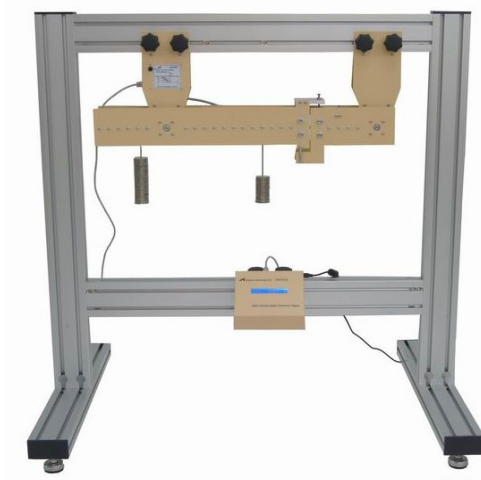




## ASTR3 Shear Force in a Beam

### 橫樑之剪力



#### Features:

- Shows and proves the basic theory of shear force in a beam
- High-quality structures teaching module for students of mechanical, civil and structural engineering
- Allows safe and practical experiments into shear force in a beam
- 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 STR2000 unit with 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 is a simply supported beam with a 'cut'. The beam fits onto a Multi Structures Test Frame (ASTR1, available separately).

A mechanism bridges the cut, which stops the beam collapsing and allows movement in the shear direction only. An electronic load cell measures the force, and connects to a Multi-Channel Digital Transducer Display (ASTR1a, available separately). Students apply loads at set positions using hangers holding various masses.



## ASTR3 Shear Force in a Beam 橫樑之剪力

### Specification:

- Standard Features
  - Supplied with lecturer and student guides
- Experiments
  - Shear force variation with an increasing point load
  - Variation of shear force for various loading conditions
  - Examination of various other loading cases and their effect on shear force, including loads traversing the beam
- Essential Ancillaries
  - Multi Structures Test Frame (ASTR1)
  - Multi-channel Digital Transducer Display (ASTR1a)
- 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
- Dimensions
  - 660 x 250 x 90 mm ± 15%
- Loads
  - 5 weight hangers
  - 200 pieces 10 g masses
- Hanger supports
  - 21 loading positions along the beam
- Force measurement
  - Electronic load cell

