

THERMAL AGEING APPARATUS

The **6 Cell Thermal Ageing Apparatus** has been designed by Ray-Ran to study the thermal endurance characteristics of polymer materials and their ageing process by passing a constant flow of heated air over individual test samples. At set time intervals, the test samples are removed and inspected for any deterioration or degradation, making the apparatus ideal for research and development labs and product design. Designed in accordance with BS 903, BS 6746, BS 5691 and ASTM E95 international test standards, the apparatus is extremely cost effective and very simple to use.

The apparatus consists of 6 individual test cells with up to 8 samples per cell, thus allowing 48 simultaneous tests to be undertaken. The test samples are suspended in a controlled environment with temperature controlled air continually being circulated through each test cell at a constant flow rate. The test samples are checked for thermal ageing at set time intervals and the condition recorded.

The apparatus has an integrated temperature bath fitted with digital temperature controller, heater and a PT100 platinum resistance thermometer which accurately maintains the test temperature. To ensure an even temperature distribution across each of the six partially submerged stainless steel cells, two Archimedean type pumps are fitted to increase temperature stability within the bath. The air flow through each cell is heated via coils submerged in a heat transfer



medium and enters the cell through a diffuser nozzle for even air flow distribution. For safety, the apparatus is fitted with an over temperature thermostat which switches off the apparatus if it over heats.

The temperature of each cell is measured by a 3 wire platinum resistance thermometer sensor and is displayed on a switched digital temperature indicator. The temperature accuracy of each individual cell is 0.5°C. Sample support holders are also provided so test samples can be suspended in each cell prior to testing.

To ensure an accurate constant flow of air across the test sample, each cell is fitted with a flow meter which regulates the air flow input between 50-500 cm³/min. A single flow meter is also used to measure the air flow output from each cell. To monitor the duration of each test cell, the apparatus is also fitted with 6 individual hour counters which are set when the test is started.

THERMAL AGEING APPARATUS (RR/TAA)

TECHNICAL SPECIFICATION

- Integrated oil bath
- Dual pump stirrer system
- Digital temperature control
- Oil tank capacity – 30 litres
- 6 off Individual stainless steel test cells
- Test sample holders
- 50-500 cm³/min glass flow meter
- Output flow rate meter
- 6 way switchable temperature indicator
- Test cell hour counter
- Certificate of calibration
- Product user manual
- CE declaration certificate
- 1 year return to base warranty

OPTIONAL ANCILLARIES

- Heat transfer medium 30 ltrs

WEIGHTS & DIMENSIONS: RR/TAA

Net Weight (kg)	75
Width (cm)	60
Depth (cm)	60
Height (cm)	65