DASSAULT SYSTEMES

SOLIDWORKS

CRYOGENIC EQUIPMENT AND SERVICES, INC.

IMPROVING CHILLING EQUIPMENT DEVELOPMENT WITH SOLIDWORKS PROFESSIONAL

Using SOLIDWORKS Professional design software, CES accelerated development of its industrial freezing and production chilling equipment.

C E S

www.CESGROUP.com

Challenge:
Accelerate the development and production of industrial freezers and chilling equipment.

Solution:
Implement SOLIDWORKS Professional design software to take advantage of robust sheet metal design and fabrication tools.

Results:
- Cut development-through-production time by 50 percent
- Improved manufacturing accuracy
- Maximized material usage
- Enhanced sales with photorealistic renderings

"We love the cold."

That's the greeting over the front door at Cryogenic Equipment Services (CES), Inc. While many may feel differently about the outdoor temperature, most people adore the frozen foods that are created with CES industrial freezing and production chilling equipment. In addition to making the equipment used to produce ice cream cakes, frozen pizzas, and heat-and-serve entrees, CES is a leading manufacturer of cryogenic freezers for pharmaceutical and metal treatment applications.

CES' products fall within three categories: linear tunnels, through which product travels along a conveyor sprayed with liquid nitrogen; spiral freezers, which are driven by belt-and-drum systems to keep product continuously moving; and walk-in batch freezers. Designing and manufacturing all three types of chilling equipment requires large-assembly design and production, and sheet metal design and fabrication solutions.

Until 2007, CES used AutoCAD® 2D design tools. However, as demand for custom-designed systems, shorter lead times, and greater accuracy grew, so did the company's need for a 3D development platform. "Growing the company required faster design and production, particularly with how we handle sheet metal," explains Design Engineer Ed Scheid. "Roughly 80 percent of what we do is sheet metal work, and by moving to a 3D system, CES anticipated that designing parts, making flat patterns, and laser-cutting pieces would be faster, more accurate, and less costly."

The CES facility in Cincinnati followed its parent company in Belgium, which had moved to SOLIDWORKS® Professional design software. "Our colleagues in Belgium chose SOLIDWORKS because it's easy to use, has robust sheet metal design and fabrication capabilities, and includes advanced design visualization tools," Scheid notes.

"We also recognized the value of using SOLIDWORKS visuals to facilitate our sales process," Scheid adds.

ACCELERATING DEVELOPMENT THROUGH PRODUCTION

Since implementing SOLIDWORKS Professional software, CES has cut the time from initial design through final production in half. In addition to realizing productivity gains in sheet metal design and fabrication, the manufacturer has experienced improvements in developing large assemblies and resolving potential clearance issues.

"Some of our freezers total 10,000 parts," Scheid points out. "Whether we're working with 2,000- or 10,000-part assemblies, SOLIDWORKS gives us the tools we need to accelerate large-assembly design. Our products are different for every customer, and the improvements we've seen with assembly and sheet metal design allow us to deliver products faster and of more consistent quality."

IMPROVED ACCURACY SAVES TIME AND MATERIAL

Using SOLIDWORKS sheet metal design tools, CES has not only carved time from its development process, but is also maximizing material usage, reducing scrap and rework. Because sheetmetal parts are more accurate with SOLIDWORKS, the company has greater confidence in its flat patterns and has eliminated grinding and retrofitting operations on the shop floor.

"When I design a sheet metal part in SOLIDWORKS, it's probably within a couple thousandths of an inch of what I design it to be, so that when it comes off the laser and gets bent, there is very little scrap and we can weld everything up exactly," Scheid stresses. "Instead of just putting one large flat pattern on a sheet, we can add other smaller pieces. Because we know the parts are very accurate, we can use the material more effectively.

"Whether we're working with 2,000- or 10,000-part assemblies, SOLIDWORKS gives us the tools we need to accelerate large-assembly design."

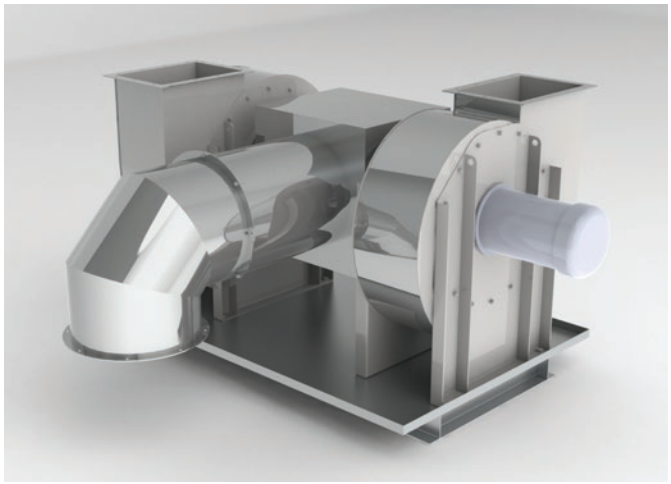
— Ed Scheid, Design Engineer

"What we see on the screen in SOLIDWORKS is exactly what the part is going to be," Scheid continues. "If it fits in SOLIDWORKS, we know that it fits. That confidence really speeds up our manufacturing operations."

LEVERAGING THE SOLIDWORKS COMMUNITY

By subscribing to the SOLIDWORKS Subscription Service, CES realizes additional benefits from the extensive and growing SOLIDWORKS Community. "With the SOLIDWORKS Subscription Service, you're not just buying the software," Scheid points out. "You're buying access to great reseller support, active user groups, and the expansive SOLIDWORKS online community, all of which are extremely valuable. You're buying a community and a network of experienced users and support, which provides big peace of mind that can help you get through any fears related to transitioning to 3D.

"The Subscription Service also provides regular software updates, bug fixes, and enhancements to the SOLIDWORKS design solution," Scheid adds. "If you run into a problem, you're not stuck working with it for an entire year waiting for a fix because SOLIDWORKS provides necessary updates through the Subscription Service."



With SOLIDWORKS Professional software, CES has improved the accuracy of sheet metal design and fabrication while reducing material usage, scrap, and rework.

Focus on Cryogenic Equipment and Services (CES), Inc.
VAR: 3DVision Technologies Corp., Cincinnati, OH, USA

Headquarters: 11959 Tramway Drive
Cincinnati, OH 45241 USA
Phone: +1 513 761 4200

For more information
www.cesgroup.com

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Americas
Dassault Systèmes
175 Wyman Street
Waltham, Massachusetts
02451-1223
USA

Europe/Middle East/Africa
Dassault Systèmes
10, rue Marcel Dassault
CS 40501
78946 Vélizy-Villacoublay Cedex
France

Asia-Pacific
Dassault Systèmes K.K.
ThinkPark Tower
2-1-1 Osaki, Shinagawa-ku,
Tokyo 141-6020
Japan