SOLIDWORKS FLOW SIMULATION: HVAC MODULE

The complete HVAC simulation tool



The HVAC module helps designers predict and optimize airflow and temperature control in working and living environments.

HVAC Design Module

The HVAC Design Module for SolidWorks Flow Simulation evaluates air and gas movement in working and living environments. The module includes advanced radiation modeling, comfort parameters, and a large database of building materials. The toolset enables engineers to tackle the tough challenges of designing efficient cooling systems for people and large scale environments:

- **Airflow Optimization** Managing airflow within a large scale environment is key to ensuring that the optimum temperature is maintained for the largest number of people.
- **Product Thermal Design** The HVAC Module not only simulates the airflow in the environment, but also for products used in the environment. With its enhanced toolset, designers can now analyze products considering real world behaviors.
- **Human Comfort Factors** The effectiveness of environmental control is measured by human comfort factors. These eight parameters evaluate both the reaction of people to the environment and aspects of the environment.

Flow Simulation For Every Engineer SolidWorks® Flow Simulation software is a powerful tool that takes the complexity out of computational fluid dynamics (CFD) for designers and engineers. You can quickly and easily simulate fluid flow, heat transfer, and fluid forces that are critical to the success of your design. The HVAC Module provides industry-specific tools and methodologies that deliver unrivaled ease of use, power, and productivity.



Industry Specific Tools in the HVAC Module are aimed directly for the mechanical engineer designing air conditioning or large scale cooling equipment. The tools are easy to use while providing exceptional simulation power:

- Advanced Radiation Modeling Thermal radiation from the sun can have a major effect on cooling requirements. Understanding the impact of material choices requires sophisticated radiation modeling that's included in the HVAC Module.
- **Engineering Database** An enhanced engineering data base includes a wide range of building materials and fans. The new materials enable building thermal analysis to be done quickly and efficiently.
- **Comfort Parameters** "Predicted mean vote" and "Predicted percent dissatisfied" are the two main comfort parameters out of the eight calculated by the HVAC module. These two parameters identify where there are problem areas, allowing you to resolve them before the cooling system is built.



You can visualize human comfort factors with the HVAC Module.

The HVAC Module enables designers and engineers to quickly and accurately model complex air conditioning and cooling systems for thermal analysis. With its combination of ease of use and industry specific tools, the HVAC Module ensures maximum analysis productivity with enhanced simulation fidelity.

Visit **www.solidworks.com/simulation** or contact your local authorized SolidWorks reseller to learn more.

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The HVAC Module helps you understand the temperature distributions in working and living environments.

