SOILMATIC — SOIL TESTING EQUIPMENTS

S0220/SM4 Automated Triaxial Testing System

Pressure ranges:
0 - 1MPa (0-10 bar)
0 - 2MPa (0-20 bar)
0 - 3MPa (0-30 bar)
0 - 4MPa (0-40 bar)
0 - 5MPa (0-50 bar)

Force ranges:
50kN, 100kN, 200kN

Volume capacity: 230cc
Interface: Touchscreen / USB connection
(other pressure range - Consult us)

Triaxial Cells:
1.700kPa to 3.000 kPa
Diameters:
38mm to 150mm
(other diameters - Consult us)
(other pressure ranges - Consult us)

Fully Automated four Pressure Triaxial System

All in one four pressure automated system for any kind of triaxial tests (TUU, TCU and TCD). It makes also possible to automatically perform permeability, consolidation and saturation tests.
The standard model has four pressure / volume maintainers that can be configured and controlled in a fully automated and independent way.
You just have to configure the test with the desired parameters and the software will automatically proceed to saturate the sample. Once the sample is saturated, EDS Software will stop the system and inform you that the saturation process has finished. It will display sensor readings in graphs and calculate "B" coefficient in real time.
Consolidation as well as UU, CD and CU triaxial tests are fully automated. Once consolidation is completed, you will be able to use the software to calculate the appropriate breaking velocity for the material that has been consolidated.
Pressure and volume maintainers will automatically keep the pressure value fixed during the test.
All readings are graphed in real time during the test and stored in a database in the PC for later processing. If desired, you will be able to apply corrections related to membrane thickness, paper drains, etc.

Pressure Maintainers.
250cc Capacity.
10, 20, 30, 40 and 50 bar Models.
Entirely made of bronze.
Each maintainer has a sensor that informs the system about the pressure at that moment.
Software PID control makes possible to reach and maintain the fixed pressure set points.
Each pressure maintainer works in turn as a volume change device.

Maintainers can be configured and used as:

- Lateral, confining or cell pressure
- Back pressure.
- Upper back pressure
- Volume change device

ADVANCED TEST

- Can be used as high precison volume change device. (0,014 mm3)
- Can be used where a high precison pressure is needed
- Can be used in research projetcs where a hydraulic gradient is needed.

DURING DATA ACQUISITION

Once the sample is in place and the test conditions are configured, the system will entirely perform the desired test (triaxial, consolidation, saturation or permeability) from beginning to end. The triaxial system is controlled by our leading-edge EDS A.I. software that automates permeability, saturation, consolidation (isotropic and anisotropic) and the triaxial test itself.

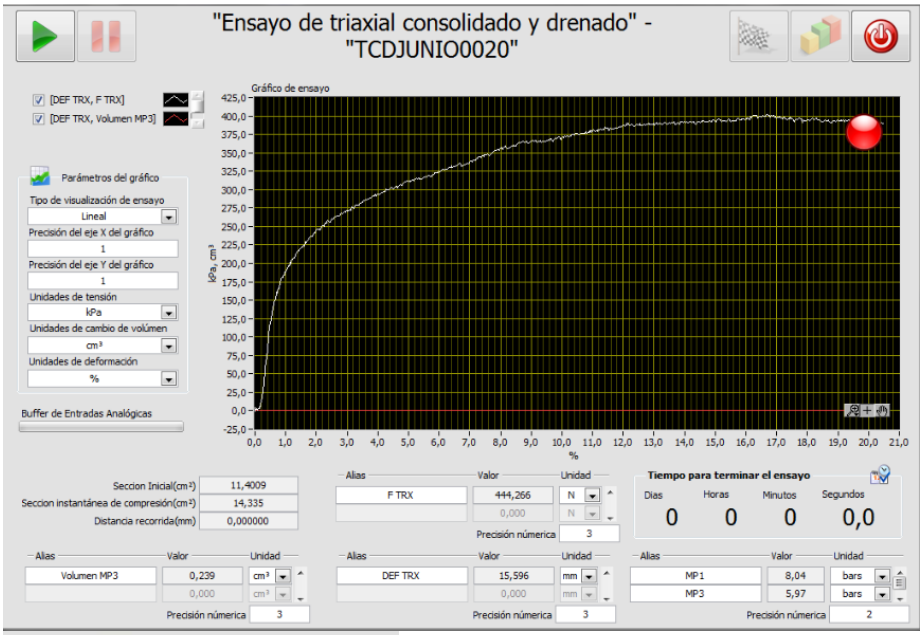
The system is a compact and complete unit containing everything required to perform fully automated tests. Independent PID controls are used to accurately apply velocity and or pressure.

ADVANTAGES FOR USERS

This system can be used with any triaxial apparatus. When used together with Proetisa's Soilmatic Series Triaxial Machine the same software will select test velocity and any other parameter.

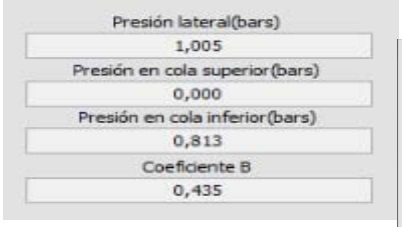
The standard frame test has a maximum load capacity of 50 kN. Higher capacity models are also available.

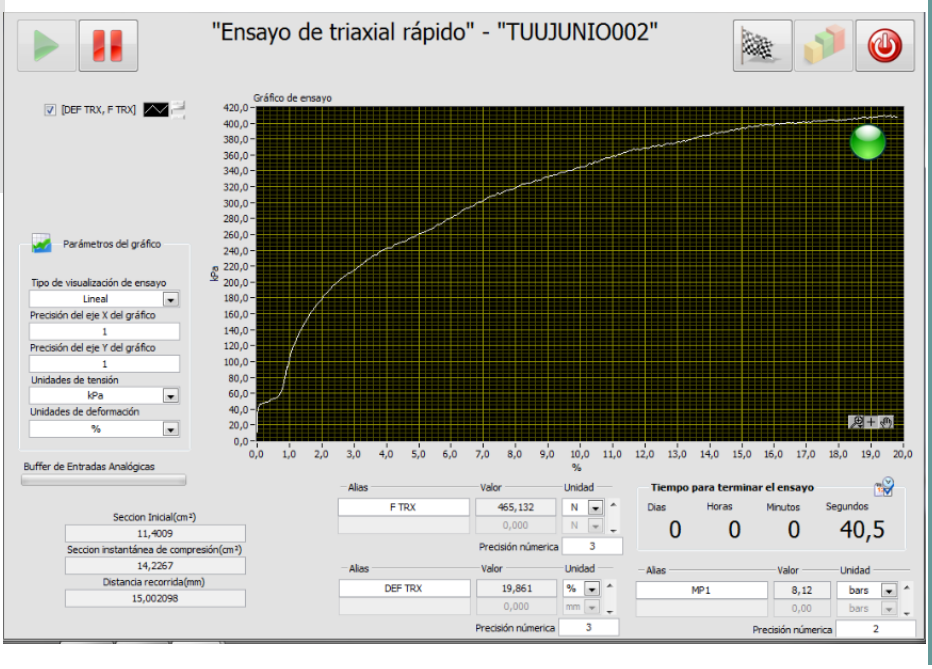
STANDARD TEST METHODS - UNE 103402, ASTM D-4767, AASHTO T-297, COE EM 1110



