

DIGITAL INDUSTRIES SOFTWARE

Solid Edge Piping Design

Enabling the automatic generation of complete pipe systems

Benefits

- Automatically generates complete pipe systems
- Automatically generates construction of a bill-of-materials
- Facilitates simple usage and fast user acceptance
- Provides productivity enhancements with sketch functionality

Features

- Comprehensive 3D standard parts library
- Report generator
- System-generated design checks
- Automated 3D piping sketch functionality

Summary

Accurate 3D pipeline planning is required for successful modular plant design. The Siemens Solid Edge® software module for piping design automates the construction and alteration of 3D pipe systems in 3D assembly groups, streamlining the workflow process.

Pipe specifications serve as the basis for the highly automated 3D piping design functionality of Solid Edge Piping Design. The software facilitates the checks on necessary parameters, such as maximum and minimum pipe lengths for connections, and uses this information to automate the creation of the pipe assembly. This facilitates the maintenance and management of pipe specifications and prevents errors or the use of incompatible equipment. Specification tables, with project-specific characteristics and parameters, can be used to pass internal software plausibility checks. Once 3D isometric diagrams are created and approved, they can be used for manufacturing.

Automation increases productivity

Solid Edge Piping Design offers many features and capabilities that streamline the workflow process. During the design process, Solid Edge Piping Design makes it easy to create, alter, extend and reproduce all necessary components for 3D pipe system construction. Users have the option of creating pipeline

paths by drawing system routes with 3D lines or automatically generating a complete specifications-enabled piping system.

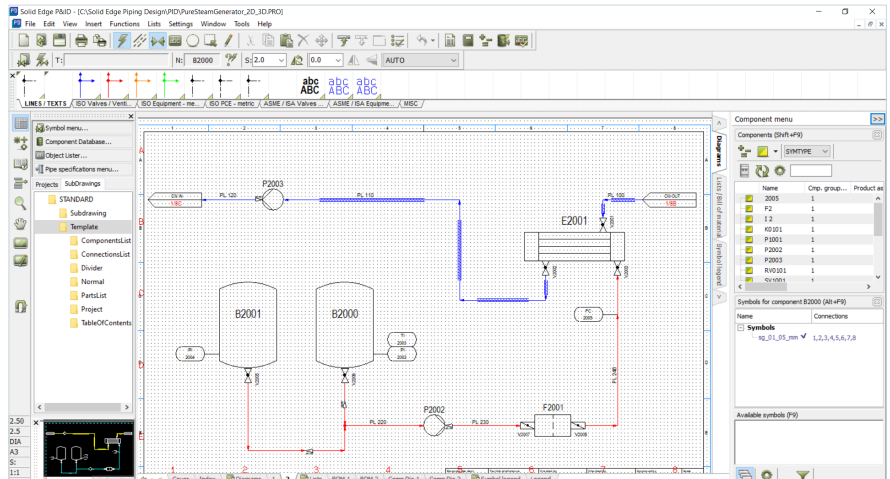
The software provides process reliability by automatically placing fittings, such as elbows, tees, collars/weldolets, flanges, gaskets and various pipes, on the pipeline route. The software also enables the automatic placement of elbows, tees, flanges and washers for non-round pipes, such as cable ducts, routes, air ventilation ducts, etc., which can be quickly and efficiently built in the 3D assembly. After a piping system has been created, Solid Edge Piping Design lets the user alter system routes and/or the composition of pipelines and seamlessly reduce or extend them.

Greatly improving productivity up to 20 percent, enhanced 3D piping sketch functionality allows even inexperienced users to easily create three-dimensional sketches. The sketch functionality in Solid Edge Piping Design guides the user on how to draw lines, providing automated line drawing. Commands such as create route, auto route, edit route, split line, etc., also help to automate the sketch, and support concentric components.

Designs can begin in basic engineering mode to reduce generation time in the early stages. Basic engineering mode allows the user to rough out a pipeline to get a preliminary idea of its general outline. All detailed calculations, which are omitted in basic engineering mode, may be added back to the design at a later stage.

A complete solution

Although Solid Edge Piping Design offers automated capabilities in a standalone solution, it can be integrated with Solid Edge P&ID Design to provide a complete modular plant solution. After importing Solid Edge P&ID into the Solid Edge Piping Design application,



Solid Edge Piping Design integrates well with Solid Edge P&ID Design, allowing cross-highlighting between modules.

features that are defined in piping and instrumentation diagrams (P&ID) can easily be placed in the 3D model.

Specific P&ID-to-3D functionality provides the user with an online or integrated connection between the P&ID diagram and a 3D assembly, even in 3D sketch mode.

Extending value

Solid Edge is a portfolio of affordable, easy-to-deploy, maintain and use software tools that advance all aspects of the product development process – mechanical and electrical design, simulation, manufacturing, technical documentation, data management and cloud-based collaboration.

Minimum system configuration

- Windows 10 Enterprise or Professional (64-bit only) version 1709 or later
- 8 GB RAM
- 65K colors
- Screen resolution: 1920 x 1080
- 6.5 GB of disk space required for installation

For more information, please visit: <https://solvedge.siemens.com/en/solutions/products/3d-design/modular-plant-design/>

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