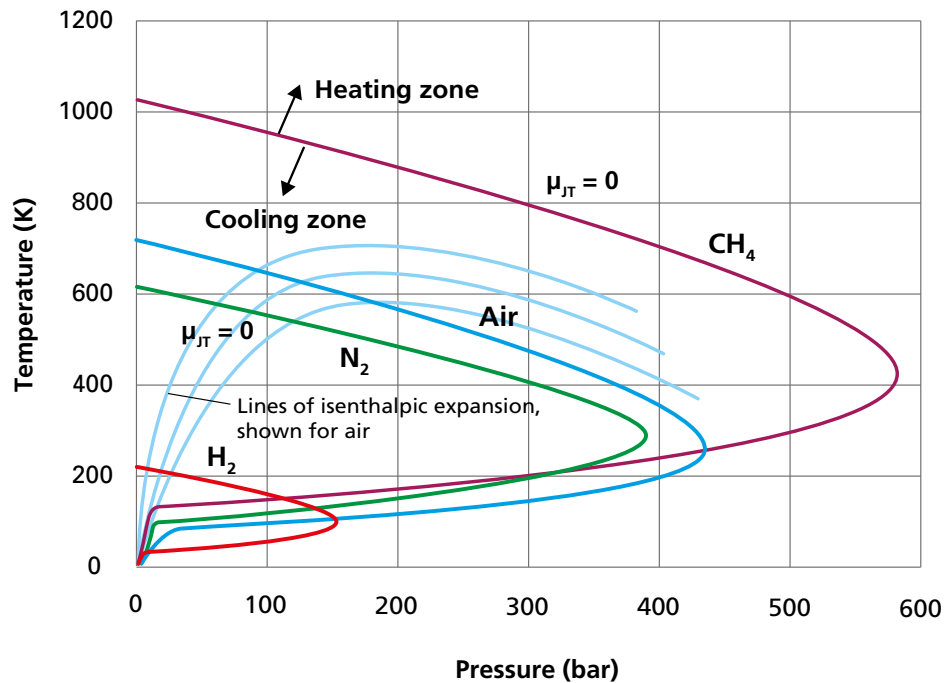


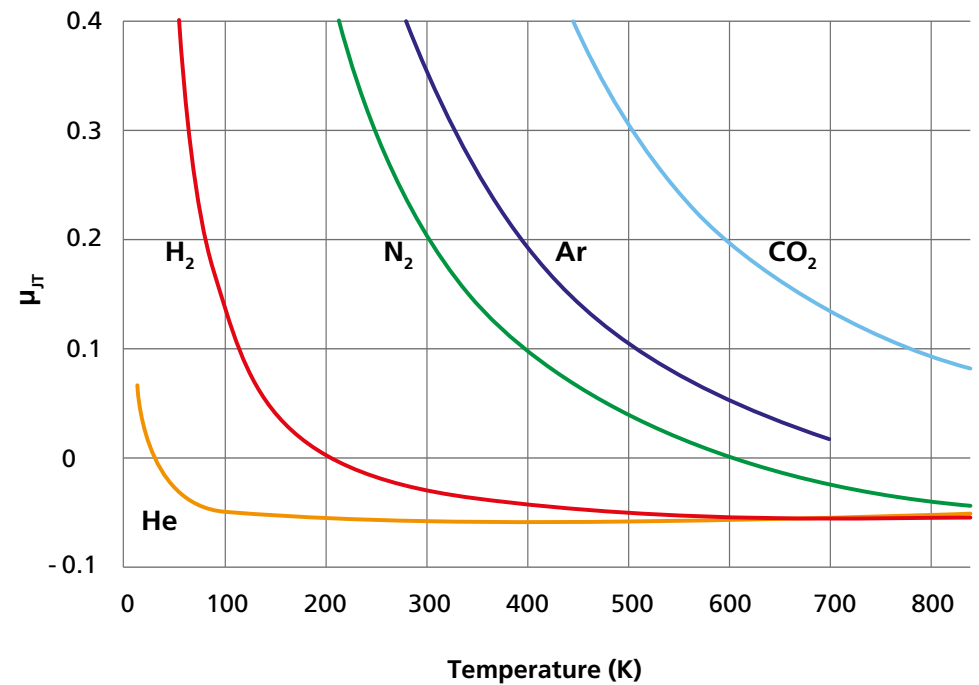
Joule-Thomson Effect for Heating and Cooling of Gases as They Expand

Joule-Thomson Inversion Curve



- H₂ Hydrogen
- N₂ Nitrogen
- CH₄ Methane
- He Helium
- Ar Argon
- CO₂ Carbon dioxide

μ_{JT} – Joule-Thomson coefficient (K/bar) and inversion temperatures at atmospheric pressure



$\mu_{JT} > 0$ means the gas will cool down during expansion
 $\mu_{JT} < 0$ means the gas will warm up during expansion