

Temperature Scales and Conversions

There are four thermodynamic temperature scales: **Celsius, Fahrenheit, Kelvin, Rankine**. The Kelvin and Rankine temperature scales are absolute scales.

The relations and conversions between the scales are:

Rankine and Celsius

$$T(K) = t(^{\circ}C) + 273.15$$

Rankine and Fahrenheit

$$T(R) = t(^{\circ}F) + 459.67$$

Conversion from Kelvin to Rankine

$$T(R) = \frac{9}{5} T(K)$$

Boiling Point of Water

$$373.15 K = 100.00^{\circ}C = 671.67 R = 212.00^{\circ}F$$

Ice Point

$$273.15 K = 0.00^{\circ}C = 491.67 R = 32.00^{\circ}F$$