# Model KB ECO 720 | Cooling incubators with environmentally friendly thermoelectric cooling

**Thanks to thermoelectric cooling technology with patented heat dissipation, the new KB ECO cooling incubator is one of the most energy-efficient cooling incubator on the market. The thermoelectric cooling technology means the KB ECO series is also very quiet during operation.**

## BENEFITS

- Safe: Unique condensate and dry-out protection for all operating conditions
- Reliable: Fail-safe operation due to intelligent thermoelectric tempering
- Smart: Temperatures programmable for intermitted incubation and refrigeration
- Economical: Minimum energy consumption thanks to optimized thermoelectric cooling



Model 720



Model 720

## IMPORTANT FEATURES

- Temperature range: 0°C through +70°C (max. 26°C below the ambient temperature)
- APT.line™ preheating chamber technology
- Electric temperature control thanks to thermoelectric cooling module with innovative heat dissipation
- Inner door made of tempered safety glass
- Inner chamber made completely of stainless steel
- 2 stainless steel racks
- Adjustable condensate protection
- Access port with silicone plug Ø 30 mm
- LCD to display temperature along with additional information and alarms
- Internal data logger, measured values can be read out in open format via USB
- Unit self-test for comprehensive status analysis
- Computer interface: Ethernet

## ORDERING INFORMATION

| Interior volume [L] | Power supply - unit fuse | Plug* | Version | Model version | Art.-No. |
|---|---|---|---|---|---|
| **Model KB ECO 720** | | | | | |
| 700 | 200...230 V 1~ 50/60 Hz -16,0 A | CEE 7/7 | Standard | KBECO720-230V | 9020-0424 |
| | 100...120 V 1~ 50/60 Hz -16,0 A | NEMA 5-20 | Standard | KBECO720UL-120V | 9020-0427 |

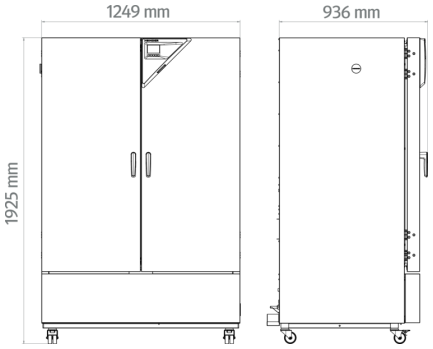
## TECHNICAL DATA

| | | |
|---|---|---|
| **Data** | | |
| Article Number | 9020-0424 | 9020-0427 |
| Designation | KBECO720-230V | KBECO720UL-120V |
| Option model | Standard | Standard |
| **Performance Data Temperature** | | |
| Temperature range | (max. 26 °C under ambient temperature) 0...70 °C | (max. 26 °C under ambient temperature) 0...70 °C |
| Temperature uniformity at 37°C | 0.1 ± K | 0.1 ± K |
| Temperature fluctuation at 37°C | 0.1 ± K | 0.1 ± K |
| Max. heat compensation at 40°C | 500 W | 500 W |
| Recovery time after door was opened for 30 s at 37°C | 4 min | 4 min |
| **Electrical data** | | |
| Rated Voltage | 200...230 V | 100...120 V |
| Power frequency | 50/60 Hz | 50/60 Hz |
| Nominal power | 1,3 kW | 1,3 kW |
| Unit fuse | 16,0 A | 16,0 A |
| Phase (Nominal voltage) | 1~ | 1~ |
| **Dimensions and weights** | | |
| Interior volume | 700 L | 700 L |
| Net weight of the unit (empty) | 272 kg | 272 kg |
| Load per rack | 45 kg | 45 kg |
| Permitted load | 150 kg | 150 kg |
| Wall clearance back | 100 mm | 100 mm |
| Wall clearance sidewise | 100 mm | 100 mm |
| **Housing dimensions not incl. fittings and connections** | | |
| Width net | 1,250 mm | 1,250 mm |
| Height net | 1,925 mm | 1,925 mm |
| Depth net | 885 mm | 885 mm |
| **Internal Dimensions** | | |
| Interior width | 973 mm | 973 mm |
| Interior height | 1,250 mm | 1,250 mm |

| | | |
|---|---|---|
| Interior depth | 576 mm | 576 mm |
| Inner doors | 2 | 2 |
| Unit doors | 2 | 2 |
| **Environment-specific data** | | |
| Sound-pressure level | 47 dB(A) | 47 dB(A) |
| Energy consumption at 25°C | 75 Wh/h | 75 Wh/h |
| Energy consumption at 37°C | 105 Wh/h | 105 Wh/h |
| **Fixtures** | | |
| Number of shelves (std./max.) | 2/15 | 2/15 |

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 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.
For model KB ECO 240 and KB ECO 400 temperature differences are possible up to 28 °C below ambient temperature; for models KB ECO 720 and KB ECO 1020, temperature differences are possible up to 26 °C below ambient temperature.
The lowest operating temperature for all units is 0 °C irrespective of the ambient temperature.

