BINDER

Model ED 400 | Drying and heating chambers 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

- Uniform drying conditions thanks to APT.line™ technology
- Identical test conditions throughout the chamber interior independent of sample size and quantity
- Outstanding thermal insulation saves operation costs

Model 400

MAIN FEATURES

- Temperature range: room temperature plus 5 °C to 300 °C
- APT.line™ preheating chamber technology
- Natural convection
- Adjustable exhaust air flap
- Controller with timer functions
- 2 chrome-plated racks
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
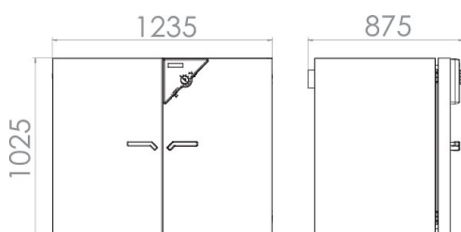
ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
Model ED 400				
400	400 V 3~ ph 50/60 Hz	with RS 422	ED400-400V-I	9010-0075
	208 V 3~ ph 60 Hz	with RS 422	ED400UL-208V-I	9010-0168

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TECHNICAL DATA

Description	ED400-400V-I[1]	ED400UL-208V-I[1]
Article Number	9010-0075	9010-0168
Performance Data Temperature		
Temperature range 5 °C above ambient temperature to [°C]	300	300
Temperature variation at 150 °C [± K]	3	3
Temperature fluctuation at 150 °C [± K]	0.5	0.5
Heating-up time to 150 °C [min]	71	71
Recovery time after 30 seconds door open at 150 °C [min]	31	31
Air change data		
Air change (approx.) at 150 °C [x/h]	10	10
Electrical data		
Rated Voltage [V]	400	208
Power frequency [Hz]	50/60	60
Nominal power [kW]	3.4	3.4
Unit fuse [A]	3 x 16	3 x 16
Phase (Nominal voltage)	3~	3~
Internal Dimensions		
Depth [mm]	520	520
Height [mm]	800	800
Width [mm]	1000	1000
Housing dimensions not incl. fittings and connections		
Width net [mm]	1235	1235
Height net [mm]	1025	1025
Depth net [mm]	765	765
Measures		
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
Interior volume [L]	400	400
Net weight of the unit (empty) [kg]	125	125
permitted load [kg]	90	90
Load per rack [kg]	35	35
Doors		
Unit doors	2	2
Environment-specific data		
Energy consumption at 150 °C [Wh/h]	672	672
Fixtures		
Number of shelves (std./max.)	2/10	2/10

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 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. 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]

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OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
	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	8012-0537
	50 mm	01	8012-0542
	100 mm	01, 11	8012-0722
Access port with silicone plug	right		
	10 mm	01	8012-1268
	30 mm	01	8012-0536
	50 mm	01	8012-0541
	100 mm	01, 11	8012-0721
	top		
	10 mm	01	8012-1262
	30 mm	01	8012-0539
	50 mm	01	8012-0545
	100 mm	01, 10	8012-0547
Alarm function for overheating	Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device		
	120 V option model	–	8012-1303
	230 V option model	–	8012-1299
Analog output 4-20 mA	for temperature values (output not adjustable)	–	8012-0430
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units.		
	version 4, BASIC edition	19	9053-0039
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	19	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	19	9053-0040
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
Class 3.1 independent temperature safety device	with visual alarm (DIN 12880)	04, 12	8012-0032
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	8012-0497
Door lock	lockable door handle	–	8012-1253
Inner chamber, reinforced	including 2 reinforced racks	–	8012-1730
Instrument tray	with lid made from 18/8 stainless steel, stackable, dimensions: 230 x 133 x 45 mm	–	4022-0123
	with lid made from 18/8 stainless steel, stackable, dimensions: 315 x 215 x 60 mm	–	4022-0124
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	–	8012-0195
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016

* Notes › See last page

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Designation	Description	*	Art.-No.
Pt 100 temperature sensor	additional flexible Pt 100, interior, with external connection incl. LEMO connector (3-pin)	–	8012-1173
Rack	chrome plated	–	6004-0005
	stainless steel	–	6004-0011
Shelf, perforated	Stainless steel	–	6004-0032
Table on castors	stable cart, casters with locking brakes, dimensions: W 1,300 x D 800 x H 780 mm	–	9051-0019
Viewing window and interior lighting	viewing window in each door, 470 x 290 mm, and 30 W interior lighting		
	208 V option model	–	8012-0271
	400 V option model	–	8012-0269

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL10-0100
Instruction	unit function instructions for operation and programming of the controller	18	DL10-0500
Preventive maintenance			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL20-0200
Calibration services			
Calibration temperature incl. certificate	including certificate, one measuring point in center of chamber at specified temperature	14, 16, 17, 18	DL30-0101
Measurement of air exchange rate	including certificate (in accordance with ASTM D5374)	14, 16, 17, 18	DL33-0000
Temperature measurement 18 measuring points	including certificate, 18 measuring points at specified temperature	14, 16, 17, 18	DL30-0118
Temperature measurement 27 measuring points	including certificate, 27 measuring points at specified temperature	14, 16, 17, 18	DL30-0127
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL30-0109
Validation services			
Execution of IQ/OQ	in accordance with qualification folder	15, 18, 20	DL40-0100
Execution of IQ/OQ/PQ	in accordance with customer's requirement, price: on request	15, 18	DL44-0500
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	–	DL00-2041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	–	DL00-2042

* Notes › See last page

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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

www.wolflabs.co.uk

Please contact us if this literature doesn't answer all your questions.