

# **DYNAMICS** Potential and Kinetic Energy – EF-2.4

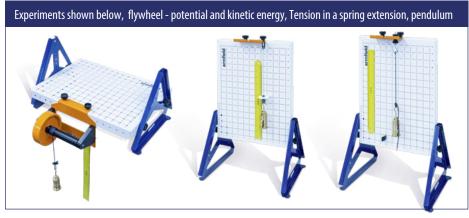
The Engineering Fundamentals range enables students to gain an understanding of the principles of engineering by the process of learning via experimentation.

The EF-2.4 Potential and Kinetic Energy experiments kit enables students to understand the difference between potential and kinetic energy and how it can transfer from one form to another. The kit contains a flywheel, a pendulum and set of springs.

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

The kit will allow students to verify Hooke's law, teach them about energy transfer from potential to kinetic energy using a simple pendulum as well as using a flywheel to demonstrate energy transfer from potential to kinetic and that it can be transferred back again via storage and release.







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URL: http://www.armfield.co.uk/ef ME ChE CE We reserve the right to amend these specifications without prior notice. E&OE © 2022 Armfield Ltd. All Rights Reserved

### 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 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**

- Kinetic and potential energy in a pendulum
- Elastic (potential) energy in a spring
- Kinetic energy in a flywheel
- Energy transfers
- Overcoming losses



### **Overall dimensions**

Tray	
Length	0.430m
Width	0.312m
Height	0.080m
Packed and crated shipping specifications	
Volume	0.02m <sup>3</sup>

5.0Kg

### 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
- Simple Harmonic Motion ► EF-2.2
- ► 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**

- ► Flywheel
- ▶ 500mm cord T-end
- ▶ 1000mm cord T-end
- ▶ 300mm cord w/o carabiner
- ➤ 250g weights set on hanger
- ► Magnetic ruler 300mm/12"
- ► Magnetic indicator
- ► Stopwatch
- ► Compression spring 0.05N/mm
- ► Compression spring 0.07N/mm

### **Ordering codes**

- ► EF-2.4 Potential and Kinetic Energy
- ► EF-BU Base Unit
- ► EF-WS Workstation (optional)

Armfield standard warranty applies with this product

## **Knowledge base**

Gross weight

- > 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.

Products C € certified armfield.co.uk

An ISO 9001:2015 Company

**Aftercare** 

Installation Commissioning Training Service and maintenance Support: armfieldassist.com