SIEMENS

NX • Teamcenter

CB

PLM is small manufacturer's strategy for future success

Industry

Industrial machinery

Business challenges

Machine complexity, including embedded electronics

More than 500 machine models regularly updated

Keys to success

Entire machines modeled using NX, including sheet metal parts

Sheet metal cutting paths created with NX CAM

Teamcenter employed as the sole repository for product data

Teamcenter viewing functionality utilized on the shop floor

Using NX and Teamcenter, industrial catering provider streamlines the design process and leverages design data throughout the organization

Food machinery specialists

CB s.r.l. (CB) develops and manufactures a wide range of industrial catering equipment, including lava rock grills, chicken rotisseries, gyro machines, and electric knives. CB shares ownership, operations and management synergies with another company, Valko s.r.l. (Valko), a manufacturer of vacuum packaging machines and thermo-sealing machines.

Founded approximately thirty years apart (CB in 1962, Valko in 1995) by the same business partners, the two companies currently employ 38 and 12 people respectively. "Our typical customers are resellers who supply restaurants and deli shops, and food store furnishing companies," says Giorgio Mauri, board member of CB, general manager of Valko, and IT manager of both companies. "We also sell

CB offers a wide range of industrial catering equipment, from lava rock grills to chicken rotisseries, from gyros to electric knives.

Results

Working prototypes ready one month after the completion of the design

Fewer sheet metal parts required for each machine; accuracy of sheet metal designs has improved

Less drafting required

Design data is leveraged for use in sales, procurement and service activities

products directly to retail food chains, including all leading chains in Italy, such as Esselunga, SMA, Auchan, Coop and Conad."

CB and Valko sell standard products from catalogs featuring approximately 300 items and 200 items respectively. Each year, five to six new products are added, either developed "from scratch," resized, or updated to include new features. All existing models are subject to constant updates, and while these machines are relatively small, they are also complex, incorporating electronics, analog input/output (I/O) devices, programmable logic controllers (PLCs), inverters, remote switches and other components.

CB employs integrated CAD solution

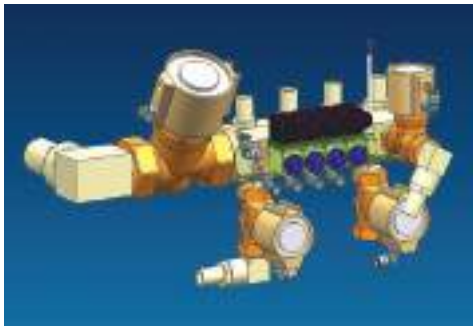
CB's technical department employs three full-time designers. "Their job ranges from modeling to drafting, to field tests and prototypes," Mauri says. "These three people are supported by a colleague in charge of creating and maintaining documentation, bills of materials, exploded views and wiring diagrams."

CB has always had a strong focus on information technology (IT) tools, adopting 2D computer-aided design (CAD) in the mid-80s, and replacing that system in the early-90s with four seats of NX™ software from Siemens PLM Software. "The transition to 3D using NX was essential to reduce the time frame from design completion to working prototype," Mauri states. "With 2D, many small mistakes go unnoticed, especially when you have to deal with sheet metal and its typical bending problems. When we started to look for a new solution, the NX sheet metal functionality immediately emerged as the most suitable software. Through all these years, we have constantly updated this software, which has fully met our expectations."

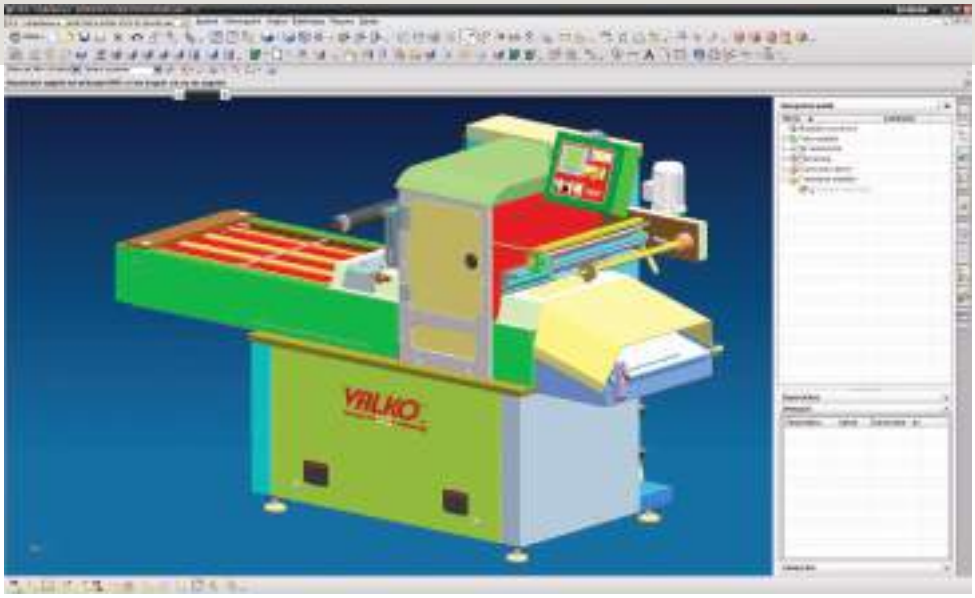
Each machine is made of approximately thirty sheet metal parts, along with a few hundred other components. Sheet metal cutting tool paths are generated using NX CAM, and then retrieved by machine operators through a semi-automatic procedure. "All machine components are modeled using NX, which goes quickly thanks to extensive libraries we have created," says Mauri. "And with NX, we have succeeded in reducing the number of sheet metal parts that must be assembled for each machine."

