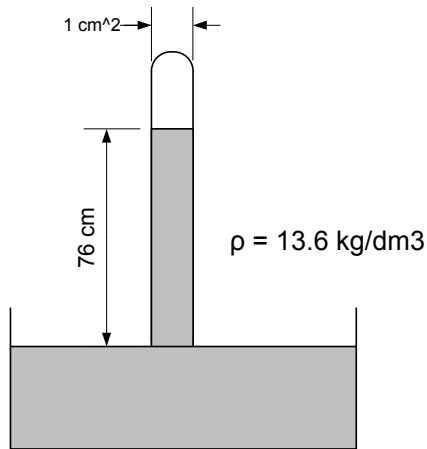


Conversion 1 atm to Bar, psi, kg/cm²

Teach Yourself Daily



$$\begin{aligned} 1 \text{ dm} &= 10 \text{ cm} \\ 1 \text{ dm}^2 &= 10 \text{ cm} \cdot 10 \text{ cm} \\ &= 100 \text{ cm}^2 \\ 1 \text{ dm}^3 &= 10 \text{ cm} \cdot 10 \text{ cm} \cdot 10 \text{ cm} \\ &= 1000 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} 1 \text{ cm} &= 0.01 \text{ m} \\ 1 \text{ cm}^2 &= 0.01 \text{ m} \cdot 0.01 \text{ m} \\ &= 0.0001 \text{ m}^2 \end{aligned}$$

$$\begin{aligned} g &= 9.8 \text{ m / det}^2 \\ 1 \text{ Bar} &= 100 \text{ Kpa} \end{aligned}$$

$$\begin{aligned} 1 \text{ kg} &= 2.2 \text{ pound} \\ 1,0336 \text{ kg} &= 2.278 \text{ pound} \\ 1,020 \text{ kg} &= 2,249 \text{ pound} \end{aligned}$$

$$\begin{aligned} 1 \text{ cm} &= 0.393 \text{ inch} \\ 1 \text{ cm}^2 &= 0.393 \text{ inch} \cdot 0.393 \text{ inch} \\ &= 0.155 \text{ inch}^2 \end{aligned}$$

$$\begin{aligned} 1,01290 \text{ bar} &= 1,0336 \text{ kgf/cm}^2 \\ 1 \text{ bar} &= 1,020 \text{ kgf/cm}^2 \end{aligned}$$

$$\begin{aligned} &= \frac{1,020 \text{ kgf}}{1 \text{ cm}^2} \\ &= \frac{2,249 \text{ pound}}{0.155 \text{ inch}^2} \\ &= 14,5 \text{ Pound/inch}^2 \\ &= 14,5 \text{ psi} \end{aligned}$$

$$\begin{aligned} 1 \text{ kgf/cm}^2 &= \frac{1,000 \text{ kgf}}{1 \text{ cm}^2} \\ &= \frac{2,2 \text{ pound}}{0.155 \text{ inch}^2} \\ &= 14,193 \text{ Pound/inch}^2 \\ &= 14,2 \text{ psi} \end{aligned}$$

$$\begin{aligned} \text{Volume (v)} &= h \cdot A \\ &= 76 \text{ cm} \cdot 1 \text{ cm}^2 \\ &= 76 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} \text{Mass} &= \rho \cdot V \\ &= 13.6 \text{ kg/dm}^3 \cdot 76 \text{ cm}^3 \\ &= 13.6 \text{ kg/1000 cm}^3 \cdot 76 \text{ cm}^3 \\ &= 13.6 \text{ kg} \cdot 0.001 / \text{cm}^3 \cdot 76 \text{ cm}^3 \\ &= 0.0136 \text{ kg/cm}^3 \cdot 76 \text{ cm}^3 \\ &= 0.0136 \text{ kg} \cdot 76 \\ &= 1.0336 \text{ kg} \end{aligned}$$

$$\begin{aligned} P &= \frac{F}{A} \\ &= \frac{m \cdot g}{A} \\ &= \frac{1,0336 \text{ kg} \cdot 9.8 \text{ m/det}^2}{1 \text{ cm}^2} \\ &= \frac{10,129 \text{ kg.m/det}^2}{0.0001 \text{ m}^2} \\ &= 10,129 \text{ N} \\ &= 10,1290 \text{ N/m}^2 \\ &= 101290 \text{ pa} \\ &= 101,290 \text{ kpa} \\ &= 1,01290 \text{ Bar} \end{aligned}$$

$$\begin{aligned} P &= \frac{m (f)}{A} \\ &= \frac{1,0336 \text{ kgf}}{1 \text{ cm}^2} \\ &= 1.0336 \text{ kg /cm}^2 \end{aligned}$$

$$\begin{aligned} P &= \frac{m (f)}{A} \\ &= \frac{1,0336 \text{ kgf}}{1 \text{ cm}^2} \\ &= \frac{2,278 \text{ pound}}{0.155 \text{ inch}^2} \\ &= 14,69 \text{ Pound/inch}^2 \\ &= 14,7 \text{ psi} \end{aligned}$$