

Model KB 53 | Refrigerated incubators with powerful compressor cooling

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



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IMPORTANT FEATURES

- Temperature range: -10 °C to +100 °C
- APT.line™ preheating chamber technology
- Up to 30% lower energy consumption compared to the previous model
- Refrigeration with compressor refrigerated 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		Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
[L]	[L]					
Model KB 53						
53	53	230 V 1~ 50 Hz -10,0 A	CEE 7/7	Standard	KB053-230V	9020-0199
		120 V 1~ 60 Hz -12,5 A	NEMA 5-15	Standard	KB053UL-120V	9020-0302

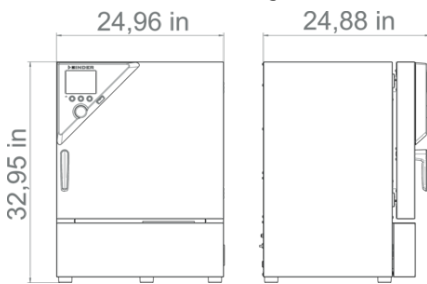
TECHNICAL DATA

Data		
Designation	KB053-230V	KB053UL-120V
Article Number	9020-0199	9020-0302
Option model	Standard	Standard
Performance Data Temperature		
Temperature range	-10...100 °C	-10...100 °C
Temperature uniformity at 37°C	0.2 ± K	0.2 ± K
Temperature fluctuation at 37°C	0.2 ± K	0.2 ± K
Max. heat compensation at 40°C	150 W	150 W
Recovery time after door was opened for 30 s at 37°C	2 min	2 min
Electrical data		
Rated Voltage	230 V	120 V
Power frequency	50 Hz	60 Hz
Nominal power	0,6 kW	0,6 kW
Unit fuse	10,0 A	12,5 A
Phase (Nominal voltage)	1~	1~
Dimensions and weights		
Interior volume	53 L	53 L
Net weight of the unit (empty)	78 kg	78 kg
Load per rack	15 kg	15 kg
Permitted load	40 kg	40 kg
Wall clearance back	100 mm	100 mm
Wall clearance sidewise	100 mm	100 mm
Housing dimensions not incl. fittings and connections		
Width net	635 mm	635 mm
Height net	835 mm	835 mm
Depth net	580 mm	580 mm
Internal Dimensions		
Interior width	400 mm	400 mm
Interior height	400 mm	400 mm

Interior depth	330 mm	330 mm
Inner doors	1	1
Unit doors	1	1
Environment-specific data		
Sound-pressure level	49 dB(A)	49 dB(A)
Energy consumption at 37°C	70 Wh/h	70 Wh/h
Fixtures		
Number of shelves (std./max.)	2/4	2/4

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	KB 53	*	Art.-No.
	back			
	10 mm	•	01	8012-0395
	30 mm	•	01	8012-1292
	50 mm	•	01	8012-1294
	left			
Access port with silicone plug	10 mm	•	01	8012-0393
	30 mm	•	01	8012-1157
	right			
	10 mm	•	01	8012-0392
	30 mm	•	01	8012-1154
	top			

Designation	Description	KB 53	*	Art.-No.
	10 mm	•	01	8012-0391
	30 mm	•	01	8012-1151
	50 mm	•	01	8012-1160
	100 mm	•	01	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
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	•	-	8012-1120
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	•	-	8012-1139
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	-	8012-1556
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	-	8012-1577
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	-	8012-1598
Class 3.3 independent temperature safety device	with visual alarm (DIN 12880)	•	-	8012-1080
Door lock	lockable door handle	•	-	8012-1773
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	-	8012-1078
Shelf, reinforced	positioned at bottom level, max. load 45 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	•	-	8012-0287

ACCESSORIES

Designation	Description	KB 53	*	Art.-No.
APT-COM™ 4	Multi Management Software APT-COM™			
	version 4, BASIC edition	•	-	9053-0039
	version 4, GLP edition	•	-	9053-0042
	version 4, PROFESSIONAL edition	•	-	9053-0040
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

Designation	Description	KB 53	*	Art.-No.
Qualification documents	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
	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
Rack	stainless steel	•	-	8012-2047
Rack accessories	fasteners (1 set of 4) for additional security of racks	•	-	8012-0531
Rubber pads	set anti-slip feet	•	-	8012-2030
Shelf, perforated	Stainless steel	•	-	8012-2083
Table on castors	stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	•	-	9051-0018
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	-	8012-2250

SERVICES

Designation	Description	*	Art.-No.
Calibration services			
Temperature calibration	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate Travel to be quoted separate.	–	DL30-0102
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate. Travel to be quoted separate. A total of 3 shelves are required.	–	DL30-0109
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate. Travel to be quoted separate. A total of 2 shelves are required.	–	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate. Travel to be quoted separate. A total of 3 shelves are required.	–	DL30-0127
Installation services			
Unit installation	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) Travel to be quoted as separate.	–	DL10-0310
		–	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming. Travel to be quoted as separate Limited to 3 hours.	–	DL10-0500

Designation	Description	*	Art-No.
Validation services			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder. Travel to be quoted separate.	–	DL41-0200
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder. Travel to be quoted separate.	–	DL44-0500
Warranty service			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	–	DL50-0010

NOTES

01 Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge.

BINDER GmbH

Tuttlingen, Germany
TEL +49 7462 2005 0
FAX +49 7462 2005 100
info@binder-world.com
www.binder-world.com

BINDER Inc.

Bohemia, NY, USA
TEL +1 631 224 4340
FAX +1 631 224 4354
usa@binder-world.com
www.binder-world.us

BINDER Environmental Testing Equipment (Shanghai) Co., Ltd.

Shanghai, P.R. China
TEL +86 21 685 808 25
FAX +86 21 685 808 29
china@binder-world.com
www.binder-world.com

BINDER Asia Pacific (Hong Kong) Ltd.

Kowloon, Hong Kong, P.R. China
TEL +852 39070500
FAX +852 39070507
asia@binder-world.com
www.binder-world.com