

FDL 115 - Safety drying oven with first class safety features

This series presents the perfect environment for solvent-based samples. The interior chamber has a symmetrical airflow with defined flow velocities, free of silicone and dust, safeguarded by a high-efficiency filter cartridge. FDL thus complies with all EN 1539 and ISO 3215 requirements and its program with the intelligent fresh air monitoring feature offers maximum occupational safety.



► Performance features and equipment:

- Electronically controlled APT.line™ preheating chamber assuring temperature accuracy and reproducible results
- All safety features according to EN 1539
- Temperature range 5 °C (32 °F) above ambient temperature up to 300 °C (572 °F)
- MP Controller, 2 programs with 10 sections each or alternatively switch over to 1 program with 20 sections
 - The time interval of single program sections can be adjusted up to a maximum of 99:59 hours or 999:59 hours. This adjustment applies to all program sections
 - Integrated week programm timer with real time function
 - Adjustable time functions and programmable temperature ramp function via program editor
- Digital temperature setting with an accuracy of one degree
- Adjustable fan speed
- Adjustable front ventilation flap slide and rear exhaust ø 50 mm (1.97 inch)
- Elapsed time indicator
- Independent adjustable temperature safety device class 2 (DIN 12880), with visual temperature alarm
- RS 422 interface for communication software APT-COM™ DataControlSystem, or switch over to printer output with RS 232 / RS 422 interface converter
- Units up to 115 liters are stackable
- 2 chrome-plated racks included
- BINDER test certificate

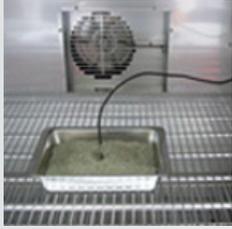


FDL 115

Exterior dimensions	
Width (mm/inch)	834 / 32.8
Height (inclusive feet) (mm/inch)	795 / 31.5
Depth (mm/inch)	685 / 27.0
Plus door handle (mm/inch)	50 / 2.0
Wall clearance (mm/inch)	100 / 3.9
Wall clearance with open door (mm/inch)	160 / 6.3
Exhaust duct outer- Ø (mm/inch)	100 / 3.9
Steam space volume (l/cu.ft.)	156 / 5.5
Interior dimensions	
Width (mm/inch)	602 / 23.7
Height (mm/inch)	435 / 17.1
Depth (mm/inch)	435 / 17.1
Interior volume (l/cu.ft.)	115 / 4.1
Racks, chrome-plated (number standard/max.)	2 / 5
Load per rack (kg/lbs.)	20 / 44
Permitted total load (kg/lbs.)	50 / 110
Weight of the unit (empty) (kg/lbs.)	90 / 199
Temperature data	
Temperature range, 5 °C (41 °F) above ambient up to (°C / °F)	300 / 572
Temperature variation	
at 70 °C (± °C)	1.5
at 150 °C (± °C)	2.5
at 300 °C (± °C)	4
Temperature fluctuation (± °C)	0.3
Heating-up time 2)	
to 70 °C (Min.)	7
to 150 °C (Min.)	17
to 300 °C (Min.)	44
Recov. time after door was opened for 30 sec. 2)	
at 70 °C (Min.)	1
at 150 °C (Min.)	3
at 300 °C (Min.)	6
Air change data	
Air change (approx. x/min.)	3
Air circulation (approx. x/min.)	40
Exhaust air volume flow (approx. L/Min. m³/h)	400 (24.0)
Air flow velocity (m/sec)	0.8 - 1.2
Highest permitted solvent quantity (at T -180 °C, M-100g/mol, U-40g/m³, K=0,5) (g)	6.65
Electrical data	
Housing protection acc. to EN 60529	IP 33
Nominal voltage (±10 %) 50 / 60 Hz (V)	230
Nominal power (kW)	2.9
Energy consumption	
at 70 °C (W)	388
at 150 °C (W)	1098
at 300 °C (W)	2023

1)
 T = drying temperature
 M = molecular mass
 U = lower explosion limit
 K = solvent vapor concentration as percentage of lower explosion limit

2) up to 98 % of the set value
 All technical data are specified for units with standard equipment at an ambient temperature of 25 °C and a voltage fluctuation of ±10 %. The temperature data are determined in accordance to factory standard following DIN 12880 respecting 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 alter technical specifications at all times.



► Specimen temperature measurement

Additional PT 100 temperature sensor for exact temperature measurement of the specimen with digital temperature display. Recording of measured data acquisition possible via RS 422 interface.

► Lockable door

Prevents unauthorized access and interference with processes in the chamber.



► Drawer for coil coating applications

Split-second loading through the drawer in the door for coil coating/hot air short cycle applications.



► Calibration certificates and validation

BINDER can significantly reduce the workload for equipment qualification. We draw on unparalleled knowledge of our equipment applications and years of experience in certification.



	FDL 115
Access port with silicone plugs, 10 mm (0.39 inch), 30 mm (1.18 inch)	<input type="radio"/>
Rack, chrome - plated or stainless steel	<input type="radio"/>
Shelf, perforated, stainless steel	<input type="radio"/>
Lockable door	<input type="radio"/>
Door gasket, silicone, resistant to high operating temperatures > 200°C (392 °F)	<input type="radio"/>
Specimen temperature display with clip sensor and 4 - 20 mA analog output (e.g. chart recorder connection), accessible via 6 - pin DIN socket	<input type="radio"/>
Factory calibration certificate. Measurement in center of chamber at 150 °C (302 °F) or at specified testing temperature.	<input type="radio"/>
Extension to factory calibration certificate. Each additional measurement at an additional measuring point or temperature	<input type="radio"/>
Temperature measurement acc. to DIN 12880 (27 measuring points) at 150 °C (302 °F) or at specified temperature with measuring protocol and certificate	<input type="radio"/>