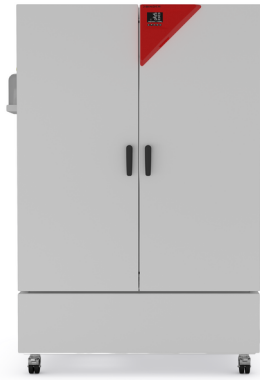


# Model KBF-S 1020 | Humidity test chambers with large temperature / humidity range

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.

## 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.



Model 1020



Model 1020

## IMPORTANT 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
- Robust twin casters with brakes, from 240 L
- Class 3.1 independent temperature safety device (DIN 12880) with visual and audible temperature alarm
- Computer interface: Ethernet
- Independent water supply via tank

## ORDERING INFORMATION

Interior volume		Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
[L]	[L]					
<b>Model KBF-S 1020</b>						
1,020	1,020	200...230 V 1~ 50/60 Hz -16,0 A	CEE 7/7	Standard	KBFS1020-230V	9020-0372
		200...240 V 1~ 50/60 Hz -16,0 A	NEMA 6-20	Standard	KBFS1020UL-240V	9020-0373

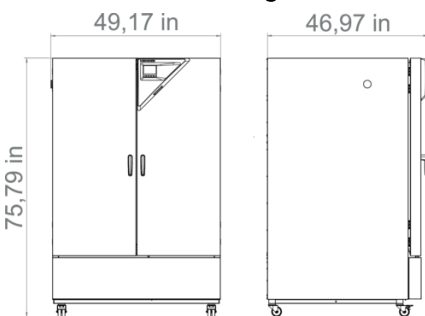
## TECHNICAL DATA

Data		
Designation	KBFS1020-230V	KBFS1020UL-240V
Article Number	9020-0372	9020-0373
Option model	Standard	Standard
Performance Data Temperature		
Temperature range	0...70 °C	0...70 °C
Max. heat compensation at 40°C	550 W	550 W
Performance Data Climate		
Temperature range with humidity	10...70 °C	10...70 °C
Humidity range	20...80 % r.F.	20...80 % r.F.
Temperature uniformity at 25°C and 60% RH	0.3 ± K	0.3 ± K
Temperature uniformity at 40°C and 75% RH	0.3 ± K	0.3 ± K
Temperature fluctuation at 25°C and 60% RH	0.1 ± K	0.1 ± K
Temperature fluctuation at 40°C and 75% RH	0.1 ± K	0.1 ± K
Recovery time after door was opened for 30 s at 25°C and 60% RH	11 min	11 min
Recovery time after door was opened for 30 s at 40°C and 75% RH	12 min	12 min
Electrical data		
Rated Voltage	200...230 V	200...240 V
Power frequency	50/60 Hz	50/60 Hz
Nominal power	2 kW	2 kW
Unit fuse	16,0 A	16,0 A
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume	1,020 L	1,020 L
Net weight of the unit (empty)	379 kg	379 kg
Load per rack	45 kg	45 kg
Permitted load	150 kg	150 kg
Wall clearance back	100 mm	100 mm

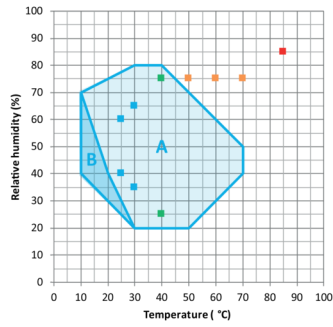
Wall clearance sidewise	300 mm	300 mm
<b>Housing dimensions not incl. fittings and connections</b>		
Width net	1,250 mm	1,250 mm
Height net	1,925 mm	1,925 mm
Depth net	1,145 mm	1,145 mm
<b>Internal Dimensions</b>		
Interior width	976 mm	976 mm
Interior height	1,250 mm	1,250 mm
Interior depth	836 mm	836 mm
Unit doors	2	2
<b>Environment-specific data</b>		
Sound-pressure level	56 dB(A)	56 dB(A)
Energy consumption at 40°C and 75% RH	550 Wh/h	550 Wh/h
<b>Fixtures</b>		
Number of shelves (std./max.)	2/15	2/15

All technical data is specified for unloaded units with standard equipment at an ambient temperature of +22 °C ±3 °C and a power supply voltage fluctuation of ±10 %. The temperature data is determined in accordance to BINDER factory standard following DIN 12880, observing the recommended wall clearances of 10 % of the height, width, and depth of the inner chamber. Technical data refers to 100 % fan speed. All indications are average values, typical for units produced in series. We reserve the right to change technical specifications at any time.

