

MapleSim™ Ropes and Pulleys Library

The MapleSim Ropes and Pulleys Library allows you to easily create winch and pulley systems as part of your machine development. Using this add-on library to MapleSim, you can model the dynamics of rope and pulley systems, and view enhanced 3-D visualizations of your system's performance. Use the Ropes and Pulleys Library to add fidelity to your machine models with ropes, chains, cables, pulleys, and more.

The MapleSim Ropes and Pulleys Library contains a variety of components that can be customized to suit your specific model.

Features include:

Rope: Axial rigidity, linear density, linear damping, pre-tension, automatic length calculation, visualizations for material tensions, and more

Cable: Axial rigidity, linear density, linear spatial damping, discretized 3-D mass distribution, wind forces, and more

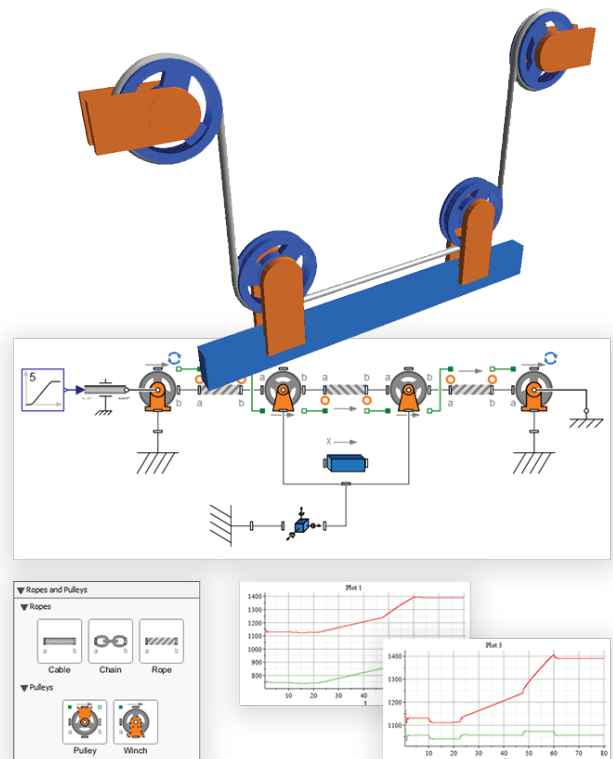
Chain: Axial rigidity, linear density, bending rigidity, discretized 3-D mass distribution, and more

Pulley: Mass and inertia, slippage, motorization, and 3-D visualization

Winch: Motorization, 3-D visualization and tension variation visualization

Highlights

- **Create both 2-D and 3-D pulley systems** using components such as fixed and floating pulleys, winches, ropes, chains, and cables.
- **Incorporate realistic behaviors** of ropes and pulley systems, including pulley slippage, chain masses, cable bending, and wind loading.
- **Explore systems with 3-D visualizations** that show material flow and system tension using force arrows and color mapping.



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and Pulleys Library

Are you facing challenges with ropes and pulleys in your models? **We can help!**
Contact the **Maplesoft Engineering Solutions team**



Visit www.maplesim.com for product information, application stories, demo videos, a demo gallery, and more.

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