

Model KB 23 | Refrigerated incubators with compressor technology

The most versatile among the refrigerated incubators for microorganisms: The BINDER KB series refrigerated incubator controls temperature ranges of -5 °C to 100 °C. With its comprehensive program functions, this refrigerated 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



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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 [cu.ft.]	Voltage	Option model	Version	Art.-No.
0.7	230 V 1~ 50/60 Hz	Standard	KB023-230V	9020-0112
	120 V 1~ 60 Hz	Standard	KB023UL-120V	9020-0113

TECHNICAL DATA

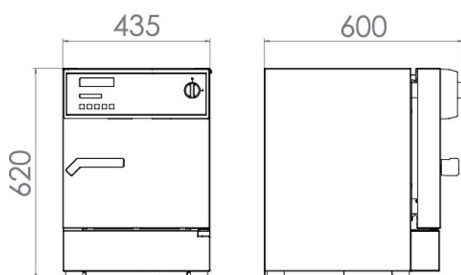
Description	KB023-230V ¹	KB023UL-120V ¹
Article Number	9020-0112	9020-0113
Performance Data Temperature		
Temperature range	0...100	0...100
Temperature variation at 37 °C [± K]	0.3	0.3
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Heating-up time to 37 °C [min]	11	11
Recovery time after 30 seconds door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

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.

Description	KB023-230V ¹	KB023UL-120V ¹
Article Number	9020-0112	9020-0113
Electrical data		
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~
Measures		
Interior volume [cu.ft.]	0.7	0.7
Net weight of the unit (empty) [lbs]	97	97
Permitted load [lbs]	55	55
Load per rack [lbs]	22	22
Wall clearance back [in]	3.94	3.94
Wall clearance sidewise [in]	3.94	3.94
Internal Dimensions		
Width [in]	8.75	8.75
Height [in]	13	13
Depth [in]	10.91	10.91
Doors		
Inner doors	1	1
Unit doors	1	1
Housing dimensions not incl. fittings and connections		
Width net [in]	17.14	17.14
Height net [in]	24.43	24.43
Depth net [in]	20.49	20.49
Environment-specific data		
Energy consumption at 40 °C [Wh/h]	60	60
Sound-pressure level [dB(A)]	47	47
Fixtures		
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.
Calibration certificate, temperature	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1598
	back		
	10 mm	01	8012-0395
	30 mm	01	8012-1292
	50 mm	01	8012-1294
	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1120
	left		
	10 mm	01	8012-0393
	30 mm	01	8012-1157
	lockable door handle	-	8012-1250
Options/Accessories	Measurement in center of chamber at specified temperature	-	8012-1139
	right		
	10 mm	01	8012-0392
	30 mm	01	8012-1154
	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
	top		
	10 mm	01	8012-0391
	30 mm	01	8012-1151
	50 mm	01	8012-1160

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.
	Stainless steel	-	6004-0052
	stainless steel	-	6004-0051
	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
Options/Accessories	fasteners (1 set of 4) for additional security of racks	-	8012-0531
	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
	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	19	8012-0715

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Services	Unit function instructions for operation and programming of the controller	18	DL10-0500
	Unpacking and setting up of unit, connecting to existing connections, and checking function	13, 18	DL10-0100
Calibration services			
	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 with 18 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0118
Services	Temperature measurement with 27 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0127
	Temperature measurement with 9 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0109

* Notes › See last page

Designation	Description	*	Art.-No.
Validation services			
Services	Execution of IQ/OQ in accordance with qualification folder	15, 18	DL41-0200
	Execution of IQ/OQ/PQ in accordance with qualification folder	15, 18	DL44-0500
Warranty service			
Services	The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded	-	DL01-8041
	The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded	-	DL01-8042

* 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.

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