

# Constant climate chambers



Always the right climate

KBF-S ECO | KBF-S

KBF | KBF P | KBF LQC | KMF series





**BINDER**

140  
140  
140

# Constant climate chambers

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

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 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
<b>Model</b>						
Model 115	–	•	•	–	–	•
Model 240	•	•	•	•	•	•
Model 400	•	–	–	–	–	–
Model 720	•	•	•	•	•	•
Model 1020	•	•	•	–	–	–
<b>General data</b>						
Temperature range (max. 28 °C under ambient tempera- ture) [°C]	0...70	–	–	–	–	–
Temperature range (max. 26 °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 illumination cassettes [°C]	–	–	–	0...70	0...70	–
Temperature range with 100% illumination [°C]	–	–	–	10...60	10...60	–
Humidity range [% RH]	10...80	20...80	10...80	10...80	10...80	10...98

•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.



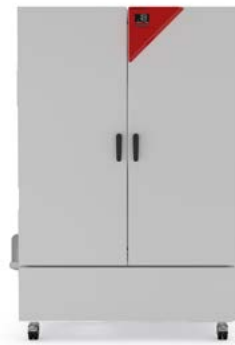
### ECONOMICAL

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 KBF-S ECO Solid.Line | with environmentally friendly thermoelectric cooling

Thanks to thermoelectric cooling technology with patented heat dissipation, the new KBF-S ECO climatic chamber is one of the most energy-efficient constant climate chambers on the market. The thermoelectric cooling technology means the KBF-S ECO series is also very quiet during operation.



Model KBF-S ECO 720

### BENEFITS

- Safe thanks to standard-compliant testing according to the ICH Q1A guideline, even with full load.
- Reliable thanks to failsafe operation without compromise.
- Smart, as a wide range of accessories makes it highly compatible for adaptation to specific customer requirements.
- Economical, as energy consumption is minimal thanks to optimized thermoelectric cooling.

### MAIN FEATURES

- Temperature range: 0 °C to +70 °C (max. 24 °C under ambient temperature)
- Humidity range: 10% to 80% RH
- APT.line™ preheating chamber technology
- Independent water supply via tank
- LCD to display temperature and humidity along with additional information and alarms
- Internal data logger, measured values can be read out in open format via USB
- Unit self-test for comprehensive status analysis
- Inner chamber made completely of stainless steel
- 2 stainless steel racks, including shelf carrier
- Access port with silicone plug Ø 30 mm, left

### AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
KBF-S ECO 240	247	› <a href="https://go2binder.com/en-KBF-S-ECO240">go2binder.com/en-KBF-S-ECO240</a>
KBF-S ECO 400	400	› <a href="https://go2binder.com/en-KBF-S-ECO400">go2binder.com/en-KBF-S-ECO400</a>
KBF-S ECO 720	700	› <a href="https://go2binder.com/en-KBF-S-ECO720">go2binder.com/en-KBF-S-ECO720</a>
KBF-S ECO 1020	1020	› <a href="https://go2binder.com/en-KBF-S-ECO1020">go2binder.com/en-KBF-S-ECO1020</a>

## 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.



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

## TECHNICAL DATA

Description	KBF-S ECO 240	KBF-S ECO 400	KBF-S ECO 720	KBF-S ECO 1020
<b>Measures</b>				
Interior volume [L]	247	400	700	1020
Net weight of the unit (empty) [kg]	146	192	267	322
Permitted load [kg]	100	120	150	150
Load per rack [kg]	30	30	45	45
Wall clearance back [mm]	100	100	100	100
Wall clearance sidewise [mm]	180	180	180	180
<b>Internal Dimensions</b>				
Width [mm]	650	650	973	973
Height [mm]	785	1200	1250	1250
Depth [mm]	485	390	576	836
<b>Housing dimensions not incl. fittings and connections</b>				
Width net [mm]	932	925	1254	1254
Height net [mm]	1461	1946	1925	1925
Depth net [mm]	796	796	885	1146
<b>Performance Data Temperature</b>				
Temperature range (max. 24 °C under ambient temperature) [°C]	–	–	0...70	0...70
Temperature range (max. 26 °C under ambient temperature) [°C]	–	0...70	–	–
Temperature range (max. 28 °C under ambient temperature) [°C]	0...70	–	–	–
Temperature variation at 40 °C [± K]	0.2	0.5	0.3	0.5
Temperature fluctuation at 40 °C [± K]	0.1	0.1	0.1	0.1
<b>Performance Data Climate</b>				
Temperature range (max. 24 °C under ambient temperature) [°C]	–	–	5...70	5...70
Temperature range (max. 26 °C under ambient temperature) [°C]	–	5...70	–	–
Temperature range (max. 28 °C under ambient temperature) [°C]	5...70	–	–	–
Temperature variation at 40 °C and 75 % RH [± K]	0.2	0.5	0.3	0.5
Temperature fluctuation at 40 °C and 75 % RH [± K]	0.1	0.1	0.1	0.1
Humidity range [% RH]	10...80	10...80	10...80	10...80
Humidity fluctuation at 40 °C and 75 % RH [% RH]	0,3	0,3	0,3	0,4
<b>Electrical data</b>				
Nominal power (version 120V) [kW]	0.8	–	1.2	1.2
Nominal power (version 230V) [kW]	0.8	1.1	1.2	1.2
Nominal power (version 120 V) [kW]	–	1.1	–	–
<b>Fixtures</b>				
Number of shelves (std./max.)	2/9	2/15	2/15	2/15

## ORDERING INFORMATION [Art. No.]

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

Voltage	Option model	KBF-S ECO 240	KBF-S ECO 400	KBF-S ECO 720	KBF-S ECO 1020
200...230 V 1~ 50/60 Hz	Standard	9020-0416	9020-0463	9020-0418	9020-0419
100...120 V 1~ 50/60 Hz	Standard	9020-0420	9020-0464	9020-0421	9020-0422

