Digital Point Load Tester

LT-R0001 / LT-R0003 | Strength classification of rock specimens

Conical platens • Manual hydraulic loading • Digital peak recording



50 / 100 kN

MODEL CAPACITIES

101.6 mm

TEST OPENING / 4 INCHES

Cores, blocks and irregular rock pieces • Field and laboratory use

Photographs and Components

Conical platens, manual hydraulic jack, protective section and digital indicator

The Digital Point Load Tester loads rock specimens between two conical platens until failure. A manual hydraulic system increases force while the digital indicator records peak load. The series includes 50 kN and 100 kN models.

CONICAL PLATENS

Hardened tips transfer force through two small opposing contact areas on the specimen.

PROTECTIVE SECTION

The transparent shield limits the spread of rock fragments from the failure area.



MANUAL HYDRAULIC JACK

The hand-operated jack moves the lower platen to increase load in a controlled manner.

DIGITAL INDICATOR

The indicator monitors force and retains peak load when the specimen fails.



Opposing conical platens and specimen positioning area

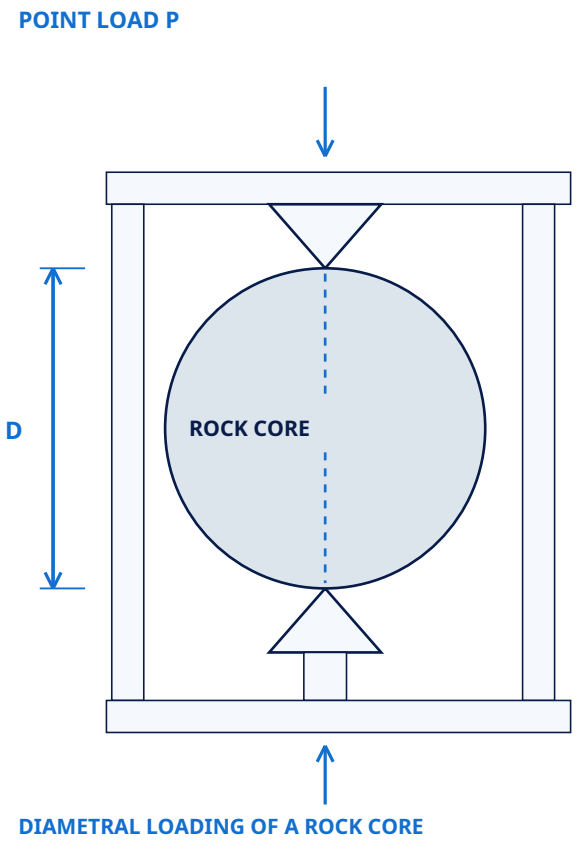


Digital indicator and maximum load reading system

LT-R0001 / LT-R0003

Rock Failure Between Two Points

Opposing conical contact • Controlled force increase • Peak load recording



Position the Specimen

Place a core, block or rock piece between the platens for the selected test arrangement.

Increase Load Gradually

Apply controlled force with the manual jack. Maintain platen alignment and specimen contact.

Record Peak Load

Record failure load, specimen dimensions and test direction. Evaluate the index using the selected method.

The diagram shows loading across the diameter of a cylindrical core. Two conical platens apply force through opposing contact points. The digital system retains peak load at failure; select the positioning geometry separately for blocks and irregular pieces.

Point Load Strength Index

Evaluate failure load together with specimen dimensions and test geometry. Apply size correction according to the selected method.

The index is used for rock classification and comparison. Conversion to uniaxial compressive strength requires a validated relationship specific to the rock.

Specimen Geometry and Test Direction

The 101.6 mm machine opening defines the physical positioning limit. Select suitable test dimensions and platen spacing for the procedure.

Record bedding direction, specimen shape and contact points. Clean and inspect platen tips before each test.

LT-R0001 / LT-R0003

Models and Technical Specifications

50 and 100 kN models • Shared loading, recording and transport features

Product Code	Capacity	Dimensions (cm)	Weight
LT-R0001	50 kN	40 × 53 × 72	25 kg
LT-R0003	100 kN	40 × 53 × 72	50 kg

Shared Technical Feature	Value / Function
Test Opening	101.6 mm / 4 inches
Loading	Manual hydraulic jack
Platens	Two hardened conical loading tips
Maximum Load Recording	Peak load retained at specimen failure
Specimen Shapes	Rock cores, blocks and irregular pieces
Reading	Digital force indicator
Protection	Transparent protective shield
Transport and Storage	Carrying case

Historical Method Reference

ASTM D5731-16 describes the point load strength index method; the standard was withdrawn in 2025. Apply specimen dimensions, corrections and evaluation according to the selected laboratory procedure.

Test Workflow

01
Measure Specimen
Record geometry and test direction.

02
Position on Platens
Align opposing specimen contact points.

03
Increase Load
Use the manual jack to load until failure.

04
Evaluate the Index
Use peak load together with specimen dimensions.

Product Page | liyatest.com.tr/en/urun/digital-point-load-tester/