Lino®
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CUSTOMER REPORT

SOMIC Verpackungsmaschinen

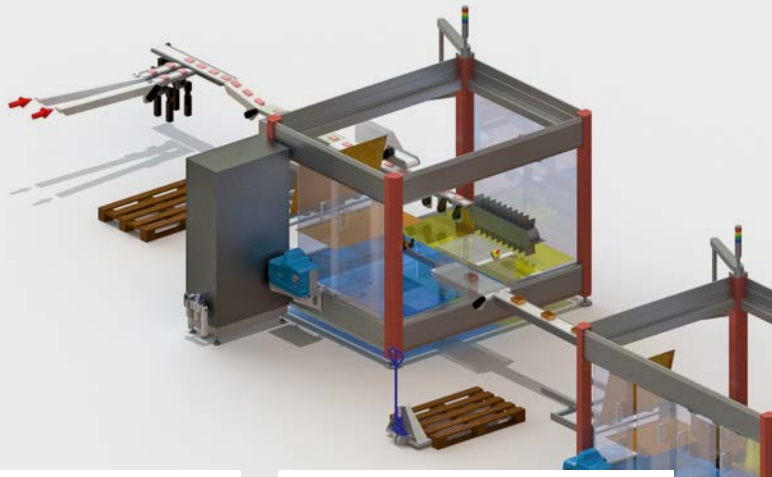
Packaging machines from SOMIC provide outer packaging that is optimally suited for transport and product presentation in retail.

3D Layouts Underscore Line Competence

SOMIC's packaging machines have an excellent reputation – particularly in the food industry. In order to attain a comparable level in the quotation process, the company implemented Lino® 3D layout for layout planning. Using this fully integrated add-in for Solidworks®, SOMIC can now generate attractive, technically sophisticated 3D plant layouts in record time.

"With the combination of Lino 3D layout and Tacton Design Automation, we're now generating 3D layout plans in record time that are meaningful to experts and laypersons alike – and visually live up to our quality standards."

Dominik Herbst, Manager Systems Engineering at SOMIC



Task

- Attractive, rules-based 3D layout planning
- Error-free layouts in the quotation process
- Seamless integration with Solidworks®

Solution

- Lino® 3D layout for 3D layout planning
- Tacton Design Automation for rules-based configuration
- Consulting and training by Lino experts

Result

- Attractive, understandable 3D layouts
- Significantly accelerated layout processes
- Automated, reusable layouts
- End-to-end processes with no media discontinuities

When we think of food and pharmaceutical packaging, attractively designed cups, blister packs, pouches, bottles, boxes or tubes invariably come to mind. Yet that is "only" the prepackaging of these products for consumers. For the manufacturers, logistics partners and distributors, what counts is the final packaging, which is usually made out of heavy-duty cardboard. These hold multiple individual packages, protecting them from soiling, damage and sunlight.

SOMIC, based in Germany's Upper Bavaria region, develops and manufactures highly sophisticated packaging systems. Their machines ensure that the goods of leading manufacturers in the food, animal feed and pharmaceutical industries are suitable for stacking, transportation and storage and are easy to handle in the retail outlets. Thanks to easy machine operation and user-friendly format changing, SOMIC's customers can create attractive cardboard packaging – rapidly, flexibly and economically.

Line competence is key

SOMIC owes its outstanding market position primarily to its advanced packaging machines – but also to its exceptional line competence. Dominik Herbst, Manager Systems Engineering at SOMIC explains it thusly: "Customers typically integrate our packaging machines at the end of their production lines. So we always strive to integrate our systems seamlessly into the configuration on site: either by implementing our machines at the end of the manufacturing or filling installation of an existing production line or planning them directly into new plant construction."

The machines to be integrated essentially consist of three elements: the feed with distribution and alignment of the products, the actual packaging machine and removal of the cartons of packaged products. An in-depth understanding of production processes, spatial and structural requirements and technical feasibility is essential to the line competence that SOMIC offers.

