Temperature Conversion

To convert between Fahrenheit (°F) and degrees Celsius (°C):

$$T_c = \frac{5}{9} \times \left(T_f - 32 \right)$$

$$T_f = \left(\frac{9}{5} \right) \times T_C + 32$$

Where: T_c is temperature in Celsius
T_f is temperature in Fahrenheit

To convert between degrees Fahrenheit (°F) and Kelvin (K):

$$T_f = \frac{9}{5} \times (T_k - 273.15) + 32$$

$$T_K = \left(\frac{5}{9} \times \left(T_f - 32 \right) \right) + 273.15$$

Where: T_f is temperature in Fahrenheit
T_K is temperature in Kelvin

To convert between degrees Fahrenheit (°F) and Rankine (R):

$$T_f = T_R - 459.69$$

$$T_R = T_f + 459.69$$

Where: T_f is temperature in Fahrenheit
T_R is temperature Rankine

To convert between degrees Celsius (°C) and Kelvin (K):

$$T_c = T_K - 273.15$$

$$T_K = T_c + 273.15$$

Where: T_c is temperature in Celsius
T_K is temperature in Kelvin

To convert between degrees (°C) and Rankine (R):

$$T_C = \frac{5}{9} \times ((T_R - 459.69) - 32)$$

$$T_R = \left(\frac{9}{5} \times T_c + 32\right) + 459.69$$

Where: T_c is temperature in Celsius
T_R is temperature in Rankine

To convert between degrees Kelvin (K) and Rankine (R):

$$T_K = \left(\frac{5}{9} \times ((T_R - 459.69) - 32)\right) + 273.15$$

$$T_R = \left(\frac{9}{5} \times (T_K - 273.15) + 32\right) + 459.69$$

Where: T_K is temperature in Kelvin
T_R is temperature in Rankine