Model FDL 115 | Safety drying chambers for limited quantities of solvent

The BINDER FDL 115 with silicone and dust-free inner chamber, as well as symmetric airflow dries specimens containing solvents and thus this safety drying oven meets all EN 1539 requirements.

BENEFITS

- Safety concept meets the DIN EN 1539-2010-08 standard
- Short drying time with high temperature accuracy and defined ventilation
- Silicone free and dust-free inner chamber
- Replaceable fresh air cartridges are easy to change and ensure constant fresh air quality



Model 115



Model 115

IMPORTANT FEATURES

- Temperature range: +10°C above ambient temperature to +300 °C
- APT.line™ preheating chamber technology
- Controller with time-segment and real-time programming
- 2 chrome-plated racks
- Fresh-air monitoring with audible and visual alarm and automatic deactivation of heating
- Replaceable filter cartridge, Class M6
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- Computer interface: RS 422
- Standard door gasket made from solvent-resistant FKM for use at up to 200 °C
- Optional door gasket made from silicone with limited solvent resistance for use at up to 300 °C

ORDERING INFORMATION

Interior volume [L]	Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
Model FDL 115					
115	230 V 1~ 50/60 Hz -	CEE 7/7	Standard	FDL115-230V	9010-0292

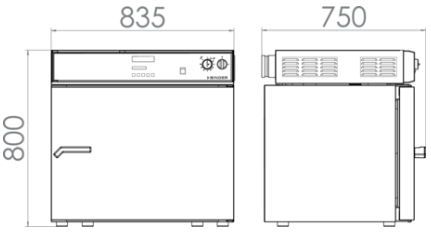
TECHNICAL DATA

Data	
Article Number	9010-0292
Designation	FDL115-230V
Option model	Standard
Performance Data Temperature	
Temperature range	+10 °C above ambient temperature to 300 °C
Temperature uniformity at 150°C	2.5 ± K
Temperature fluctuation at 150°C	0.8 ± K
Heating up time to 150°C	20 min
Recovery time after door was opened for 30 s at 150°C	12 min
Air change data	
Air circulation (approx.)	20 x/min
Volumetric flow rate of exhaust air acc. to EN 1539 at 50 °C	400 ca. L/min
Solvent quantity	
Highest permitted solvent quantity (at T-180°C, M-100g/mol, U-40g/m3, K=0,5)	4,67 g
Electrical data	
Rated Voltage	230 V
Power frequency	50/60 Hz
Nominal power	2,9 kW
Phase (Nominal voltage)	1~
Dimensions and weights	
Interior volume	115 L
Net weight of the unit (empty)	90 kg
Load per rack	30 kg
Permitted load	60 kg
Wall clearance back	160 mm
Wall clearance sidewise	100 mm
Housing dimensions not incl. fittings and connections	
Width net	830 mm
Height net	805 mm

Depth net	685 mm
Internal Dimensions	
Interior width	600 mm
Interior height	435 mm
Interior depth	435 mm
Unit doors	1
Environment-specific data	
Sound-pressure level	57 dB(A)
Energy consumption at 150°C	1,200 Wh/h
Fixtures	
Number of shelves (std./max.)	2/5

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. Technical data refers to 100 % fan speed. 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	8012-1284
	left		
	10 mm	01	8012-1277
	30 mm	01	8012-1360
	right		
	10 mm	01	8012-1270
	30 mm	01	8012-1355
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	-	8012-1117

Designation	Description	*	Art.-No.
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	-	8012-1136
	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-1553
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-1574
	temperature measurement incl. certificate and 27 measuring points at specified temperature	-	8012-1595
Coil coating door flap	door flap for coil coating tests	-	8012-0179
Door gasket	made from silicone, resistant to high temperatures for operating temperatures above 200°C. Note: The gasket wears out more quickly in temperatures above 250°C	-	8012-0499
Door lock	lockable door handle	-	8012-1248
Measurement of air exchange rate	in accordance with ASTM D5374, definition and protocol according to ambient temperature	-	8012-1196

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
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	8012-2250
Qualification documents	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
	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
Rack	stainless steel	-	8012-2048
Shelf, perforated	Stainless steel	-	8012-2161

Designation	Description	*	Art.-No.
Table on castors	stable cart, casters with locking brakes, dimensions: W 1,000 x D 800 x H 780 mm	-	9051-0018

SERVICES

Designation	Description	*	Art.-No.
Calibration services			
Calibration certificate, temperature	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	05	DL30-0120
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	05	DL30-0102
Measurement of air exchange rate	including certificate (in accordance with ASTM D5374)	05	DL33-0000
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	05	DL30-0109
Temperature measurement, 18 measuring points	Temperature measurement with 18 measuring points with a set value specified by the user, including certificate	05	DL30-0118
Temperature measurement, 27 measuring points	Temperature measurement with 27 measuring points with a set value specified by the user, including certificate	05	DL30-0127
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			
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	DL20-0720
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
Maintenance services			
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	DL20-0602
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	05	DL50-0010

NOTES

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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