

Ageing and Heat Resistance

Features

- Stable temperature range 60 - 250° C
- Seven separate test cells
- No volatile migration between cells
- Auto-tuning temperature control
- Adjustable air flow
- Accurate temperature and airflow
- Safety Temperature cut-out
- Sturdy Construction on stand and castor wheels

Improved Design



Accelerated ageing and heat resistance tests are designed to estimate the relative resistance of rubber to deterioration with the passage of time. For this purpose, the rubber is subjected to controlled deteriorating influences for definite periods, after which appropriate properties are measured and compared with the corresponding properties of the unaged rubber.

This air oven method of ageing exposes a test sample to elevated air temperatures, allowing its physical properties, such as tensile strength, to be measured and compared with those of an un-aged sample.

The Wallace O7E Laminar Air Flow Ageing Chamber, allows samples to be aged in separate cells, preventing any contamination from adjacent samples through the migration of volatile substances.

The oven includes a billet machined aluminium block containing seven cylindrical vertical cells. Avoiding the need for the valuable bench space, the O7E is designed as a complete unit with its own stand and castor wheels.

Preheated air at a controlled temperature is pumped from a manifold through a calibrated opening into the bottom of each cell, ensuring even air and temperature distribution.

To avoid contamination from re-circulation, the air is discharged to the atmosphere through the two covers at the top of each cell. The test samples are suspended from the inside of the top cover.

The oven includes a PID temperature controller with digital display. The controller is equipped with auto-ranging tuning, achieving a high level of accuracy and stability at the working temperature. Alarms on the controller abort the tests if the temperature goes outside its operating band, as can occur after a mains power failure.

A USB communication option is offered, allowing connection to a PC.

The oven is fitted with thermostats, which will switch off the power supply if the cell temperature exceeds 280°C. A valve positioned on the top of the control module regulates the airflow, which is measured accurately by a calibrated flow-



Plasticity: *The Wallace Multi-Cell Ageing Chamber (O7E)*

Specifications

Wallace Multi-Cell Ageing Chamber (O7E)	
Weight	113 kg
Dimensions (mm)	620 (w) x 500 x (d) x 960 (h)
Maximum Power	2.1kW
Chamber size	75mm (diameter) x 305 mm (depth)
Number of heating chambers	7
Operating temperature	60 - 250 °C ± 0.2°C
Air Flow	1 - 10 ft ³ /hr
Standards	BS ISO 188 ASTM D573



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