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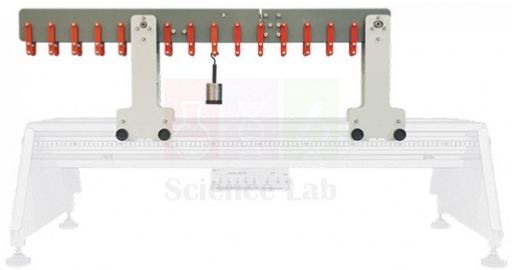
Product Name :

Bending Moments In a Beam

Product Code :

SLE/EG/11



Description :

Bending Moments In a Beam (Product Code: SLE/EG/11) is a beam experiment that measures bending moment directly: a load cell bridges a cut at mid-span, so the moment carried across the cut is read as loads are hung along the beam. The beam sits on a pinned support and a roller support, has an overhanging end for positive and negative moments, and comes with a uniformly distributed load (UDL) for comparison with single point loads. It is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, as foundational mechanics lab equipment for engineering students.

Key Details

Parameter	Detail
Type	Bending moment experiment for a simply supported beam with overhang
Supports	Two: one pinned (rotation only), one roller (allows translation)
Beam layout	Central span with an overhanging end, giving positive and negative bending moments
Loading	Loads on hangers suspended along the beam
Included load	Uniformly distributed load (UDL) that can be applied across thespan
Measurement	Load cell at the cut at mid-span measures bending moment
Positioning	Pointers that work with the scale on the Structures Platform
Data connection	Load cell connects to the USB interface hub of the Structures Platform

Typical Use

Students place the supports with the pointers and scale, hang a load at a chosen position and note the bending moment at the cut from the load cell. They calculate the same value from the reactions and compare. Moving a single load across the span and onto the overhang, and plotting the mid-span moment for each position, produces the influence line for bending moment at that section; loads on the overhang show the moment at mid-span changing sign.

Next, the UDL is laid across the span and the result compared with a point load of the same total size, showing why distributed loads give lower peak moments. Combining several hangers lets students build full bending moment diagrams and test the principle of superposition. It is often the first structures practical in a civil or mechanical syllabus, and a sensible starting point for colleges assembling engineering lab equipment in India for strength of materials.

Manufacturer

The beam module is manufactured by **Jain Scientific Equipments Private Limited**, based in Ambala, Haryana, and sold under the ScienceLab name. Purchase departments completing vend
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