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Product Name :

Vane Shear Apparatus (Motorised)

Product Code :

SLE/CE/74



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Description :

Vane Shear Apparatus (Motorised) (Product Code: SLE/CE/74) is a laboratory vane tester used to measure the undrained shear strength of soft, saturated clay specimens that are too weak to trim for other strength tests. Soil laboratories and civil engineering colleges use its 230 V motor and worm gear to turn the vane at a slow 1/60 rpm through a calibrated torsion spring, reading torque on a degree dial. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM lab equipment manufacturer in India, at its own factory in Ambala.

Specifications

Parameter	Detail
Torque head	Adjustable in height by a lead screw rotated by a drive wheel, to lower the vane into the specimen
Drive	Single-phase electric drive operating a worm gear that turns theupper end of a calibrated torsion spring
Rate of rotation	1/60 rpm (one revolution per hour, 6° per minute)
Power supply	230 V AC
Torque reading	Vane shaft attached through the hollow upper shaft to a resettable pointer on a dial graduated in degrees
Torque calculation	Dial reading multiplied by the spring factor gives the torque
Sample container	Container for the soil sample supplied; a sampling tube of 38 mm i.d. x 150 mm long can also be used as the container
Product code	SLE/CE/74
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Vane Shear Apparatus Used For?

The clay sample, in the supplied container or still in its 38 mm sampling tube, is set beneath the torque head, and the drive wheel lowers the vane into it. When the motor is switched on, the worm gear slowly winds the torsion spring, which in turn twists the vane. Once the clay shears, the pointer stays at the largest angle reached; multiplying that reading by the spring factor gives the torque, from which the shear strength is worked out using the vane dimensions.

The method suits very soft marine, alluvial and organic clays that would slump in an unconfined compression test, and repeating it on remoulded soil shows the clay's sensitivity. It is a regular part of engineering educational equipments in India for geotechnical practicals. Push the vane in gently and start rotation promptly so the soil around the blades is not disturbed or allowed to consolidate.

OEM Manufacturer

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