

2.1 Adiabatic process



- There is no transfer of thermal energy between the system and surrounding. The system is thermal isolated.

- $Q = 0$

- $\Delta U = Q + W = 0 + W = W$

- There is work done on the system when the gas is compressed ($\Delta T > 0$).

- There is work done by the system when it expands ($\Delta T < 0$).

- Poisson's law:

$$p V^x = \text{const.}$$

Where $x = c_p/c_v$ – is Poisson's constant

- $c_p > c_v$, $x > 1$ – depends on type of gas used

Adiabata – graph of adiabatic process:

