

### Benefits and Features

- Linear bearings for minimum horizontal friction
- Two sets of limit switches to prevent over traveling
- Built-in 4-channel data acquisition with 16-bit resolution
- Stand alone capability
- Two universal load cells with 11 kN (2,500 lbs.) capacity
- Accurate displacement rate control from 0.00003 to 15 mm per minute (0.000001 to 0.6 inches per minute)
- Built-in electronic controls for automatic display of data and control of test
- Windows® friendly user interface
- Fully automated incremental consolidation, direct and residual, and interface shear testing capabilities options

### Applicable Test Standards

- ASTM D5607
- ASTM D5321
- ASTM D3080 / T236
- ASTM D2435 / T216

The Rock Shear Interface (RSI) is a versatile system capable of performing the consolidation and shearing phases for natural and artificial rock joints on rock cores up to 83 mm (3.26 in.) in diameter, direct and residual shear on soils as well as for determining the interface frictional properties of soil and geosynthetics on sample sizes up to 150 x 150 mm (6 x 6 in.).

The system consists of a computer controlled unit that utilizes micro stepper motors to control and apply verticals load and horizontal displacements. Built-in electronics control test and display data in real time. The computer controlled program runs under the latest Windows® platform. It includes the capability to display the current status and graphically portray the progress of the test in real time. The system also includes the capability for the operator to alter the test process and conditions at any stage during the test.

This is a turnkey system that includes hardware and software for recording all test input data and settings of selected test parameters, performing standard engineering calculations on the data, and producing graphically plotted and printed output in accordance with current testing standards.



Standard Fully-Automated  
Rock Shear System

# Rock Shear Interface

## TECHNICAL SPECIFICATIONS

### CAPACITY

11 kN (2,500 lbs.) vertical and horizontal

### MOTOR

Stepper motor with built-in controls

### VERTICAL MOTOR

Stepper motor with built-in controls for vertical load

### HORIZONTAL MOTOR

Stepper motor with built-in controls for horizontal load

### SPEED RANGE

0.00003 to 10 mm per min.  
(0.000001 to 0.40 in. per min.)

### DIMENSIONS

width = 432 mm (17 in.)  
length = 902 mm (35.5 in.)

### HORIZONTAL TRAVEL

75 mm (3 in.) resolved to 0.002 mm  
(0.00008 in.)

### VERTICAL TRAVEL

50 mm (2 in.) resolved to 0.002 mm  
(0.00008 in.)

### POWER

110/220 V, 50/60 Hz, 1 phase

### MODEL

**RSI-ShearTrac-II:** 11 kN (2,500 lbs.)  
frame capacity

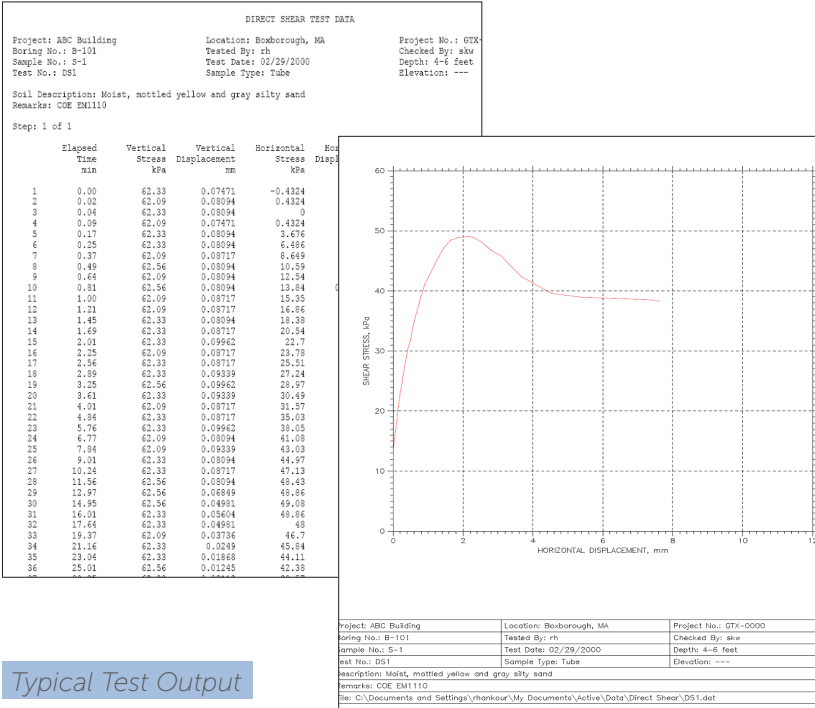
### ACCESSORIES

Geo-NET™-PC: Network card and cable to link RSI-ShearTrac-II frame to PC

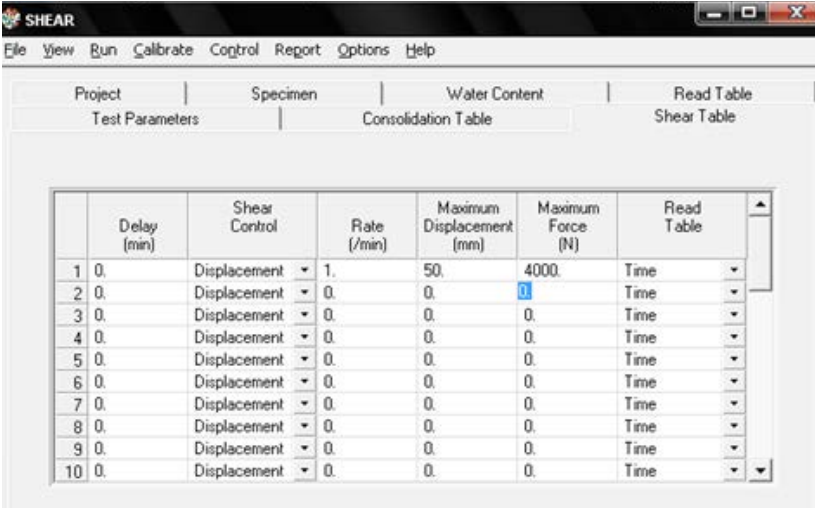
RSI-SHEAR: Software package to automatically run consolidation and direct residual shear test either load or displacement control

SHEAR.REPORT: Editing/reporting software package

150 mm (6 in.) shear rings: For direct residual and interface shear test



Typical Test Output



User-friendly Interface