DIGITAL DIRECT / RESIDUAL/ SHEAR APPARATUS AZA0900

The AZA0900 Digital Direct / Residual Shear Apparatus is a high-precision, motorised geotechnical testing system designed for the accurate determination of soil shear strength parameters, including both peak and residual conditions. It is an advanced solution for laboratories requiring reliable evaluation of cohesion (c) and angle of internal friction (φ) for critical engineering applications.

Unlike conventional shear machines, the AZA0900 is specifically engineered to perform residual shear testing, enabling analysis of long-term soil behavior after large deformations. This capability is essential for landslide studies, slope stability analysis, and reactivated soil mass evaluation.

Key Features & Benefits

- Dual capability for peak and residual shear strength measurement
- Fully digital system with load cells and LVDTs for high accuracy
- Motorised constant strain rate ensures repeatability
- Real-time digital display and data logging
- PC connectivity for automated analysis and reporting
- Ideal for advanced geotechnical investigations

Standards Compliance

- ASTM D3080 – Direct Shear Test of Soils
- IS 2720 (Part 13) – Direct Shear Test
- Relevant ASTM / ISSMGE Guidelines

AZA LAB UNIVERSE

TECHNICAL SPECIFICATION

Parameter	Specification
Model	AZA0900
Test Type	Direct Shear & Residual Shear
Operation	Motorised, Constant Rate of Strain
Shear Rate Range	0.001 – 2.0 mm/min (typical)
Normal Load Capacity	Up to ~20 kN
Shear Load Capacity	Up to ~10 kN
Load Measurement	Electronic Load Cells
Displacement Measurement	LVDTs (Horizontal & Vertical)
Shear Box Sizes	60×60 mm, 100×100 mm, or circular
Normal Load Application	Dead Weights with Lever System
Data Display	Digital (Load & Displacement)

TECHNICAL SPECIFICATION

Parameter	Specification
Connectivity	USB / RS-232 (PC Interface)
Power Supply	230 V AC, 50 Hz
Construction	Heavy-duty steel frame
Compliance	ASTM D3080, IS 2720 (Part 13)