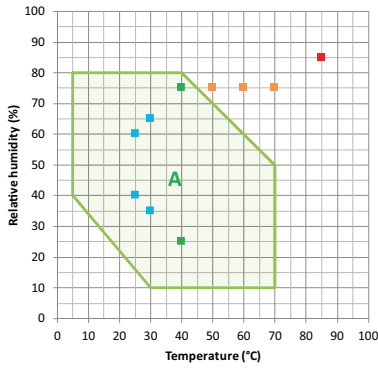


## EXTRACT OF FULLFILLED STANDARDS

- ICH Q1A(R2)

## TEMPERATURE-HUMIDITY CHART

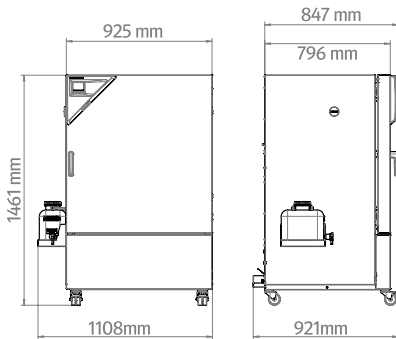
KBF-S ECO 240, KBF-S ECO 400, KBF-S ECO 720, KBF-S ECO 1020



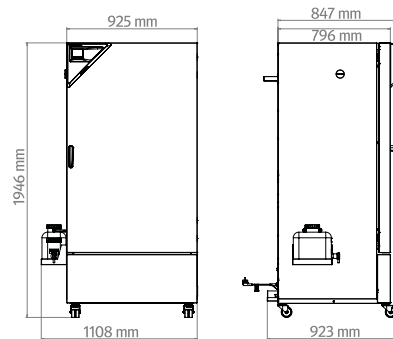
- ICH Long term stability testing
  - Accelerated stability testing
  - ICH Stress testing
  - Industrial THB testing (85/85)
- A: Guaranteed condensation-free range

## DIMENSIONS incl. fittings and connections [mm]

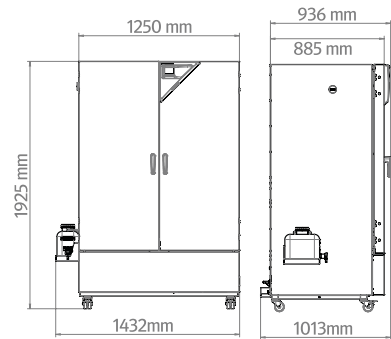
### KBF-S ECO 240



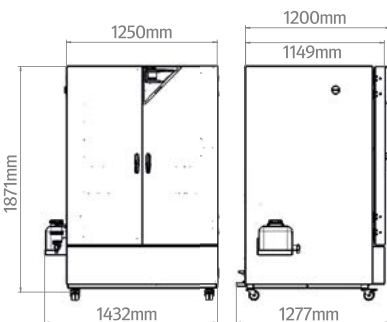
### KBF-S ECO 400



### KBF-S ECO 720



### KBF-S ECO 1020



## ORDERING INFORMATION OPTIONS

Designation	Description	KBF-S	KBF-S	KBF-S	KBF-S	Art. No.
		ECO 240	ECO 400	ECO 720	ECO 1020	
Access port with silicone plug	left					
	30 mm	•	•	•	•	8012-2072
	50 mm	•	•	•	•	8012-2079
	100 mm	•	•	•	•	8012-2077
	right					
	30 mm	•	•	•	•	8012-2071
	50 mm	•	•	•	•	8012-2078
	100 mm	•	•	•	•	8012-2076
	top					
	30 mm	•	•	•	•	8012-2073
	50 mm	•	•	•	•	8012-2074
	100 mm	•	•	•	•	8012-2075
Calibration certificate, expanded	for temperature and humidity; for extending the measurement in center of chamber to include another test value	•	•	•	•	8012-2066
Calibration certificate, temperature	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	•	8012-2069
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	•	8012-2068
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	•	8012-2067
Calibration certificate, temperature and humidity	Measurement in center of chamber at 25 °C / 60% RH or at specified test values	•	•	•	•	8012-2065
	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	•	•	•	•	8012-2070
Door lock	lockable door handle	•	•	–	–	8012-2086
		–	–	•	•	8012-2087

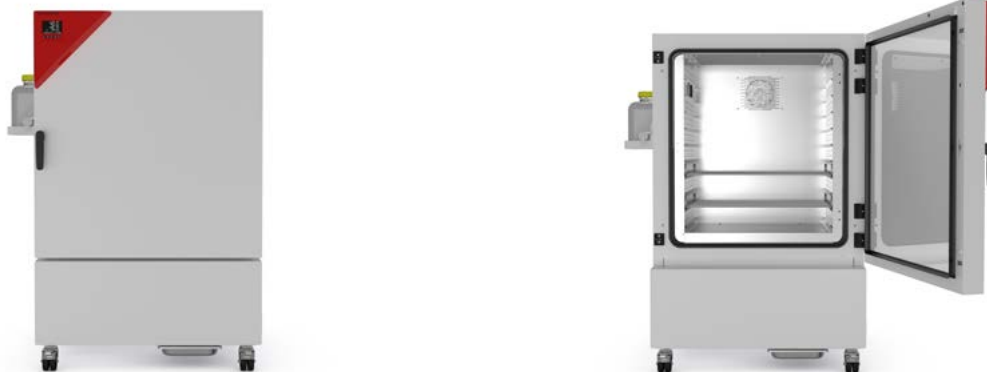
## ORDERING INFORMATION ACCESSORIES

Designation	Description	KBF-S	KBF-S	KBF-S	KBF-S	Art. No.
		ECO 240	ECO 400	ECO 720	ECO 1020	
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
Convenient water supply	Flexible positioning of the water container with magnetic holder, hose adapter for water container with practical quick coupling, and water stop function					
	External, with magnetic holder	•	•	•	•	8012-1847

Designation	Description	KBF-S ECO 240	KBF-S ECO 400	KBF-S ECO 720	KBF-S ECO 1020	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	
			•	•	–	–	8012-2050
			–	–	•	–	8012-2051
<b>Rack accessories</b>	fasteners (1 set of 4) for additional security of racks		–	–	•	8012-2052	
			•	•	•	•	8012-2280
<b>Rack, reinforced</b>	stainless steel, with fasteners (1 set of 4)		•	–	–	8012-0638	
			–	–	•	–	8012-0674
			–	–	–	•	8012-0968
<b>Shelf, perforated</b>	Stainless steel		•	•	–	–	8012-2163
			–	–	•	–	8012-2252
			–	–	–	•	8012-2254
<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	

## Series KBF-S Solid.Line | with large temperature / humidity range

The Solid.Line KBF-S climate chamber is a custom-made solution for long-term testing and accelerated stability testing of pharmaceutical products in accordance with the ICH Q1A guideline. The corrosion-free and condensation-free interior also ensures exceptionally stable temperature and moisture levels, even when fully loaded.



