

## Model BF 56 | Standard-Incubators with forced convection

The BINDER incubator of the BF Avantgarde.Line series with forced convection is suitable for all gentle incubation applications, particularly under a full load and large batch throughputs. This incubator is extremely homogeneous and has quick recovery times.

### BENEFITS

- Excellent temporal and spatial temperature accuracy
- High process reliability
- 100 °C disinfection routine



Model 56



Model 56

### MAIN FEATURES

- Temperature range: +7 °C above ambient temperature to +100 °C
- High temperature accuracy thanks to APT.line™ technology
- Forced convection
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- Inner door made of tempered safety glass
- 2 chrome-plated racks
- Stackable
- Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design
- USB port for recording data

### ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
59	230 V 1~ ph 50/60 Hz	Standard	BF056-230V	9010-0313
	120 V 1~ ph 60 Hz	Standard	BF056UL-120V	9010-0314

### TECHNICAL DATA

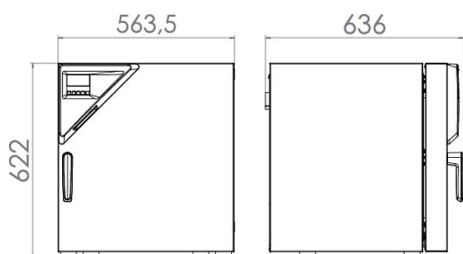
Description	BF056-230V <sup>1</sup>	BF056UL-120V <sup>1</sup>
Article Number	9010-0313	9010-0314
Performance Data Temperature		
Temperature range +7 °C above ambient temperature to	100 °C	100 °C
Temperature variation at 37 °C [± K]	0.2	0.2
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Heating-up time to 37 °C [min]	6	6
Recovery time after 30 seconds door open at 37 °C [min]	3	3

<sup>1</sup> 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 to BINDER factory standard following DIN 12880, observing the recommended wall clearances of 10 % of the height, width, and depth of the inner chamber. All indications are average values, typical for units produced in series. We reserve the right to change technical specifications at any time.

Description	BF056-230V <sup>1</sup>	BF056UL-120V <sup>1</sup>
Article Number	9010-0313	9010-0314
<b>Electrical data</b>		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	60
Nominal power [kW]	0.4	0.4
Unit fuse [A]	6.3	12.5
Phase (Nominal voltage)	1~	1~
<b>Measures</b>		
Interior volume [L]	59	59
Net weight of the unit (empty) [kg]	40	40
Permitted load [kg]	70	70
Load per rack [kg]	30	30
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
<b>Internal Dimensions</b>		
Width [mm]	400	400
Height [mm]	440	440
Depth [mm]	340	340
<b>Doors</b>		
Unit doors	1	1
<b>Housing dimensions not incl. fittings and connections</b>		
Width net [mm]	560	560
Height net [mm]	625	625
Depth net [mm]	565	565
<b>Environment-specific data</b>		
Energy consumption at 37 °C [Wh/h]	55	55
Sound-pressure level [dB(A)]	43	43
<b>Fixtures</b>		
Number of shelves (std./max.)	2/4	2/4

<sup>1</sup> 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 to BINDER factory standard following DIN 12880, observing the recommended wall clearances of 10 % of the height, width, and depth of the inner chamber. 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]



## OPTIONS

Designation	Description	*	Art.-No.
<b>Access port with silicone plug</b>	left		
	10 mm	01	8012-1274
	30 mm	01	8012-1156
	50 mm	01	8012-1164
	right		
	10 mm	01	8012-1267
	30 mm	01	8012-1153
	50 mm	01	8012-1162
	top		
	10 mm	01	8012-1261
	30 mm	01	8012-1150
	50 mm	01	8012-1159
100 mm	01	8012-1166	
<b>Alarm function for overheating</b>	Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device	-	8012-1634
<b>Analog output 4-20 mA</b>	for temperature values (output not adjustable)	02	8012-1622
<b>Calibration certificate, expanded</b>	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1111
<b>Calibration certificate, temperature</b>	for temperature, measurement in center of chamber at specified temperature	-	8012-1130
	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1590
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1569
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1548
<b>Clock</b>	battery-backed	-	8012-1639
<b>Door lock</b>	lockable door handle	-	8012-1663
<b>Ethernet interface</b>	for Multi Management Software APT-COM™	-	8012-0990
<b>Gas-tight option model</b>	Incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	-	8012-1044
<b>Inert gas connection</b>	With gas inlet and outlet, Ø 10 mm, incl. additional measures for the greatest possible impermeability to gas; not in conjunction with access port or interior lighting option	-	8012-1047
<b>Interior socket</b>	Waterproof, switched flush-mounting box (CA3GD) for nominal voltage in unit interior, with cover and corresponding plug (nominal voltage; max. 500 W; max. 90 °C; protection class IP67)	-	8012-1638
<b>Pt 100 temperature sensor</b>	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1618

\* Notes › See last page

## ACCESSORIES

Designation	Description	*	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>Data Logger Kit</b>	T 220: For continuous temperature logging from -90 °C to 220 °C. The kit includes 1 data logger, Pt 100 sensor with 2 m extension cable and 1 magnetic fixture for mounting to the BINDER unit	-	8012-0715
<b>Data Logger Software</b>	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	-	8012-0821
<b>pH-neutral detergent</b>	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016

\* Notes › See last page

Designation	Description	*	Art.-No.
<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, CO <sub>2</sub> , O <sub>2</sub> , pressure, depending on unit		
	Digital in PDF format	–	7057-0001
	Hard copy inside folder	–	7007-0001
	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, CO <sub>2</sub> , O <sub>2</sub> – or pressure, depending on unit		
<b>Rack</b>	Digital in PDF format	–	7057-0005
	Hard copy inside folder	–	7007-0005
<b>Rack</b>	chrome plated	–	6004-0166
	stainless steel	–	6004-0150
<b>Rack, heavy load</b>	Stainless steel, max. load per rack 50 kg	–	6004-0252
<b>Rubber pads</b>	set anti-slip feet	–	8012-1887
<b>Shelf, perforated</b>	Stainless steel	–	6004-0182
<b>Table on castors</b>	stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	–	9051-0018

\* Notes › See last page

## SERVICES

Designation	Description	*	Art.-No.
<b>Installation services</b>			
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	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0500
<b>Maintenance contracts</b>			
<b>Maintenance services</b>			
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 test temperature specified by the user in the center of the usable space, including certificate	05	DL20-0910
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	DL20-0200
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	DL20-0810
<b>Calibration services</b>			
Calibration certificate, temperature	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	03, 04, 05	DL30-0101
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	03, 04, 05	DL30-0102
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0127
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0109
<b>Validation services</b>			
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	05	DL40-0100
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	05	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	–	DL50-0010

\* 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 Sensor calibration is performed in an accredited calibration laboratory.
- 04 Calibration is performed according to the BINDER factory standard.
- 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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