



TORSION of BARS APPARATUS

HSM2



Year 2
study

Features

- Bench mounted, compact.
- Four test specimens, of different materials.
- Angle of Twist can be measured in two positions along specimen.
- Bearings for smooth rotation.
- Very visual.
- Quick and easy set up.
- Customer specific specimens can be used.

Description

Apparatus to understand and investigate directly the relationship between the torsional load applied to a round bar and the angular twist produced and how this relationship varies with the beam material and its cross sectional polar moment of area. Specimens are rigidly held in a clamp fixed to one end of the bench top base frame. A bearing at the other end contains a short shaft

with an integral pulley and chuck.

The pulley has cord wrapped around its periphery to allow torque to be applied using the Load hanger and calibrated weights supplied. A rotation scale and pointer can be attached at any point on the specimen's length to find the angle of twist of the specimen. A specimen set is supplied with a variety of specimens in round bar and differing materials.

Related laws

- Modulus of Rigidity.
- Shear Modulus.
- Torsion Constant.
- Polar Moment of Inertia.
- Angle of Twist.
- Gauge Length.

Learning capabilities

- To measure the angle of twist produced by torsional loads for various specimens and verify that the relationship is linear.
- To determine the modulus of rigidity for specimens of various materials.

Technical Specification

- Extruded aluminium base frame with solid connecting bars
- 3-jaw chuck to hold specimens at one end with chuck keys supplied
- 90° Protractor in 1° increments
- Mild steel rod: Ø5mm x 460mm long
- Brass rod: Ø5mm x 460mm long
- Aluminium alloy rod: Ø4.76mm x 460mm long
- Nylon rod: Ø6.35mm x 460mm long
- 2 x attaching protractors and protractor scales provided

What's in the Box?

- 1 x HSM2
- 4 x specimens
- 1 x Chuck key
- 1 x Hex wrench set
- 1 x Tape measure
- 1 x 2m spare cord
- 5 x 0.1N; 1 x 1N; 2 x 2N; 1 x 5N; 1 x 10N
- Instruction manual
- Packing list
- Test sheet

You might also like

- HST22
- HSM31

Weights & Dimensions

- Weight: 12 kg
- Length: 600mm
- Width: 140mm
- Height: 140mm

Essential Services

- Sturdy Bench top

Ordering information

To order this product, please call PA Hilton quoting the following code:
HSM2

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 - 2 YEARS