

Servo-Controlled Rock Direct Shear and Triaxial System (RDS-500)



- Closed loop servo control of double acting (push/pull) 500 kN (50 ton) shear load actuator with ± 50 mm stroke
- 1500 kN (150 ton) normal load capacity with 100 mm stroke
- Includes adjustable locking mechanism to prevent rotation of the top box in any one direction, two directions, or none (fixed so that no shear plane rotations are allowed)
- Accepts 150 mm (6") diameter samples & 100 x 100 mm cubical specimens up to 150 mm high
- Software for automatic performance of direct shear tests with constant normal stress or normal stiffness
- Capable of performing unconfined or triaxial tests with optional hardware
- Other load capacities and specimen size dimensions are available, including large-scale test systems for shear loads of up to 1,000 kN (100 ton) and specimen sizes up to 300 mm diameter or side

DESCRIPTION

The GCTS Direct Shear and Triaxial System for Testing Rocks is a versatile device for testing a wide range of rock specimen configurations. Cylindrical cores, cubes, prisms, and rock fragments can be used to determine the shear strength.

This system features electro-hydraulic closed-loop digital servo control of the shear and normal loads for test automation. The included software program accepts inputs from the normal load sensor and up to three normal deformation sensors (the software calculates automatically the average normal deformation). Loads or deformations for both the shear and normal actuators can be set to automatically perform advanced tests such as the Constant or Calculated Normal Stiffness Direct Shear Test.

This system also can be provided with an optional triaxial cell, pressure intensifiers, unconfined loading platens, indirect tension (Brazilian) platens, etc. to perform most of the laboratory mechanical tests required for rocks.

SPECIFICATIONS

Please contact GCTS for complete specifications.