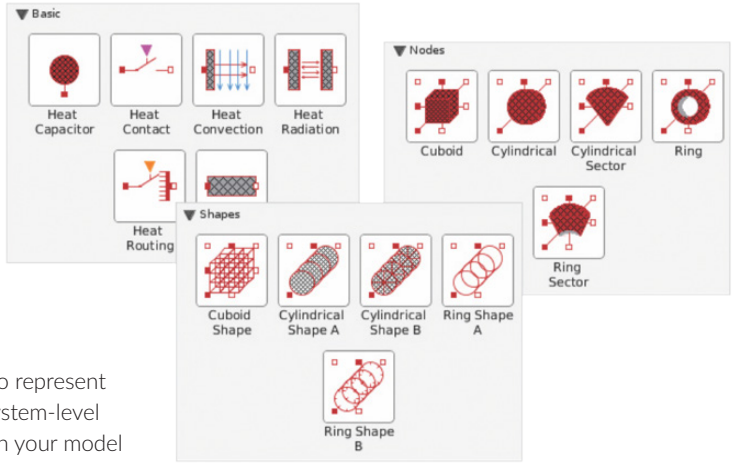
MapleSim Heat Transfer Library

The MapleSim Heat Transfer Library gives you a comprehensive view into the heat transfer effects present in your model, enabling you to refine your design to improve performance and avoid overheating. This component library is useful for any situation where heat generation is a concern, especially when there are moving boundaries between heat generating components, such as motors, batteries, printers, and manufacturing equipment.



The highly complex geometries embodied in your CAD model often provide so much information that it becomes impossible to simulate heat transfer during system-level explorations. The MapleSim Heat Transfer Library from CYBERNET allows you to represent your design using simpler, but sufficient, geometries inside a full system-level model, so it becomes feasible to explore the heat transfer effects in your model and improve your design.

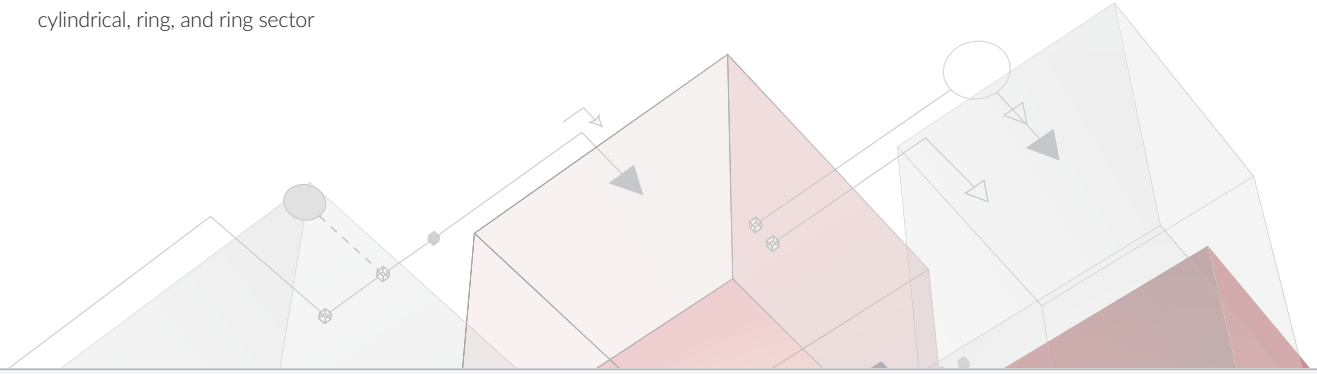
Why use the Heat Transfer Library:

- Gain a comprehensive understanding of the heat transfer effects in your model.
- Easily test out new configurations much more quickly than with other modeling tools.
- Generate the discretized model using common, built-in geometries and then automatically check the temperature distribution in system-level simulations.
- Customize the materials and geometry of your design when dealing with more complicated geometries.

Heat Transfer Components

The MapleSim Heat Transfer Library from CYBERNET includes a variety of components to cover common situations as well as custom geometries and materials, including:

- **Basic:** Model basic heat and thermal components, such as heat capacitors, thermal conductors, heat convection, and heat radiation; and model moving boundaries using heat contact and heat routing
- **Boundaries:** Define heat flow and temperature
- **Multiple:** Combine multiple basic thermal components
- **Nodes:** Model generic nodes, consisting of heat capacitors and thermal conductors, in various 2-D and 3-D shapes, such as cuboid, cylindrical, ring, and ring sector
- **Properties:** Select or define the thermal properties of standard materials
- **Routing:** Manage the routing between thermal connections
- **Sensors:** Monitor heat flow and temperature
- **Shapes:** Model generic ideal thermal conductor solids in 2-D and 3-D, such as cuboid, cylindrical, or ring shapes, using multiple nodes



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