



Engineering Science

ES8**Friction and Inclined Plane Kit**

Shows the frictional and other forces on bodies and between different surfaces on a flat or inclined plane



- One of a series of 18 kits for experiments in fundamental engineering science topics
- For use on any engineering course from foundation to postgraduate
- Flexible and modular with sensible size parts – each kit fits onto the Work Panel (ES1) for experiments and simple classroom demonstrations
- Supplied in a hard-wearing storage tray with moulded insert to hold parts securely and a graphical list to help check the kit contents
- Rugged and durable parts for safe ‘hands-on’ experiments – allowing better understanding
- Contains an inclinable flat metal plate for experiments in frictional forces and the classic ‘forces on an inclined plane’ experiment

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- An ISO 9001 certified company

ES8

Friction and Inclined Plane Kit

Description



This versatile kit is part of a series that allows many experiments using different arrangements of their parts. Students, teachers or lecturers fit the parts of the kit to the Work Panel (ES1) (supplied separately) to study or show an engineering science topic.

This kit includes parts for experiments in friction and forces on a flat or inclined plane. The plane has an inclinometer and adjustment to allow the student to set the plane to any angle between zero and 90 degrees. The parts include different friction surfaces, a roller set, a rolling car or sled with adjustable mass and a simple roller.

Students fit the different parts to the plane and apply masses. They learn how different surface finishes and mass affect friction and how surface angles and mass affect forces around a body on a plane.

The experiments introduce students to important engineering and scientific terms, such as the coefficient of friction, sliding friction and kinetic friction.

The inclinable plane allows students to do the classic 'forces on an inclined plane experiments'. It also shows the relationship between frictional forces and angles other than horizontal.

TecEquipment supply a CD-ROM with the Work Panel (ES1). It includes all the worksheets, guidance notes and lecturer notes (with answers) needed for typical experiments with each kit. The selection of parts in the kits and the choice of fixing points on the work panel means that teachers or lecturers may extend the experiments to an even greater range.

Note: The kit is for use with the ES1 Work Panel (supplied separately).

Standard Features

- Five-year warranty
- Manufactured in accordance with the latest European Union directives

Experiments

- Forces on an Inclined Plane
- Rolling and Sliding Friction on different surfaces
- Kinetic and Static Sliding Friction between different surfaces
- Surface angle and friction between different surfaces

Operating Conditions

For use in:

Well lit classroom or laboratory

Storage temperature range:

-25°C to +55°C (when packed for transport)

Operating temperature range:

+5°C to +40°C

Operating relative humidity range:

80% at temperatures < 31°C decreasing linearly to 50% at 40°C

Essential Services

A level bench or desktop of at least 500 mm wide x 500 mm front to back.

Essential Base Unit

Work Panel (ES1)

Specifications

Storage tray (with clip-on lid):

450 mm x 320 mm x 85 mm

Nett weight:

4.1 kg

Packed volume and weight:

Approximately 0.015 m³ and 4.6 kg

Main parts:

- Inclenable plane
- Car or sled
- Different surfaces
- Weight hangers and weights
- Roller Set

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