## DIMENSIONS Incl. fittings and connections [mm]




## OPTIONS

| Designation | Description | KB ECO 720 | * | Art.-No. |
|---|---|---|---|---|
| | left | | | |
| | 30 mm | • | 01 | 8012-2113 |
| | 50 mm | • | 01 | 8012-2120 |
| | 100 mm | • | 01 | 8012-2118 |
| Access port with silicone plug | right | | | |
| | 30 mm | • | 01 | 8012-2112 |
| | 50 mm | • | 01 | 8012-2119 |
| | 100 mm | • | 01 | 8012-2117 |
| | top | | | |

| Designation | Description | KB ECO 720 | * | Art.-No. |
|---|---|---|---|---|
| | 30 mm | • | 01 | 8012-2114 |
| | 50 mm | • | 01 | 8012-2115 |
| | 100 mm | • | 01 | 8012-2116 |
| Calibration certificate, expanded | for temperature; for extending the measurement in center of chamber to include another test temperature | • | - | 8012-2107 |
| Calibration certificate, temperature | for temperature, measurement in center of chamber at specified temperature | • | - | 8012-2106 |
| | temperature measurement incl. certificate, 9 measuring points at specified temperature | • | - | 8012-2108 |
| | temperature measurement incl. certificate, 15- 18 measuring points at specified temperature | • | - | 8012-2109 |
| | temperature measurement incl. certificate and 27 measuring points at specified temperature | • | - | 8012-2110 |
| Door lock | lockable door handle | • | - | 8012-2122 |

## ACCESSORIES

| Designation | Description | KB ECO 720 | * | Art.-No. |
|---|---|---|---|---|
| APT-COM™ 4 BASIC-Edition | for simple logging and documentation requirements with up to 5 networked units. | | | |
| | version 4, BASIC edition | • | - | 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 | • | - | 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 | • | - | 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 |
| | Basic set 500, length 50 cm | • | - | 8012-1108 |
| | Basic set 900, length 90 cm | • | - | 8012-1109 |
| | 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 |
| | Expansion set 500, length 50 cm | • | - | 8012-1717 |
| | Expansion set 900, length 90 cm | • | - | 8012-1718 |

| Designation | Description | KB ECO 720 | * | Art.-No. |
|---|---|---|---|---|
| pH-neutral detergent | concentrated, for gentle remove of residual contaminants; 1 kg | • | - | 8012-2250 |
| 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 | • | - | 8012-2051 |
| Rack, reinforced | stainless steel, with fasteners (1 set of 4) | • | - | 8012-0674 |
| Shelf, perforated | Stainless steel | • | - | 8012-2252 |

## SERVICES

| Designation | Description | * | Art.-No. |
|---|---|---|---|
| **Calibration services** | | | |
| Calibration certificate, temperature | Calibration of one (1) test temperature specified by the user in center of chamber, including certificate | 05 | DL30-0135 |
| | Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate | 05 | DL30-0102 |
| Temperature measurement, 9 measuring points | Temperature measurement with 9 measuring points with a set value specified by the user, including certificate | 05 | DL30-0109 |
| Temperature measurement, 18 measuring points | Temperature measurement with 18 measuring points with a set value specified by the user, including certificate | 05 | DL30-0118 |
| Temperature measurement, 27 measuring points | Temperature measurement with 27 measuring points with a set value specified by the user, including certificate | 05 | DL30-0127 |
| **Installation services** | | | |
| Unit commissioning | 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 | DL10-0170 |
| Unit instructions | Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming | 05 | DL10-0550 |
| **Maintenance contracts** | | | |
| BRONZE 3-year maintenance contract | Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts | 05 | DL20-0720 |

| Designation | Description | * | Art.-No. |
|---|---|---|---|
| GOLD 3-year maintenance contract | Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, replacement of wear parts, calibration of one test temperature specified by the user in the center of the usable space, including certificate | 05 | DL20-0945 |
| SILVER 3-year maintenance contract | Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, calibration of one test temperature specified by the user in the center of the usable space, without certificate | 05 | DL20-0845 |
| **Maintenance services** | | | |
| Maintenance | One-off 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 usable space without certificate | 05 | DL20-0604 |
| **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** | | | |
| 1-year warranty extension | The warranty is extended by 1 year from the delivery date, wear parts are excluded | 05 | 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.

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).

**BINDER GmbH**
Tuttlingen, Germany
TEL +49 7462 2005 0
info@binder-world.com
www.binder-world.com

**BINDER Inc.**
Bohemia, NY, USA
TEL +1 631 224 4340
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
china@binder-world.com
www.binder-world.com