

**FE
SERIES**

The FEL10 Drain Permeameter apparatus provides the students with a way of studying the interactions between drains, soils and filters in the laboratory.

The apparatus consists of a constant head permeator which allows the study of various combinations of soils, filters and drain types. Changes in permeability with time can be estimated by measuring the rate of drainage of water from the permeator.

The part of the soil/drain system which is changing its permeability can be inferred from the series of piezometer tubes which are connected to the cylinder of the permeator.

Description

The Armfield Drain Permeameter is suited for use both as a teaching and demonstration tool and for laboratory testing and research. The equipment consists of a 100mm diameter transparent column, which may be filled with any soil type. A removable base section is provided into which the filter material to be investigated is placed. Water is added to the column under a constant head and permeating water and soil is collected at the base. The discharge from the drain can be monitored to assess the efficiency of the filter material. The apparatus is supported on a sturdy metal frame and may be conveniently placed on a laboratory bench close to a water supply and drain.



Drain Permeameter – FEL10



FEL10 - Safe and easy working height

Experimental content

- ▶ Determine relative efficiencies of drain filter materials
- ▶ Select optimum filter/soil combinations
- ▶ Demonstration of Darcy's Law and to illustrate the various concepts in the Darcy equation: water potential, hydraulic conductivity and flow rate
- ▶ To investigate the influence of drain slot size variation of drain sediment yield and susceptibility to blocking
- ▶ Investigation of the dynamics of a gravel envelope

Overall dimensions

Length	0.40m
Width	0.35m
Height	1.19m
Packed and crated shipping specifications	
Volume	0.5 m ³
Gross Weight	80kg

Requirements



Cold water supply

Scale



Ordering specification

Drain Permeameter comprising:

- ▶ Acrylic column, 100mm diameter supported on a metal stand
- ▶ Removable test section is provided at the base of the column to house the filter medium to be tested
- ▶ May be bench mounted
- ▶ Complete with instruction manual

Ordering codes

- ▶ FEL10

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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/fel10>

Applications
ChE IP

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