



UNIVERSE DIGITAL PENETROMETER AZA0939

The AZA0939 Digital Penetrometer from Azalab is an advanced, high-precision laboratory instrument designed for the accurate determination of consistency (penetration value) of bituminous materials, including bitumen, asphalt, greases, waxes, petroleum jelly, and other semi-solid substances.

Engineered for laboratories requiring maximum accuracy, repeatability, and operational efficiency, the AZA0939 integrates classical penetration testing methodology with digital measurement, automated timing, and controlled needle release, ensuring consistent and operator-independent results. The instrument is widely used in civil engineering laboratories, highway authorities, asphalt plants, petroleum testing facilities, and research institutions, with full compliance to international standards.

Key Functional Features

- High-Resolution Digital Measurement
LED/LCD display with 0.01 mm resolution for precise readings
- Programmable Timer Control
Adjustable test duration (0–99 seconds), standard 5-second test automated
- Automatic Penetration Control
Electronic release and locking for uniform test conditions





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- Robust Construction

Heavy-duty cast iron/steel base ensures vibration-free operation

- Precision Vertical Adjustment

Lead screw mechanism for accurate needle positioning

- Integrated Illumination & Magnifier

Enhances visibility for accurate needle placement

- Complete Accessory Package

Supplied with needle, weights, and sample containers

Applications

- Bitumen grading for road construction
- Asphalt plant quality control
- Petroleum, grease, and wax testing
- Research and development laboratories
- Academic and training institutions
- Semi-solid material testing (including cosmetic and industrial products)

Standards Compliance

Designed in full compliance with:

- ASTM D5 – Penetration of Bituminous Materials
- EN 1426 – Determination of Needle Penetration
- AASHTO T49
- IP 49
- IS 1203

Ensures globally accepted, reproducible, and auditable test results.



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TECHNICAL SPECIFICATION

Parameter	Specification
Model	AZA0939
Operation	Digital, automatic timing & release
Display	LED/LCD Digital
Resolution	0.01 mm
Measurement Range	0 – 400 penetration units
Timer	Electronic, programmable (0–99 sec)
Standard Test Time	5 seconds (adjustable)
Standard Load	100 g (extendable)
Plunger Weight	~47.5 g
Vertical Adjustment	Lead screw mechanism
Base	Heavy-duty cast iron/steel
Leveling	Adjustable screws with spirit level
Illumination	Integrated low-voltage lamp



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TECHNICAL SPECIFICATION

Parameter	Specification
Magnification	Mounted magnifying lens
Power Supply	230V, 50/60 Hz, single phase
Accessories	Needle (2.5 g), weights, sample cups
Standards	ASTM D5, EN 1426, AASHTO T49, IP 49, IS 1203
Dimensions	Approx. 200 × 280 × 410 mm
Weight	Approx. 8–12 kg
Origin	India

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