

$$\Delta P dA = dF$$

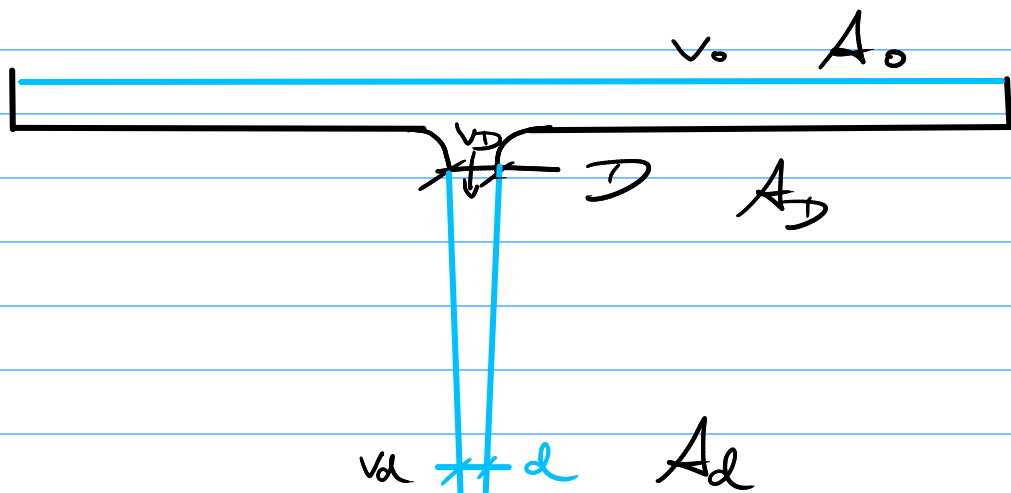
$$dA = B(z) dz$$

$$\frac{\frac{B(z)}{2}}{z} = \tan \alpha$$

$$\Rightarrow B(z) = 2z \tan \alpha$$

$$P_0 + \Delta P$$

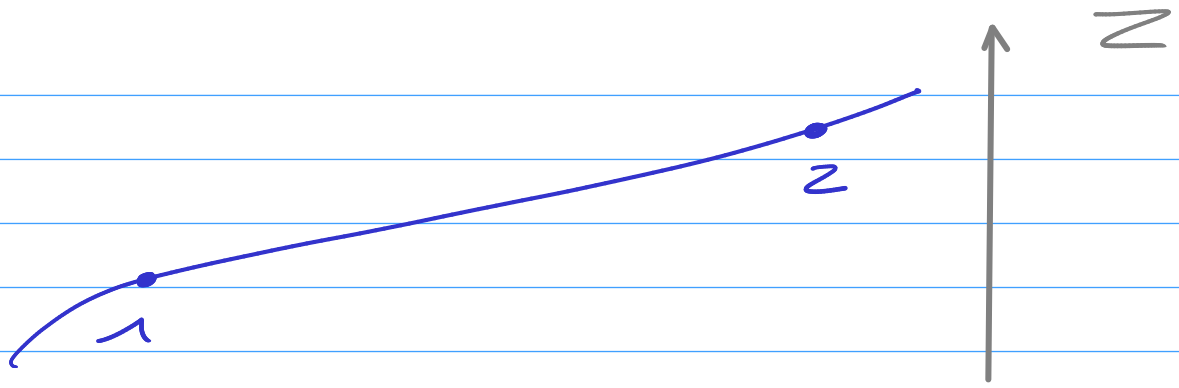
$$z \downarrow P(z) = P_0 + \Delta P + \rho g z$$



$$v_D A_D = v_0 A_0 \Rightarrow v_0 = v_D \frac{A_D}{A_0}$$

$$A_0 \gg A_D > A_d \Rightarrow v_0 \ll v_D$$

Bernoulli:  $\dots \underbrace{\rho \frac{v_0^2}{2}}_{\leftarrow} \dots = \dots \underbrace{\rho \frac{v_D^2}{2}}_{\leftarrow} \dots$



$$P_1 + \rho \frac{V_1^2}{2} + \rho g z_1 = P_2 + \rho \frac{V_2^2}{2} + \rho g z_2$$

$$P_1 + \rho \frac{V_1^2}{2} + \rho \underbrace{(z_1 - z_2)}_{\Delta h} = P_2 + \rho \frac{V_2^2}{2}$$