Model 240

### BENEFITS

- Safe thanks to climatic homogeneity that far exceeds the accuracy required by ICH guidelines, 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: 0 °C to +70 °C
- Humidity range: 20% to 80% RH
- APT.line™ preheating chamber technology
- Humidity regulation with capacitive humidity sensor and steam humidification
- LCD to display temperature and humidity along with additional information and alarms
- Internal data logger, measured values can be read out in open format via USB
- Unit self-test for comprehensive status analysis
- Inner chamber made completely of stainless steel
- 2 stainless steel racks, incl. shelf supports
- Access port with silicone plug, 30 mm, left

### AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
KBF-S 115	102	› <a href="https://go2binder.com/en-KBF-S115">go2binder.com/en-KBF-S115</a>
KBF-S 240	247	› <a href="https://go2binder.com/en-KBF-S240">go2binder.com/en-KBF-S240</a>
KBF-S 720	700	› <a href="https://go2binder.com/en-KBF-S720">go2binder.com/en-KBF-S720</a>
KBF-S 1020	1020	› <a href="https://go2binder.com/en-KBF-S1020">go2binder.com/en-KBF-S1020</a>

## 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.



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

## TECHNICAL DATA

Description	KBF-S 115	KBF-S 240	KBF-S 720	KBF-S 1020
<b>Measures</b>				
Interior volume [L]	102	247	700	1020
Net weight of the unit (empty) [kg]	128	189	284	379
Permitted load [kg]	100	100	150	150
Load per rack [kg]	30	30	45	45
Wall clearance back [mm]	100	100	100	100
Wall clearance sidewise [mm]	100	100	300	300
<b>Internal Dimensions</b>				
Width [mm]	600	650	973	976
Height [mm]	483	785	1250	1250
Depth [mm]	351	485	576	836
<b>Housing dimensions not incl. fittings and connections</b>				
Width net [mm]	880	925	1250	1250
Height net [mm]	1050	1460	1925	1925
Depth net [mm]	650	800	890	1145
<b>Performance Data Temperature</b>				
Temperature range [°C]	0...70	0...70	0...70	0...70
Temperature variation at 40 °C [± K]	0.3	0.3	0.3	0.3
Temperature fluctuation [± K]	–	0.1	0.1	–
Temperature fluctuation at 40 °C [± K]	–	–	–	0.1
<b>Performance Data Climate</b>				
Temperature range [°C]	10...70	10...70	10...70	10...70
Temperature variation at 40 °C and 75 % RH [± K]	0.3	0.3	0.3	0.3
Temperature fluctuation at 40 °C and 75 % RH [± K]	0.1	0.1	0.1	0.1
Humidity range [% RH]	20...80	20...80	20...80	20...80
Humidity fluctuation at 40 °C and 75 % RH [% RH]	2,0			
<b>Electrical data</b>				
Nominal power (version 230V) [kW]	1.4	1.4	2	2
Nominal power (version 240V) [kW]	1.4	1.4	2	2
<b>Fixtures</b>				
Number of shelves (std./max.)	2/5	2/9	2/15	2/15

## ORDERING INFORMATION [Art. No.]

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

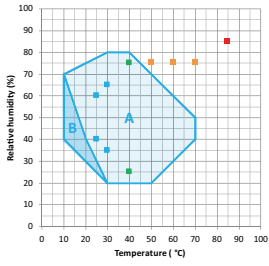
Voltage	Option model	KBF-S 115	KBF-S 240	KBF-S 720	KBF-S 1020
200...230 V 1~ 50/60 Hz	Standard	9020-0370	9020-0366	9020-0368	9020-0372
200...240 V 1~ 50/60 Hz	Standard	9020-0371	9020-0367	9020-0369	9020-0373

## EXTRACT OF FULLFILLED STANDARDS

- ICH Q1A(R2)

## TEMPERATURE-HUMIDITY CHART

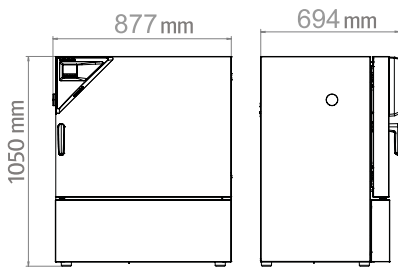
KBF-S 115, KBF-S 240, KBF-S 720, KBF-S 1020



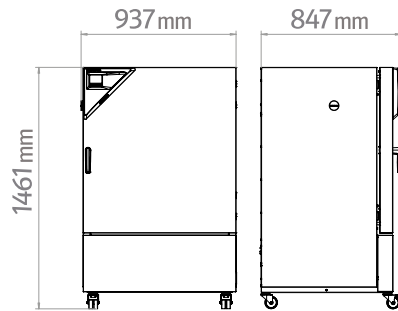
- ICH Long term stability testing
- Accelerated stability testing
- ICH Stress testing
- Industrial THB testing (85/85)
- A: Guaranteed condensation-free range
- B: Time-limited operation (max. 24 hours)

