

The Surface Irrigation Apparatus, FEL2 has been developed to help students of irrigation understand more fully the interaction of factors which influence water movement both on the soil surface and in the soil profile.

The equipment allows actual surface irrigation experiments to be performed on a small scale in the laboratory.

FOR LABORATORY-SCALE INVESTIGATIONS OF SURFACE IRRIGATION AND RELATED SYSTEMS



FEL2 - Soil/Water Model Tank

Experimental content

- ▶ Understand surface and sub-surface effects of surface water application
- ▶ Understand optimum irrigation application rates to maximise infiltration and minimise surface run-off
- ▶ Demonstrating the effect of rate of discharge on the advance and infiltration of water into the soil
- ▶ Demonstrating the effect of soil texture on the advance and infiltration of water into the soil
- ▶ Demonstrating the effect of land slopes on the advance and infiltration of water into the soil
- ▶ Demonstrating the effect of surface irregularities on the advance and infiltration of water into the soil
- ▶ Demonstrating the use of drip irrigation methods and how drip rate and spacing of drip points affects the wetted profile within the soil
- ▶ Demonstrating by visualising the flow lines how a tile drain works

Description

The apparatus consists of a narrow transparent fronted tank, which may be partially filled with any soil type. It is supported on a bench mounted frame. The equipment is self-contained with a sump tank, pump and flow meter fitted behind the tank.

Water may be discharged along the soil surface or directed to twin drip nozzles to demonstrate trickle irrigation. Measurement of rates of water penetration into the soil is aided by a grid on the tank front.

Removable end plates enable soil samples to be changed quickly and easily.

Requirements

Scale



► Electrical supply:

FEL2-A: 220-240V/1Ph/50Hz

FEL2-B: 120V/1Ph/60Hz

FEL2-G: 220-240V/1Ph/60Hz

► Cold water supply



Overall dimensions

Length	1.1m
Width	0.5m
Height	0.75m

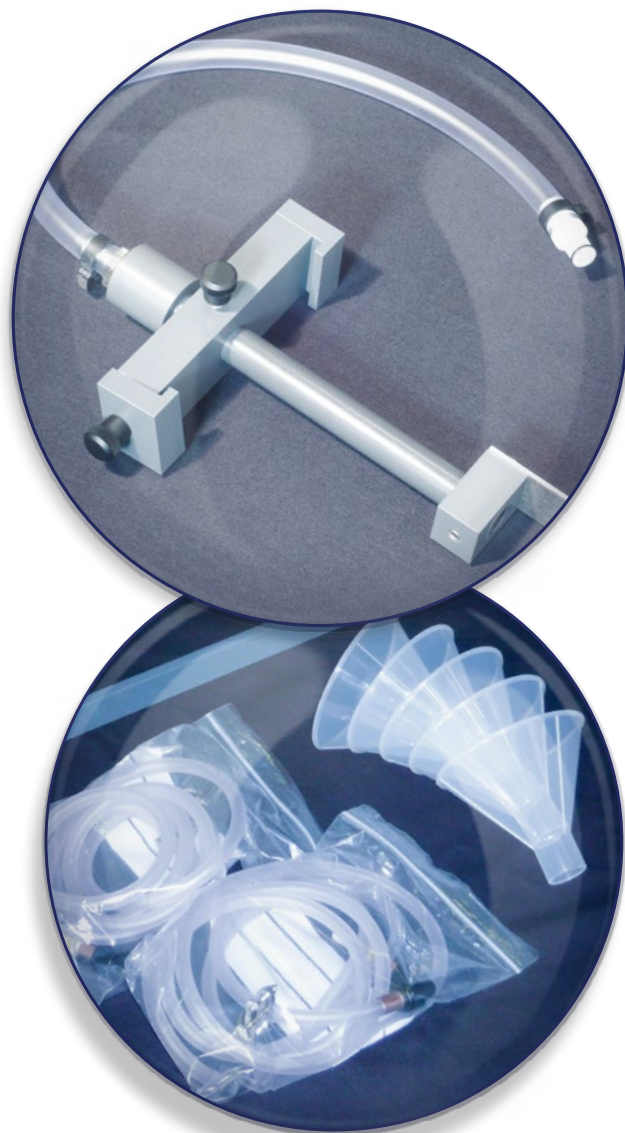
Packed and crated shipping specifications

Volume	0.9 m ³
Gross Weight	130kg

Ordering specification

Soil/Water Model Tank comprising:

- Sand tank, 1.00m x 0.025m x 0.450m (L x W x H)
- One large side formed from a sheet of transparent material
- Metal frame supporting sump tank from which water is pumped via a flow meter to the soil surface
- Flood and drip surface outlets (two can be used together by fitting a Y-connector)
- Overflow system to remove surface water to sump
- Complete with instruction manual



FEL2 - Supplied accessories

Ordering codes

- FEL2-A: 220-240V/1Ph/50Hz
- FEL2-B: 120V/1Ph/60Hz
- FEL2-G: 220-240V/1Ph/60Hz

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



Products CE certified

armfield.co.uk

Aftercare

Installation
Commissioning
Training
Service and maintenance
Support: armfieldassist.com