

APPARATUS FOR SOFTENING POINT OF ASPHALT (RING-AND- BALL TEST APPARATUS)



Apparatus for Softening Point of Asphalt (Ring-and-Ball Test apparatus) TT-36Z

Apparatus for Softening Point of Asphalt (Ring-and-Ball Test apparatus) conforms to the ASTM D36 Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus).

The apparatus covers the determination of the softening point of bitumen in the range from 30 to 160°C [86 to 320°F] using the ring-and-ball apparatus immersed in distilled water [30 to 80°C] or USP glycerin [above 80 to 160°C].

APPLICATIONS

The primary application of this apparatus is to determine the **softening point of bitumen (asphalt)**, in compliance with the **ASTM D36** standard. The test identifies the specific temperature at which the asphalt reaches a defined level of softness. This value is a critical measure of the material's consistency and its susceptibility to heat, which is essential for grading the binder and predicting its performance in high-temperature environments.

Key Industries

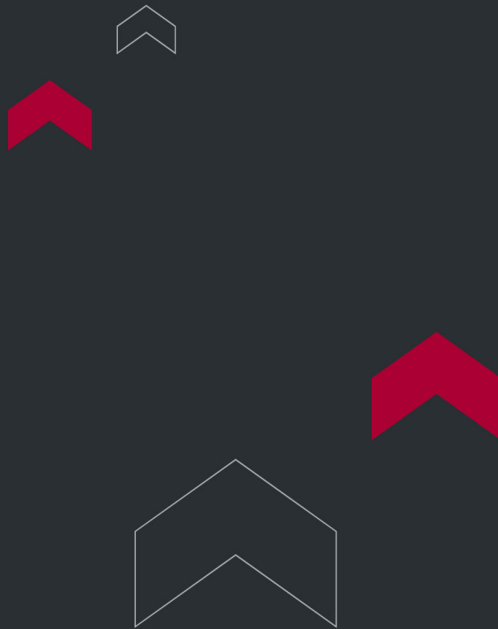
- **Asphalt Production & Petroleum Refining:** This is a fundamental quality control test used by producers to grade their asphalt binders and certify that they meet the required specifications for temperature stability.
- **Road Construction & Paving:** This test is crucial for highway agencies and paving contractors to ensure the asphalt binder will resist softening and deforming (rutting) under the high temperatures of summer and direct sunlight.
- **Roofing Manufacturing:** This is a key industry for this test. Producers of asphalt-based roofing materials, such as shingles and waterproofing membranes, must control the softening point to ensure their products remain stable and do not flow or soften excessively on hot rooftops.

FEATURES

- This device uses computer control for clear and visible detection, ensuring accurate and reliable results. The sample test is completed automatically, and the test result is printed after the test concludes.
- The test bath is heated linearly, with the bath liquid stirring effectively. The heating rate meets the required standards, allowing for the testing of two samples simultaneously.
- It features a high-temperature-resistant quartz cuboid glass tank, with a steel ball locating ring and steel ball dimensions meeting all specified requirements.

TECHNICAL SPECIFICATIONS

1. Rated Voltage: AC 220V $\pm 10\%$, 50Hz (110V also available)
2. Measuring Range: Softening point $\leq 80^{\circ}\text{C}$, $+5^{\circ}\text{C}$ to $+80^{\circ}\text{C}$
3. Softening Point $> 80^{\circ}\text{C}$, $+32^{\circ}\text{C}$ to $+160^{\circ}\text{C}$
4. Accuracy: 0.1°C
5. Stirrer: Electromagnetic stirring, with continuously adjustable speed
6. Heating Rate: Adjusts to $5.0 \pm 0.5^{\circ}\text{C}/\text{min}$ after 3 minutes
7. Result: Printer
8. Power Consumption: Heating rate of 600W, with total power dissipation $\leq 700\text{W}$
9. Flask Capacity: 1000ml
10. Ambient Requirements: Temperature up to 35°C , Humidity $\leq 85\%$



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