

$$\begin{aligned}V_s &= K_p C_p \left(\sqrt{\Delta p} \right)_{\text{avg}} \sqrt{\frac{T_{s(\text{avg})}}{P_s M_s}} \\ &= 34.97 C_p \left(\sqrt{\Delta p} \right)_{\text{avg}} \sqrt{\frac{T_{s(\text{avg})}}{P_s M_s}}\end{aligned}\quad \text{Eq. 306A-9}$$