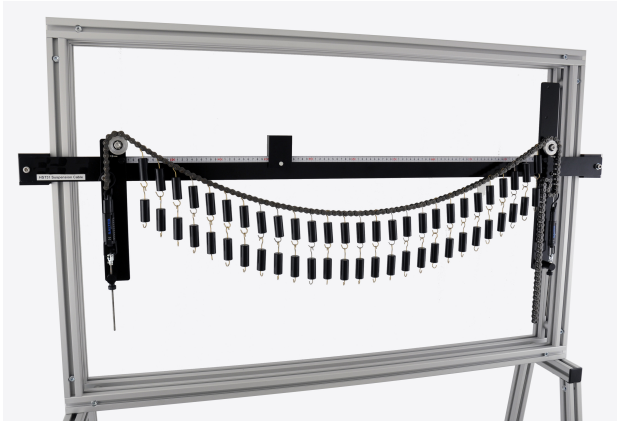




SUSPENSION CABLE HST31



Year 1
study

Features

- Unique to HST Structures Range.
- Point or Uniformly Distributed Load (UDL).
- Wide variety of loading arrangements.
- Commercially available chain.
- Dedicated e-book supplied

Description

Experiment to compare the simplified theory of a suspension cable with results measured using a chain of uniform weight per unit length. A horizontal base beam has a fixed pulley at one end and a vertically adjustable pulley at the other end of a 1 m span. A length of roller chain is used as the suspension cable, which is tensioned by two spring balances that can be adjusted to keep the chain length constant. A height gauge on the base beam is provided to measure the X and Y co-ordinates of the lay of the chain. A large number of small suspension weights are used to hang on the chain rollers to vary the uniform weight per unit length, or alternatively to hang in a cluster to form a point load. Each suspension weight weighs approximately 1N each and has a hook at each end which allows it to be attached to the chain and allows other weights to be linked in series on the chain, thus changing the self weight of the chain. Varying point loads can be achieved by created a series of linked weights at a single point on the chain.

Related Laws/Applications

- Symmetrical and Unsymmetrical Suspended Cable.
- Suspension Cable with Catenary.
- Weight per Unit Length.
- Parabolic Curves.

Learning capabilities

- Comparison of experimental results of a suspension cable with a catenary
- Study of use of the simplified theory assuming a parabolic curve
- Symmetrical and unsymmetrical suspended cables
- Determination of the effect of a point load

Technical Specification

- 1000mm chain span
- 2 x 10kgf spring balance
- 81 x 1N suspension weight
- X and Y scale calibrated in mm

Essential Ancillaries

- HST1 (or HST100)

What's in the Box?

- 1 x Horizontal Rail
- 81 x 1N Suspension Weight
- 1 x Chain
- 2 x Spring Balance
- 1 x Tape measure
- Accessories container
- 2 x Hex wrench
- Instruction manual
- E-book
- Packing list
- Test sheet

You might also like

- HST2

Weights & Dimensions

- Weight: 45 kg
- Length: 1400mm
- Width: 120mm
- Height: 700mm

Operational Conditions

- Storage temperature: -10°C to +70°C
- Operating temperature range: +10°C to +50°C
- Operating relative humidity range: 0 to 95%, non condensing

Ordering information

To order this product, please call PA Hilton quoting the following code: HST31

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