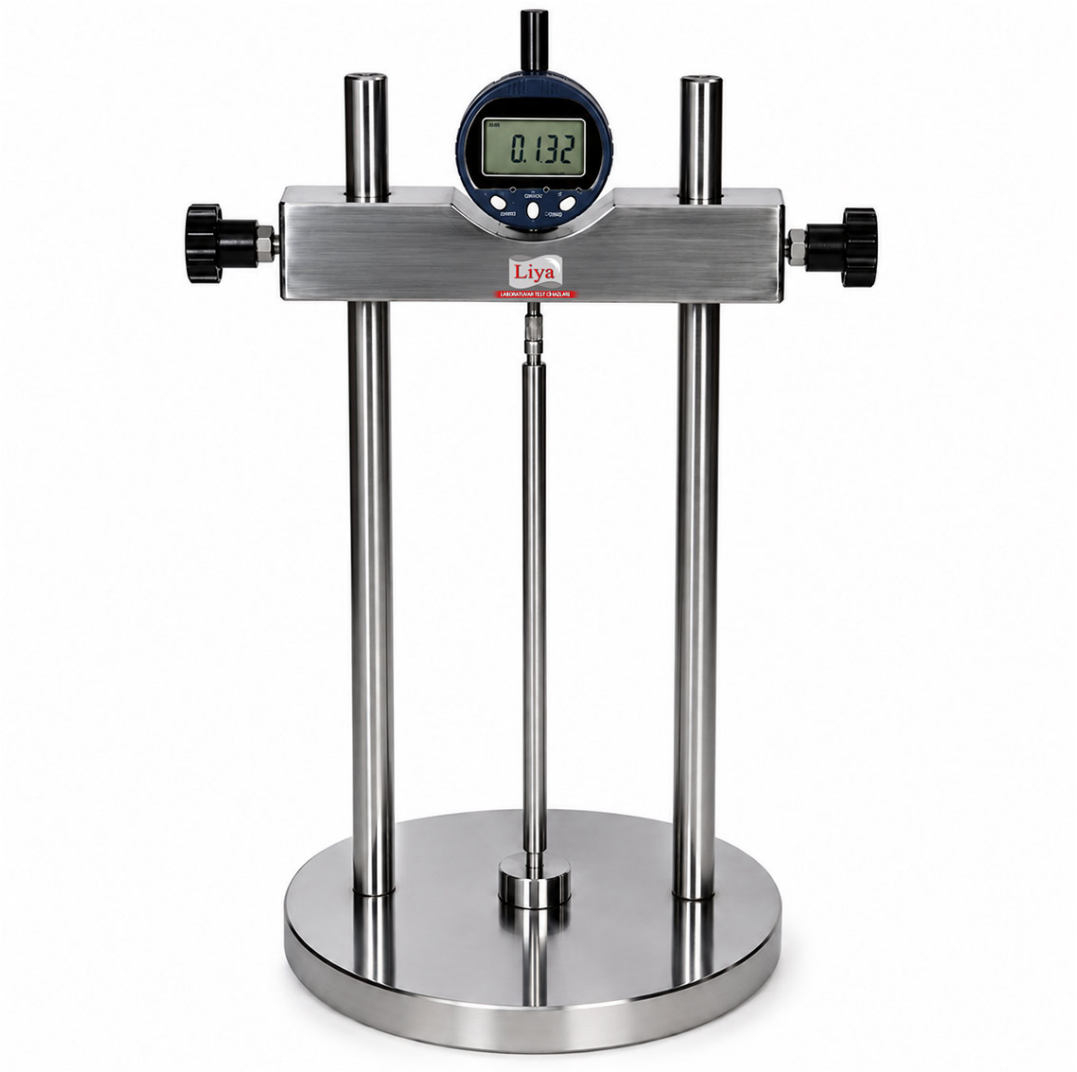
Cement Shrinkage Test Set

LT-A0048/AS and LT-A0048/DS | Analog and digital options

Length comparator • Steel inserts • Reference rod checks



0.01 mm

ANALOG READABILITY

0.001 mm

DIGITAL RESOLUTION

EN 1367-4 • EN 12617-4 • ASTM C490/C490M

Photographs and Measuring Components

Digital indicator example, adjustment fittings and comparator frame

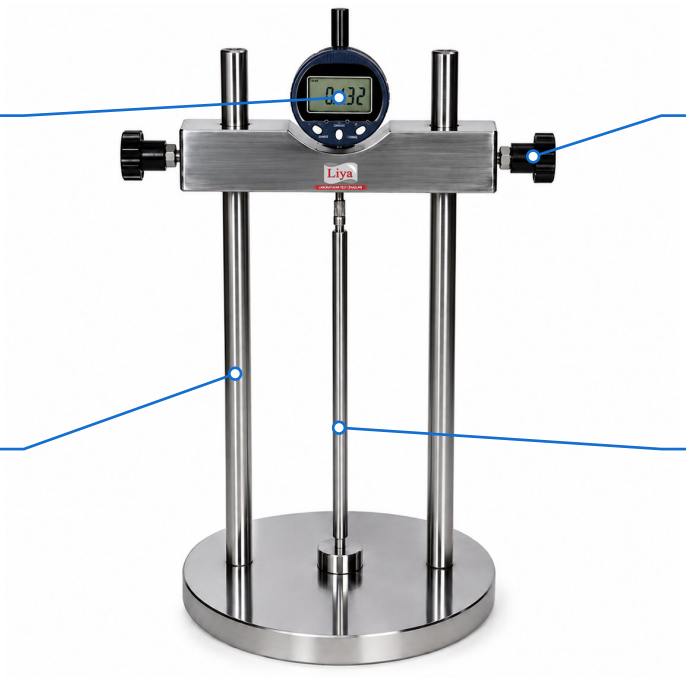
The set measures linear length change in hardened cement and mortar specimens by comparison. Steel inserts provide contact points along a consistent axis. The reference rod supports frame and indicator checks before each measuring series.

