

## Direct Shear Testing System for Soils (SDS-100)



- Closed-loop servo control of double acting (push/pull) 20 kN (2 ton) shear load actuator with  $\pm 25$  mm stroke & 20 kN
- (2 ton) normal load capacity with 50 mm stroke
- Normal load reaction support mounted on sliding bearings to minimize horizontal friction
- Accepts specimens with up to 100 mm (4") diameter or 70 mm (2.75") square specimens
- Software for automatic performance of direct shear tests with constant normal stress or normal stiffness
- Real time graphical display of test progress
- Mounted on a cart with casters
- Other load capacities & specimen size dimensions are available, including large-scale test systems for shear loads of up to 1,000 kN (100 ton) & specimen sizes up to 300 mm diameter or side

### DESCRIPTION

This system features electro-hydraulic closed-loop digital servo control of the shear and normal loads for test automation. Loads or deformations for both the shear and normal actuators can be prescribed for automatically performing conventional direct shear

tests as well as more advanced tests. This system can be easily programmed to perform tests such as the constant normal stiffness test where the normal load is a function of a prescribed stiffness for simulating actual compressibility of a ground shear plane (e.g. soil-pile interaction).

The GCTS Direct Shear Test System is especially well suited to test coarse granular materials because of its large sample size and high load capacity.

A major advantage over conventional motorized system is that this system eliminates vibrations that can disturb or compact granular specimens.

The SDS-100 is mounted on a convenient cart with caster that not only supports the apparatus but also houses the hydraulics inside.

### SPECIFICATIONS

Power: . . . . . 120 or 220 VAC

(Contact GCTS for full specifications and available options)

### SHIPPING

Weight : . . . . . 250 kg.

Dimensions: . . . . . 1.0 m x 1.2 m x 1.2 m