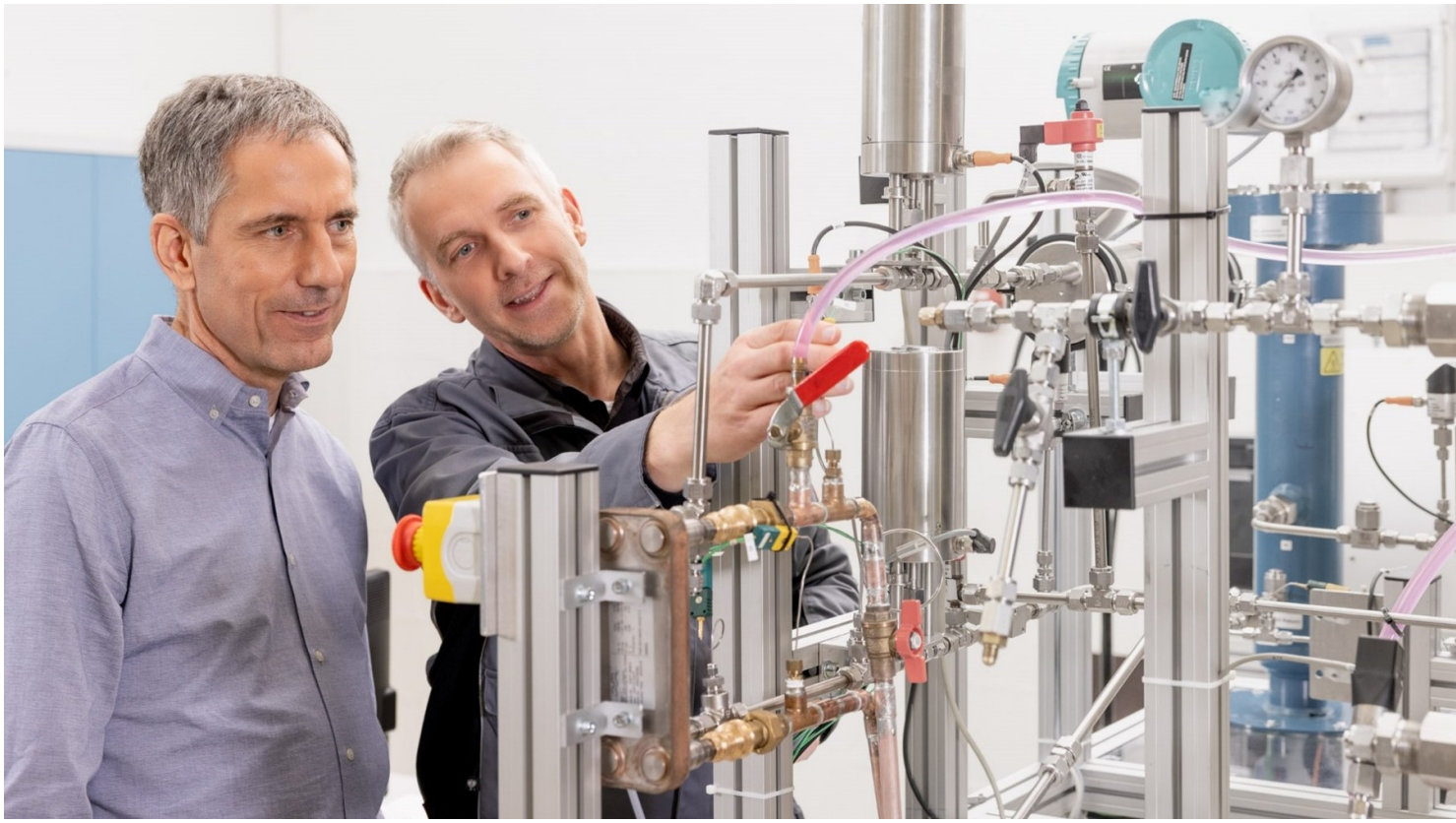
TIL Suite



Modeling and Simulation of Thermal Systems

The TIL Suite is a powerful and flexible software package for steady-state and transient simulations of thermodynamic components and systems. It combines the **TIL model library** and the **TILMedia substance data library**, empowering you to design and optimize a wide range of thermal systems with high accuracy and simulation speed.

Whether you're simulating individual components or complex, multi-layered systems, the TIL Suite provides **flexibility, transparency, and adaptability** to create your own systems. Many years of experience from a wide variety of service and research projects in simulation, testing, and software development is incorporated into the TIL Suite. In addition, many subject-specific components and systems are available in add-on libraries.

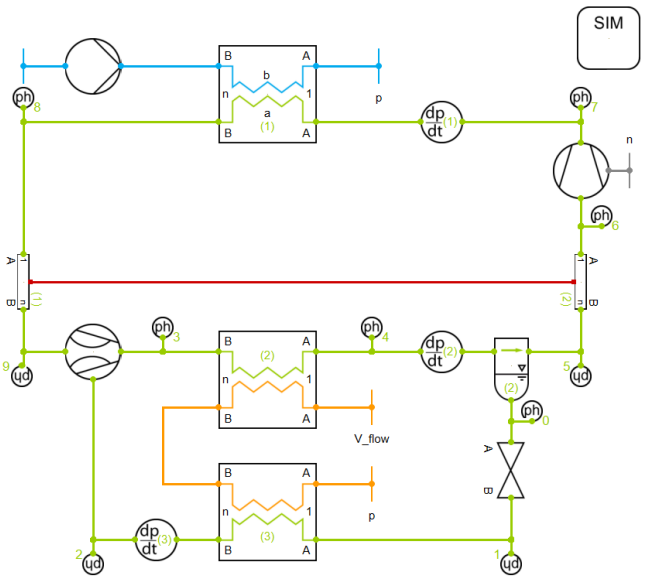
TLK-Thermo GmbH
Engineering Services and Software for Thermal Systems

Contact Person
Ingo Frohböse
i.frohboese@tlk-thermo.com
+49 5361 390 76 - 234

TIL Suite

Your Key Benefits

- ✓ **Fast and accurate simulations**
- ✓ **Flexible and user-friendly model architecture**
- ✓ **Customizable and extensible components**
- ✓ **Proven in industrial and academic environments**



CO_2 Heat pump cycle with ejector

Application

The TIL Suite allows modeling the following systems, among others:

- **Refrigeration cycles** including refrigerant mixtures
- **Heat pump systems** including frosting and defrosting
- **Heating, ventilation, and air conditioning** (HVAC) systems
- **Hydraulic Networks**
- **Clausius-Rankine Cycles**
- **Fuel cell systems and electrolysis** (with add-ons)
- **Absorption** and adsorption systems (with add-ons)
- **Carbon capture systems** (direct air and point source capture with add-ons)

Model and Substance Data Library

- Versatile and numerically optimized thermal component and system models
- Fast and robust simulations with various media
- Steady-state and transient simulations
- Ready-to-use examples

Flexibility and Adaptability

- View details in the Modelica code
- Object-oriented concepts of inheritance and polymorphism
- Clear visual language of model icons, documentation and well-structured GUIs

Supplementary Model Libraries

- More extensive or detailed simulation of subject-specific components and systems
- TIL Add-On Mobile Air Conditioning (AC)
- TIL Add-On Hydrogen Energy Systems
- TIL Add-On Thermal Storages

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