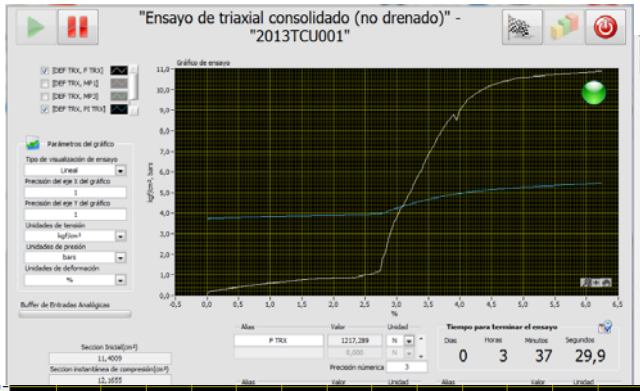
It makes also possible to automatically perform any test. (Triaxial (UU, CU and CD), permeability, consolidation and saturation.

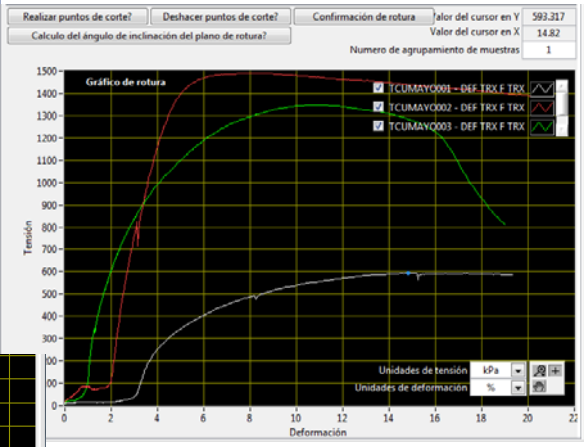
If needed more pressure maintainers could be added.

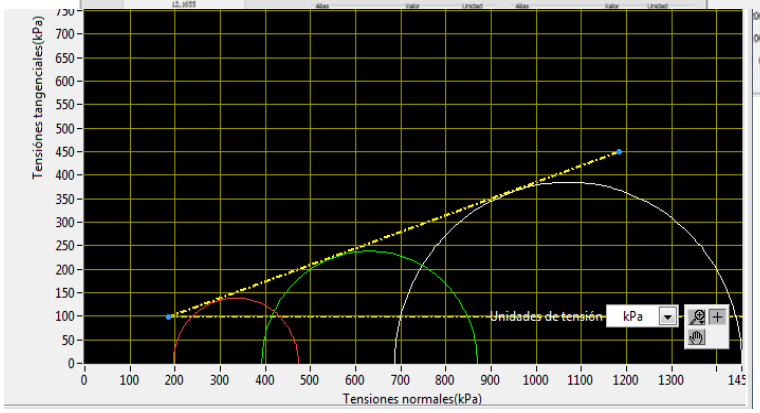




***"B" check** .Once the sample is saturated, EDS Software will stop the system and inform you that the saturation process has finished. It will display sensor readings in graphs and calculate "B" coefficient in real time.*







S0220/SM4 include:

4 Pressure maintainer S0169/SM

1 Triaxial frame S0150/SM.

LATER ANALYSIS

You will be able to process and plot all the recorded data and print results in Word format or export data to Microsoft Excel.

EDS software

- Multi-task control and data acquisition. You will be able to, for example, carry out a triaxial test and saturation at the same time, or both quick triaxial and a permeability tests.
- The software application will allow you to open several windows at the same time displaying the different tests that are being carried out at that time.
- Real time graphs with acquired data.
- You will be able to activate or deactivate the sensors display without data loss.
- You will be able to change graph units, for example: display values in bars, kg/cm2 or kPa, etc.
- Likewise, it is possible to choose between linear or logarithmic time scales.
- Graphs have an auto function that adjusts it to its real size. It is possible to zoom and enlarge areas of interest or change the way in which data are displayed, toggle between dots and lines, view minimum and maximum values, etc.
- Virtual display with elapsed and remaining time.
- Event configuration allowing the user to stop tests, accelerate data acquisition, activate alarms, etc.
- Software makes it possible to define values in order to finish tests depending on force, strain, stroke, pressure, volume, etc.