Email : sales@scilabexport.com
Phone: +91-7082934803

Product Name :

Suspended Beam Bridge

Product Code :

SLE/EG/08



Description :

The **Suspended Beam Bridge** (Product Code: SLE/EG/08) models a cantilever bridge in which two outer anchor sections carry a short central span hung between their cantilever tips. Load cells in the supports and within the bridge measure both the support reactions and the internal reactions where the suspended span meets the cantilevers, so students can test textbook predictions for a statically determinate bridge that can still achieve a large central span. It is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, a technical educational equipment manufacturer for civil engineering and polytechnic laboratories.

Key Details

Parameter	Detail
Type	Cantilever and suspended-span bridge model
Anchor sections	Two outer anchor sections, each on two supports
Suspended section	Short central section carried by a short cantilever on each anchor section
Supports	Four, each with pointers that work with the scale on the Structures Platform
Reaction measurement	Load cells in the supports and in the bridge structure
Quantities measured	Support reactions and internal reactions between the cantilever and suspended sections
Loading	Loads can be applied at any position on the bridge
Data connection	Load cells connect to the USB interface hub of the Structures Platform

Typical Use

Students set out the four supports using the pointers and platform scale, then place a load at a chosen point along the deck. From the load cells they read the four support reactions and the two internal reactions at the joints between the cantilevers and the suspended span. Using statics alone they predict the same values, since the hinge-like joints make the bridge statically determinate, and then compare. Moving the load step by step across the bridge lets the class build influence lines for each reaction.

The model explains why this form of bridge has been used for long spans: the suspended section lets the structure span far while remaining simple to analyse and less sensitive to support settlement. It is an engaging way to link theory with real bridge design, and suits departments buying lab equipment for technical institutes that teach bridge engineering and structural analysis.

Manufacturer

Supplied under the ScienceLab name, this bridge model is manufactured by **Jain Scientific Equi**
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