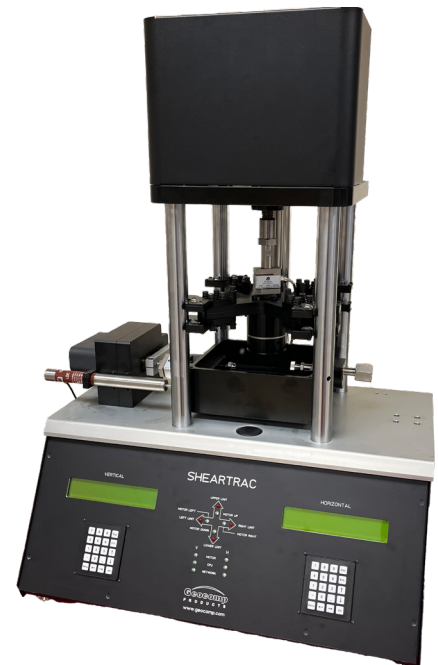


CYCLIC SIMPLE SHEAR

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
- Built in safety features
- Smart and sophisticated technologies to simplify testing
- Repeatable, reliable, and accurate results you can trust
- Real-time and remote test parameter changes for quality control
- Convenient reporting and data export
- Faster, smarter, better: designed with full automation and manual control options
- Easy upgrade to perform additional test types
- Designed and manufactured in the USA



Standard Cyclic Direct Simple Shear ShearTrac II

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

CYCLIC SIMPLE SHEAR SHEARTRAC II



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

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

WEIGHT

63 kg (140 lbs)

DIMENSIONS

660 x 406 x 813 mm (26 x 16 x 32 in)

INCLUDED

- GeoNet-U USB 2.0 network adapter and cable to link to PC/laptop
- 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

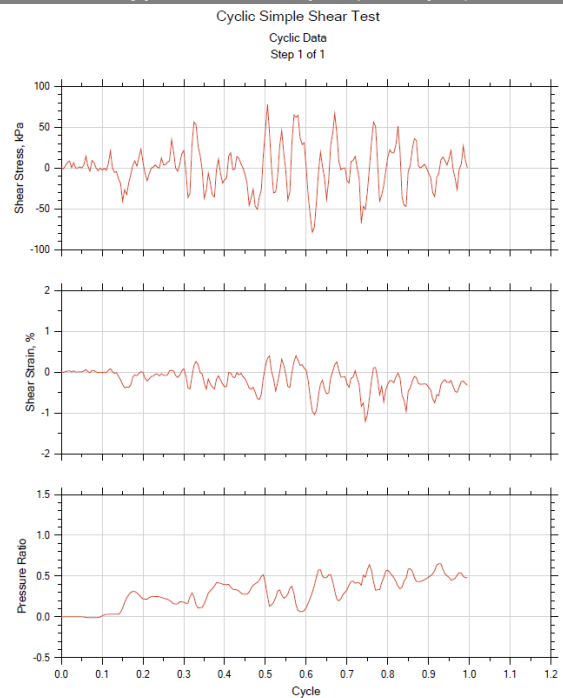
12 month warranty; extended warranties available

User-Friendly Interface

	Strain Amplitude %	Maximum Stress Ratio	Cycle Period s	Maximum Number of Cycles	Number of Readings per Cycle
1	1	0.8	10	3000	200
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0

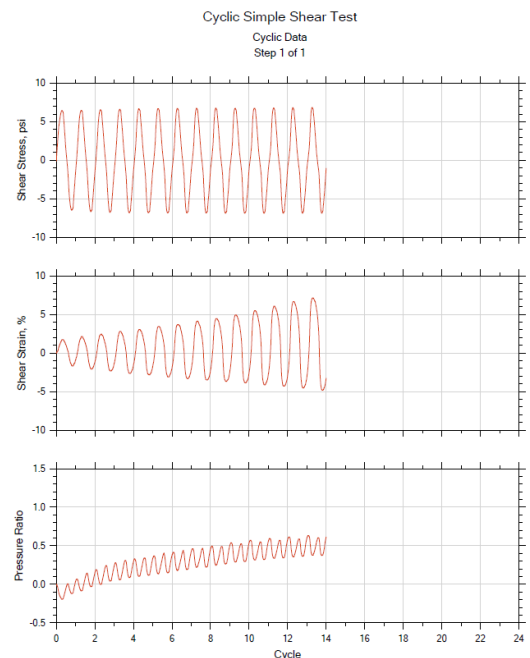
Cyclic Control: Desired Response Gain: Max. Mean Horiz. Strain: %
 Normal Control: Gain Update Period: Cycles Max. Total Horiz. Strain: %
 Constant Volume Gain: Gain Update Window: Cycles Filter Norm. Cutoff Freq:

Typical Test Output (example)



Project Name: USA	Location:	Project Number: Seismic
Boring Number:	Tester: bn	Checker: dl
Sample Number:	Test Date: 01/10/2018	Depth:
Test Number:	Preparation:	Elevation:
Description: Cyclic Simple Shear test with ChiChi Earthquake Record - Vertical effective stress is 300 kPa		
Remarks:		

Typical Test Output (example)



Project Name: USA	Location:	Project Number: Seismic
Boring Number:	Tester: gf	Checker: la
Sample Number:	Test Date: 02/07/18	Depth:
Test Number:	Preparation: intact	Elevation: ---
Description: Moist grey and brown sandy clay		
Remarks: Cyclic Simple Shear Test with post cyclic shear phase - Vertical effective stress is 19.58 psi		

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