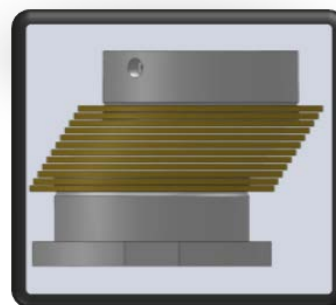
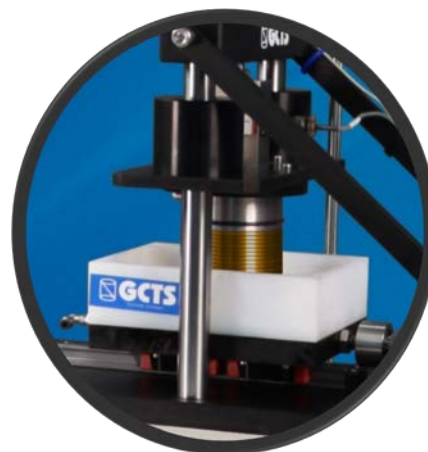


Simple Shear Testing System for Soils (SSH-25)



SPECIFICATIONS

- Dynamic and static simple shear apparatus capable of applying cyclic loads up to 5 Hz (30 mm./sec max. velocity)
- Closed-loop servo-control of double acting (push/pull) 18 kN shear load actuator with ± 25 mm. stroke & 18 kN normal load capacity with 50 mm. stroke
- 100 mm. (4") diameter standard specimen size. Optional 70 mm. (2.8") diameter specimen platens and K_0 rings available
- Normal load reaction support mounted on sliding bearings to minimize horizontal friction
- Software for automatic performance of simple shear tests with real time graphical display of test progress
- Load frame, signal conditioning unit, and hydraulic pump mounted to a moveable cart
- Optional accessories and software to perform direct shear tests

DESCRIPTION

This system features a closed-loop digital servo-control of the shear and normal loads for test automation. Stresses or strains for both the shear and normal actuators can be prescribed to automatically perform conventional simple shear tests as well as cycle dynamic tests, such as liquefaction or cyclic strength.

A high-precision vertical deformation sensor is included to perform liquefaction tests on dry sands by specifying a zero-vertical deformation during cyclic shear loads. The electro-hydraulic loading system for both the normal and shear load actuators can apply or maintain the prescribed loads or deformations with a very small compliance.

The system includes a stiff lateral support of the top cap to minimize rotation compliance while allowing it to move freely in the vertical direction. The sliding base is mounted on pre-loaded linear bearings to keep both caps parallel to each other during simple shear tests.

The SSH-25 is mounted on a convenient cart with casters that not only supports the apparatus, but also houses the hydraulics inside. The wireless interface and standard power allows the user to place this system anywhere where there is a power source.