AZA LAB / MATERIAL TESTING EQUIPMENT

DIRECT SHEAR TEST APPARATUS

AZA0901 | TECHNICAL DATASHEET



PRODUCT OVERVIEW

The AZA0901 Motorized Direct Shear Test Apparatus is designed for laboratory determination of soil shear resistance using a 60 × 60 × 25 mm specimen. The loading unit applies normal load directly or through a counterbalanced detachable lever, while the motorized drive provides twelve selectable shear displacement rates.

The split shear box is mounted in a roller-supported housing for low-friction movement. The loading yoke accepts force through a recessed steel ball in the loading pad or directly through its boss. The system is supplied without a proving ring; measurement instruments are listed as essential accessories.

KEY CAPABILITIES

- Motorized direct shear apparatus with 12 selectable displacement rates
- Normal stress capacity up to 8 kg/cm^2
- 60 × 60 × 25 mm split shear box and specimen cutter
- Direct or counterbalanced lever loading arrangement
- V-strip and roller-strip guided shear box housing
- 230 V AC single-phase operation; digital version also available

TECHNICAL SPECIFICATIONS

01 / TECHNICAL SPECIFICATIONS

Parameter	Specification
Model	AZA0901
Equipment	Motorized Direct Shear Test Apparatus
Referenced standard	IS 2720 (Part XIII)
Specimen size	60 × 60 × 25 mm
Normal stress capacity	8 kg/cm^2 (supplier stated)
Normal load	Direct or detachable counterbalanced lever
Shear drive	Motorized; 12 displacement rates
Rate range	0.0002–1.25 mm/min (listed settings)
Power supply	230 V AC, single phase
Net weight	Approx. 140 kg
Included weight increments	0.05 kg/cm^2 × 4; 0.1 × 1; 0.2 × 1; 0.5 × 3; 1.0 × 1
Proving ring	Not included; 200 kg accessory specified

The soil specimen is placed between gripper plates in the split shear box and subjected to the selected normal load. The motorized drive displaces one half of the box relative to the other at a chosen rate; shear force and displacement are monitored using appropriate proving ring and dial gauges.

Selectable displacement rates (mm/min), as supplied: 1.25, 0.625, 0.25, 0.125, 0.05, 0.025, 0.01, 0.005, 0.002, 0.001, 0.004 and 0.0002.

Supplied assembly: loading unit and yoke, split shear box, one pair each of plain and perforated gripper plates, one pair of porous stones, loading pad, shear box housing with two ball-roller strips, specimen cutter and weight set. The proving ring is excluded.

Essential accessories (separately specified): 200 kg high-sensitivity compression proving ring; consolidation dial gauge 0.01 mm × 25 mm; strain dial gauge 0.01 mm × 25 mm.

Optional: additional weights for 5 kg/cm^2 normal stress, 60 × 60 mm soil sampler and pack of 50 test forms.

Spare porous stones available in pairs.

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