

# Model BD 56 | Standard-Incubators with gravity convection

The BD Avantgarde.Line series is specially designed for gentle incubation of organisms, as well as conditioning of heat-sensitive media. The new design of the units and the homogeneous temperature distribution ensure the very best results.

## BENEFITS

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



Model 56



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## MAIN FEATURES

- Temperature range: ambient temperature plus 5 °C to 100 °C
- High temperature accuracy thanks to APT.line™ technology
- Gravity convection
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- Inner door made of tempered safety glass
- 2 chrome-plated racks
- Units up to 115 L are 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 [cu.ft.]	Voltage	Option model	Version	Art.-No.
2	230 V 1~ 50/60 Hz	Standard	BD056-230V	9010-0323
	120 V 1~ 60 Hz	Standard	BD056UL-120V	9010-0324

## TECHNICAL DATA

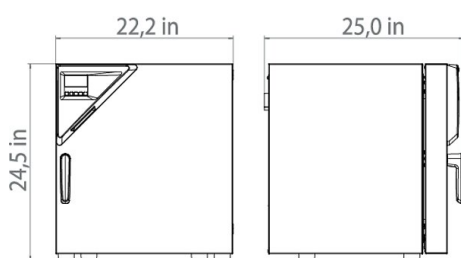
Description	BD056-230V <sup>1</sup>	BD056UL-120V <sup>1</sup>
<b>Article Number</b>	<b>9010-0323</b>	<b>9010-0324</b>
<b>Performance Data Temperature</b>		
Temperature range +5 °C above ambient temperature to	100 °C	100 °C
Temperature variation at 37 °C [± K]	0.3	0.3
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Heating-up time to 37 °C [min]	42	42
Recovery time after 30 seconds door open at 37 °C [min]	15	15

1 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	BD056-230V <sup>1</sup>	BD056UL-120V <sup>1</sup>
Article Number	9010-0323	9010-0324
<b>Electrical data</b>		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	60
Nominal power [kW]	0.3	0.3
Unit fuse [A]	6.3	12.5
Phase (Nominal voltage)	1~	1~
<b>Measures</b>		
Interior volume [cu.ft.]	2	2
Net weight of the unit (empty) [lbs]	88	88
Permitted load [lbs]	154	154
Load per rack [lbs]	66	66
Wall clearance back [in]	6.3	6.3
Wall clearance sidewise [in]	3.94	3.94
<b>Internal Dimensions</b>		
Width [in]	14.18	14.18
Height [in]	16.55	16.55
Depth [in]	14.97	14.97
<b>Doors</b>		
Unit doors	1	1
<b>Housing dimensions not incl. fittings and connections</b>		
Width net [in]	22.06	22.06
Height net [in]	24.63	24.63
Depth net [in]	22.26	22.26
<b>Environment-specific data</b>		
Energy consumption at 37 °C [Wh/h]	25	25
<b>Fixtures</b>		
Number of shelves (std./max.)	2/4	2/4

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## DIMENSIONS INCL. FITTINGS AND CONNECTIONS [MM]



**OPTIONS**

Designation	Description	*	Art.-No.	
<b>Options/Accessories</b>	Calibration certificate, temperature	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-0921
		additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-0940
		back		
		10 mm	01	8012-0390
		30 mm	01	8012-0397
		50 mm	01	8012-0399
		battery-backed	-	8012-0981
		for Multi Management Software APT-COM™	-	8012-0986
		for temperature values (output not adjustable)	02	8012-0941
		for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1110
		left		
		10 mm	01	8012-0388
		30 mm	01	8012-0047
		50 mm	01	8012-0051
		lockable door handle	-	8012-1025
		Measurement in center of chamber at specified temperature	-	8012-1129
		right		
		10 mm	01	8012-0387
		30 mm	01	8012-0046
		50 mm	01	8012-0050
		Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device	-	8012-0979
		temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-0918
		temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-0915
		top		
		10 mm	01	8012-0386
		30 mm	01	8012-0045
		50 mm	01	8012-0049
	100 mm	01, 10	8012-0053	
	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)	07	8012-0980	
	with 15 W light bulb			
	120 V option model	-	8012-1630	
	230 V option model	-	8012-0969	

\* Notes › See last page

**ACCESSORIES**

Designation	Description	*	Art.-No.
<b>Multi Management Software</b>	Multi Management Software APT-COM™		
	version 4, BASIC edition	19	9053-0039
	version 4, GLP edition	19	9053-0042
	version 4, PROFESSIONAL edition	19	9053-0040

\* Notes › See last page

Designation	Description	*	Art.-No.
	chrome plated	-	6004-0174
	Stainless steel	-	6004-0190
	stainless steel	-	6004-0158
	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
	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
<b>Options/Accessories</b>	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		
	Digital in PDF format	-	7057-0005
	Hard copy inside folder	-	7007-0005
	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
	set of 4 anti-slip feet, for safe stacking of units	-	8012-1887
	stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	-	9051-0018
	Stainless steel, max. load per rack 50 kg	-	6004-0201
	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	19	8012-0715

\* Notes › See last page

## SERVICES

Designation	Description	*	Art.-No.
<b>Installation services</b>			
Services	Unit function instructions for operation and programming of the controller	18	DL10-0500
	Unpacking and setting up of unit, connecting to existing connections, and checking function	13, 18	DL10-0100
<b>Preventive maintenance</b>			
Services	Executive of equipment inspection according to maintenance plan	14, 18	DL20-0200
<b>Calibration services</b>			
Services	Expansion – including certificate, each additional measuring point in center of chamber at specified test temperature	14, 16, 17, 18	DL30-0102
	Temperature calibration with 1 measuring point in center of chamber at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0101
	Temperature measurement with 18 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0118
	Temperature measurement with 27 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0127
	Temperature measurement with 9 measuring points at a specified test temperature, including certificate	14, 16, 17, 18	DL30-0109
<b>Validation services</b>			
Services	Execution of IQ/OQ in accordance with qualification folder	15, 18	DL40-0100
	Execution of IQ/OQ/PQ in accordance with qualification folder	15, 18	DL44-0500
<b>Warranty service</b>			
Services	The warranty is extended from 2 to 3 years from the delivery date, wear parts are excluded	-	DL01-6041
	The warranty is extended from 2 to 5 years from the delivery date, wear parts are excluded	-	DL01-6042

\* 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.
- 07 The additional heat input may affect the temperature behavior.
- 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 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.

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