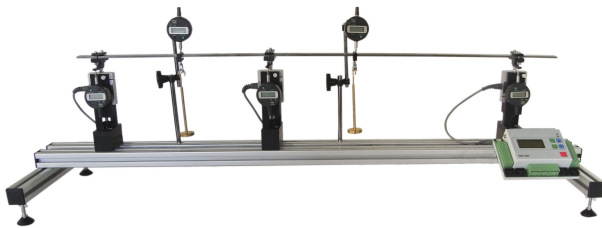


ADVANCED BEAM TESTING APPARATUS (DIGITAL VERSION)

HSM1cD



Year 2
study

Features

- Bench mounted unit
- Comprehensive Theory of Beams
- Wide variety of beam experiments can be undertaken
- Six test beams supplied as standard
- Most comprehensive beam apparatus available
- Single and Two span arrangements
- Cantilevers
- Digital Interface and software supplied as standard

Description

An unlimited range of beam experiments can be performed to measure support reactions, deflections and rotations of simply supported, fixed and two span continuous beams, simple and propped cantilevers, and sinking supports. Test beams with different material and cross section are carried by pinned supports on three load-measuring piers each containing an electronic load cell which measures the vertical reaction forces. The output from each load cell is fed into the Data Acquisition Interface supplied. Data Acquisition Software captures the key experimental parameters from the hardware. Three dial gauges on movable stands measure the beam and support displacements. Supplied with hangers, calibrated weights set and set of test beams.

Related Laws/Applications

- Beams
- Civil Engineering
- Structural Engineering
- Encastré
- Bending Theory
- Principle of Super Position
- Reciprocal Displacements
- Beam Span
- Circular Bending
- Uniformly distributed Load
- Cantilever

Learning capabilities

- All variables in deflection of beams
- Slope and curvature of beams
- Support reactions of single span and continuous beams
- Effect of sinking supports
- Area moment theorems
- Super-position
- Clerk Maxwell's reciprocal theorem
- Comparison of measured reactions with theoretical values
- Study of effect of sinking supports

Technical Specification

- Bench mounted test frame supplied
- 1 x Steel: 1200(L) x 25(W) x 5(H) mm
- 1 x Brass: 1200(L) x 25.4(W) x 4.76(H) mm
- 1 x Aluminium: 1200(L) x 25.4(W) x 6.35(H)mm
- 1 x Aluminium: 1200(L) x 25.4(W) x 3.20(H)mm
- 1 x Aluminium: 1200(L) x 25.4(W) x 4.76(H)mm
- 1 x Aluminium: 1200(L) x 19.0(W) x 6.35(H)mm
- 500N Pier load cell capacity
- 3 x Digital dial gauges: 12.7mm travel, 0.01mm resolution
- 3 x Dial gauge connection leads supplied
- 4 x Load hangers

Recommended Ancillaries

- HSM1f
- HSM1g

What's in the Box?

- 1 x Base frame
- 3 x Reaction Pier
- 1 x Fixed pier
- 1 x Digital Interface
- 4 x Beam clamp
- 3 x Dial gauge stand
- 4 x Load hanger
- 1 x Hex wrench set
- 1 x Tape measure
- 3 x Dial gauge
- 3 x Dial gauge cables
- 5 x 1N; 10 x 2N; 10 x 5N; 5 x 10N
- 4 x Aluminium beam
- 1 x Steel beam
- 1 x Brass beam
- Instruction manual
- Packing list
- Test sheet

You might also like

- HSM1
- HSM1c
- HST11

Weights & Dimensions

- Weight: 20 kg
- Length: 1400mm
- Width: 300mm
- Height: 410mm

Essential Services

- Sturdy Bench top

Ordering information

To order this product, please call PA Hilton quoting the following code: HSM1cD

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.

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COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS