

# Model KB 23 | Cooling incubators with compressor technology

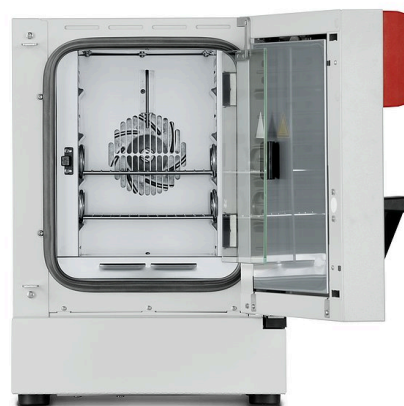
The most versatile among the cooled incubators for microorganisms: The BINDER KB series cooled incubator controls temperature ranges of -5 °C to 100 °C. With its comprehensive program functions, this cooled incubator offers a wide range of capabilities and delivers reproducible test results.

## BENEFITS

- Safe, reproducible incubation, even at high ambient temperatures
- Disinfection routine at +100 °C
- Up to 30% lower energy consumption compared to the previous model



Model 23



Model 23

## MAIN FEATURES

- Temperature range: 0 °C to 100 °C
- APT.line™ preheating chamber technology
- Cooling with compressor cooling unit
- Adjustable fan speed
- Controller with time-segment and real-time programming
- Elapsed time indicator
- Inner door made of tempered safety glass
- 2 stainless steel racks
- Stackable
- Class 3.1 independent temperature safety device (DIN 12880) with visual and audible temperature alarm

## ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
20	230 V 1~ ph 50/60 Hz	Standard	KB023-230V	9020-0112
	120 V 1~ ph 60 Hz	Standard	KB023UL-120V	9020-0113

## TECHNICAL DATA

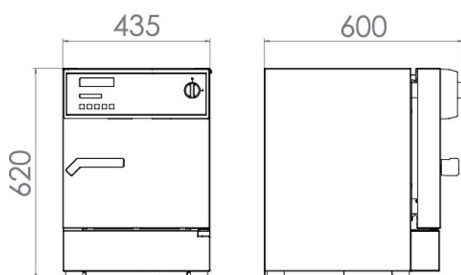
Description	KB023-230V <sup>1</sup>	KB023UL-120V <sup>1</sup>
<b>Article Number</b>	<b>9020-0112</b>	<b>9020-0113</b>
<b>Performance Data Temperature</b>		
Temperature range (max. 24 °C unter Umgebungstemperatur) [°C]	0...100	0...100
Temperature variation at 37 °C [± K]	0.3	0.3
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Heating-up time to 37 °C [min]	11	11
Recovery time after 30 seconds door open at 37 °C [min]	2	2

<sup>1</sup> 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. Technical data refers to 100 % fan speed. All indications are average values, typical for units produced in series. We reserve the right to change technical specifications at any time.

Description	KB023-230V <sup>1</sup>	KB023UL-120V <sup>1</sup>
Article Number	9020-0112	9020-0113
<b>Electrical data</b>		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	60
Nominal power [kW]	0.34	0.34
Unit fuse [A]	10	12.5
Phase (Nominal voltage)	1~	1~
<b>Measures</b>		
Interior volume [L]	20	20
Net weight of the unit (empty) [kg]	44	44
Permitted load [kg]	25	25
Load per rack [kg]	10	10
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	100	100
<b>Internal Dimensions</b>		
Width [mm]	222	222
Height [mm]	330	330
Depth [mm]	277	277
<b>Doors</b>		
Inner doors	1	1
Unit doors	1	1
<b>Housing dimensions not incl. fittings and connections</b>		
Width net [mm]	435	435
Height net [mm]	620	620
Depth net [mm]	520	520
<b>Environment-specific data</b>		
Energy consumption at 40 °C [Wh/h]	60	60
Sound-pressure level [dB(A)]	47	47
<b>Fixtures</b>		
Number of shelves (std./max.)	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 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. Technical data refers to 100 % fan speed. 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.
<b>Access port with silicone plug</b>	back		
	10 mm	01	8012-0395
	30 mm	01	8012-1292
	50 mm	01	8012-1294
	left		
	10 mm	01	8012-0393
	30 mm	01	8012-1157
	right		
	10 mm	01	8012-0392
	30 mm	01	8012-1154
	top		
	10 mm	01	8012-0391
30 mm	01	8012-1151	
50 mm	01	8012-1160	
<b>Calibration certificate, expanded</b>	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1120
<b>Calibration certificate, temperature</b>	for temperature, measurement in center of chamber at specified temperature	-	8012-1139
	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1598
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1577
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1556
<b>Door lock</b>	lockable door handle	-	8012-1250

\* Notes › See last page

## ACCESSORIES

Designation	Description	*	Art.-No.
<b>Data Logger Kit</b>	T 220: For continuous temperature logging from -90 °C to 220 °C. The kit includes 1 data logger, Pt 100 sensor with 2 m extension cable and 1 magnetic fixture for mounting to the BINDER unit	-	8012-0715
<b>Data Logger Software</b>	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	-	8012-0821
<b>pH-neutral detergent</b>	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
<b>Rack</b>	stainless steel	-	6004-0051
<b>Rack accessories</b>	fasteners (1 set of 4) for additional security of racks	-	8012-0531
<b>Shelf, perforated</b>	Stainless steel	-	6004-0052

\* Notes › See last page

## SERVICES

Designation	Description	*	Art.-No.
<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)	05	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	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	05	DL20-0710
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	05	DL20-0910

\* Notes › See last page

Designation	Description	*	Art.-No.
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	05	DL20-0810
<b>Calibration services</b>			
Calibration certificate, temperature	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	03, 04, 05	DL30-0101
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0127
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0109
<b>Validation services</b>			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	05	DL41-0200
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	05	DL44-0500

\* 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 Sensor calibration is performed in an accredited calibration laboratory.
- 04 Calibration is performed according to the BINDER factory standard.
- 05 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).

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