

Features:

- Compact benchtop unit with non corrosive components
- Transparent components & Tubing for better visualization.
- Includes precision Flowmeter & differential manometer for accurate measurement.

Tesca Permeability / Fluidization Studies Apparatus is designed to study characteristics of flow-through a bed of particles. The apparatus consists of a cylinder filled with various types of bed granular medium (for example; sand), a constant head water tank is connected to the cylinder which allows water to flow through the cylinder. Utility water supply 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.

The pressure drop across the bed is measured by a 0.5m mercury manometer. Valves are fitted for isolation of various part circuits, together with air release valves. The test section tube and all tubing connections are clear color type so that the operation can be observed and present of bubbles easily detected. The apparatus framework is made of steel tubes with epoxy coated for corrosion resistance. Detailed Operation & Maintenance Manual is provided along with the trainer.



Specifications:

- Six stirrers with stainless steel paddles, linked to a variable speed motor with electronic feedback speed control
- Sample tube I/D: 38mm
- Sample tube length: 507mm
- Flowmeter range: 50-800ml/min
- 0.5m water differential manometer
- 0.5m Mercury manometer

Experiment Capabilities:

- Pressure drops measurement flow through packed beds.
- Verification of Kozeny's equation.
- Characteristics of a liquid fluidized bed.
- Measurement of permeability of selected solids.
- Attrition test

Required Services:

- Tap Water & Drainage

Note: Specifications are subject to change.

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