Consolidation Test Set

LT-S0251 / LT-S0252 / LT-S0253 | Incremental vertical-load consolidation

Lever loading • Cell diameter options • Analog or digital measurement



3 cell sizes

Ø50 / Ø63.5 / Ø75 mm OPTIONS

9:1 / 10:1 / 11:1

LOADING LEVER RATIOS

ASTM D2435 • AASHTO T216 • ISO 17892-5

Photographs and Set Components

Oedometer frames, loading levers and three-station table

The Consolidation Test Set monitors time-dependent deformation of laterally restrained soil under vertical load. Different cells, weight sets and measurement options can be selected to form the test arrangement.

CONSOLIDATION CELL

The specimen is held under vertical load within a rigid ring and porous-stone arrangement.

DEFORMATION MEASUREMENT

Analog or suitable digital measurement monitors vertical specimen movement.



THREE-STATION TABLE

The LT-S0250/2 table can support three oedometer stations in one working area.

LOADING LEVER

Weight force is transferred to the specimen according to the selected lever ratio.



Cell, indicator and loading frame



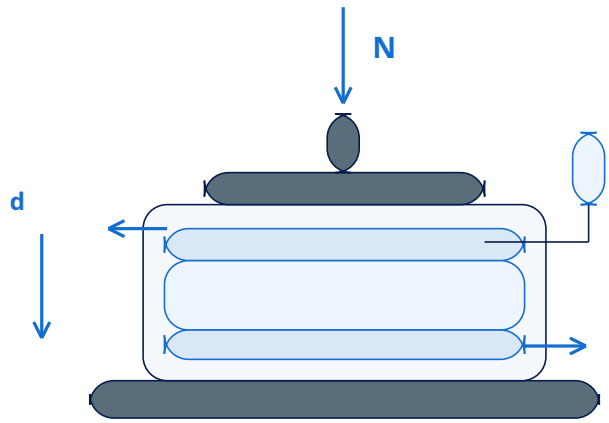
Optional static data acquisition unit

LT-S0251 / LT-S0252 / LT-S0253

Incremental Load and Double Drainage

Prepare specimen • Apply load • Take timed readings • Evaluate

POROUS STONES + SPECIMEN + VERTICAL LOAD



LOADING: SELECTED LEVER RATIO AND WEIGHTS

DRAINAGE: UPPER AND LOWER SPECIMEN FACES

Monitor vertical deformation at each load stage

Evaluate compression and consolidation behaviour

REPRESENTATIVE INCREMENTAL-LOADING OEDOMETER • NOT TO SCALE

Prepare the Cell

Place the specimen in the ring. Prepare porous stones, loading pad and measurement arrangement.

Load in Stages

Apply load stages using the selected lever ratio and weights.

Take Timed Readings

Record time and deformation at each stage and evaluate using the method.

A rigid ring restrains lateral specimen deformation. Upper and lower porous stones support drainage under vertical load. Monitor time-dependent vertical deformation at each load stage to evaluate compressibility and consolidation behaviour.

Cell and Loading Selection

The LT-S0251 high-pressure arrangement uses Ø50 mm specimens; LT-S0252 ASTM uses Ø63.5 mm and LT-S0253 BS/EN uses Ø75 mm specimens. Stated total weight options are 64 or 80 kg depending on the model.

Select cell components matched to diameter, including porous stones, pressure pads, cutting rings, calibration discs and specimen preparation apparatus.

Optional Digital Data Monitoring

A 4- or 8-channel static data acquisition system supports time-displacement recording with suitable electronic sensors. In an analog dial arrangement, take readings according to the test procedure.

Consolidation software supports square-root-time and logarithmic-time graphs and evaluation of T50, T90, T100, mv and Cv. Data and graphs can be exported to Excel.

LT-S0251 / LT-S0252 / LT-S0253

Model Options and Technical Specifications

High-pressure, ASTM and BS/EN cell arrangements

Model / Component	Description / Specification
LT-S0251 • High Pressure	Ø50 mm specimen • Total weights 64 kg
LT-S0252 • ASTM	Ø63.5 mm specimen • Total weights 64 kg
LT-S0253 • BS/EN	Ø75 mm specimen • Total weights 80 kg
LT-S0250/1	Loading frame
LT-S0250/2	Consolidation table • Capacity for 3 oedometers
Loading Lever Ratios	9:1 / 10:1 / 11:1
Weight-Set Options	16 / 32 / 50 / 64 / 80 kg
Measuring Options	Analog or digital deformation measurement
Optional Data Acquisition	4- or 8-channel static system
Software Evaluation	Time-displacement graphs • Excel export

Use Weight, Lever Ratio and Specimen Area Together

Retain specimen diameter, lever ratio, applied weights and time-deformation records. Evaluate normal stress and consolidation results according to the applicable method.

Consolidation Test Workflow

01
Prepare
Prepare the specimen and suitable cell.

02
Load
Apply weight stages using the lever ratio.

03
Read
Record time and deformation values.

04
Evaluate
Calculate consolidation results and report.

Product Page | liyatest.com.tr/en/urun/consolidation-test-set/