

Model ED 56 | Drying and heating chambers Avantgarde.Line with natural convection

The strengths of a BINDER ED series drying chamber include routine drying and sterilization tasks up to 300 °C. Thanks to the natural convection, all thermal processes which use this drying chamber are highly efficient. The ED series ensures fast, uniform drying.

BENEFITS

- Best energy efficiency on the market
- Excellent temporal and spatial temperature accuracy
- USB connection for recording data
- Temperature range up to 300 °C



Model 56



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MAIN FEATURES

- Temperature range: ambient temperature plus 5 °C to 300 °C
- Up to 30% lower energy consumption compared to conventional units on the market
- High temperature accuracy thanks to APT.line™ technology
- Natural convection
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- 2 chrome-plated racks
- Stackable
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design
- USB port for recording data

ORDERING INFORMATION

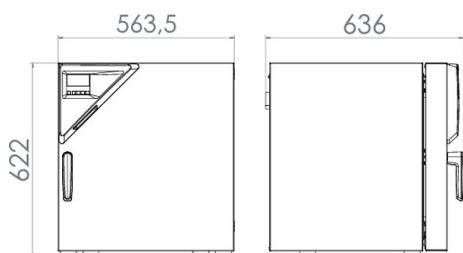
Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
Model ED 56				
2	230 V 1 ph 50/60 Hz	Standard	ED056-230V	9010-0333
	120 V 1 ph 60 Hz	Standard	ED056UL-120V	9010-0334

TECHNICAL DATA

Description	ED056-230V ¹	ED056UL-120V ¹
Article Number	9010-0333	9010-0334
Performance Data Temperature		
Temperature range 5 °C above ambient temperature to [°C]	300	300
Temperature variation at 150 °C [± K]	2.3	2.3
Temperature fluctuation at 150 °C [± K]	0.4	0.4
Heating-up time to 150 °C [min]	50	50
Recovery time after 30 seconds door open at 150 °C [min]	19	19
Electrical data		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	60
Nominal power [kW]	1.05	1.15
Unit fuse [A]	6.3	12.5
Phase (Nominal voltage) [ph]	1	1
Outer dimensions		
Width net [mm]	560	560
Height net [mm]	625	625
Depth net [mm]	565	565
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
Doors		
Unit doors	1	1
Internal Dimensions		
Width [mm]	360	360
Height [mm]	420	420
Depth [mm]	380	380
Measures		
Interior volume [L]	57	57
Net weight of the unit (empty) [kg]	39	39
permitted load [kg]	70	70
Load per rack [kg]	30	30
Environment-specific data		
Energy consumption at 150 °C [Wh/h]	180	180
Fixtures		
Number of shelves (std./max.)	2/4	2/4

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.

DIMENSIONS incl. fittings and connections [mm]



OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
Access port with silicone plug	back		
	10 mm	01	8012-1282
	30 mm	01	8012-0540
	50 mm	01	8012-0546
	left		
	10 mm	01	8012-1275
	30 mm	01	8012-1018
	50 mm	01	8012-1022
	right		
	10 mm	01	8012-1268
	30 mm	01	8012-1017
	50 mm	01	8012-1021
	top		
	10 mm	01	8012-1262
	30 mm	01	8012-0539
	50 mm	01	8012-0545
100 mm	01, 10	8012-1029	
Analog output 4-20 mA	for temperature values (output not adjustable)	02	8012-1623
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1115
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	-	8012-1134
	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1593
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1572
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1551
Cart	Cart – stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	-	9051-0018
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	04, 12	8012-0985
Clock	battery-backed	-	8012-1640
Data Logger Kit	T 350: For continuous temperature logging from 0 °C to 350 °C; kit includes 1 data logger, Pt 100 sensor with 2 m extension cable and 1 magnetic fixture for mounting to the BINDER unit	19	8012-0714
Data Logger Software	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
Door gasket	made of FKM, silicone-free	03	8012-1008
Door lock	lockable door handle	-	8012-1664
Ethernet interface	for communication software	-	8012-1645
Instrument tray	with lid made from 18/8 stainless steel, stackable, dimensions: 230 x 133 x 45 mm		
	small	-	4022-0123
	with lid made from 18/8 stainless steel, stackable, dimensions: 315 x 215 x 60 mm		
Interior lighting	large	-	4022-0124
	with 15 W light bulb		
	120 V option model	-	8012-1631
	230 V option model	-	8012-1627
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	-	8012-0195
Overheating alarm	audible, can be switched off, adjustable limit on the independent temperature safety device	-	8012-1635
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
Pt 100 temperature sensor	additional flexible Pt 100, interior, for displaying the temperature on the unit display	-	8012-1619
Rack	chrome plated	-	6004-0174
	stainless steel	-	6004-0158
Rack, heavy load	Stainless steel (1.4301/AISI 304), max. load per rack 50 kg, max. total load 70 kg	-	6004-0201

* Notes › See last page

Designation	Description	*	Art.-No.
Rubber pads	set of 4 anti-slip feet, for safe stacking of unit	10	8012-0001
Shelf, perforated	Stainless steel	-	6004-0190
Software	APT-COM™ communications software version 2 to 3, GLP edition	19	9053-0016
	version 3, BASIC edition	19	9053-0014
	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
Viewing window and interior lighting	viewing window (triple insulating glass) in door, 240 x 240 mm, and 15 W interior		
	120 V option model	-	8012-1059
	230 V option model	-	8012-1058

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Data Logger Kit installation service	unit function instructions for operation and programming of the controller	18	DL100400
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL100100
Preventive maintenance			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL200200
Calibration services			
Calibration temperature incl. certificate	including certificate, one measuring point in center of chamber at specified temperature	14, 16, 17, 18	DL300101
Measurement of air exchange rate	including certificate (in accordance with ASTM D5374)	14, 16, 17, 18	DL330000
Temperature measurement 18 measuring points	including certificate, 18 measuring points at specified temperature	14, 16, 17, 18	DL300118
Temperature measurement 27 measuring points	including certificate, 27 measuring points at specified temperature	14, 16, 17, 18	DL300127
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL300109
Validation services			
Execution of IQ/OQ	in accordance with qualification folder	15, 18, 20	DL400100
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	8012-0761
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	8012-0942
Warranty service			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	-	DL002041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	-	DL002042

* 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.
- 06 Heating-up time may increase as a result of the lower heat conductivity.
- 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.
- 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.