

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.

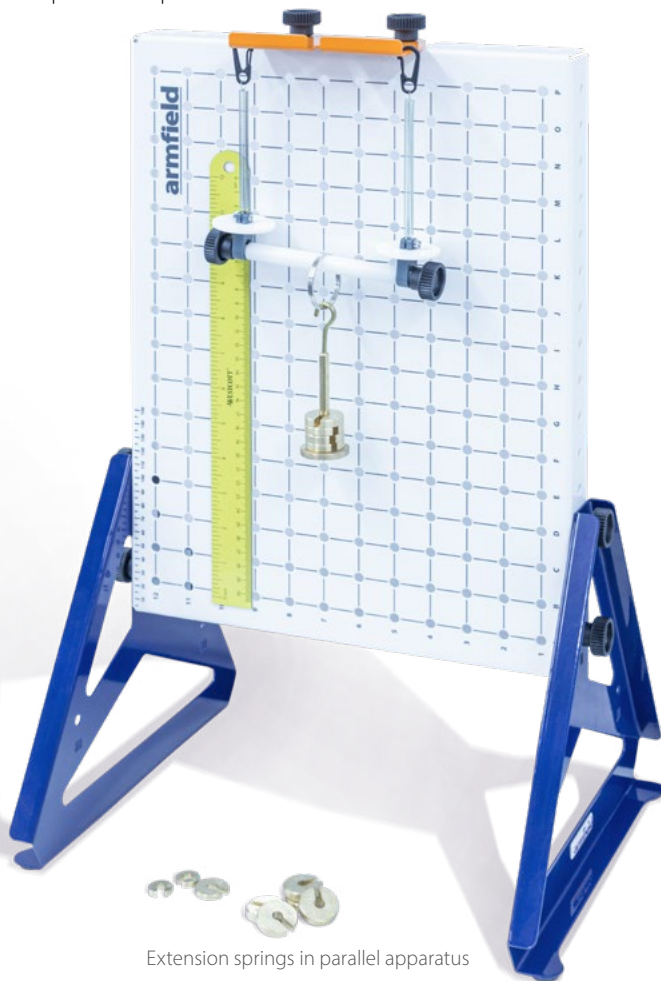
Each kit is supplied with a highly visual user friendly operational guide, enabling the student to understand the theory of the subject by the application of practical experimentation.

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

Description

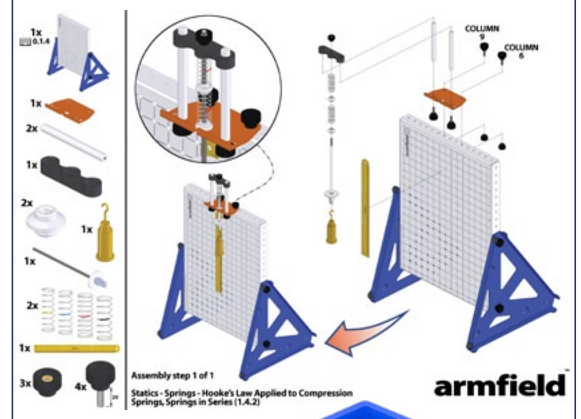
The EF-1.4 Springs experiment kit enables students to learn about Hooke's law when applied to both extension and compression springs.

Students can experiment with a single spring, springs in series or in parallel. A variety of compression springs are included to enable students to learn about spring rates.



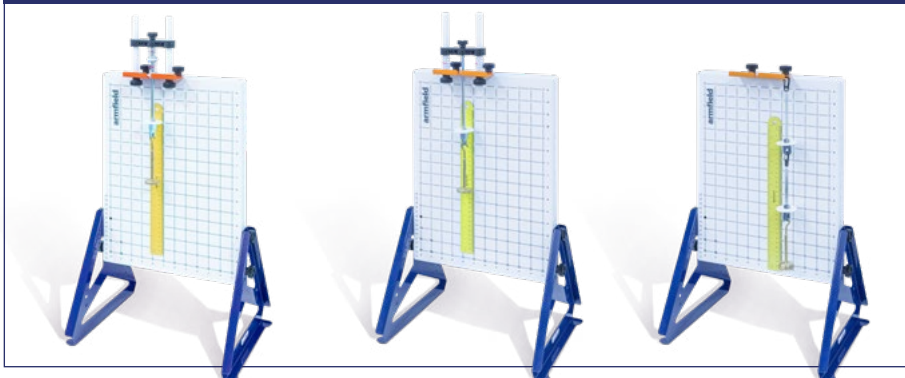
Extension springs in parallel apparatus

Easy to follow instructions



1 tray supplied with EF-1.4

Experiments shown: Compression - Springs in series, Single Compression Spring, Single Extension Spring full list on reverse



High quality materials



UK office - email: sales@armfield.co.uk tel: +44 (0) 1425 478781 (for ROW)

USA office - email: info@armfield.inc tel: +1 (609) 208-2800 (USA only)

Issue: 2

URL: <http://www.armfield.co.uk/ef>

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Applications

ME ChE CE IP

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



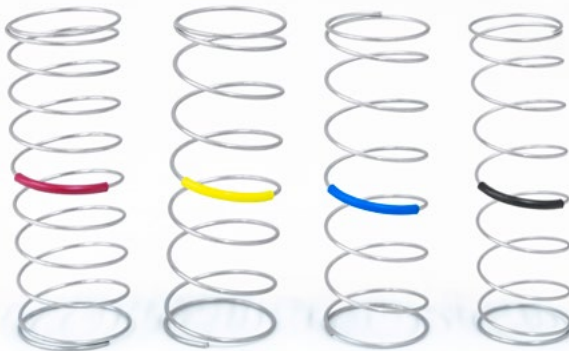
EF-WS scale



- ▶ 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

- ▶ Hooke's law applied to compression springs, single spring
- ▶ Hooke's law applied to compression springs in series
- ▶ Hooke's law applied to compression springs in parallel
- ▶ Hooke's law applied to extension springs, single spring
- ▶ Hooke's law applied to extension springs in series
- ▶ Hooke's law applied to extension springs in parallel



Overall dimensions

Tray

Length	0.430m
Width	0.312m
Height	0.080m

Packed and crated shipping specifications

Volume	0.02m ³
Gross weight	5Kg

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

- ▶ Hooke's law guide block
- ▶ Hooke's law spring end
- ▶ Hooke's law link bar
- ▶ 250g weights set on hanger
- ▶ Magnetic ruler, 300mm / 12"
- ▶ 2 x Compression spring 0.05N/mm (red)
- ▶ 2 x Compression spring 0.07N/mm (yellow)
- ▶ 2 x Compression spring 0.09N/mm (blue)
- ▶ 2 x Compression spring 0.11N/mm (black)

Ordering codes

- ▶ EF-1.4 - Springs
- ▶ 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



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Aftercare

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