## DIMENSIONS incl. fittings and connections [mm]

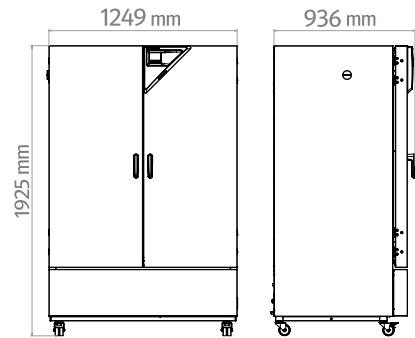
KBF-S 115



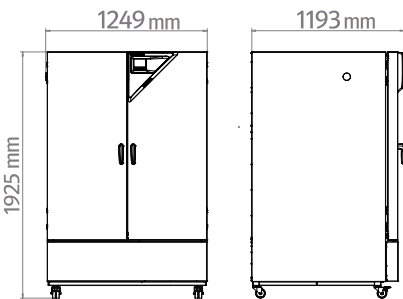
KBF-S 240



KBF-S 720



KBF-S 1020



## ORDERING INFORMATION OPTIONS

Designation	Description	KBF-S 115	KBF-S 240	KBF-S 720	KBF-S 1020	Art. No.
<b>Access port with silicone plug</b>	left					
	30 mm	•	•	•	•	8012-2072
	50 mm	•	•	•	•	8012-2079
	100 mm	•	•	•	•	8012-2077
	right					
	30 mm	•	•	•	•	8012-2071
	50 mm	•	•	•	•	8012-2078
	100 mm	•	•	•	•	8012-2076
	top					
	30 mm	•	•	•	•	8012-2073
	50 mm	•	•	•	•	8012-2074
	100 mm	•	•	•	•	8012-2075
<b>Calibration certificate, expanded</b>	for temperature and humidity; for extending the measurement in center of chamber to include another test value	•	•	•	•	8012-2066
<b>Calibration certificate, temperature</b>	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	•	8012-2069
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	•	8012-2068
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	•	8012-2067
<b>Calibration certificate, temperature and humidity</b>	Measurement in center of chamber at 25 °C / 60% RH or at specified test values	•	•	•	•	8012-2065
	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	•	•	•	•	8012-2070
<b>Door lock</b>	lockable door handle	•	•	–	–	8012-2086
		–	–	•	•	8012-2087

## ORDERING INFORMATION ACCESSORIES

Designation	Description	KBF-S 115	KBF-S 240	KBF-S 720	KBF-S 1020	Art. No.
<b>APT-COM™ 4 BASIC-Edition</b>	for simple logging and documentation requirements with up to 5 networked units. version 4, BASIC edition	•	•	•	•	9053-0039
<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
<b>Convenient water supply</b>	Flexible positioning of the water container with magnetic holder, hose adapter for water container with practical quick coupling, and water stop function					
	External, with magnetic holder	•	•	•	•	8012-1847



Designation	Description	KBF-S 115	KBF-S 240	KBF-S 720	KBF-S 1020	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
	Expansion set 900, length 90 cm	–	–	•	•	8012-1718
<b>pH-neutral detergent</b>	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
	Hard copy inside folder	•	•	•	•	7007-0006
<b>Rack</b>	stainless steel	•	–	–	–	8012-2049
		–	•	–	–	8012-2050
		–	–	•	–	8012-2051
		–	–	–	•	8012-2052
<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
		–	–	–	•	8012-0968
		•	–	–	–	8012-2165
<b>Shelf, perforated</b>	Stainless steel	–	•	–	–	8012-2163
		–	–	•	–	8012-2252
		–	–	–	•	8012-2254
<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

## Series KBF | with large temperature / humidity range

The BINDER KBF is the specialist for unconditionally reliable stability testing and precise maintenance of constant climate conditions. From programming to documentation, this constant climate chamber meets all critical requirements.



KBF 240 model

### BENEFITS

- Safe thanks to climatic homogeneity that far exceeds the accuracy required by ICH guidelines, 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: 0 °C to +70 °C
- Humidity range: 10 % to 80 % RH
- APT.line™ preheating chamber technology
- Humidity regulation with capacitive humidity sensor and vapor humidification
- Intuitive touchscreen controller with time-segment and real-time programming
- BINDER Multi Management Software APT-COM™ Basic Edition
- 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

### AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
KBF 115	102	› <a href="https://go2binder.com/en-KBF115">go2binder.com/en-KBF115</a>
KBF 240	247	› <a href="https://go2binder.com/en-KBF240">go2binder.com/en-KBF240</a>
KBF 720	700	› <a href="https://go2binder.com/en-KBF720">go2binder.com/en-KBF720</a>
KBF 1020	1020	› <a href="https://go2binder.com/en-KBF1020">go2binder.com/en-KBF1020</a>

## 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](http://go2binder.com/en-options)

## TECHNICAL DATA

Description	KBF 115	KBF 240	KBF 720	KBF 1020
<b>Measures</b>				
Interior volume [L]	102	247	700	1020
Net weight of the unit (empty) [kg]	128	189	312	379
Permitted load [kg]	100	100	150	150
Load per rack [kg]	30	30	45	45
Wall clearance back [mm]	100	100	100	100
Wall clearance sidewise [mm]	100	100	300	100
<b>Internal Dimensions</b>				
Width [mm]	600	650	973	973
Height [mm]	483	785	1250	1250
Depth [mm]	351	485	576	836
<b>Housing dimensions not incl. fittings and connections</b>				
Width net [mm]	880	925	1250	1250
Height net [mm]	1050	1460	1925	1925
Depth net [mm]	650	800	890	1145
<b>Performance Data Temperature</b>				
Temperature range [°C]	0...70	0...70	0...70	0...70
Temperature variation at 40 °C [± K]	0.2	0.3	0.2	0.2
Temperature fluctuation [± K]	0.1	0.1	0.1	0.5
<b>Performance Data Climate</b>				
Temperature range [°C]	10...70	10...70	10...70	10...70
Temperature variation at 40 °C and 75 % RH [± K]	0.2	0.3	0.2	0.2
Temperature fluctuation at 40 °C and 75 % RH [± K]	0.1	0.1	0.1	0.1
Humidity range [% RH]	10...80	10...80	10...80	10...80
Humidity fluctuation at 40 °C and 75 % RH [± % RH]	≤2	1,5	1,5	1,5
<b>Electrical data</b>				
Nominal power (version 230 V) [kW]	2	2.1	3.1	3.1
Nominal power (version 240 V) [kW]	2	2.1	3.1	3.1
<b>Fixtures</b>				
Number of shelves (std./max.)	2/5	2/9	2/15	2/15

