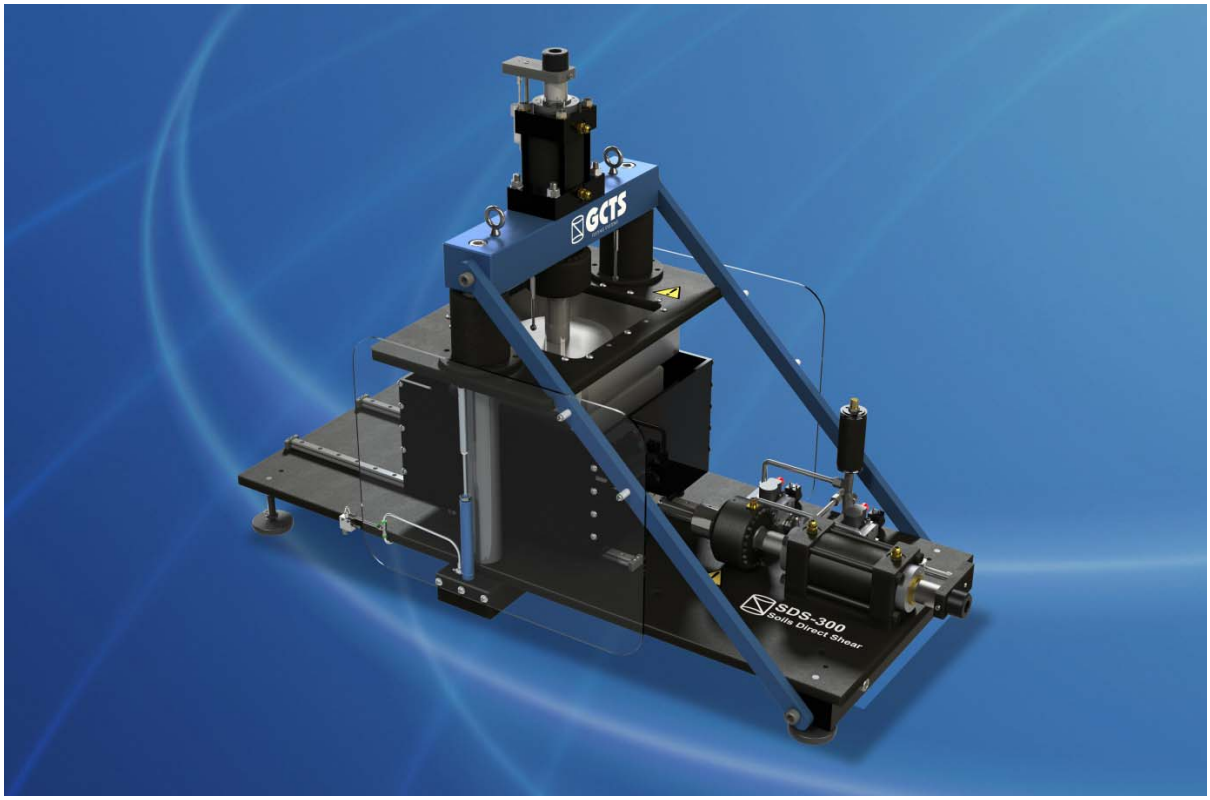
Accuracy Is The
Underlying Strategy.

GCTS
TESTING SYSTEMS

Direct Shear Testing System for Soils and Asphalts (SDS-300)



- Closed-loop servo control of double acting (push/pull) 100 kN (10 ton) shear load actuator with 100 mm (±50 mm) stroke & 100 kN (10 ton) normal load capacity with 50 mm stroke
- Normal load reaction support mounted on sliding bearings to minimize horizontal friction
- Accepts 300 mm (12") square specimens
- Software for automatic performance of direct shear tests with constant normal stress or normal stiffness
- Available interface platens to test soils, asphalt and geo-membranes.
- 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 top shear box has the horizontal translation and the bottom shear box is mounted on pre-loaded sliding bearings to minimize horizontal friction. Set screws with nylon tips are used to adjust the shear gap although the top shear box is suspended on springs that balance its own weight allowing for different shear gaps settings and the precise measurement and control of the normal stress. Included with this system are loading plates with square grid of retractable pins spaced at 25 mm in both directions to grab different type of samples such as soils, asphalt and other materials. Also included is a water reservoir to submerge specimens during testing.

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

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

SPECIFICATIONS

Contact GCTS for full specifications.