

## Model KBF P 240 | 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

- Safe thanks to climatic homogeneity that far exceeds the accuracy required by ICH guidelines, even with a fully loaded unit. The light spectrum is 100% compliant with ICH requirements.
- 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 240



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### IMPORTANT FEATURES

- Temperature range: 0 °C to +70 °C
- Temperature range with light: +10 °C to +60 °C
- Humidity range: 10 % to 80 % RH
- 2 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
- 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
- 2 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]	Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
<b>Model KBF P 240</b>					
247	200...230 V 1~ 50/60 Hz -16,0 A	CEE 7/7	Standard	KBFP240-230V	9020-0328
	200...240 V 1~ 50/60 Hz -16,0 A	NEMA 6-20	Standard	KBFP240UL-240V	9020-0329

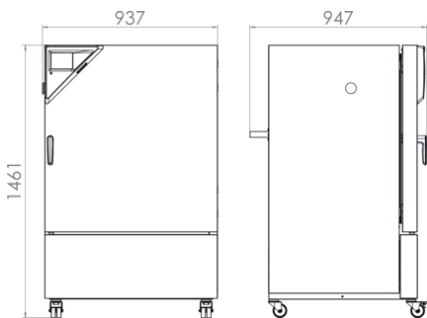
## TECHNICAL DATA

Data		
Designation	KBFP240-230V	KBFP240UL-240V
Article Number	9020-0328	9020-0329
Option model	Standard	Standard
Performance Data Temperature		
Temperature range	0...70 °C	0...70 °C
Temperature range without illumination cassettes	0...70 °C	0...70 °C
Temperature range with 100% illumination	10...60 °C	10...60 °C
Max. heat compensation at 40°C with illumination	400 W	400 W
Performance Data Climate		
Temperature range with humidity and without illumination cassettes	10...70 °C	10...70 °C
Temperature range with humidity and 100% illumination	10...60 °C	10...60 °C
Temperature fluctuation with illumination at 25°C and 60% RH	0.2 ± K	0.2 ± K
Humidity fluctuation with illumination at 25°C and 60% RH	1.5 % RH	1.5 % RH
Recovery time after door was opened for 30 s with illumination at 25°C and 60% RH	4 min	4 min
Recovery time after door was opened for 30 s with illumination at 40°C and 75% RH	6 min	6 min
Lightdata per Illumination Cassettes		
ICH compliant illumination for photo stability testing	7500 lx	7500 lx
ICH compliant illumination for photo stability testing	1,1 W/m <sup>2</sup>	1,1 W/m <sup>2</sup>
Electrical data		
Rated Voltage	200...230 V	200...240 V
Power frequency	50/60 Hz	50/60 Hz
Nominal power	2,4 kW	2,4 kW
Unit fuse	16,0 A	16,0 A
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume	247 L	247 L
Net weight of the unit (empty)	213 kg	213 kg

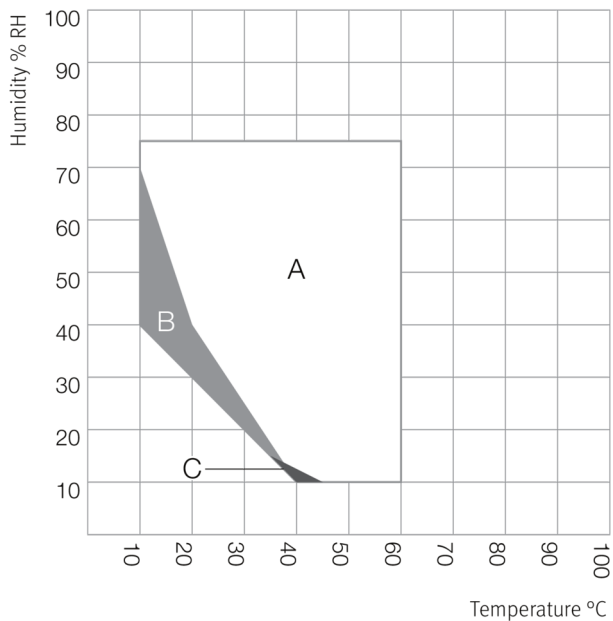
Load per rack	30 kg	30 kg
Permitted load	100 kg	100 kg
Wall clearance back	100 mm	100 mm
Wall clearance sidewise	100 mm	100 mm
<b>Housing dimensions not incl. fittings and connections</b>		
Width net	925 mm	925 mm
Height net	1,460 mm	1,460 mm
Depth net	800 mm	800 mm
<b>Internal Dimensions</b>		
Interior width	650 mm	650 mm
Interior height	785 mm	785 mm
Interior depth	485 mm	485 mm
Inner doors	1	1
Unit doors	1	1
<b>Environment-specific data</b>		
Sound-pressure level	53 dB(A)	53 dB(A)
Energy consumption at 40°C and 75% RH	760 Wh/h	760 Wh/h
<b>Fixtures</b>		
Number of shelves (std./max.)	2/7	2/7
Number of illumination cassettes (std./max.)	2/2	2/2

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]



## DIAGRAMS



- A: Guaranteed condensation-free range  
 B: Time-limited operation (max. 24 hours)  
 C: Deviations of technical data may be possible

Climate chart

## OPTIONS

Designation	Description	KBF P 240	*	Art.-No.
	left			
	30 mm	•	01	8012-1444
	50 mm	•	01	8012-1474
	100 mm	•	01	8012-1341
	right			
	30 mm	•	01	8012-1438
Access port with silicone plug	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 ( $\pm 2$ °C) and humidity ( $\pm 5$ % RH), accessible via 6-pin DIN socket (max. 24 V - 2.5 A), with audible signal that can be switched off	•	-	8012-1758

Designation	Description	KBF P 240	*	Art.-No.
Analog output 4-20 mA	for temperature and humidity values (output not adjustable)	•	-	8012-1722
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, 9 measuring points at specified temperature	•	-	8012-1564
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	-	8012-1585
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	-	8012-1605
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)	•	-	8012-1751
Door lock	lockable door handle	•	-	8012-1659
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
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	-	8012-1747
RS 485 interface, 2-wire	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	•	-	8012-1743

## ACCESSORIES

Designation	Description	KBF P 240	*	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			

Designation	Description	KBF P 240	*	Art.-No.
	240 V option model	•	-	8009-0821
Qualification documents	<p>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</p>			
	Digital in PDF format	•	-	7057-0007
	Hard copy inside folder	•	-	7007-0007
	<p>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</p>			
	Digital in PDF format	•	-	7057-0003
	Hard copy inside folder	•	-	7007-0003
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
Rack	stainless steel	•	-	8012-2050
Rack, reinforced	stainless steel, with fasteners (1 set of 4)	•	-	8012-0638
Rack accessories	fasteners (1 set of 4) for additional security of racks	•	-	8012-2280
Shelf, perforated	Stainless steel	•	-	8012-2163
WLAN kit	<p>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.</p>	•	-	8012-2262
Water supply set	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
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	-	8012-2250

## SERVICES

Designation	Description	*	Art.-No.
<b>Calibration services</b>			
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)	–	DL30-0525

Designation	Description	*	Art.-No.
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	–	DL30-0302
	Temperature and humidity calibration with 1 measuring point in center of chamber with 1 specified pair of values, including certificate	–	DL30-0301
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	–	DL30-0309
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	–	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	–	DL30-0327
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	–	DL30-0427
<b>Installation services</b>			
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)	–	DL10-0300
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	–	DL10-0700
<b>Maintenance contracts</b>			
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	–	DL20-0710
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/pressure value, including certificate	–	DL20-0930
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	–	DL20-0820
<b>Maintenance services</b>			
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	–	DL20-0400
<b>Validation services</b>			
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	–	DL44-0500
Execution of IQ/OQ incl. light photometry	Execution of IQ/OQ including light photometry in accordance with qualification folder	–	DL43-0400
<b>Warranty service</b>			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	–	DL50-0030

## NOTES

01      Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge.

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