

SIEMENS DIGITAL INDUSTRIES SOFTWARE

Simcenter SPH Flow Studio

Intuitive user interface for Simcenter SPH Flow solver

Benefits

- Streamlines the entire simulation flow
- Easily manages simulation data and projects
- Assists users in generating valid solver input data
- Monitors and manages local and remote computations
- Postprocesses simulation results for visual interpretation

Summary

Simcenter™ SPH Flow Studio software is a toolset that provides an advanced and intuitive graphical user interface (GUI) for using Simcenter SPH Flow. It covers the entire simulation flow: preprocessing, computation and postprocessing.

Through Simcenter SPH Flow Studio, Simcenter SPH Flow benefits from a unified GUI and dedicated tools, including data and project management, geometry editing and meshing, 3D rendering and others.

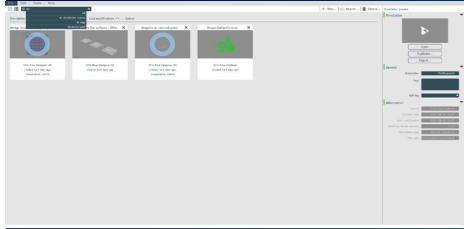
Preprocessing tools	Computation management and monitoring	Postprocessing tools
Simcenter SPH Flow simulation input/output data model and management		

Simcenter SPH Flow Studio assists the user in configuring and generating valid solver input data and mesh files. From those input files, simulations can easily be run on any machine, including workstations, laptops, High-Performance Computing (HPC) supercomputer clusters and cloud-based platforms.

Intuitive GUI

Simcenter SPH Flow Studio provides the following features:

Project and simulation data management

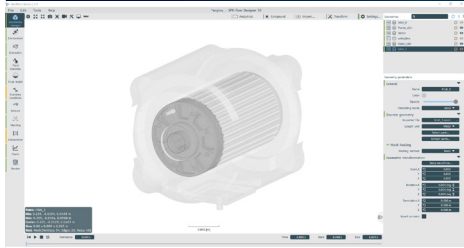


Intuitive and optimized GUI technology

Features:

- Create, delete and copy simulations
- Export and import simulation data
- Display simulation thumbnails
- Undo/redo button

Geometry visualization and editing

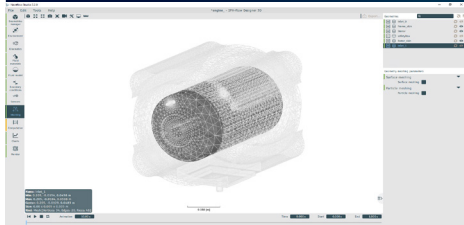


Geometry import and editing

Features:

- Create analytical 2D or 3D geometries
- Import CAD files in IGES, STEP, DXF/DWG, ACIS and Parasolid® formats
- Import mesh files in STL format
- Choose rendering mode and display faces normal direction
- Manipulate geometries (positioning, rescale, Boolean operations, partial volume filling, etc.)

Geometry meshing

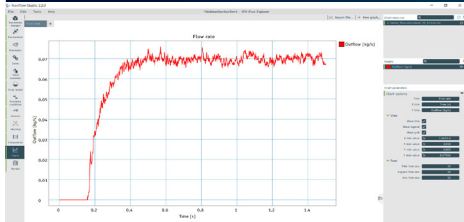


CAD meshing and mesh optimization

Features:

- Perform automatic CAD meshing
- Perform CAD cleaning and mesh optimization
- Perform particles generation (for SPH-based solvers)
- Apply local particle refinements

Computation monitoring and management

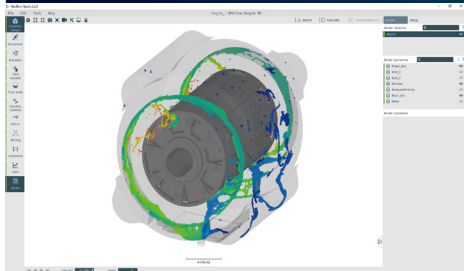


Support of local and remote computations

Features:

- Export simulation data and mesh files into solver-specific format
- Launch simulation on local computer
- Monitor computation progress in real-time
- Support cloud-based platforms

Simulation results visualization: XY, 2D and 3D plots



Postprocessing tools and 3D GUI

Features:

- Import solver computation result files
- Automatically retrieve computation results from local computer
- Store and analyze simulation results
- Plot XY graphs and 2D/3D field contours
- Export to standard postprocessing tools

Supported platforms

PC x86-64 architecture

Operating systems:

- Microsoft Windows 10
- Red Hat Enterprise Linux 7 and 8
- CentOS 7 and 8

Siemens Digital Industries Software
[siemens.com/software](https://www.siemens.com/software)

Americas
 1 800 498 5351

Europe
 00 800 70002222

Asia-Pacific
 001 800 03061910

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