

# Drying ovens with gravity convection

## ED series

Routine drying and sterilization applications up to 300 °C and precision heat storage are the strength of ED drying ovens. Drying processes run much more efficiently with gravity (natural) convection and the high rate of air exchange.



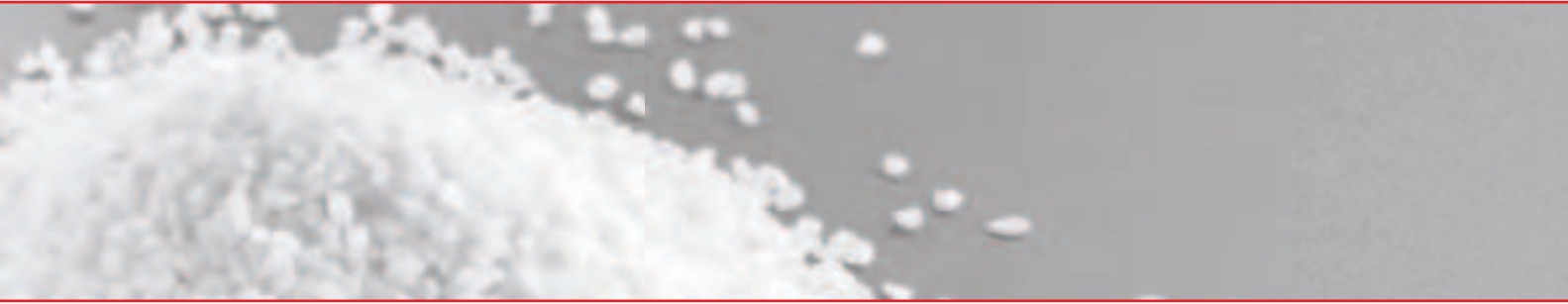
► ED 53 model



Available sizes (liters)

### ► EQUIPMENT

- Temperature range from 5 °C above ambient temperature to 300 °C
- DS control with integrated timer 0 to 99 hrs
- Digital temperature setting with an accuracy of one degree
- Independent adjustable temperature safety device class 2 (DIN 12880), with visual temperature alarm
- Adjustable ventilation by means of front ventilation flap slide and rear exhaust Ø 50 mm
- Optional RS 422 Interface for APT-COM™ Data Control System communication software
- Units up to 115 liters are stackable
- Two chrome-plated racks included

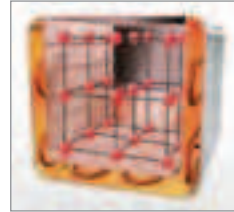


► ED SERIES | BEST DRYING RESULTS:



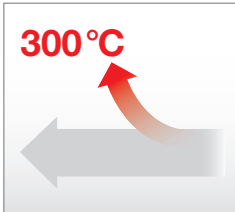
**Uniform drying conditions**

- APT.line™ preheating chamber
  - Homogeneous temperature control with gravity (natural) convection
  - Identical test conditions throughout the chamber interior independent of sample size and quantity



**Best quality and precision guaranteed**

- High standard according to DIN 12880 (27-point measurement according to factory standard)
- Short delivery times
- Minimal maintenance and operating costs



**Broad range of applications**

- Standard temperature range up to 300 °C
- Large capacity reserves
- Short heating up times



**Convenient work environment**

- Hermetic door closure with 2-points door closure
- Low heat dissipation due to 60 mm insulation
- Rack with tilt protection for easy loading and unloading
- Complete stainless steel inner chamber without permanent fixtures
- Easy cleaning

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► **OPTIONS**

- Access ports of various diameters with silicone plugs
- Racks, chrome-plated or stainless steel
- Perforated shelf, stainless steel
- Independent temperature safety device class 3.1 according to DIN 12880
- Door with window and interior lighting
- Door lock
- Door gasket made of FKM (Viton)
- Switchable audio alarm for overheating
- Analog output for temperature 4 – 20 mA with 6-pin DIN socket
- Temperature measurement according to DIN 12880
- Calibration certificate
- Extension to factory calibration certificate (additional measuring point)
- Data Logger Kits and Logger Software



