Automatic Direct Shear

LT-S0260 | Consolidated drained soil shear-strength testing

Adjustable shear rate • LCD display • Computer connection



5 kN

MAXIMUM SHEAR FORCE

5000 N

MAXIMUM VERTICAL LOAD WITH 10:1 LEVER

ASTM D3080 • AASHTO T236 • ISO 17892-10

LT-S0260

Photographs and Instrument Compon

Shear box, horizontal drive and lever with dead-weight loading

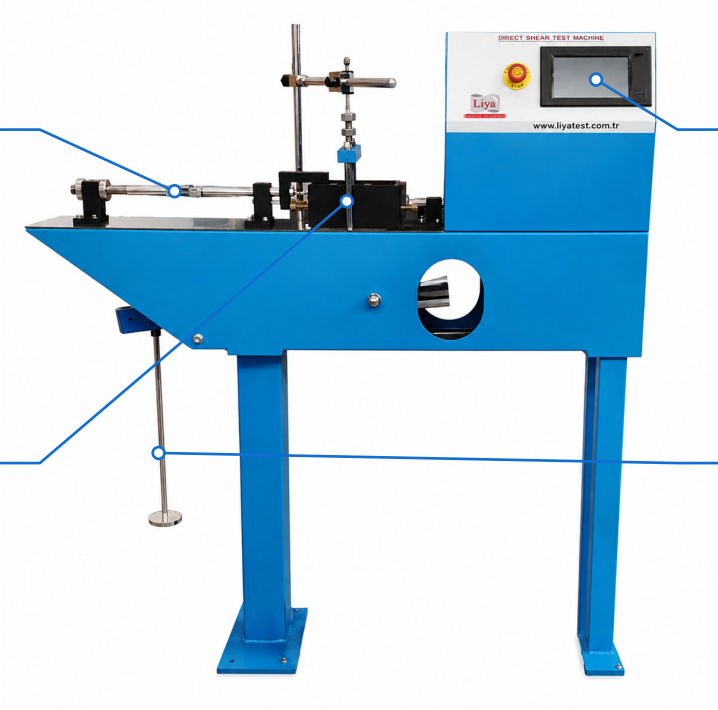
Automatic Direct Shear applies controlled horizontal movement to soil specimens under normal load. Adjustable shear rate and computer connection support test management and evaluation of cohesion and internal friction angle.

HORIZONTAL DRIVE

Moves one part of the shear box at the rate selected by the operator.

SHEAR BOX

The split arrangement holds the specimen and defines the applied shear plane.

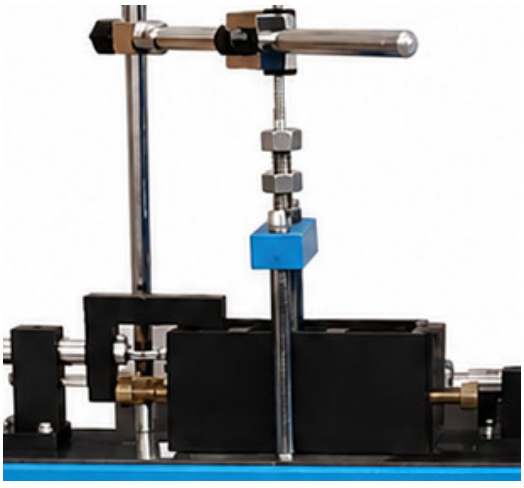


LCD CONTROL

Test parameters are monitored on the LCD display; computer connection is available.

NORMAL LOADING

Dead weights and a lever apply vertical force to the specimen during shear.



Shear box and loading arrangement



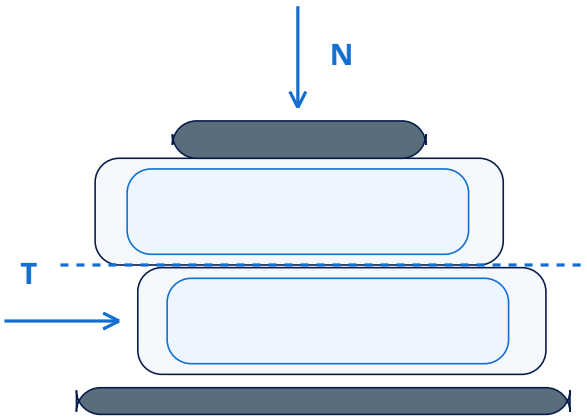
LCD display and control panel

LT-S0260

Controlled Shear under Normal Load

Position specimen • Consolidate • Shear • Evaluate results

NORMAL FORCE + HORIZONTAL SHEAR MOVEMENT



NORMAL LOAD: CONSOLIDATION AND SHEAR

HORIZONTAL MOVEMENT: CONTROLLED DISPLACEMENT

Monitor shear force and displacements together

Determine c and ϕ from different normal stresses

REPRESENTATIVE SHEAR BOX DIAGRAM • NOT TO SCALE

Prepare the Specimen

Select a suitable box. Position the specimen, drainage and loading components.

Consolidate and Shear

Apply normal load. After consolidation, shear at the rate required by the method.

Evaluate Strength

Use tests at different normal stresses together to establish the strength envelope.

Consolidate the specimen under normal load, then move one part of the shear box horizontally. Monitor shear force and horizontal and vertical displacements throughout testing. Evaluate strength parameters using tests conducted at different normal stresses.

Controlled Rate and Normal Load

The shear rate is adjustable from 0.0001 to 9.9999 mm/min. Select a rate suited to specimen properties and drainage conditions according to the test method. Maximum shear force is 5 kN.

Maximum vertical load is 5000 N using the 10:1 lever. The LT-G8025 slotted weight set totals 50 kg: 4 × 10 kg, 1 × 5 kg, 2 × 2 kg and 1 × 1 kg.

Specimen Options and Data Monitoring

The standard arrangement includes 60 × 60 mm shear box equipment. Alternative assemblies: LT-S0270 Ø60 mm, LT-S0275 100 × 100 mm, LT-S0280 Ø100 mm and LT-S0285 Ø2.5 inch.

The LCD display and computer connection support test monitoring. The system can generate shear stress-normal stress graphs, calculate c and ϕ and stop automatically when the test is complete.

LT-S0260

Technical Specifications and Equipmer

LT-S0260 | 5 kN shear force and lever-based normal loading

Model / Feature	Description / Specimen Option
Product Code	LT-S0260 • Automatic Direct Shear
Maximum Shear Force	5 kN
Maximum Vertical Load	5000 N • Using 10:1 loading lever
Shear Rate	0.0001-9.9999 mm/min
Control and Connection	LCD display • Computer connection
Standard Shear Box	LT-S0265 • 60 × 60 mm equipment
Weight Set	LT-G8025 • 50 kg slotted weight set
External Dimensions	65 × 155 × 135 cm
Approximate Weight	170 kg
Power Supply	220 V • 50-60 Hz • 1 phase

Link Each Test Series to Its Normal Stress Records

Retain specimen geometry, normal load, consolidation records and shear rate. Evaluate the strength envelope using tests at different normal stresses and report results with the method used.

Direct Shear Test Workflow

01
Prepare
Position the specimen in a suitable shear box.

02
Consolidate
Consolidate under the selected normal load.

03
Shear
Monitor data during controlled horizontal movement.

04
Evaluate
Calculate strength parameters and report.

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