Modified Vicat Cone Penetrometer

LT-CE0017 | Consistency evaluation of masonry mortar

200 g moving assembly • Conical plunger • Cylindrical measure



200 g

TOTAL MOVING ASSEMBLY MASS

Manual

TESTING AND READING

ASTM C780 Annex A1 • Measure associated with ASTM C185

LT-CE0017

Photograph and Measuring Components

Conical plunger, depth scale and mortar measure

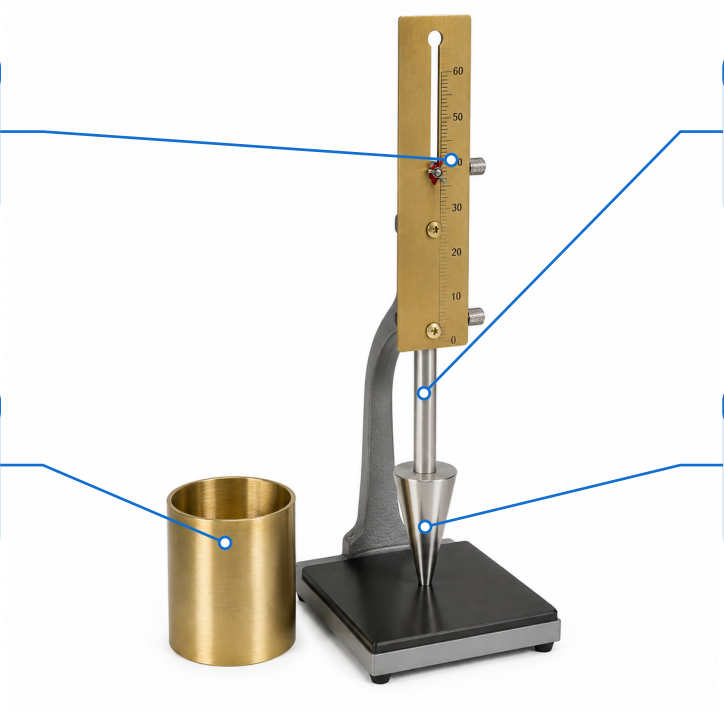
LT-CE0017 evaluates fresh masonry mortar consistency by cone penetration depth. The moving assembly is released; the operator reads penetration and compares mixes prepared with the same procedure.

DEPTH SCALE

The vertical scale and indicator provide initial position adjustment and penetration readings.

MOVING SHAFT

The vertical guide maintains alignment of the cone assembly. Check free movement and initial adjustment before testing.



CYLINDRICAL MEASURE

Place fresh mortar in the cylindrical cup. Fill and level the surface according to the test method.

CONICAL PLUNGER

The cone penetrates freely into mortar. Total mass of the cone, shaft and indicator assembly is 200 g.



Depth scale and adjustable indicator detail



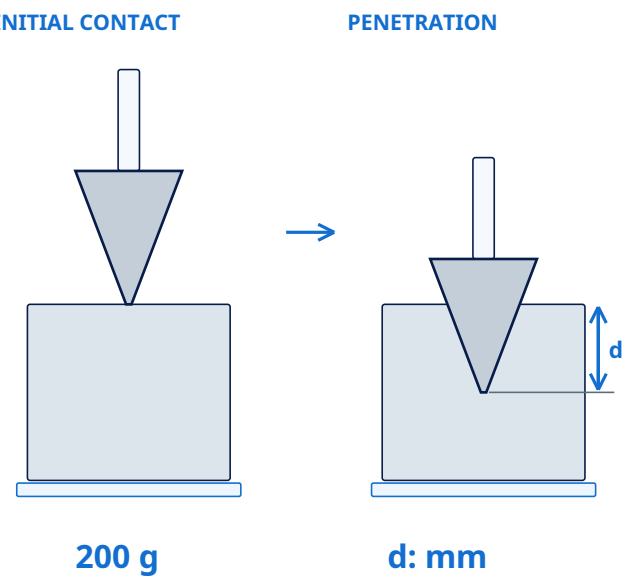
Conical plunger and cylindrical measure

LT-CE0017

From Cone Penetration to Mortar Consistency

Prepare surface • Release the cone • Read penetration depth

SURFACE CONTACT • FREE PENETRATION



d: DEPTH FROM MORTAR SURFACE TO CONE TIP

FIXED MOVING MASS: 200 g • RESULT: mm

OPERATING PRINCIPLE • REPRESENTATIVE PENETRATION • NOT TO SCALE

Prepare the Mortar

Fill the measure with fresh mortar according to the method. Level the surface; record test time and conditions.

Contact and Release

Bring the cone to the mortar surface. Adjust the initial indicator and release the assembly for free penetration.

Read and Compare

Read penetration depth. Record the result with specimen data; compare mixes under consistent preparation conditions.

Under similar test conditions, more fluid mortar generally permits deeper cone penetration. Depth supports consistency comparison and evaluation of water additions in trial mixes. It is separate from direct water percentage or strength measurement.

200 g Moving Assembly

The 200 g value applies to the total moving assembly, including cone, shaft and indicator. Defined mass supports consistent loading conditions between tests.

Keep the cone clean and check free movement in the guide. Place the cup on the stable base and set the initial position against the mortar surface. Apply no additional force during measurement.

Method and Mix Records

ASTM C780 Annex A1 addresses masonry mortar consistency by cone penetration. Select the cylindrical measure to meet the associated ASTM C185 cup requirements.

Record mix proportions, water quantity, temperature and elapsed time after mixing. Consistent conditions make it easier to interpret consistency changes between different mortar mixes.

Technical Information and Test Arrangement

LT-CE0017 • Manual cone penetration for fresh mortar

Specification	Technical Information
Product Code	LT-CE0017
Apparatus Type	Modified Vicat cone penetrometer
Test Purpose	Evaluation of fresh masonry mortar consistency
Measuring Principle	Free penetration of a conical plunger
Measured Value	Penetration depth; mm
Moving Assembly Mass	200 g total
Moving Assembly	Cone, shaft and indicator
Penetration Tool	Conical plunger
Reading Assembly	Vertical scale and adjustable indicator
Specimen Container	Cylindrical measure
Primary Test Method	ASTM C780 Annex A1
Measure Reference	ASTM C185

Surface Contact and Free Movement

Prepare the surface according to the method. Bring the cone into contact; check the initial setting and free movement. Record depth with specimen conditions.

From Fresh Mortar to Consistency Comparison

01
Fill
Fill the measure with mortar and level the surface.

02
Set
Bring the cone to the surface and set the start.

03
Release
Allow the assembly to penetrate freely.

04
Read
Record depth and compare mortar mixes.

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