Access ports with silicone plugs



Calibrations and validations



Door with window and interior lighting



Drying oven with special door access port for loading test materials

► **BINDER INDIVIDUAL**  
More information on page 133

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# Technical data for your planning and installation

## ED series



	ED 23	ED 53	ED 115	ED 240	ED 400	ED 720
<b>Exterior dimensions</b>						
Width (mm/inch)	435 / 17.13	635 / 25.0	835 / 32.87	1035 / 40.75	1235 / 48.62	1235 / 48.62
Height (including feet/castors) (mm/inch)	495 / 19.49	620 / 24.41	705 / 27.76	825 / 32.48	1025 / 40.35	1530 / 60.24
Depth (mm/inch)	520 / 20.47	575 / 22.64	645 / 25.39	745 / 29.33	765 / 30.12	865 / 34.06
plus door handle, I-panel and exhaust duct (mm/inch)	105 / 4.13	105 / 4.13	105 / 4.13	105 / 4.13	105 / 4.13	105 / 4.13
Quantity of doors	1	1	1	2	2	2
<b>Interior dimensions</b>						
Width (mm/inch)	222 / 8.74	400 / 15.75	600 / 23.62	800 / 31.50	1000 / 39.37	1000 / 39.37
Height (mm/inch)	330 / 12.99	400 / 15.75	480 / 18.90	600 / 23.62	800 / 31.50	1200 / 47.24
Depth (mm/inch)	300 / 11.81	350 / 13.78	420 / 16.54	520 / 20.47	520 / 20.47	620 / 24.41
Interior volume (l/cu.ft.)	20 / 0.7	53 / 1.9	115 / 4.1	240 / 8.6	400 / 14.3	720 / 25.7
Quantity of racks (standard/max.)	2 / 3	2 / 5	2 / 6	2 / 7	2 / 10	2 / 15
Load per rack (kg/lbs.)	12 / 26	15 / 33	20 / 44	30 / 66	35 / 77	45 / 99
Permitted total load (kg/lbs.)	25 / 55	40 / 88	50 / 110	70 / 155	90 / 199	120 / 265
Weight of the unit (empty) (kg/lbs.)	22 / 49	42 / 93	57 / 126	86 / 190	125 / 276	174 / 384
<b>Temperature data</b>						
Temperature range, by 5 °C/9 °F above ambient up to °C/°F	300 / 572	300 / 572	300 / 572	300 / 572	300 / 572	300 / 572
Temperature uniformity <sup>1)</sup> at 150 °C/302 °F (±K)	2.5	3.2	2.5	2.5	3	2.8
Temperature fluctuation at 70 °C/158 °F (±K)	0.3	0.3	0.3	0.3	0.3	0.3
Heating-up time <sup>2)</sup> to 150 °C/302 °F (min)	24	27	29	48	62	69
Recov. time after door was opened for 30 sec. <sup>2)</sup> at 150 °C/302 °F (min)	5	6	9	13	20	14
Air change at 150 °C/302 °F (x/h)	13	19	10	10	10	9
<b>Electrical data</b>						
Housing protection acc. to EN 60529	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Nominal voltage (±10 %) 50/60 Hz (V)	230 1 N ~	230 1 N ~	230 1 N ~	230 1 N ~	400 3 N ~	400 3 N ~
Nominal power (kW)	0.8	1.2	1.6	2.7	3.4	5.0
Energy consumption at 150 °C/302 °F (Wh/h)	148	210	300	447	672	750
Model no. without RS 422	9010-0190	9010-0078	9010-0096	-	-	-
Model no. with RS 422	9010-0191	9010-0079	9010-0097	9010-0101	9010-0075	9010-0076

<sup>1)</sup> value without window // <sup>2)</sup> 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 with factory standard following DIN 12880 respecting the recommended wall clearances of 10 % of the height, width and depth of the inner chamber.

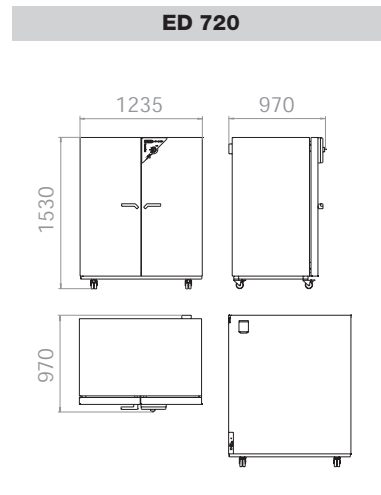
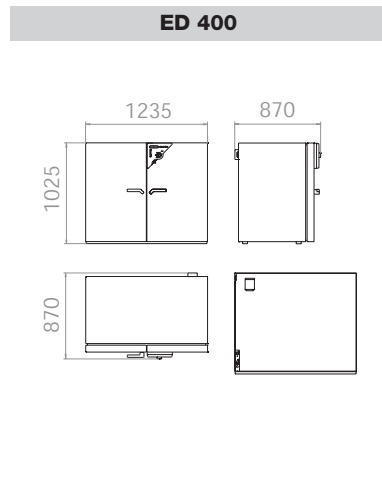
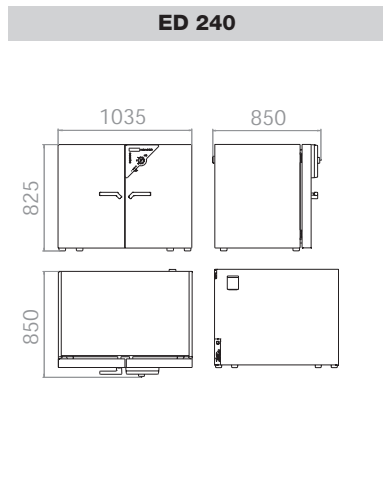
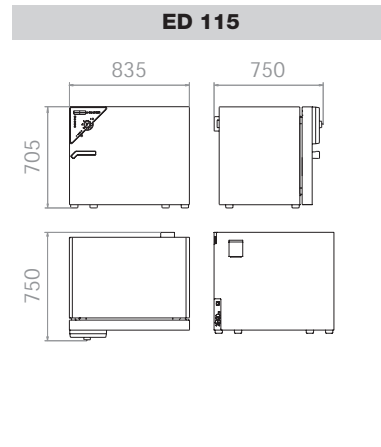
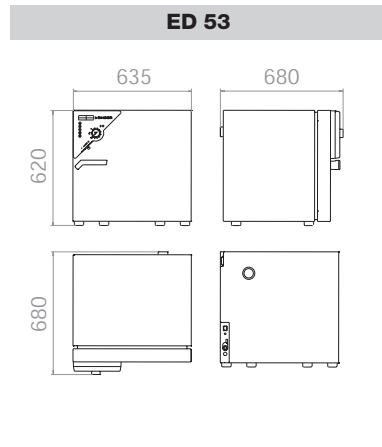
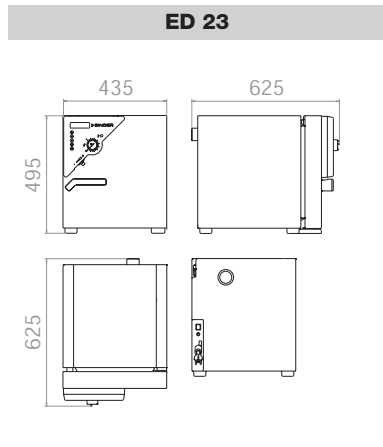
All indications are average values, typical for units produced in series. We reserve the right to change technical specifications at any time.



Current information and values are available at:  
[www.binder-world.com](http://www.binder-world.com)



► DIMENSIONS



► INSTALLATION REQUIREMENTS

	ED 23	ED 53	ED 115	ED 240	ED 400	ED 720
Nominal voltage ( $\pm 10\%$ ) 50/60 Hz (V)	230 1 N ~	230 1 N ~	230 1 N ~	230 1 N ~	400 3 N ~	400 3 N ~
Nominal power (kW)	0.8	1.2	1.6	2.7	3.4	5

