

## Cell Ageing Ovens

for precision ageing of rubber and plastic materials



**Cell Oven EB 01**, with four cells. The test piece holder in each cell can take up to 24 standard test pieces.

The high temperature accuracy is achieved by using an aluminium block with channels for preheating of the air.



**EB 01 LTP**, with built in programmable water cooling. This version of the oven can operate between 20 °C to 200°C, which is very interesting for testing of stress relaxation. The cooling makes it possible to conduct automatic relaxation tests according to ISO 3384 method B, where the ageing is done at elevated temperature but the counterforce is measured at room temperature.

The temperature cycle is controlled from the PC-computer running the relaxation tests



**Test Tube Oven EB 11**, with 24 test tubes.

**Test Tube Oven EB14**, with 3 x 6 test tubes and three temperatures.

The ovens are designed for ageing tests according to ASTM D 865 Rubber-Deterioration by Heating in Air (Test Tube Enclosure).

The ovens can also be used for testing in liquids according to ASTM D 471 Effect of liquids.



**Cell Oven EB 07**, with three cells which can be used with individual temperatures. The test piece holder in each cell can take up to 24 standard test pieces.

The high temperature accuracy is achieved by using three separate extruded aluminium blocks with channels for preheating of the air.

EB 07 gives the laboratory extra flexibility when carrying out sample ageing at several different temperatures.

## Technical Specification, Cell Ageing Ovens

	EB 01	EB 01 LTP	EB 07	EB 11	EB 14
Temperature range, °C:	40 - 200 (HT=300°C)	20 - 200 (HT=300°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	± 1	± 1
201 - 300 °C, °C:	± 1,0	± 1,0	± 1,0	± 2	± 2
Temp. variation in time and space, °C:	± 0,25	± 0,25	± 0,25	± 0,5	± 0,5
Temperature sensors:	PT 100, 1/3 DIN	PT 100, 1/3 DIN	PT 100, 1/3 DIN	PT 100, 1/3 DIN	PT 100, 1/3 DIN
No. of cells:	4	4	3	-	-
Test Tubes:	-	-	-	24	3 x 6
Air speed, m/s:	<0,001	<0,001	<0,001	-	-
Useful volume, l:	4x2,4	4x2,4	3x2,4	-	-
Dimensions, inner, dia x h, mm:	100 x 300	100 x 300	100 x 300	-	-
Test Tube-dimensions dia x h, mm:	-	-	-	38 x 300	38 x 300
Dimensions, external, w x h x d, mm	575 x 465 x 400	575 x 465 x 400	575 x 465 x 400	575 x 465 x 400	575 x 465 x 400
No. of temperatures:	1	1	3	1	3
Weight, kg:	approx. 45	approx. 48	approx. 42	approx. 72	approx. 66
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)	220-240/1/50 (110-120/1/60)	220-240/1/50 (110-120/1/60)
Power, W:	900	900	700	900	700
Air changes, changes/hour:	3 - 20	3 - 20	3 - 20	-	-
Standard	ISO 188, method A IEC 811	ISO 188, method A IEC 811	ISO 188, method A IEC 811	ASTM D865 ASTM D471	ASTM D865 ASTM D471
		Programmable temperature from a PC	* HT only one cell		* HT only 6 tubes

### Common specifications:

- The ovens perform well inside the apparatus requirements in ISO 188, IEC 811 and other equivalent standards (EB 01, EB 07).
- The ovens perform well inside the apparatus requirements in ASTM D865 and ASTM D471 (EB 11, EB 14).
- Special design with controlled air exchange rate and low air speed. (EB 01, EB 07)
- The casing consists of steel, painted with epoxy powder paint in bluegreen colour.
- The inner chamber is made of aluminium.
- Temperature controller with 0,1°C set point.
- Solid state relay for safe control.
- Temperature indicator with sensor in the cell (EB 01, EB 07).
- Temperature indicator with sensor in one test tube (EB 11). Three test tubes (EB 14).
- Adjustable over and under temperature limits with alarm.
- Fixed over temperature fuse at 240 °C (or 340 °C).
- Flowmeters with needle valves, for setting the air exchange rate (EB 01, EB 07).
- The air speed is low and is dependent on the air exchange rate only, as specified in ISO 188 method A (EB 01, EB 07).
- Alarm for low air pressure (EB 01, EB 07).
- Built in air pump (EB 01, EB 07).
- Cooling channels in the casing for low surface temperature.
- Temperature controlled cooling fan for the electronics cabinet.
- Indication of power failure.
- Run-time meter.

### Accessories for the Elastocon Cell Ovens



**Stand EB 01.01**, stand to support the sample holder while mounting test pieces for ageing.



**Compression Set Rig EV 03**, according to ISO 815.



**Tension Set Rig EV 04**, according to ISO 2285.



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