KBF 720 (E5.2) - Constant climate chamber

The KBF series was particularly designed for absolutely reliable stability tests and precise maintenance of constant climatic conditions. With its large reserve capacity and many optional features, it is designed to meet future challenges for many years to come.

Performance features and equipment:

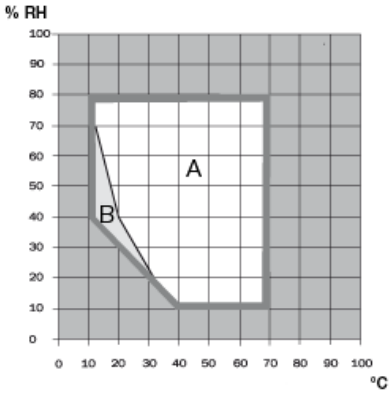
- Electronically controlled APT.line™ preheating chamber and refrigerating system assuring temperature accuracy and reproducible results
- Temperature range 0 °C (32 °F) up to 70 °C (158 °F) - without humitiy
- Temperature range 10 °C (50 °F) up to 70 °C (158 °F) - with humitiy
- Humidity range 10 % RH to 80 % RH
- MCS controller with 25 storable programs of 100 sections each for a maximum of 500 program segments
- Features:
  - User friendly LCD screen
  - Easy-to-read menu guide
  - Integrated electronic chart recorder
  - Variety of options for the graphic display of process parameters
  - Real time clock
- Electronically controlled humidification and dehumidification system with capacitive humidity sensor
- Suitable for stability tests according to ICH guideline Q1A (R2)
- Inner glass doors with sealing
- Independent adjustable temperature safety device class 3.1 (DIN 12880), with visual and audible temperature alarm
- Access port with silicone plug Ø 30 mm (1.18 inch), left side
- Safety connection kit for water supply and drainage, including water hose, total length 6 m (19.7 ft.)
- Ethernet interface for GLP/GMP and the FDA guideline 21 CFR Part 11 compliant APT-COM™ DataControlSystem software
- 2 stainless steel racks included
- BINDER test certificate

Technical specification KBF 720 (E5.2)

BINDER
Best conditions for your success

	KBF 720 (E5.2)
Exterior dimensions	
Width (mm/inch)	1249 / 49.2
Height (inclusive castors) (mm/inch)	1924 / 75.8
Depth (mm/inch)	887 / 34.9
Plus door handle, I - panel, connection (mm/inch)	52 / 2.1
Wall clearance rear (mm/inch)	100 / 3.9
Wall clearance side (mm/inch)	100 / 3.9
Steam space volume (l/cu.ft.)	918 / 32.4
Number of doors	2
Number of inner glass doors	2
Interior dimensions	
Width (mm/inch)	970 / 38.2
Height (mm/inch)	1250 / 49.2
Depth (mm/inch)	576 / 22.7
Interior volume (l/cu.ft.)	698 / 24.7
Racks (number standard/max.)	2 / 16
Load per rack (kg/lbs.)	45 / 99
Permitted total load (kg/lbs.)	150 / 331
Weight of the unit (empty) (kg/lbs.)	315 / 695
Temperature data (without humidity)	
Temperature range 1) (°C/°F)	
Temperature range	0 - 70 / 32 - 158
Temperature variation	
at 25 °C (77 °F) (±K)	0.2
at 40 °C (104 °F) (±K)	0.2
Temperature fluctuation (± K)	0.1
Max. heat compensation up to 40 °C (104 °F) (W)	600
Climatic data (with humidity)	
Temperature range (°C/°F)	10 - 70 / 50 - 158
Temperature variation	
at 25 °C (77 °F) / 60 % RF (±K)	0.2
at 40 °C (104 °F) / 75 % RF (±K)	0.2
Temperature fluctuation	
at 25 °C (77 °F) / 60 % RF (±K)	0.1
at 40 °C (104 °F) / 75 % RF (±K)	0.1
Humidity range (% RH)	10 - 80
Humidity fluctuation (± % RH)	
at 25 °C (77 °F) / 60 % RF	≤ 1.5
at 40 °C (104 °F) / 75 % RF	≤ 1.5
Recovery time after doors were open for 30 sec. 2)	
at 25 °C (77°F) / 60% RH) (Min.)	2
at 40 °C (104 °F) / 75% RH) (Min.)	6
Electrical data	
Housing protection acc. to EN 60529	IP 20
Nominal voltage (±10%) 50 / 60 Hz (V)	200-240 1N~
Nominal power (kW)	3.1
Energy consumption at 40 °C (104 °F) / 75 % RF 3) (W)	620
Noise level (dB (A))	53

