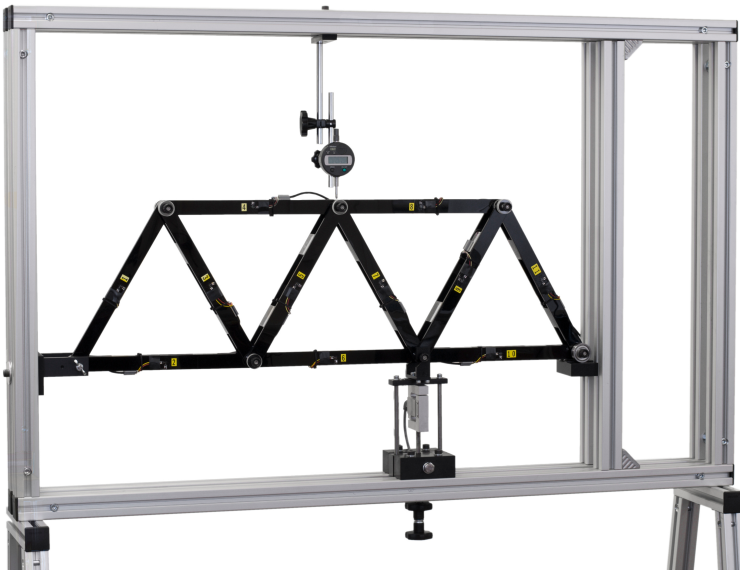


PIN JOINTED FRAMEWORKS

HST19



Year 3
study

Features

- Visually realistic ROOF truss and WARREN truss.
- True pin jointed structures.
- Each truss comes fully assembled.
- No disassembly required.
- Load can be applied at different joints
- All truss members strain gauged.
- Movable Deflection indicator to all joints.
- Quick and easy connection of loading mechanism.
- Dedicated e-book supplied

Description

Two assembled pin-jointed frameworks (warren and basic roof truss) to measure the strains (hence stresses) and joint deflections. Each member, when assembled creates a truly pin joint. The frameworks mount onto two end supports. One support has a pivoting arrangement whilst the other has pivoting and rolling arrangement. The loads on the framework are applied at specific joints by using the screwjack loading mechanism supplied. Each framework member has a strain gauge arrangement attached. The signal from the loading mechanism and strain gauges is fed directly into the HDA200 Interface (sold separately). To measure the deflection at specific joints a dial gauge is mounted on an extendable arm which can be rotated onto the joint being measured. This arm can be manoeuvred over the joint accurately.

Related Laws/Applications

- Castiglianos' Theorem.
- Statically Determinate.
- Resolution of Joints.
- Stress.
- Strain.
- Area.
- Modulus of Elasticity.
- Reactions.
- Bow's notation.

Learning capabilities

- To allow the study of strains within various true pin jointed frameworks
- To allow the study of stresses within various true pin jointed frameworks
- Comparison of different frameworks
- Comparison of actual and theoretical results

Technical Specification

- Roof Truss: 11 members; 900mm truss length; 30° member angle
- Warren Truss: 11 members; 900mm truss length; 60° member angle
- Acrylic Truss Members: 25(H) x 10(W) mm
- Loading Mechanism: 0...500N
- Digital Dial Gauge: 12.7mm travel; 0.01mm resolution
- Half Bridge Strain Gauging

Essential Ancillaries

- HST1 (or HST100)
- HDA200

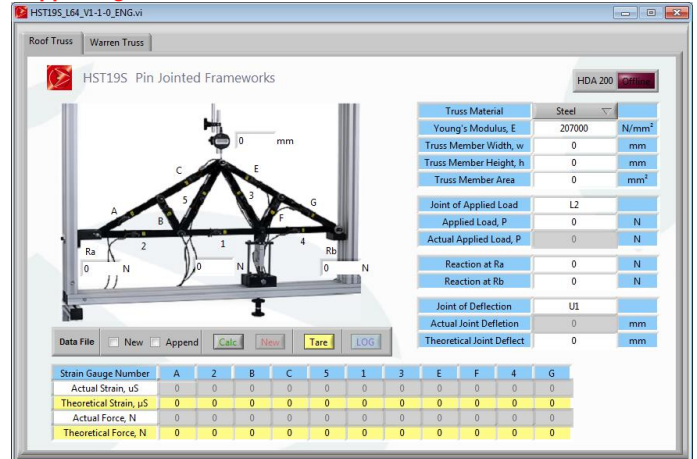
What's in the Box?

- 1 x assembled Roof Truss
- 1 x assembled Warren Truss
- 1 x Loading Mechanism
- 1 x Digital Dial Gauge and Data Cable
- 1 x Flat Anvil
- 1 x Tape measure
- Accessories container
- Hex wrench
- 1 x spanner
- Instruction manual
- Software
- E-book
- Packing list
- Test sheet

You might also like

- HST16
- HST19

Supporting Software



- HST19S

Minimum System Requirements

- Computer or Laptop running WIN7 or above

Weights & Dimensions

- Weight: 12 kg
- Length: 1000mm
- Width: 360mm
- Height: 100mm

Essential Services

- 110/120V, 60Hz or 220/240V, 50Hz, single phase, live neutral and earth for HDA200

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: HST19

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.

Copyright © 2018 P.A. Hilton Limited. All rights reserved. This technical leaflet, its contents and/or layout may not be modified and/or adapted, copied in part or in whole and/or incorporated into other works without the prior written permission of P. A. Hilton Limited. Hi-Tech Education is a registered trade mark of P. A. Hilton Limited.

COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS