Model KBF PRO 130 | Constant climate chambers with expanded temperature / humidity range

A powerful all-rounder among constant climate chambers: Equipped with all kinds of sophisticated technology, the KBF PRO takes any material test in its stride – whether it takes place at -20°C or under THB conditions at +85°C and 85% relative humidity. It offers flexible water supply options for all installation sites and consumes up to 40% less energy than its predecessor, the KMF model.

BENEFITS

- Reliable and powerful thanks to innovative temperature control technology
- Reliable: long-term operation based on proven compressor technology and inner chamber made of stainless steel
- Smart: signal triangle with light-up status display, ergonomic control terminal with touchscreen program controller, rack with telescopic rails
- Efficient: low energy consumption thanks to modern inverter cooling technology



Model 130



Model 130

IMPORTANT FEATURES

- Temperature range: -20 °C to +100 °C
- Humidity range: 10% to 98% RH
- Proven APT.line™ preheating chamber technology
- Up to 40% lower energy consumption compared to the previous model
- Energy-efficient cooling with modern inverter cooling unit
- Cooling with the natural, low-GWP refrigerant R-290
- Door heating to prevent condensation
- Adjustable fan speed
- Humidity regulation with capacitive humidity sensor and responsive steam humidification
- Sturdy housing design with HIT sandwich technology
- Stainless-steel inner chamber
- Inner doors made of metal oxide-coated safety glass
- Two racks made of stainless steel
- Ø 30 mm access port with silicone plug
- Stackable
- Intuitive touchscreen controller with time-segment and real-time programming
- Internal data logger, measured values can be read out in open format via USB
- Class 3.3 independent temperature safety device(DIN 12880) with visual and acoustic alarms
- Unit self-test for comprehensive status analysis
- Data interfaces: Ethernet, USB
- BINDER Multi Management Software APT-COM™ basic edition

ORDERING INFORMATION

Interior volume [L]	Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
Model KBF PRO 130					
127	208...240 V 1~ 50/60 Hz -16,0 A	CEE 7/7	Standard	KBFPRO130-230V	9020-0439

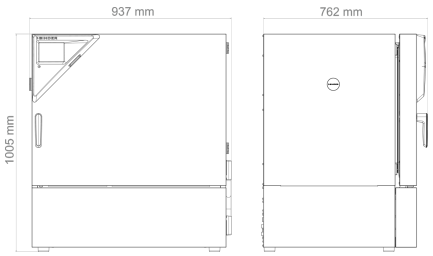
TECHNICAL DATA

Data	
Article Number	9020-0439
Designation	KBFPRO130-230V
Option model	Standard
Performance Data Temperature	
Temperature range	-20...100 °C
Max. heat compensation at 40°C	450 W
Performance Data Climate	
Temperature range with humidity	10...90 °C
Humidity range	10...98 % RH
Temperature uniformity at 25°C and 60% RH	0.2 ± K
Temperature uniformity at 40°C and 75% RH	0.2 ± K
Temperature fluctuation at 25°C and 60% RH	0.1 ± K
Temperature fluctuation at 40°C and 75% RH	0.1 ± K
Humidity fluctuation at 25°C and 60% RH	1 ± % RH
Humidity fluctuation at 40°C and 75% RH	1 ± % RH
Recovery time after door was opened for 30 s at 25°C and 60% RH	2 min
Recovery time after door was opened for 30 s at 40°C and 75% RH	3 min
Electrical data	
Rated Voltage	208...240 V
Power frequency	50/60 Hz
Nominal power	1,9 kW
Unit fuse	16,0 A
Phase (Nominal voltage)	1~
Dimensions and weights	
Interior volume	127 L
Net weight of the unit (empty)	142 kg
Load per rack	30 kg
Permitted load	150 kg
Wall clearance back	100 mm

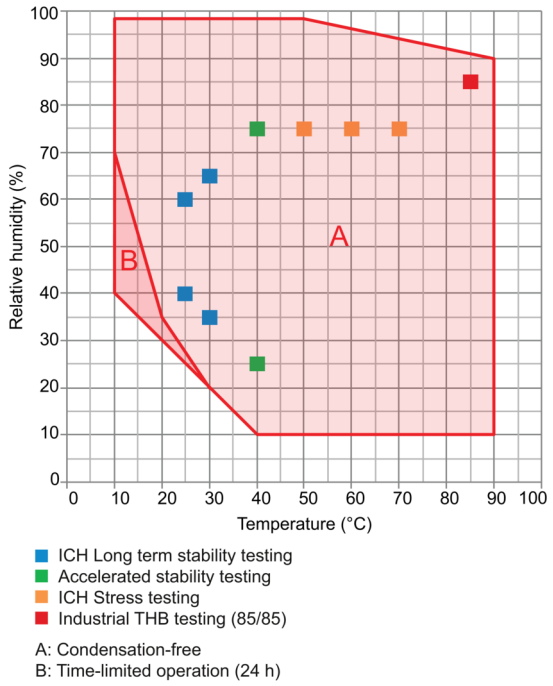
Wall clearance sidewise	100 mm
Housing dimensions not incl. fittings and connections	
Width net	900 mm
Height net	1,005 mm
Depth net	710 mm
Internal Dimensions	
Interior width	656 mm
Interior height	500 mm
Interior depth	386 mm
Inner doors	1
Unit doors	1
Environment-specific data	
Sound-pressure level at 25°C and 60% RH	46 dB(A)
Energy consumption at 25°C and 60% RH	235 Wh/h
Energy consumption at 40°C and 75% RH	255 Wh/h
Energy consumption at 85°C and 85% RH	345 Wh/h
Fixtures	
Number of shelves (std./max.)	2/6

