

THERMAL SYSTEMS LIBRARY

Optimize Design of large and complex thermal systems



DESIGN THERMAL SYSTEMS AS A BUSINESS EXPERIENCE

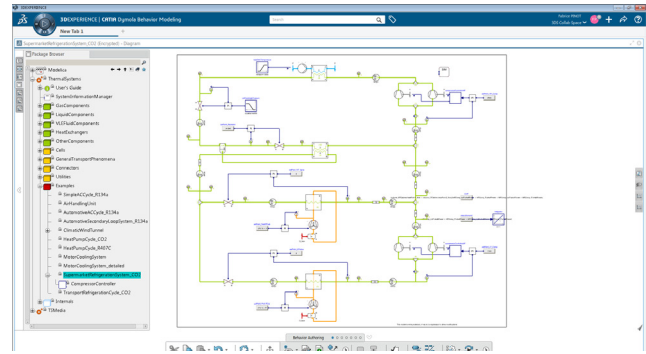
Thermal System Library is a library of extremely versatile models. On the one hand, individual components can be modeled and calculated in detail. On the other hand, the models are ideally suited for the design and optimization of large and complex systems. In this respect, Thermal Systems Library is characterized not only by its precision, but also by extreme speed. The library has incorporated many years of experience with projects and test benches in the development of the models.

APPLICATION

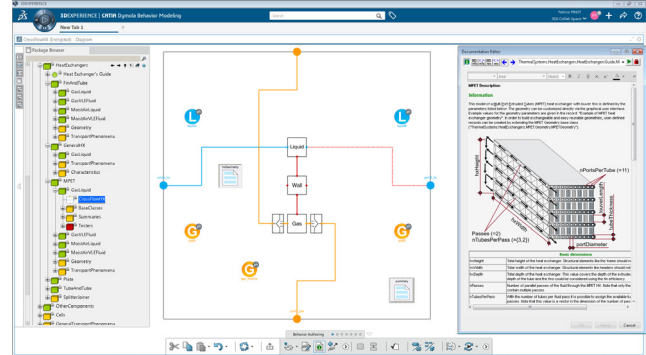
The Thermal Systems Library can be used, for the modeling of the following systems:

- Refrigeration cycles, including refrigeration mixtures
- Heat pump systems
- Systems with ejectors
- Hydraulic networks
- Clausius-Rankine cycles
- Heating, ventilation and air-conditioning systems
- Ab- and adsorption systems
- Fuel cell systems

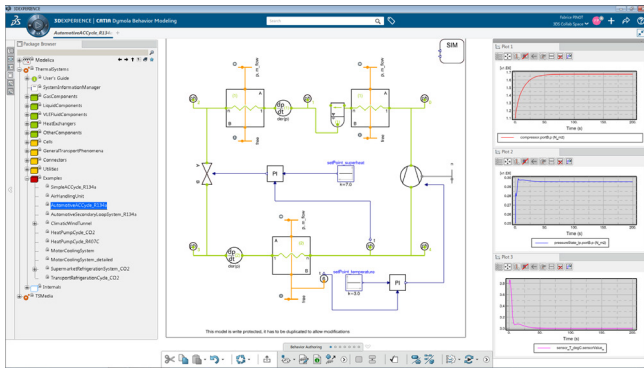
The graphical user interface in addition to the source code view, enables the composition and parameterization of very different thermal systems. In Modelica code, model details can be viewed and components can be added. The object-oriented structure of the program and the principle of inheritance also allow the user to add new components.



Model of a Supermarket Refrigeration System with CO2 gas



Detail model for Multi-Port Extruded Tubes (MPET) heat exchanger



Simulation of an automotive air conditioning Cycle R134A

BENEFITS

- Save money by reducing real measurements: the library provides accurate and industry-proven models already validated by laboratory measurements
- Rapidly optimize the best thermal system for your needs, thanks to the scalable, robust and performant modeling
- Save time in thermal system performance assessment with a comprehensive set of ready-to-use components and examples

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