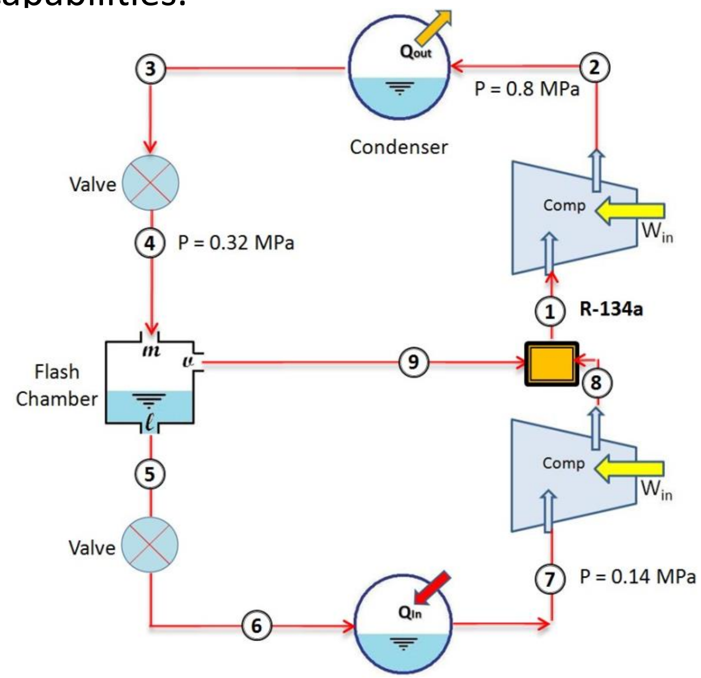
TESuite® Variable Fidelity Analysis

TESuite software package is designed to provide the system engineers the most advanced modeling and simulation tool for efficient thermal analysis and assessment of thermal management system capabilities.

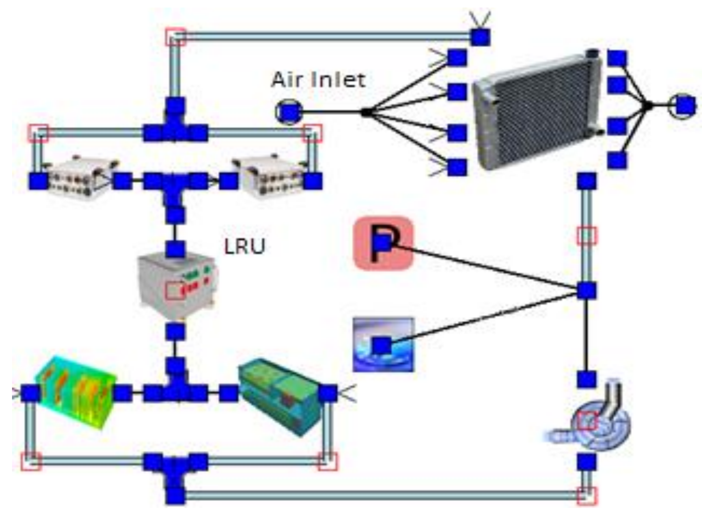


Efficient and Accurate

- The ultimate environment for the design and analysis of integrated thermal management strategies at the platform, subsystem, and component levels.
- Rapid analysis with desired degree of detail.
- The first package to truly bring together the simplicity of drag and drop modeling and the power of detailed 3D CFD and Heat Transfer, with a single click of the mouse.

Differentiating Capabilities:

- NIST Fluids Library as well as User-Defined Fluids
- Drag-and-Drop User Interface
- Customizable Parts
- Full Thermodynamics Analysis Capability
- Steady-state and Transient Analysis



