$$d_{\mathrm{eff}} = 7.844 \cdot \left(\frac{V_{\mathrm{gas}}}{\sqrt{\frac{\left(p_{\mathrm{in}} - p_{\mathrm{atmos}}\right) \cdot \left(p_{\mathrm{in}} + p_{\mathrm{atmos}}\right)}{SG_{\mathrm{N}_2} \cdot T}}} \right)^{0.5057}$$