

Industrial machinery and heavy equipment

Y-Fang Enterprise Group

Switch to Solid Edge enables shipping of sophisticated sealing machines within 1 1/2 months of custom order receipt

Product

Solid Edge

Business challenges

Improve design efficiency and assembly precision across sealing machine portfolio

Keys to success

Solid Edge and Solid Edge with Insight server to accelerate the design of sophisticated machines

Strong support from Siemens PLM Software's partner CADEX Technology

Software's ease of use

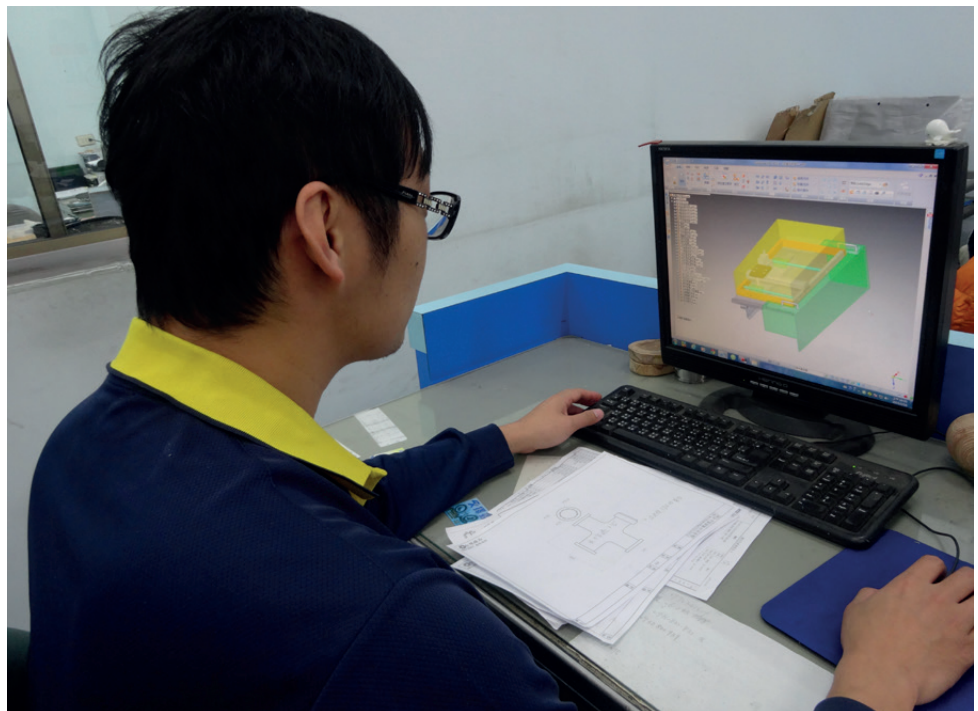
Results

Streamlined, highly productive transition to complete 3D design environment

Extensive knowledge re-use fostered by fast conversion of existing drawings

Significantly improved purchasing and inventory management activities enabled by automatic BOM generation

30 percent increase in product development productivity



Using 3D technology, Y-Fang significantly improves assembly operations, product quality and competitive edge

Development-to-production efficiency

Headquartered in Gaoxiong, Taiwan, Y-Fang Enterprise Group (Y-Fang) specializes in the production of various automatic machines, including filling, sealing, fructose and sauce bagging. The company is

one of the few packing system service providers capable of supplying integrated equipment and consumables. The desktop sealing machines developed by Y-Fang are represented in about 80 percent of the local convenience stores and fast food outlets in Taiwan. Customized designs of medium- to large-sized machines, including whole-plant solutions, are the main sources of Y-Fang's operating revenues and have attracted customers from 25 countries in Asia, Europe and the Americas.

