

Capillary pressure

[@wikipedia](#)

The difference between [phase pressures](#) due to difference in fluids interaction with rock matrix:

(1) $p_{cog} = p_o - p_g$	oil-gas capillary pressure
(2) $p_{cow} = p_o - p_w$	oil-water capillary pressure

[Capillary pressure](#) is a function of [reservoir saturation](#), [permeability](#) and [wettability](#).

One of the strong assumptions in [reservoir](#) fluid dynamic modelling is that 3-phase [capillary pressure](#) is a function of one [saturation](#) only:

(3) $p_{cog} = p_{cog}(s_o)$	a function of oil saturation only s_o
(4) $p_{cow} = p_{cow}(s_w)$	a function of water saturation only s_w

Mathematical model of [capillary pressure](#) is given by interpolation of laboratory data and also by a number of physical and empirical [capillary pressure correlations](#)

See also

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

[Petroleum Industry](#) / [Upstream](#) / [Subsurface E&P Disciplines](#) / [Field Study & Modelling](#)

[Capillary pressure @model](#)