

SIEMENS DIGITAL INDUSTRIES SOFTWARE

Simcenter Flomaster for Solid Edge

Using simulation to more rapidly design better piping systems

Benefits

- Streamlines workflow to quickly compute and visualize flow velocity, temperature and pressure drop in piping systems in a 1D environment
- Provides significant time savings when building a simulation model
- Automates generation of system-level models from 3D geometry
- Generates more accurate analysis of overall system behavior
- Does not require simulation expertise

Summary

Piping systems need to be designed to meet flow velocity, temperature and pressure drop performance requirements. However, many simulation products are too complex for engineers who just need to quickly verify their designs. Simcenter™ Flomaster™ for Solid Edge® software, based on a leading 1D computational fluid dynamics (CFD) simulation tool for fluids engineering, allows users to easily model and analyze the fluid and thermal flows in their piping systems.

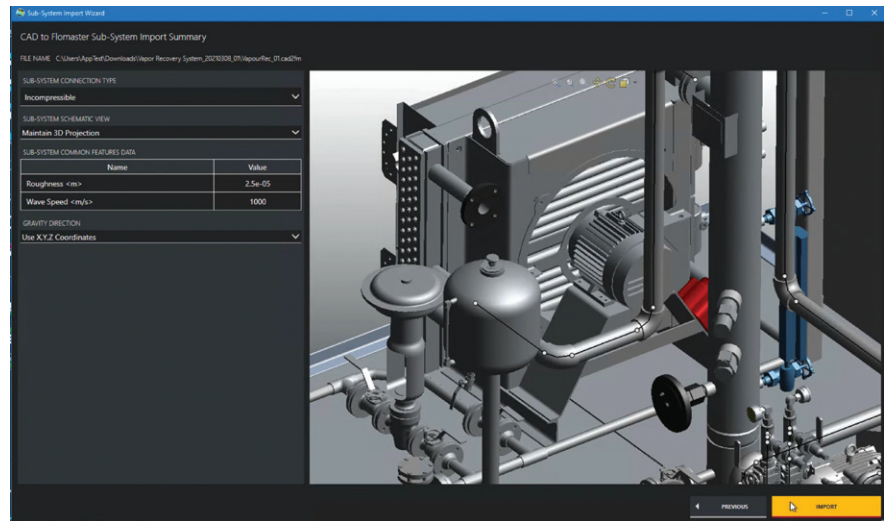
Simcenter Flomaster for Solid Edge is part of the Xcelerator™ portfolio, the comprehensive and integrated portfolio of software and services from Siemens Digital Industries Software. It allows the user to size and balance thermofluid piping systems early in the design stage and model different operating conditions to confirm maximum operating efficiency and safety. It provides a streamlined workflow to quickly compute and visualize requirements by automatically creating a simulation model from computer-aided design (CAD) 3D geometries. This can cut the time required to build a simulation model by up to 90 percent.

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Features

- Best-in-class thermofluid simulation for mainstream market
- Superior flow balancing capability
- Automated model creation and workflow based on 3D CAD geometry
- Easy for novice users yet provides advanced capabilities for experts



With built-in wizards, Simcenter Flomaster for Solid Edge is easy for novices to use, yet it is also appropriate for simulation experts with its advanced capabilities such as simulation of rapid dynamic events and pressure surge.

First in industry to automatically extract 3D geometries

Using Simcenter Flomaster for Solid Edge automates the generation of system-level models directly from 3D geometry. The user simply abstracts the 3D geometry in Solid Edge and the simulation model is automatically created and ready to run in Simcenter Flomaster for Solid Edge. Static and dynamic analyses can be performed on the model to evaluate the piping system's performance. Analyses include dynamic system behavior and sizing of components. With a dedicated optional module, CAD geometry in the form of a .pcf file can also be used to automatically create the simulation model.

Use of digital twin improves efficiency and safety

Solid Edge solutions enable you to create a digital twin early in the project that helps you understand the cost and safety implications of design decisions. This digital twin may be re-used throughout the engineering phase from early design sizing to detailed investigation of different operating conditions and scenarios.

Extending value

The Solid Edge portfolio is an integrated set of powerful, comprehensive and accessible tools that advance all aspects of the product development process. Solid Edge addresses today's complexity challenges with automated digital solutions that cultivate creativity and collaboration.

By harnessing the latest innovative technologies in mechanical and electrical design, simulation, manufacturing, publications, data management and cloud-based collaboration, Solid Edge dramatically shortens time-to-market, provides greater production flexibility and significantly reduces costs with its collaborative and scalable solutions.

Minimum system requirements

- Windows 10 Enterprise or Professional (64 bit only) version 1809 or later
- 16 gigabyte (GB) random access memory (RAM)
- 65K colors
- Screen resolution: 1920 x 1080
- 8.5 GB of disk space required for installation

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