Berner International Corp.

Customer Success Story

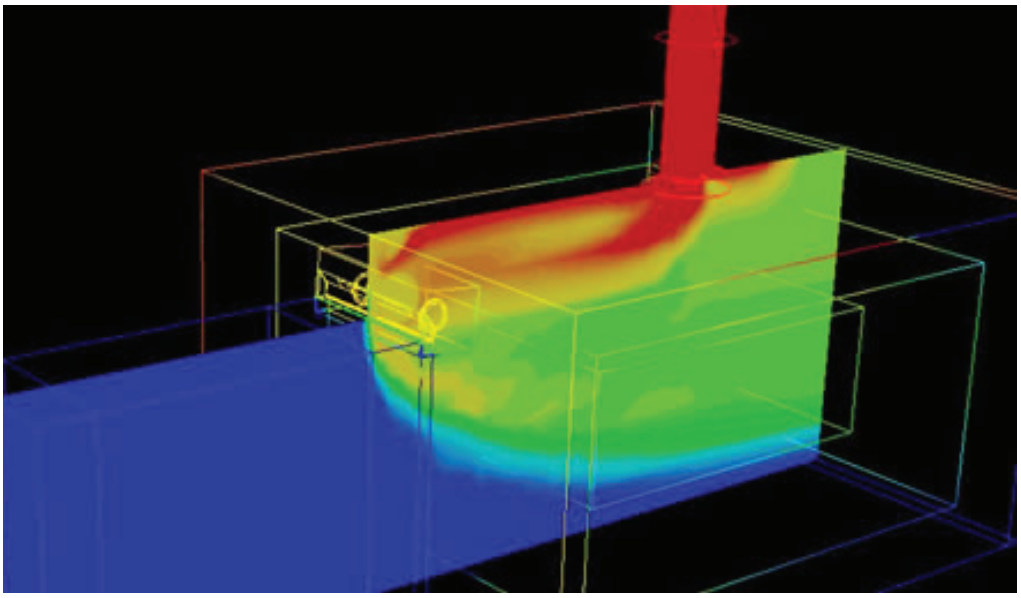
Autodesk® Simulation CFD

Autodesk Simulation CFD made our invisible advantages visible and allowed our customers to see for themselves the advantages of our product line.

—Phil Thomas
Engineer
Berner International Corp.

Revealing invisible advantages.

Engineers at Berner use Autodesk Simulation CFD to show customers how the company's air doors outperform the competition.



Visualizing the effect of insufficient velocity for an air door. Image courtesy of Berner International Corp.

An air door, sometimes called an air curtain, employs a controlled stream of air aimed across an opening to create an air seal. This seal separates different environments, while allowing a smooth, unhindered flow of traffic and unobstructed vision through the opening.

Effective air doors must be engineered to deliver a flow of air with specific volume, velocity, and uniformity in order to provide a reliable seal all the way to the floor. "Short change any one and the door will not work," says Phil Thomas, an engineer with Berner International Corp.

At Berner, Thomas uses Autodesk® Simulation CFD to assist and accelerate the development of air doors that can stop 30 mph gusts and work in openings up to 30 feet high. The ability to conduct extensive early-stage design reviews prior to construction of a physical prototype gives engineers at Berner the ability to efficiently sort through all of the "what if" scenarios until all product quality and innovation objectives are achieved.

Recently, Thomas put Autodesk Simulation CFD to work in a slightly different way: as a sales tool. According to Thomas, customers were having a hard time appreciating the performance attributes delivered by the product line of New Castle, Pennsylvania-based Berner.

"Since air is invisible our advantages are invisible," Thomas explains. "We needed a way to show customers the interrelationship between volume, velocity, and uniformity. More specifically, we wanted to demonstrate the superior performance of our products versus those of our competitors."

Thomas built three models in Dassault Systèmes SolidWorks® to accurately represent air doors from Berner and two if its competitors. Transient flow and thermal simulations were run in Autodesk Simulation CFD. The interactive results were added to a sales presentation to show that properly designed air doors can effectively separate a 15 mph winter wind from a room with air at 60°F.

"Autodesk Simulation CFD made our invisible advantages visible and allowed our customers to see for themselves the advantages of our product line," says Thomas.

Beyond the sales and marketing impact, Thomas says he routinely uses Autodesk Simulation CFD to find better plenums (air-filled spaces), and optimize fan spacing and their angles, without the time and expense associated with physical prototyping.

To learn more about Autodesk Simulation CFD, visit **www.autodesk.com/simulationcfd**.

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