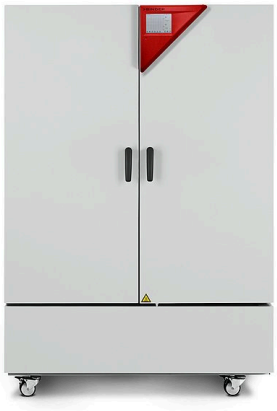
Model KBF 720 | Constant climate chambers with large temperature / humidity range

The BINDER KBF is the specialist for unconditionally reliable stability testing and precise maintenance of constant climate conditions. From programming to documentation, this constant climate chamber meets all critical requirements.

BENEFITS

- Safe thanks to climatic homogeneity that far exceeds the accuracy required by ICH guidelines, even with a fully loaded unit.
- Reliable thanks to failsafe operation without compromise. The interior and Longlife evaporator plate are made entirely from stainless steel.
- Smart, as a wide range of accessories makes it highly compatible for adaptation to specific customer requirements.
- Economical thanks to maximum effective volume which allows for 30% larger load compared to the competition.



Model 720

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MAIN FEATURES

- Temperature range: 0 °C to +70 °C
- Humidity range: 10 % to 80 % RH
- APT.line™ preheating chamber technology
- Humidity regulation with capacitive humidity sensor and vapor humidification
- Intuitive touchscreen controller with time-segment and real-time programming
- BINDER Multi Management Software APT-COM™ Basic Edition
- Internal data logger, measured values can be read out in open format via USB
- Unit self-test for comprehensive status analysis
- Tight-sealing inner door made of safety glass (ESG)
- Avoidance of glass corrosion by special TIMELESS coating
- Inner chamber made of stainless steel
- 2 stainless steel racks
- Access port with silicone plug, 30 mm, left
- 4 stable castors, two with brakes, from 240 liters
- Class 3.1 independent temperature safety device (DIN 12880) with visual and audible temperature alarm
- Computer interface: Ethernet
- Door heating

ORDERING INFORMATION

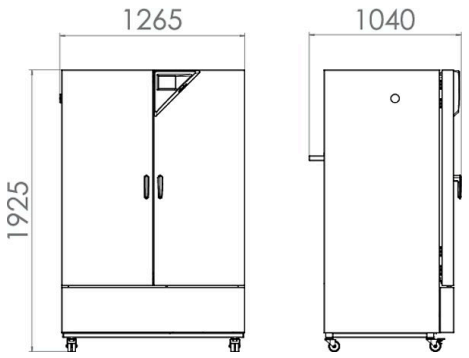
Interior volume [L]	Voltage	Option model	Version	Art.-No.
700	200...230 V 1~ ph 50/60 Hz	Standard	KBF720-230V	9020-0324
	200...240 V 1~ ph 50/60 Hz	Standard	KBF720UL-240V	9020-0325

TECHNICAL DATA

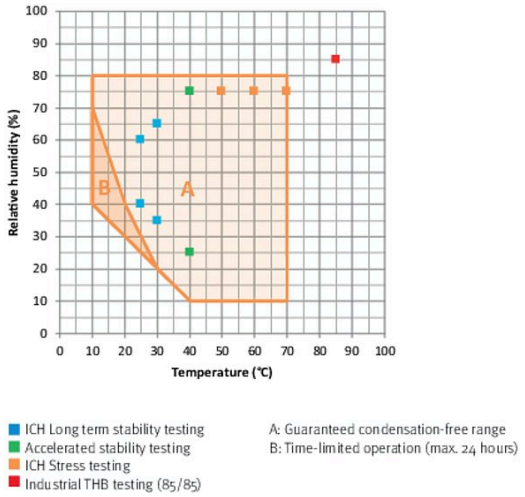
Description	KBF720-230V[1]	KBF720UL-240V[1]
Article Number	**9020-0324**	**9020-0325**
Performance Data Temperature		
Temperature range [°C]	0...70	0...70
Temperature variation at 40 °C [± K]	0.2	0.2
Temperature fluctuation [± K]	0.1	0.1
Max. heat compensation at 40 °C [W]	600	600
Performance Data Climate		
Temperature range [°C]	10...70	10...70
Temperature variation at 25 °C and 60 % RH [± K]	0.2	0.2
Temperature variation at 40 °C and 75 % RH [± K]	0.2	0.2
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	10...80	10...80
Humidity fluctuation at 25 °C and 60 % RH	1,5 ± % RH	1,5 ± % RH
Humidity fluctuation at 40 °C and 75 % RH	1,5 ± % RH	1,5 ± % RH
Recovery time after 30 seconds door open at 25 °C and 60 % RH [min]	16	16
Recovery time after 30 seconds door open at 40 °C and 75 % RH [min]	17	17
Electrical data		
Rated Voltage [V]	200...230	200...240
Power frequency [Hz]	50/60	50/60
Nominal power [kW]	3.1	3.1
Unit fuse [A]	16	16
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume [L]	700	700
Net weight of the unit (empty) [kg]	312	312
Permitted load [kg]	150	150
Load per rack [kg]	45	45
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	300	300
Internal Dimensions		
Interior width [mm]	973	973
Interior height [mm]	1250	1250
Interior depth [mm]	576	576
Doors		
Inner doors	2	2
Unit doors	2	2
Housing dimensions not incl. fittings and connections		
Width net [mm]	1250	1250
Height net [mm]	1925	1925
Depth net [mm]	890	890
Environment-specific data		
Energy consumption at 40 °C and 75 % RH [Wh/h]	620	620
Sound-pressure level [dB(A)]	53	53
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



