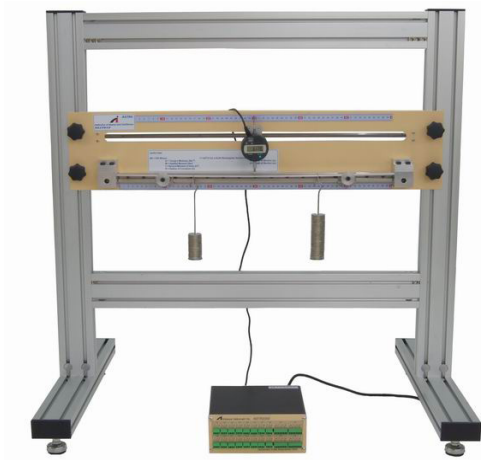




ASTR4 Deflection of Beams and Cantilevers

橫樑及懸臂樑之撓度



Features:

- For study of beam deflection under different loads and fixing conditions
- High-quality structures teaching module for students of mechanical, civil and structural engineering
- Allows safe and practical experiments into deflections of beams and cantilevers
- Realistic and verifiable experiment results
- Optional All's Structures Software package for extra 'virtual' experiments that simulate and confirm the results from your hardware and allow extended experiments
- Optional ASTR2000 unit including All's Structures Software package for automatic data acquisition and virtual experiments
- One of many interchangeable experiment modules from All's modern, flexible and cost-effective Structures teaching system
- Ideal for classroom demonstrations, or students working in pairs or small groups

Description:

The experiment hardware consists of a backboard that fixes to the Multi Structures Test Frame (ASTR1, available separately). Test beams fit onto the backboard using a rigid clamp and knife-edge supports. Students apply loads at any position using hangers holding various masses. Mounted on a trammel, a digital deflection indicator traverses the beam. The indicator measures beam deflection. Scales on the backboard show the position of the indicator, the loads and supports.



ASTR4 Deflection of Beams and Cantilevers

橫樑及懸臂樑之撓度

Specification:

- Standard Features
 - Supplied with lecturer guide and student guide
- Experiments
 - Examination of:
 - Beam deflections
 - General bending formulae
 - Beam end rotations
 - Elastic modulus (Young's modulus) for various materials
 - Typical conditions are:
 - Cantilever
 - Propped cantilever
 - Encastre beam
 - Simply supported beam
- Essential Ancillaries
 - Multi Structures Test Frame (ASTR1)
- Recommended Ancillaries
 - Structures Software (ASTRS) for virtual experiments or
 - Automatic Data Acquisition Unit (ASTR2000) for automatic data acquisition and virtual experiments
- Operating Conditions
 - +5°C to +40°C
- Specification
 - 880 x 180 x 120 mm \pm 15%
- Loads
 - 10 weight hangers
 - 10 knife-edges with weight hangers
 - 200 pieces 10 g masses
- Test beams
 - 1 x aluminum
 - 1 x steel
 - 1 x brass
- Deflection measurement
 - Digital deflection indicator
- Accessories
 - 1 x 600 mm Rule
 - 1 x 150 mm vernier

- ASTR4-ALB
 - 6061 Aluminum Alloy, Strain Gage Beam
- SR1
 - Strain Gage Indicator

