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| --- | --- | --- | --- |
| **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 (m2) | square foot (ft2) | 1 m2 = 10.764 ft2 |
| Volume | cubic meter (m3)  Liter (L) = .001 m3 | cubic foot (ft3)  Gallon (gal) = .1337 ft3 | 1 m3 = 31.315 ft3  3.785 L = 1 gal |
| Mass | kilogram (kg)  metric ton / tonne (t) = 1000 kg | slug = | 14.59 kg = 1 slug |
| Force | newton (N) =  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  3.6 kilometers per hour (kph) = 1 | feet per second  mile per hour (mph) = 1.467 |  |
| Acceleration  (Linear) | meter per second squared | foot per second squared |  |
| Velocity  (Angular) | radian per second  1 rotation per minute (rpm)  = | radian per second  1 rotation per minute (rpm)  = | -- |
| Acceleration  (Angular) | radian per second squared | radian per second squared | -- |
| 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 | meter4  1 milimeter4 (mm4) = 10-12 | foot4 (ft4)  20736 inches4 (in4) = ft4 | 8.6x10-3 m4 = 1ft4 |
| Mass Moment of Inertia | kilogram meter2 |  | 1 kg\*m2 =1.356 lb\*ft2 |
| Work and Energy | joule (J) = 1 | foot-pound (ft lb) | 1.356 J = 1 ft lb |
| Power | watt (W) = 1 = 1  kilowatt (kW) = 1000 W | foot pound per second  horsepower (hp) = 550 | 1 kW = 1.341 hp |
| Pressure or Stress | pascal (Pa) = 1  kilopascal (kPa) = 1000 Pa  megapascal (MPa) = 106 Pa  gigapascal (MPa) = 109 Pa | pounds per square inch (psi)  kilo-pounds per square inch (ksi) = 1000 psi |  |