

Model KBF-S 1020 | Humidity test chambers with large temperature / humidity range

The new Solid.Line KBF-S climate chamber is a custom-made solution for long-term testing and accelerated stability testing for pharmaceutical products in accordance with the ICH Q1A guideline. The corrosion-free and condensation-free interior also ensures exceptionally stable temperature and moisture levels, even when fully loaded.

BENEFITS

- Homogeneous climate conditions thanks to APT.line™ preheating chamber
- Standard-compliant testing according to ICH Q1A
- Precise temperature and humidity control



Model 1020



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MAIN FEATURES

- Temperature range: 0 °C to 70 °C
- Humidity range: 20% to 80% RH
- APT.line™ preheating chamber technology
- Humidity regulation with capacitive humidity sensor and steam humidification
- LCD to display temperature and humidity 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
- Inner chamber made completely of stainless steel
- 2 stainless steel racks, incl. shelf supports
- Access port with silicone plug, 30 mm, left
- Robust twin casters with brakes, from 240 L
- Class 3.1 independent temperature safety device (DIN 12880) with visual and audible temperature alarm
- Computer interface: Ethernet
- Independent water supply via tank

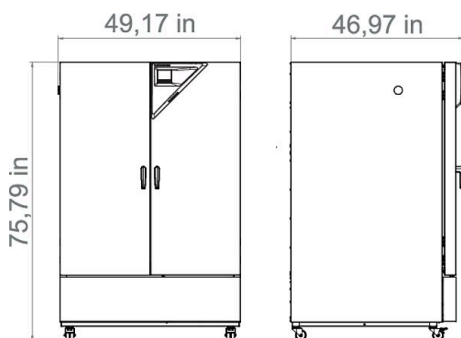
ORDERING INFORMATION

| Interior volume [cu.ft.] | Voltage | Option model | Version | Art.-No. |
|--------------------------|-------------------------|--------------|-----------------|-----------|
| 36 | 200...230 V 1~ 50/60 Hz | Standard | KBFS1020-230V | 9020-0372 |
| | 200...240 V 1~ 50/60 Hz | Standard | KBFS1020UL-240V | 9020-0373 |

TECHNICAL DATA

| Description | KBFS1020-230V ¹ | KBFS1020UL-240V ¹ |
|--|----------------------------|------------------------------|
| Article Number | 9020-0372 | 9020-0373 |
| Performance Data Temperature | | |
| Temperature range | 0...70 | 0...70 |
| Temperature variation at 40 °C [± K] | 0.3 | 0.3 |
| Temperature fluctuation at 40 °C [± K] | 0.1 | 0.1 |
| Max. heat compensation at 40 °C [W] | 550 | 550 |
| Performance Data Climate | | |
| Temperature range [°C] | 10...70 | 10...70 |
| Temperature variation at 25 °C and 60 % RH [± K] | 0.3 | 0.3 |
| Temperature variation at 40 °C and 75 % RH [± K] | 0.3 | 0.3 |
| Temperature fluctuation at 25 °C and 60 % RH [± K] | 0.1 | 0.1 |
| Temperature fluctuation at 40 °C and 75 % RH [± K] | 0.1 | 0.1 |
| Humidity range [% RH] | 20...80 | 20...80 |
| Humidity fluctuation at 25 °C and 60 % RH | 1,5 % RH | 1,5 % RH |
| Humidity recovery time after 30 s door open at 25 °C and 60 % RH [min] | 11 | 11 |
| Humidity recovery time after 30 s door open at 40 °C and 75 % RH [min] | 12 | 12 |
| Electrical data | | |
| Rated Voltage [V] | 200...230 | 200...240 |
| Power frequency [Hz] | 50/60 | 50/60 |
| Nominal power [kW] | 2 | 2 |
| Unit fuse [A] | 16 | 16 |
| Phase (Nominal voltage) | 1~ | 1~ |
| Measures | | |
| Interior volume [cu.ft.] | 36 | 36 |
| Net weight of the unit (empty) [lbs] | 836 | 836 |
| Permitted load [lbs] | 331 | 331 |
| Load per rack [lbs] | 99 | 99 |
| Wall clearance back [in] | 3.94 | 3.94 |
| Wall clearance sidewise [in] | 11.82 | 11.82 |
| Internal Dimensions | | |
| Width [in] | 38.45 | 38.45 |
| Height [in] | 49.3 | 49.3 |
| Depth [in] | 32.94 | 32.94 |
| Doors | | |
| Unit doors | 2 | 2 |
| Housing dimensions not incl. fittings and connections | | |
| Width net [in] | 49.3 | 49.3 |
| Height net [in] | 75.8 | 75.8 |
| Depth net [in] | 45.1 | 45.1 |
| Environment-specific data | | |
| Energy consumption at 40 °C and 75 % RH [Wh/h] | 550 | 550 |
| Sound-pressure level [dB(A)] | 56 | 56 |
| Fixtures | | |
| Number of shelves (std./max.) | 2/15 | 2/15 |

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]

