

# Model KBF 115 | Constant climate chambers with large temperature / humidity range

## BENEFITS

- Homogeneous climate conditions thanks to APT.line™ technology
- Automatic water and wastewater management
- Pressure humidification with fast response times



Model 115

## MAIN FEATURES

- Temperature range: 0 °C to 70 °C
- Humidity range: 10 % to 80 % RH
- APT.line™ preheating chamber technology
- Humidity regulation with capacitative humidity sensor and vapor humidification
- Controller with time-segment programming
- Tightly-sealed inner door made of tempered safety glass
- 2 stainless steel racks
- Access port with silicone plug, 30 mm, left
- Class 3.1 independent temperature safety device (DIN 12880) with visual and audible temperature alarm
- Computer interface: Ethernet
- Door heating

## ORDERING INFORMATION

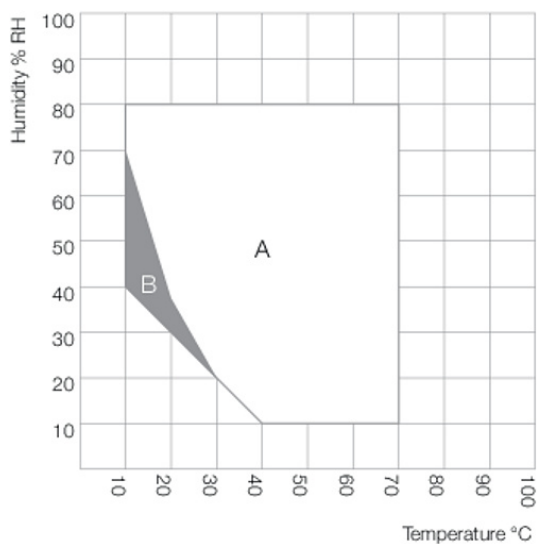
Interior volume [L]	Voltage	Option model	Version	Art.-No.
Model KBF 115				
102	200...230 V 1~ 50/60 Hz	Standard	KBF115-230V	9020-0267
	200...240 V 1~ 50/60 Hz	Standard	KBF115UL-240V	9020-0268

## TECHNICAL DATA

Description	KBF115-230V	KBF115UL-240V
<b>Article Number</b>	<b>9020-0267</b>	<b>9020-0268</b>
Performance Data Temperature		
Temperature range [°C]	0...70	0...70
Temperature uniformity at 25 °C [± K]	0.2	0.2
Temperature uniformity at 40 °C [± K]	0.2	0.2
Temperature fluctuation [± K]	0.1	0.1
Max. heat compensation at 40 °C [W]	200	200

Description	KBF115-230V	KBF115UL-240V
<b>Article Number</b>	<b>9020-0267</b>	<b>9020-0268</b>
Recovery time after 30 seconds door open at 25 °C and 60 % RH [min]	15	15
Recovery time after 30 seconds door open at 40 °C and 75 % RH [min]	8	8
<b>Performance Data Climate</b>		
Temperature range [°C]	10...70	10...70
Temperature uniformity at 25 °C and 60 % RH [± K]	0.2	0.2
Temperature uniformity at 40 °C and 75 % RH [± K]	0.2	0.2
Temperature fluctuation at 25 °C and 60 % RH [± K]	0.1	0.1
Temperature fluctuation at 40 °C and 75 % RH [± K]	0.1	0.1
Humidity range [% RH]	10...80	10...80
Humidity fluctuation at 25 °C and 60 % RH	±2 ± % RH	±2 ± % RH
Humidity fluctuation at 40 °C and 75 % RH	±2 ± % RH	±2 ± % RH
<b>Electrical data</b>		
Rated Voltage [V]	200...230	200...240
Power frequency [Hz]	50/60	50/60
Nominal power [kW]	2	2
Phase (Nominal voltage)	1~	1~
<b>Measures - Outer dimensions</b>		
Width net [mm]	880	880
Height net [mm]	1050	1050
Depth net [mm]	650	650
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	100	100
Steam space volume [L]	156	156
<b>Measures - Doors</b>		
Inner doors	1	1
Unit doors	1	1
<b>Measures - Internal Dimensions</b>		
Width [mm]	600	600
Height [mm]	483	483
Depth [mm]	351	351
<b>Measures</b>		
Interior volume [L]	102	102
Net weight of the unit (empty) [kg]	129	129
Load per rack [kg]	30	30
<b>Environment-specific data</b>		
Energy consumption at 40 °C and 75 % RH	470 Wh/h	470 Wh/h
Sound-pressure level [dB(A)]	52	52

