SIMPLE SUSPENSION BRIDGE
HST2

Year 1
study

Features

- Visually realistic Suspension bridge.`
- Solid bridge deck
- Cable Tension measured using load cells.
- Unrestricted loading positions along bridge deck.
- True Uniformly Distributed Loading (UDL).
- Single, UDL or rolling loads can be applied.
- Ability to create customer specific vehicle to traverse bridge.
- Ability to create customer specific bridge deck.
- Dedicated e-book supplied

Description

A rigid bridge deck is suspended from twin steel suspension cables by pairs of vertical tie rods, which when fully assembled create cables of a parabolic form with 1.0 metre span and 0.2metre dip. The ends of each cable pass over pulleys which terminate in load cells which record the cable tension when connected to the HDA200 Interface (sold separately). The bridge loading is applied via a number of calibrated test bars, each having a known N/m value. Point loads can also be applied by means of a calibrated mass, which can be position quickly and easily on the bridge deck. The smooth design of the bridge deck allows a wide variety of unrestricted load positions to be used along the beam lengths.

Related Laws/Applications

- Tension
- Uniformly Distributed Load (UDL)
- Parabolic Arch
- Cable
- Suspension Bridge

Learning capabilities

- Comparison of theory with actual results for a uniformly distributed load
- Comparison of theory with actual results for point load and rolling load
- Cable tension obtained for loads at varying positions and magnitude along the bridge deck

Technical Specification

- Bridge Deck Length: 1000mm
- Bridge Deck width: 102mm
- Bridge Cable 'dip': 200mm
- UDL Bar: 12.5N/m each
- Point Load: 20N
- Load Cell: 500N

Essential Ancillaries

- HST1 (or HST100)
- HDA200

What's in the Box?

- 1 x Bridge deck assembly
- 8 x UDL Bars
- 1 x Point load
- 1 x Tape measure
- 1 x Spirit level
- 1 x Hex wrench
- Instruction manual
- Accessories container
- E-book
- Packing list
- Test sheet

You might also like

- HST4
- HST5
- HST18
- HST31

Weights & Dimensions

- Weight: 16 kg
- Length: 1030mm
- Width: 100mm
- Height: 300mm

Essential Services

- 110/120V, 60Hz or 220/240V, 50Hz, single phase, live neutral and earth for optional HDA200

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: HST2

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