

Industrial machinery

DONIDO

Ability to re-use existing design solutions speeds up production process

Product

Solid Edge

Business challenges

Quickly design new modules and re-use existing design solutions

Work in 'real time' with massive assembled models

Rapidly create alternative configurations of a project

Meet technical/environmental requirements of each customer and geographic region

Keys to success

Use Solid Edge to create a sustainable environment for efficient engineering design and production

Use Quicksheet in Solid Edge to facilitate the re-use of existing design solutions

Take advantage of synchronous technology

Results

Performed engineering changes two times faster than using traditional modeling



With Solid Edge, DONIDO generates engineering changes and production-ready drawings two times faster than using traditional modeling

Innovation is key to DONIDO's high-quality products

Offering a diverse portfolio of high-quality milk processing lines and equipment, DONIDO PLC (DONIDO) has established a strong network of clients and partners on a local, as well as global, level. DONIDO has become the benchmark for the industry and the DONIDO brand is present in almost all Bulgarian, and many foreign, dairy enterprises. The company employs more than 150 highly qualified specialists in all related areas covering the entire design and manufacturing process.

The DONIDO plant in Haskovo, Bulgaria is equipped with modern machines and

advanced technologies to enable the high quality of the finished product. Dedicated engineering teams perform precise and fast assembly of the delivered lines anywhere in the world. Highly qualified process engineers contribute to the successful start-up of the line and advise customers how to achieve design capacity. After-sales service is among DONIDO's highest priorities, because milk is a delicate raw material, which spoils quickly and requires immediate care.

In 1998, DONIDO decided to switch from 2D to 3D design, and its choice was Solid Edge® software from product lifecycle management (PLM) specialist Siemens PLM Software. Given the high volume of parts produced using sheet metal and the reputation of Solid Edge as a leading product in this industry, DONIDO's choice was a logical continuation of management's desire to support innovative processes and systems.

Results *(continued)*

Quickly created alternative configurations of the project, re-using 3D assembled modules

Prepared sets of high-quality catalogs, brochures and technical manuals



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Yordan Valtchev
CEO
DONIDO

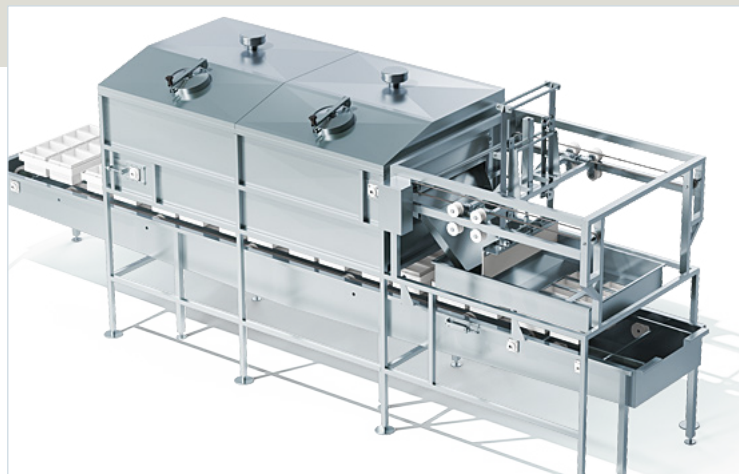
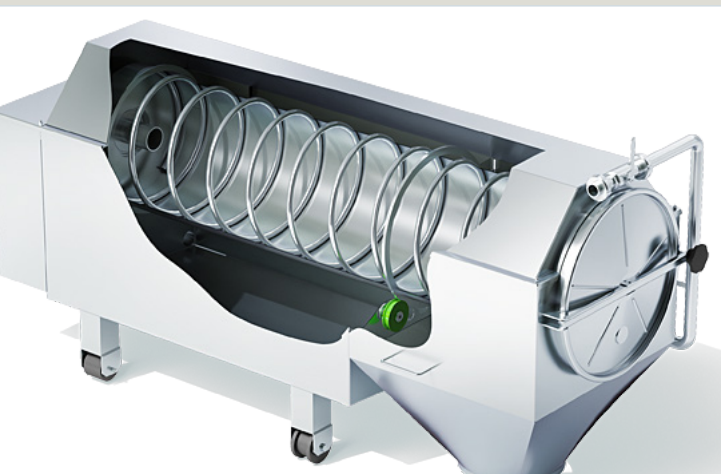
A major part of DONIDO’s innovation policies includes constant initiatives to develop the skills of the engineering team through periodic specialized training, as well as using an up-to-date innovative technological environment. As a result, the development teams always work with the latest version of Solid Edge, which takes advantage of synchronous technology, enabling DONIDO’s engineers to perform engineering changes two times faster than using traditional modeling with a ‘history tree’ approach which requires editing a complex tree of features.

Each product is one-of-a-kind

“DONIDO manufactures equipment based on customer requests and specifications. That’s why each milk processing line is unique, although assembled according to the same set of standards modules,” explains Yordan Valtchev, DONIDO’s CEO (chief executive officer). “Therefore, for us, it is equally important to be able to quickly design new modules and to re-use already existing design solutions through a flexible combination of different product configurations. Here, Solid Edge proved to be the perfect tool for us – a reliable 3D CAD (computer-aided design) platform with excellent performance, stable code and premium technical support.”

“In addition, the CAE tools of Solid Edge allow our designers to simulate structural loads and validate the design before building the physical prototypes...”

Yordan Valtchev
CEO
DONIDO



Using advanced 3D CAD and manufacturing software, DONIDO can make the right decisions even in the initial phase of establishing the most appropriate concept for the client. This enables the realization of critical goals, including that the final product meets the highest technical and environmental requirements of each and every customer and geographic region.