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



Climate chart

OPTIONS

Designation	Description	*	Art.-No.
Access port with silicone plug	left		
	30 mm	01	8012-2489
	50 mm	01	8012-2490
	right		
	30 mm	01	8012-2492
	50 mm	01	8012-2493
	top		
	30 mm	01	8012-2500
	50 mm	01	8012-2495
	100 mm	01	8012-2496
Alarm output, zero-voltage	accessible via 3-pin clamping sleeve (max. 24 V - 2.5 A)	-	8012-2504
Analog output 4-20 mA	for temperature and humidity values (output not adjustable)	-	8012-2375
Calibration certificate, expanded	for temperature and humidity; for extending the measurement in center of chamber to include another test value	-	8012-2576

Designation	Description	*	Art.-No.
Calibration certificate, temperature	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-2379
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-2383
	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-2427
Calibration certificate, temperature and humidity	Measurement in center of chamber at 25°C / 60% RH or at specified test values	-	8012-2438
	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	-	8012-2578
Coated heat exchanger	For preventing damage to the aluminum heat exchanger caused by corrosive sample material	-	8012-2582
Door lock	lockable door handle	-	8012-2538
Door lock, electromechanical	can be opened with PIN code via controller	-	8012-2540
Inner chamber, reinforced	max. total load 100 kg	-	8012-2524
Interior lighting	With climate-resistant LEDs, switches when the unit door is opened	-	8012-2562
Specimen temperature display	Flexible Pt 100 indoor temperature sensor, for object temperature display or control	-	8012-2554

ACCESSORIES

Designation	Description	*	Art.-No.
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
Base	With swivel casters, for mobile installation or leveling of the unit or stack of units	-	9051-0045
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
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
	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

Designation	Description	*	Art.-No.
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	8012-2250
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
	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
Reinforced rack	Shelf rack in set with pair of retaining rails (U rails), made entirely of stainless steel		
	Load-bearing capacity 50 kg	-	8012-2412
Shelf rack, perforated	Shelf rack in set with pair of retaining rails (U rails), made entirely of stainless steel		
	Load-bearing capacity 25 kg	-	8012-2406
Stacking adapter	For safe stacking of two identical units	-	9051-0048
Standard rack	Shelf rack in set with pair of retaining rails (U rails), made entirely of stainless steel		
	Load-bearing capacity 25 kg	-	8012-2389
Water supply	External, free-standing, set consisting of 20-liter fresh water canister with pump and level sensor and 20-liter waste water canister	-	8012-2592

SERVICES

Designation	Description	*	Art.-No.
Calibration services			
Temperature and humidity calibration	Expansion –Temperature and humidity calibration with 1 measuring point in center of chamber with 1 specified pair of values, including certificate	05	DL30-0302
	Temperature and humidity calibration with 1 measuring point in center of chamber with 1 specified pair of values, including certificate	05	DL30-0340
Temperature and humidity measurement, 9-1 measuring points	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	05	DL30-0309
Temperature and humidity measurement, 18-1 measuring points	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	05	DL30-0318
Temperature and humidity measurement, 27-1 measuring points	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	05	DL30-0327

Designation	Description	*	Art.-No.
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	05	DL30-0427
Installation services			
Unit commissioning	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)	05	DL10-0170
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0550
Maintenance contracts			
BRONZE 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts	05	DL20-0710
GOLD 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, replacement of wear parts, calibration of one temperature/humidity value, including certificate	05	DL20-0920
SILVER 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, calibration of one test temperature specified by the user in the center of the usable space, without certificate	05	DL20-0820
Maintenance services			
Maintenance	One-off maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Calibration of a test temperature specified by the user in center of usable space without certificate	05	DL20-0613
Validation services			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	05	DL42-0300
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	05	DL44-0500
Warranty service			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	05	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.

05 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).

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