

Model KBF P 720 | Constant climate chambers with ICH-compliant light source

The KBF P constant climate chamber, equipped with ICH-compliant light source, is an expert when it comes to photostability tests and ensures clear test results in accordance with ICH Guideline Q1B. At the same time, the variable-position illumination cassettes offer homogeneous lighting conditions.

BENEFITS

- Homogeneous climate conditions thanks to APT.line™ technology
- Automatic water and wastewater management
- Pressure humidification with fast response times
- Variable position and removable illumination cassettes
- ICH-compliant illumination for long-term stable test conditions



Model 720

MAIN FEATURES

- Temperature range: 0 °C to 70 °C
- Temperature range with light: 10 °C to 60 °C
- Humidity range: 10 % to 80 % RH
- 3 positionable illumination cassettes with ICH-compliant UV/Vis light source
- APT.line™ preheating chamber technology
- Humidity regulation with capacitive humidity sensor and vapor humidification
- Inner chamber made of stainless steel
- Intuitive touchscreen controller with time-segment and real-time programming
- 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
- 3 stainless steel racks
- Access port with silicone plug, 30 mm, left
- 4 stable castors, two with brakes
- 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.
Model KBF P 720				
700	200...230 V 1~ ph 50/60 Hz	Standard	KBFP720-230V	9020-0330
	200...240 V 1~ ph 50/60 Hz	Standard	KBFP720UL-240V	9020-0331

TECHNICAL DATA

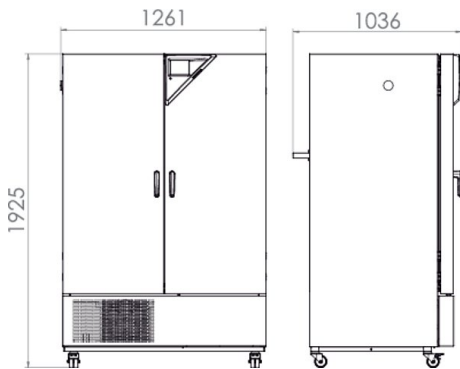
Description	KBFP720-230V ¹	KBFP720UL-240V ¹
Article Number	9020-0330	9020-0331
Performance Data Temperature		
Temperature range with 100% illumination [°C]	10...60	10...60
Temperature range without illumination cassettes [°C]	0...70	0...70
Max. heat compensation at 40 °C with illumination [W]	1000	1000
Performance Data Climate		
Temperature range with 100% illumination [°C]	20...60	20...60
Temperature range without illumination cassettes [°C]	10...70	10...70
Temperature variation with illumination at 25 °C and 60 % RH [± K]	1.2	1.2
Temperature variation with illumination at 40 °C and 75 % RH [± K]	1.2	1.2
Temperature fluctuation with illumination at 25 °C and 60 % RH [± K]	0.2	0.2
Temperature fluctuation with illumination at 40 °C and 75 % RH [± K]	0.2	0.2
Humidity range with illumination cassettes, with illumination [% RH]	10...75	10...75
Humidity range without illumination [% RH]	10...80	10...80
Humidity fluctuation with illumination at 25 °C and 60 % RH [± % RH]	2	2
Humidity fluctuation with illumination at 40 °C and 75 % RH [± % RH]	2	2
Humidity recovery time after 30 s door open at 25 °C and 60 % RH with illumination [min]	4	4
Humidity recovery time after 30 s door open at 40 °C and 75 % RH with illumination [min]	5	5
Lightdata per Illumination Cassettes		
ICH compliant illumination for photo stability testing [lx] ^{*2}	9000	9000
ICH compliant illumination for photo stability testing [W/m ²] ^{*2}	1.5	1.5
Electrical data		
Rated Voltage [V]	200...230	200...240
Power frequency [Hz]	50/60	50/60
Nominal power [kW]	3.5	3.5
Unit fuse [A]	16	16
Phase (Nominal voltage)	1~	1~
Internal Dimensions		
Depth [mm]	576	576
Height [mm]	1250	1250
Width [mm]	973	973
Housing dimensions not incl. fittings and connections		
Width net [mm]	1250	1250
Height net [mm]	1925	1925
Depth net [mm]	890	890
Measures		
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	200	200
Interior volume [L]	700	700
Net weight of the unit (empty) [kg]	374	374
permitted load [kg]	150	150
Load per rack [kg]	45	45

- 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.
- 2 Average value, measured at 25 °C with a spherical sensor (±10 %) by 12 cm below the light cassette. The values given in W/m² refer to global radiation.

