

**Product Name :**  
Fixed and Fluidised Bed Apparatus

**Product Code :**  
ALABS-A174-018

ALTEC™

**Description :**

**Fixed and Fluidised Bed Apparatus**

- Pressure drop through packed and fluidised beds, for air and water systems
- Verification of Carman-Kozeny equation
- Onset of fluidisation
- Observation of differences between particulate and aggregative fluidisation
- Demonstration of Liquefaction and liquefied soil phenomena

**Description:**

Upward flow of fluid through a bed of particles is a naturally occurring phenomenon, for example the movement of ground water. Industrial applications include ion-exchange, extraction of soluble components from raw materials and other chemical processes. The simultaneous study of air and water systems and the phenomenon of 'bubbling' can be observed. The apparatus comprises three clear acrylic columns mounted above a moulded ABS base. The base contains a water reservoir with a variable speed submersible pump, which

pumps water through an electronic flow meter into the base of the left hand column. This column features an overflow pipe, which returns the water back into the sump. The two air columns are fed by variable pressure regulators, which can be used to adjust the air flow rate through the column. The air flow rate is measured using pressure sensors at discharge orifices at the top of the columns. The integral micro controller calculates the flow rates from the pressure readings and displays these on the front panel



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