Isentropic Processes

- Isentropic (process or system)
  - no change in entropy
  - $dS=0$ or $\Delta S=\int dS=0$
- 2nd Law for control mass

$$dS= \delta Q/T+ \delta \mathcal{P}_s$$

- So two ways to get no entropy change
  - production (irreversibilities) "balanced" by cooling (heat transfer out, $\delta Q<0$)
  - reversible processes - no production of entropy + adiabatic no heat (or entropy) transfer