

Model KT 53 | Cooling incubators with thermoelectric cooling

The KT series combines outstanding performance with impressive energy efficiency and environmental friendliness. The cooled 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 cooling 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
- 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

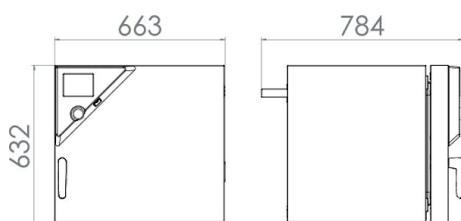
| Interior volume [L] | Voltage | Option model | Version | Art.-No. |
|---------------------|----------------------------|--------------|--------------|-----------|
| Model KT 53 | | | | |
| 53 | 200...240 V 1~ ph 50/60 Hz | Standard | KT053-230V | 9020-0311 |
| | 100...120 V 1~ ph 50/60 Hz | Standard | KT053UL-120V | 9020-0312 |

TECHNICAL DATA

| Description | KT053-230V ¹ | KT053UL-120V ¹ |
|---------------------------------------------------------|-------------------------|---------------------------|
| Article Number | 9020-0311 | 9020-0312 |
| Performance Data Temperature | | |
| Temperature range [°C] | 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~ |
| Outer dimensions | | |
| Width net [mm] | 660 | 660 |
| Height net [mm] | 635 | 635 |
| Depth net [mm] | 630 | 630 |
| Wall clearance back [mm] | 100 | 100 |
| Wall clearance sidewise [mm] | 240 | 240 |
| Doors | | |
| Inner doors | 1 | 1 |
| Unit doors | 1 | 1 |
| Internal Dimensions | | |
| Width [mm] | 400 | 400 |
| Height [mm] | 400 | 400 |
| Depth [mm] | 334 | 334 |
| Measures | | |
| Interior volume [L] | 53 | 53 |
| Net weight of the unit (empty) [kg] | 63 | 63 |
| permitted load [kg] | 40 | 40 |
| Load per rack [kg] | 15 | 15 |
| 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]



OPTIONS AND ACCESSORIES

| 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, 10 | 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 |
| Analog output 4-20 mA | for temperature values (output not adjustable) | 02 | 8012-0974 |
| 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 | - | 8012-1122 |
| 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 |
| 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 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) | 07 | 8012-0984 |
| 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 | - | 8012-0935 |
| Rack | stainless steel | - | 6004-0007 |

* Notes › See last page

| Designation | Description | * | Art.-No. |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---|-----------|
| 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 |
| Shelf, reinforced | positioned at bottom level, max. load 67 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system | - | 8012-0818 |
| Table on castors | stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm | - | 9051-0018 |
| 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

SERVICES

| Designation | Description | * | Art.-No. |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------|
| Installation services | | | |
| Installation | and set up of unit at operating location, connect to existing connections | 13, 18 | DL10-0100 DL10-0300 |
| 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 | 8012-0874 |
| 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 | 8012-0961 |
| Warranty service | | | |
| Extension of the warranty from 2 to 3 years | beginning with the date of delivery, wearing parts are not included | - | DL03-0041 |
| Extension of the warranty from 2 to 5 years | beginning with the date of delivery, wearing parts are not included | - | DL03-0042 |

* 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.
- 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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