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Product Name :

Rotational Moment of Inertia Apparatus

Product Code :

SLE/MCE/30



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Description :

Rotational Moment of Inertia Apparatus (Product Code: SLE/MCE/30) is a three-string pendulum set-up used to determine the moment of inertia of a rigid body in engineering and physics laboratories. A hanging plate is twisted into torsional oscillation, and a photoelectric sensor with a time counting device measures the oscillation period, so students obtain the period electronically rather than by eye. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM technical educational equipment manufacturer, at its own factory in Ambala, India.

Key Details

Parameter	Detail
Measurement method	Three-string pendulum (trifilar suspension)
Oscillating element	Hanging plate in torsional oscillation
Timing system	Photoelectric sensor combined with a time counting device
Quantity measured	Torsional oscillation period of the plate
Result	Moment of inertia of a rigid body
Variables studied	Mass distribution and axis (shaft) position of the rigid body
Product code	SLE/MCE/30
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Rotational Moment of Inertia Apparatus Used For?

Moment of inertia is the rotational counterpart of mass: it describes how strongly a body resists a change in its rotation, and it depends on how that mass is distributed about the axis. Here the plate hangs from three strings, a small twist sets it oscillating about its vertical axis, and the period of that torsional oscillation is linked to the moment of inertia of whatever the plate carries. Timing the empty plate first and then the plate with a test body lets students separate the body's own moment of inertia.

Moving the same body away from the centre of the plate shows how the axis position changes the result, a direct check of the parallel axis theorem in engineering mechanics classes. For consistent readings, keep the twist small, start the plate without sideways swing, and repeat each timing a few times before averaging. As a moment of inertia kit for Indian colleges and polytechnics, it pairs well with a balance and a vernier caliper, because the calculation needs the masses and dimensions involved.

OEM Manufacturer

The Rotational Moment of Inertia Apparatus comes from ScienceLab as the original equipment manu ts own l utors and i