CENTRIFUGAL FORCE APPARATUS

HFC21



Year 2
study

Features

- Self-contained bench apparatus
- Fully guard with power 'cut-out'
- Six adjustable masses, three each side for balance.
- Quick and easy to adjust
- Speed controlled and digitally displayed

Description

This apparatus is used to verify that centrifugal force varies with the square of the speed, the rotating mass, and the radius of gyration. The bench-mounted unit houses a speed-controlled motor, which carries a horizontal assembly. This assembly comprises a boom which rotates and onto which sliding weights are fitted and adjusted. The weights are attached to centrifugal rods, which move outwards during rotation and through crank levers apply a force to an integral load cell. The speed of rotation of the boom is displayed on the front panel along with the digital force reading. A unique feature is that all three variables can be set and the centrifugal force directly read from the digital force display. Six masses are supplied along with all the necessary tools, spares and accessories.

Related Laws/Applications

- Centrifugal Force
- Rotational Motion of a Body
- Radius of gyration

Learning capabilities

- To verify that the centrifugal force on a rotating mass is proportional to the: -
- a) Square of the speed
- b) Mass
- c) Radius of gyration
- To compare the experimental results with those calculated from theory

Technical Specification

- Path radii: 100, 110, 120, 130, 140, 150mm
- 6 x centrifugal weights: 100g each
- Digital readout of force: 0..100N, 0.1N resolution
- Digital readout of rotational speed: 0…350rpm, 1rpm resolution

What's in the Box?

- 1 x HFC21
- 6 x CF weights
- 1 x Hex wrench set
- 1 x Power lead
- 1 x Tape measure
- 1 x Locking handle
- 1 x Spare belt
- 4 x Knurled knobs
- Instruction manual
- Packing list
- Test sheet

You might also like

- HFC29
- HFC25

Weights & Dimensions

- Weight: 14 kg
- Length: 500mm
- Width: 500mm
- Height: 450mm

Essential Services

- Sturdy Bench Top
- 110/120V, 60Hz or 220/240V, 50Hz, single phase, live neutral and earth

Ordering information

To order this product, please call PA Hilton quoting the following code: HFC21

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