



SOIL CONE PENETROMETER AZA0851

The AZA0851 Precision Cone Penetrometer is a high-accuracy laboratory instrument designed for determining the liquid limit of fine-grained soils using the cone penetration method.

The system fully complies with IS 2720 (Part 5) and ASTM D4318, ensuring standardized and reliable test results.

Compared to the traditional Casagrande method, the cone penetrometer provides a more objective and repeatable measurement by directly correlating soil consistency with cone penetration depth, minimizing operator dependency and improving test precision.

Purpose & Importance

The liquid limit represents the moisture content at which soil transitions from a plastic to a liquid state.

Engineering Significance

- Soil classification (Atterberg Limits)
- Determination of plasticity index
- Evaluation of soil consistency and workability
- Design of foundations and pavements
- Assessment of soil behavior under varying moisture conditions

Standards Compliance

- IS 2720 (Part 5) – Methods of Test for Soils
- ASTM D4318 – Liquid Limit, Plastic Limit, and Plasticity Index





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Key Features & Benefits

- High Accuracy

Precision depth gauge with fine resolution ensures reliable readings

- Objective Testing Method

Eliminates operator subjectivity associated with groove closure methods

- Standards-Compliant

Fully aligned with IS and ASTM testing procedures

- Robust Construction

Stainless steel cone and rigid frame for long-term durability

- Smooth Operation

Low-friction release mechanism ensures consistent free penetration

- Compact & Stable

Laboratory-friendly design with stable base structure

Applications

- Liquid limit determination of soils
- Atterberg limits testing
- Geotechnical investigations
- Foundation and pavement design
- Civil engineering laboratories
- Academic and research institutions
- Quality control in construction projects.



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TECHNICAL SPECIFICATION

Parameter	Details
Model	AZA0851
Test Type	Liquid Limit (Cone Penetration Method)
Applicable Standards	IS 2720 (Part 5), ASTM D4318
Cone Material	Stainless Steel
Maximum Penetration	Up to 20 mm
Depth Gauge Resolution	0.1 mm
Release Mechanism	Manual / Lever Operated
Base	Rigid Metal Base
Sample Type	Fine-grained cohesive soils
Application	Laboratory soil testing
Brand	AZALAB