CYCLIC SIMPLE SHEAR SHEARTRAC II

The ShearTrac II cyclic direct simple shear (CDSS) system performs the consolidation and cyclic shear phases of a test under fully automatic control. Typical applications include earthquake engineering, liquefaction analysis, or offshore studies. The DSS test generates a fairly homogeneous state of shear stress throughout the specimen, which provides initial stress condition, stress path, and deformation configuration that models numerous field loading conditions more closely than other strength tests (such as triaxial). The system utilizes a micro-stepper motor to apply the vertical load and an advanced zero-backlash servo actuation system to apply shear force and displacement to the soil specimen.

- Consolidate with or without initial shear stress
- System includes a highly rigid frame and an innovative mechanical locking system for reliable passive volume control
- Post cyclic drained/undrained shearing
- Unmatched automation from test start to finish - 2 to 32 times faster results and labor time savings of 30% to 95% vs. manual testing
- Flexible design - perform additional testing on the same platform and save money and space in your lab
- Full test control and remote monitoring allows you to take your testing on the go - view real-time results, check test quality, and change parameters
- Convenient reporting - produce complete, compliant reports instantly or export data for desired manipulation
- Designed for consistent and repeatable testing you can be confident in

Applicable Test Standards

ASTM D2166, D2435, D3080, D4186, D4546, D6528, D8296 | AASHTO T208, T216, T236
BS 1377-5, 1377-7 | ISO/TS 17892-5, 17892-10 | AS 1289.6.6.1, 1289.6.2.2
**TECHNICAL SPECIFICATIONS**

**LOAD CAPACITY**
- Horizontal load capacity up to 4.5 kN (1 klbf)
- Vertical load capacity up to 11 kN (2.5 klbf)

**VERTICAL/HORIZONTAL MOTORS**
- Micro-stepper (V) and zero backlash servo actuation system

**CONTROL**
- Stress (load)
- Strain (displacement)

**TYPE OF CYCLIC LOADING**
- Cyclic stress/strain controlled sinusoidal and irregular user defined waveform

**CYCLIC RATE**
- Up to 5 Hz; Typical test range 0.033 to 2 Hz

**VERTICAL TRAVEL**
- 50 mm

**HORIZONTAL TRAVEL**
- 50 mm

**POWER**
- 208-240 V, 50/60 Hz, 1 phase

**INCLUDED**
- Geo-NET network card and cable to link to PC
- CDSS software module to automatically run and report tests

**ACCESSORIES**
- Top & bottom cap, bronze sintered porous stones with pins, teflon coated stack of rings, base plate - 50 mm (2.0 in) or 63.5 mm (2.5 in) or 100 mm (4.0 in) kits

**WARRANTY**
- 12 month warranty; extended warranties available

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**User-Friendly Interface**

Typical Test Output (example)

![Typical Test Output](image)

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