### DIMENSIONS Incl. fittings and connections [mm]



DIAGRAMS



- 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)

Climate chart

OPTIONS

Designation	Description	KBF-S 1020	*	Art.-No.
	left			
	30 mm	•	01	8012-2072
	50 mm	•	01	8012-2079
	100 mm	•	01	8012-2077
	right			
	30 mm	•	01	8012-2071
Access port with silicone plug	50 mm	•	01	8012-2078
	100 mm	•	01	8012-2076
	top			
	30 mm	•	01	8012-2073
	50 mm	•	01	8012-2074
	100 mm	•	01	8012-2075
Calibration certificate, expanded	for temperature and humidity; for extending the measurement in center of chamber to include another test value	•	-	8012-2066
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	-	8012-2067
Calibration certificate, temperature	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	-	8012-2068
	temperature measurement incl. certificate and 27 measuring points at specified temperature	•	-	8012-2069
Calibration certificate, temperature and humidity	Measurement in center of chamber at 25°C / 60% RH or at specified test values	•	-	8012-2065

Designation	Description	KBF-S 1020	*	Art.-No.
	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	•	-	8012-2087

## ACCESSORIES

Designation	Description	KBF-S 1020	*	Art.-No.
	Multi Management Software APT-COM™			
APT-COM™ 4	version 4, BASIC edition	•	-	9053-0039
	version 4, GLP edition	•	-	9053-0042
	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
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	
Qualification documents	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

Designation	Description	KBF-S 1020	*	Art.-No.
	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
Rack	stainless steel	•	-	8012-2052
Rack, reinforced	stainless steel, with fasteners (1 set of 4)	•	-	8012-0968
Rack accessories	fasteners (1 set of 4) for additional security of racks	•	-	8012-2280
Shelf, perforated	Stainless steel	•	-	8012-2254
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.	•	-	8012-2262
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	-	8012-2250

## SERVICES

Designation	Description	*	Art.-No.
<b>Calibration services</b>			
Temperature and humidity calibration	Expansion –Additional Temperature and humidity calibration with 1 measuring point in center of chamber with 1 specified pair of values, including certificate. Travel to be quoted separate.	–	DL30-0302
	Temperature and humidity calibration with 1 measuring point in center of chamber with 1 specified pair of values, including certificate. Travel to be quoted separate.	–	DL30-0301
Temperature and humidity measurement according to DIN12880	Temperature measurement in accordance with DIN 12880 with 27 temperature measuring points and 1 humidity measuring point in center of chamber with a pair of values specified by the user, including certificate	–	DL30-0427
Temperature measurement, 9 temperature measuring points and 1 humidity measuring point	Temperature measurement with 9 temperature measuring points and 1 humidity measuring point in center of chamber with a pair of values specified by the user, including certificate. Travel to be quoted separate. A total of 3 shelves are required.	–	DL30-0309
Temperature measurement, 18 temperature measuring points and 1 humidity measuring point	Temperature measurement with 18 temperature measuring points and 1 humidity measuring point in center of chamber with a pair of values specified by the user, including certificate. Travel to be quoted separate. A total of 2 shelves are required.	–	DL30-0318
Temperature measurement, 27 temperature measuring points and 1 humidity measuring point	Temperature measurement with 27 temperature measuring points and 1 humidity measuring point in center of chamber with a pair of values specified by the user, including certificate. Travel to be quoted separate. A total of 3 shelves are required.	–	DL30-0327
<b>Installation services</b>			
Unit installation	Connect the unit to the customer-side connections (electricity, water, wastewater, gas), basic functions check, brief operating instructions. (excl.: unpacking, setup, controller instructions, programming, installation work) Travel to be quoted as separate.	–	DL10-0300

Designation	Description	*	Art.-No.
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming. Travel to be quoted as separate limited to 3 hours.	–	DL10-0700
<b>Maintenance services</b>			
BRONZE 3-year maintenance contract	Annual Device Inspection Includes Preventive Maintenance with Calibration Certificate. 10% Discount on Spare Parts and Labor for any additional Services needed Wear + tear parts to be purchased or billed to customer. Travel to be quoted as separate.	–	DL20-0710
GOLD 3-year maintenance contract	Annual Device Inspection Includes Preventive Maintenance with Calibration Certificate of both Temperature and Humidity. 25% Discount on Spare Parts and Labor for any additional Services needed. One additional courtesy visit per year can be used for service visit or operator. Wear + tear parts to be purchased or billed to customer. Travel to be quoted separate.	–	DL20-0920
Preventive maintenance	One-off maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Checking a test temperature specified by the user in center of usable space without certificate. Wear + tear parts need to be purchased or billed to customer. Travel to be quoted as separate.	–	DL20-0400
SILVER 3-year maintenance contract	Annual Device Inspection Includes Preventive Maintenance with Calibration Certificate 15% Discount on Spare Parts and Labor for any additional Services needed One additional courtesy visit per year can be used for service visit or operator training. Wear + tear parts to be purchased or billed to customer. Travel to be quoted separate.	–	DL20-0820
<b>Validation services</b>			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder. Travel to be quoted separate.	–	DL42-0300
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder. Travel to be quoted separate.	–	DL44-0500
<b>Warranty service</b>			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	–	DL50-0030

## NOTES

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

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