



Autodesk Helps Huntair Turn Operating Rooms into Cleanrooms

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Autodesk Inventor of Month Uses Autodesk Simulation CFD and Inventor Software to Develop Airflow Delivery System that Can Help Reduce Infections

SAN RAFAEL, Calif.--(BUSINESS WIRE)--Jun. 26, 2012-- [Autodesk, Inc.](#) (NASDAQ:ADSK) has recognized Huntair, Inc. as the June Autodesk [Inventor of the Month](#) for the company's use of Autodesk software to develop a revolutionary airflow delivery system that has the potential to reduce healthcare-acquired infections.



Huntair leverages Autodesk software to develop its CLEANSUITE system, a revolutionary airflow delivery device that can reduce healthcare-acquired infections (Photo: Business Wire)

Huntair — a leading designer and manufacturer of specialized heating, ventilating and air conditioning (HVAC) systems — leverages both [Autodesk Simulation CFD](#) and [Autodesk Inventor](#) software to develop its CLEANSUITE system that is inspired by cleanrooms used in the semiconductor and pharmaceutical industries.

With healthcare-acquired infections claiming 99,000 U.S. lives annually and costing the U.S. healthcare system billions of dollars, the CLEANSUITE system helps avoid contamination of patients in any operating room by delivering a controlled stream of low turbulence, temperature-controlled and HEPA-filtered air over the operating table. As a result, airborne contaminants have less chance of reaching the patient undergoing surgery.

Comprehensive Flow Simulation

While most systems rely on multiple diffusers to deliver air, the CLEANSUITE system uses a single diffuser approach. Huntair created computational fluid dynamic (CFD) models in Autodesk Simulation CFD software to better understand the performance of its product before anything was built.

"Autodesk CFD Simulation software helped us understand what is *actually* going on with airflow in the operating room versus what *should* be happening theoretically," said Kevin Schreiber, global director of healthcare for Huntair. "As a result, we were able to optimize our design to minimize turbulence and control the direction of the air in the operating room, allowing for improved contamination control over the sterile surgical setting."

Engineers also relied on Autodesk Simulation CFD models to test the CLEANSUITE system's air temperature control. Standard air temperature in a hospital can vary as much as 10°F due to the thermal effects of lights and people. Engineers optimized the CLEANSUITE system to maintain a steady temperature from when air enters the room, to when it reaches the patient.

Autodesk Inventor Software for Modeling

Huntair engineers use Autodesk Inventor software to model the modular, ceiling-hung CLEANSUITE system with integrated filtration, electrical, piping and structural equipment supports.

"With this approach, we not only have air flow and air delivery, but also a UL-listed light fixture and a structural interface between equipment, light booms and the building structure. Nobody else is doing anything like it for the operating room environment," said Schreiber.

Huntair also uses Autodesk Inventor software to market CLEANSUITE and show their model to their customers.

"Because not everyone has CAD ability, we can use Inventor software files and create a 3D PDF document for our customers to view the model. It's amazing and they love it!" adds Schreiber.

Huntair's innovative new system has already gained considerable support in the healthcare industry. The company has built and installed more than 14 CLEANSUITE systems for healthcare providers and is now working on designs for several other healthcare facilities, including ambulatory surgery centers.

"The combination of Autodesk Simulation CFD and Autodesk Inventor offers fast, accurate, and innovative analysis and modeling capabilities," said Brenda Discher, vice president, Manufacturing Industry Strategy and Marketing at Autodesk. "By applying these capabilities upfront in product development — where decision-making is critical — Huntair's system is changing the healthcare industry and has the potential to save thousands of lives."

About Huntair, Inc.

Headquartered in Tualatin, Oregon, Huntair is a leader in airflow management. Its products range from specialized HVAC applications used in critical industrial environments such as biotechnology and pharmaceuticals manufacturing, aerospace and hospitals, to the extremely demanding cleanrooms used in semiconductor manufacturing. For additional information, visit www.huntair.com.

About Autodesk

Autodesk, Inc., is a leader in [3D design](#), engineering and entertainment software. Customers across the manufacturing, architecture, building, construction, and media and entertainment industries -- including the last 17 Academy Award winners for Best Visual Effects -- use Autodesk software to design, visualize and simulate their ideas. Since its introduction of AutoCAD software in 1982, Autodesk continues to develop the broadest portfolio of state-of-the-art software for global markets. For additional information about Autodesk, visit www.autodesk.com.

A video featuring Huntair is available on the Autodesk YouTube Channel at <https://www.youtube.com/watch?v=XeBRYxQth2w>.

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