time to 100°C

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Heating up time to 150°C

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Heating up time to 37°C

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Average heating-up rate according to IEC 60068-3-5

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Cooling down time from 110°C to -40°C

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Cooling down time from 180°C to -40°C

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Cooling down time from 180°C to -70°C

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Cooling down time from 22°C to -80°C

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Average cooling down time according to IEC 60068-3-5

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Max. heat compensation at 37°C

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Max. heat compensation at 40°C

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Max. heat compensation at 40°C with illumination

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Recovery time after door was opened for 30 s at 150°C

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Recovery time after door was opened for 30 s at 37°C

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Temperature range with humidity and without illumination cassettes

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Temperature range with humidity and 100% illumination

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Temperature range with humidity

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Humidity range

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Humidity range without illumination cassettes

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Humidity range with 100% illumination

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Temperature uniformity at 25°C and 60% RH

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Temperature uniformity at 40°C and 75% RH

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Temperature uniformity with illumination at 25°C and 60% RH

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Temperature uniformity with illumination at 40°C and 75% RH

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Temperature uniformity with humidity dependent on set value

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Temperature fluctuation at 25°C and 60% RH

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Temperature fluctuation at 40°C and 75% RH

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Temperature fluctuation with illumination at 25°C and 60% RH

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Temperature fluctuation with illumination at 40°C and 75% RH

---

Temperature fluctuation with humidity dependent on set value

---

Humidity fluctuation at 25°C and 60% RH

---

Humidity fluctuation at 40°C and 75% RH

---

Humidity fluctuation with illumination at 25°C and 60% RH

---

Humidity fluctuation with illumination at 40°C and 75% RH

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Humidity fluctuation with humidity dependent on set value

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Recovery time after door was opened for 30 s at 25°C and 60% RH

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Recovery time after door was opened for 30 s at 40°C and 75% RH

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Recovery time after door was opened for 30 s with illumination at 25°C and 60% RH

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Recovery time after door was opened for 30 s with illumination at 40°C and 75% RH

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Max. heat compensation at 25°C and 90% RH

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CO<sub>2</sub> range

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CO<sub>2</sub> measuring technology

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CO<sub>2</sub> recovery time after door was opened for 30 s at 5 vol. % CO<sub>2</sub>

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Standard O<sub>2</sub> control range

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O<sub>2</sub> control ranges with option: O<sub>2</sub> range

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O<sub>2</sub> recovery time after door was opened for 30 s at 5 vol. % O<sub>2</sub>

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ICH compliant illumination for photo stability testing

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ICH compliant illumination for photo stability testing

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Daylight tubes

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Daylight tubes

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Fluora® growth lamps

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Arabidopsis lamps

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Air circulation (approx.)

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Volumetric flow rate of exhaust air acc. to EN 1539 at 50 °C

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Air change rate at 100°C

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Air change rate at 150°C

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Permitted end vacuum

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Leckrate

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Highest permitted solvent quantity (at T-180°C, M-100g/mol, U-40g/m<sup>3</sup>, K=0,5)

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Rated Voltage

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Power frequency

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Nominal power

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Unit fuse

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Phase (Nominal voltage)

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Vacuum connection with small flange

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Measuring access port with small flange

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Inert gas connection with flow limiter (RP<sup>®</sup>)

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Compressed air connection for pressure-encapsulation

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Interior volume

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Net weight of the unit (empty)

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Load per rack

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Permitted load

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Wall clearance back

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Wall clearance sidewise

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Width net

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Height net

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Depth net

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Interior width

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Interior height

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Interior depth

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Viewing window width

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Viewing window height

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Inner doors

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Unit doors

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Sound-pressure level

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Average heat compensation at set value -80°C and Ta = 21°C

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Energy consumption at 25°C and 60% RH

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Energy consumption at 100°C

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Energy consumption at 150°C

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Energy consumption at 20°C

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Energy consumption at 37°C

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Energy consumption at 37°C and 75% RH

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Energy consumption at 37°C and with illumination

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Energy consumption at 40°C and 75% RH

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Energy consumption at 85°C and 85% RH

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Energieverbrauch bei Sollwert -80 °C und  $T_u = 20$  °C

Number of shelves (std./max.)

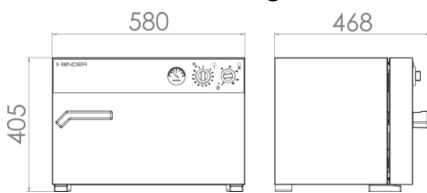
Number of illumination cassettes (std./max.)

Freezer racks per compartment

Cryoboxes, 50 mm

All technical data is specified for unloaded units with standard equipment at an ambient temperature of  $+22$  °C  $\pm 3$  °C and a power supply voltage fluctuation of  $\pm 10\%$ . 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	B 28	*	Art.-No.
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	•	-	8012-0022
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	•	-	8012-0030

## ACCESSORIES

Designation	Description	B 28	*	Art.-No.
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	-	8012-2250
Rack	chrome plated	•	-	8012-2032
Rubber pads	set anti-slip feet	•	-	8012-0702
Shelf, perforated	Stainless steel	•	-	8012-2160

## SERVICES

Designation	Description	*	Art.-No.
<b>Calibration services</b>			
Calibration certificate, temperature	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	-	DL30-0110

Designation	Description	*	Art.-No.
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	–	DL30-0102
<b>Installation services</b>			
Unit commissioning	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)	–	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	–	DL10-0500
<b>Maintenance contracts</b>			
BRONZE 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	–	DL20-0720
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 test temperature specified by the user in the center of the usable space, including certificate	–	DL20-0915
SILVER 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, calibration of one test temperature specified by the user in the center of the usable space, without certificate	–	DL20-0815
<b>Maintenance services</b>			
Maintenance	One-off maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Calibration of a test temperature specified by the user in center of usable space without certificate	–	DL20-0601
<b>Warranty service</b>			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	–	DL50-0010

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