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Model KT 53 | Refrigerated incubators with thermoelectric refrigeration

The KT series combines outstanding performance with impressive energy efficiency and environmental friendliness. The refrigerated incubators of the KT series are state-of-the-art in application and protect the samples.

BENEFITS

- Safe and reproducible incubation conditions even at high environmental conditions
- Disinfection routine at 100 °C
- Energy efficient, environmentally friendly and secure

Model 53

MAIN FEATURES

- Temperature range: 4 °C to 100 °C
- APT.line™ preheating chamber technology
- Adjustable fan speed
- Electric refrigeration with Peltier module
- Controller with time-segment and real-time programming
- Display via LCD monitor
- Input via pushbutton/rotary knob

- Inner door made of tempered safety glass
- 2 stainless steel racks
- Units up to 115 liters are stackable
- Class 3.1 independent temperature safety device (DIN 12880) with visual and audible temperature alarm
- Computer interface: Ethernet
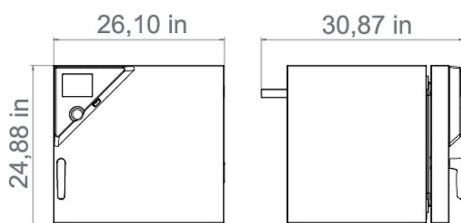- Data recording and USB interface

ORDERING INFORMATION

Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
1.9	200...240 V 1~ 50/60 Hz	Standard	KT053-230V	9020-0311
	100...120 V 1~ 50/60 Hz	Standard	KT053UL-120V	9020-0312

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TECHNICAL DATA

Description	KT053-230V[1]	KT053UL-120V[1]
Article Number	**9020-0311**	**9020-0312**
Performance Data Temperature		
Temperature range	4...100	4...100
Temperature variation at 37 °C [± K]	0.3	0.3
Temperature fluctuation [± K]	0.1	0.1
Max. heat compensation at 37 °C [W]	100	100
Recovery time after 30 seconds door open at 37 °C [min]	2	2
Electrical data		
Rated Voltage [V]	200...240	100...120
Power frequency [Hz]	50/60	50/60
Nominal power [kW]	0.4	0.4
Unit fuse [A]	10	10
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume [cu.ft.]	1.9	1.9
Net weight of the unit (empty) [lbs]	139	139
Permitted load [lbs]	88	88
Load per rack [lbs]	33	33
Wall clearance back [in]	3.94	3.94
Wall clearance sidewise [in]	9.46	9.46
Internal Dimensions		
Width [in]	15.76	15.76
Height [in]	15.76	15.76
Depth [in]	13.16	13.16
Doors		
Inner doors	1	1
Unit doors	1	1
Housing dimensions not incl. fittings and connections		
Width net [in]	26	26
Height net [in]	25.02	25.02
Depth net [in]	24.82	24.82
Environment-specific data		
Energy consumption at 25 °C [Wh/h]	75	75
Energy consumption at 37 °C [Wh/h]	75	75
Sound-pressure level [dB(A)]	48	48
Fixtures		
Number of shelves (std./max.)	2/5	2/5

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]

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OPTIONS

Designation	Description	*	Art.-No.
Access port with silicone plug	left		
	10 mm	01	8012-1290
	30 mm	01	8012-1158
	50 mm	01	8012-1165
	right		
	10 mm	01	8012-1289
	30 mm	01	8012-1155
	50 mm	01	8012-1163
	top		
	10 mm	01	8012-1288
	30 mm	01	8012-1152
	50 mm	01	8012-1161
	100 mm	01	8012-1168
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	–	8012-0982
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	–	8012-1122
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	–	8012-1141
	temperature measurement incl. certificate and 27 measuring points at specified temperature	–	8012-1600
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	–	8012-1579
	temperature measurement incl. certificate, 9 measuring points at specified temperature	–	8012-1558
Class 3.3 independent temperature safety device	with visual alarm (DIN 12880)	–	8012-0978
Door heating	120 V option model	–	8012-0930
	230 V option model	–	8012-0931
Door lock	lockable door handle	–	8012-1668
Interior lighting	with 15 W light bulb		
	120 V option model	–	8012-0932
	230 V option model	–	8012-0933
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)	–	8012-0984
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	–	8012-0935
Shelf, reinforced	positioned at bottom level, max. load 45 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	–	8012-0818
Zero voltage relay contacts	for controlling 3 relay contacts via program regulators, accessible via 6-pin DIN socket (max. 24 V - 2.5 A)	–	8012-0976

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.
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	–	8012-0715
Data Logger Software	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	–	8012-0821
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

* Notes › See last page

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Designation	Description	*	Art.-No.
Multi Management Software	Multi Management Software APT-COM™		
	version 4, BASIC edition	–	9053-0039
	version 4, GLP edition	–	9053-0042
	version 4, PROFESSIONAL edition	–	9053-0040
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016
Qualification documents	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
Rack	stainless steel	–	6004-0007
Rack accessories	fasteners (1 set of 4) for additional security of racks	–	8012-0620
Rack, reinforced	stainless steel, with fasteners (1 set of 4)	–	8012-0829
Rubber pads	set anti-slip feet	–	8012-1887
Shelf, perforated	Stainless steel	–	6004-0029
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			
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)	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
Maintenance services			
Maintenance	Maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Calibration of a test temperature specified by the user in center of chamber without certificate	05	DL20-0200
Calibration services			
Temperature calibration	Calibration of one (1) test temperature specified by the user in center of chamber including certificate	03, 04, 05	DL30-0101
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	03, 04, 05	DL30-0102
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
Validation services			
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
Warranty service			
Warranty extension from 2 to 3 years	The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded	–	DL03-0041
Warranty extension from 2 to 5 years	The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded	–	DL03-0042

* Notes › See last page

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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   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).