Soil Triaxial Test Set

LT-E0450/TX | Controlled confining pressure and axial loading

UU • CU • CD • Digital data acquisition • Specimen diameter options



50 kN

LOADING FRAME CAPACITY

1700 kPa

TRIAXIAL CELL PRESSURE CAPACITY

ASTM D2850 • ASTM D4767 • ASTM D7181 • BS 1377-7 / 1377-8

Photographs and System Components

Loading frame, triaxial cell, pressure and volume-change arrangement

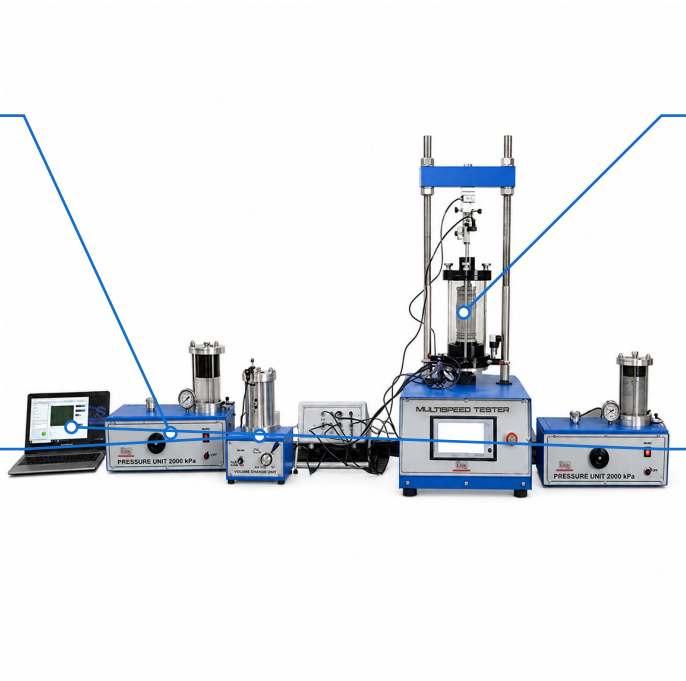
The triaxial system loads cylindrical soil specimens axially under confining pressure. Load, displacement, pressure and volume-change data are monitored according to the selected configuration to evaluate strength and deformation.

PRESSURE UNITS

Apply pressure for cell and back-pressure control according to the selected arrangement.

FRAME AND CELL

The loading frame applies controlled axial loading to the specimen within the cell.



VOLUME CHANGE

Suitable accessories monitor volume change during consolidation and drainage.

DATA ACQUISITION

Load, displacement and selected pressure channels can be evaluated on a computer.



Loading head and triaxial cell



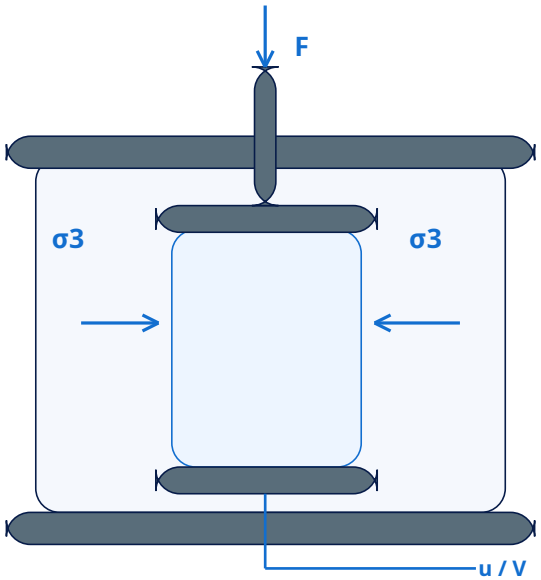
Pressure and volume-change units

LT-E0450/TX

Three Tests, Different Drainage Conditions

UU: unconsolidated undrained • CU: consolidated undrained • CD: consolidated drained

CONFINING PRESSURE + AXIAL LOAD + DRAINAGE



AXIAL LOAD AND CONFINING PRESSURE

DRAINAGE: ACCORDING TO UU / CU / CD METHOD

Cylindrical soil specimen within a membrane

Evaluate strength and deformation behaviour

REPRESENTATIVE TRIAXIAL CELL DIAGRAM • NOT TO SCALE

UU • Unconsolidated Undrained

Consolidation and drainage are not permitted. Evaluate strength in total-stress terms.

CU • Consolidated Undrained

Consolidate first; close drainage during shear. Use pore pressure to evaluate effective stress.

CD • Consolidated Drained

Allow drainage during consolidation and shear. Select a rate that limits excess pore pressure.

Position the membrane-enclosed specimen inside the cell. Cell fluid applies confining pressure while the piston applies axial load. Arrange drainage and pressure connections for the method and record data using suitable sensors and volume-change accessories.

Cell and Specimen Selection

The standard cell accommodates Ø38 and Ø50 mm specimens and has a pressure capacity of 1700 kPa. A separate larger cell is available for Ø70 and Ø100 mm specimens.

Use end caps, porous discs and membranes matched to specimen diameter. Prepare cell-pressure, back-pressure and pore-pressure connections according to the selected test configuration.

Control and Digital Data Monitoring

The 50 kN loading frame provides an adjustable speed range of 0.001-51 mm/min. The 7″ TFT control unit supports monitoring and recording of load and axial displacement.

Select appropriate pressure, drainage and volume-change accessories for CU/CD applications. Computer software supports data processing, graphical evaluation and reporting.

Technical Specifications and Test Options

LT-E0450/TX | Soil strength and deformation evaluation

Parameter	Description / Specification
Product Code	LT-E0450/TX
Test Options	UU • CU • CD
Loading Frame Capacity	50 kN
Test Speed	0.001-51 mm/min
Control Unit	7″ TFT touch screen
Cell Pressure Capacity	1700 kPa
Specimen Diameters	Standard: Ø38 / Ø50 mm • Option: Ø70 / Ø100 mm
Loading Unit Dimensions	47 × 61 × 115 cm
Loading Unit Weight	105 kg
Power Supply	220 V • 50-60 Hz • 1 phase

Select the Measuring Arrangement for the Test Method

Record specimen size, cell and back pressures, drainage conditions and loading rate. Use pore-water pressure measurement for effective-stress evaluation in CU testing.

Triaxial Test Workflow

01
Prepare
Prepare specimen, membrane and cell.

02
Pressurize
Set pressure and drainage for the method.

03
Load
Monitor data at a controlled axial rate.

04
Evaluate
Report stress, deformation and strength.

Product Page | liyatest.com.tr/en/urun/soil-triaxial-test-set-uu-cu-cd/