FS SERIES

Fluid Science Service Unit FS-SU

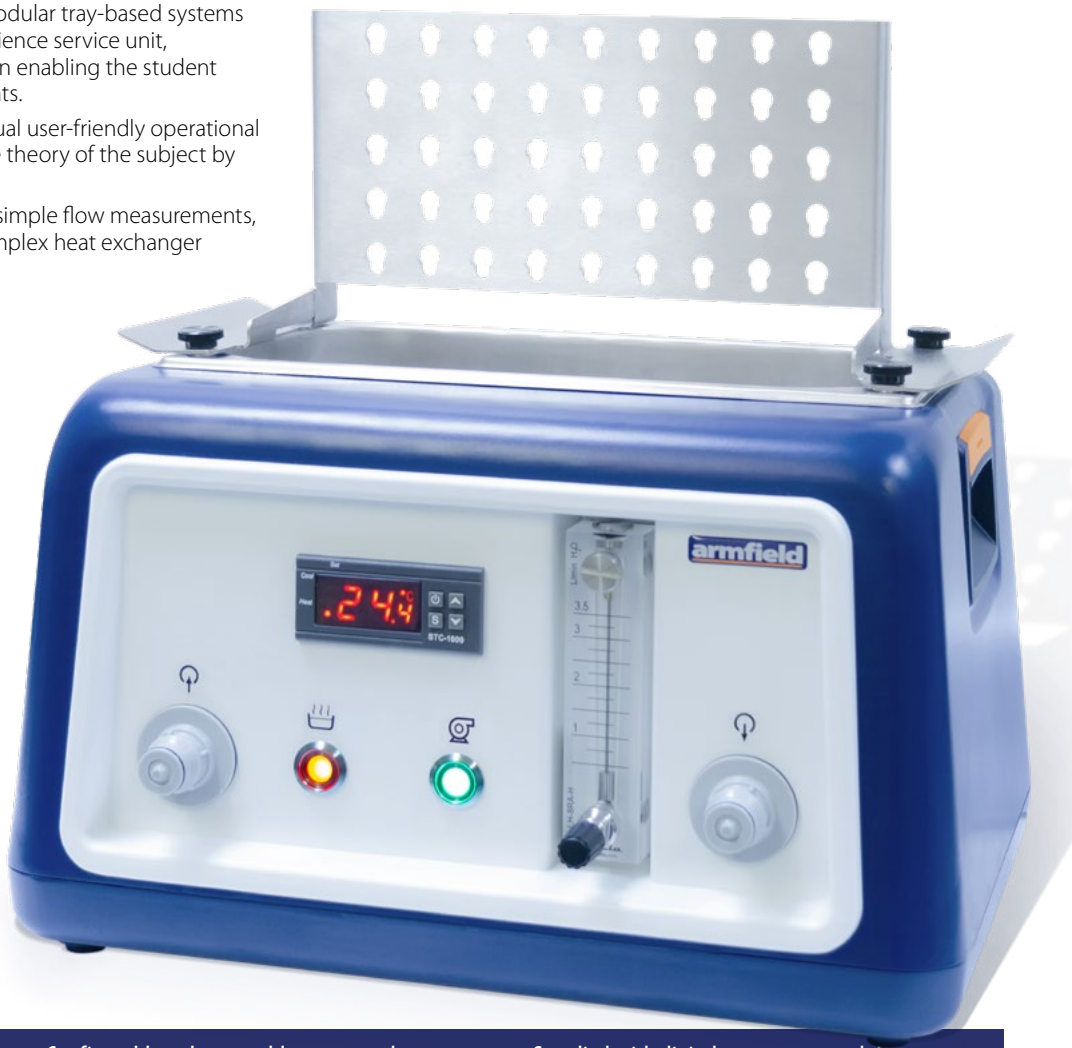
The Fluid Science range is an innovative suite of products designed to enable student to gain an understanding of the fundamentals of Fluid Mechanics and Thermo Fluids by the process of learning via hands-on experimentation.

The high precision elements are supplied as modular tray-based systems which operate in conjunction with the Fluid Science service unit, multifunctional work panel and instrumentation enabling the student to conduct their individual or group experiments.

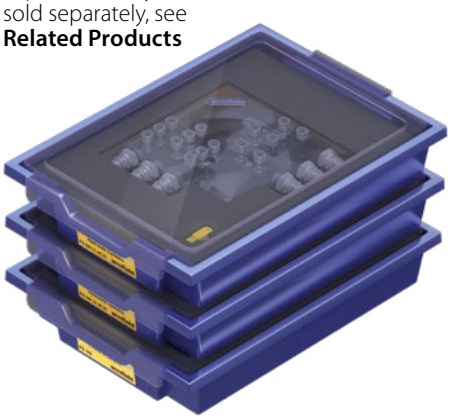
The experiments are supplied with a highly visual user-friendly operational guide, allowing the students to understand the theory of the subject by the application of practical experimentation.

