

The Engineering Fundamentals range is designed to enable students to gain an understanding of the fundamentals of engineering by the process of learning via hands-on experimentation.

The Modular hands-on tray based system is supplied in conjunction with a multifunctional Base Unit enabling the student to conduct their own experiments in subjects such as Statics, Dynamics, Kinematics.

Each Kit is supplied with a highly visual user friendly operational guide, enabling the student to understand the theory of the subject by the application of practical experimentation.

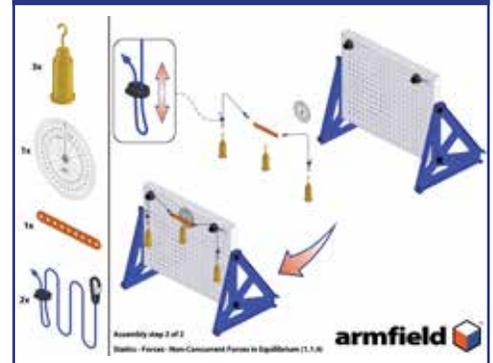
AN INNOVATIVE, HANDS ON MODULAR SYSTEM DESIGNED TO ENABLE INVESTIGATION AND THE UNDERSTANDING OF ENGINEERING PRINCIPLES.

Description

The EF-1.1 - Forces experiment kit enables students to understand the centre of gravity of different shapes and analysis of forces in equilibrium for concurrent and non-concurrent force.



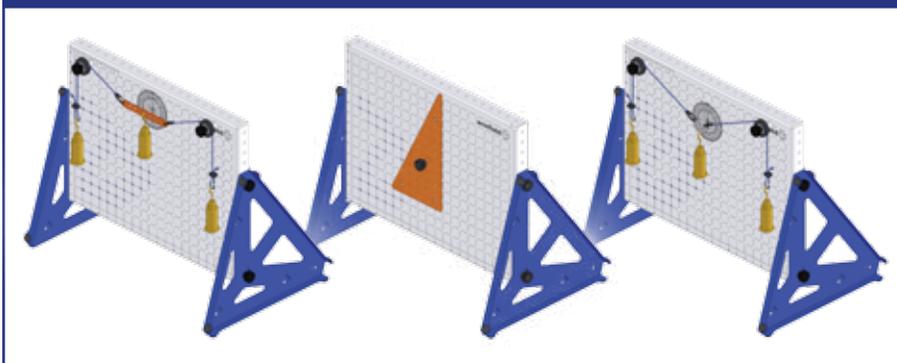
Easy to follow instructions



1 tray supplied with EF 1.1



Experiments analysing 4 Forces in equilibrium, CoG of Plane Figures & Non-Concurrent Forces in Equilibrium



High quality materials



online datasheet

Applications

Issue: PROVISIONAL

URL: www.armfield.co.uk/ef

ChE ME CE IP

Features / benefits

- ▶ Applied student Learning via Building and experimentation
- ▶ Supplied with a detailed instruction manual, covering the theory of forces including multiple practical experiments designed to further develop the students' understanding in this field.
- ▶ Hands-on Learning
- ▶ Clear and concise pictorial assembly instructions enhance the learning experience
- ▶ Multiple experimental capability per self-contained kit
- ▶ Tool-Less assembly

Requirements

Scale



- ▶ EF-BU on which to build the experiment from the tray components
- ▶ Level and stable work surface to mount the EF-BU upon. The optional EF-WS is ideal for this if no suitable desk or bench is available.

Demonstration / Instructional Capabilities

Centre of Gravity of Plane Figures:

- Parallelogram
- Rectangle
- Semi-circle
- Triangle
- Irregular shape

Analysis of 3 forces in equilibrium using:

- Force Triangles
- Vector addition
- Bow's Notation
- Graphical method
- Mathematical Solution

Analysis of 4 forces in equilibrium using:

- Force Triangles
- Vector addition
- Bow's Notation
- Graphical method
- Mathematical Solution

Analysis of non-concurrent forces (Linked Polygons)

Overall dimensions

Tray	
Length:	0.430m
Width:	0.312m
Depth:	0.080m

Packed and crated shipping specifications:

Volume:	0.015m ³
Gross weight:	5kg



Products CE certified

Essential accessories / equipment

- ▶ Base Unit EF-BU

Optional accessories

- ▶ Workstation EF-WS

The workstation can be used as a demonstration platform at the front of the classroom, but also doubles up as a storage unit for the experiment trays and EF-BU Base Units.

Castors allow the entire Workstation and its contents to easily be wheeled between classrooms.

The workstation can be configured to store:

- Up to 12 Base Units and a maximum of 18 trays (2 Base Units occupy the space of 1 Tray).
- 12 Base Units and 12 trays.
- 18 trays if storing no Base Units.

- ▶ EF1-SPARES (recommended)

A selection of the most commonly used parts in the EF kits provided in a durable storage tray which can easily be stored along with the rest of the EF kits. By having a spares kit in the classroom, experiments can be varied. In addition misplaced or damaged items can be replaced quickly without any downtime.

Related products

- ▶ EF-BU - Base Unit

Statics topic / experiment trays

- ▶ EF-1.2 - Moments
- ▶ EF-1.3 - Beams
- ▶ EF-1.4 - Springs
- ▶ EF-1.5 - Torsion

Dynamics topic / experiment trays

- ▶ EF-2.2 - Simple Harmonic Motion

Kinematics topic / experiment tray

- ▶ EF-3.2 - Simple Mechanisms

Options

- ▶ EF-WS - Workstation
- ▶ EF1 - Spares

Ordering codes

- ▶ EF-1.1 - Forces Experiments
- ▶ EF-BU - Base Unit
- ▶ EF-WS - Workstation

Ordering specification

- ▶ For more detail please contact our sales team.

Warranty

Two year warranty

Knowledge base

- > 26 years expertise in industrial R&D technology
- > 50 years providing engaging engineering teaching equipment

Benefit from our experience, just call or email to discuss your laboratory needs, latest project or application.

Aftercare

Installation
Commissioning
Training
Service and maintenance
Support: armfieldassist.com