

Product Name :
Permeability and Fluidisation Studies Apparatus**Product Code :**
ALABS-A138-001**Description :****Permeability and Fluidisation Studies Apparatus**

- Apparatus to verify Darcy's Law, to examine Kozeny's equation and to observe liquid fluidisation behaviour of a granular bed.
- Equipment consists of a metal framework, constant head tank and transparent test section for observation. Flow is indicated by a Rotameter.
- A 0.5m water differential manometer and 0.5m Mercury manometer are included for pressure drop across the bed.

Description:

A bed of granular medium (usually sand, but other materials can be used such as Ballotini or anthracite) is placed in a readily demountable tube through which water can be made to flow in either a downwards or upwards direction. Flow from a laboratory tap passes through a constant head tank, which also allows air bubbles to be released, and is controlled by hand with a needle valve. The rate of flow is indicated by a variable area meter. Pressure drop across the bed can be measured either by a 0.5m length water differential manometer

or a 0.5m length Mercury manometer (see recommended accessories), depending on the magnitude. Valves are fitted for isolation of various parts of the circuit, together with air release valves. The test section tube and all tubing connections are transparent so that operation can be observed and the presence of air bubbles easily detected. All metal fittings are corrosion resistant. No power connections are required and the whole apparatus can be lifted and transported by one person. Test material (Ballotini) for the packed bed is supplied but Mercury for the manometer is not included.

Technical Details:

Sample tube I/D: 38mm

Sample tube length: 507mm

Flow Meter Range:

50-800ml/min

0.5m water differential manometer

0.5m Mercury manometer



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