

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, Mechanisms and 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

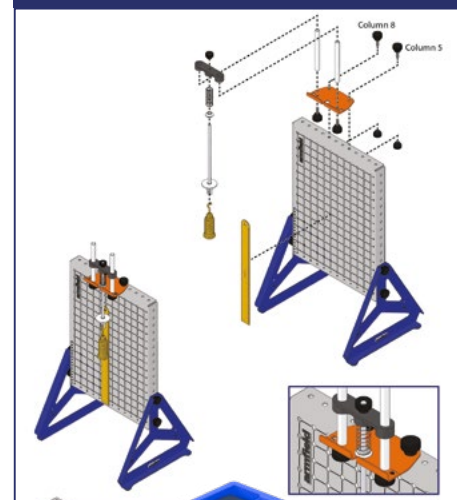
Description

The EF-1.2 Moments experiment kit enables students to understand the relationship of weights and beam balance. Different configurations are possible to enhance understanding of the principles of moments, levers, beams and the relationship of distance and forces applied on a beam.



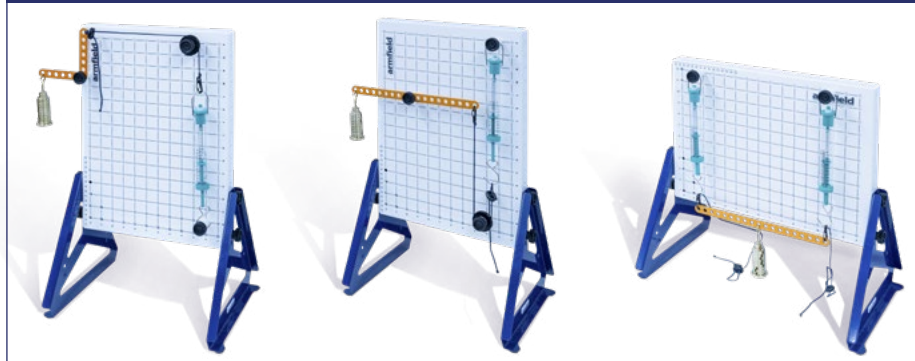
Centre of gravity of a body by inclining at a known angle apparatus

Easy to follow instructions

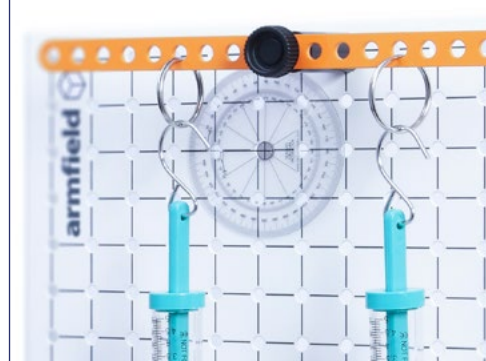


2 trays supplied with EF-1.2

Moments experiments shown, Bell Crank Lever, 1st Class Lever, Beam Reactions Setup, full list on reverse



High quality materials



Features / benefits

Features

- ▶ Neatly presented in an easily identifiable and durable storage tray
- ▶ Trays have clear lids making it easy to see their contents
- ▶ Pictorial tray contents list to identify missing components easily
- ▶ Accompanied by a detailed manual with various practical exercises
- ▶ Clear and concise assembly instructions for each experiment
- ▶ Multiple experiments per kit
- ▶ Toolless assembly

Benefits

- ▶ Hands-on understanding from lessons
- ▶ Improve the student's dexterity by self-assembly with the instructions provided

Requirements

Scale

EF-BU

Experiment tray scale



EF-BU scale



EF-WS 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.

Experimental content

- ▶ Simple beam balance
- ▶ Beam balance with oblique force
- ▶ 1st Class lever
- ▶ 2nd Class lever
- ▶ 3rd Class lever
- ▶ Bell Crank lever
- ▶ Beam reactions
- ▶ Stability of a body:
 - Stable
 - Neutral
 - Unstable equilibrium
- ▶ Centre of gravity of a body by inclining at a known angle



Overall dimensions

Tray

Length	0.430m per tray
Width	0.312m per tray
Height	0.080m per tray

Packed and crated shipping specifications

Volume	0.02m ³ per tray
Gross weight	5Kg per tray

Essential accessories / equipment

- ▶ EF-BU Base Unit

Related products

- ▶ EF-BU Base Unit

Statics Experiments

- ▶ EF-1.1 Forces
- ▶ EF-1.2 Moments
- ▶ EF-1.3a Beams
- ▶ EF-1.3b Trusses
- ▶ EF-1.4 Springs
- ▶ EF-1.5 Torsion

Dynamics Experiments

- ▶ EF-2.1 Friction
- ▶ EF-2.2 Simple Harmonic Motion
- ▶ EF-2.3 Rotational Friction
- ▶ EF-2.4 Potential and Kinetic Energy
- ▶ EF-2.5 Centrifugal and Centripetal Force

Mechanisms Experiments

- ▶ EF-3.1 Cam, Crank and Toggle
- ▶ EF-3.2 Simple Mechanisms
- ▶ EF-3.3 Additional Mechanisms
- ▶ EF-3.4 Bar Linkages

Kinematics

- ▶ EF-4.1 Pulleys
- ▶ EF-4.2 Gears
- ▶ EF-4.3 Drive Systems

Strength of Materials

- ▶ EF-5.1 Tensile Tester

Options

- ▶ EF-WS Workstation

Ordering specification

- ▶ Attachment beam – Long
- ▶ Attachment beam – Short
- ▶ 2 x Newton meter (500g / 5N)
- ▶ 2 x 250g weights set on hanger
- ▶ 2 x Adjustable length cords
- ▶ 2 x Grey PVC shouldered spacer (Type A)
- ▶ Grey PVC shouldered spacer (Type B)
- ▶ 2 x Split ring 38mm OD

Ordering codes

- ▶ EF-1.2 - Moments
- ▶ EF-BU - Base Unit
- ▶ EF-WS - Workstation (optional)

Armfield standard warranty applies with this product

Knowledge base

- > 28 years expertise in research & development 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.

An ISO 9001:2015 Company



armfield.co.uk

Aftercare

Installation
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Training
Service and maintenance
Support: armfieldassist.com