

# Constant climate chambers



Always the right climate

KBF-S ECO | KBF-S

KBF | KBF P | KBF LQC | KMF series





**BINDER**

14.8  
100  
10.0

## Series KMF | with expanded temperature / humidity range

The BINDER KMF ensures absolutely constant test conditions throughout the testing area. A big advantage of this constant climate chamber is its low space requirement and flexibility in terms of water supply. The wide temperature and humidity range make this constant climate chamber ideally suited for stress testing series.



KMF 240 model

### BENEFITS

- Safe thanks to climatic homogeneity that far exceeds the accuracy required by ICH guidelines as well as THB (85/85), 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.

### MAIN FEATURES

- Temperature range: -10 °C to +100 °C
- Humidity range: 10 % RH to 98 % RH
- 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)

### AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
KMF 115	102	› <a href="https://go2binder.com/en-KMF115">go2binder.com/en-KMF115</a>
KMF 240	247	› <a href="https://go2binder.com/en-KMF240">go2binder.com/en-KMF240</a>
KMF 720	700	› <a href="https://go2binder.com/en-KMF720">go2binder.com/en-KMF720</a>



Find all details online: [go2binder.com/en-KMF](https://go2binder.com/en-KMF)

## OPTIONAL EQUIPMENT

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**Access port with silicone plug**

For introducing external measuring instruments. Large selection of different diameters and positions (left, right, or top)



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**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.



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**LED light bar sets**

LED light bars in three different lengths (30, 50, 90 cm) can be easily and variably positioned in the BINDER unit, including various attachment options and control unit. Additional light bars can be added as desired.



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**Services**

You can access our installation, maintenance, calibration, validation, or warranty services by taking out a Maintenance Service Agreement or by simply getting in touch when you need us. More information is available in the accessories and services chapter.



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**BINDER INDIVIDUAL**

Using a BINDER series production product as a basis, we develop individual solutions as a single unit or in small batches. All products are tested, certified, and supplied with a full functional guarantee and warranty. More information is available in the accessories and services chapter.



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► All extras online [go2binder.com/en-options](http://go2binder.com/en-options)

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## TECHNICAL DATA

Description	KMF 115	KMF 240	KMF 720
<b>Measures</b>			
Interior volume [L]	102	247	700
Net weight of the unit (empty) [kg]	128	189	306
Permitted load [kg]	100	100	150
Load per rack [kg]	30	30	45
Wall clearance back [mm]	100	100	100
Wall clearance sidewise [mm]	100	100	100
<b>Internal Dimensions</b>			
Width [mm]	600	650	973
Height [mm]	483	785	1250
Depth [mm]	351	485	576
<b>Housing dimensions not incl. fittings and connections</b>			
Width net [mm]	880	930	1250
Height net [mm]	1050	1465	1925
Depth net [mm]	650	800	890
<b>Performance Data Temperature</b>			
Temperature range [°C]	-10...100	-10...100	-10...100
Average heating-up rate according to IEC 60068-3-5 [K/min]	1.3	0.8	0.7
Average cooling down time according to IEC 60068-3-5 [K/min]	0.5	0.4	0.4
<b>Performance Data Climate</b>			
Temperature range [°C]	10...90	10...90	10...90
Temperature variation depending on setpoint [± K]	0.2...1	0.1...1	0.1...1
Temperature fluctuation depending on setpoint [± K]	0.1...0.3	0.1...0.3	0.1...0.5
Humidity range [% RH]	10...98	10...98	10...98
Humidity fluctuation depending on setpoint [± % RH]	≤2,5	≤2	≤2
<b>Electrical data</b>			
Nominal power (version 230 V) [kW]	2	2.1	3.1
Nominal power (version 240 V) [kW]	2	2.1	3.1
<b>Fixtures</b>			
Number of shelves (std./max.)	1/5	1/9	1/15

## ORDERING INFORMATION [Art. No.]

**Further details:** Go to [www.binder-world.com](http://www.binder-world.com) > Search > Enter Article Number

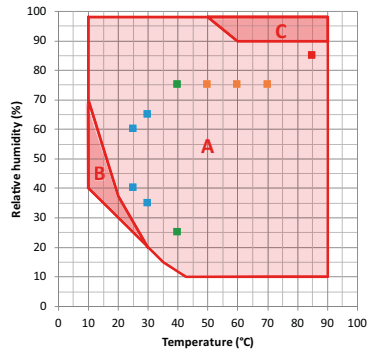
Voltage	Option model	KMF 115	KMF 240	KMF 720
200...230 V 1~ 50/60 Hz	Standard	9020-0341	9020-0343	9020-0345
200...240 V 1~ 50/60 Hz	Standard	9020-0342	9020-0344	9020-0346

## EXTRACT OF FULLFILLED STANDARDS

- ICH Q1A(R2)

