

## BP120 FIXED AND FLUIDIZED BED APPARATUS



### GENERAL DESCRIPTION

This bench top apparatus is designed for a study of fluid bubbling phenomena in fixed and fluidized beds of solid particles.

The apparatus consists of a water and an air system. Each has a fluidized column and a pump. Air or water is supplied to the column via bottom porous plate and escape to the top. Control valve varies the rate of flow. Two sizes of bed materials are supplied. Measurement of flow rate is by rotameter and pressure drop is by manometer.

Instruction manual is also included.

### EXPERIMENT CAPABILITIES

- Visualization of fluidization
- Pressure drop through packed and fluidized beds for both water and air systems
- Observation of difference between particulate and aggregative fluidization
- Verification of Carman - Kozeny equation.

### TECHNICAL DATA

- Fluidized column : Glass tube with 1 mm scale  
: 50 mm diameter x 550 mm long
- Bed plate : Wire mesh
- Water manometer : 1 ea.
- Air manometer : 1 ea.
- Water rotameter : 1 ea.
- Air rotameter : 1 ea.
- Water pump : 1 ea.
- Air compressor : 1 ea.
- Bed material : Alumina oxides or washed sand, two sizes
- Software for data display and analysis by computer (separately supply)
- Power supply : 220 V, 1 Ph, 50 Hz. Other power supply is available on request.

**Net (unpacked) Shipping Dimensions WxLxH** : 80 x 50 x 80 cm  
**Net Weight** : Approx. 35 kg