Automatic Ring and Ball Test Set

LT-AS0037 | Automatic softening point determination

Optical detection • PT100 probe • Controlled heating and cooling



30-150 °C

APPROXIMATE TEST RANGE

2 specimens

RING AND BALL ASSEMBLY

EN 1427 • ASTM D36 • AASHTO T53

Photographs and Test Components

Touchscreen control, bath, ring assembly and optical detection

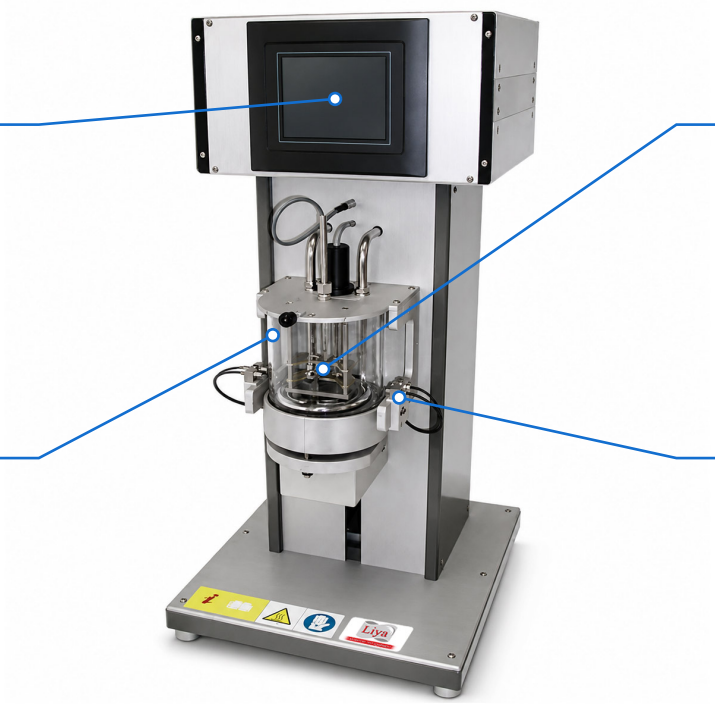
The LT-AS0037 automatically determines the softening point of bituminous materials using the ring and ball method. Sensors detect the specified drop position while bath temperature is monitored, and the corresponding temperature is recorded.

TOUCHSCREEN CONTROL

The colour graphic screen provides method selection, data recording and calibration functions.

GLASS BEAKER AND BATH

A water or glycerol bath operates with controlled heating and magnetic stirring.



RING AND BALL ASSEMBLY

Two brass rings, steel balls and centering guides form the specimen assembly.

OPTICAL DETECTION

Photoelectric sensors detect when the specimens reach the specified drop position.



Colour graphic control screen



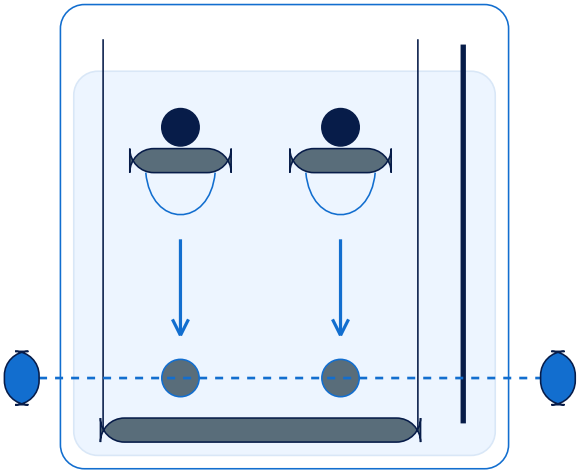
Glass beaker, ring holder and detection assembly

LT-AS0037

Temperature Recording at Softening

Prepare specimens • Set the bath • Heat steadily • Record automatically

TWO RINGS + STEEL BALLS + LIQUID BATH



PT100: MEASURES BATH TEMPERATURE

OPTICAL SENSOR: DETECTS DROP POSITION

SPECIMEN: BINDER PREPARED IN THE RING

Temperature is recorded automatically at detection

REPRESENTATIVE RING AND BALL DIAGRAM • NOT TO SCALE

Prepare Specimens and Bath

Fill both rings. Center the balls; select the appropriate bath liquid and method.

Start Controlled Heating

Control bath temperature and stirring. Monitor temperature continuously with the PT100.

Record the Softening Point

Record temperatures at optical detection; evaluate readings according to the method.

As heating progresses, the binder in each ring softens and deforms downwards under the steel ball. Optical detection occurs when the specimen and ball reach the specified position. The bath temperature at that moment is used for softening point evaluation.

Bath Liquid and Thermal Control

Water or glycerol is used within the approximate 30-150 °C test range. Select the bath liquid and heating programme according to the expected softening point and applicable method.

PID control manages the temperature increase; the magnetic stirrer promotes uniform bath conditions. Integrated cooling can reduce the bath to approximately 5 °C for preconditioning.

Set Components and Data Recording

The set includes a ring holder, bottom plate, two brass rings, two centering guides, two steel balls, glass beaker and magnetic stirrer bar. An electric lifting assembly supports preparation.

Record specimen identification, bath liquid and detection temperatures. Evaluate results according to the applicable standard; clean the assembly after testing.

Technical Specifications and Set Contents

LT-AS0037 | Automatic ring and ball softening point determination

Technical Specification	Value / Description
Product Code	LT-AS0037
Test Method	Ring and ball • Two specimens
Test Range	Approximately 30-150 °C • Water or glycerol
Temperature Measurement	PT100 temperature probe
Softening Detection	Photoelectric sensors • Automatic temperature record
Thermal Management	PID control • Integrated cooling
Bath Stirring	Speed-controlled magnetic stirrer
Control / Preparation	Colour touchscreen • Electric lifting assembly
External Dimensions / Weight	85 × 65 × 40 cm • 60 kg
Relevant Methods	EN 1427 • ASTM D36 • AASHTO T53

Check Bath and Detection Conditions

Check bath liquid, starting conditions and method before testing. Record the detection temperatures of both specimens and apply the relevant standard's acceptance and reporting rules.

Softening Point Test Workflow

01
Prepare
Fill the rings and center the steel balls.

02
Set
Select bath liquid and test method.

03
Heat / Detect
Heat steadily and detect the drop position.

04
Record
Record temperatures and evaluate results.

Product Page | liyatest.com.tr/en/urun/automatic-ring-and-ball-test-set/