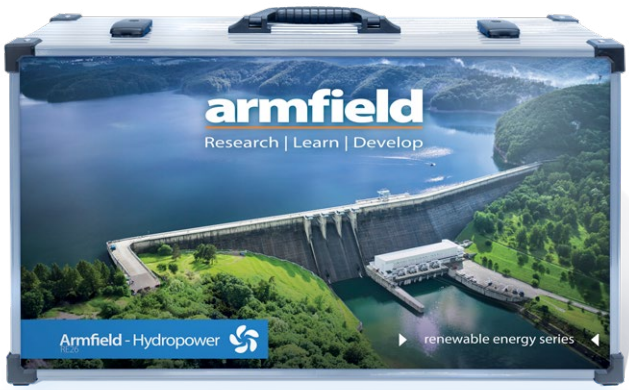
RE SERIES

RENEWABLE ENERGY Hydropower – RE26

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 A WIDE RANGE OF EXPERIMENTS INTO THE APPLICATION OF HYDROPOWER ON A LABORATORY SCALE

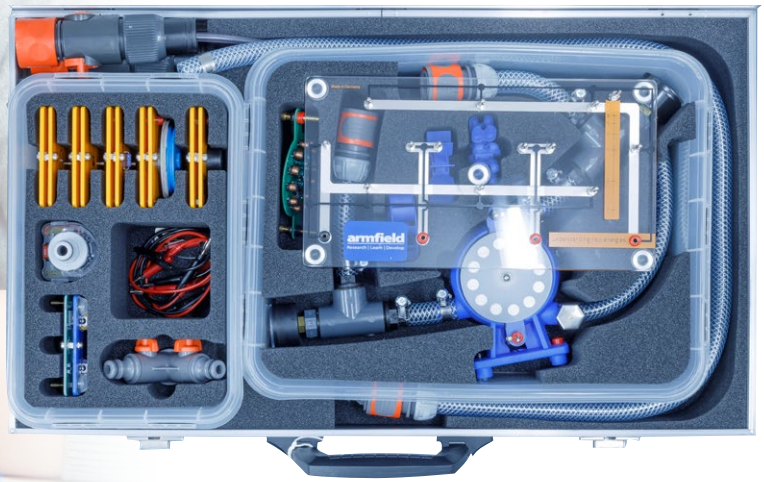


Supplied in an aluminium case

"The RE26 Hydropower system provides students with a self-contained modular system, covering all aspects of Hydropower generation.

Included in the system are various components that allow students to not only experiment how key principles of hydrostatics and fluid dynamics affect hydropower systems but how different turbine types affect the overall system outputs.

The self-contained RE26 provides comprehensive step by step manual taking students through every step, challenging them both practically and theoretically utilising key engineering mathematical principles, to support practical outcomes."



Features / benefits

- Experimentation system for solar thermal energy conversion
- Quantitative experiments for different collector systems
- Flexible and location-independent usage
- Laboratory scale
- Modular design
- Supplied in a self-contained aluminium case
- Includes in-depth manual and predefined experiments

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

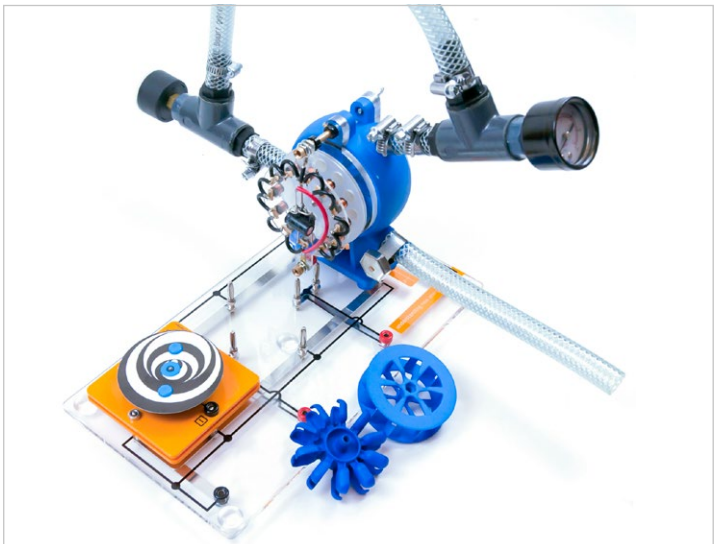
Issue: 1
URL: http://www.armfield.co.uk/re
Applications: ME ChE CE IP

Experimental content

- Volume flow rate, flow velocity, and power as a function of the height of fall
- Volume flow rate, flow velocity, and power in relation to pipe cross-section
- Functional comparison of Pelton turbine, crossflow turbine, and waterwheel
- Performance comparison of the Pelton turbine, crossflow turbine, and waterwheel based on volume flow and pressure

Specifications

Component	Description
Turbine Casing	2 inflows (upper/lower), 1 outflow; compatible with Pelton, Crossflow & Water Wheel
Turbine Set	Includes Pelton, Crossflow, and Water Wheel turbines
Manometer Sets	2 bar for upper inflow, 4 bar for lower inflow
Intake Connector	Connects both inflows; valve-controlled
Flow Set (4 /8/12 mm)	1m hose with 4 / 8/ /12 mm ID, valve, and O-ring marker
Aluminium Case	Storage and transport case
Induction Generator	Magnet disc-driven, generates DC using coils, diodes, and capacitors
AV-Module	Measures voltage (0–12V) & current (0–2A); 192×192 px display; battery-powered; optional USB/Wireless
Light Bulb Module	Plug-in micro bulb for basic load simulation



Requirements

1Ph

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

- Level and stable work surface

Scale

Overall dimensions

Tray	
Length	0.640m
Width	0.165m
Height	0.370m
Packed and crated shipping specifications	
Volume	0.038m^3
Gross weight	6.5Kg

Related curriculums

- Renewable Energies
- Electrical Engineering
- Automotive Engineering

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
- **RE18:** Advanced Smart Grid 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

- **RE26:** Hydropower

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

CE

Products CE certified

armfield.co.uk

Aftercare

Installation
Commissioning
Training
Service and maintenance
Support: armfieldassist.com