## ORDERING INFORMATION [Art. No.]

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

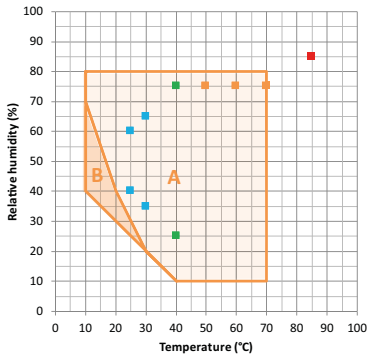
Voltage	Option model	KBF 115	KBF 240	KBF 720	KBF 1020
200...230 V 1~ 50/60 Hz	Standard	9020-0320	9020-0322	9020-0324	9020-0326
200...240 V 1~ 50/60 Hz	Standard	9020-0321	9020-0323	9020-0325	9020-0327

## EXTRACT OF FULLFILLED STANDARDS

- ICH Q1A(R2)

## TEMPERATURE-HUMIDITY CHART

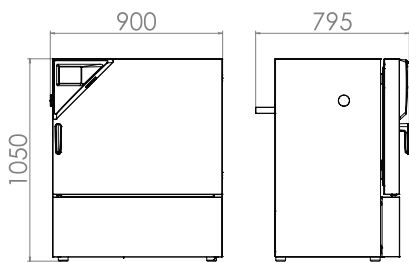
KBF 115, KBF 240, KBF 720, KBF 1020



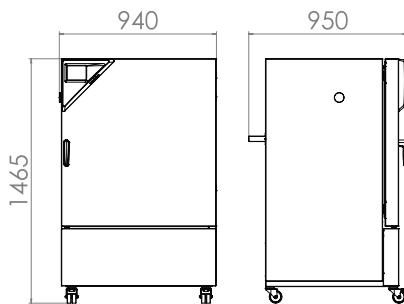
- ICH Long term stability testing
  - Accelerated stability testing
  - ICH Stress testing
  - Industrial THB testing (85/85)
- A: Guaranteed condensation-free range
  - B: Time-limited operation (max. 24 hours)

## DIMENSIONS incl. fittings and connections [mm]

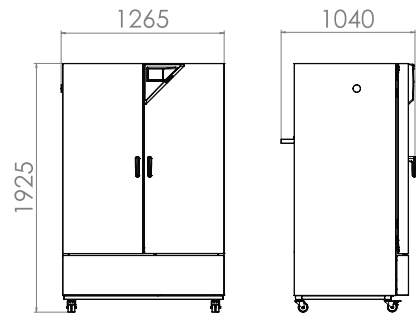
KBF 115



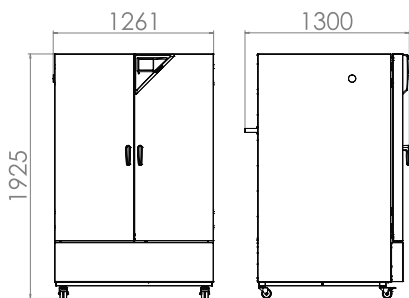
KBF 240



KBF 720



KBF 1020



## ORDERING INFORMATION OPTIONS

Designation	Description	KBF 115	KBF 240	KBF 720	KBF 1020	Art. No.
<b>Access port with silicone plug</b>	left					
	30 mm	•	•	•	•	8012-1442
	50 mm	•	•	•	•	8012-1472
	100 mm	•	•	•	•	8012-0515
	right					
	30 mm	•	•	•	•	8012-1436
	50 mm	•	•	•	•	8012-1466
	100 mm	•	•	•	•	8012-0514
	top					
	30 mm	•	•	•	•	8012-1448
	50 mm	•	•	•	•	8012-1454
	100 mm	•	•	•	•	8012-1460
<b>Alarm output, zero-v oltage</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	•	–	–	–	8012-1036
		–	•	–	–	8012-1037
		–	–	•	–	8012-1038
		–	–	–	•	8012-1810
<b>Analog output 4-20 mA</b>	for temperature and humidity values (output not adjustable)	•	–	–	–	8012-1039
		–	•	–	–	8012-1040
		–	–	•	–	8012-1041
		–	–	–	•	8012-1811
<b>Calibration certificate, expanded</b>	for temperature and humidity; for extending the measurement in center of chamber to include another test value	•	•	•	•	8012-0155
<b>Calibration certificate, temperature</b>	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	•	•	8012-0923
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	•	•	•	8012-0920
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	•	•	•	8012-0917
<b>Calibration certificate, temperature and humidity</b>	Measurement in center of chamber at 25 °C / 60% RH or at specified test values	•	•	•	•	8012-0154
	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	•	•	•	•	8012-0924
<b>Class 3.3 independent temperature safety device</b>	with visual alarm (DIN 12880)	•	–	–	–	8012-1032
		–	•	–	–	8012-1033
		–	–	•	•	8012-1034
<b>Door lock</b>	lockable door handle	•	•	–	–	8012-1023
		–	–	•	•	8012-1024
<b>Pt 100 temperature sensor</b>	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	•	•	8012-1042
<b>RS 485 interface, 2-wire</b>	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	•	•	•	•	8012-1066
<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	–	–	•	–	8012-1489

## ORDERING INFORMATION ACCESSORIES

Designation	Description	KBF 115	KBF 240	KBF 720	KBF 1020	Art. No.
<b>APT-COM™ 4 BASIC-Edition</b>	for simple logging and documentation requirements with up to 5 networked units.					
	version 4, BASIC edition	•	•	•	•	9053-0039
<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
<b>Converter, voltage</b>	to operate the device at a nominal voltage of 120 V 1 ph 60 Hz					
	240 V option model	•	•	•	•	8009-0821
<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>	concentrated, for gentle remove of residual contaminants; 1 kg	•	•	•	•	8012-2250
	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
<b>Qualification documents</b>	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
		•	–	–	–	8012-2049
<b>Rack</b>	stainless steel	–	•	–	–	8012-2050
		–	–	•	–	8012-2051
		–	–	–	•	8012-2052
		•	•	•	•	8012-2280
<b>Rack accessories</b>	fasteners (1 set of 4) for additional security of racks	•	–	–	–	8012-0700
<b>Rack, reinforced</b>	stainless steel, with fasteners (1 set of 4)	–	•	–	–	8012-0638
		–	–	•	–	8012-0674
		–	–	–	•	8012-0968
		•	•	•	•	8012-2280

