TRIANGLE of FORCES

HFC2

Year 1
study

Features

- Very visual, bench top apparatus
- Direct measurement of forces
- Adjustable lines of action of forces
- Practical verification of Triangle of Forces
- Full set of weights and hangers available

Description

A bench mounted base board, with a raised circular table with a central pin and 360° protractor has three pulleys on adjustable clamps around the table edge. Three cord assemblies with hooks, attach to a central ring and terminate at Load hangers. The central ring rests over the central pin of the raised table, while weights are added to the individual hangers. The central ring is then removed from the central pin, and the condition of equilibrium is allowed to be obtained naturally. The lines of action of each applied force is read from the protractor attached to the raised table. The triangle of forces in equilibrium can be constructed and the resultant of two known forces can be found.

Related Laws/Applications

- Resolution of forces
- Static and co-planar forces
- Triangle of forces
- Resultants

Learning capabilities

- To find any suitable combination of three coplanar forces in equilibrium
- To compare the results with the graphical solution obtained by drawing the triangle of forces
- To demonstrate that the resultant of two known forces is equal and opposite to the equilibrant found experimentally

Technical Specification

- Base Board: 350(L) x 350(W) mm
- Raised Table: 200mm above base board, Ø300mm
- Protractor: 0…360°, 1° resolution
- 3 x pulley bracket
- 3 x Load hanger

What's in the Box?

- 1 x HFC2
- 3 x Pulley bracket
- 3 x Cord assembly
- 2 x Split ring
- 3 x Load hanger
- 1 x 2m Spare cord
- 6 x 0.1N; 12 x 0.2N; 3 x 1N; 6 x 2N; 2 x 5N
- Instruction manual
- Packing list
- Test sheet

You might also like

- HFC3
- HST23

Weights & Dimensions

- Weight: 10 kg
- Length: 350mm
- Width: 350mm
- Height: 250mm

Essential Services

- Sturdy Bench Top

Ordering information

To order this product, please call PA Hilton quoting the following code:
HFC2