Model KT 170 | Cooling incubators with thermoelectric cooling

BENEFITS

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



Model 170



Model 170

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 with KT 115
- 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 170				
163	200...240 V 1~ 50/60 Hz	Standard	KT170-230V	9020-0289
	100...120 V 1~ 50/60 Hz	Standard	KT170UL-120V	9020-0310

TECHNICAL DATA

Description	KT170-230V	KT170UL-120V
Article Number	**9020-0289**	**9020-0310**
Performance Data Temperature		
Temperature range [°C]	4...100	4...100
Temperature uniformity at 37 °C [± K]	0.4	0.4
Temperature uniformity at 25 °C [± K]	0.1	0.1
Temperature fluctuation [± K]	0.1	0.1
Max. heat compensation at 40 °C [W]	100	100
Recovery time after 30 seconds door open 90° aperture angle at 37 °C [min]	3	3

Description	KT170-230V	KT170UL-120V
Article Number	**9020-0289**	**9020-0310**
Electrical data		
Rated Voltage [V]	200...240	100...120
Power frequency [Hz]	50/60	50/60
Nominal power [kW]	0.8	0.8
Unit fuse [A]	10	10
Phase (Nominal voltage)	1~	1~
Measures - Outer dimensions		
Width net [mm]	860	860
Height net [mm]	1025	1025
Depth net [mm]	655	655
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	240	240
Measures - Doors		
Inner doors	1	1
Unit doors	1	1
Measures - Internal Dimensions		
Width [mm]	600	600
Height [mm]	765	765
Depth [mm]	355	355
Measures		
Interior volume [L]	163	163
Net weight of the unit (empty) [kg]	102	102
Load per rack [kg]	30	30
Environment-specific data		
Energy consumption at 37 °C	80 Wh/h	80 Wh/h
Energy consumption at 25 °C	80 Wh/h	80 Wh/h
Sound-pressure level [dB(A)]	48	48

OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
Access port with silicone plug	10 mm, left	01	8012-0393
	10 mm, right	01	8012-0392
	10 mm, top	01	8012-0391
	30 mm, left	01	8012-0047
	30 mm, right	01	8012-0046
	30 mm, top	01	8012-0045
	50 mm, left	01	8012-0051
	50 mm, right	01	8012-0050
	50 mm, top	01	8012-0049
	100 mm, top	01, 10	8012-0053
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	–	8012-1002
Analog output, 4 – 20 mA	for temperature values (output not adjustable)	02	8012-0996
Calibration certificate, expanded	each measurement at additional measuring point or testing temperature	–	8012-0022