Results (continued)

Impressive new customer base resulting from effective use of 3D animation for business communications

Ability to ship goods within an average lead time of 1 1/2 months after receipt of custom orders

“3D animation enables our sales people to use simulative scenarios to facilitate design communication and obtain product confirmation with customers. When used at shows, 3D animation enables us to precisely present design details. This enables clients and prospects to quickly understand product characteristics, as well as increases the attractiveness of our products. With Solid Edge, we are winning more business opportunities.”

Ye Tingrong
Managing Director
Y-Fang Enterprise Group



As its portfolio of machines grew and operating revenues increased, Y-Fang was increasingly concerned with “development-to-production” efficiency. The challenge was how to improve design productivity and assembly precision. Moreover, its 2D software was rapidly becoming incapable of handling increasingly sophisticated designs. This led to an urgent need for a solution.

Ye Tingrong, managing director of Y-Fang, found the solution during an overseas machinery show: “I saw that several big manufacturers were showing realistic designs of their products in 3D. It was very cool. After some inquiries, I determined that 3D design was really the solution I had been looking for.” Upon returning to Taiwan, Tingrong learned about Solid Edge® software from Siemens PLM Software. Y-Fang assessed the software’s capabilities. He liked what he saw and, soon thereafter, the company implemented Solid Edge.

A step-by-step transition to high productivity

Y-Fang specifically introduced Solid Edge with the Insight™ design data management solution.

Thanks to the professional services provided by the excellent technical team of CADEX Technology, a partner of Siemens PLM Software, the transition from 2D to 3D went very smoothly.

However, Tingrong recalls that the design team initially experienced a bit of a surprise because working with 2D data is quite different than working with 3D models. Tingrong notes, “The 2D and 3D design tools are distinctly dissimilar. For some designers, it can be a challenging transition, especially during busy seasons when priority must be given completing work.”

Tingrong established a paced implementation plan to enable a smooth and efficient transition from one technology to another. In this way, deadlines could be readily met while the designers gained strong skill sets using the new solution. As part of the plan, Tingrong set up a two-year period during which all designers would make the transition from the old approach to the new best practices.

The designers paced their learning according to their own comfort levels. Those who were particularly assertive in making the transition earned special recognition and

rewards. The approach was quite successful, yielding on-time delivery of assignments throughout the process, increasingly higher levels of productivity (compared with the previous approach) and a design team especially proficient in the use of 3D.

2D files meet 3D functions

The first step in Y-Fang's implementation plan was to convert its 2D files to 3D format for editing. In this way, the designers did not have to start from scratch. Instead, they were able to edit old files, while learning the functions of the new software.

Tingrong describes an example of one of Y-Fang's latest sealing machines, which he compares to a finely designed desktop coffee maker. To achieve optimal form and function, a precise match must be attained between the plastic item being manipulated (sealed) and the machine in order to determine the external shape of the sealing machine. For this purpose, Y-Fang's designers used Solid Edge to transfer finished 2D drawings and generate the external shape. Some of these drawings were produced by Y-Fang's internal designers; others were received from customers in the form of 2D drafts. Tingrong points out that all of the drawings can be quickly converted to 3D using Solid Edge and then easily edited.

Utilizing "frames" to design machines

Y-Fang makes extensive use of frames to design machines. After designs are



Using Solid Edge, Y-Fang has increased product development effectiveness approximately 30 percent, in terms of design quality, project management and customer satisfaction.

“With Solid Edge, we are able to realistically simulate the operations of complete machines, which significantly reduces part errors that might occur in subsequent processing steps. This notably decreases overall product development time, materials waste and costs. Using Solid Edge, we’ve measurably improved customer confidence and goodwill.”

Ye Tingrong
Managing Director
Y-Fang Enterprise Group

transferred using Solid Edge, conventional assembly processing and 3D drafts can be used. Parting lines can be treated as frame paths to accelerate the process. When any part is modified, its frame is automatically updated to increase drawing accuracy. Moreover, using Solid Edge, a bill of materials (BOM) can be immediately generated to provide information regarding the types and quantities of parts engaged, and to maintain the most accurate and appropriate levels of parts purchased and inventoried.

