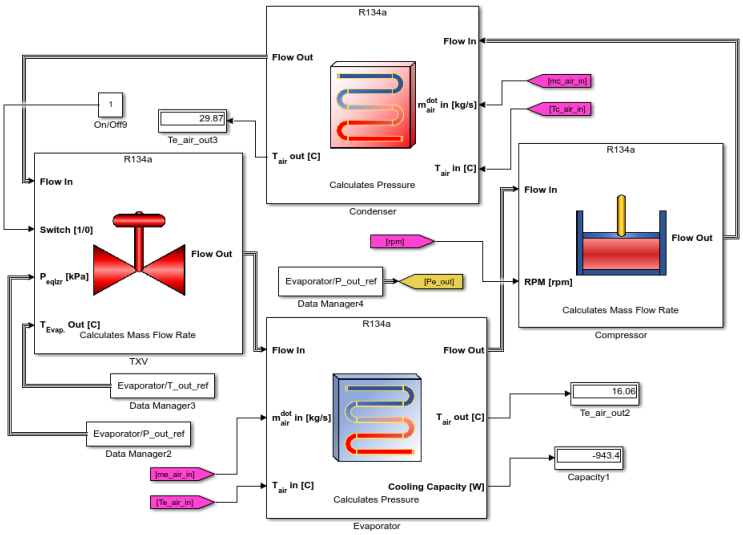
THERMOSYS™

Introducing Thermosys™ 5.1 …

The THERMOSYS™ 5 Toolbox for MATLAB/Simulink® is a suite of simulation tools for analyzing the behavior of air-conditioning and refrigeration systems (both steady-state and time-dependent). It was developed at the University of Illinois at Urbana-Champaign through sponsorship by the Air-Conditioning and Refrigeration Center (ACRC) and is currently distributed by CU Aerospace.



Vapor Cycle System Model in Thermosys™

Key features include:

- Nonlinear models suitable for simulation and control design of multiphase fluid dynamics associated with subcritical air-conditioning and refrigeration systems
- Capability to simulate transient dynamics, including startup and shutdown dynamics
- Component models library with user-defined parameters for building customized systems models
- Approachable and adaptable, with drag 'n' drop functionality and compatibility with MATLAB/Simulink® tools
- Built-in fluid properties for air, ammonia (R717), carbon dioxide (R744), glycol/water mixtures, R21, R22, R134a, R245fa, R404A, R407C, R410A, R507A, R1234YF, and water
- Brazed plate heat exchanger models for condensers and evaporators
- Humid air exchanger modeling for condensers and evaporators
- Improved usability, with application of a bus format to handle data connections between components
- Newly-developed electro-thermal models for studying motors, generators, and batteries

Pricing options:

Thermosys™ is offered as either a perpetual single-seat license, or an annual multi-machine license package for commercial R&D and academic groups. Special pricing options are offered for educational users, government institutions, and ACRC members.

SIMULINK Enabled

MathWorks Partner

Customized support options are available:

- Extended maintenance of perpetual license for upgrades and user support
- Enhanced customer support (hourly or packages)
- Project support for system design or custom component model development

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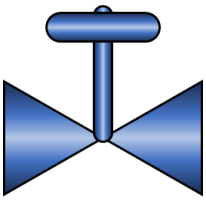
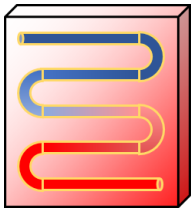
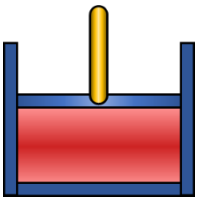


Valves: Thermosys™ includes models for automatic expansion valves, thermostatic expansion valves and electronically controlled throttling valves, with user-defined parameters and performance.

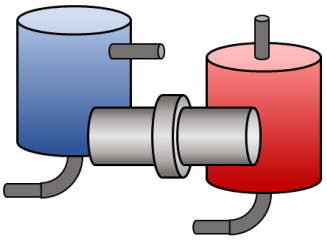
Heat Exchangers: Various options are available for modeling heat exchangers, evaporators, and condensers, including tube-and-fin types and brazed-plate types.

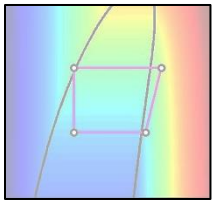




Pump Models: User-defined models for volumetric and adiabatic efficiency are included, as well as thermal dynamics modeling of the compressor housing.

Pipes/Tanks/Junctions/Splits: Flow resistance blocks enable users to account for pressure losses between components; adaptable models for tanks, junctions, and splits are also included.





Advanced Features: The latest release includes updated features such as live P-h plotter blocks, humidity models for heat exchangers, gas coolers with secondary fluids, and electrical component thermal models.

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Go to www.thermosys.us for details and pricing.