

Joule–Thomson effect

[@wikipedia](#)

Synonym: [Throttling Temperature effect](#) = [Joule–Thomson effect](#)

[Fluid temperature](#) change (warming or cooling) under the [throttling process](#).

The value of [temperature](#) effect δT is proportional to [pressure](#) drop δP :

$$(1) \qquad \delta T = \epsilon_{JT} \cdot \delta P$$

where

ϵ_{JT}	is Joule–Thomson coefficient
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In [Fluid Dynamics](#) the [Joule–Thomson effect](#) [\(1\)](#) translates to the following equation:

$$(2) \qquad \frac{\partial T}{\partial t} = \epsilon_{JT} \cdot \mathbf{u} \cdot \nabla P$$

where

t	time
$\mathbf{u}$	flow velocity
∇	vector differential operator

See also

[Physics](#) / [Thermodynamics](#) / [Thermodynamic process](#) / [Adiabatic Process](#) / [Throttling process](#)

[[Joule–Thomson coefficient](#)]