SOIL > CYCLIC

CYCLIC TRIAXIAL TESTING MACHINE (Automatic)

Code : T833



- Designed for determining cyclic strength (liquefaction resistance), small-strain shear modulus & damping, and resilient behavior of soils under repeated loading. Suitable for CU cyclic programs and pavement-style loading workflows.
- Fully automated triaxial platform integrating servo-actuated axial loading, dual pressure/volume control (cell & back pressure), and synchronized high-rate data acquisition for closed-loop control in load or deformation.
- Cyclic loading with sinusoidal control for ASTM D5311/D3999;
- End-of-test criteria configurable by cycle count, axial strain limit, or pore-pressure ratio (ru), with real-time plots of q–εa, Δu–N, and stress path to support rapid interpretation.
- Flexible specimen configuration with common diameters (38/50/70/100 mm), interchangeable caps/pedestals/porous stones, and optional local strain or bender-element kits.

STANDARDS

ASTM D5311 • ASTM D3999 • ASTM D4767 • ASTM D7181 • ASTM D2850 • AASHTO T 307 • BS 1377-7 • BS 1377-8

TECHNICAL SPECIFICATIONS

- Capacity (dynamic axial): 15 kN
- Capacity (static axial): 10 kN
- Cyclic waveform: Sinusoidal (standard)
- Cyclic rate: Up to 10 Hz
- Control modes: Load control (deviator stress) / deformation control (axial strain)
- Cell pressure range: 0–1000 kPa
- Back pressure range: 0–1000 kPa
- Displacement transducer: ±25–50 mm (model-dependent)
- Specimen Size: Ø36–150 mm (standard Ø50 mm)
- Consolidation modes: Isotropic / anisotropic / K_0
- Software: Test staging (saturation, consolidation, cyclic), real-time plots, auto-report templates
- Power: Single-phase 208–230 V, 50/60 Hz (region-dependent)
- Optional ALFA Cloud integration for secure, real-time data upload, centralized storage, and web access to results.

EQUIPPED WITH

- Servo-actuated load frame with integrated controller and encoder
- High-pressure triaxial cell with caps, pedestals, porous stones, tubing
- Two pressure/volume controllers for cell and back pressure with de-airing kit
- Axial load cell, axial displacement transducer, pore and cell pressure transducers
- PC control software with cyclic & static triaxial modules and report templates

SUPPLIED WITH

- Membranes, O-rings, filter papers
- Essential fittings and hoses set
- Startup consumables kit for standard specimen sizes

ORDERING INFORMATION

Item Name	Item Code
CYCLIC TRIAXIAL TESTING MACHINE (up to 70 mm)	T833A07XU
DYNAMIC ACTUATOR and CONTROLLING UNIT for T333A	T833P001U