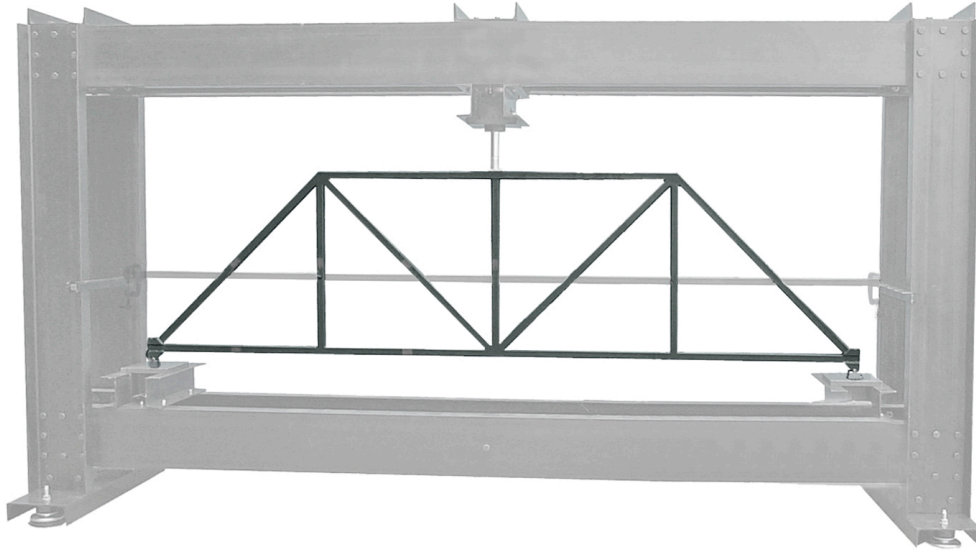




## PLANE FRAME

### HPM6/1



#### Features

- Study of the simple theory of pin jointed and rigid jointed frames, showing calculation errors; also demonstrating influence lines; and verification of reciprocal theorem.
- Includes a suitably sized plane triangulated frame of welded steel hollow square section members on which loads may be applied and deflections measured.
- The frame may be mounted normally, as per image or inverted
- Real size welded truss
- Utilises pinned & roller bearings

#### Description

The standard truss supplied is made from fully welded hollow square section steel members and has dual end bearings so that it can be mounted in the normal manner or inverted. Two high level reaction supports are supplied to allow the truss to be inverted and to use the same end bearing conditions. One end of the truss is pinned to permit rotation and the other end pinned incorporating a triple roller system to eliminate horizontal restraint. The truss has been specially designed to be tested in the MAGNUS (HPM1) frame with hydraulic loading and deflections measured using the dial gauges supplied. The standard set of accessories that are supplied with the HPM1, allow the dial gauge to be positioned accurately at the joints. For safety reasons during experimentation, two safety chains have been provided to secure the truss to the HPM1 MAGNUS frame, whilst not restricting the truss movements or deflections.

#### Learning capabilities

- Comparison of deflections with theoretical values assuming pin joints
- Comparison between normal and inverted underslung trusses
- Investigation of reciprocal theorem

#### Technical Specification

- 3.6 metre span, four bay plane frame
- 45° diagonals
- 40 x 40mm section hollow steel tube 3mm wall thickness (approximately)
- Maximum load for the truss: 40kN

#### Essential Ancillaries

- HPM1 Universal Test Frame
- HPM2 Accessories Kit
- HPM3 Single Hydraulic Ram System
- HPM12 Protective Guard

**What's in the Box?**

- 1x Plane Frame
- 2 x High level reaction supports
- 2 x 'S' hooks
- 1 x Cross rocker bearings
- 2 x Pins
- 1 x Bearing block
- 1 x Roller bearing assembly
- 1 x Dial gauge, 25mm travel, 0.01mm resolution
- 1 x Magnetic dial gauge stand

**Weights & Dimensions**

- Plane Frame Net Dimensions: 3.65M (L) X 0.94M (H)
- Plane frame Net Weight: 50Kg

**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:  
HPM6/1 PLANE FRAME

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COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS