



An ideal gas

An ideal gas has a gas constant $R = 0.3 \text{ kJ/kg} \cdot \text{K}$ and a constant volume specific heat $c_v = 0.7 \text{ kJ/kg} \cdot \text{K}$. If the gas has a temperature change of 100°C , what is the change in internal energy in kJ/kg ?

Answer: 70.

Explanation: The change in internal energy is given by: $\Delta u = c_v \cdot \Delta T = 70 \text{ kJ/kg}$