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Product Name :

Relative density test apparatus

Product Code :

SLE/CE/62



Science Lab

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Description :

Relative density test apparatus (Product Code: SLE/CE/62) is a vibratory table and mould assembly used to compact free-draining sands and gravels to their densest state so their relative density can be calculated in soil mechanics laboratories. Geotechnical labs and civil engineering colleges use it with 3000 ml and 15000 ml unit weight moulds on a cushioned steel deck of about 75 cm x 75 cm. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM and TVET lab equipment manufacturer in India, at its own factory in Ambala.

Specifications

Parameter	Detail
Vibratory table deck	Cushioned steel vibrating deck, about 75 cm x 75 cm
Power supply	415 V, three phase
Vibration frequency	Approximately 3600 vibrations per minute under an 11.5 kg load
Amplitude	Variable in three ranges: 0.05 to 0.25 mm, 0.25 to 0.45 mm and 0.45 to 0.65 mm
Unit weight moulds	Cylindrical metal moulds, 3000 ml and 15000 ml capacity
Mould accessories	Guide sleeve with clamp assembly, surcharge base plate, handle for the surcharge base plate, surcharge weight
Dial gauge	0.01 mm x 50 mm travel, with 25 mm extension piece
Product code	SLE/CE/62
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Relative Density Test Apparatus Used For?

Clean sands and gravels do not give a clear peak in a normal compaction test, so their state of packing is described by relative density instead. With this apparatus, dry soil is placed in the mould, the guide sleeve is clamped on, and the surcharge base plate and weight are seated on top. The table then vibrates the filled mould, and the dial gauge with its extension piece records how far the surcharge plate has settled, giving the compacted volume.

Comparing the field density of a sand fill with its maximum and minimum densities tells engineers how loose or dense the deposit is, which matters for foundations, backfill behind walls and embankments. For colleges buying from an engineering lab equipment manufacturer, it turns a textbook index into a practical exercise. Bolt the table to a firm floor so vibration goes into the specimen, not the bench.

What to Specify When Ordering

- Mould capacity: 3000 ml, 15000 ml or both, based on the particle size of your soils
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