Dynamic Cone Penetrometer

LT-S0047 | Subgrade, sub-base and compacted soil investigation

Drop-hammer system • Cone tip • Penetration monitoring with depth



8 kg

DROP HAMMER MASS

575 mm

HAMMER DROP HEIGHT

BS 1377-9 • In-situ dynamic cone penetration

LT-S0047

Photographs and Set Components

Hammer assembly, penetration rods, cone tips and steel measuring rule

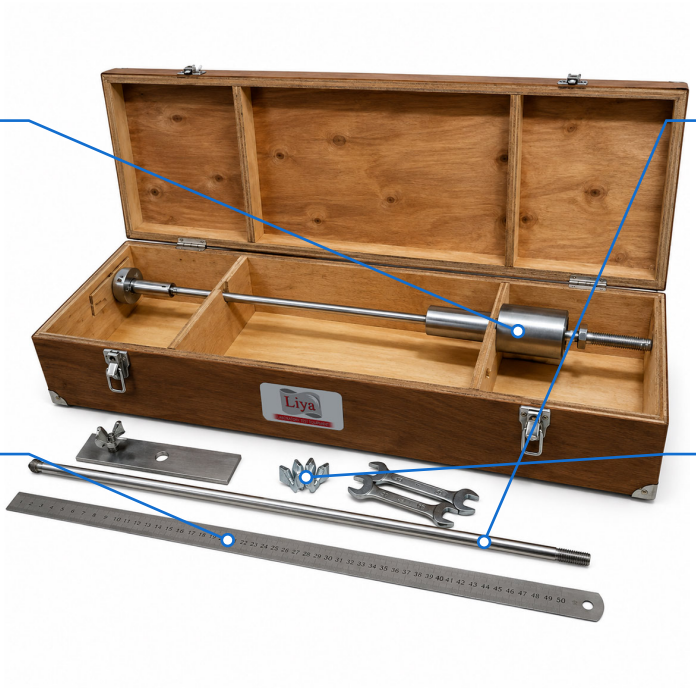
The Dynamic Cone Penetrometer evaluates the in-situ penetration resistance of pavement materials and compacted soil layers. A drop hammer drives the cone through the rod, while blow count and penetration depth are recorded together.

GUIDE AND HAMMER

The 8 kg hammer is raised along the guide and released to generate impact.

MEASURING RULE

The steel rule supports monitoring of cone penetration depth.



RODS AND CONNECTIONS

Penetration and extension components form the arrangement transmitting impact to the cone.

CONE TIPS

The 60° cone advances through the soil under repeated hammer blows.



Hammer, guide and connection area



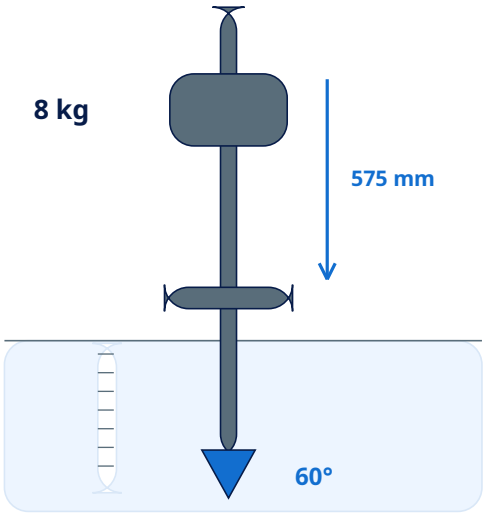
Cone tips, rod and measuring rule

LT-S0047

Soil Profiling by Penetration per Blow

Position • Drop hammer • Read depth • Evaluate penetration index

8 kg HAMMER + 575 mm DROP + 60° CONE



DCP INDEX: PENETRATION / NUMBER OF BLOWS

RECORD DEPTH TOGETHER WITH BLOW COUNT

Impact energy passes through the rod to the cone

Evaluate penetration resistance with depth

REPRESENTATIVE DYNAMIC CONE PENETRATION DIAGRAM • NOT TO SCALE

Position the Assembly

Place the cone at a suitable location. Check rod verticality and the initial reading.

Apply Blows and Read

Raise the hammer 575 mm and release. Record blow count and penetration.

Evaluate the Profile

Examine penetration per blow against depth to assess resistance and layer changes.

Each blow advances the cone into the ground. Penetration over a selected blow interval can be divided by the number of blows and expressed in mm/blow. Changes in penetration help track variations in material resistance and layer conditions with depth.

Standard and Extended Depth

The standard arrangement provides approximately 850 mm test depth. Extension rods allow investigation to depths of up to 2 metres. Upper and lower extension components are included in the set.

Retain the rod configuration and extension details with the test record. Soil type, moisture, density and rod friction can influence penetration response.

Layer and In-Situ CBR Assessment

Lower penetration per blow generally indicates higher resistance, while greater penetration indicates lower resistance. Changes with depth help investigate layer boundaries and weaker zones.

Suitable validated correlations may be used to estimate in-situ CBR. Match the correlation to soil type and apparatus configuration; report the result as an estimate derived from DCP data.

LT-S0047

Technical Specifications and Set Contents

LT-S0047 | Mechanical DCP field testing system

Parameter / Component	Description / Specification
Product Code	LT-S0047
Hammer Mass	8 kg
Drop Height	575 mm
Cone Tip Angle	60°
Standard Test Depth	Approximately 850 mm
Extended Test Depth	Up to 2 metres
Measuring Arrangement	Steel rule • Depth and blow-count records
Set Components	Hammer, rods, cone, connections and hand tools
Transport / External Dimensions	Wooden case • 120 × 35 × 20 cm
Approximate Complete Weight	30 kg

Retain Penetration Data with the Test Configuration

Record initial depth, blow count, penetration and extension rods. When applying a CBR correlation, state the relationship used and soil conditions with the result.

Dynamic Cone Penetration Workflow

01
Position
Place the cone and take an initial reading.

02
Apply Blows
Release the hammer from the specified height.

03
Read
Record blow count and depth together.

04
Evaluate
Review penetration index and depth profile.

Product Page | liyatest.com.tr/en/urun/dynamic-cone-penetrometer/