

ANSYS Discovery Live

The New Paradigm in Building Ventilation Design

The Challenge

Confidently Design Ventilation Systems to Meet Client and Regulatory Requirements

MEP consulting firms and HVAC equipment suppliers recognize the need to reduce energy costs and move towards environmentally responsible designs. Rand Simulation, an ANSYS Channel Partner, provides engineering simulation solutions to address these concerns and help these organizations instantly explore and substantiate ventilation design options to more effectively respond to RFPs, differentiate and deliver innovative ventilation strategies.

The Solution

Instant Simulation Results with ANSYS Discovery Live

Whether the HVAC concept designer or equipment supplier, Discovery Live enables you to prove ventilation performance to clients throughout the conceptual design and equipment selection phases of a project—long before construction and system integration. As a virtual design and visual substantiation tool, Discovery Live is revolutionizing how building ventilation is designed, communicated and marketed. Literally see the impact of design options within seconds and mitigate:

- ▶ Risk of overdesign
- ▶ Costly downstream rework and scheduling delays
- ▶ Energy inefficiencies
- ▶ Lack of innovation with only ASHRAE calculations and historical knowledge
- ▶ Inability to balance ventilation performance with aesthetics and sustainable designs
- ▶ Local occupant discomfort factors – drafts, temp variations, humidity control

The Unique Approach

Providing Revolutionary Technological Advances

ANSYS is the global leader in engineering simulation and the only software OEM that is 100% focused on simulation R&D to provide platforms that cater to even the most complex systems. Its breakthrough with Discovery Live has led to the removal of all barriers that had prevented many firms from historically taking advantage of these capabilities.

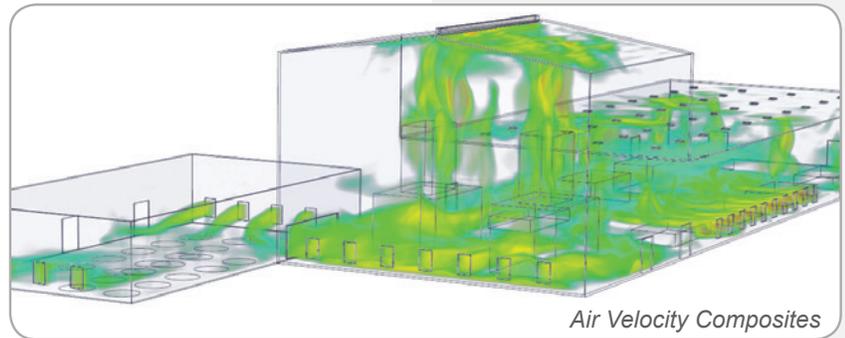
Now, with ANSYS' Discovery Live software, every MEP, AE, consulting firm and equipment supplier can utilize building ventilation analysis as part of their design process to strengthen its value-add and capture market share.

- ▶ Extremely economical pricing
- ▶ No CAD or simulation experience needed
- ▶ Simulations that once took days to calculate now take only seconds
- ▶ Unparalleled visualization lets you rapidly explore and communicate options
- ▶ Computational fluid dynamics (CFD), structural analysis (FEA) and SpaceClaim direct modeling included in one package

Facility Examples

Rapid innovation is possible at all types of facilities:

- ▶ Manufacturing facilities
- ▶ Food processing plants
- ▶ Storage warehouses
- ▶ Educational facilities
- ▶ Building atriums
- ▶ Operating rooms
- ▶ Lab spaces
- ▶ Sports facilities
- ▶ Parking garages
- ▶ Airplane hangars



Air Velocity Composites

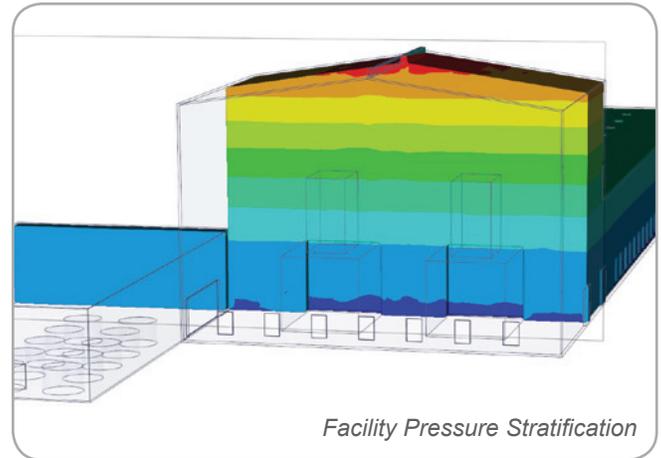
“We’ve tried various analysis tools, but Discovery Live is the only solution that meets our need for both a design and sales acceleration tool. Predictions are consistent with ASHRAE trends and the real-time results empower perspective clients to be part of the decision-making process, see the impact of various design alternatives and have confidence in the purchase of Moffitt equipment—all in a matter of minutes!”

