Relative Density Test Set

LT-S4253 / LT-S4254 | Compactness evaluation of cohesionless materials

Adjustable vibration • Mould options • Precision height measurement



762 × 762 mm

VIBRATING TABLE DIMENSIONS

0.5 / 0.1 ft^3

MOULD VOLUMES DEPEND ON MODEL

EN 13286-5 • Density evaluation of granular materials

Photographs and System Components

Vibrating table, moulds and surcharge components

The Relative Density Test Set evaluates density and compactness characteristics of cohesionless materials in the laboratory. EN and ASTM-type arrangements are available with different mould options.

CONTROL PANEL

Provides the controls for operating and managing the vibrating system.

VIBRATING TABLE

The 762 × 762 mm table promotes particle rearrangement within the mould by vibration.



MOULD ASSEMBLY

Cylinder, upper section and surcharge components form the selected test arrangement.

VOLUME OPTIONS

Both models include a 0.5 ft^3 mould; the LT-S4254 includes an additional 0.1 ft^3 mould.



Mould, upper section and connecting components

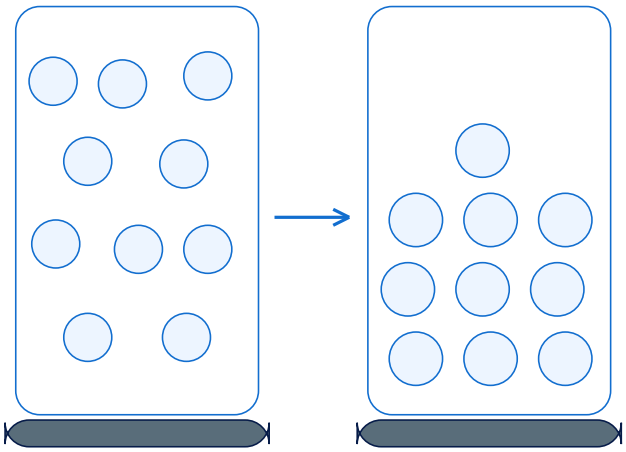


Vibrating table and control panel

Vibratory Arrangement and Volume Measurement

Select the method • Place material • Apply vibration • Measure height

LOOSE AND DENSER PARTICLE ARRANGEMENT



VIBRATION: PARTICLE REARRANGEMENT

MEASUREMENT: SPECIMEN HEIGHT AND VOLUME

Relate dry specimen mass to the determined volume

Evaluate density and compactness using the method

REPRESENTATIVE PARTICLE ARRANGEMENT • NOT TO SCALE

Select the Arrangement

Select model, mould volume and specimen preparation according to the test method.

Apply Vibration

Place the material. Apply surcharge and vibration conditions according to the procedure.

Evaluate Volume

Determine volume from height measurements. Calculate density using dry mass.

Vibration rearranges granular particles and reduces void volume. Use the dry specimen mass and determined volume to calculate density. Establish the maximum and minimum index values required for relative compactness evaluation using the applicable methods.

EN Arrangement and Maximum Dry Density

The LT-S4253 is supplied for the EN arrangement and includes a 0.5 ft^3 mould set. EN 13286-5 evaluates maximum dry density of suitable granular mixtures using a vibrating table.

Apply specimen preparation, water condition, surcharge arrangement and vibration duration according to the selected procedure. Record test conditions together with the result.

Measurement and Loose Placement

The gauge set includes a dial indicator with 50.8 mm travel and 0.025 mm graduations, a dedicated holder and a calibration bar. Height readings after vibration support volume evaluation.

A separately ordered pouring funnel arrangement can support loose placement. Two metal cylinders measure Ø152 × 305 mm, with 25.4 and 12.7 mm outlet diameters.

Model Options and Technical Specifications

LT-S4253 EN • LT-S4254 ASTM-type arrangement

Technical Specification	Value / Description
LT-S4253 • EN	120 × 120 × 150 cm • Approximately 350 kg
LT-S4254 • ASTM Type	120 × 120 × 150 cm • Approximately 400 kg
Vibrating Table	762 × 762 mm
Operating Value	Approximately 3600 rpm • Adjustable vibration
Shared Mould Volume	0.5 ft^3 • Approximately 14,200 cm^3
Additional LT-S4254 Mould	0.1 ft^3 • Approximately 2,830 cm^3
Mould Cylinder	Cast aluminium
Measuring Dial Indicator	50.8 mm travel • 0.025 mm graduations
Calibration Bar	76 × 305 × 3.2 mm
Separate Funnel Set Outlets	25.4 and 12.7 mm

Match the Mould and Gauge Arrangement to the Model

Record mould volume, dry specimen mass, height readings and vibration conditions. Evaluate maximum and minimum index tests according to their applicable procedures.

Relative Density Evaluation Workflow

01
Prepare
Prepare the method, mould and specimen.

02
Place
Place material according to the procedure.

03
Measure
Perform required vibration and volume readings.

04
Evaluate
Report density and compactness results.

Product Page | liyatest.com.tr/en/urun/relative-density-test-set/