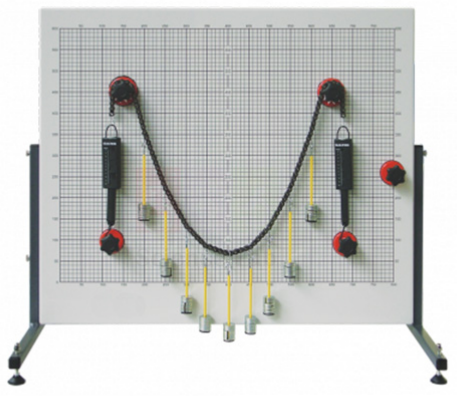
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**Product Name :**

Suspension Cable Demonstration

**Product Code :**

SLE/ESA/01



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## 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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