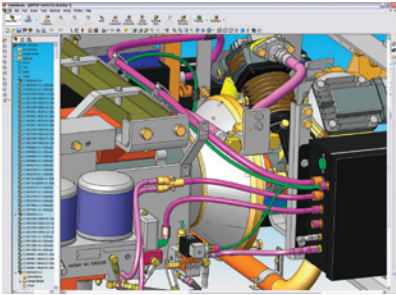


SolidWorks Routing Product Overview

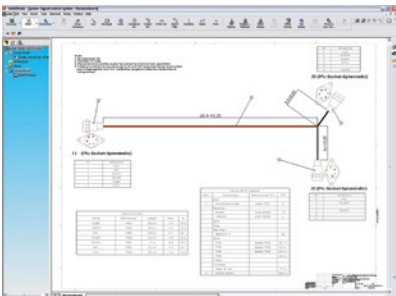
ROUTED SYSTEMS DESIGN SOFTWARE AND FITTING LIBRARY

SolidWorks® Routing software saves you time by automating complex piping, tubing, electrical conduit, and cabling design tasks. The solution also includes built-in capabilities that streamline the generation of cable and harness manufacturing documentation.



Speed the design of products that include tube, electrical, and pipe routes.

Image courtesy of WABCO Transit Division, WABTEC Corporation



Flatten electrical cable and harness routes, detail and generate manufacturing documentation quickly and easily.

SolidWorks Routing software simplifies the design of all types of piping, tubing, and electrical cabling systems. The solution can save significant time in the design of machinery and equipment that contains pneumatic, hydraulic, or electrical subsystems. SolidWorks Routing includes a library of ready-made fittings that further reduces design time, as well as a component selection filter that eases compliance with standards.

In addition, for designers that need to detail electrical cable and harness routes for manufacturing, the SolidWorks Routing solution offers harness documentation capabilities that further enhance productivity in the design of electrical subsystems.

Design routed systems more quickly. SolidWorks Routing enables you to quickly and easily design pipe, tube, and electrical routes in your product designs. Key time-saving tools include:

- Intuitive creation and modification of routed systems, including drag-and-drop placement, automatic sizing of components (parts or assemblies), copying and mirroring of routes, and autoinsertion of piping bends and elbows.
- Fast, easy 3D parametric modeling of tubing, piping, and electrical cable and harness systems within complex product or equipment designs.
- Autorouting of flexible tube, hose, and electrical cable and harness segments, along with rigid pipe, tube, and electrical conduit, directly or through mounting clips and hangers.
- Timesaving library of ready-made tubing, piping, and electrical cabling and harnessing components.
- Automatic creation of engineering drawings and bills of materials with complete information, including cut lengths for pipe and tube routes.
- Specialized capabilities including creation of bend data files for CNC tube- and pipe-bending machines and efficient creation of penetration cuts involving pipes and tubes.
- Easy reuse of data created with electrical CAD software and other tools when creating new cable and harness route designs, importing data conveniently in Microsoft® Excel format.

Generate cable and harness manufacturing documentation easily. SolidWorks Routing provides designers of electrical and electronic systems with additional timesaving tools for generating cable and harness manufacturing documentation. Capabilities include:

- Flattening of 3D electrical cable and harness routes in order to create drawings and related documentation easily and efficiently.
- Creation of automatic reports including wire list, wire summary, harness bills of materials, and harness connection information.
- Ability to add electrical component data to flattened cable and harness designs in order to document the design more fully.

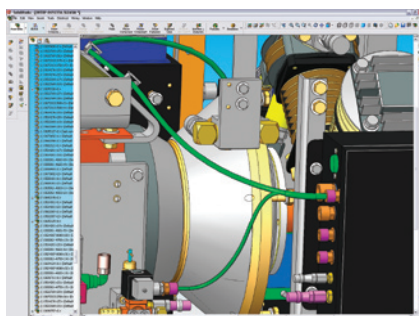
Local language support

- Chinese
- Czech
- English
- French
- German
- Italian
- Japanese
- Korean
- Polish
- Portuguese
- Russian
- Spanish

- Automatic addition of multiple connector views into harness drawings in order to communicate design and manufacturing intent more effectively.
- Addition of manufacturing documentation details such as costs, electrical test specifications, and instructions for connector assembly, including wiring, terminals, coverings, and seals.

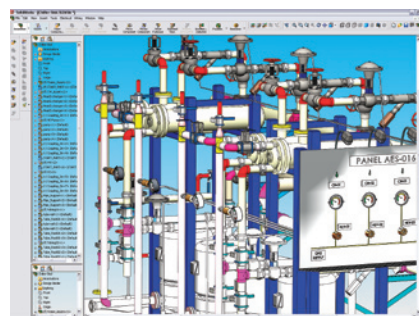
Improve design quality with intuitive assembly creation and editing. Add tube, pipe, and electrical routes early in the design process. Creating and modifying routes with SolidWorks Routing is simple. Edit the route segments easily using dynamic drag-and-drop functions. Insert a standard or custom component into a route by selecting and dragging it to the right location within the design. The placement of fittings is parametric and associative, so fittings and components automatically adjust to changes in the design. You can also generate routes in the context of the assembly – relationships between the route and other assembly components can be assigned, helping you reduce errors and meet production requirements more efficiently.

Save time with a library of common fittings. SolidWorks Routing includes a library of ready-made piping, tubing, and electrical fittings. Contents include pipes, elbows, flanges, reducers, tube fittings, electrical connectors, receptacles, plugs, and other standard parts. Expanded through the powerful configuration and design table capabilities of SolidWorks 3D mechanical CAD software, the fittings library offers you thousands of ready-made parts to choose from. With the SolidWorks Routing fittings library, you can simply drag standard routed system parts into route assemblies rather than spending time creating them from scratch. A component selection filter automatically enables you to design routes to specific standards. You can further expand the library by modifying the existing parts and creating other reusable fittings to meet all requirements.



Simplify the design of cable and harness routes by merging electrical and mechanical design data.

Image courtesy of WABCO Transit Division, WABTEC Corporation



Add piping, tubing, and electrical conduit to your designs more easily and ensure accuracy of bills of materials.

Image courtesy of Wes Mosier at Applied Engineering Services, Inc.

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