

(KEY CONCEPT) [A-1-5]

Basic Dimension	Standard SI Unit	Standard US Customary Unit	Non-Standard Unit
Mass (M)	kilograms-mass (kg)	slugs (slug)	pounds-mass (lbf)
Length (L)	meters (m)	feet (ft)	inches (in)
Time (T)	seconds (s)	seconds (s)	
Force (F = MLT ⁻²)	Newton (N) $N = \text{kg} \cdot \text{m/s}^2$	pounds-force (lbf) or "lb" $\text{lbf} = \text{slug} \cdot \text{ft/s}^2$	kilograms-force (kgf)
Temperature (θ)	Kelvin (K)	Rankine (°R)	Celsius (°C) Fahrenheit (°F)

$$9.81 \text{ N} = 1 \text{ kgf}$$

$$\text{K} = ^\circ\text{C} + 273$$

$$1 \text{ ft} = 12 \text{ in} \quad 1 \text{ psi (lbf/in}^2) = 144 \text{ psf (lbf/ft}^2)$$

$$1 \text{ slug} = 32.2 \text{ lbf}$$

$$^\circ\text{R} = ^\circ\text{F} + 460$$