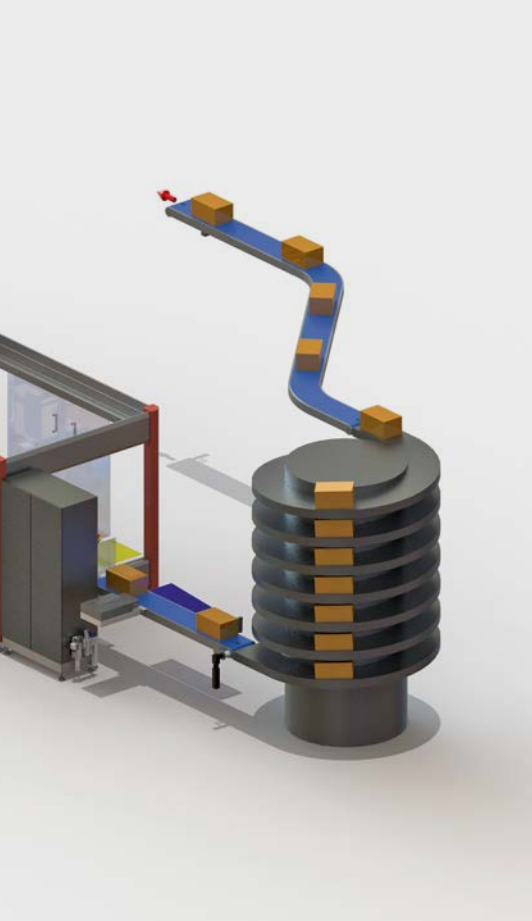
From space plans to plant layouts

Customers value this expertise highly. However, this presents challenges in sales and quotation processes: For instance, a customer is planning a line for various types of yogurt filled in cups. SOMIC machines at the end of the line are to combine the assortments, group them, fold them and glue a carton around them. In the first place, the customer wants to be able to adapt these modularly structured machines easily to changing requirements. But in a production line, the machines must also of course efficiently fit the space available.

THE COMPANY

somic
Engineered to perform

Name	SOMIC Verpackungsmaschinen GmbH & Co. KG
Location	Amerang, Germany (headquarters), Haag i. OB, Germany (production facility), Minneapolis, MI, USA (branch)
Portfolio	Machines and installations for producing (final) packaging as well as transport and product handling systems
Revenues	approx. € 64 million in Germany
Employees	approx. 400 (2020)
Founded	1974
Internet	www.somic.de



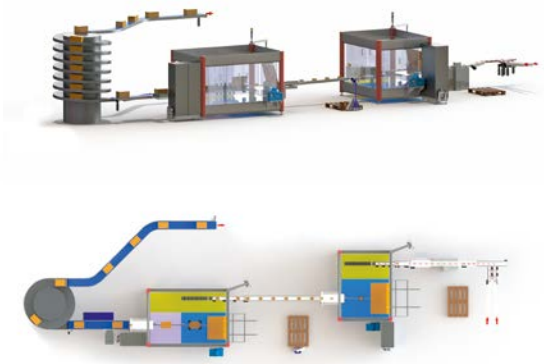
Typically, customers thus provide SOMIC's sales representatives with a space plan showing the dimensions and interfaces, pillars, doors or possible level changes in the floor. These are key feasibility and cost parameters for planning and preparing the quote. The sales representatives pass the plans and technical specifications on to the SOMIC system engineers, who use these to develop the line concept – previously using 2D drawing software. Generating a 2D plant layout is not all that difficult. However, projects like these are subject to numerous requirement changes, each one necessitating a new layout variant, which means that the work involved can rapidly snowball.

No more 2D layouts, no more media discontinuities

"A much more critical factor is that the top view of a 2D layout needs to be interpreted, and on the customer side we're not only talking to layout planning experts. Details such as the floor or transport level are often hard to identify, and crossing lines mean that the entire plan becomes ambiguous. Additionally, we design our machines and components in 3D using Solidworks – transfer to 2D layouts always means an error-prone system and media discontinuity", notes Dominik Herbst.

And this discontinuity is two-fold: in order to enhance the documentation for customers and make it clearer for project owners, engineering staffers used to import the layout plans manually into Solidworks to generate 3D layouts there, omitting details and using reduced dummies to keep the files from getting too cumbersome. Layouts with the original modules were only generated just before delivery.

