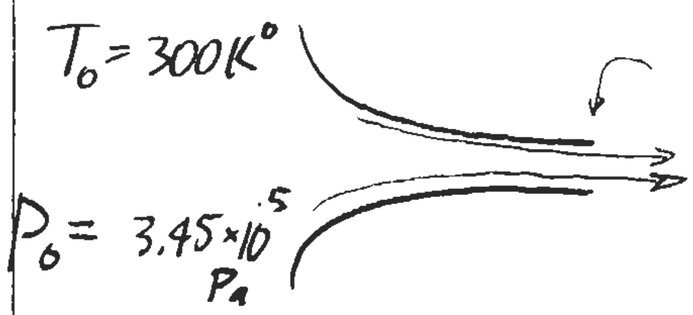
Flow out of tank through air hose:



Required $\dot{m} = 0.01$ kg/s $= \rho^* a^* A^*$

$$\rho^* = \rho_0 \left[1 + \frac{\gamma-1}{2}\right]^{\frac{-1}{\gamma-1}} = 0.634\,\rho_0$$

but $h_0 = c_p T_0 = 1004\ J/kg°K \cdot 300° = 301200\ m^2/s^2$

$$a_0 = \sqrt{(\gamma-1)h_0} = 347.1\ m/s$$

$$\rho_0 = \gamma P_0/(\gamma-1)h_0 = 4.01\ kg/m^3$$

So $\rho^* = 0.634\,\rho_0 = 2.542\ kg/m^3$

$$a^* = a_0\left[1 + \frac{\gamma-1}{2}\right]^{-\frac{1}{2}} = 316.8\ m/s$$

$$A^* = \frac{\dot{m}}{\rho^* a^*} = \frac{0.01}{2.542 \cdot 316.8} = 1.24 \times 10^{-5}\ m^2 = 0.124\ cm^2$$

$r = 2$ mm

diameter $= 4$ mm $= 0.156$ in.