Semi-Automatic Digital Bitumen Penetrometer

LT-AS0026 | Digital penetration measurement and automatic timing

Coarse and fine adjustment • Digital indicator • Controlled release



0.01 mm

DIGITAL MEASUREMENT RESOLUTION

5 s

TYPICAL NEEDLE-TEST RELEASE PERIOD

EN 1426 • ASTM D5 • AASHTO T49

LT-AS0026

Photograph and Measuring Components

Digital indicator, needle/tool assembly, platform and timer

The semi-automatic penetrometer measures bitumen penetration under defined load, time and temperature conditions. The operator sets the initial position; the timer controls release and penetration depth is read digitally.

DIGITAL INDICATOR

Displays penetration movement digitally with 0.01 mm resolution.

HEIGHT ADJUSTMENT

Coarse and fine adjustment brings the needle to the specimen surface in a controlled manner.



NEEDLE / TOOL ASSEMBLY

Use the standard needle for bitumen needle tests. Other tools support different applications.

TIMER AND START

The Start button activates timing; the typical needle-test period is 5 seconds.



Digital penetration indicator



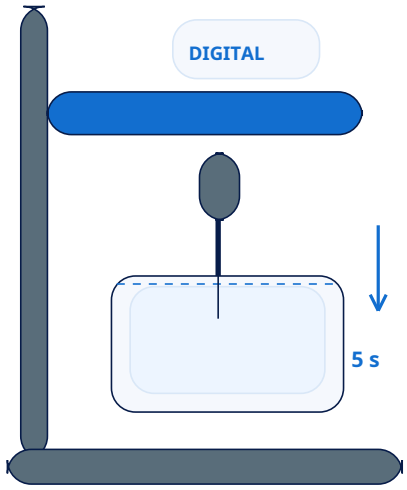
Automatic timer and Start button

LT-AS0026

Needle Penetration Measuring Cycle

Condition • Set surface contact • Release • Read and record

LOAD + TIME + TEMPERATURE: DEFINED CONDITIONS



NEEDLE ASSEMBLY

DIGITAL RESOLUTION: 0.01 mm

TYPICAL RELEASE PERIOD: 5 s

INITIAL POSITION: NEEDLE TIP AT SPECIMEN SURFACE

Report penetration depth using the test method

REPRESENTATIVE NEEDLE PENETRATION DIAGRAM • NOT TO SCALE

Condition and Position

Condition the specimen as specified. Set the needle precisely at its surface.

Zero and Release

Check the loading assembly and time. Prepare the indicator and start the test.

Read and Record

Read penetration depth. Record repeat measurements and conditions according to the method.

The needle, holder and loading assembly are released for the defined period and movement into the bitumen is read digitally. The result is used to assess specimen consistency. Prepare specimen temperature, load and duration according to the applicable method.

Specimen Containers and Test Conditions

Specimen containers are available in Ø55 × 35 mm and Ø75 × 45 mm sizes. Choose a container for the specimen quantity and method and complete temperature conditioning before testing.

Select measurement positions and repeat count as specified. 0.01 mm is display resolution and does not alone define system accuracy.

Needle and Alternative Tool Options

EN 1426, ASTM D5 and AASHTO T49 are bitumen needle-penetration methods. Use the standard needle with the appropriate test arrangement.

Quarter/half-scale cones, a penetration cone and a ball tool support other penetration applications. Match tool, load and procedure to the material being tested.

Technical Specifications and Accessory Codes

LT-AS0026 | Options for needle and other penetration applications

Product Code	Accessory / Description
LT-AS0027	Penetration needle
LT-AS0028	Penetrometer carrying case
LT-AS0029	Quarter-scale cone and shaft
LT-AS0030	Half-scale cone and shaft
LT-AS0031	Penetration cone
LT-AS0032	Ball penetration tool

Technical Specification	Value / Description
Digital Resolution	0.01 mm
Typical Test Timing	5 s • Automatic release
Positioning	Coarse and fine height adjustment
Base Construction	Cast-iron base plate
External Dimensions	260 × 240 × 600 mm
Weight	10 kg

Verify Initial Contact and Test Conditions

Set the standard needle at the specimen surface in a controlled manner. Verify load, duration and temperature against the method and record penetration with its test conditions.

From Bitumen Specimen to Penetration Result

01
Condition
Prepare vessel and specimen at test temperature.

02
Set
Adjust initial needle contact and indicator.

03
Start
Release under defined load and time.

04
Record
Save penetration and test conditions.

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