Von Turbine II abgegebene Leistung

$$w_{t,34}^{rev,isoth} = R \cdot T \cdot \ln\left(\frac{p_4}{p_3}\right) \cdot \dot{m}$$ ←Double-click on this formula

$$P_{t,34}^{rev,isoth} = \dot{m} \cdot R \cdot T \cdot \ln\left(\frac{p_4}{p_3}\right)$$

$\dot{m} = 1{,}9\ \frac{kg}{s}$

$R = 2{,}077\ \frac{kJ}{kg \cdot K}$

$T = T_u = 293{,}15\ K$

$p_4 = p_u = 100\ 000\ Pa$

$p_3 = 761\ 284\ Pa$

$$P_{t,34}^{rev,isoth} = 1{,}9\ \frac{kg}{s} \cdot 2{,}077\ \frac{kJ}{kg \cdot K} \cdot 293{,}15\ K \cdot \ln\left(\frac{100\ 000\ Pa}{761\ 284\ Pa}\right)$$

$$P_{t,34}^{rev,isoth} = -2348{,}23\ \frac{kJ}{s}$$

$$\boldsymbol{P_{t,34}^{rev,isoth} = -2348{,}23\ kW}$$