armfield

F SERIES

F1a-Basic SOFTWARE INCLUDED AS STANDARD

# F SERIES: BASIC FLUID MECHANICS

## Complete Fluid Mechanics Laboratory – F1

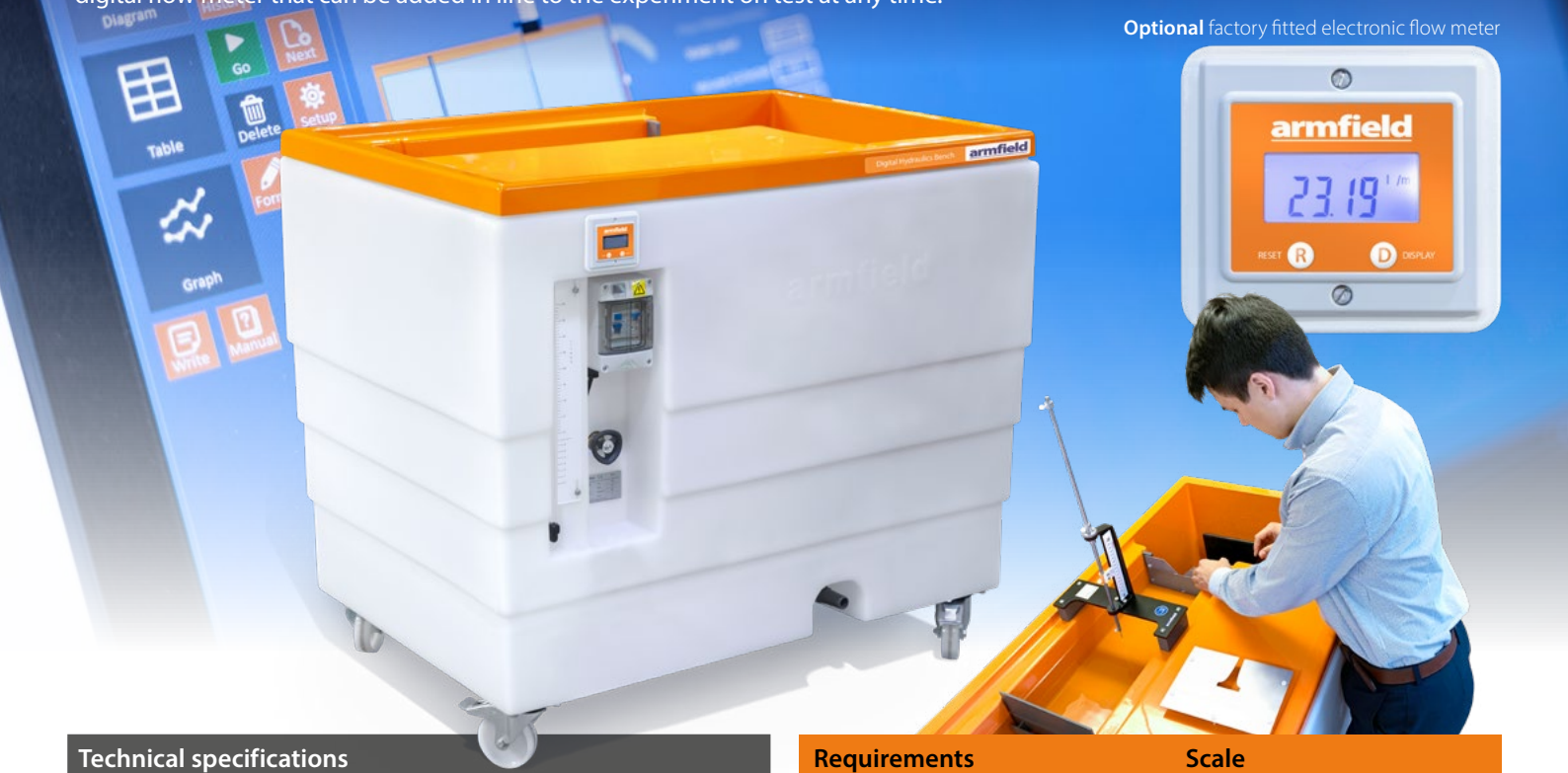
## Hydraulics Bench - F1-10

**The F1-10 unit is a portable and self-contained service module providing a controlled flow of water to a range of optional accessories. It is supplied as standard with the Fluid Mechanics F1-aBASIC Software**

