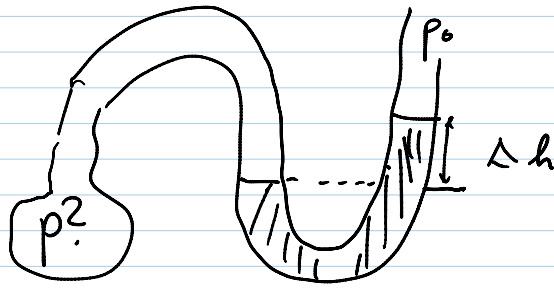


Flüssigkeitsmanometer



$$\Delta p = \rho_{fl} g \cdot \Delta h$$
$$p^z - p^o = \rho_{fl} g \cdot \Delta h$$

1 mm Wassersäule

$$\begin{aligned} p(1\text{mm WS}) &= 1 \frac{\text{kg}}{\text{dm}^3} \cdot 9,81 \frac{\text{m}}{\text{s}^2} \cdot 1\text{mm} \\ &= 1000 \frac{\text{kg}}{\text{m}^3} \cdot 9,81 \frac{\text{m}}{\text{s}^2} \cdot 0,001\text{m} = 9,81 \frac{\text{kg} \cdot \text{m}}{\text{s}^2 \cdot \text{m}^2} \\ &= 9,81 \text{ Pa} \end{aligned}$$

1 mm Quecksilbersäule

$$\rho_{Hg} = 13,6 \frac{\text{kg}}{\text{dm}^3}$$

$$\begin{aligned} p(1\text{mm Hg}) &= 9,81 \cdot 13,6 \text{ Pa} = 133 \text{ Pa} = 1,33 \text{ hPa} \\ &= 1,33 \text{ mbar} \\ &= 1 \text{ Torr} \end{aligned}$$

"Normaldruck" 760 Torr $\hat{=}$ 1013 mbar