



# CAM and FOLLOWER APPARATUS

## HTM8



Year 1  
study

### Features

- Self-contained bench top unit
- Set of five cams supplied
- Set of two followers supplied
- Angular and linear displacement recorded
- Derive Velocity and Acceleration diagrams

### Description

A vertical pillar contains the main spindle for each cam to be rotated, whilst a dial gauge has its anvil resting on the top edge of the cam. Each cam is mounted on a central shaft and is free to rotate about this shaft. The cams are rotated by hand. The rise and fall displacement of the cam, as it rotates through  $360^\circ$ , is measured using the dial gauge. The angular position of the cam is shown on a protractor and a pointer. Cams and followers are easily changed and graphs for the variety of cams can be created to compare the linear change with the rise and fall of the follower. A set of cams are supplied as standard along with a set of followers which run on the perimeter of each cam. Each cam can be easily changed and the angular and dial gauge readings are clear.

### Related Laws/Applications

- Mechanisms
- Cams
- Followers
- Constant Speed
- Velocity Diagram
- Acceleration Diagram
- Linear displacement against rotation
- Simple Harmonic Motion
- Dwell
- Internal Combustion Engine
- Automatic Handling Machinery

### Learning capabilities

- To determine a graph of follower displacement against angular rotation of the cam
- To derive the velocity and acceleration diagrams, and determine the maximum acceleration of the follower
- To assess the effect of different cams and followers
- To compare experimental and calculated results

#### Technical Specification

- Simple Harmonic Motion Cam: Rise/Fall 24mm
- Tangent Cam: Large radius 32mm; small radius 15mm
- Eccentric Cam: 10mm eccentricity
- Roller follower: Ø19mm
- Dial gauge: 25mm range, 0.01mm resolution
- Angular protractor scale with 360° range and 1° resolution

#### What's in the Box?

- 1 x HTM8 Assembly
- 1 x Simple Harmonic Motion Cam
- 1 x Uniform Motion Cam
- 1 x Constant Acceleration Cam
- 1 x Tangent Cam
- 1 x Eccentric Cam
- 1 x Dial Gauge
- Instruction manual
- Packing list
- Test sheet

#### Weights & Dimensions

- Weight: 6 kg
- Length: 250mm
- Width: 150mm
- Height: 540mm

#### Essential Services

- Sturdy Bench top

#### Operational Conditions

- Storage temperature: -10°C to +70°C
- Operating temperature range: +10°C to +50°C
- Operating relative humidity range: 0 to 95%, non condensing

#### Ordering information

To order this product, please call PA Hilton quoting the following code:  
HTM8

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