SOILMATIC — SOIL TESTING EQUIPMENTS

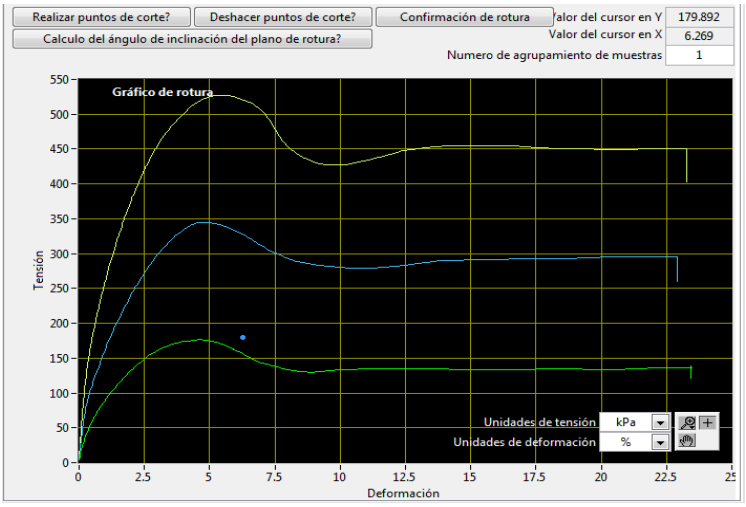
S0125/SM/VC - Automated system for direct shear test. SOILMATIC VC

Horizontal shearing can be applied at a specified rate of deformation or at a specified rate of horizontal force change.

Proetisa's automated direct shear apparatus is a universal shear system capable of performing the consolidation, drained and undrained direct shear or residual shear stages in a completely automated way.

Constant volume condition during the shear

The Automated system for direct shear test is a universal shear system capable of performing the consolidation and shear phases of a direct simple shear test under full automatic control.
The direct simple shear device is a way to measure undrained shear strength of soils that reflects the average shear strength mobilized in the field during failure of embankments on soft soil foundations and deep excavations in clay The test generates a fairly homogeneous state of shear stress throughout the specimen, which provides initial stress condition, stress path, and deformation configuration that models numerous field loading conditions more closely than any other test systems such as triaxial.
The system consists of a computer-controlled unit that utilizes motors to apply the vertical and horizontal loads to the soil specimen.
The system is capable of running a consolidation phase automatically.
Horizontal shearing can be applied at a specified rate of deformation or at a specified rate of horizontal force change. The constant volume condition during the shear is maintained through a closed loop computer control with the vertical displacement sensor as the feedback. The system is capable of displaying the current status of a test and graphically portraying the progress of the test in real time. The system includes the capability for the operator to alter the test process and conditions at any stage of the test.



STANDARD TEST METHOD
ASTM D 6528 and ASTM D2435/T216

Models
Soilmatic 2.5 - 2,5 kN
Soilmatic 5 - 5 kN
Soilmatic 10 - 10 kN

Features and advantages

It is possible to choose between several load capacity ranges from 1kN to 20kN. The system is delivered together with the requested force transducers.

Automated or manual operation of all options. Consolidation, Drained or Undrained Direct Shear tests.

EDS Software displays real time graphs with test data and stores them for later processing and analysis, both graphic and numeric.

EDS Software makes possible to calculate the appropriate shear velocity for the material to be tested after the consolidation stage is completed.
Remote access to control the system wherever you are.

Stored graphs and data can be exported to Excel for later processing.

Word format report creation

Selectable velocity from 0.000005 to 9.8 mm/min. Speed ranges can be increased or decreased.

Horizontal shearing can be applied at a specified rate of deformation

Horizontal shearing can be applied at a specified rate of horizontal force .

Constant volume condition during the shear

TECHNICAL FEATURES

CAPACITY: The standard system is delivered together with a 5kN. Transducer. This can be replaced by a lower or higher capacity one up to 20kN

VERTICAL MOTOR: Motor with PID controlled vertical load

HORIZONTAL MOTOR: Motor with PID controlled horizontal load

VELOCITY RANGE: 0.000005 a 9,8 mm/min
HORIZONTAL STROKE: 0 - 25 mm
VERTICAL STROKE: 20 mm

POWER SUPPLY: 110/220 V, 50/60 Hz, One phase

DIMENSIONS: 1000 x 450 x 800 mm
WEIGHT: 120 kg

MODELS:

S0125/SM/VC/2	Automated system for direct shear test 2,5 kN
S0125/SM/VC/5	Automated system for direct shear test 5 kN
S0125/SM/VC/10	Automated system for direct shear test 10 kN