## TEMPERATURE-HUMIDITY CHART

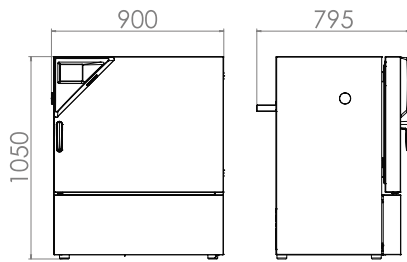
KMF 115, KMF 240, KMF 720



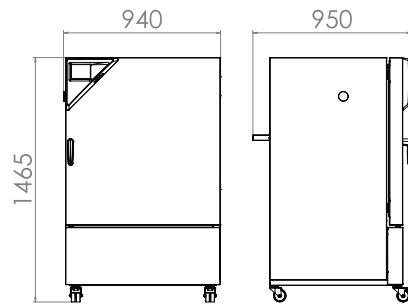
- ICH Long term stability testing
  - Accelerated stability testing
  - ICH Stress testing
  - Industrial THB testing (85/85)
- A: Guaranteed condensation-free range  
 B: Time-limited operation (max. 24 hours)  
 C: Condensation in the inner chamber may be possible

## DIMENSIONS incl. fittings and connections [mm]

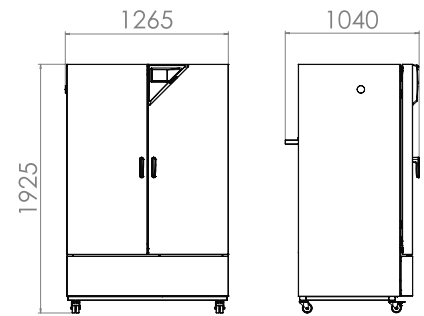
KMF 115



KMF 240



KMF 720



## ORDERING INFORMATION OPTIONS

Designation	Description	KMF 115	KMF 240	KMF 720	Art. No.
	left				
	30 mm	•	•	•	8012-1446
	50 mm	•	•	•	8012-1476
	100 mm	•	•	•	8012-1342
	right				
<b>Access port with silicone plug</b>	30 mm	•	•	•	8012-1440
	50 mm	•	•	•	8012-1470
	100 mm	•	•	•	8012-1339
	top				
	30 mm	•	•	•	8012-1452
	50 mm	•	•	•	8012-1458
	100 mm	•	•	•	8012-1464

Designation	Description	KMF 115	KMF 240	KMF 720	Art. No.
<b>Alarm output, zero-voltage</b>	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	•	–	–	8012-1676
		–	•	–	8012-1677
		–	–	•	8012-1678
<b>Analog output 4-20 mA</b>	for temperature and humidity values (output not adjustable)	•	–	–	8012-1679
		–	•	–	8012-1680
		–	–	•	8012-1681
<b>Calibration certificate, expanded</b>	for temperature and humidity; for extending the measurement in center of chamber to include another test value	•	•	•	8012-1191
<b>Calibration certificate, temperature</b>	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	8012-1606
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	8012-1586
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	8012-1565
<b>Calibration certificate, temperature and humidity</b>	Measurement in center of chamber at 25 °C / 60% RH or at specified test values	•	•	•	8012-1185
	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	•	•	•	8012-1612
<b>Class 3.3 independent temperature safety device</b>	with visual alarm (DIN 12880)	•	–	–	8012-1673
		–	•	–	8012-1674
		–	–	•	8012-1675
<b>Door lock</b>	lockable door handle	•	•	–	8012-1660
		–	–	•	8012-1727
<b>Inner chamber, reinforced</b>	including 2 reinforced racks	–	•	–	8012-0624
		–	–	•	8012-0675
<b>Pt 100 temperature sensor</b>	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	•	8012-1682
<b>RS 485 interface, 2-wire</b>	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	•	•	•	8012-1712
<b>Shelf, reinforced</b>	positioned at bottom level, max. load 45 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	–	–	•	8012-1493

## ORDERING INFORMATION ACCESSORIES

Designation	Description	KMF 115	KMF 240	KMF 720	Art. No.
<b>APT-COM™ 4 GLP-Edition</b>	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
<b>APT-COM™ 4 PROFESSIONAL-Edition</b>	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units. version 4, PROFESSIONAL edition	•	•	•	9053-0040
<b>BINDER PURE AQUA SERVICE</b>	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
<b>BINDER PURE AQUA SERVICE, accessories</b>	Single-use, replacement cartridge for BINDER PURE AQUA System	•	•	•	6011-0165

Designation	Description	KMF 115	KMF 240	KMF 720	Art. No.	
<b>LED light bars</b>	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	
<b>pH-neutral detergent</b>	Expansion set 900, length 90 cm	–	–	•	8012-1718	
	concentrated, for gentle remove of residual contaminants; 1 kg	•	•	•	8012-2250	
<b>Qualification documents</b>	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	
<b>Rack</b>	stainless steel	Hard copy inside folder	•	•	•	7007-0006
		•	–	–	8012-2049	
		–	•	–	8012-2050	
		–	–	•	8012-2051	
<b>Rack accessories</b>	fasteners (1 set of 4) for additional security of racks	•	•	•	8012-2280	
<b>Rack, reinforced</b>	stainless steel, with fasteners (1 set of 4)	•	–	–	8012-0700	
		–	•	–	8012-0638	
		–	–	•	8012-0674	
<b>RS 485 / RS 422 interface converter</b>	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	
<b>Shelf, perforated</b>	Stainless steel	•	–	–	8012-2165	
		–	•	–	8012-2163	
		–	–	•	8012-2252	
<b>Water supply set</b>	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	
<b>WLAN kit</b>	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	