

Direct Simple Shear ShearTrac II-DSS

Benefits and Features

- Choose load capacity to fit user needs up to 11 kN (2,500 lbs.)
- Total automation, control, data collection and reporting of test results
- Prepare tables and plots of report quality within minutes of completing a test
- Geo-NET compatibility lets unit be accessed and controlled over a computer network
- Generate columns of data for easy reduction using your own spreadsheet software
- Accurate displacement rate control from 0.00003 to 15 mm per minute (0.000001 to 0.6 inches per minute)
- Stand alone through front keypad and LCD menu capability

Applicable Test Standards

- ASTM D6528 Consolidated Undrained Direct Simple Shear Testing of Cohesive Soils
- ASTM D2435 / T216 One-Dimensional Consolidation Properties of Soils

The ShearTrac II-DSS system is a universal shear system capable of performing the consolidation and shear phases of a direct simple shear test under full automatic control. The direct simple shear device is a way to measure undrained shear strength of soils that reflects the average shear strength mobilized in the field during failure of embankments on soft soil foundations and deep excavations in clay. 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 test systems such as triaxial. The system consists of a computer-controlled unit that utilizes micro-stepper motors to apply the vertical and horizontal loads to the soil specimen.

The system is capable of running a consolidation phase for up to 32 increments automatically. Horizontal shearing can be applied at a specified rate of deformation or at a specified rate of horizontal force change. The constant volume condition during the shear is maintained through a closed loop computer control with the vertical displacement sensor as the feedback. The system is capable of displaying the current status of a test and graphically portraying the progress of the test in real time. The system includes the capability for the operator to alter the test process and conditions at any stage of the test.



Standard ShearTrac II System

