

Thermal Engineering with Maple

Application Collection

Psychrometric Modeling

Swamp Cooler

Adiabatic Mixing of Humid Air

Human Comfort Zone

Dew Point and Wet-Bulb Temperature of Air

Interactive Psychrometric Chart

Thermodynamic Cycles

Optimize a Rankine Cycle

Ideal Brayton Cycle

Organic Rankine Cycle

Turbine Analysis

Efficiency of a Rankine Cycle

Isothermal Compression of Methane

Adiabatic Compression of Methane

Refrigeration

Rate of Refrigerant Boiling

Flow through an Expansion Valve

Food Refrigerator

COP of a Refrigeration Cycle

Refrigeration Cycle Analysis 1

Refrigeration Cycle Analysis 2

Miscellaneous

Water Fountain

Particle Falling through Air

Water in Piston

Saturation Temperature of Fluids

Measurement Error in a Venturi Flowmeter

Heat Transfer

Energy Needed to Vaporize Ethanol

Heat Transfer Coefficient across Flat Plate

Dittus-Boelter Correlation for Heat Transfer Coefficient

Combustion and Rocketry

Flame Temperature and Composition of Carbon Monoxide Combustion

Maximum Deflagration Pressure for the Combustion of Hydrogen in Air at Constant Volume

Rich and Lean Octane Combustion

Monomethylhydrazine-Dinitrogen Tetroxide Rocket

Vapor-Liquid Equilibria

Water-Ethanol

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