* Notes › See last page

Designation	Description	*	Art.-No.
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	–	8012-0030
	temperature measurement incl. Certificate and 27 measuring points at specified temperature	–	8012-0921
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	–	8012-0918
	temperature measurement incl. certificate, 9 measuring points at specified temperature	–	8012-0915
Cart	stable cart, casters with locking brakes	–	9051-0018
Class 3.3 independent temperature safety device	with visual alarm (DIN 12880)	–	8012-1000
Data Logger Kit	T 220: temperature logging from -90 °C to 220 °C	19	8012-0715
Data Logger Kit, 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	–	8012-0927
	230 V option model	–	8012-0926
Door lock	lockable door handle	–	8012-1025
Interface converter, RS232/RS422 - 115V	RS 422 cable set and RS 232 / RS 422 interface converter for connection to 10-way plug distributor or for connection to a unit		
	120 V, 60 Hz option model	–	8012-0557
Interface converter, RS232/RS422 - 230V	RS 422 cable set and RS 232 / RS 422 interface converter for connection to 10-way plug distributor or for connection to a unit		
	230 V, 50/60 Hz option model	–	8012-0556
Interface converter, RS422 - 115V	RS 422 cable set and RS 422 / Ethernet interface converter for connection to 10-way plug distributor or for connection to a unit		
	120 V, 60 Hz option model	–	8012-0405
Interface converter, RS422 - 230V	RS 422 cable set and RS 422 / Ethernet interface converter for connection to 10-way plug distributor or for connection to a unit		
	230 V, 50/60 Hz option model	–	8012-0380
Interface converter, USB / RS422	RS 422 cable set and RS 422 / USB interface converter for connection to 10-way plug distributor or for connection to a unit (USB-powered converter)	–	8012-0665
Interior lighting	120 V, 15 W option model	–	8012-0932
	230 V, 15 W option model	–	8012-0933
Interior socket	coverable, with associated LEMO connector (nominal voltage, max. 500 W, max. 90 °C, protection class IP67)	07	8012-1006
Magnetic Pouch (A4)	insert pouch with magnetic strip	–	1007-0098
			1007-0065
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016
Rack	stainless steel	–	6004-0112
Rack, accessories	set of 4 fasteners for additional security	–	8012-0620
Rack, reinforced	stainless steel, with 1 set of 4 fasteners, max. load 70 kg	–	8012-0828
RS 422 interface	in place of Ethernet, for communication software	–	8012-1004
	modular plug distributor for 10 RS 422 interfaces	–	8012-0295
RS 422 interface, cable (15 m)	RS 422 connection cable (15 m) between plug distributor and RS 422 interface	–	5023-0036
RS 422 interface, cable (50 m)	RS 422 extension cable (50 m) between interface converter and unit or RS 232 / RS 422 plug distributor	–	5023-0117
Rubber pads	set of 4 anti-slip feet, for safe stacking of unit	10	8012-0001
Shelf, perforated	stainless steel	–	6004-0115
Shelf, reinforced	positioned at bottom level, max. load 67 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	–	8012-0817
Software	APT-COM™ communications software		
	version 2 to 3, GLP edition	19	9053-0016
	version 3, BASIC edition	19	9053-0014
	version 3, GLP edition	19	9053-0015
	version 3, STANDARD edition	19	9053-0013
	APT-COM™ communications software, price: for free		
	version 3, GLP DEMO Edition	19	9053-0008

* Notes › See last page

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Designation	Description	*	Art.-No.
Specimen temperature display	with flexible Pt 100 sensor and digital specimen temperature display	–	8012-0994
Zero voltage relay contacts	for controlling 3 relay contacts via program-pin DIN socket (max. 24 V regulators, accessible via 6 - 2.5 A)	–	8012-0998

* 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	DL100300
Instruction	unit function instructions for operation and programming of the controller	18	DL100700
Preventive maintenance			
Preventive maintenance	Execution of equipment inspection according to maintenance plan	14, 18	DL200400
Calibration services			
Calibration temperature	including certificate, one measuring point in center of chamber at specified temperature	14, 16, 17, 18	DL300101
Temperature measurement 18 measuring points	including certificate, 18 measuring points at specified temperature	14, 16, 17, 18	DL300118
Temperature measurement 27 measuring points	including certificate, 27 measuring points at specified temperature	14, 16, 17, 18	DL300127
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL300109
Validation services			
Execution of IQ/OQ	in accordance with qualification folder	15, 18, 20	DL410200
Execution of IQ/OQ/PQ	in accordance with customer's requirement, price: on request	15, 18	DL440500
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	–	DL030041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	–	DL030042

* 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 Heat resistant only to max. 200 °C.
04 Only available on units rated for 230 V.
05 Attention: The pump is delivered separately. The electric connection for the pump (230 V/1~/50 Hz) must be carried out by an authorized electrician.
06 Heating-up time may increase as a result of the lower heat conductivity.
07 The additional heat input may affect the temperature behavior.
08 The pump (packaged separately) is ready for connection.
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 (see the chapter on BINDER Service) 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 both items.
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.
21 ATEX conformity:
Pumping chamber (pumped gases): II 2G IIC T3 X
Environment with inert purge gas: II 2G IIB T4 X
Environment without inert purge gas: II 3G IIB T4 X
Motor: II 2G Ex d IIB T4 Gb

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