Fully Automatic Direct Shear Machine

LT-S1260 | Automatic consolidation and direct shear

Controlled normal load • Horizontal movement • Digital data recording



100 kN

MAXIMUM SHEAR FORCE

300 × 300

SQUARE SHEAR BOX / MM

7-inch TFT touchscreen • Shear force and displacement monitoring

Photographs and Components

Touchscreen control, vertical loading frame and specimen working area

The Fully Automatic Direct Shear Machine shears specimens under controlled normal load and horizontal movement. The system automatically manages consolidation and shearing. Digital measurement records shear force and horizontal and vertical displacements.

TOUCHSCREEN CONTROL

The 7-inch screen displays test parameters and live measurement data.

VERTICAL LOADING

The upper loading arrangement applies controlled normal force to the specimen.



MOBILE FRAME

The wheeled metal cabinet simplifies positioning within the laboratory.

SPECIMEN AREA

The shear box holds the specimen; select fixtures for the required test geometry.



Touchscreen display and emergency stop button

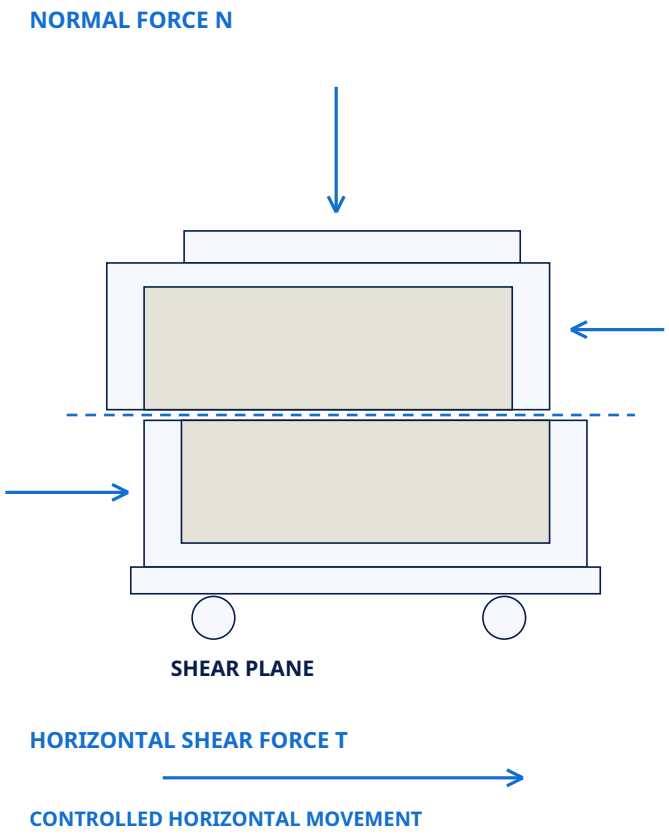


Vertical loading frame and specimen working area

LT-S1260

Direct Shear Under Normal Load

Consolidation • Horizontal shearing • Force and displacement measurement



Apply Consolidation

Place the specimen in the shear box. Apply normal load and monitor consolidation.

Select Shear Rate

Select a horizontal rate for the test method and drainage conditions. Start the shear stage.

Record the Data

Monitor shear force and horizontal and vertical movements. Evaluate peak and residual strength.

The two halves of the shear box create relative movement along a predefined plane through the specimen. The vertical system applies normal load while the horizontal system produces shearing. Recorded force and displacements describe specimen behaviour.

Cohesion and Internal Friction Angle

One test gives shear resistance at the selected normal stress. To establish a strength envelope, test similar specimens at different normal stresses.

Software evaluates the test series to support determination of cohesion (c) and internal friction angle (ϕ).

Consolidated Drained Conditions

For soil testing, select shear rate according to specimen drainage and consolidation behaviour.

Recording horizontal force together with horizontal and vertical movement allows consolidation and shear stages to be compared.

Technical Specifications

LT-S1260 • Capacity, specimen box, automatic control and electrical supply

Technical Feature	Value / Function
Product Code	LT-S1260
Maximum Shear Force	100 kN
Square Shear Box Option	300 × 300 mm
Machine Dimensions	165 × 155 × 135 cm
Machine Weight	470 kg
Power Supply	220 V, 50-60 Hz, 1 phase
Control Display	7-inch TFT touchscreen
Normal Loading	Automatic servo-controlled vertical load
Test Stages	Automatic consolidation and shearing
Measured Data	Shear force; horizontal and vertical displacement
Software	Peak/residual values; c and ϕ; records and reports
Test Termination	Automatic stop at the selected test target

References for Soil Testing

ASTM D3080/D3080M, EN ISO 17892-10, AASHTO T236 and BS 1377-7.

These references relate to consolidated drained direct shear tests of soils. Select normal load and shear rate for the applicable method.

Large Specimens and Fixture Selection

The 300 × 300 mm square shear box is an option for large soil specimens. Its loading pad, base and drainage components support specimen preparation.

For rock specimens, select appropriate fixtures, specimen geometry and the relevant test method separately.

LT-S1260

Shear Box and Supporting Component

Box assembly, loading and preparation fixtures for 300 × 300 mm specimens

Product Code	Component / Function
LT-S1265	300 × 300 mm shear box set; specimen cutter and extruder
LT-S0265/1	Shear box
LT-S0265/2	Loading pad
LT-S0265/3	Grooved base plate
LT-S0265/4	Porous stone
LT-S0265/5	Plain grid plate
LT-S0265/6	Perforated grid plate
LT-S0265/7	Specimen cutter
LT-S0265/8	Specimen extruder

Shear Box Assembly Arrangement

The loading pad transfers normal force to the specimen. Base, grid and porous-stone components support specimen preparation and drainage. Select fixtures for the specimen and test method.

Test Workflow

01
Prepare Specimen
Assemble the box and place the specimen.

02
Apply Normal Load
Monitor automatic consolidation.

03
Start Shearing
Shear at the selected rate; monitor force and movement.

04
Evaluate Results
Save peak/residual values and the test series.

Product Page | liyatest.com.tr/en/urun/fully-automatic-direct-shear/