MEASURING INDICATOR

Analog and digital options are available. The photograph shows a digital comparator configuration.

ADJUSTMENT FITTING

Secures the upper measuring head position. Check mechanical connections before taking readings.



RIGID FRAME

Two-column support helps position specimens along the same measuring axis.

REFERENCE ROD

The photographed rod is positioned in the comparator. Check the reference reading before each series.



Digital comparator and display region

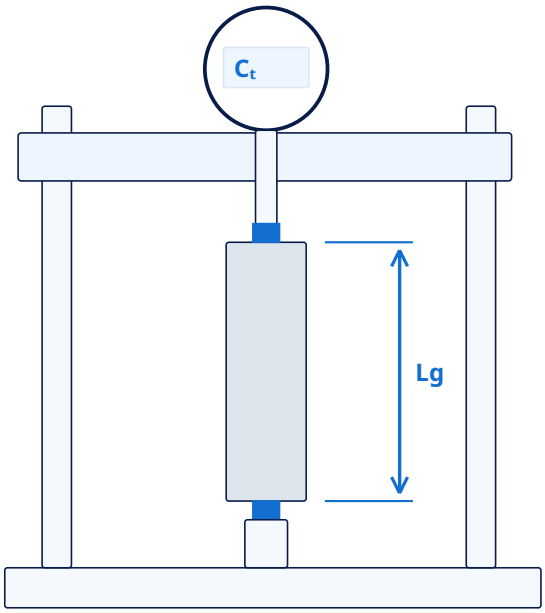


Lower contact and reference rod seating region

Reference-Based Length Change Measurement

Check reference • Record initial reading • Condition • Measure again

COMPARATOR • SPECIMEN • END INSERTS



C_0 / C_t | $\Delta L = C_t - C_0$

INITIAL AND LATER READINGS ON THE SAME AXIS

$\Delta L = C_t - C_0$ | LENGTH CHANGE (%) = $100 \times \Delta L / Lg$

C: CORRECTED READING • Lg: GAUGE LENGTH • NOT TO SCALE

Check the Reference

Fit the appropriate reference rod. Check the indicator reading and measuring contacts.

Record the Initial Reading

Position the specimen using its end inserts. Record the initial reading and specimen identification.

Remeasure and Compare

Measure again after curing or conditioning in the same setup. Compare reference-corrected readings.

Specimen length change is determined from comparator readings at different ages. Reference rod readings correct for changes in the measuring system. Use the gauge length defined by the test method when calculating percentage change.

Reference Correction and Gauge Length

Measure the reference rod and specimen consistently during each series. Record C as the difference between specimen and reference readings.

C_0 is the initial corrected reading and C_t is the later reading. Calculate the difference as $\Delta L = C_t - C_0$. Use gauge length Lg for percentage change; follow the method sign and reporting convention.

Mould and Test Method Selection

LT-CE0038 is a two-gang mould for 25 × 25 × 285 mm specimens. LT-CE0035/S is the three-gang option for 40 × 40 × 160 mm mortar prisms.

Match mould, inserts, reference rod and conditioning to the method. EN 1367-4 covers aggregate-related drying shrinkage; EN 12617-4 covers shrinkage and expansion. ASTM C151/C151M is a method reference for autoclave expansion.

Model Options and Accessories

Analog and digital comparators • Moulds, inserts and reference rods

Set Code	Measuring Range	Readability / Resolution
LT-A0048/AS	Analog: 10 mm	0.01 mm readability
LT-A0048/DS	Digital: 12.7 mm	0.001 mm resolution

Product Code	Part / Accessory	Technical Information
LT-A0048	Length Comparator Frame	180 × 180 × 410 mm; 5.3 kg
LT-CE0035/S	Three-Gang Mould	40 × 40 × 160 mm specimen
LT-CE0035/2	Steel Inserts	For LT-CE0035; 10 pieces
LT-CE0035/3	Reference Rod	160 mm
LT-CE0038	Two-Gang Shrinkage Mould	25 × 25 × 285 mm specimen
LT-CE0038/2	Steel Inserts	For LT-CE0038; 10 pieces
LT-CE0038/3	Reference Rod	305 mm
LT-G8000	Analog Dial Indicator	10 mm / 0.01 mm
LT-G8009	Digital Dial Indicator	12.7 mm / 0.001 mm

Reference, Contact Points and Conditioning

Select the appropriate reference rod. Keep insert contacts clean; use the same setup for initial and later readings, and record conditioning time and conditions.

From Specimen to Linear Length Change

01
Prepare
Prepare mould and end inserts for the method.

02
Initial Read
Check reference and take initial reading.

03
Condition
Store the specimen under method conditions.

04
Compare
Remeasure and report corrected length change.

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