The range includes experiments ranging from simple flow measurements, losses in hydraulic circuits through to more complex heat exchanger processes.

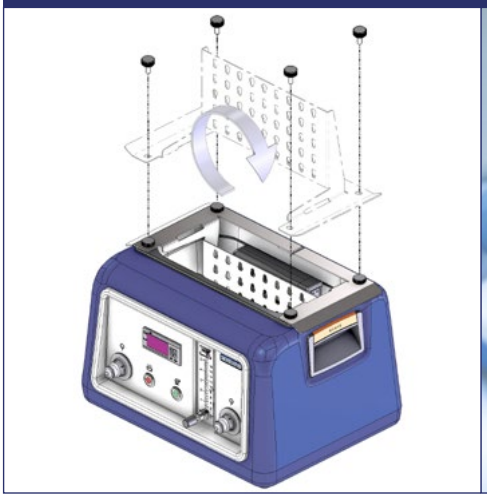
UNIQUE SMALL-SCALE MODULAR TEACHING SYSTEM FOR FLUID MECHANICS AND THERMO FLUIDS



Experiment trays are sold separately, see **Related Products**



Back plates is easily stored inside the unit



Configurable as hot or cold water supply

Supplied with digital manometer and thermometer

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: 1
URL: http://www.armfield.co.uk/ef

Applications: ME ChE CE IP

Description

The Fluid Science Service Unit FS-SU is designed to be used in conjunction with the fluid science experiments offered by Armfield. The unit incorporates a pump and rotameter to vary the water flow rate and a heating system. The built-in safety features of the unit include a thermal cut out that prevents the hot water circuit exceeding 55°c and a low voltage water resistant power supply unit. The unit is supplied as standard with.

Requirements

Scale

Electrical supply:

- 100-240V/1 Phase, 50-60Hz
- Level surface
- FS experiment trays

Initial fill of 5ltrs water. Drain to empty water away once experiment is complete. During use, water supply or drainage are not required.

Technical specifications

Water operational temperature range	Ambient to 55°C (131°F)
Water flow rate	0–3.5 litres/minute
Water volume	5 litres
Digital thermometer	
Measuring range:	-50°C to 1350°C (-58°F to 2462°F)
Accuracy:	0.015%
Digital manometer	
Measuring range:	13.78kPa
Accuracy:	0.3%
Hardwired thermal cut out switch to prevent over temperature of water	
Operating voltage:	24vDC power supply
PSU voltage:	100VAC to 240 VAC, 50-60Hz
IP65 rated	
CE certified for worldwide use.	

Overall dimensions

Dimensions stowed (excluding power supply)	
Length	0.385m
Width	0.314m
Height	0.249m
Dimensions Set Up (excluding power supply)	
Length	0.385m
Width	0.314m
Height	0.387m
Packed and crated shipping specifications	
Net weight	8.5Kg (inc. accessories and power supply)
Gross weight	9.9Kg (inc. accessories and power supply)

Demonstration / instructional capabilities

The entire FS Fluid Science range is designed to work with the service unit. See individual FS datasheets for specific demonstration experimental capabilities

Features

- Integrated pump
- Integrated flowmeter with needle valve
- Each service unit can be used as either a hot or cold-water supply
- Quick connect couplings for easy connection to experiment modules, self-sealing on supply unit to minimise water loss
- Digital Manometer and Thermometer provided
- Bespoke system for experimental modules that reduces the risk of spillage
- Low voltage within the supply unit to protect users

Benefits

- Applied student learning via experimentation
- Common service unit can be used for either hot or cold water supply
- Tool-less assembly
- Built in thermal cut-out to prevent overheating
- Low voltage 24vDC power supply
- Manual control for in depth student learning

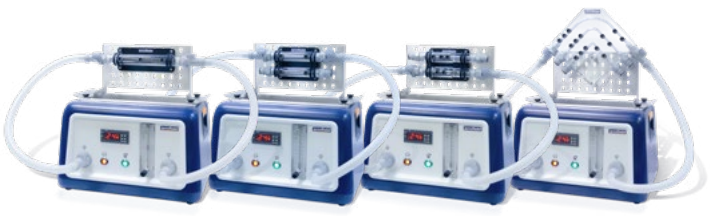
Related products

Fluid Mechanics Range

- FS-1.1 Flow Measurement
- FS-1.2 Energy Losses - Straight pipes
- FS-1.3 Energy Losses - Bends
- FS-2.1 Manometer - Inclined
- FS-2.2 Manometer - U tube
- FS-3.1 Heat Exchanger - Shell and tube
- FS-3.2 Heat Exchanger - Tubular
- FS-3.3 Heat Exchanger - Cross flow
- FS-3.4 Heat Exchanger - Plate
- FS-4.1 Fluidised bed

Essential Accessories / Equipment

One of the range of Fluid Science service trays



Ordering codes

FS-SU