- p is the hydrostatic pressure (Pa= 1 kg /(m·s^2)),
- d is the fluid density (kg/m^3),
- g is gravitational acceleration (m/s^2),

h is height of liquid column (m).

$$p = d^{\alpha} g^{\beta} h^{\gamma} \gg kg * m^{-1} * s^{-2} = kg^{\alpha} m^{-3\alpha} m^{\beta} s^{-2\beta} m^{\gamma} \gg$$

$$\gg \alpha = 1, -3\alpha + \beta + \gamma = -1, -2\beta = -2 \gg \alpha = 1, \beta = 1, \gamma = 1$$

That's why:

$$p = dgh$$