Josef Bliemel, Head of Systems Engineering at SOMIC, recalls: "Another department had already gained some experience with 3D layout planning using Lino 3D layout. The colleagues showed us how easy it was to build and present models using this add-in for Solidworks. Our next step was to run a test in our department – using real data of our machines and actual customer requirements. These tests were so successful that we prepared a rollout concept together with the Lino consultants."



Plant layout of a two-stage SOMIC packaging line in Lino 3D layout. The arbitrarily selectable and zoomable views highlight the interaction of the tray and wraparound packer.

"The Solidworks add-ins from Lino ensure a high level of continuity and automation. This not only lets us accelerate our quotation process but also elevate it to an ever-rising quality level."

Josef Bliemel, Head of Systems Engineering at SOMIC

Lino 3D layout and Tacton deliver quality lead

Systems Engineering was responsible for rolling out and deploying the new Lino solution. As the interface between customers and designers, this department was tasked with verifying the technical feasibility of customer requirements and generating meaningful 3D layouts. To make it possible to generate layouts using a rule-based process and import model changes automatically, Lino's experts integrated the configuration tool Tacton Design Automation (TDA) for Solidworks.

"Our aim was to achieve a significantly faster quotation process that generates attractive quote documentation. To this end, we invested some time in building our model library and prepared a comprehensive rule set for our standard module. We utilized a structured, step-by-step approach – and it totally paid off," declares Department Head Josef Bliemel.

Since then, the library has grown to include 140 parts from the SOMIC modular system, so that it now covers practically all components and custom packaging concepts. When new machine types are developed and components modified, they are automatically placed in the library, where they are available for future configurations and layouts. And, as Dominik Herbst emphasizes, "Lino's experts were – and are – approachable at all times. They helped us to rapidly find practical solutions!"

SOMIC's headquarters are located in Amerang, Bavaria. Four independent business units use their individual competencies in a targeted manner to create top SOMIC products for the world market.

Multiple benefits for quotation process
The enormous advantages of Lino 3D layout paired with Tacton Design Automation are on full display in day-to-day use. For instance quotation process optimization: The new solutions eliminate the media discontinuities between quotation and order, and all systems use a single, central, absolutely consistent data basis for the machines and components. Additionally, the library and the rule set ensure that only configurations and layouts that the standardized SOMIC modular system covers can be generated.

“The software warns us immediately when dimensions don’t match up or other collisions occur,” continues Dominik Herbst. “This lets us verify the feasibility early in the layout phase – and also for requirement changes.” Additionally, layout planning with Lino 3D is much faster: objects are simply dragged and dropped into the layout, and the snap technology ensures they are placed at precisely the right location. And even the familiarization time for new employees is shorter, as they already possess a strong knowledge of 3D CAD systems like Solidworks and don’t need to additionally be taught how to plan 2D layouts.

But perhaps most importantly for SOMIC, 3D layout planning entirely accords with the company’s demanding quality standards. “We enjoy showing customers the new layouts. They’re understandable, illustrate all necessary details from multiple perspectives, can be presented to customers interactively on site – and also look good, with realistic colors, surfaces and customer logos”, says Josef Bliemel. “That’s hugely valuable for successful selling.”

“We enjoy showing the new layouts to our customers. They are comprehensible, can be presented interactively on site in customer meetings, and are enormously valuable for sales success.”

Josef Bliemel

Lino® 3D Configuration Solutions
Lino GmbH is a provider of technology leading software solutions and consulting services for Design and Sales Automation, System Configuration and 3D Visualization. Enterprises in different manufacturing industries realize efficient, end-to-end sales and product development processes with enormous savings potential with the Lino Team along with Tacton Configurator and Software Made by Lino® products.

The Tacton technology sets entirely new standards in Product Configuration and revolutionizes the drafting, configuration and selling of complex industrial products. In combination with Software Made by Lino® products, you can easily integrate applications from CAD, PDM, PLM, ERP, CRM, Web, eCommerce or mobile devices with Tacton software.

Lino is a Tacton Business Partner, Solidworks Solution Partner and Microsoft Partner Gold Application Development. The configuration specialist and software developer operates six offices in Germany and Austria: Bremen, Mainz, Stuttgart, Nuremberg, Dresden and Raabs (A).

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Lino® 3D Configuration Solution for end-to-end business processes from sales to manufacturing