GoEngineer

CHALLENGE:
DEVELOP INNOVATIVE TESTING PRODUCTS WHILE ADHERING TO EXACTING INDUSTRY STANDARDS AND EVER-GROWING PRODUCT REQUIREMENTS.

SOLUTION:
DASSAULT SYSTEMS' SOLIDWORKS 3D CAD AND SIMULATION SOFTWARE, AND GOENGINEER FOR SOFTWARE SUPPORT, TRAINING, AND SERVICES.

RESULTS:
STATE-OF-THE-ART PRODUCTS DELIVERED TO MARKET ON-TIME AND WITHIN BUDGET. INTERNAL SOFTWARE ISSUES RESOLVED QUICKLY AND WITHOUT HASSLES.

LANSMONT AND GOENGINEER: SHAKING THINGS UP TO IMPROVE PRODUCT DEVELOPMENT, SAFETY, AND RELIABILITY

Contrary to pop psychology, human beings have limits. Kids, jobs, family, school—and a myriad of other things—can test our limits.

Lansmont Corporation of Monterey, California, is in the business of testing limits. The company is the world's largest provider of state-of-the-art measurement, testing, and monitoring equipment all geared to test the limits of your products and find unknown breaking points before products are delivered to market.

Case in point: Lansmont was hired to build a machine to simulate vibration produced by the shipping of its customer's drug delivery device. Test results revealed adverse effects of specific vibrations on insulin inhalers and their resident drugs. The vibrations created an unexpected and improper drug mixture—a problem with serious ramifications.

Fortunately, these issues were discovered in a test lab and potential product problems were completely avoided. "The average person doesn't really think about stuff like this, but it is what our products are specialized to do," says Vice President of Engineering Kevin Gilman. "We build customized machines that produce a number of conditions for product testing purposes."

Tests can run the gamut from drop, shock, or compression, to vibrate, shake, or impact. If it happens in the real world, Lansmont can build equipment to discover potential problems by replicating the environment. The result: stronger and more durable products, and, perhaps most importantly, safer and more predictable products.

"Most companies we work with have their own simulation labs to subject their products to all kinds of abuse," says Gilman. "The most strenuous event is often just shipping the product from Point A to Point B."

The company has recently faced the challenge of building bigger platforms for testing large-screen TVs. Reality dictates that larger vibration fixtures have more issues with resonant frequencies and problems with the fixture itself. "It's a real design problem for us," admits Gilman. "Our hydraulic actuators are not infinite in terms of how much force they can produce at these frequencies."

Industry-established standards define the frequency ranges for testing. Making bigger tables that meet standards requires a lot of work and creative thinking to resolve design challenges while adhering to exacting industry constraints.

For the larger vibration tables, Lansmont uses Dassault Systems' SOLIDWORKS 3D CAD and also utilizes SOLIDWORKS Simulation to perform finite element analyses. The goal is to optimize structure design while meeting weight and frequency requirements. "We couldn't do it without SOLIDWORKS. The software has enabled us to be more innovative, and we love that it is so easy to use," reports Gilman.

Lansmont has also been hired by both industry and educational institutions to create machines that simulate an improvised explosive device (IED) blast. "We have built one-seat, two-seat, and four-seat versions," says Gilman. Some clients do research on every aspect of warfare, looking

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>
> —**KEVIN GILMAN,** *Vice President of Engineering, Lansmont Corporation*

at what happens to vehicles when they're blown up with IEDs; other clients simply want to simulate vehicle crashes.

"There's a lot of work going on in the area of vehicle design and even in the clothing the soldiers wear," says Gilman. "We use nitrogen gas as a propellant for most of our activation systems, and we do gas-dynamic equations. SOLIDWORKS enables us to easily recognize the details of how interactions happen as we design and build our machines."

Lansmont has relied on SOLIDWORKS for over 10 years, and they recently switched SOLIDWORKS resellers to GoEngineer, a local reseller whose mission is to create happy, successful customers.

"GoEngineer is far more eager to help us. We're not software experts here, so we rely on the reseller to provide the expertise for getting the environment properly set up and working well.

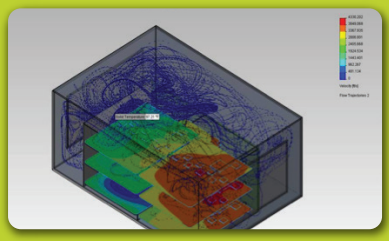
Lansmont continues to grow and add more SOLIDWORKS' licenses. "SOLIDWORKS has been invaluable. One of the beauties of SOLIDWORKS is it can show you issues way before you actually start cutting chips," says Gilman. "That saves both time and money."

Now that Lansmont has partnered with GoEngineer, they can be innovative without worrying about software problems slowing down their product development process.

"GoEngineer comes in with highly qualified people to make sure that all of our SOLIDWORKS products are working well. They conduct local events and provide excellent support—I think all our guys have GoEngineer's phone number close at hand; it's a great partnership," concludes Gilman.

This portable Asset Tracker measures dynamic shock and vibration events.

Programmable horizontal crash sled that simulates braking and cornering inputs, along with crash impacts.



SOLIDWORKS heat flow analysis of an electronic enclosure.

GoEngineer

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GoEngineer is a provider of powerful product design and engineering tools including support and training for SOLIDWORKS, Stratasys, CAMWorks, Altium, and PLM with over 30 years of customer experience in high tech, medical, machine design, energy, and other industries.

Lansmont Corporation

Lansmont provides state-of-the-art technology to the world's leading companies, government laboratories and educational institutions.

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