—John Moffitt, *CEO*
Moffitt Corporation

The Value

Save Time, Money, and Your Reputation by Rapidly Designing and Communicating the Best Ventilation Systems

- ▶ Confirm ventilation before detailed construction documentation by “seeing” airflow and temperature performance
- ▶ Identify proper equipment selection and HVAC layout for optimal airflow and temperature management
- ▶ Eliminate redundant and/or oversized equipment
- ▶ Visually substantiate performance claims throughout the design process
- ▶ Gain LEED/energy tax credits with ASHRAE 55, 62.1, 90.1 compliance



The Rand Simulation Difference

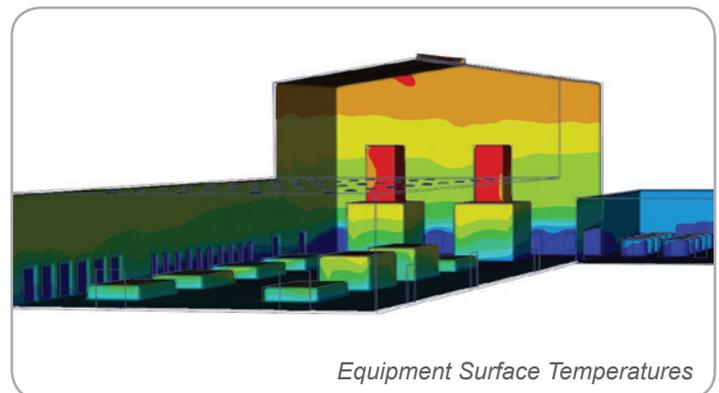
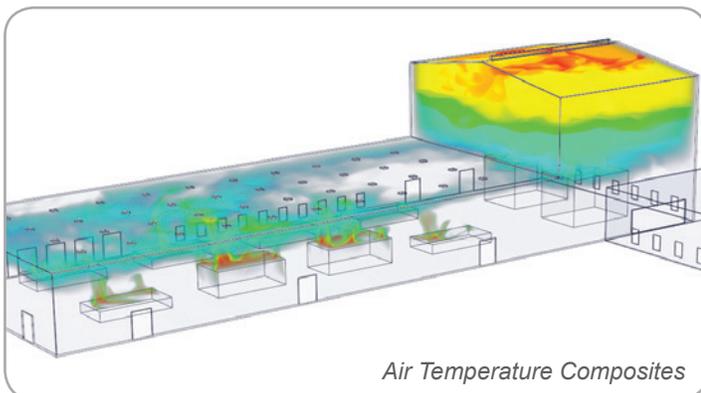
Benefit from Partnering with a Proven Analysis and Ventilation Design Leader

Discovery Live software is only half of the equation. The other half is partnering with a company that understands the building ventilation space and can help you efficiently implement the software into your design and sales process.

You'll immediately benefit with Rand Simulation as your partner from our extensive experience collaborating with top MEP and equipment suppliers on facilities incorporating innovative ventilation strategies to address a range of HVAC challenges—occupant comfort and safety, thermal stratification, contaminant capture and evacuation, wind/wake effects and exhaust re-entrainment.

Support from Rand Simulation maximizes the Discovery Live experience and ROI by providing you trusted:

- ▶ **Design Insight** for visualizing and understanding ventilation performance, identification of deficiencies/root-cause and how to optimize early in the design process
- ▶ **Analysis Expertise** to accurately generate and interpret simulation results that empower informed design decisions, meet critical project deadlines and enable visual communication with stakeholders
- ▶ **Collaboration** to exchange the most effective simulation workflows and design ideas based on your project's objectives, ventilation design intent and timeline



About Rand Simulation

Rand Simulation is focused on helping organizations bring their product vision to reality through incorporating engineering simulation technology into the product development process. Rand Simulation caters to product development organizations looking to compress the design process, maximize innovation, strengthen competitive differentiation and grow bottom-line profitability. Rand Simulation serves as both a North American reseller of ANSYS engineering simulation software and as a trusted design consultant offering insights gained on over 3,000 design projects using engineering analysis software to balance design performance with size, cost, DFM and aesthetics.

