

You don't need a solve block:

$$Q_c := 18000 \frac{\text{BTU}}{\text{hr}} \quad h_2 := 239.01 \frac{\text{BTU}}{\text{lb}}$$

$$h_3 := 120.17 \frac{\text{BTU}}{\text{lb}} \quad \rho := 10.747 \frac{\text{lb}}{\text{ft}^3}$$

$$\Delta P := 2 \text{psi} \quad \lambda := 0.001$$

$$\Delta h := h_2 - h_3 = 118.84 \frac{\text{BTU}}{\text{lb}}$$

$$\Delta P = \lambda \cdot \frac{\rho \cdot v^2}{2} \quad v := \sqrt{\frac{2 \Delta P}{\lambda \rho}} = 1313 \frac{\text{ft}}{\text{sec}}$$

$$\frac{Q_c}{\Delta h} = \dot{m} = \rho \cdot v \cdot A = \rho \cdot v \cdot \left(\frac{\pi \cdot d^2}{4} \right) \quad d := \sqrt{\frac{4 \cdot \frac{Q_c}{\Delta h}}{\rho \cdot v}} = 0.041 \text{ in}$$