ADVANCED BEAM TESTING APPARATUS (ANALOGUE VERSION)

HSM1c



Year 1
study

Features

- Bench top apparatus for large number of beam tests
- Three reaction piers with digital display
- Fixed pillar for cantilever work
- Large number of test setups/ variations available
- Quick and easy adjustment of test span
- Containers supplied for all accessory parts
- Full set of weights and hangers supplied

Description

The bench mounted apparatus has an aluminium profiled base on levelling feet. Three reaction piers can be moved along the length of the base to create differing test spans for the beam. For each reaction pier the applied force is displayed digitally in engineering units of Newton's (N). Each reaction pier has a tare function and a clamping mechanism for the test beam which allows simply supported end conditions with no vertical movement. A set of test beams are supplied together with two analogue dial gauges for measuring beam deflections and slopes. The dial gauges are mounted on movable stands for accurate positioning along the beam length. A set of calibrated weights and hangers are supplied along with the necessary tools to adjust the equipment.

Related Laws/Applications

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

Learning capabilities

- Reactions and central deflection of a simply supported beam with varying span
- Reactions and deflection for an offset load on a simply supported beam
- Effect of beam cross section on deflection
- Distributed load on a simply supported beam
- Offset point loading
- End load on a cantilever

Technical Specification

- Base frame approximately 1400mm in length
- Three adjustable reaction piers
- Newton (N) display with 0.1N resolution
- Battery operated reaction pier, with ‘auto OFF’ function
- Hangers and beam clamps x 4 off
- Analogue dial gauges to measure deflections; 25mm travel; 0.01mm resolution x 2 off
- Steel test beam: 1200(L) x 25(W) x 5(H) mm
- Aluminium test beam: 1200(L) x 25.4(W) x 3.2(H) mm
- Aluminium test beam: 1200(L) x 25.4(W) x 4.76(H) mm
- Aluminium test beam: 1200(L) x 25.4(W) x 6.35(H) mm

Recommended Ancillaries

- HSM1f
- HSM1g

What’s in the Box?

- 1 x Base frame
- 3 x Analogue Pier
- 1 x Fixed pier
- 3 x Beam clamp
- 2 x Dial gauge stand
- 4 x Load hanger
- 1 x Hex wrench set
- 1 x Tape measure
- 2 x Dial gauge
- 10 x 0.1N; 10 x 0.2N; 5 x 10N; 5 x 2N; 10 x 5N
- 3 x Aluminium beam
- Instruction manual
- Packing list
- Test sheet

You might also like

- HSM1
- HSM1cD
- HST11

Weights & Dimensions

- Weight: 26 kg
- Length: 1400mm
- Width: 400mm
- Height: 400mm

Essential Services

- Sturdy Bench top

Ordering information

To order this product, please call PA Hilton quoting the following code: HSM1c

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