MDL 115 - Safety drying oven with first class safety features and an expanded temperature range

The MDL series operates at temperatures up to 350 ºC at an airflow of 400l/min, ideal conditions for high temperature testing, e.g. in coil coating applications. The preheating chamber with its special Airflow Design permits homogenous baking processes to be performed with maximum occupational safety in extremely short time, safeguarded by electronic monitoring of fresh air. Individual programming options provide maximum flexibility for completing your jobs.

Performance features and equipment:

- Electronically controlled APT.line™ preheating chamber assuring temperature accuracy and reproducible results
- Temperature range 5 °C (32 °F) above ambient temperature up to 350 °C (662 °F)
- All safety features acording to EN 1539
- Heat load 9.0 kW
- Door gasket made of of high temperature resistant silicone
- Rear exhaust connector Ø 100 mm (3.94 inch)
- MCS controller with 25 storable programs of 100 sections each for a maximum of 500 program segments
- Features:
  - User friendly LCD screen
  - Easy-to-read menu guide
  - Integrated electronic chart recorder
  - Variety of options for the graphic display of process parameters
  - Real time clock
- Replaceable fresh-air filter cartridge, class F6 (EU6-fine particle filter for paricel 1...10 µm)
- Independent adjustable temperature safety device class 2 (DIN 12880), with visual and audible temperature alarm
- Fresh-air monitoring with audible and visual alarm and automatic deactivation of heating
- RS 422 interface for use with optional GMP/GLP and FDA guideline 21 CFR Part 11 compliant APT-COM™ DataControlSystem software
- 2 chrome-plated racks included
- BINDER test certificate

	MDL 115
Exterior dimensions	
Width (mm/inch)	834 / 32.8
Height (inclusive feet) (mm/inch)	800 / 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 / 23.6
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)	350 / 662
Temperature variation	
at 70 °C (± °C)	2
at 150 °C (± °C)	3.4
at 300 °C (± °C)	7
Temperature variation with door flap	
at 70 °C (± °C)	2
at 150 °C (± °C)	3
at 300 °C (± °C)	8
Temperature fluctuation (± °C)	0.5
Heating-up time 2)	
to 70 °C (Min.)	3.5
to 150 °C (Min.)	6
to 300 °C (Min.)	10
Recov. time after door was opened for 30 sec.2)	
at 70 °C (Min.)	0.5
at 150 °C (Min.)	2
at 300 °C (Min.)	4
Recov. time after door was opened for 30 sec.2)	
at 70 °C (Min.)	0.5
at 150 °C (Min.)	1
at 300 °C (Min.)	2
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
Electrical data	
Housing protection acc. to EN 60529	IP 33
Nominal voltage (±10 %) 50 / 60 Hz (V)	400 3/N
Nominal power (kW)	9.0
Energy consumption	
at 70 °C (W)	400
at 150 °C (W)	1130
at 300 °C (W)	2083

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1) value without window
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 determinated 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.

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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.

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	MDL 115
Rack, chrome - plated or stainless steel	O
Shelf, perforated, stainless steel	O
Lockable door	O
Door flap for coil - coating tests	O
Replacement air filter (class F6/EU6 – for particle sizes between 1 µm and 10 µm), 100 × 520 × 22 mm (3.94 x 20.47 x 0.87 inch), with aluminum frame	O
Additional measuring channel for digital display of specimen temperature, with clip sensor. Measuring data recorded through RS 422 port	O
Temperature measurement acc. to DIN 12880 (27 measuring points) at 150 °C (302 °F) or at specified temperature with measuring protocol and certificate	O
Factory calibration certificate. Measurement in center of chamber at 150 °C (302 °F) or at specified testing temperature.	O
Extension to factory calibration certificate. Each additional measurement at an additional measuring point or temperature.	O

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