LARGE CYCLIC SIMPLE SHEAR
SHEARTRAC III - DSS

The ShearTrac III - DSS is a universal shear system capable of performing the consolidation, static and cyclic direct simple shear phases on large (12 in/ 305 mm) diameter samples under full automatic control. 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 any other strength tests such as triaxial. The system consists of a computer-controlled unit that utilizes a micro-stepper motor to apply the vertical load and an advanced servo motor to apply the horizontal cyclic load to the soil specimen.

- Consolidate isotropically with or without initial shear stress
- Run drained and undrained (constant load/volume with active or passive volume control) tests
- Post cyclic drained/undrained loading
- 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 D6528, D2435
# TECHNICAL SPECIFICATIONS

## LOAD CAPACITY
- 22 kN (5 klbf) horizontal
- 45 kN (10 klbf) horizontal
- 45 kN (10 klbf) vertical
- OR 45 kN (10 klbf) vertical

## VERTICAL/HORIZONTAL MOTORS
Micro-stepper and servo motor systems with built-in controls

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

## CYCLIC RATE
Up to 10 Hz; Typical test rate up to 2 Hz

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

## VERTICAL TRAVEL
90 mm (3.5 in) resolved to 0.002 mm (0.00008 in)

## HORIZONTAL TRAVEL
90 mm (3.5 in) resolved to 0.002 mm (0.00008 in)

## POWER
120/208 V, 3 phase

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

## ACCESSORIES
- Gripping plates optional for GCL testing
- 12 in diameter ring set
- DSS software
- Direct Shear software & shear box

## WARRANTY
- 12 month warranty; extended warranties available

## User-Friendly Interface

**Typical Test Output (example)**

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