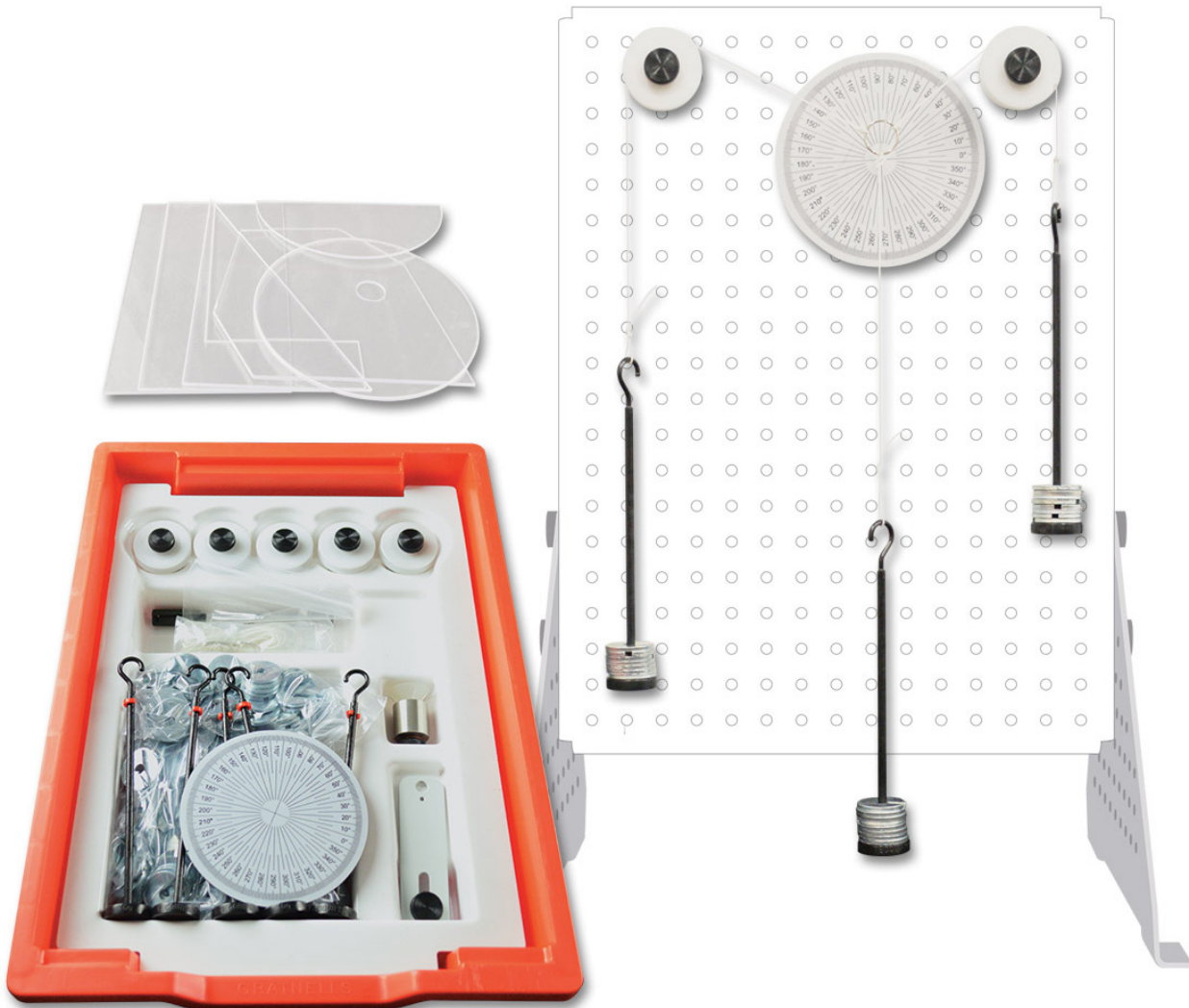




## ≡ FORCES KIT

ES2

Demonstrates how to find the centre of gravity of shapes and the relationship between angles and coplanar forces, using force triangles.



### KEY FEATURES

- 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 all parts needed for experiments with centres of gravity and angles and coplanar forces



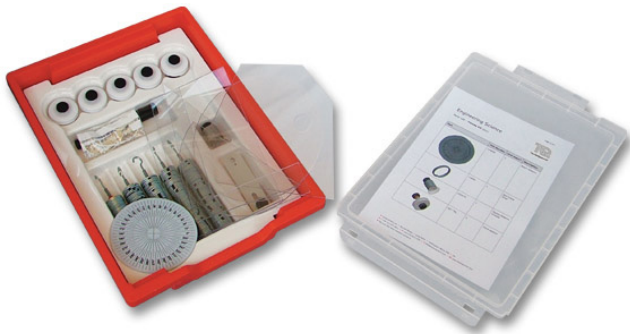
# FORCES KIT

ES2

## 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 a set of different plastic shapes for experiments in centres of gravity of two-dimensional objects. It also includes pulleys, weights and a magnetic protractor for experiments in concurrent and non-concurrent coplanar forces and angles.



The selection of pulleys and weights allows you to create force triangles, polygons and linked polygons. The guidance notes show how to analyse and predict forces using Bow's Notation and the parallelogram of forces.

TecQuipment supply a memory stick 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
- ISO9001 certified manufacturer

## LEARNING OUTCOMES

- Centres of gravity
- Force triangles
- Force polygons and Bow's notation
- Linked polygons (non-concurrent forces)

## 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

TecQuipment is committed to a programme of continuous improvement; hence we reserve the right to alter the design and product specification without prior notice.

### STORAGE TRAY (WITH CLIP-ON LID):

450 mm x 320 mm x 85 mm

### NETT WEIGHT:

4.5 kg

### PACKED VOLUME AND WEIGHT:

Approximately 0.015 m<sup>3</sup> and 5 kg

### MAIN PARTS:

- Plastic shapes (two-dimensional)
- Marker pen
- Pulleys
- Weight hangers and weights
- Cord and rings
- Magnetic protractor