Temperature-humidity chart with ICH checkpoints

OPTIONS

Designation	Description	*	Art.-No.
Access port with silicone plug	left		
	30 mm	01	8012-1442
	50 mm	01	8012-1472
	100 mm	01	8012-0515
	right		
	30 mm	01	8012-1436
	50 mm	01	8012-1466
	100 mm	01	8012-0514
	top		
	30 mm	01	8012-1448
	50 mm	01	8012-1454
	100 mm	01	8012-1460
Alarm output, zero-voltage	for temperature (±2 °C) and humidity (±5 % RH), accessible via 6-pin DIN socket (max. 24 V - 2.5 A), with audible signal that can be switched off	–	8012-1038
Analog output 4-20 mA	for temperature and humidity values (output not adjustable)	–	8012-1041
Calibration certificate, expanded	for temperature and humidity; for extending the measurement in center of chamber to include another test value	–	8012-0155
Calibration certificate, temperature	temperature measurement incl. certificate and 27 measuring points at specified temperature	–	8012-0923
	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

* Notes › See last page

Designation	Description	*	Art.-No.
Calibration certificate, temperature and humidity	Measurement in center of chamber at 25 °C / 60% RH or at specified test values	–	8012-0154
	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
Class 3.3 independent temperature safety device	with visual alarm (DIN 12880)	–	8012-1034
Door lock	lockable door handle	–	8012-1024
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	–	8012-1042
RS 485 interface, 2-wire	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	–	8012-1066
Shelf, reinforced	positioned at bottom level, max. load 45 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	–	8012-1489

* Notes › See last page

ACCESSORIES

Designation	Description	*	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
BINDER PURE AQUA SERVICE	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
BINDER PURE AQUA SERVICE, accessories	Single-use, replacement cartridge for BINDER PURE AQUA System	–	6011-0165
Converter, voltage	to operate the device at a nominal voltage of 120 V 1 ph 60 Hz		
	240 V option model	–	8009-0821
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
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	8012-2250
Qualification documents	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
Rack	stainless steel	–	8012-2051
Rack accessories	fasteners (1 set of 4) for additional security of racks	–	8012-2280
Rack, reinforced	stainless steel, with fasteners (1 set of 4)	–	8012-0674
RS 485 / RS 422 interface converter	RS 422 cable set and RS 485 / RS 422 interface converter for connection to 10-way plug distributor		
	115 V option model	–	8012-0599
	230 V option model	–	8012-0589
Shelf, perforated	Stainless steel	–	8012-2252

* Notes › See last page

Designation	Description	*	Art.-No.
	consisting of fresh- and waste-water containers (20 liters each), cabling and pump		
Water supply set	external, for hanging from the back of the device	–	8012-0643
	external, free-standing	–	8012-1846
WLAN kit	The kit contains a client bridge that establishes a wireless connection between BINDER units and APT-COM4, LIMS, or customer-specific software via an Ethernet interface. It provides an alternative solution in situations where units need to be positioned in locations without an on-site Ethernet connection. In secured networks, installation and configuration must be performed by the customer's IT service.	–	8012-2262

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Maintenance contracts			
Installation services			
Maintenance services			
Calibration services			
Validation services			
Warranty service			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	–	DL50-0030
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	DL20-0710
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	05	DL42-0300
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	05	DL44-0500
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 temperature/humidity value, including certificate	05	DL20-0920
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	DL20-0400
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	DL20-0820
Temperature and humidity calibration	Expansion –Temperature and humidity calibration with 1 measuring point in center of chamber with 1 specified pair of values, including certificate	03, 04, 05	DL30-0302
	Temperature and humidity calibration with 1 measuring point in center of chamber with 1 specified pair of values, including certificate	03, 04, 05	DL30-0301
Temperature and humidity measurement according to DIN12880	Temperature measurement in accordance with DIN 12880 with 27 temperature measuring points and 1 humidity measuring point in center of chamber with a pair of values specified by the user, including certificate	03, 04, 05	DL30-0427
Temperature and humidity measurement, 18-1 measuring points	Temperature measurement with 18 temperature measuring points and 1 humidity measuring point in center of chamber with a pair of values specified by the user, including certificate	03, 04, 05	DL30-0318
Temperature and humidity measurement, 27-1 measuring points	Temperature measurement with 27 temperature measuring points and 1 humidity measuring point in center of chamber with a pair of values specified by the user, including certificate	03, 04, 05	DL30-0327
Temperature and humidity measurement, 9-1 measuring points	Temperature measurement with 9 temperature measuring points and 1 humidity measuring point in center of chamber with a pair of values specified by the user, including certificate	03, 04, 05	DL30-0309
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	DL10-0300
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0700

* 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 Sensor calibration is performed in an accredited calibration laboratory.
04 Calibration is performed according to the BINDER factory standard.
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).

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