GEAR TRAIN APPARATUS
HTM25



Year 1
study

Features
- Small, compact bench top apparatus
- Transmission ratios for single, double stage
- Planetary spur gear drives
- Durable plastic gears. Four supplied
- Quick and easy engagement/dis-engagement

Description
A solid base mounts an epicyclic arm, which is free to rotate about a fixed pivot point on bearings. Onto this arm are mounted durable plastic gears. Spur gears of 40, 60, 80 and 100 teeth are provided, with a module of 1. Pins mount the gears in position and they are easy to remove and fit. Gear mesh is precise and allows easy rotation of each gear. The gears can be arranged in simple, compound or planetary gear trains. The compound gear train requires two gears to be interlocked via pins. All gears within the apparatus can be locked together to form two gear compounds. The epicyclic arm can be locked in position during simple and compound gear train work or released for planetary work. When released the arm is free to rotate about its pivot point. Gear spacers are supplied to ensure all gears remain at the right heights during the many combinations of gear arrangement achievable. A mounting stud is supplied for gear and spacer storage.

Related Laws/Applications
- Gear Trains
- Ratios
- Number of Teeth
- Velocity Ratio
- Epicyclic Gears
- Driver and Follower
- Automotive

Learning capabilities
- To show that for a single spur gear train, the ratio of the speeds of the driver and driven wheels are inversely proportional to the ratio of the number of teeth
- To verify that intermediate gears have no effect on the velocity ratio
- To establish the sense of rotation of a gear train with one or more intermediate wheels
- To verify that for a compound gear train the velocity ratio depends on the ratio of teeth on the intermediate wheel
- To investigate the velocity ratio of epicyclic gear trains

Technical Specification

- Spur Gears: 40, 60, 80, 100 teeth
- Module 1

What’s in the Box?

- 1 x HTM25 Assembly
- 4 x Spur Gears
- 3 x Spacer
- 3 x Gear Pins
- 2 x Split Pins
- Instruction manual
- Packing list
- Test sheet

You might also like

- HTM13
- HTM98
- HTM7

Weights & Dimensions

- Weight: 1 kg
- Length: 410mm
- Width: 120mm
- Height: 90mm

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:
HTM25

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