

**EF
SERIES**

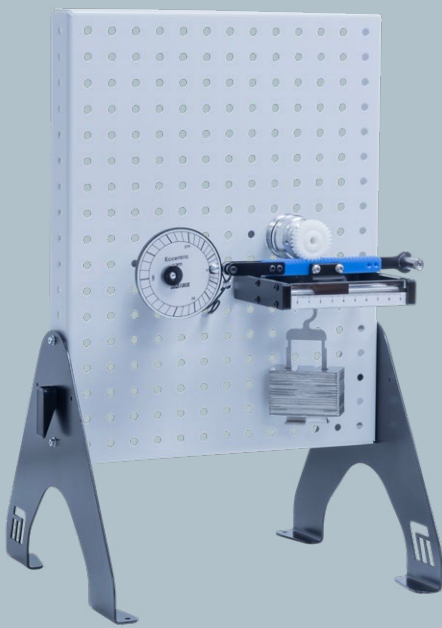
EFK4-MKII Mechanisms Fundamentals Kit

The Engineering Fundamentals EFK4-MKII Mechanisms fundamentals kit is designed to enable students to gain an understanding of the fundamentals of engineering by the process of learning via hands-on experimentation.

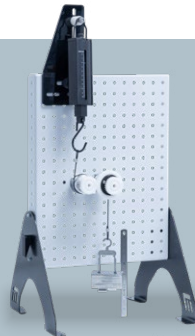
Practical experience allows students to see the real-world application of theoretical knowledge, leading to a deeper and more comprehensive understanding of engineering principles.

The modular kit is supplied in conjunction with a multifunctional base unit enabling the student to conduct their own experiments in subjects such as Gears, Cranks, Cams and Drive Systems.

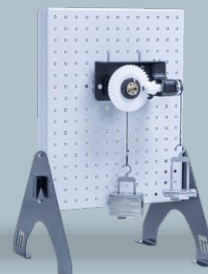
Each kit is supplied with a highly visual user-friendly operational guide, enabling the student to understand the theory of the subject by the application of practical experimentation.



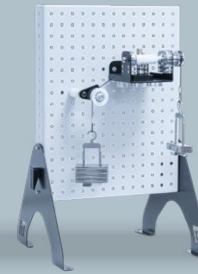
9. Eccentric Cam (70).



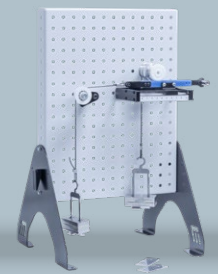
1. Spur Gear



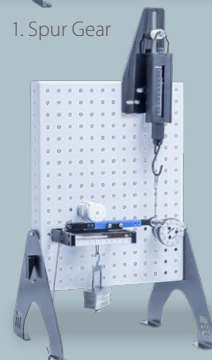
2. Compound Gear



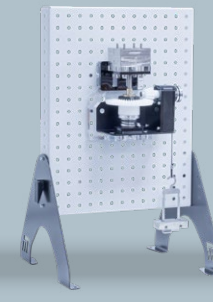
3. Bevelled Gears



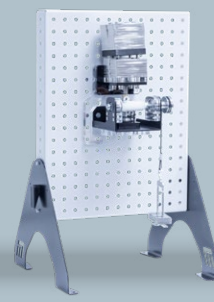
4. Worm Gears



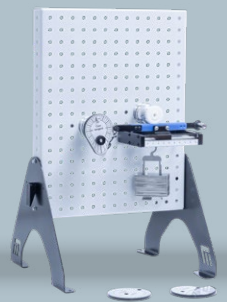
5. Rack and Pinion



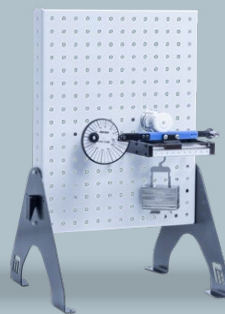
6. Screw Jack Bevelled Gear Jack



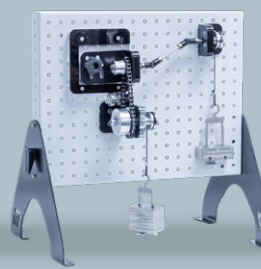
7. Jack Worm Gear



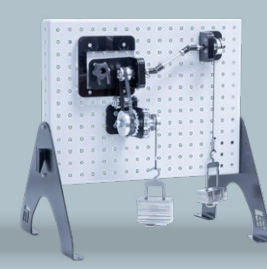
8. Tangent Cam



10. Snail Cam



11. Chain Drive



12. Belt Drives

Topics Covered:

- GEARS
- CRANKS
- CAMS
- DRIVE SYSTEMS

EACH KIT CONTAINS A SINGLE MULTIPURPOSE FRAME

Features/benefits

Features

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

Benefits

- ▶ Enhanced Understanding of Concepts
- ▶ Improved Problem-Solving Skills
- ▶ Engagement and Motivation
- ▶ Teamwork and Communication



Tray 1 of 3 supplied with EFK4- MKII

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: 4
 URL: <http://www.armfield.co.uk/ef>

Applications

ME ChE CE IP

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Requirements

Scale

EFK4
MKII

Experiment tray scale



Backboard Scale



- ▶ EFK4-MKII base unit with stand on which to build the experiment from the tray components

Experimental content

Gears (Mechanical Advantage (MA), Efficiency and Gear Ratio):

- ▶ Simple Gear
- ▶ Compound Gear
- ▶ Rack & Pinion Gear
- ▶ Bevel Gear
- ▶ Worm Gear

Screw Jack

Cams (Displacement Analysis):

- ▶ Tangent Cam
- ▶ Snail Cam
- ▶ Eccentric Cam
- ▶ Crank (Force and Displacement Analysis)

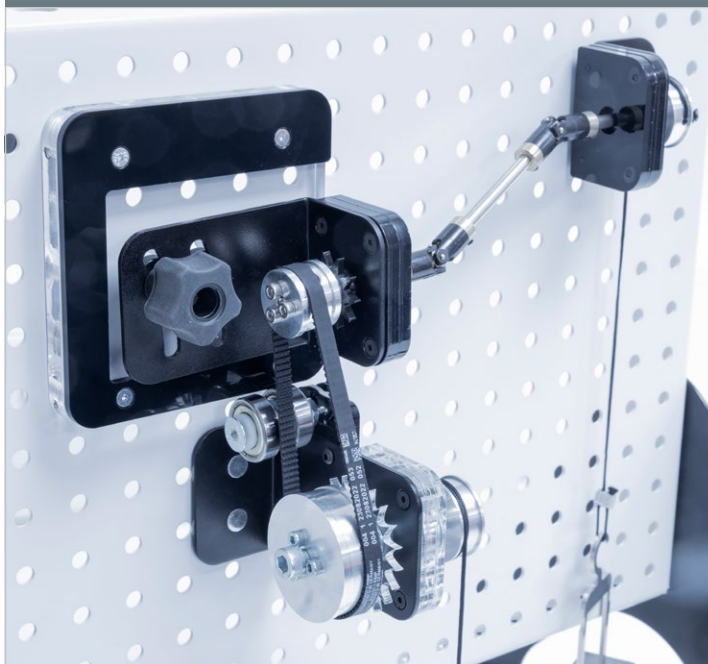
Drive System (MA, Efficiency and Gear Ratio)

- ▶ Universal Joint
- ▶ Belt Transmission
- ▶ Chain Transmission

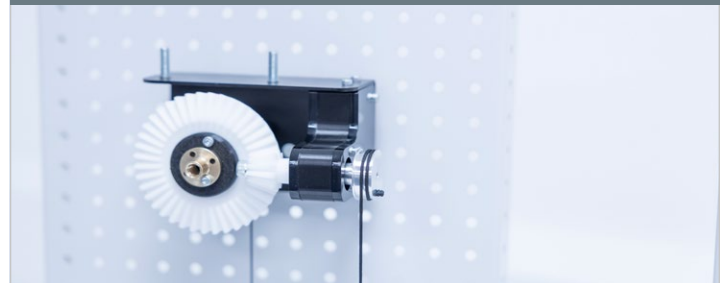
Ordering specification

- ▶ Gear 1 - Small Shaft 1
- ▶ Gear 2 - Mid Shaft 1
- ▶ Gear 3 - Large Shaft 1
- ▶ Rack Gear 1
- ▶ Bevel Gear 1
- ▶ Worm Gear 1
- ▶ Crank 1
- ▶ Cam 1
- ▶ Screw Jack Adapter 1
- ▶ Screw Jack Weights 1
- ▶ Universal Joint Shafts 1
- ▶ Large Sprocket 1
- ▶ Roller Tensioner 1
- ▶ Slider Plate 1
- ▶ Tray Lid 1
- ▶ Deep tray 1
- ▶ Work Panel for Fundamentals 1
- ▶ 5g plastic weight 4
- ▶ Square hanger stem 3
- ▶ Crank Angle Indicator 1
- ▶ A1 ruler - 15cm 1
- ▶ Spring balance mounting plate 1
- ▶ Spring Balance Pillar 1
- ▶ Balance Slider Plate Assembly 1
- ▶ Salter 12 spring balance 10N x 0.1N 1
- ▶ Foam cut outs for the FM0759 kit 1
- ▶ Long Adjustable Pulley Assembly 1

Belt Drive System



Compound Gear



Overall Dimensions

Tray 1		Tray 2		Tray 3	
Length	0.43m	Length	0.43m	Length	0.43m
Width	0.21m	Width	0.21m	Width	0.21m
Height	0.08m	Height	0.08m	Height	0.08m

Packed and crated shipping specifications

Volume	0.073m ³ per kit
Gross weight	11Kg

Related products

- ▶ EFK1-MKII Statics Fundamentals Kit
- ▶ EFK2-MKII Dynamics Fundamentals Kit
- ▶ EFK6-MKII Materials Fundamentals Kit

Ordering codes

- ▶ EFK4-MKII Mechanisms Fundamentals Kit

Armfield standard warranty applies with this product

Knowledge base

- > 30 years expertise in research & development technology
- > 52 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

Installation
Commissioning
Training
Service and maintenance
Support: armfieldassist.com