Temperature-humidity chart



A: Standard Climate range / B: Discontinuous range

2. We recommend the BINDER Pure Aqua Service for longer maintenance intervals, regardless of water quality.

3. Demineralized or deionized water available at the customers location.

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1) Data valid at an ambient temperature of 25 °C (77 °F)
2) up to 98 % of the set value
3) These values can be used upon calculation of air conditioning systems
All technical data are specified for units with standard equipment at an ambient temperature of 20 °C (68 °F) and a voltage fluctuation of ± 10 %. The temperature data are determinated in accordance to factory standard following DIN 12880 respecting the recommended wall clearances of 10 % of the height, width and depth of the inner chamber. All indications are average values, typical for units produced in series. We reserve the right to alter technical specifications at all times.

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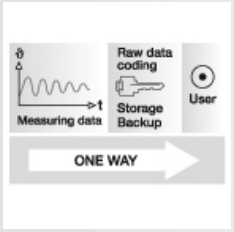
Access ports

With silicon plugs for inserting external measuring devices into the chamber. Access ports with 10, 30, 50, and 100 mm diameter.



APT-COM™ DataControlSystem GLP Edition

Software for GLP compliant control, programming, and documentation. Permits networks of up to 30 units and/or controllers. Meets the requirements of FDA 21 CFR Part 11.

BINDER Data Logger kits

The new BINDER Data Logger kits for temperature and humidity can record temperature and humidity data of BINDER equipment. This finely tuned product solution also contains useful accessories for mounting the Logger on the BINDER unit, including cable bushings and a sensor mounting bracket.

Calibration certificates

Measurement in the center at specified values. Additional measuring points or test values according to your specification.

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	KBF 720 (E5.2)
Access port with silicone plugs, 30 mm (1.18 inch), 50 mm (1.97 inch), 100 mm (3.94 inch)	O
Securing elements for additional fastening of racks (1 set of 4 pieces)	O
Keyboard lock	O
Additional PT 100 temperature sensor, flexibly installed, with external connection, including LEMO connector (3 - pin)	O
RS 422 connection for communication software APT-COM™ DataControlSystem	O
External fresh water supply set consits of fresh and waste water tank with 20 liter each, cabling and pump	O
BINDER PURE AQUA SERVICE consisting of disposible cartridge, hose set and measuring unit	O
Factory calibration certificate for temperature and humidity. Measurement in center of chamber at 25 °C (77 °F) / 60% RH or at specified values	O
Extension to factory calibration certificate for temperature and humidity. Each additional measurement at an additional measuring point or set of values	O
Temperature precision measurement according to DIN 12880 and 9 - point humidity measurement / factory standard with measurement log and certificate, measured at 25 °C (77 °F) / 60% RH or at specified values	O
Data Logger Kit TH 70: For the continuous temperature and humidity recording of -40 °C (-40 °F) to 70 °C (158 °F) / 0% to 100 % RH. Kit includes 1 data logger, 1 attachable combined humidity/temperature sensor with 2 m extension cable and 1 fixture for the connection at the BINDER unit	O
Data Logger Kit TH 70/70: With two attachable combined sensors. One for the continuous temperature and humidity recording of -40 °C (-40 °F) to 70 °C (158 °F) / 0% to 100 % RH. Second one at the data logger for recording the environmental conditions. Kit includes 1 data logger, 2 attachable combined humidity/temperature sensors with 2 m extension cable and 1 fixture for the connection at the BINDER unit	O
Data Logger Kit T 220: For the continuous temperature recording of -90 °C (-130 °F) to 220 °C (428 °F). Kit includes 1 data logger, PT 100 sensor with 2 m Teflon extension cable and 1 fixture for the connection at the BINDER unit	O
Data Logger Software: Configuration und evaluation software for all BINDER Data Logger Kits, incl. data cable	O
Rack, stainless steel	O
Reinforced rack, stainless steel, with 1 set of securing elements (4 pieces) max. load 70 kg (154 lbs.)	O
Shelf, perforated, stainless steel	O
Temperature safety device, Class 3.3 (DIN 12880) with optical alarm	O
4-20 mA analog output for temperature and humidity measurements (e.g. chart recorder connection), with 6 - pin DIN socket. Outputs are adjusted automatically as the controller is adjusted	O
Zero-voltage relay alarm outputs for temperature (±2 °C) and humidity (±5 % RH), accessible via 6 - pin DIN socket, with acoustic signal that can be switched off (maximum power rating 24 V AC / DC, 2.5 A)	O
Switchable waterproof interior socket 230 V AC (max. 500 W), IP 65 protected, with corresponding plug. Max. allowed operating temperature 50 °C (122 °F)	O
Door lock	O
Interior lighting (30 W)	O

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