

ΜΕΤΑΒΟΛΕΣ ΙΔΑΝΙΚΩΝ ΑΕΡΙΩΝ

ΠΟΛΥΤΡΟΠΙΚΗ	ΙΣΟΘΕΡΜΗ	ΙΣΟΧΩΡΗ	ΙΣΟΒΑΡΗΣ	ΑΔΙΑΒΑΤΙΚΗ
$p \cdot v^k = \text{σταθ.}$	$p \cdot v = \text{σταθ.} \quad (k = 1)$	$v = \text{σταθ.} \quad (k \rightarrow \infty)$	$p = \text{σταθ.} \quad (k = 0)$	$p \cdot v^\gamma = \text{σταθ.} \quad (k = \gamma)$
$k = \frac{\log\left(\frac{p_1}{p_2}\right)}{\log\left(\frac{v_2}{v_1}\right)}$	$\frac{p_1}{p_2} = \frac{v_2}{v_1}$	$\frac{p_1}{p_2} = \frac{T_1}{T_2}$	$\frac{v_1}{v_2} = \frac{T_1}{T_2}$	$\gamma = \frac{c_p}{c_v}$
$\frac{T_1}{T_2} = \left(\frac{v_2}{v_1}\right)^{k-1}$	$L_{1,2} = R_1 \cdot T \cdot \ln\left(\frac{v_2}{v_1}\right) =$ $= R_1 \cdot T \cdot \ln\left(\frac{p_1}{p_2}\right)$	$Q_{1,2} = (\Delta U)_{1,2} = U_2 - U_1$	$L_{1,2} = p \cdot (v_2 - v_1)$	$\frac{T_1}{T_2} = \left(\frac{v_2}{v_1}\right)^{\gamma-1}, \quad \frac{T_1}{T_2} = \left(\frac{p_1}{p_2}\right)^{\frac{\gamma-1}{\gamma}}$
$\frac{T_1}{T_2} = \left(\frac{p_1}{p_2}\right)^{\frac{k-1}{k}}$	$(\Delta U)_{1,2} = 0$	$L_{1,2} = \text{ΕΡΓΟ ΟΓΚΟΥ} = 0$	$Q_{1,2} = (U_2 - U_1) + L_{1,2}$	$\frac{v_2}{v_1} = \left(\frac{p_1}{p_2}\right)^{\frac{1}{\gamma}}$
$L_{1,2} = \frac{p_1 \cdot v_1 - p_2 \cdot v_2}{k-1} =$ $= \frac{R_1 \cdot (T_1 - T_2)}{k-1}$	$Q_{1,2} = L_{1,2}$			$Q_{1,2} = 0$ $L_{1,2} = \frac{p_1 \cdot v_1 - p_2 \cdot v_2}{\gamma-1} =$ $= \frac{R_1 \cdot (T_1 - T_2)}{\gamma-1}$

ΔΙΕΘΝΕΣ ΣΥΣΤΗΜΑ ΜΟΝΑΔΩΝ : $Q_{1,2} = (U_2 - U_1) + L_{1,2}, \quad Q_{1,2} \left(\frac{\text{kJ}}{\text{kg}}\right), \quad U \left(\frac{\text{kJ}}{\text{kg}}\right), \quad L_{1,2} \left(\frac{\text{kJ}}{\text{kg}}\right)$

ΤΕΧΝΙΚΟ ΣΥΣΤΗΜΑ ΜΟΝΑΔΩΝ : $Q_{1,2} = (U_2 - U_1) + A \cdot L_{1,2}, \quad Q_{1,2} \left(\frac{\text{kcal}}{\text{kp}}\right), \quad U \left(\frac{\text{kcal}}{\text{kp}}\right), \quad L_{1,2} \left(\frac{\text{kp} \cdot \text{m}}{\text{kp}}\right), \quad A = \frac{1}{427} \left(\frac{\text{kcal}}{\text{kp} \cdot \text{m}}\right)$