## CHARTS



A: Guaranteed condensation-free range  
 B: Time-limited operation (max. 24 hours)

Climate chart

## OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
<b>Access port with silicone plug</b>	30 mm, left	01	8012-0648
	30 mm, right	01	8012-0647
	30 mm, top	01	8012-0649
	50 mm, left	01	8012-0653
	50 mm, right	01	8012-0652
	50 mm, top	01	8012-0650
	100 mm, left	01	8012-0515
	100 mm, right	01	8012-0514
	100 mm, top	01	8012-0651
<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	-	8012-0705
<b>Analog output, 4 – 20 mA</b>	for temperature and humidity values (output not adjustable)	-	8012-0704
<b>BINDER Pure Aqua Service</b>	system for preparation or complete desalination of tap water, containing single-use cartridge, hoses and measuring device	-	8012-0759
<b>BINDER Pure Aqua Service, accessories</b>	Single-use, replacement cartridge for BINDER Pure Aqua System	-	6011-0165
<b>Calibration certificate, expanded</b>	for temperature and humidity, each additional measurement at additional points or sets of values	-	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>	for temperature and humidity, measurement in center of chamber at 25 °C / 60 % RH or at specified 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)	-	8012-0703

\* Notes › See last page

Designation	Description	*	Art.-No.
<b>Converter, voltage</b>	to operate the device at a nominal voltage of 120 V 1 ph 60 Hz	-	8009-0821
	T 220: temperature logging from -90 °C to 220 °C	19	8012-0715
<b>Data Logger Kit</b>	TH 70/70: temperature and humidity logging from -40 °C to 70 °C and 0 % to 100 % RH and additional combination sensor for recording environmental conditions	19	8012-0717
	TH 70: temperature and humidity logging from -40 °C to 70 °C and 0 % to 100 % RH	19	8012-0716
<b>Data Logger Kit, software</b>	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
<b>Door lock</b>	lockable door handle	-	8012-0584
<b>Interface converter, RS232/RS422 - 115V</b>	RS 422 cable set and RS 232 / RS 422 interface converter for connection to 10-way plug distributor or for connection to a unit 120 V, 60 Hz option model	-	8012-0557
<b>Interface converter, RS232/RS422 - 230V</b>	RS 422 cable set and RS 232 / RS 422 interface converter for connection to 10-way plug distributor or for connection to a unit 230 V, 50/60 Hz option model	-	8012-0556
<b>Interface converter, USB / RS422</b>	RS 422 cable set and RS 422 / USB interface converter for connection to 10-way plug distributor or for connection to a unit (USB-powered converter)	-	8012-0665
<b>Interior lighting</b>	230 V, 15 W option model	02	8012-0116
<b>Interior socket</b>	coverable, with associated LEMO connector (nominal voltage, max. 500 W, max. 90 °C, protection class IP67)	07	8012-0640
<b>Lockable controller keyboard</b>	Lockable controller keyboard with key-operated switch	-	8012-0609
<b>Magnetic Pouch (A4)</b>	insert pouch with magnetic strip	-	1007-0065
<b>pH-neutral detergent</b>	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
<b>Pt 100 temperature sensor</b>	additional Pt 100, with flexible cable installed with external connection, incl. 6-pin DIN socket	-	8012-0637
<b>Rack</b>	stainless steel	-	6004-0112
<b>Rack, accessories</b>	set of 4 fasteners for additional security	-	8012-0620
<b>Rack, reinforced</b>	stainless steel, with 1 set of 4 fasteners, max. load 70 kg	-	8012-0700
<b>RS 422 interface</b>	in place of Ethernet, for communication software	-	8012-0641
	modular plug distributor for 10 RS 422 interfaces	-	8012-0295
<b>RS 422 interface, cable (15 m)</b>	RS 422 connection cable (15 m) between plug distributor and RS 422 interface	-	5023-0036
<b>RS 422 interface, cable (50 m)</b>	RS 422 extension cable (50 m) between interface converter and unit or RS 232 / RS 422 plug distributor	-	5023-0117
<b>Shelf, perforated</b>	stainless steel	-	6004-0115
	APT-COM™ communications software		
	version 2 to 3, GLP edition	19	9053-0016
	version 3, BASIC edition	19	9053-0014
<b>Software</b>	version 3, GLP edition	19	9053-0015
	version 3, STANDARD edition	19	9053-0013
	APT-COM™ communications software, price: for free		
	version 3, GLP DEMO Edition	19	9053-0008
<b>Water supply set</b>	external, consisting of fresh- and waste-water containers (20 liters each), cabling and pump	-	8012-0643

\* Notes › See last page

## SERVICES

Designation	Description	*	Art.-No.
<b>Installation services</b>			
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL100300
Instruction	unit function instructions for operation and programming of the controller	18	DL100700
<b>Preventive maintenance</b>			
Preventive maintenance	Execution of equipment inspection according to maintenance plan	14, 18	DL200400

\* Notes › See last page

Designation	Description	*	Art.-No.
<b>Calibration services</b>			
Calibration temperature and humidity	including certificate, one measuring point in center of chamber at 25 °C / 60 % RH or at specified values	14, 16, 17, 18	DL300301
Temperature and humidity measurement according to DIN12880	including certificate (27 temperature measuring points and 1 humidity measuring point, at 25 °C / 60 % RH or at specified values)	14, 16, 17, 18	DL300427
Temperature measurement 18 temperature measuring points and 1 humidity measuring point	including certificate, 18 temperature measuring points and 1 humidity measuring point in center of chamber, at 25 °C / 60 % RH or at specified values	14, 16, 17, 18	DL300318
Temperature measurement 27 temperature measuring points and 1 humidity measuring point	including certificate, 27 temperature measuring points and 1 humidity measuring point in center of chamber, at 25 °C / 60 % RH or at specified values	14, 16, 17, 18	DL300327
Temperature measurement 9 temperature measuring points and 1 humidity measuring point	including certificate, 9 temperature measuring points and 1 humidity measuring point in center of chamber, at 25 °C / 60 % RH or at specified values	14, 16, 17, 18	DL300309
<b>Validation services</b>			
Execution of IQ/OQ	in accordance with qualification folder	15, 18, 20	DL420300
Execution of IQ/OQ/PQ	in accordance with customer's requirement, price: on request	15, 18	DL440500
Qualification folder IQ/OQ	supporting documents for validation performed by customer, consisting of: IQ/OQ checklists, unit schematics, QM certificate in accordance with ISO 9001	15, 18, 20	8012-0867
Qualification folder IQ/OQ/PQ	supporting documents for validation performed by customer, in accordance with customer's requirement, extension of Qualification folder IQ/OQ by chapter PQ	15, 18	8012-0955

\* Notes › See last page

## NOTES

- 01 Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge.
- 02 UL mark is not granted when this option is used.
- 03 Heat resistant only to max. 200 °C.
- 04 Only available on units rated for 230 V.
- 05 Attention: The pump is delivered separately. The electric connection for the pump (230 V/1~/50 Hz) must be carried out by an authorized electrician.
- 06 Heating-up time may increase as a result of the lower heat conductivity.
- 07 The additional heat input may affect the temperature behavior.
- 08 The pump (packaged separately) is ready for connection.
- 09 Not in conjunction with the optional access port, door with window and interior lighting.
- 10 Not available on 23-liter units.
- 11 Not available on 23- or 53-liter units.
- 12 Only available on units rated for 230 V or 400 V.
- 13 Installation and connections take place at unit location; transport within the company only upon consultation.
- 14 We recommend a BINDER service contract (see the chapter on BINDER Service) to cover unit inspections, calibrations and validations.
- 15 OQ according to Yellow Paper = completed factory validation documentation of all OQ checklists.
- 16 Sensor calibration is performed in an accredited calibration laboratory.
- 17 Calibration is performed according to the BINDER factory standard.
- 18 Quoted prices do not include travel costs. Please refer to the chapter on BINDER Service for travel costs for your region. Quoted prices for services performed in Switzerland do not include a country-specific added fee (available on request).
- 19 For additional accessories, refer to the Process documentation chapter.
- 20 When ordering IQ/OQ qualification folders and associated IQ/OQ execution on one order, we offer a 15 % discount for both items.  
When ordering IQ/OQ/PQ qualification folders and associated IQ/OQ/PQ execution on one order, we offer a 15 % discount for the item of the IQ/OQ/PQ folder.
- 21 ATEX conformity:  
Pumping chamber (pumped gases): II 2G IIC T3 X  
Environment with inert purge gas: II 2G IIB T4 X  
Environment without inert purge gas: II 3G IIB T4 X  
Motor: II 2G Ex d IIB T4 Gb



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.