

armfield

FACTFILE18

AN ISO 9001 COMPANY

INNOVATORS IN ENGINEERING EDUCATION

CAPTURE GOES TRANSPARENT

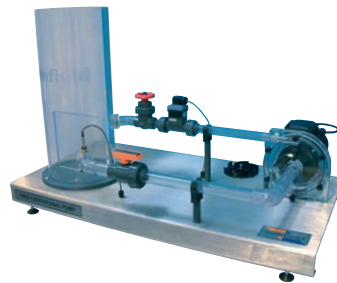
Armfield's CAPTURE range of fluid mechanics teaching equipment brought large, expensive and unwieldy equipment to the benchtop in the teaching laboratory at an affordable price.

Now CAPTURE MkII adds a new transparency to the range. Mounted on a stainless steel base, the pump bodies and covers are made from transparent acrylic to allow students to view the internal mechanisms and easily visualise flow paths.

All the CAPTURE units use standard PCs to display, record and manipulate the data. The world-beating Armfield educational software provides extensive facilities aimed specifically at engineering education and enhancing the learning experience. A common software format is used across all machines.

Four pump demonstration units

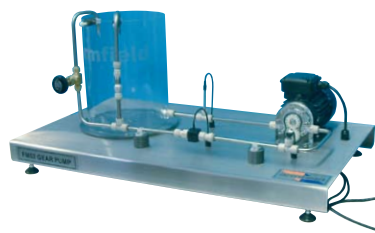
- FM50 centrifugal pump
- FM51 Series and Parallel pumps includes two centrifugal pumps, which can be configured as single pump, two pumps in parallel and two pumps in series.
- FM52 gear pump
- FM53 plunger pump



view online: www.armfield.co.uk/fm50



view online: www.armfield.co.uk/fm51



view online: www.armfield.co.uk/fm52



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All use identical electric motors to allow a realistic comparison to be made.

The centrifugal pump rigs are also supplied with alternative impellers which can be changed over by students allowing investigation into the effects on pump performance.

Common features of all Pump Rigs

- Transparent Pump bodies for maximum impact and educational benefit
- Computer linking, with a common interface unit for all the Capture MkII range (IFD7)
- Advanced educational software included with all units
- Stable speed control using a slip compensated inverter drive
- Electronic measurement of torque at the pump drive shaft using a sensorless torque vector drive.
- Simple interconnections and interfacing
- Stainless steel bases

CAPTURE MKII INTERFACE

The interface is via a new IFD7 interface console which provides cost effective solution for laboratories using several CAPTURE units. This provides signal conditioning for all sensors and is connected by a single multi-way cable. The interface incorporates a three-phase inverter drive which accurately controls the speed of the motors and relays a torque reading to the computer. Pump start and stop and speed control are via software for improved ease of use.



view CAPTURE online at www.armfield.co.uk/fmcm

CAPTURE MKII - Air Flow Machines

The CAPTURE MkII Air Flow Machines are designed to demonstrate to engineering students the operating principles and characteristics of different types of fans and compressors.

Three different machines are available

- FM40 Centrifugal Fan
- FM41 Axial Fan
- FM42 Centrifugal Compressor

The FM40 and FM42

use three phase ac motors, allowing:

- Stable speed control using a slip compensated inverter drive
- Electronic measurement of torque at the motor drive shaft using a sensorless torque vector drive.

Common features of all Air Flow Machines

- Transparent Ducts for maximum visibility of the machines, and associated educational benefit
- Computer linking, with a common interface unit for all the Capture MkII range (IFD7)
- Advanced educational software included with all units
- Simple interconnections and interfacing
- Stainless steel bases

view CAPTURE online at www.armfield.co.uk/fmcm



URL: www.armfield.co.uk/fm40



URL: www.armfield.co.uk/fm41

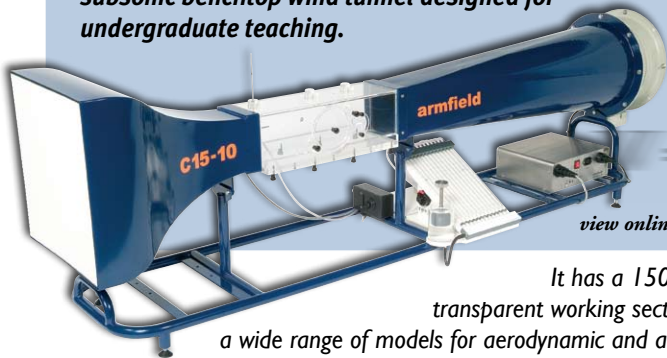


URL: www.armfield.co.uk/fm42

C15 COMPUTER CONTROLLED WIND TUNNEL

The Armfield C15 is a new computer controlled subsonic benchtop wind tunnel designed for undergraduate teaching.

C SERIES
APPLIED FLUID MECHANICS



view online: www.armfield.co.uk/c15

It has a 150mm (six inch) transparent working section and offers a wide range of models for aerodynamic and air flow studies.

Options include an inclined manometer bank or an electronic manometer bank. A special feature is the electronic lift and drag balance, where sensors are used to measure the forces. The model being tested can be rotated and the angle of rotation measured electronically. Readings are displayed on the control software screen and can be logged.

Models available include a lift and drag aerofoil, pressure wing, drag models of various shapes, a pressure cylinder, Bernoulli apparatus, boundary layer plate and a project kit which allows users to make their own models.

Do you have a story to tell about your laboratory or work? Tell it in Factfile, distributed twice a year (Spring & Fall) to nearly 15,000 US academics. We like to have up to 500 words and a picture.

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