Designation	Description	KBF 115	KBF 240	KBF 720	KBF 1020	Art. No.
<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
		–	–	–	•	8012-2254
<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



## Series KBF P | 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.



KBF P 240 model

### 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.

### 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
- 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

### AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
KBF P 240	247	› <a href="https://go2binder.com/en-KBFP240">go2binder.com/en-KBFP240</a>
KBF P 720	700	› <a href="https://go2binder.com/en-KBFP720">go2binder.com/en-KBFP720</a>



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

## 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	KBF P 240	KBF P 720
<b>Measures</b>		
Interior volume [L]	247	700
Net weight of the unit (empty) [kg]	213	374
Permitted load [kg]	100	150
Load per rack [kg]	30	45
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	100	200
<b>Internal Dimensions</b>		
Width [mm]	650	973
Height [mm]	785	1250
Depth [mm]	485	576
<b>Housing dimensions not incl. fittings and connections</b>		
Width net [mm]	925	1250
Height net [mm]	1460	1925
Depth net [mm]	800	890
<b>Performance Data Temperature</b>		
Temperature range with 100% illumination [°C]	10...60	10...60
Temperature range without illumination cassettes [°C]	0...70	0...70
<b>Performance Data Climate</b>		
Temperature range with 100% illumination [°C]	10...60	20...60
Temperature range without illumination cassettes [°C]	10...70	10...70
Temperature variation with illumination at 40 °C and 75 % RH [± K]	0.6	1.2
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 40 °C and 75 % RH [± % RH]	2	2
<b>Lightdata per Illumination Cassettes</b>		
ICH compliant illumination for photo stability testing [lx]	7500	9000
ICH compliant illumination for photo stability testing [W/m²]	1.1	1.5
<b>Electrical data</b>		
Nominal power (version 230 V) [kW]	2.4	3.5
Nominal power (version 240 V) [kW]	2.4	3.5
<b>Fixtures</b>		
Number of shelves (std./max.)	2/7	3/12
Number of illumination cassettes (std./max.)	2/2	3/3

## ORDERING INFORMATION [Art. No.]

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

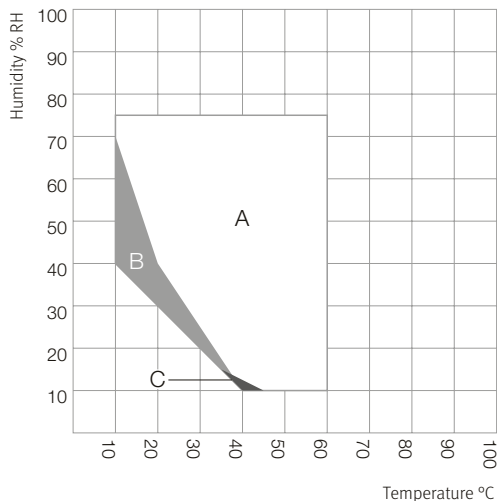
Voltage	Option model	KBF P 240	KBF P 720
200...230 V 1~ 50/60 Hz	Standard	9020-0328	9020-0330
200...240 V 1~ 50/60 Hz	Standard	9020-0329	9020-0331

EXTRACT OF FULLFILLED STANDARDS

- ICH Q1A(R2)
- ICH Q1B

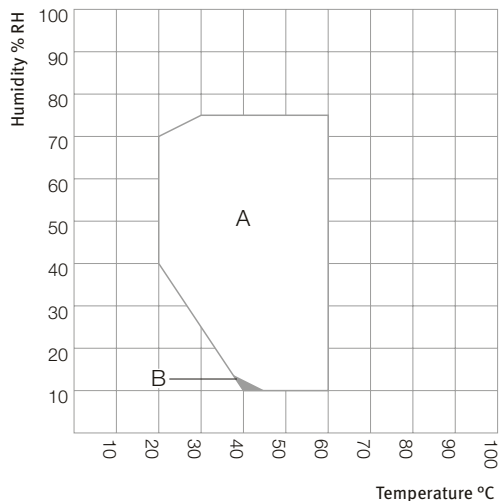
TEMPERATURE-HUMIDITY CHART

KBF P 240



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

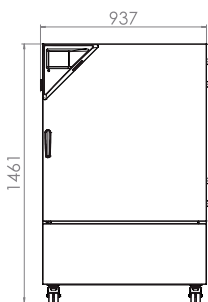
KBF P 720



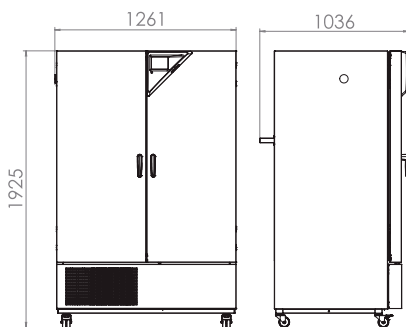
A: Guaranteed condensation-free range  
 B: Deviations of technical data may be possible

DIMENSIONS incl. fittings and connections [mm]