This mobile bench is constructed from lightweight corrosion-resistant plastic and incorporates an open channel with side channels to support the accessories on test. The hydraulics bench includes a volumetric measuring tank stepped to accommodate low or high flow rates and a stilling baffle to reduce turbulence. A remote sight tube with scale gives an instantaneous indication of water level.

The bench additionally includes a quick-release pipe connector situated in the benchtop enabling rapid exchange of accessories without the need for hand tools, a measuring cylinder for measurement of very small flow rates, stopwatch and a copy of Armfield's F1-aBASIC educational software.

The F1-10 hydraulics bench can be supplied with either a factory fitted electronic flow meter with digital display or an optional inline digital flow meter that can be added in line to the experiment on test at any time.




**Optional** factory fitted electronic flow meter




| Technical specifications | |
|---|---|
| Pump | Submersible |
| | Max head: 8.3m $H_2O$ |
| (using volumetric tank) | Max flow: 80 litres/min |
| (using appropriate accessory) | Max flow: 100 litres/min |
| Motor rating | 0.25kW |
| Sump tank capacity | 250 litres |
| High flow volumetric tank | 40 litres |
| Low flow volumetric tank | 6 litres |
| Height of working surface | 1m above floor level |
| **Overall dimensions** | |
| Length | 1.13m |
| Width | 0.73m |
| Height | 1.0m |
| **Packed and crated shipping specifications** | |
| Volume | 1.5$m^3$ |
| Gross weight | 160kg |

**Requirements** **Scale**

COLD

**Electrical supply:**

**Basic Hydraulics Bench:**

- **F1-10-A** 220-240V / 1ph / 50Hz @ 10 amp
- **F1-10-B** 110-120V / 1ph / 60Hz @ 20 amp
- **F1-10-G** 220V / 1ph / 60Hz @ 10 amp

**Digital Hydraulics Bench** (with digital flow meter):

- **F1-10-2-A** 220-240V / 1ph / 50Hz @ 10 amp
- **F1-10-2-B** 110-120V / 1ph / 60Hz @ 20 amp
- **F1-10-2-G** 220V / 1ph / 60Hz @ 10 amp

**Water:** Fill with clean water. No permanent connection required.

### Ordering codes

- F1-10-A
- F1-10-B
- F1-10-G
- F1-10-2-A/-B/-G
- F1-10-2-A/-B/-G
- F1-10-2-A/-B/-G
- F1-10-1 Digital Flow Meter for F1-10 Hydraulics Bench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USA office - email: info@armfield.inc tel: +1 (609) 208-2800 (USA only)



Issue: 2
URL: http://www.armfield.co.uk/f1


Applications: ChE ME CE IP



armfield.co.uk

# armSOFT Software F1-aBASIC

**Armfield's F1-aBASIC software is now included as standard** with either of the hydraulic benches. The Armfield software is a powerful manual data entry learning package which enhances the educational content and understanding of Armfield's F1 Fluid Mechanics accessories that utilise either of the F1-10 Hydraulics benches.

The software allows the user to manually input data from primary instrumentation and offers a powerful tool for displaying and processing the results.

Software additionally includes the electronic version of the manual for all the modules on test.

