

Model BF 400 | Standard-Incubators with forced convection

The BINDER incubator of the BF series with mechanical 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

- Safe and reproducible incubation even under high batch throughputs in long-term operation
- Disinfection routine at 100 °C
- Stable atmosphere by inner glass door



Model 400

MAIN FEATURES

- Temperature range: +5 °C above ambient temperature to +100 °C
- APT.line™ preheating chamber technology
- Adjustable fan speed
- Adjustable exhaust air flap
- Controller with timer functions
- Inner door made of tempered safety glass
- 2 chrome-plated racks
- Class 3.1 independent temperature safety device (DIN 12880) with visual temperature alarm
- Computer interface: RS 422

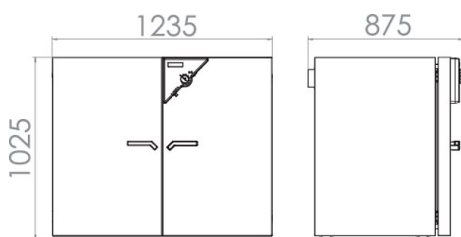
ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
400	230 V 1~ ph 50/60 Hz	Standard	BF400-230V	9010-0241
	120 V 1~ ph 60 Hz	Standard	BF400UL-120V	9010-0242

TECHNICAL DATA

Description	BF400-230V ¹	BF400UL-120V ¹
Article Number	9010-0241	9010-0242
Performance Data Temperature		
Temperature range +5 °C above ambient temperature to	100 °C	100 °C
Temperature variation at 37 °C [± K]	0.4	0.4
Temperature fluctuation at 37 °C [± K]	0.1	0.1
Heating-up time to 37 °C [min]	12	12
Recovery time after 30 seconds door open at 37 °C [min]	5	5
Electrical data		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	60
Nominal power [kW]	0.85	0.85
Unit fuse [A]	12.5	12.5
Phase (Nominal voltage)	1~	1~
Measures		
Interior volume [L]	400	400
Net weight of the unit (empty) [kg]	145	145
Permitted load [kg]	90	90
Load per rack [kg]	35	35
Wall clearance back [mm]	160	160
Wall clearance sidewise [mm]	100	100
Internal Dimensions		
Width [mm]	1000	1000
Height [mm]	800	800
Depth [mm]	500	500
Doors		
Unit doors	2	2
Housing dimensions not incl. fittings and connections		
Width net [mm]	1235	1235
Height net [mm]	1025	1025
Depth net [mm]	765	765
Environment-specific data		
Energy consumption at 37 °C [Wh/h]	56	56
Fixtures		
Number of shelves (std./max.)	2/9	2/9

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]

OPTIONS

Designation	Description	*	Art.-No.
Access port with silicone plug	back		
	10 mm	01	8012-1281
	30 mm	01	8012-1291
	50 mm	01	8012-1293
	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
Alarm function for overheating	Switchable acoustic alarm, with adjustable limit value on the independent temperature safety device		
	120 V option model	–	8012-1302
	230 V option model	–	8012-1298
Analog output 4-20 mA	for temperature values (output not adjustable)	–	8012-0482
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	–	8012-1111
Calibration certificate, temperature	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
Door lock	lockable door handle	–	8012-1252
Inner chamber, reinforced	including 2 reinforced racks	–	8012-1732
Interior socket	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)	–	8012-1170
Pt 100 temperature sensor	additional flexible Pt 100, interior, with external connection incl. LEMO connector (3-pin)	–	8012-1172

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units. version 4, BASIC edition	–	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	–	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
Data Logger Kit	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
Data Logger Software	LOG ANALYZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	–	8012-0821
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016

* Notes › See last page

Designation	Description	*	Art.-No.
Qualification documents	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 ₂ , O ₂ , 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 ₂ , O ₂ – or pressure, depending on unit		
	Digital in PDF format	–	7057-0005
	Hard copy inside folder	–	7007-0005
Rack	chrome plated	–	6004-0005
	stainless steel	–	6004-0011
Rubber pads	set anti-slip feet	–	8012-1887
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

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
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	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0500
Maintenance contracts			
Maintenance services			
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
Calibration services			
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
Validation services			
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
Warranty service			
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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