KBF P 240



KBF P 720



ORDERING INFORMATION OPTIONS

Designation	Description	KBF P 240	KBF P 720	Art. No.
<b>Access port with silicone plug</b>	left			
	30 mm	•	•	8012-1444
	50 mm	•	•	8012-1474
	100 mm	•	•	8012-1341
	right			
	30 mm	•	•	8012-1438
	50 mm	•	•	8012-1468
	100 mm	•	•	8012-1338
	top			
	30 mm	•	•	8012-1450
	50 mm	•	•	8012-1456
	100 mm	•	•	8012-1462
<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	•	–	8012-1758
		–	•	8012-1762
<b>Analog output 4-20 mA</b>	for temperature and humidity values (output not adjustable)	•	–	8012-1722
		–	•	8012-1738
<b>Calibration certificate, expanded</b>	for temperature and humidity; for extending the measurement in center of chamber to include another test value	•	•	8012-1190
<b>Calibration certificate, temperature</b>	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
<b>Calibration certificate, temperature and humidity</b>	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
<b>Class 3.3 independent temperature safety device</b>	with visual alarm (DIN 12880)	•	–	8012-1751
		–	•	8012-1754
<b>Door lock</b>	lockable door handle	•	–	8012-1659
		–	•	8012-1662
<b>Light photometry</b>	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
<b>Pt 100 temperature sensor</b>	additional flexible Pt 100, interior, for displaying the temperature on the unit display	•	•	8012-1747
<b>RS 485 interface, 2-wire</b>	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	•	•	8012-1743
<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	–	•	8012-1491

ORDERING INFORMATION ACCESSORIES

Designation	Description	KBF P 240	KBF P 720	Art. No.
<b>APT-COM™ 4 BASIC-Edition</b>	for simple logging and documentation requirements with up to 5 networked units. version 4, BASIC edition	•	•	9053-0039
<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

Designation	Description	KBF P 240	KBF P 720	Art. No.
<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
<b>Converter, voltage</b>	to operate the device at a nominal voltage of 120 V 1 ph 60 Hz 240 V option model	•	–	8009-0821
<b>pH-neutral detergent</b>	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, 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
<b>Rack</b>	stainless steel	•	–	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)	•	–	8012-0638
		–	•	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	•	–	8012-2163
		–	•	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

## Series KBF LQC | 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.



KBF LQC 240 model

### 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.

### 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

### AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
KBF LQC 240	247	› <a href="https://go2binder.com/en-KBFLQC240">go2binder.com/en-KBFLQC240</a>
KBF LQC 720	700	› <a href="https://go2binder.com/en-KBFLQC720">go2binder.com/en-KBFLQC720</a>

## 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	KBF LQC 240	KBF LQC 720
<b>Measures</b>		
Interior volume [L]	247	700
Net weight of the unit (empty) [kg]	217	374
Permitted load [kg]	100	150
Load per rack [kg]	30	45
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	100	200
<b>Internal Dimensions</b>		
Width [mm]	650	973
Height [mm]	785	1250
Depth [mm]	485	576
<b>Housing dimensions not incl. fittings and connections</b>		
Width net [mm]	925	1250
Height net [mm]	1460	1925
Depth net [mm]	800	890
<b>Performance Data Temperature</b>		
Temperature range with 100% illumination [°C]	10...60	10...60
Temperature range without illumination cassettes [°C]	0...70	0...70
<b>Performance Data Climate</b>		
Temperature range with 100% illumination [°C]	10...60	20...60
Temperature range without illumination cassettes [°C]	10...70	10...70
Temperature variation with illumination at 40 °C and 75 % RH [± K]	0.6	1.2
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 40 °C and 75 % RH [± % RH]	2	2
<b>Lightdata per Illumination Cassettes</b>		
ICH compliant illumination for photo stability testing [lx]	7500	9000
ICH compliant illumination for photo stability testing [W/m²]	1.1	1.5
<b>Electrical data</b>		
Nominal power (version 230 V) [kW]	2.4	3.5
Nominal power (version 240 V) [kW]	2.4	3.5
<b>Fixtures</b>		
Number of shelves (std./max.)	2/7	3/12
Number of illumination cassettes (std./max.)	2/2	3/3

## ORDERING INFORMATION [Art. No.]

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

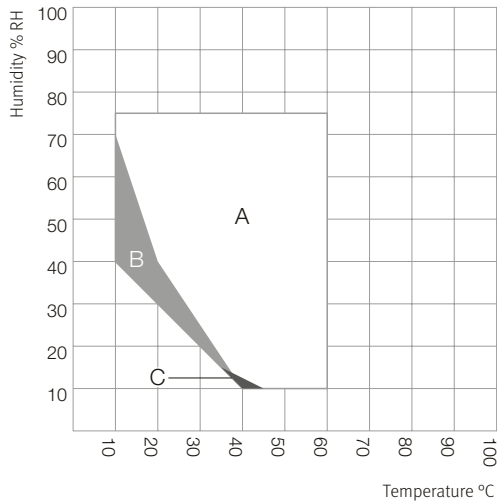
Voltage	Option model	KBF LQC 240	KBF LQC 720
200...230 V 1~ 50/60 Hz	Standard	9020-0332	9020-0334
200...240 V 1~ 50/60 Hz	Standard	9020-0333	9020-0335

## EXTRACT OF FULLFILLED STANDARDS

- ICH Q1A(R2)
- ICH Q1B

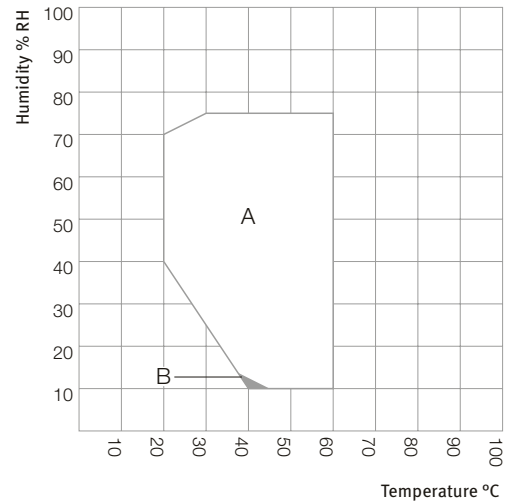
## TEMPERATURE-HUMIDITY CHART

KBF LQC 240



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

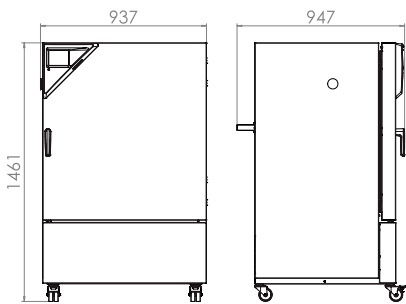
KBF LQC 720



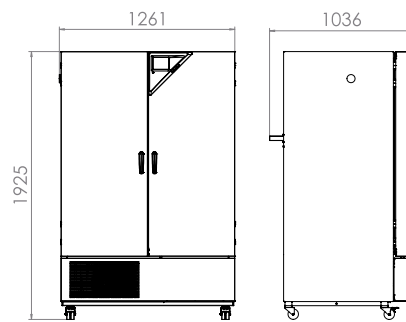
A: Guaranteed condensation-free range  
 B: Deviations of technical data may be possible

