

Constant climate chambers



Always the right climate

KBF-S ECO | KBF-S

KBF | KBF P | KBF LQC | **KMF series**





BINDER

Temperature	14.8
Humidity	90.0
Setpoint	90.0

Constant climate chambers

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BINDER climate chambers stand out when testing material behaviors under constant temperature and humidity conditions. They are fully compliant with ICH guidelines and offer the best solution for stability testing of active pharmaceutical ingredients at 40 °C and 75% RH as well as for numerous other applications.

Series KBF P and KBF LQC climate chambers also offer ICH-compliant illumination for standard-compliant long-term tests. In combination with the innovative Light Quantum Control (LQC), they offer a reliable all-in-one solution for photostability testing in a single chamber.

Wide temperature and humidity ranges can be realized with Series KMF chambers – ideal for complex stress tests at 85 °C and 85% RH, for example.

PRODUCT SELECTION CONSTANT CLIMATE CHAMBERS

Features	Series KBF-S ECO Solid.Line › Page 6	Series KBF-S Solid.Line › Page 12	Series KBF › Page 18	Series KBF P › Page 25	Series KBF LQC › Page 31	Series KMF › Page 37
Model						
Model 115	–	•	•	–	–	•
Model 240	•	•	•	•	•	•
Model 720	•	•	•	•	•	•
Model 1020	•	•	•	–	–	–
General data						
Temperature range (max. 28 °C under ambient tempera- ture) [°C]	0...70	–	–	–	–	–
Temperature range (max. 24 °C under ambient tempera- ture) [°C]	0...70	–	–	–	–	–
Temperature range [°C]	–	0...70	0...70	–	–	-10...100
Temperature range without illuminati- on cassettes [°C]	–	–	–	0...70	0...70	–
Temperature range with 100% illumi- nation [°C]	–	–	–	10...60	10...60	–
Humidity range [% RH]	10...80	20...80	10...80	10...80	10...80	10...98
Ethernet interface	•	•	•	•	•	•
USB interface	•	•	•	•	•	•
Forced convection	•	•	•	•	•	•
Controller and timer functions						
Controller display	LCD	LCD	TFT Touch	TFT Touch	TFT Touch	TFT Touch
Ramp function	–	–	•	–	–	•
Time delayed ON	–	–	•	–	–	•
Programming option	•	•	•	•	•	•
Weekly program function	•	•	•	•	•	•
Adjustable fan speed	•	•	•	•	•	•
Real-time clock	•	•	•	•	•	•
Class 3.1 indepen- dent temperature safety device	•	•	•	•	•	•
Temperature alarm, acoustic	•	•	•	•	•	•
Temperature alarm, visual	•	•	•	•	•	•

•Standard equipment

ADVANTAGES AT A GLANCE



SAFE

Series KBF-S ECO, KBF-S, KBF, KBF P, KBF LQC, **KMF**

Climatic homogeneity far exceeds the accuracy required by ICH guidelines as well as THB (85/85), even with a fully loaded unit.



RELIABLE

Series KBF-S ECO, KBF-S, KBF, KBF P, KBF LQC, **KMF**

Failsafe operation without compromise. Interior made completely of stainless steel.



SMART

Series KBF-S ECO, KBF-S, KBF, KBF P, KBF LQC, **KMF**

A wide range of accessories makes adaptation exactly to specific customer requirements possible.



ECONOMICAL

Series KBF-S ECO, KBF-S, KBF, KBF P, KBF LQC, **KMF**

Maximum effective volume which allows for 30% larger load compared to the competition.

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	› go2binder.com/en-KMF115
KMF 240	247	› go2binder.com/en-KMF240
KMF 720	700	› go2binder.com/en-KMF720

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TIPS & TRICKS

Benefit from our many years of experience, as demonstrated in our technical papers:

Tips & Tricks:

› go2binder.com/en-tips-tricks

Case Studies:

› go2binder.com/en-case-studies



OPTIONAL EQUIPMENT

Access port with silicone plug

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



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.



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.



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.



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.



► All extras online go2binder.com/en-options

TECHNICAL DATA

Description	KMF 115	KMF 240	KMF 720
Measures			
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
Internal Dimensions			
Width [mm]	600	650	973
Height [mm]	483	785	1250
Depth [mm]	351	485	576
Housing dimensions not incl. fittings and connections			
Width net [mm]	880	930	1250
Height net [mm]	1050	1465	1925
Depth net [mm]	650	800	890
Performance Data Temperature			
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
Performance Data Climate			
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
Electrical data			
Nominal power (version 230 V) [kW]	2	2.1	3.1
Nominal power (version 240 V) [kW]	2	2.1	3.1
Fixtures			
Number of shelves (std./max.)	1/5	1/9	1/15

ORDERING INFORMATION [Art. No.]

