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SWELL TEST APPARATUS AZA0915

The AZA0915 Swell Test Apparatus from Azalab is a precision laboratory system designed for the determination of swell potential and swelling pressure of expansive soils. These soils—typically rich in highly active clay minerals such as montmorillonite—undergo significant volume changes with moisture variation, leading to heave, uplift pressure, and structural distress in foundations and pavements. The AZA0915 provides quantitative evaluation of soil expansion characteristics, enabling engineers to design safe, durable, and deformation-resistant foundations, particularly in regions with black cotton soils and other expansive formations.



Key Features

Rigid Load Frame

- Hand-operated, high-stiffness frame
- Ensures stable and controlled load application

Precision Consolidation Assembly

- Stainless steel ring for dimensional stability and corrosion resistance
- Supplied with base plate and collar

Uniform Load Distribution

- Perforated swell plate with adjustable stem
- Ensures accurate load transfer and alignment



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Efficient Saturation System

- High-permeability porous stones (top & bottom)
- Promotes uniform wetting and drainage

Accurate Measurement System

- Dial gauge: 25 mm range, 0.01 mm least count
- High-sensitivity proving ring for swelling pressure

Integrated Soaking Arrangement

- Dedicated soaking tank for controlled immersion

Durable Construction

- Corrosion-resistant materials suitable for repeated wet testing cycles

Standards Compliance

- IS 2720 (Part 41):1977 (Reaffirmed 2021) – Swelling Pressure of Soils
- ASTM D4546 – One-Dimensional Swell or Collapse of Soils
- AASHTO T 216 – Consolidation Properties of Soils

Consolidation Mould (Ring)

- Internal Diameter: 100 mm
- Height: 127.3 mm (~1000 ml volume)
- Material: Stainless Steel

Perforated Swell Plate

- Diameter: 100 mm
- Thickness: 16 mm
- Adjustable stem

Porous Stones

- Quantity: 2 (top & bottom)
- Diameter: 100 mm
- Thickness: 12.7 mm



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Dial Gauge

- Range: 25 mm
- Least Count: 0.01 mm

Proving Ring

- Capacity: 2.5 kN (250 kgf) or as specified
- High sensitivity

Accessories

- Load transfer bar and steel ball
- Spacer (100 mm dia × 12.7 mm thick)
- Soaking tank (250 mm dia × 210 mm height)

TECHNICAL SPECIFICATION

Feature	Specification
Model	AZA0915
Test Type	Swell Potential & Swelling Pressure
Application	Expansive / Black Cotton Soils
Load Frame Capacity	50 kN (5000 kgf)
Operation	Hand-operated