BELL CRANK LEVER

HFC9

Year 1
study

Features

- Compact bench top unit
- Levers and moments
- spring Balance for Load recording
- Five loading arrangements
- Full set of weights and hanger supplied

Description

A sturdy aluminium base frame supports a vertical pillar onto which pivots the bell crank lever. The bell crank lever contains five loadings rings into which the Load hanger can be fitted to vary the mechanical advantage of the system. A spring balance is supported horizontally at the base of the bell crank lever, and has an adjustable mechanism to enable the datum position to be returned. Lever mechanisms of all shapes and sizes are very common parts of machines, particularly in hand operated devices. The bell crank lever offers the typical mechanical advantage of a lever, and in addition it turns the line of action of the effort through 90°. In most cases the cranked lever would be a casting with a bushed pivot at the corner. The experimental model has been built up from plastic to simulate the real thing. This traditional item enables the reaction force of a 90° bell crank to be measured by a spring balance when a load is applied at any of five leverage ratios.

Related Laws/Applications

- Machines
- Mechanical Advantage
- Levers
- Moment
- Spring balance
- Forces
- Reaction Forces
- Lines of Action

Learning capabilities

- To determine by experiment the reaction force of a bell-crank lever to an applied load
- To confirm the effect of leverage ratio
- To compare with calculation by taking moments about the pivot

Technical Specification

- Aluminium base with rubber feet
- 90° Bell Crank Lever
- Hanger positions from fulcrum: 200, 250, 300, 350, 400 mm
- Spring Balance: 6kgf, 0.1kgf resolution
- 1 x Load hanger
- Weights set

What’s in the Box?

- 1 x HFC9
- 1 x Load hanger
- 1 x 5N; 2 x 10N
- Instruction manual
- Packing list
- Test sheet

Weights & Dimensions

- Weight: 4 kg
- Length: 440mm
- Width: 100mm
- Height: 270mm

Essential Services

- Sturdy Bench Top

Ordering information

To order this product, please call PA Hilton quoting the following code:
HFC9