

Model KB 53 | Refrigerated incubators with compressor technology

The most versatile among the refrigerated incubators for microorganisms: The BINDER KB series refrigerated incubator controls temperature ranges of -10 °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 53



Model 53

MAIN FEATURES

- Temperature range (Model 23): 0 °C to 100 °C
- Temperature range (Models 53, 115, 240, 400, 720): -5 °C to 100 °C
- APT.line™ preheating chamber technology
- Refrigeration with compressor refrigerated unit
- Door heating system from 240 liters
- Adjustable fan speed
- Controller with time-segment and real-time programming
- Inner door made of tempered safety glass
- 2 stainless steel racks
- Units up to 115 liters are stackable
- Access port with silicone plug from 240 liters
- Class 3.1 independent temperature safety device (DIN 12880) with visual and audible temperature alarm
- Computer interface: Ethernet

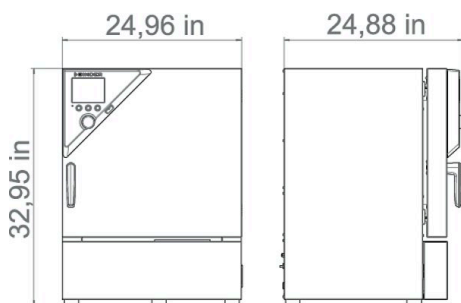
ORDERING INFORMATION

Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
1.9	230 V 1~ 50 Hz	Standard	KB053-230V	9020-0199
	120 V 1~ 60 Hz	Standard	KB053UL-120V	9020-0302

TECHNICAL DATA

Description	KB053-230V ¹	KB053UL-120V ¹
Article Number	9020-0199	9020-0302
Performance Data Temperature		
Temperature range °C [°C]	-10...100	-10...100
Temperature variation at 37 °C [± K]	0.2	0.2
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Heating-up time to 37 °C [min]	5	5
Recovery time after 30 seconds door open at 37 °C [min]	2	2
Electrical data		
Rated Voltage [V]	230	120
Power frequency [Hz]	50	60
Nominal power [kW]	0.6	0.6
Unit fuse [A]	10	12.5
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume [cu.ft.]	1.9	1.9
Net weight of the unit (empty) [lbs]	159	159
Permitted load [lbs]	88	88
Load per rack [lbs]	33	33
Wall clearance back [in]	3.94	3.94
Wall clearance sidewise [in]	3.94	3.94
Internal Dimensions		
Width [in]	15.76	15.76
Height [in]	15.76	15.76
Depth [in]	13	13
Doors		
Inner doors	1	1
Unit doors	1	1
Housing dimensions not incl. fittings and connections		
Width net [in]	25.02	25.02
Height net [in]	32.9	32.9
Depth net [in]	22.85	22.85
Environment-specific data		
Energy consumption at 37 °C [Wh/h]	70	70
Sound-pressure level [dB(A)]	49	49
Fixtures		
Number of shelves (std./max.)	2/4	2/4

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
	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1078
	back		
	10 mm	01	8012-0395
	30 mm	01	8012-1292
	50 mm	01	8012-1294
	for temperature (± 2 °C), accessible via 6-pin DIN socket (max. 24 V - 2.5 A), with audible signal that can be switched off	-	8012-1082
	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	-	8012-1773
	Measurement in center of chamber at specified temperature	-	8012-1139
	positioned at bottom level, max. load 45 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	-	8012-0287
	Options/Accessories	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
100 mm		01, 10	8012-1167
Waterproof, switched flush-mounting box (CA3GD) for nominal voltage in unit interior, with cover and corresponding plug (nominal voltage; max. 500 W; max. 90 °C; protection class IP67)		07	8012-1074
with 15 W light bulb			
120 V option model		-	8012-1068
230 V option model		02	8012-1069
with visual alarm (DIN 12880)		-	8012-1080

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.
Multi Management Software	Multi Management Software APT-COM™ version 4, BASIC edition	19	9053-0039
	version 4, GLP edition	19	9053-0042
	version 4, PROFESSIONAL edition	19	9053-0040
	Stainless steel	-	6004-0029
	stainless steel	-	6004-0007
	Basic set consisting of 2 pieces, attachment material, control unit for max. 4 light strips, 100-240 V, 50/60 Hz		
	Basic set 300, length 30 cm	-	8012-1107
	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
	Expansion set consisting of 2 pieces, attachment material: clips. For expanding the basic set of light bars		
	Expansion set 300, length 30 cm	-	8012-1716
	fasteners (1 set of 4) for additional security of racks	-	8012-0531
Options/Accessories	IQ/OQ documents – supporting documents for validation performed by customers, consisting of: IQ/OQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, CO ₂ , O ₂ , pressure, depending on unit		
	Digital in PDF format	-	7057-0001
	Hard copy inside folder	-	7007-0001
	IQ/OQ/PQ documents – supporting documents for validation performed by customers, according to customer requirements, PQ section added to qualification folder IQ/OQ; parameters: temperature, CO ₂ , O ₂ – or pressure, depending on unit		
	Digital in PDF format	-	7057-0005
	Hard copy inside folder	-	7007-0005
	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
set of 4 anti-slip feet, for safe stacking of units	-	8012-1887	
stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	-	9051-0018	
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
Preventive maintenance			
Services	Executive of equipment inspection according to maintenance plan	14, 18	DL20-0200
Calibration services			
Services	Expansion – including certificate, each additional measuring point in center of chamber at specified test temperature	14, 16, 17, 18	DL30-0102
	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
	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
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

* Notes › See last page

Designation	Description	*	Art.-No.
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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