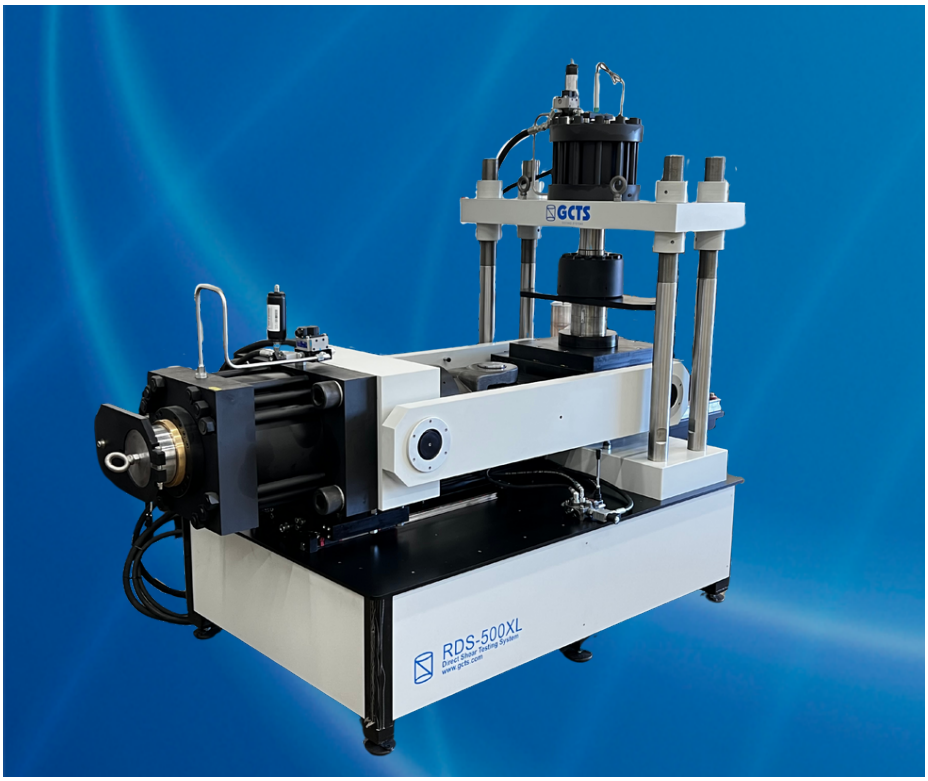
Servo-Controlled Rock Direct Shear System (RDS-500XL)



- Closed loop servo control of double acting (push/pull) ±1,500 kN (150 ton) shear load actuator with ±50 mm (2") stroke and 1000 kN (100 ton) normal load capacity with 100 mm (4") stroke
- Normal load stiff reaction frame mounted on sliding bearings to minimize horizontal friction while keeping the normal load vertical throughout the full shear displacement
- Accommodates up to 300 mm x 300 mm (12" x 12") square specimens up to 100 mm (4") high
- Software for automatic performance of direct shear tests with constant normal stress or normal stiffness
- Real time graphical display of test progress

DESCRIPTION

The GCTS Rock Direct Shear System is a cost-effective tool for testing various rock specimen shapes like cylindrical cores, cubes, prisms, and rock fragments to assess shear strength. It is equipped with electro-hydraulic closed-loop digital servo control for automating shear and normal loads during testing.

Software processes inputs from a standard load sensor and up to four normal deformation sensors, calculating the average normal deformation automatically. It allows users to preset loads or deformations for shear and normal actuators to conduct advanced tests like the Constant or Calculated Normal Stiffness Direct Shear Test. Specimens are cured in removable rings and transferred to the shear box for preparing multiple specimens efficiently.