

BERNOULLI'S CONSERVATION OF ENERGY $\Delta K = \frac{1}{2}mv_f^2 - \frac{1}{2}mv_i^2$ $\Delta U = mg\Delta h$

Conservation of Energy

$$m_f = m_i$$

Bernoulli's Equation

$$P_1 + \frac{1}{2}\rho v_1^2 + \rho g y_1 = P_2 + \frac{1}{2}\rho v_2^2 + \rho g y_2$$

$$W = \Delta K + \Delta U$$

$$\frac{dm}{\rho} (P_1 - P_2) = \frac{1}{2} \Delta m (\Delta v) + mg(\Delta y)$$

$$P + \frac{1}{2}\rho v^2 + \rho g y = \text{constant}$$