Further details: Go to www.binder-world.com > Search > Enter Article Number

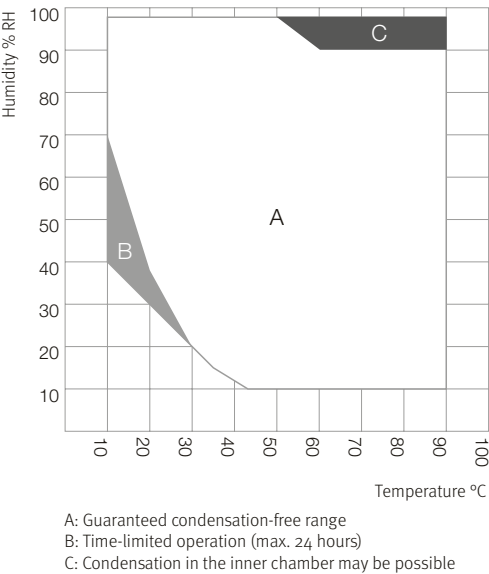
Voltage	Option model	KMF 115	KMF 240	KMF 720
200...230 V 1~ 50/60 Hz	Standard	9020-0341	9020-0343	9020-0345
200...240 V 1~ 50/60 Hz	Standard	9020-0342	9020-0344	9020-0346

EXTRACT OF FULLFILLED STANDARDS

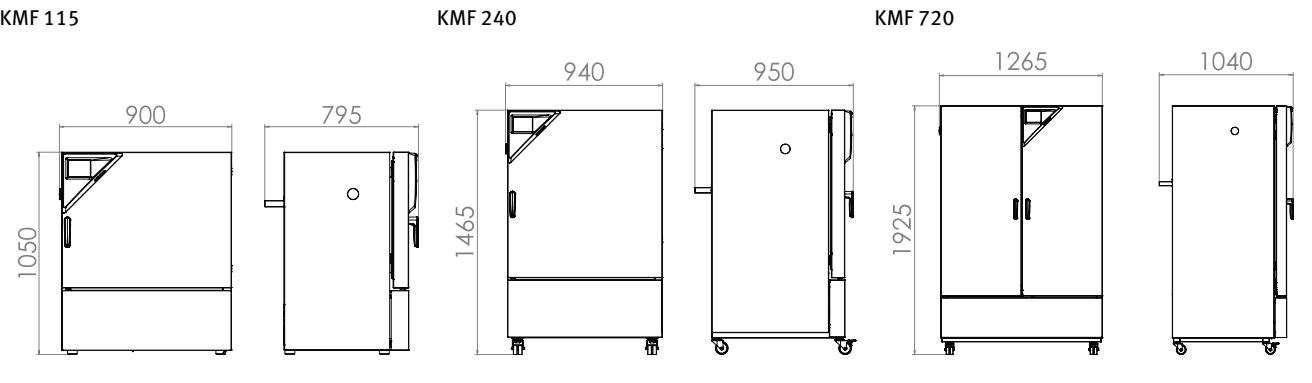
- ICH Q1A(R2)

TEMPERATURE-HUMIDITY CHART

KMF 115, KMF 240, KMF 720



DIMENSIONS incl. fittings and connections [mm]



ORDERING INFORMATION OPTIONS

Bezeichnung	Beschreibung	KMF 115	KMF 240	KMF 720	Art.-Nr.
Access port with silicone plug	left				
	30 mm	•	•	•	8012-1446
	50 mm	•	•	•	8012-1476
	100 mm	•	•	•	8012-1342
	right				
	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

Bezeichnung	Beschreibung	KMF 115	KMF 240	KMF 720	Art.-Nr.
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	•	–	–	8012-1676
		–	•	–	8012-1677
		–	–	•	8012-1678
Analog output 4-20 mA	for temperature and humidity values (output not adjustable)	•	–	–	8012-1679
		–	•	–	8012-1680
		–	–	•	8012-1681
Calibration certificate, expanded	for temperature and humidity; for extending the measurement in center of chamber to include another test value	•	•	•	8012-1191
Calibration certificate, temperature	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
Calibration certificate, temperature and humidity	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
Class 3.3 independent temperature safety device	with visual alarm (DIN 12880)	•	–	–	8012-1673
		–	•	–	8012-1674
		–	–	•	8012-1675
Door lock	lockable door handle	•	•	–	8012-1660
		–	–	•	8012-1727
Inner chamber, reinforced	including 2 reinforced racks	–	•	–	8012-0624
		–	–	•	8012-0675
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	•	8012-1682
RS 485 interface, 2-wire	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	•	•	•	8012-1712
Shelf, reinforced	positioned at bottom level, max. load 45 kg, with additional attachment for operation of shaking device, stirring device or roller bottle system	–	–	•	8012-1493

ORDERING INFORMATION ACCESSORIES

Bezeichnung	Beschreibung	KMF 115	KMF 240	KMF 720	Art.-Nr.
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

Bezeichnung	Beschreibung	KMF 115	KMF 240	KMF 720	Art.-Nr.
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	•	•	•	1002-0016
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	•	–	–	6004-0112
		•	–	–	8012-2049
		–	•	–	6004-0101
		–	•	–	8012-2050
		–	–	•	6004-0106
		–	–	•	8012-2051
Rack accessories	fasteners (1 set of 4) for additional security of racks	•	•	•	8012-0620
Rack, reinforced	stainless steel, with fasteners (1 set of 4)	•	–	–	8012-0700
		–	•	–	8012-0638
		–	–	•	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	•	–	–	6004-0115
		–	•	–	6004-0040
		–	–	•	8009-0486
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
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.	•	•	•	8500-0164

BINDER products

CO₂ incubators

Incubators

Cooling incubators

Growth chambers

Ultralow temperature freezers

Drying and heating chambers

Safety drying chambers

Vacuum drying chambers

Constant climate chambers

Dynamic climate chambers



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