BINDER

Model KB 53 | Cooling incubators with compressor technology

The powerful virtuoso in cooling incubators for microorganisms: the KB masters temperature ranges from -5 °C to 100 °C. The new KB series consumes up to 30% less energy compared to its predecessor. With its extensive programming options and homogenous incubation conditions even when fully loaded, this cooling incubator covers a wide range of applications.

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: -5 °C to 100 °C
- APT.line™ preheating chamber technology
- Up to 30% lower energy consumption compared to the previous model
- Cooling with compressor cooling unit
- Adjustable fan speed
- Controller with time-segment and real-time programming

- Inner door made of tempered safety glass
- 2 stainless steel racks
- Stackable
- Class 3.1 independent temperature safety device (DIN 12880) with visual and acoustic alarm
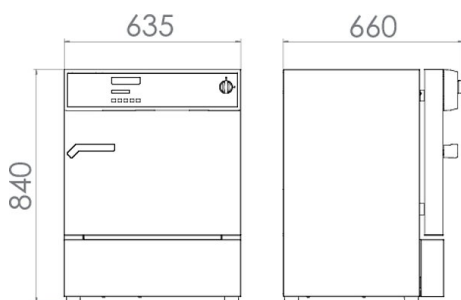- Computer interface: Ethernet

ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
Model KB 53				
53	230 V 1~ ph 50 Hz	Standard	KB053-230V	9020-0199
	120 V 1~ ph 60 Hz	Standard	KB053UL-120V	9020-0302

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TECHNICAL DATA

Description	KB053-230V[1]	KB053UL-120V[1]
Article Number	9020-0199	9020-0302
Performance Data Temperature		
Temperature range [°C]	-5…100	-5…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 [L]	53	53
Net weight of the unit (empty) [kg]	78	78
permitted load [kg]	40	40
Load per rack [kg]	15	15
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	100	100
Doors		
Inner doors	1	1
Unit doors	1	1
Internal Dimensions		
Depth [mm]	330	330
Height [mm]	400	400
Width [mm]	400	400
Housing dimensions not incl. fittings and connections		
Width net [mm]	635	635
Height net [mm]	835	835
Depth net [mm]	580	580
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.

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DIMENSIONS incl. fittings and connections [mm]

635 660

840

OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
	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
Access port with silicone plug	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
	100 mm	01, 10	8012-1167
Alarm output, zero-voltage	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
Analog output 4-20 mA	for temperature values (output not adjustable)	02	8012-1072
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units.		
	version 4, BASIC edition	19	9053-0039
APT-COM™ 4 GLP-Edition	for working under GLP-compliant conditions. Measured values are documented in a tamper-proof way in line with the requirements of FDA Regulation 21 CFR 11.		
	version 4, GLP edition	19	9053-0042
APT-COM™ 4 PROFESSIONAL-Edition	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.		
	version 4, PROFESSIONAL edition	19	9053-0040
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	–	8012-1120
	for temperature, measurement in center of chamber at specified temperature	–	8012-1139
Calibration certificate, temperature	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
Class 3.3 independent temperature safety device	with visual alarm (DIN 12880)	–	8012-1080
Data Logger Kit	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
Data Logger Software	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
Door lock	lockable door handle	–	8012-1773

* Notes › See last page

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Designation	Description	*	Art.-No.
Interior lighting	with 15 W light bulb		
	120 V option model	–	8012-1068
	230 V option model	02	8012-1069
Interior socket	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
LED light bars	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
	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
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	–	8012-1078
Rack	stainless steel	–	6004-0007
Rack accessories	fasteners (1 set of 4) for additional security of racks	–	8012-0531
Rubber pads	set anti-slip feet	–	8012-1887
Shelf, perforated	Stainless steel	–	6004-0029
Shelf, reinforced	positioned at bottom level, max. load 67 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	–	8012-0287
Table on castors	stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	–	9051-0018

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL10-0100
Instruction	unit function instructions for operation and programming of the controller	18	DL10-0500
Preventive maintenance			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL20-0200
Calibration services			
Calibration temperature incl. certificate	including certificate, one measuring point in center of chamber at specified temperature	14, 16, 17, 18	DL30-0101
Temperature measurement 18 measuring points	including certificate, 18 measuring points at specified temperature	14, 16, 17, 18	DL30-0118
Temperature measurement 27 measuring points	including certificate, 27 measuring points at specified temperature	14, 16, 17, 18	DL30-0127
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL30-0109
Validation services			
Execution of IQ/OQ	in accordance with qualification folder	15, 18, 20	DL41-0200
Execution of IQ/OQ/PQ	in accordance with customer's requirement, price: on request	15, 18	DL44-0500
Qualification folder IQ/OQ	supporting documents for validation performed by customer, consisting of: IQ/OQ checklists, unit schematics, QM certificate in accordance with ISO 9001	15, 18, 20	8012-0873
Qualification folder IQ/OQ/PQ	supporting documents for validation performed by customer, in accordance with customer's requirement, extension of Qualification folder IQ/OQ by chapter PQ	15, 18	8012-0960
Warranty service			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	–	DL01-8041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	–	DL01-8042

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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.
06	Heating-up time may increase as a result of the lower heat conductivity.
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.
20	When ordering IQ/OQ qualification folders and associated IQ/OQ execution on one order, we offer a 15 % discount for the item of the IQ/OQ folder.
	When ordering IQ/OQ/PQ qualification folders and associated IQ/OQ/PQ execution on one order, we offer a 15 % discount for the item of the IQ/OQ/PQ folder.

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