Fluid Properties/Parameters

$\mu_{\text{air}} \approx 10^{-5} \text{ kg/m/s}$

$P_{\text{air}} = 1 \text{ atm} = 101000 \text{ Pa} = \frac{N}{m^2} = \frac{kg \cdot m}{s^2 \cdot m^2} = \frac{kg}{m \cdot s}$

Newton's Law of Viscosity

$I = \mu_{\text{air}} \frac{du}{dy}$

$P = \frac{F}{A}$

$\rho_{\text{air}} = 1 \text{ kg/m}^3$

No slip condition
\[ \vec{V} = \omega \hat{i} + v \hat{j} + w \hat{k} \]
\[ u \text{ slow} \quad \frac{du}{dy} \text{ small} \]

\[ u \text{ fast} \quad \frac{du}{dy} \text{ large} \]