

Phase pressure = pw, po, pg

The [thermodynamic equilibrium](#) of the [reservoir fluids](#) may end up with the pressure difference between [fluid phases](#) (called [capillary pressure](#)) due to difference in [fluids](#) interaction with [rocks](#):

(1) $P_{cow} = p_o - p_w$	(2) $P_{cog} = p_o - p_g$	(3) $P_{cgw} = p_g - p_w$
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where

p_o	oil phase pressure
p_g	gas phase pressure
p_w	water phase pressure

Some engineering applications make fair use of the concept of [Average phase pressure](#) p :

3-phase Oil + Gas + Water fluid model	(4) $p = \frac{1}{3} (p_w + p_o + p_g)$
2-phase Oil + Water fluid model	(5) $p = \frac{1}{2} (p_w + p_o)$
2-phase Oil + Gas fluid model	(6) $p = \frac{1}{2} (p_o + p_g)$
2-phase Gas + Water fluid model	(7) $p = \frac{1}{2} (p_w + p_g)$

See also

[Natural Science](#) / [Physics](#) / [Fluid Dynamics](#) / [Percolation](#)

[[Capillary pressure](#)] [[Average phase pressure](#)] [[Oil phase pressure](#)][[Gas phase pressure](#)][[Water phase pressure](#)]