



UNIVERSE RING & BALL APPARATUS (SEMI AUTOMATIC) AZA0934

The AZA0934 Ring & Ball Apparatus (Semi-Automatic) from Azalab is an advanced laboratory system designed for the precise and repeatable determination of the softening point of bitumen, asphalt binders, and related materials.

This test is critical for evaluating the temperature susceptibility and high-temperature performance of bituminous binders, directly impacting pavement resistance to rutting and permanent deformation. By integrating semi-automatic control and detection, the AZA0934 enhances accuracy, repeatability, and operational efficiency, making it ideal for modern QC and research laboratories.



Key Functional Features

- Microprocessor-controlled heating for precise heating rate
- High-accuracy PT100 RTD temperature sensor
- Automatic ball drop detection (optical/contact sensor)
- Digital temperature display with fine resolution
- Integrated magnetic stirrer for uniform bath temperature
- Optional cooling fan for faster turnaround between tests
- User-friendly control panel
- Built-in over-temperature and safety protection

Standards Compliance

- ASTM D36 – Ring & Ball Softening Point
- EN 1427 – Bituminous binders
- AASHTO T53 – Softening Point Test
- IP 58 – Petroleum Testing
- IS 1205 – Softening Point of Bitumen



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TECHNICAL SPECIFICATION

Parameter	Specification
Operation	Semi-Automatic
Test Method	Ring & Ball Softening Point
Application	Bitumen and binders
Temperature Range	Ambient to ~150°C
Heating Control	Microprocessor controlled
Heating Rate	5.0 ± 0.5 °C/min
Temperature Sensor	PT100 RTD
Resolution	0.1°C / 0.01°C
Ball Drop Detection	Automatic (optical/contact)
Stirring System	Magnetic stirrer
Cooling System	Optional fan
Display	Digital
Power Supply	230V AC, 50/60 Hz
Standards	ASTM D36, EN 1427, IS 1205
Design	Compact benchtop