

65. We apply Bernoulli's equation to the central streamline:

$$p_1 + \frac{1}{2}\rho_{\text{air}}v_1^2 = p_o + \frac{1}{2}\rho_{\text{air}}v_o^2 \implies p_1 - p_o = \frac{1}{2}\rho_{\text{air}}(v_o^2 - v_1^2)$$

where $v_o = 65 \text{ m/s}$, $v_1 = 2 \text{ m/s}$ and the density of air is $\rho_{\text{air}} = 1.2 \text{ kg/m}^3$ (see Table 15-1). Thus, we obtain $p_1 - p_o \approx 2500 \text{ Pa}$.