

Quantity	Metric (SI) Units of Measure	US Customary (USC) Units of Measure	Conversion Factors (SI) to (USC)
Time	second (s) 1 minute (min) = 60 seconds 1 hour (hr) = 60 minutes 1 day = 24 hours	second (s) 1 minute (min) = 60 seconds 1 hour (hr) = 60 minutes 1 day = 24 hours	--
Length	meter (m) 1000 millimeters (mm) = 1 m 1 kilometer (km) = 1000 m	foot (ft) 12 inches (in) = 1 ft 1 mile (mi) = 5280 ft	1 m = 3.281 ft
Area	square meter (m ²)	square foot (ft ²)	1 m ² = 10.764 ft ²
Volume	cubic meter (m ³) Liter (L) = .001 m ³	cubic foot (ft ³) Gallon (gal) = .1337 ft ³	1 m ³ = 31.315 ft ³ 3.785 L = 1 gal
Mass	kilogram (kg) metric ton / tonne (t) = 1000 kg	slug = 1 $\left(\frac{lb*s^2}{ft}\right)$	14.59 kg = 1 slug
Force	newton (N) = 1 $\left(\frac{kg*m}{s^2}\right)$ kilonewton (kN) = 1000 N	pound (lb) 16 ounces (oz) = 1 lb 1 kilo pound (kip) = 1000 lbs 1 ton = 2000 lbs	4.448 N = 1 lb
Velocity (Linear)	meter per second (m/s) 3.6 kilometers per hour (kph) = 1 m/s	feet per second (ft/s) mile per hour (mph) = 1.467 $\frac{ft}{s}$	1 $\frac{m}{s}$ = 3.281 $\frac{ft}{s}$
Acceleration (Linear)	meter per second squared $\left(\frac{m}{s^2}\right)$	foot per second squared $\left(\frac{ft}{s^2}\right)$	1 $\frac{m}{s^2}$ = 3.281 $\frac{ft}{s^2}$
Velocity (Angular)	radian per second $\left(\frac{rad}{s}\right)$ 1 rotation per minute (rpm) $= \frac{2\pi rad}{60 s}$	radian per second $\left(\frac{rad}{s}\right)$ 1 rotation per minute (rpm) $= \frac{2\pi rad}{60 s}$	--
Acceleration (Angular)	radian per second squared $\left(\frac{rad}{s^2}\right)$	radian per second squared $\left(\frac{rad}{s^2}\right)$	--
Moment of a Force; Torque	Newton-meter (N*m)	Foot-pound (lb*ft) Inch pound (lb*in)	1.356 N*m = 1 lb*ft
Area Moment of Inertia	meter ⁴ (m ⁴) 1 millimeter ⁴ (mm ⁴) = 10 ⁻¹² * m ⁴	foot ⁴ (ft ⁴) 20736 inches ⁴ (in ⁴) = 1 ft ⁴	8.6x10 ⁻³ m ⁴ = 1ft ⁴
Mass Moment of Inertia	kilogram meter ² (kg * m ²)	slug foot ² (slug * ft ²)	1 kg*m ² =1.356 lb*ft ²
Work and Energy	joule (J) = 1 (N * m)	foot-pound (ft lb)	1.356 J = 1 ft lb
Power	watt (W) = 1 (J/s) = 1 $\left(\frac{kg*m}{s^2}\right)$ kilowatt (kW) = 1000 W	foot pound per second $\left(\frac{ft*lb}{s}\right)$ horsepower (hp) = 550 $\left(\frac{ft*lb}{s}\right)$	1.356 W = 1 $\frac{ft lb}{s}$ 1 kW = 1.341 hp
Pressure or Stress	pascal (Pa) = 1 N/m ² kilopascal (kPa) = 1000 Pa megapascal (MPa) = 10 ⁶ Pa gigapascal (MPa) = 10 ⁹ Pa	pounds per square inch (psi) = 1 (lb/in ²) kilo-pounds per square inch (ksi) = 1000 psi	6894.76 Pa = 1 psi