

$$F_1 v_1 \Delta t - F_2 v_2 \Delta t = (\Delta m_2 g h_2 - \Delta m_1 g h_1) + \left(\frac{1}{2} \Delta m_2 v_2^2 - \frac{1}{2} \Delta m_1 v_1^2 \right)$$

$$P_1 S_1 v_1 \Delta t - P_2 S_2 v_2 \Delta t = (\rho \Delta V g h_2 - \rho \Delta V_1 g h_1) + \left(\frac{1}{2} \rho \Delta V_2 v_2^2 - \frac{1}{2} \rho \Delta V_1 v_1^2 \right)$$

$$\Delta V (p_1 - p_2) = \Delta V (\rho g h_2 - \rho g h_1) + \Delta V \left(\frac{1}{2} \rho v^2 \right)$$

$$p + \rho g h + \frac{1}{2} \rho v^2 = \text{const}$$