

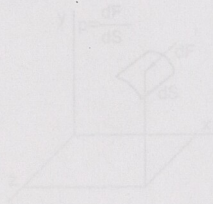
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## DEW POINT.

Pressure is defined as force per unit area. It is usually more convenient to use pressure rather than force to describe the influence upon fluid behavior. The standard unit for pressure is the Pascal, which is a Newton per square meter.

$$p = \frac{dF}{dS} \quad [Pa]$$



## Static fluid pressure.



Liquid in the tank shown on the picture above has a certain weight. Therefore force acting on the bottom of the tank is:

$$F = m \cdot g = V \cdot \rho \cdot g = g \rho h S$$

where  
 $m$  ... weight  
 $V$  ... volume

Well known expression for static pressure is obtained using pressure definition above:

$$p = \frac{F}{S} = \frac{g \rho h S}{S} = g \rho h$$

The fluid pressure at a given depth does not depend upon the total mass or total volume of the liquid. The above pressure expression is easy to see for the straight, unobstructed column, but not obvious for the cases of different geometry.