



PLASTIC BENDING of BEAMS HST3



Year 3
study

Features

- High quality, robust and durable design.
- Three supports; Simple, fixed, propped cantilever
- Commercially available specimen size
- Three specimens supplied.
- Force and deflection both viewed on HDA200.
- Customer specific specimens could be used.
- Dedicated e-book supplied

Description

The experiment hardware provides two end supports; one for completely fixed end, whilst the other giving horizontal travel. Both supports create simple supports (knife edges) and have clamp plates which create fixed ends by restricting the end rotation of the test beam. The test beams have a single point load applied using the fine screw jack mechanism with integral load cell supplied. The displacement of the test beam within its elastic and plastic regions is measured using a dial gauge and this along with the load cell output connect into the HDA200 Interface (sold separately). A set of black mild steel beams are supplied with further sets available (HST3a).

Related Laws/Applications

- Plastic Collapse.
- Plastic Moment.
- Yield Stress.
- Plastic Modulus.
- Simply Supported.
- Propped Cantilever.
- Fixed Beam (Encastre).
- Plastic Hinges.
- Radius of Curvature.

Learning capabilities

- Measurement of collapse load for a mild steel beam
- Study of extra load carried as beam is made redundant by end fixing

Technical Specification

- Black Mild Steel test beams
- Beam section: 20mm x 5mm
- Beam length: 800mm
- Digital Dial Gauge: 12.7mm travel; 0.01mm resolution
- Loading Mechanism: 0...500N

Essential Ancillaries

- HST1
- HDA200

Recommended Ancillaries

- HST3A

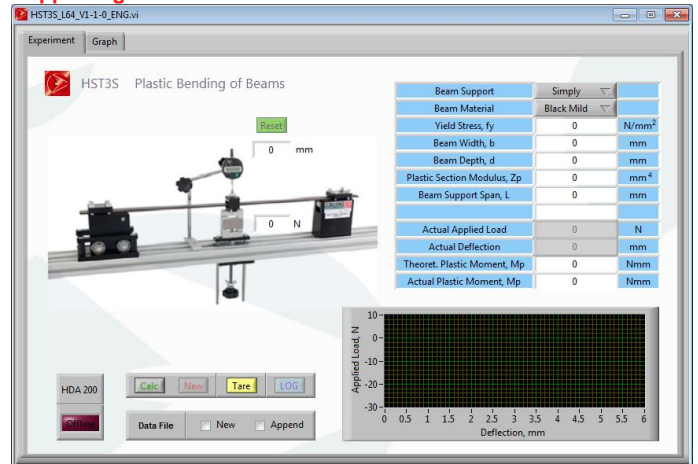
What's in the Box?

- 1 x Loading mechanism
- 1 x Moving end support
- 1 x Fixed end support
- 1 x Digital Dial Gauge
- 1 x Dial Gauge Data Cable
- 1 x Tape measure
- Hex wrench
- Accessories container
- Instruction manual
- Software
- E-book
- Packing list
- Test sheet

You might also like

- HST8

Supporting Software



- HST3S

Minimum System Requirements

- Computer or Laptop running WIN7 or above

Weights & Dimensions

- Weight: 10 kg
- Length: 360mm
- Width: 110mm
- Height: 160mm

Essential Services

- 110/120V, 60Hz or 220/240V, 50Hz, single phase, live neutral and earth for 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: HST3

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