

Cabinet Ageing Ovens

for precision ageing of rubber and plastic materials



Option W

Triple glazed window and lamp illuminating the inner chamber

Cabinet Oven EB 04, excellent temperature stability and distribution is achieved by using an inner chamber with a controlled air flow.

The oven can be supplied in two sizes, with 60 and 120 l useful volume.

EB 04 is ideal for ageing finished products and large test pieces which are unsuitable for cell ovens. Both shelves and rods are supplied with the oven for accomodating most types of samples.



Cabinet Oven EB 10, ageing oven for precision ageing of rubbers and plastics under controlled conditions.

EB 10 is a budget version of the EB 04. The air pump and flowmeter/regulator are replaced by a factory set throttle to give a fixed air exchange rate of 7 or 12 changes per hour. The oven has separate systems for temperature control and indication with alarm.

Cabinet Oven EB 12, ageing oven for precision ageing of rubbers and plastics under controlled conditions and with high air speed.

The oven EB 12 has the same specification and external size as EB 10-60, except high air speed with laminar flow from bottom to top, meeting the requirements in ISO 188 method B.



For all Ovens

Option W, Triple glazed window and lamp illuminating the inner chamber

Option HT, temperature range to 300° C (not in combination with window)

Technical Specification, Cabinet Ageing Ovens

	EB 04	EB 10	EB 12
Temperature range, °C:	40 - 200 (HT=300°C)	40 - 200 (HT=300°C)	40 - 200 (HT=300°C)
Temp.control, 40 - 200 °C, °C:	± 0,5	± 0,5	± 0,5
201 - 300 °C, °C:	± 1,0	± 1,0	± 1,0
Temp.variation in time and space, °C:	± 0,25	± 0,25	± 0,25
Temperature sensors:	PT 100, 1/3 DIN	PT 100, 1/3 DIN	PT 100, 1/3 DIN
Air speed, m/s:	<0,001	<0,001	1± 0,5
Useful volume, l:	60 (120)	60 (120)	50
Dimensions, inner, w x h x d, mm:	450 x 450 x 300 (550 x 550 x 400, 120l)	450 x 450 x 300 (550 x 550 x 400, 120l)	450 x 450 x 250
Dimensions, external, w x h x d, mm:	750 x 700 x 550 (850 x 800 x 650, 120l)	750 x 700 x 550 (850 x 800 x 650, 120l)	750 x 700 x 550
Dimension, window, 3 glass, 200 x 300 mm:	option	option	option
Shelf positions:	3	3	-
Shelves:	2	2	-
Sample rod positions	15 (24 120l)	15 (24 120l)	15
Sample rods	10 (12 120l)	10 (12 120l)	15
Illumination of the inner chamber: 12V, 5 W halogen	option	option	option
Weight, kg:	approx. 87 (108 120l)	approx 82 (103 120l)	approx 82
Voltage, V/phase/freq:	220-240/1/50 (110-120/1/60)	220-240/1/50 (110-120/1/60)	220-240/1/50 (110-120/1/60)
Power, W:	2 200	2 100	2 200
Air changes, changes/hour:	3 - 14*	7 or 12	7 or 12
Standard	ISO 188, method A IEC 811	ISO 188, method A IEC 811	ISO 188, method B

*120 l only 3 - 7

Common specifications:

- The ovens perform well inside the apparatus requirements in ISO 188, IEC 811 and other equivalent standards.
- Special design with controlled air exchange rate and low or high air speed.
- The casing consists of steel, painted with epoxy powder paint in bluegreen colour.
- The inner chamber is made of stainless steel.
- Temperature controller with 0,1°C setpoint.
- Solid state relay for safe control.
- Temperature indicator with sensor in the inner chamber.
- Adjustable over and under temperature limits with alarm.
- Fixed over temperature fuse at 240 °C, and 340°C.
- Flowmeters with needle valves, for setting the air exchange rate (EB 04 only).
- The air speed is low and is dependent on the air exchange rate only, as specified in ISO 188 method A (EB 04, EB 10).
- High and laminar air speed as specified in ISO 188 method B (EB 12).
- Alarm for low air pressure (EB 04).
- Built in air pump (EB 04).
- Cooling channels in the casing for low surface temperature.
- Temperature controlled cooling fan for the electronics cabinet.
- Indication of power failure.
- Run-time meter.

Elastocon manufactures a range of ageing ovens for precision ageing of rubbers and plastics under controlled conditions. All ovens conform to ISO 188, IEC 811 and technical equivalent standards. The ovens are designed to give very low temperature variations in time and space, low or high air speed and controlled air exchange rate. Good control of temperature, air speed and air exchange rate has been shown to be very important to achieve good repeatability and reproducibility when doing heat ageing tests of polymer materials. Recent research done in Sweden shows that the air speed is a very important factor, influencing the ageing results by increased evaporation of softeners and antioxidants and by increased oxidation at higher air speeds. Elastocon ageing ovens have a low air speed, dependant of the air exchange rate only, or specified high air speed (1m/s) to allow tests to be performed investigating the influence of air speed. This is also included in the new version of ISO 188.

ELASTOCON reserve the right to modify this specification in part or in whole