CB also extensively uses the rendering capabilities of NX, which enable the

In a design developed with NX, all components are modeled, thanks to extensive libraries created by the company's designers.



The machines manufactured by CB and Valko are relatively small but rather complex, as they include electronics, analog I/Os, PLCs, inverters, remote switches and other components.



Using Teamcenter, an orderly information flow is created within the organization, with data accessible to everyone.

"Teamcenter can be implemented without significant customization, which proves that the software is suitable for small-to-medium enterprises like ours."

Giorgio Mauri
IT Manager
CB s.r.l.

company to submit accurate and lifelike representations of its machines to customers. Models rendered using NX are also used in the company's catalog. This makes it possible to include machines that have not yet been manufactured and photographed. Images rendered with NX reproduce even satin steel surfaces with lifelike realism.

Today, by modeling an entire machine in 3D, CB can build a working prototype within one month after the completion of the design.

Leveraging design data

A new member of CB's technical department was recently hired to handle information flow and product releases, and to synchronize design with manufacturing, sales and procurement. This new employee was brought in concurrently with the implementation of Teamcenter® software from Siemens PLM Software. CB management identified this product lifecycle management (PLM) solution as the one that best meets requirements of the company itself, as well as those of its customers and the industry in general. "The introduction of Teamcenter came right in time to help us meet market demands for fast information delivery," says Mauri. "It creates an orderly information flow within our organization, with data accessible to everyone."

In addition to the Teamcenter license, CB has installed three licenses of visualization to leverage the huge potential of Teamcenter as an integrated product data management (PDM) system across the rest of the company. "The adoption of Teamcenter has provided us with a PDM system that always shows the current and correct revision status of each machine," explains Mauri. "Also, using Teamcenter allows us to associate more than just technical information with each project. For instance, procurement can manage

Valko produces vacuum food packaging machines and thermo-sealing machines.

CB and Valko design and manufacture equipment for industrial catering, deli shops and food retail chains.

Solutions/Services

NX
www.siemens.com/nx

Teamcenter
www.siemens.com/
teamcenter

Customer's primary business

CB s.r.l. develops and manufactures a wide range of industrial catering equipment. Valko s.r.l. produces vacuum food packaging machines and thermo-sealing machines.
www.cb-italy.com

Customer location

Bottanuco, Bergamo
Italy

Partner

Team 3D

"We have clear ideas and goals in mind for the future, and Teamcenter has demonstrated it can support our evolution and requirements."

Giorgio Mauri
IT Manager
CB s.r.l.

pending offers and prices, sales can add pictures or images, service can store assembly diagrams to be easily retrieved and viewed when necessary. The sales staff also handles first-level assistance, and it is very helpful for them to have a tool that allows them to find and view all information quickly and easily."

In the factory, workers use Teamcenter to visualize the items necessary for their job. This has caused a dramatic reduction in the amount of drafting that must be done. "We are thinking of setting up large screens in production to view all machine assembly and preparation instructions," says Mauri. "And we are seriously considering the installation of 3D virtual projectors in our training room and in production. With such advanced technology, it will be even easier for our designers to communicate and transfer their ideas to factory staff, customers and machine operators."

Another goal of Mauri is to implement a procedure for semi-automatic transfer of bills of materials (BOMs) from Teamcenter to the company's enterprise resource planning (ERP) software. "We have clear ideas and goals in mind for the future," he says. "Teamcenter has demonstrated that it can support our evolution and requirements. Most of all, the software can be implemented without significant customization, which proves that Teamcenter is suitable for small-to-medium enterprises like ours."

CB has support from Siemens PLM Software partner, Team 3D. "Our collaboration started with NX," says Mauro Barra, Team 3D's owner. "Then, for the Teamcenter launch, we dedicated a person for the initial work of transferring data from the legacy system. Now that CB has added a resource specifically to deal with project management activities, everything is ready for their next step, which is to extend this technology beyond the technical department. Investments such as this prove that CB is a forward-looking company."

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