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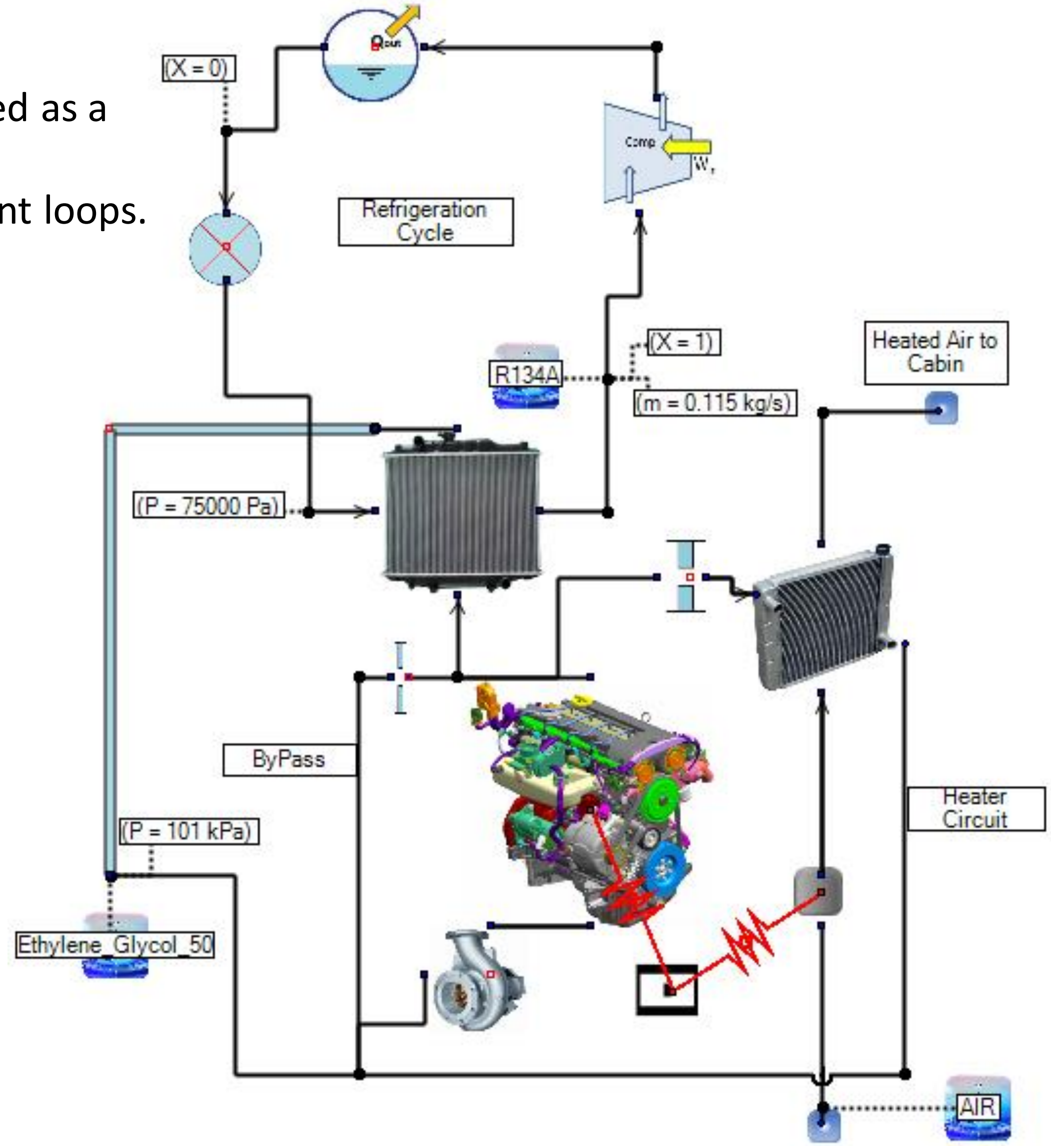
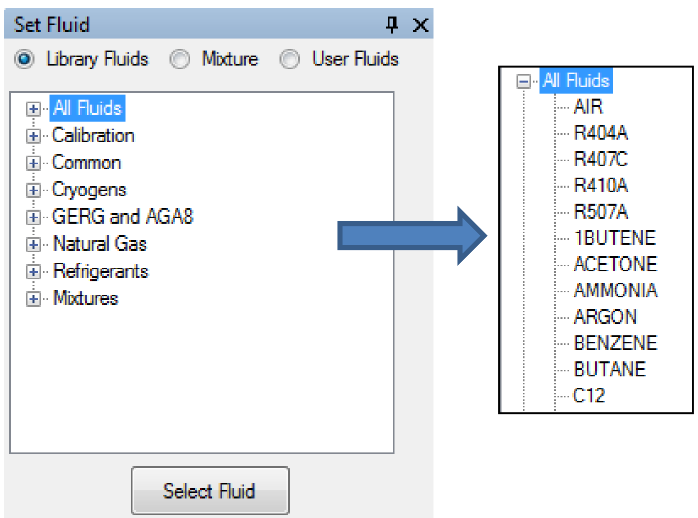
Modeling Approach

