

Measuring pressure

The pressure in fluids (liquids and gases) can be measured with a *manometer*.

A manometer is a U-shaped tube, open on both sides, which contains a liquid. One arm of the manometer is connected to the vessel containing the fluid whose pressure is to be measured. This produces a pressure difference that displaces the liquid inside the manometer. The difference in the height, h , between the liquid in the two arms gives the difference between the fluid pressure being measured and the external atmospheric pressure. This pressure difference can be calculated from the formula

$$\text{pressure difference} = \rho gh$$

(where ρ is the density of the liquid in the manometer).