

**Product Name :**

Calibration of a Pressure Gauge

**Product Code :**

SLE/EFM/25

**Description :**

- Pressure gauge with visible working mechanism to demonstrate how this type of pressure gauge works and how to calibrate it.
- The apparatus is a gauge connected to a dead weight tester.
- Gauge has a transparent dial that allows students to see the working mechanism.
- The mechanism is a thin walled tube with an oval cross-section, bent into an arc.
- One end of the tube is held rigidly. This end admits pressure.
- To calibrate the gauge, students add weights to a platform on a dead weight tester.
- The weights put a known force on to a piston.
- They then remove the weights and record gauge readings.
- The piston has a known area, so students can calculate the pressure.
- A flexible tube containing water transfers the pressure on the piston to the tube.
- Students add the weights in increments, recording pressure readings from the gauge at each increment.
- The other end of the tube, connected to a dial and pointer mechanism, is free to move.
- When the pressure in the tube increases, it tries to straighten and so moves the pointer by an amount proportional to the pressure increase.