BENDING MOMENT in a BEAM

HST10



Year 1
study

Features

- Visually realistic, 'cut' beam
- Takes internal forces and shows them externally
- Bending Force output via load cell
- Unrestricted loading positons
- Load position at 'cut' in beam
- Experiment can be undertaken from both sides
- Quickly and easily interchangeable with HST9 and HST46
- Optional Influence line section
- Dedicated e-book supplied

Description

Each beam is simply supported on vertical supports which can be positioned in a variety of positions along the beam lengths. At the ‘cut’ section, a bearing in one beam rests inside a radiused pocket of the other beam. This restricts any vertical movement between the two beams (hence removes any visible shear force), but does not restrict rotation between the two beams and hence bending is not restricted. In their unloaded state the beams are levelled using the level indicator provided. Loads are applied to the beam using the Load hangers and calibrated weights set. The force transducer connects to the HDA200 Interface (sold separately).

Related Laws/Applications

- Bending Moment
- Strain
- Stress
- Young's' Modulus
- Bending Moment Diagrams (BMD)
- Verification of Equilibrium of Vertical Forces and Moments

Learning capabilities

- Visual demonstration of the bending moment at a 'cut' section in a beam
- Comparison of experimental results with theoretical values
- Creation and use of bending moment diagrams
- Variation in bending moment for variations in load, load position and load arrangement

Technical Specification

- Beam lengths of 650 and 350mm
- Beam cross section: 51 x 38mm
- 50mm graduations on beams
- Weights set: 1 x 1N, 2 x 2N, 2 x 5N, 2 x 10N

Essential Ancillaries

- HST1 (or HST100)
- HDA200

Recommended Ancillaries

- HST10A

What's in the Box?

- 1 x Short Beam
- 1 x Long Beam
- 2 x Support Rods
- 3 x Hangers
- 1 x 2N, 2 x 2N, 2 x 5N, 2 x 10N weight
- 1 x Tape measure
- Accessories container
- Hex wrench
- Instruction manual
- E-book
- Packing list
- Test sheet

You might also like

- HST9
- HST46
- HFC31

Weights & Dimensions

- Weight: 6 kg
- Length: 1000mm
- Width: 100mm
- Height: 350mm

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: HST10

All brand and/or product names are trademarks of their respective owners. Specifications and external appearance are subject to change without notice. The colour of the actual product may vary from the colour shown in the brochure.
Copyright © 2018 P.A. Hilton Limited. All rights reserved. This technical leaflet, its contents and/or layout may not be modified and/or adapted, copied in part or in whole and/or incorporated into other works without the prior written permission of P. A. Hilton Limited. Hi-Tech Education is a registered trade mark of P. A. Hilton Limited.
COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS