

Model KBF LQC 720 | Humidity test chambers with ICH-compliant light source and light dose control

The main advantage of the BINDER KBF LQC series is the patented light photometry for photostability tests. Two 3D spherical sensors control the light dosage of UV-A and visible light. Once the desired light dosage is achieved, the chamber switches off automatically.

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
- Precise photometry with 3D ball-type sensors at the sample



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
- positionable illumination cassettes with ICH-compliant UV/Vis light source
- Independent light-dose control of UV-A and visible light with spherical sensors
- APT.line™ preheating chamber technology
- Humidity regulation with capacitive humidity sensor and vapor humidification
- Inner chamber made of stainless steel
- BINDER Multi Management Software APT-COM™ Basic Edition
- 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
- 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 [cu.ft.]	Voltage	Option model	Version	Art.-No.
24.7	200...230 V 1~ 50 Hz	Standard	KBFLQC720-230V	9020-0334
	200...240 V 1~ 50/60 Hz	Standard	KBFLQC720UL-240V	9020-0335

TECHNICAL DATA

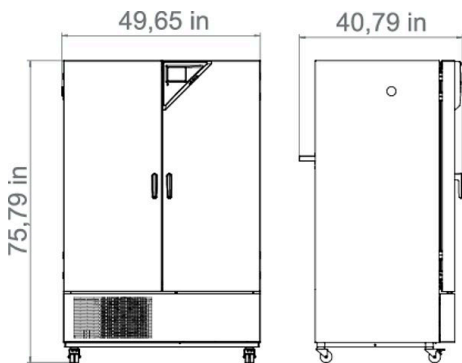
Description	KBFLQC720-230V ¹	KBFLQC720UL-240V ¹
Article Number	9020-0334	9020-0335
Performance Data Temperature		
Temperature range with 100% illumination [°C]	10...60	10...60
Temperature range without illumination cassettes [°C]	0...70	0...70
Max. heat compensation at 40 °C with illumination [W]	1000	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]	1	1
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	50/60
Nominal power [kW]	3.5	3.5
Unit fuse [A]	16	16
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume [cu.ft.]	24.7	24.7
Net weight of the unit (empty) [lbs]	825	825
Permitted load [lbs]	331	331
Load per rack [lbs]	99	99
Wall clearance back [in]	3.94	3.94
Wall clearance sidewise [in]	7.88	7.88
Internal Dimensions		
Width [in]	38.34	38.34
Height [in]	49.3	49.3
Depth [in]	22.69	22.69
Doors		
Inner doors	2	2
Unit doors	2	2

- 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.

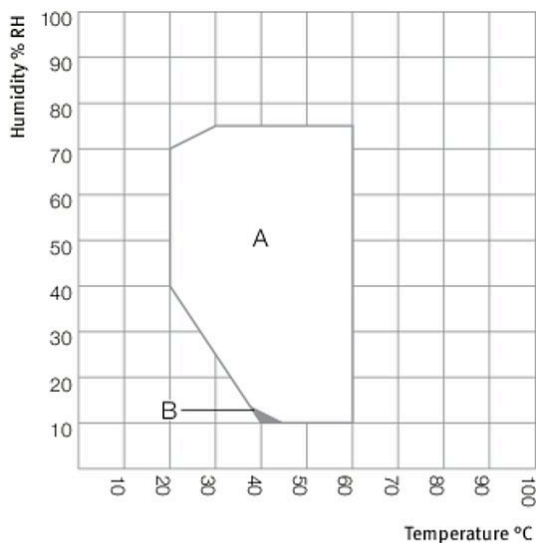
Description	KBFLQC720-230V ¹	KBFLQC720UL-240V ¹
Article Number	9020-0334	9020-0335
Housing dimensions not incl. fittings and connections		
Width net [in]	49.3	49.3
Height net [in]	75.8	75.8
Depth net [in]	35.07	35.07
Environment-specific data		
Energy consumption at 40 °C and 75 % RH [Wh/h]	2350	2350
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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- 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.

DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]



CHARTS



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

Climate chart

OPTIONS

Designation	Description	*	Art.-No.	
Calibration certificate, temperature	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1604	
	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1748	
	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	-	8012-1744	
	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	-	8012-1763	
	for temperature and humidity values (output not adjustable)	-	8012-1739	
	for temperature and humidity; for extending the measurement in center of chamber to include another test value	-	8012-1189	
	including certificate, illumination and irradiance for visible light, 25 measuring points on 3 measurement levels, as well as spectral distribution (385 – 785 nm)	-	8012-0909	
	left			
	30 mm	01	8012-1443	
	50 mm	01	8012-1473	
	100 mm	01	8012-1340	
	lockable door handle	-	8012-1661	
	Measurement in center of chamber at 25 °C / 60% RH or at specified test values	-	8012-1183	
	Options/Accessories	positioned at bottom level, max. load 45 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	-	8012-1490
		right		
30 mm		01	8012-1437	
50 mm		01	8012-1467	
100 mm		01	8012-1337	
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		-	8012-1610	
temperature measurement incl. certificate, 15- 18 measuring points at specified temperature		-	8012-1584	
temperature measurement incl. certificate, 9 measuring points at specified temperature		-	8012-1563	
top				
30 mm		01	8012-1449	
50 mm		01	8012-1455	
100 mm		01	8012-1461	
with visual alarm (DIN 12880)		-	8012-1755	

* 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	-	8009-0486
	stainless steel	-	6004-0106
	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
	consisting of fresh- and waste-water containers (20 liters each), cabling and pump		
	external, for hanging from the back of the device	-	8012-0643
	external, free-standing	-	8012-1846
	fasteners (1 set of 4) for additional security of racks	-	8012-0620
	IQ/OQ documents – supporting documents for validation performed by customers, consisting of: IQ/OQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, humidity, and light values		
	Digital in PDF format	-	7057-0003
	Hard copy inside folder	-	7007-0003
	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, humidity, and light values		
	Digital in PDF format	-	7057-0007
	Hard copy inside folder	-	7007-0007
Options/Accessories	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
	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
	Single-use, replacement cartridge for BINDER PURE AQUA System	-	6011-0165
	stainless steel, with fasteners (1 set of 4)	-	8012-0674
	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
Calibration services			
Services	Expansion – including certificate, each additional measuring point in center of chamber at 25 °C / 60% RH or at specified values	14, 16, 17, 18	DL30-0302
	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 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
	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

* Notes › See last page

Designation	Description	*	Art.-No.
Validation services			
Services	Execution of IQ/OQ including light photometry in accordance with qualification folder	15, 18	DL43-0400
	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	-	DL02-6041
	The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded	-	DL02-6042

* Notes › See last page

NOTES

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