Falling Head Permeameter Set

LT-S0140 | Water permeability assessment of fine-grained soils

Ø100 mm cell • Manometer stand • Soaking reservoir



Ø100 mm

PERMEABILITY CELL DIAMETER

4 tubes

MANOMETER TUBE OPTIONS

ISO 17892-11 • Falling water head principle

Photographs and Set Components

Manometer stand, connections, soaking reservoir and permeability cell

The LT-S0140 evaluates water-flow behaviour in low- and medium-permeability soils. Particularly for clayey and silty specimens, falling water level and elapsed time are monitored together as water passes through the specimen.

MANOMETER STAND

Supports observation of the falling water head. Tube options are Ø2, Ø4, Ø6 and Ø8 mm.

CONNECTION ASSEMBLY

Rubber hose and connections form the water path between the manometer and cell.



SOAKING RESERVOIR

Supports specimen preparation and water saturation stages.

PERMEABILITY CELL

The Ø100 mm cell contains the prepared soil specimen during testing.



Lower manometer connections and hose arrangement



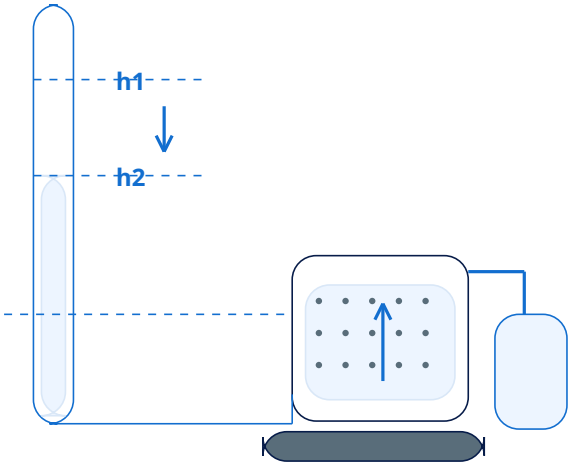
Ø100 mm permeability cell

LT-S0140

Monitoring Water Head and Time Together

Prepare specimen • Fill with water • Monitor heads • Calculate

FALLING HEAD + SOIL SPECIMEN + TIME



h1 / h2: INITIAL AND FINAL WATER HEADS

t: ELAPSED TIME BETWEEN THE TWO HEADS

FLOW: THROUGH A SATURATED SOIL SPECIMEN

Calculate permeability using the applicable method

REPRESENTATIVE FALLING HEAD TEST DIAGRAM • NOT TO SCALE

Prepare Specimen and Cell

Place the specimen in the cell. Carry out preparation and saturation as specified.

Record Heads and Time

Select a suitable manometer tube. Record initial and final water heads with elapsed time.

Evaluate Permeability

Use specimen dimensions, tube area and head-time records in the calculation.

Water moves from the manometer tube through the soil specimen and the level in the vertical tube falls. Determine initial and final hydraulic heads relative to a fixed reference. Specimen geometry, selected tube area and elapsed time are used together to calculate the coefficient of permeability.

Specimen Saturation and Connections

Prepare and saturate the specimen according to the method. Fill the cell and hoses with water while avoiding air in the flow path; check connections and leakage.

Maintain specimen conditions during testing. Read water heads against the same reference; record temperature and other conditions required by the method.

Manometer Selection and Calculation

The stand is offered with Ø2, Ø4, Ø6 and Ø8 mm tube options, each 1.5 m long. Select the tube for specimen permeability and a clearly readable change in water level.

Verify the tube area, specimen length and specimen cross-section used in the calculation. Record initial and final heads with time; evaluate permeability using the applicable method's calculation rules.

Technical Specifications and Component Codes

LT-S0140 | Cell, manometer stand, reservoir and connection hose

Technical Specification	Value / Description
Product Code	LT-S0140
Test Principle	Falling water head • Soil permeability
Specimen Group	Low / medium permeability • Clayey and silty soils
Cell Diameter	Ø100 mm
Manometer Tubes	4 tubes • Ø2 / Ø4 / Ø6 / Ø8 mm
Tube Length	1.5 m each
Connection Hose	Rubber • 3 m

Component Code	Description
LT-S0140/1	Falling head permeability cell • Ø100 mm
LT-S0140/2	Manometer stand • 4 manometer tubes
LT-S0140/3	Soaking reservoir tank
LT-G0212	Rubber connection hose • 3 m

Record Head, Time and Geometry Together

Read initial and final heads against a fixed reference. Record tube area, specimen dimensions and elapsed time; perform testing and calculation according to the applicable permeability method.

Falling Head Test Workflow

01
Prepare
Place and saturate the specimen.

02
Connect
Fill cell and suitable manometer connections.

03
Monitor / Time
Record head decrease and elapsed time.

04
Calculate
Evaluate the coefficient of permeability.

Product Page | liyatest.com.tr/en/urun/falling-head-permeameter-set/