- A complex engineering system is represented as a network of parts and flow paths.
- Direct interaction of air, liquid and refrigerant loops.
  - Select parts
  - Connect parts to define flow paths
  - Choose loop fluid
  - Set BC's, load cases and run



Fluid definition



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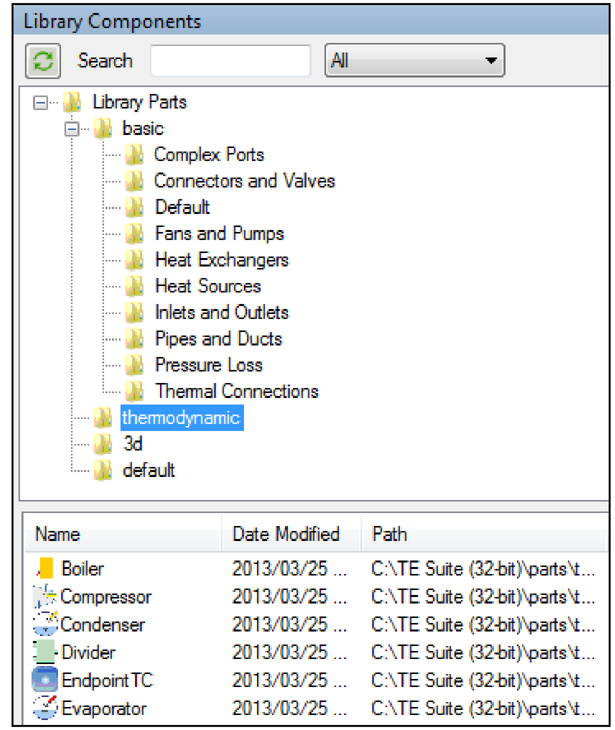
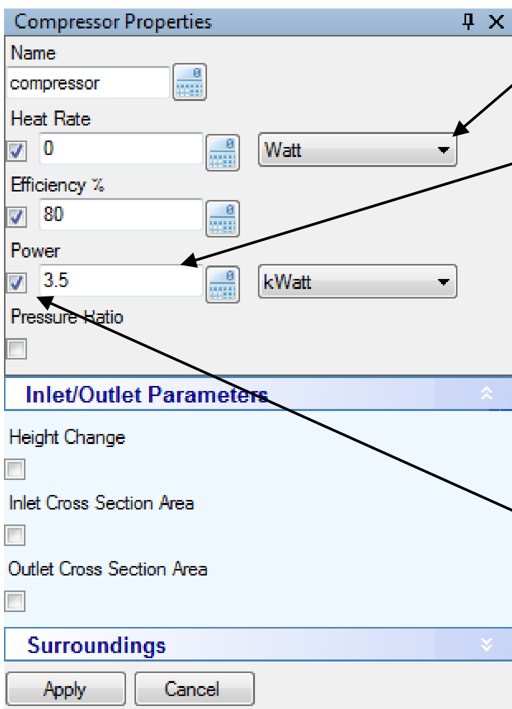
Parts Definition

Parts are completely customizable and are selected from the “Parts Library”.

- Simple Parts
- Complex Parts - Defined using a collection of simple parts
- 3D Parts – Analyzed using CFD/CHT



Parts Properties Menu



Units

User Variables

Checked variables are known input (constant or variable)

Unchecked variables are: Calculated (primary variables) or
Effect neglected (secondary variables)

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Complex Mathematical Expressions

Parts behavior can be controlled using complex mathematical expressions using functions and tables.

- Tables - Define ranges for the independent variable
- Functions - prescribe the behavior in each range

“Math-Look” window for illustration of algebraic expressions

Independent Variable and its ranges