Synchronous technology improves design change efficiency

Y-Fang’s designers are particularly adept in using the synchronous technology capability of Solid Edge for change management, which is especially useful for customized machine projects. Solid Edge with synchronous technology provides the power of parametric design with the flexibility of direct geometry editing and ad-hoc modifying. Synchronous technology enables designers to freely edit foreign files. The use of the software’s collaborative functions accelerates assembly management. The object search tool of Solid Edge

further accelerates task completion. The result is substantially reduced product development time.

Tingrong explains, “What makes Solid Edge different from the modeling methods employed by other design software is that, with synchronous technology, our designers can easily manipulate models without having to learn a lot about the logic behind them.” According to Tingrong, Solid Edge is not subject to the limitations of traditional modeling techniques; it enables users to freely explore their ideas, build models and constrain the use of dimensions. Such functionality allows users to quickly modify one or more parts and provides significant benefits for customers when it comes to customization.

3D animation accelerates business communications

In addition to using Solid Edge for drafting, Y-Fang makes use of the 3D and animation features of Solid Edge by displaying 3D images on mobile devices, thus achieving multi-channel communications.



Solutions/Services

Solid Edge with Insight
www.siemens.com/solidedge

Customer's primary business

Y-Fang Enterprise Group specializes in the production of various automatic filling machines, sealing machines, fructose machines, sauce bagging machines, and more.
www.yifanggroup.com

Customer location

Gaoxiong, Taiwan
Republic of China

Partner

CADEX Technology
www.CADEX.com.tw

"I have particularly high expectations of the functionality of Solid Edge in terms of marketing communications," says Tingrong, "3D animation enables our sales people to use simulative scenarios to facilitate design communication and obtain product confirmation with customers. When used at shows, 3D animation enables us to precisely present design details. This enables clients and prospects to quickly understand product characteristics, as well as increases the attractiveness of our products. With Solid Edge, we are winning more business opportunities."

Realizing a 30 percent increase in product development effectiveness

It was Tingrong's observation that, one year after implementing the step-by-step approach to 3D, Y-Fang has streamlined their project management processes while achieving considerable increases in design quality and customer satisfaction. Tingrong notes that the use of Solid Edge

is exceptionally effective in the area of parts assembly. Overall, Tingrong estimates a 30-percent increase in productivity across product development operations.

Tingrong elaborates on the advantage: "Solid Edge enables us to ship goods within an average lead time of 1 1/2 months after receipt of custom orders, thus providing us a competitive edge by improving both quality and speed."

He concludes, "In order to ensure the best quality product, we perform extensive testing before and after assembling sealing machines. With Solid Edge, we are able to realistically simulate the operations of complete machines, which significantly reduces part errors that might occur in subsequent processing steps. This notably decreases overall product development time, material waste and costs. Using Solid Edge, we've measurably improved customer confidence and goodwill."

"Solid Edge enables us to ship goods within an average lead time of 1 1/2 months after receipt of custom orders, thus providing us a competitive edge by improving both quality and speed."

Ye Tingrong
Managing Director
Y-Fang Enterprise Group

Siemens PLM Software

Americas +1 314 264 8287
Europe +44 (0) 1276 413200
Asia-Pacific +852 2230 3308

www.siemens.com/plm

© Siemens Product Lifecycle Management Software Inc. Siemens and the Siemens logo are registered trademarks of Siemens AG. D-Cubed, Femap, Fibersim, Geolus, GO PLM, I-deas, Insight, J T, NX, Parasolid, Solid Edge, Syncrofit, Teamcenter and Tecnomatix are trademarks or registered trademarks of Siemens Product Lifecycle Management Software Inc. or its subsidiaries in the United States and in other countries. All other logos, trademarks, registered trademarks or service marks belong to their respective holders.

44863-Z9 3/15 H