Huge assembly models easily handled

Often a milk processing line contains thousands of unique, individual components. This means the ability to work in real time with massive assembled models is essential for the rapid design and manufacture of a customer's order. Here, Solid Edge is a key factor in accelerating turnaround. Using a unique, lightweight representation of the

individual components and the system libraries of Solid Edge, together with the efficient management of operating memory, enables designers to quickly create alternative configurations of the project. The designers re-use 3D assembled modules and even complete, existing solutions already available in the company's archive.

Quick and effective interaction with these large assembled models using Solid Edge is extremely important, since the resulting support and services information needs to meet the documentation requirements for the marketing and sales department, distributors and consumers. The use of virtual assembly models created with Solid Edge enables DONIDO to quickly prepare sets of high-quality catalogs, brochures and technical manuals for each of their product lines.

"For DONIDO, the advantages of using Solid Edge modeling for sheet metal containers are of paramount importance. The built-in intelligence of Solid Edge, which embeds the physical laws of bending the metal lists into 3D CAD models, allows our engineers to design vessels directly in 3D, and to generate accurate flat patterns for their production without subsequent engineering changes."

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Virtual assembly models are validated using Solid Edge by checking the mutual component interference and arrangement of components. This enables the creation of production drawings with precise, accurate dimensions; detailed and visual instructions for optimal installation; and detailed specifications containing specific quantities of materials. Using such information allows DONIDO to quickly calculate the planned cost for accurate bidding and to perform effective planning of the entire production process.

Re-using existing design solutions speeds up the process

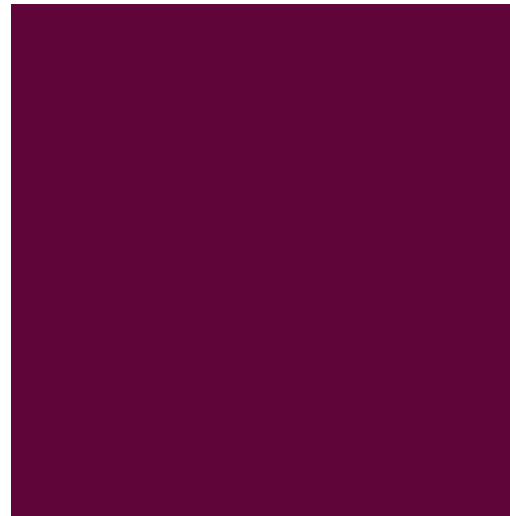
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"In addition, the CAE (computer-aided engineering) tools of Solid Edge allow our designers to simulate structural loads and validate the design before building the physical prototypes, through verification and optimization of the static and dynamic stability. The ability to check the stress inside the mid-surface of the sheet metal allows selection of optimal materials and construction solutions to ensure the necessary work safety factors."

Along with system library and alternate assemblies, the Quicksheet functionality of Solid Edge allows DONIDO to facilitate the re-use of existing design solutions – by quickly producing drawing sets for a new project using dedicated templates reflecting the similarity of product types – with just a few mouse clicks.

Winning more contracts with shorter design times

Since implementing Solid Edge, DONIDO, together with SpaceCAD Ltd., a Siemens PLM Software partner in Bulgaria, is following a consistent policy of creating a



Solutions/Services

Solid Edge

www.siemens.com/solidedge

Customer's primary business

DONIDO is the largest producer of processing lines and equipment for the dairy industry in Bulgaria. The company specializes in the production of machines and equipment for milk processing, which the company installs and puts into operation, providing the necessary technical support for the production of a wide range of milk products.
www.donido.com

Customer location

Haskovo
Bulgaria

Partner

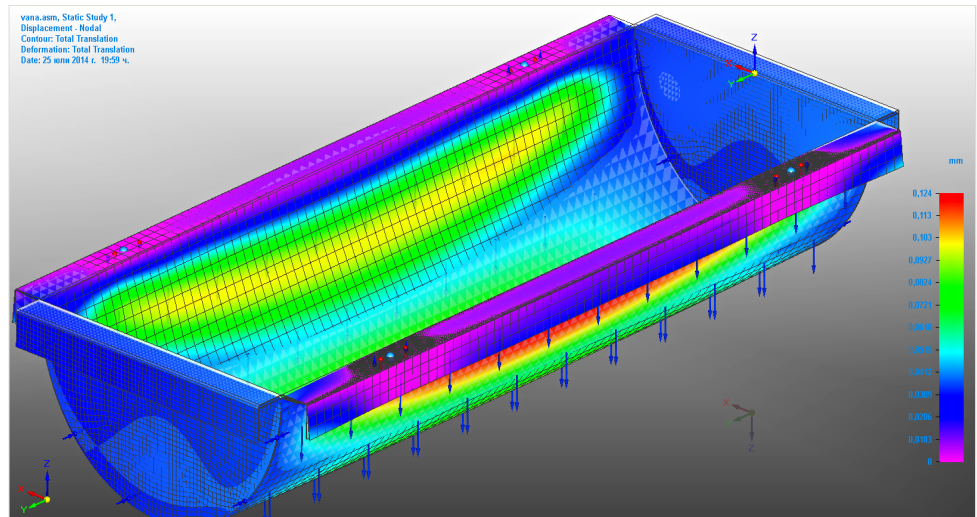
SpaceCAD Ltd.
www.spacecad.bg

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sustainable environment for efficient engineering design and production, using virtual models created, assembled, validated and optimized with Solid Edge.

"We look forward to the next evolution of Solid Edge," says Valtchev. "Improvements to sketching in 3D, along with new opportunities for direct generation of blank stamping of 3D models and direct integration with

KeyShot for superior photorealistic rendering in real time, will give us new tools to win more contracts via shorter design turn-around, less time for technical training in the execution of orders and improved re-use of corporate knowledge. All this and we'll be selling better products."



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