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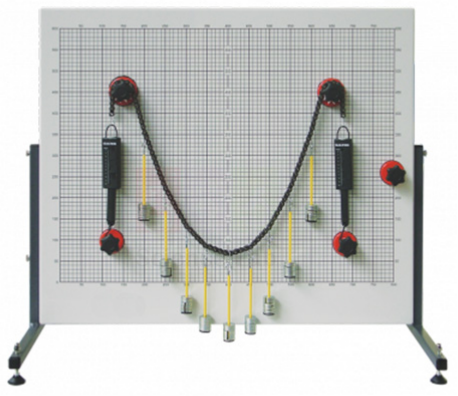
Product Name :

Suspension Cable Demonstration

Product Code :

SLE/ESA/01



Description :

Suspension Cable Demonstration (Product Code: SLE/ESA/01) is a magnetic engineering science kit used to study the shape and tension of a suspension cable in structures and applied mechanics classes, fitted to the Work Panel (STF1). A roller chain acts as the cable, held on magnetically mounted sprocket pulleys, while spring balances read the cable tension under hanging weights. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer, at its own factory in Ambala, India.

Key Details

Parameter	Detail
Mounting	For use with the Work Panel (STF1); magnetic parts fit to the panel
Cable	Roller chain
Cable supports	Magnetically mounted sprocket pulleys
Tension measurement	Spring balances
Loading	Set of weight hangers and weights
Configurations	Symmetrical and non-symmetrical cables; point loads orevenly-spread loads
Theory covered	Suspension cable compared with a catenary cable; catenary and parabolic theory
Documentation	Fully illustrated User Guide with theory, experiments and typical results
Product code	SLE/ESA/01
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Suspension Cable Demonstration Used For?

A cable hanging under its own weight takes the shape of a catenary, but when it carries a load spread evenly along the horizontal, as the deck of a suspension bridge does, its shape approaches a parabola. With this kit, students hang the roller chain between the sprocket pulleys on the Work Panel, let it sag freely, then add weight hangers at intervals to create an evenly-spread load. Measuring the sag and the spring balance tensions in each case shows which theory fits better.

The same parts can be rearranged into non-symmetrical cable arrangements or loaded at single points, so one kit carries a class from introductory statics to more advanced structures work. Because every part mounts magnetically, set-ups change quickly within a lesson and can be repeated for each student group. The illustrated User Guide supplies theory and typical results for comp
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