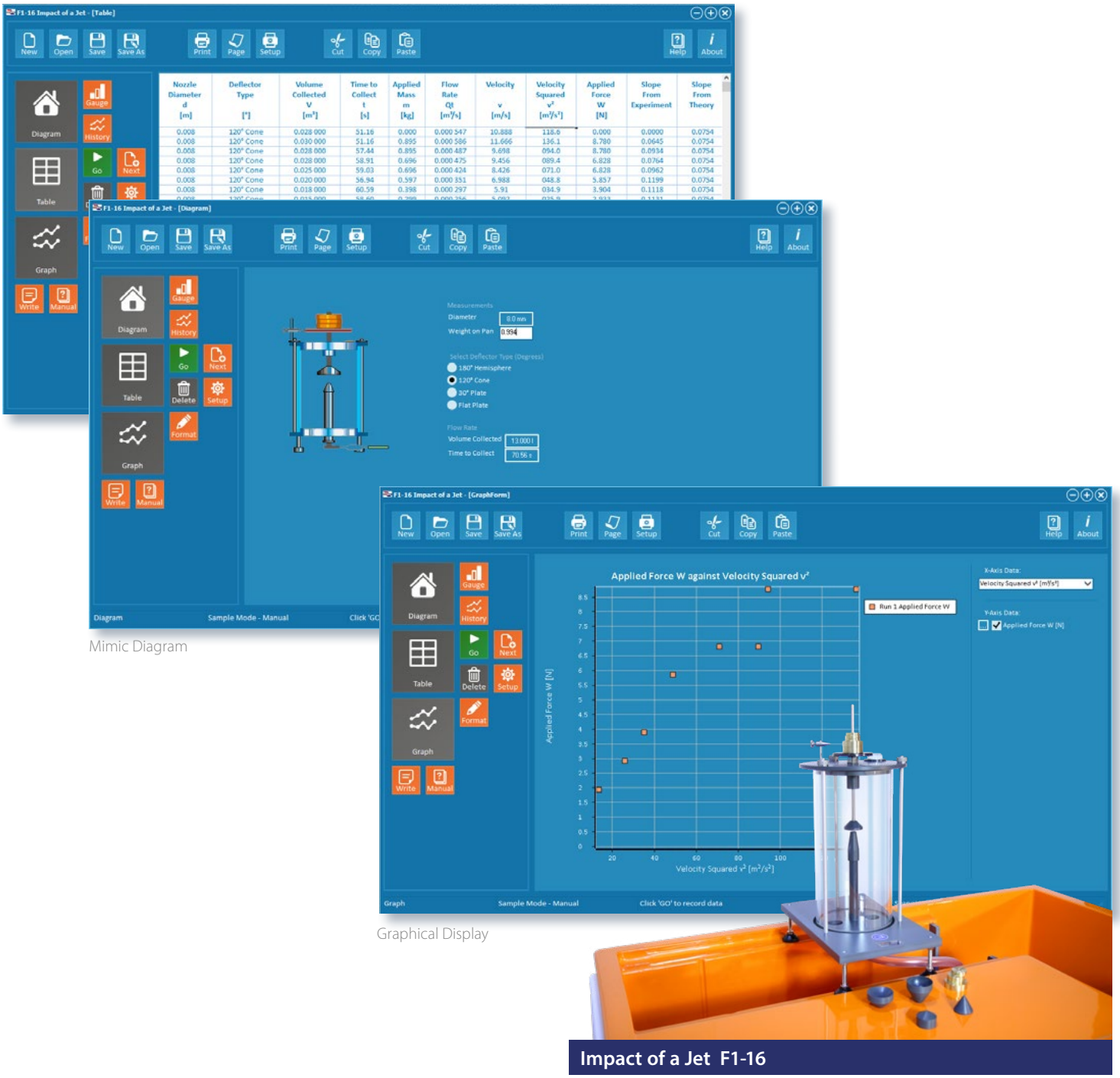
Some of the major features include:

**Mimic Diagram** - a pictorial representation of the equipment with fields to enter measurements from the equipment which displays any calculated variables directly in engineering units.

**Tabular Display** - As the data is entered, it is stored in a spreadsheet format. The table also contains columns for the calculated values.

**Graphical Display** - When several samples have been recorded, they can be viewed in graphical format. Powerful and flexible graph plotting tools are available in the software allowing the user full choice over what is displayed.

Tabular Display




Mimic Diagram

Graphical Display

**Impact of a Jet F1-16**

## Knowledge base

> 26 years' expertise in industrial R&D 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 Company

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## Aftercare

**Installation**
**Commissioning**
**Training**
**Service and maintenance**
**Support:** armfieldassist.com