## DIMENSIONS incl. fittings and connections [mm]

KBF LQC 240



KBF LQC 720



ORDERING INFORMATION OPTIONS

Designation	Description	KBF LQC 240	KBF LQC 720	Art. No.
<b>Access port with silicone plug</b>	left			
	30 mm	•	•	8012-1443
	50 mm	•	•	8012-1473
	100 mm	•	•	8012-1340
	right			
	30 mm	•	•	8012-1437
	50 mm	•	•	8012-1467
	100 mm	•	•	8012-1337
	top			
	30 mm	•	•	8012-1449
	50 mm	•	•	8012-1455
	100 mm	•	•	8012-1461
<b>Alarm output, zero-voltage</b>	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	•	–	8012-1759
		–	•	8012-1763
<b>Analog output 4-20 mA</b>	for temperature and humidity values (output not adjustable)	•	–	8012-1734
		–	•	8012-1739
<b>Calibration certificate, expanded</b>	for temperature and humidity; for extending the measurement in center of chamber to include another test value	•	•	8012-1189
<b>Calibration certificate, temperature</b>	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	•	8012-1604
	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
<b>Calibration certificate, temperature and humidity</b>	Measurement in center of chamber at 25 °C / 60% RH or at specified test values	•	•	8012-1183
	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
<b>Class 3.3 independent temperature safety device</b>	with visual alarm (DIN 12880)	•	–	8012-1752
		–	•	8012-1755
<b>Door lock</b>	lockable door handle	•	–	8012-1658
		–	•	8012-1661
<b>Light photometry</b>	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
<b>RS 485 interface, 2-wire</b>	Additional serial interface can be used parallel to Ethernet, for Multi Management Software APT-COM™	•	•	8012-1744
<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	–	•	8012-1490

ORDERING INFORMATION ACCESSORIES

Designation	Description	KBF LQC 240	KBF LQC 720	Art. No.
<b>APT-COM™ 4 BASIC-Edition</b>	for simple logging and documentation requirements with up to 5 networked units. version 4, BASIC edition	•	•	9053-0039
<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

Designation	Description	KBF LQC 240	KBF LQC 720	Art. No.
<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
<b>Converter, voltage</b>	to operate the device at a nominal voltage of 120 V 1 ph 60 Hz 240 V option model	•	–	8009-0821
<b>pH-neutral detergent</b>	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, 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
<b>Rack</b>	stainless steel	•	–	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)	•	–	8012-0638
		–	•	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	•	–	8012-2163
		–	•	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

## 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

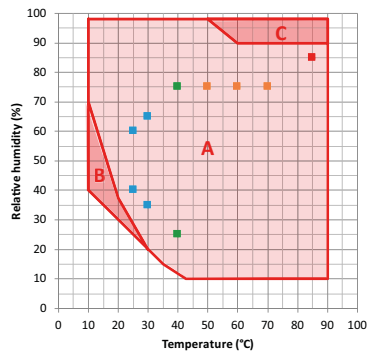
Voltage	Option model	KMF 115	KMF 240	KMF 720
200...230 V 1~ 50/60 Hz	Standard	9020-0341	9020-0343	9020-0345
200...240 V 1~ 50/60 Hz	Standard	9020-0342	9020-0344	9020-0346

## EXTRACT OF FULLFILLED STANDARDS

- ICH Q1A(R2)

## TEMPERATURE-HUMIDITY CHART

KMF 115, KMF 240, KMF 720



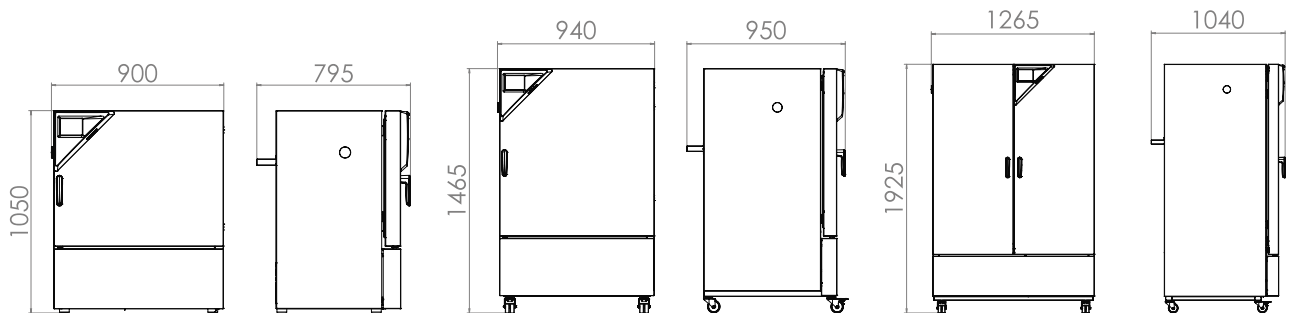
- ICH Long term stability testing
  - Accelerated stability testing
  - ICH Stress testing
  - Industrial THB testing (85/85)
- A: Guaranteed condensation-free range  
 B: Time-limited operation (max. 24 hours)  
 C: Condensation in the inner chamber may be possible

## 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>	Hard copy inside folder	•	•	•	7007-0006
	stainless steel	•	–	–	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>		•	–	–	8012-0700
	stainless steel, with fasteners (1 set of 4)	–	•	–	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>		•	–	–	8012-2165
	Stainless steel	–	•	–	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

# BINDER products

CO<sub>2</sub> 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

Battery test chambers

Walk-in-chambers

Multi Management Software



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