

Adiabatic Process

[@wikipedia](#)

A [thermodynamic process](#) without transfer of [heat](#) or [mass](#) of substances between a [thermodynamic system](#) and its surroundings:

$$(1) \quad \frac{\partial(Q^\downarrow - Q^\uparrow)}{\partial t} = 0$$

In an [adiabatic process](#), the energy is transferred to the surroundings only as [work](#).

There three most popular types of [adiabatic fluid expansions](#):

Isentropic expansion	Free expansion	Throttling
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See also

[Natural Science](#) / [Physics](#) / [Thermodynamics](#) / [Thermodynamic process](#)