

CONVERSION DATA - DESCRIPTION AND OPERATION

1. General

- A. This section contains information for converting the more commonly used measuring units found in this manual from the common United States system to the International System of Units (metric system).
- B. Other conversion factors may be found in manuals such as **Standard for Use of the International System of Units (SI): The Modern Metric System**, prepared by ASTM, 100 Bar Harbor Drive, West Conshohocken, PA 19428-2959 USA.

2. Conversion Factors

A. Distance and Length

- (1) Multiply inches by 25.4 to obtain mm (millimeters).
- (2) Multiply feet by 0.3048 to obtain m (meters).

B. Mass

- (1) Multiply ounces by 28.35 to obtain g (grams).
- (2) Multiply pounds by 0.04536 to obtain kg (kilograms).
- (3) Divide kilograms by 2.205 to obtain pounds.

C. Temperature

(1) Converting from Fahrenheit to Celsius:

- (a) Subtract 32 degrees from temperature and divide the difference by 1.8 to obtain degrees Celsius.
- (b) Formula: $T(^{\circ}\text{C}) = (T(^{\circ}\text{F}) - 32) / 1.8$

(2) Converting from Celsius to Fahrenheit:

- (a) Multiply the sum by 1.8 degrees and add 32 degrees to temperature to obtain Fahrenheit.
- (b) Formula: $T(^{\circ}\text{F}) = T(^{\circ}\text{C}) \times 1.8 + 32$

D. Torque

- (1) Multiply inch-pounds by 0.11298 to obtain Newton-meters.
- (2) Multiply foot pounds by 1.3588 to obtain Newton-meters.

E. Force

- (1) Multiply pounds of force by 4.4482 to obtain N (Newtons).

F. Pressure

- (1) Multiply pressure (psi) by 6.8948 to obtain kPa (kiloPascals).

G. Mass flow

- (1) Multiply pounds-per-hour by 1.26×10^{-4} to obtain kg/sec.