CHARTS

Climate chart

OPTIONS

| Designation | Description | * | Art.-No. |
|--|---|-----------|-----------|
| Calibration certificate, temperature | temperature measurement incl. certificate and 27 measuring points at specified temperature | - | 8012-0923 |
| | for temperature and humidity; for extending the measurement in center of chamber to include another test value | - | 8012-0155 |
| Options/Accessories | left | | |
| | 30 mm | 01 | 8012-1442 |
| | 50 mm | 01 | 8012-1472 |
| | 100 mm | 01 | 8012-0515 |
| | lockable door handle | - | 8012-1979 |
| | Measurement in center of chamber at 25 °C / 60% RH or at specified test values | - | 8012-0154 |
| | right | | |
| | 30 mm | 01 | 8012-1436 |
| | 50 mm | 01 | 8012-1466 |
| | 100 mm | 01 | 8012-0514 |
| | temperature (according to DIN12880) and humidity measurement incl. certificate, 27 temperature measuring points and 1 humidity measuring point, at 25 °C / 60 % RH or at specified values | - | 8012-0924 |
| | temperature measurement incl. certificate, 15- 18 measuring points at specified temperature | - | 8012-0920 |
| | temperature measurement incl. certificate, 9 measuring points at specified temperature | - | 8012-0917 |
| | top | | |
| | 30 mm | 01 | 8012-1448 |
| 50 mm | 01 | 8012-1454 | |
| 100 mm | 01 | 8012-1460 | |
| 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 | 8012-1043 | |

* Notes › See last page

ACCESSORIES

| Designation | Description | * | Art.-No. |
|----------------------------------|------------------------------------|----|-----------|
| Multi Management Software | Multi Management Software APT-COM™ | | |
| | version 4, BASIC edition | 19 | 9053-0039 |
| | version 4, GLP edition | 19 | 9053-0042 |
| | version 4, PROFESSIONAL edition | 19 | 9053-0040 |

* Notes › See last page

| Designation | Description | * | Art.-No. |
|--|---|-----------|-----------|
| | Stainless steel | - | 8009-0792 |
| | stainless steel | - | 6004-0143 |
| | 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 |
| | concentrated, for gentle remove of residual contaminants; 1 kg | - | 1002-0016 |
| | 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 |
| | fasteners (1 set of 4) for additional security of racks | - | 8012-0620 |
| | Flexible positioning of the water container with magnetic holder, hose adapter for water container with practical quick coupling, and water stop function | | |
| | External, with magnetic holder | - | 8012-1847 |
| Options/Accessories | IQ/OQ documents – supporting documents for validation performed by customers, consisting of: IQ/OQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature and humidity values | | |
| | Digital in PDF format | - | 7057-0002 |
| | Hard copy inside folder | - | 7007-0002 |
| | 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 and humidity values | | |
| | Digital in PDF format | - | 7057-0006 |
| | Hard copy inside folder | - | 7007-0006 |
| | LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable) | 19 | 8012-0821 |
| | Single-use, replacement cartridge for BINDER PURE AQUA System | - | 6011-0165 |
| | stainless steel, with fasteners (1 set of 4) | - | 8012-0968 |
| | System for preparation or complete desalination of tap water, complete set containing PURE AQUA 300 single-use cartridge, measuring device, and all necessary connecting parts | - | 8012-0759 |
| 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 | |
| TH 70/70: For continuous temperature and humidity logging from -40 °C to 70 °C / 0% to 100% RH and additional logging of ambient conditions. Kit includes 1 data logger, 2 attachable combined humidity/temperature sensors, 2 m extension cable and 1 fixture for mounting to the BINDER unit | 19 | 8012-0717 | |
| TH 70: For continuous temperature and humidity logging from -40 °C to 70 °C; 0% to 100% RH. Kit includes 1 data logger, Pt 100 sensor with 2 m extension cable, and 1 magnetic fixture for mounting to the BINDER unit | 19 | 8012-0716 | |

* Notes › See last page

SERVICES

| Designation | Description | * | Art.-No. |
|-------------------------------|---|--------|-----------|
| Installation services | | | |
| Services | Unit function instructions for operation and programming of the controller | 18 | DL10-0700 |
| | Unpacking and setting up of unit, connecting to existing connections, and checking function | 13, 18 | DL10-0300 |
| Preventive maintenance | | | |
| Services | Executive of equipment inspection according to maintenance plan | 14, 18 | DL20-0400 |

* Notes › See last page

| Designation | Description | * | Art.-No. |
|-----------------------------|--|----------------|-----------|
| Calibration services | | | |
| | Temperature and humidity calibration with 1 measuring point in center of chamber with 1 specified pair of values, including certificate | 14, 16, 17, 18 | DL30-0301 |
| | Temperature measurement in accordance with DIN 12880 with 27 temperature measuring points and 1 humidity measuring point in center of chamber at specified values, including certificate | 14, 16, 17, 18 | DL30-0427 |
| Services | Temperature measurement with 18 temperature measuring points and 1 humidity measuring point in center of chamber with 1 specified pair of values, including certificate | 14, 16, 17, 18 | DL30-0318 |
| | Temperature measurement with 27 temperature measuring points and 1 humidity measuring point in center of chamber with 1 specified pair of values, including certificate | 14, 16, 17, 18 | DL30-0327 |
| | Temperature measurement with 9 temperature measuring points and 1 humidity measuring point in center of chamber at specified values, including certificate | 14, 16, 17, 18 | DL30-0309 |
| Validation services | | | |
| Services | Execution of IQ/OQ in accordance with qualification folder | 15, 18 | DL42-0300 |
| | Execution of IQ/OQ/PQ in accordance with qualification folder | 15, 18 | DL44-0500 |
| Warranty service | | | |
| Services | The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded | - | DL01-4041 |

* 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.
- 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.

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