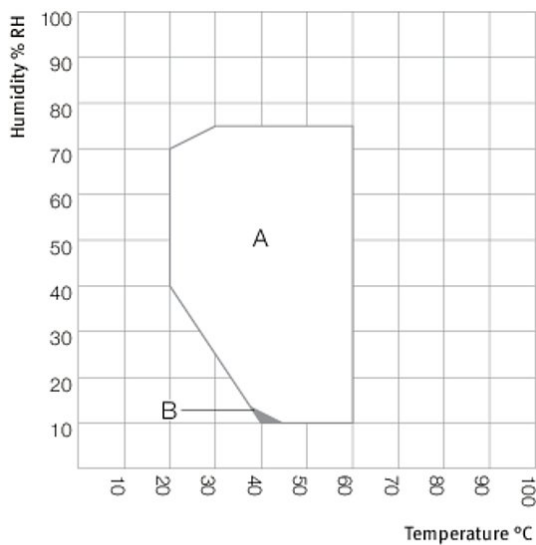
Description	KBFP720-230V ¹	KBFP720UL-240V ¹
Article Number	9020-0330	9020-0331
Doors		
Inner doors	2	2
Unit doors	2	2
Environment-specific data		
Energy consumption at 40 °C and 75 % RH [Wh/h]	1850	1850
Sound-pressure level [dB(A)]	53	53
Fixtures		
Number of shelves (std./max.)	3/12	3/12
Number of illumination cassettes (std./max.)	3/3	3/3

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- Average value, measured at 25 °C with a spherical sensor (±10 %) by 12 cm below the light cassette. The values given in W/m² refer to global radiation.

DIMENSIONS incl. fittings and connections [mm]



CHARTS



A: Guaranteed condensation-free range
 B: Deviations of technical data may be possible

Climate chart

OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
Access port with silicone plug	left		
	30 mm	01	8012-1444
	50 mm	01	8012-1474
	100 mm	01	8012-1341
	right		
	30 mm	01	8012-1438
	50 mm	01	8012-1468
	100 mm	01	8012-1338
	top		
	30 mm	01	8012-1450
50 mm	01	8012-1456	
100 mm	01	8012-1462	
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	-	8012-1762
Analog output 4-20 mA	for temperature and humidity values (output not adjustable)	-	8012-1738
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units. version 4, BASIC edition	19	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	19	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	19	9053-0040
BINDER PURE AQUA SERVICE	system for preparation or complete desalination of tap water, containing single-use cartridge, hoses and measuring device	-	8012-0759
BINDER PURE AQUA SERVICE, accessories	Single-use, replacement cartridge for BINDER PURE AQUA System	-	6011-0165
Calibration certificate, expanded	for temperature and humidity; for extending the measurement in center of chamber to include another test value	-	8012-1190
Calibration certificate, temperature	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1605
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1585
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1564
Calibration certificate, temperature and humidity	Measurement in center of chamber at 25 °C / 60% RH or at specified test values	-	8012-1184
	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	-	8012-1611
Class 3.3 independent temperature safety device	with visual alarm (DIN 12880)	-	8012-1754
Data Logger Kit	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
Data Logger Software	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
Door lock	lockable door handle	-	8012-1662
Light photometry	including certificate, illumination and irradiance for visible light, 25 measuring points on 3 measurement levels, as well as spectral distribution (385 – 785 nm)	-	8012-1546
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1747
Rack	stainless steel	-	6004-0106
Rack accessories	fasteners (1 set of 4) for additional security of racks	-	8012-0620

* Notes › See last page

Designation	Description	*	Art.-No.
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
RS 485 interface, 2-wire	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	-	8012-1743
Shelf, perforated	Stainless steel	-	8009-0486
Shelf, reinforced	positioned at bottom level, max. load 67 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	-	8012-1491
Water supply set	consisting of fresh- and waste-water containers (20 liters each), cabling and pump		
	external, free-standing	-	8012-1846
	external, consisting of fresh- and waste-water containers (20 liters each), cabling and pump		
	external, for hanging from the back of the device	-	8012-0643

* 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	DL10-0300
Instruction	unit function instructions for operation and programming of the controller	18	DL10-0700
Preventive maintenance			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL20-0400
Calibration services			
Calibration temperature and humidity	including certificate, one measuring point in center of chamber at 25 °C / 60 % RH or at specified values	14, 16, 17, 18	DL30-0301
Light photometry	including certificate, 25 measuring points on 3 measurement levels, intensity measurements for visible light and UVA, as well as spectral distribution (qualitative spectral measurements 250 – 785 nm)	14, 16, 17, 18	DL30-0525
Temperature and humidity measurement according to DIN12880	including certificate (27 temperature measuring points and one humidity measuring point, at 25 °C / 60 % RH or at specified values)	14, 16, 17, 18	DL30-0427
Temperature measurement 18 temperature measuring points and 1 humidity measuring point	including certificate, 18 temperature measuring points and 1 humidity measuring point in center of chamber, at 25 °C / 60 % RH or at specified values	14, 16, 17, 18	DL30-0318
Temperature measurement 27 temperature measuring points and 1 humidity measuring point	including certificate, 27 temperature measuring points and 1 humidity measuring point in center of chamber, at 25 °C / 60 % RH or at specified values	14, 16, 17, 18	DL30-0327
Temperature measurement 9 temperature measuring points and 1 humidity measuring point	including certificate, 9 temperature measuring points and 1 humidity measuring point in center of chamber, at 25 °C / 60 % RH or at specified values	14, 16, 17, 18	DL30-0309
Validation services			
Execution of IQ/OQ incl. light measurement	including light measurement, in accordance with qualification folder	15, 18, 20	DL43-0400
Execution of IQ/OQ/PQ	in accordance with customer's requirement, price: on request	15, 18	DL44-0500
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	8012-0868
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	8012-0956
Warranty service			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	-	DL01-5041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	-	DL01-5042

* Notes › See last page



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