THREE WIRE SUSPENSION
HFC12



Year 1
study

Features
- Bench top unit
- Three wires suspension
- Equilibrium and redundancy investigated
- Single central ring with dynamometers attached
- Full set of weights and hanger supplied

Description
A free standing backboard provides supports for three tensile suspenders that meet at a ring carrying a Load hanger. The tensile suspenders or spring balances show the tensile force reading in each of the suspenders which are at about 30 and 45 degrees to the central vertical one. The lengths of each suspender can be adjusted by a threaded rod attached to the spring balance. This can be adjusted via a thumb screw which is located at the end of the adjustable rod. A set of calibrated weights is supplied to apply loading to the hanger which pulls down on the load ring which is connected to each of the spring balances.

Related Laws/Applications
- Equilibrium
- Horizontal Forces
- Vertical Forces
- Redundancy
- Vertical Tie
- Three wire suspension

Learning capabilities
- To investigate the possibility of redundancy in the vertical tie.
- To compare the sum of the vertical components of the forces in the three wires with the vertical load they support.
- To verify that the horizontal components of the forces in the two oblique rods are equal.

Technical Specification

- Base Board: 400(L) x 150(W) x 920(H) mm
- Rubber bench feet
- Load ring: 4 suspension holes; 1 at 30°, 1 at 45°
- 3 x Spring Balance: 6kgf, 0.01kgf resolution
- 1 x Load hanger
- Weights set: 5 x 10N

What's in the Box?

- 1 x HFC12 base board
- 1 x Load hanger
- 1 x Load ring
- 3 x Spring Balance assembly
- 1 x Tape measure
- 5 x 10N
- Instruction manual
- Packing list
- Test sheet

Weights & Dimensions

- Weight: 4 kg
- Length: 420mm
- Width: 150mm
- Height: 920mm

Essential Services

- Sturdy Bench Top

Ordering information

To order this product, please call PA Hilton quoting the following code:
HFC12

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