

The Armfield advanced renewable energies range is a specialised learning system for the technical education in universities and vocational training centres.

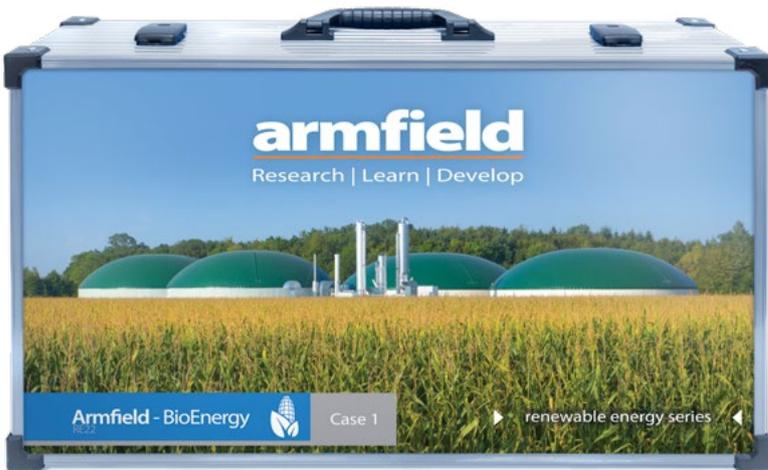
The kits cover Photovoltaic and Wind Energy generation, Fuel Cell and Battery Technology, Thermal Energy and the construction of a controllable Smart Grid on a laboratory scale.

PROVIDES AN IN-DEPTH EXPLORATION OF THE ENERGETIC USE OF BIOMASS

“The extensive experiment system brought to you by the Armfield BioEnergy kit enables you to reconstruct and understand the whole biomass cycle without any additional equipment.

A cultivation box and hydroculture allow the observation of the sprouting and growth of plants. Thereby the water and nutrient consumption can be analysed in the different growth phases.

Different experiments then show the aerobic as well as the anaerobic degradation of the biomass in a compost or biogas processes. Thus allows the exploration of the energetic use of biomass.”



Supplied in two aluminium case's



Features / benefits

- ▶ Explore of the energetic use of biomass
- ▶ Cultivation box and hydro-culture
- ▶ Aerobic as well as the anaerobic degradation of the biomass
- ▶ Understand the whole biomass cycle
- ▶ Observe of the sprouting and growth of plants
- ▶ Analyse nutrient consumption in different growth phases

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Issue: 1

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

Applications

ME ChE CE IP

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Experimental content

BioEnergy experiments

- ▶ Germination of plant seeds
- ▶ Plant growth in a hydroculture
- ▶ Consumption of water and nutrients
- ▶ Aerobic degradation of biomass in a compost
- ▶ Anaerobic degradation of biomass to form hydrogen
- ▶ Anaerobic degradation of biomass to form methane



Planters and plant lights



Cultivation box and hydroculture

Requirements

Scale

1Ph



Electrical supply: 110-230V AC 50-60Hz

- ▶ Level and stable work surface
- ▶ 1 x Bunsen burner (Not supplied by Armfield)

Overall dimensions

Tray X2

Length	0.640m
Width	0.165m
Height	0.370m

Packed and crated shipping specifications per tray

Volume	0.038m ³
Gross weight	14.6Kg

Related curriculums

- ▶ Renewable Energies
- ▶ Chemical Engineering
- ▶ Environmental Engineering

Ordering specification

- ▶ 1 x composter
- ▶ 1 x Gas collecting container
- ▶ 1 x Burner
- ▶ 1 x Tripod plant lighting
- ▶ 1 x Sprout box
- ▶ 1 x Box 6 L
- ▶ 1 x Tripod
- ▶ 1 x Seed set
- ▶ 1 x Rubber plug with tube
- ▶ 1 x ID tags
- ▶ 1 x Aluminium case 1710 silver
- ▶ 1 x Aluminium case 1710 blue
- ▶ 2 x Pot holder BioEnergy
- ▶ 1 x Propeller
- ▶ 1,5 x Silicone tube 4mm
- ▶ 1 x Switch 4mm
- ▶ 2 x Plant light
- ▶ 1 x Hose clamp
- ▶ 1 x Test lead black 25 cm
- ▶ 1 x Test lead red 25 cm
- ▶ 2 x Short-circuit plug
- ▶ 1 x Erlenmeyer flask 1000 ml
- ▶ 2 x Timer
- ▶ 1 x Air pump
- ▶ 2 Aeration stone
- ▶ 50 Net cup planter
- ▶ 1 EC meter
- ▶ 1 x Temperature logger
- ▶ 1 x Weight
- ▶ 1 x Tweezers
- ▶ 24 x Stopper red
- ▶ 1 x Nebulizer
- ▶ 2 x Plastic box Gratnells 75 mm deep
- ▶ 1 x Insert BioEnergy Rtg 1710
- ▶ 2 x Info sheet initial startup

Essential accessories / equipment

- ▶ **RE21:** Biofuel Clamp Set

Other products in the advanced renewable energies range

- ▶ **RE10:** Advanced Photovoltaic Energy
- ▶ **RE12:** Advanced Wind Energy
- ▶ **RE14:** Advanced Fuel Cell Technology
- ▶ **RE16:** Advanced Thermal Energy
- ▶ **RE20:** Bio-Fuel
- ▶ **RE24:** Advanced Battery Technology

Operational conditions

- ▶ Storage Temperature: -10°C to +70°C
- ▶ Operating temperature range: +10°C to +50°C
- ▶ Operating relative humidity range: 0 to 95%, non-condensing

Ordering codes

- ▶ **RE22:** BioEnergy

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

Installation
Commissioning
Training
Service and maintenance
Support: armfieldassist.com