

Industrial machinery and heavy equipment, plastics extrusion

Compuplast

Plastics extrusion specialist uses Solid Edge with synchronous technology to substantially accelerate order response time and reduce development costs

Products

Solid Edge, Femap, NX

Business challenges

Use models in a different format

Create models faster

Transfer from 2D with one program to 3D using Solid Edge

Keys to success

Enable easy editing of models taken from another format

Improve digital best practices

Utilize advanced data management

Results

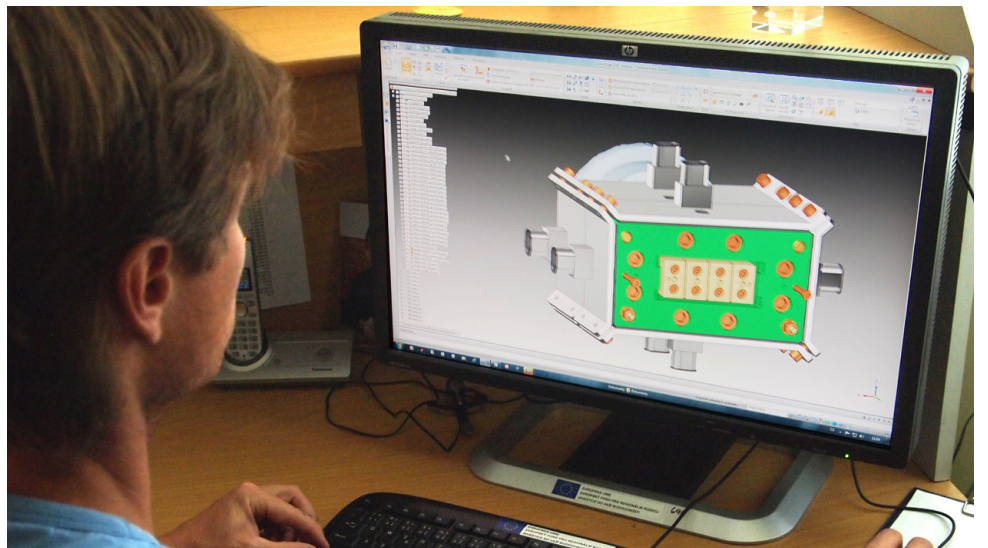
New models created faster

Model modification time, especially for those taken over from subcontractors, accelerated

Data from a similar orders quickly found and re-used on new orders

Development cost and time significantly reduced

Substantially fewer prototypes deployed at customer sites



Siemens PLM Software solutions enable Compuplast to improve digital best practices, including receiving and editing multiple data formats

Collaborating with well-known manufacturers

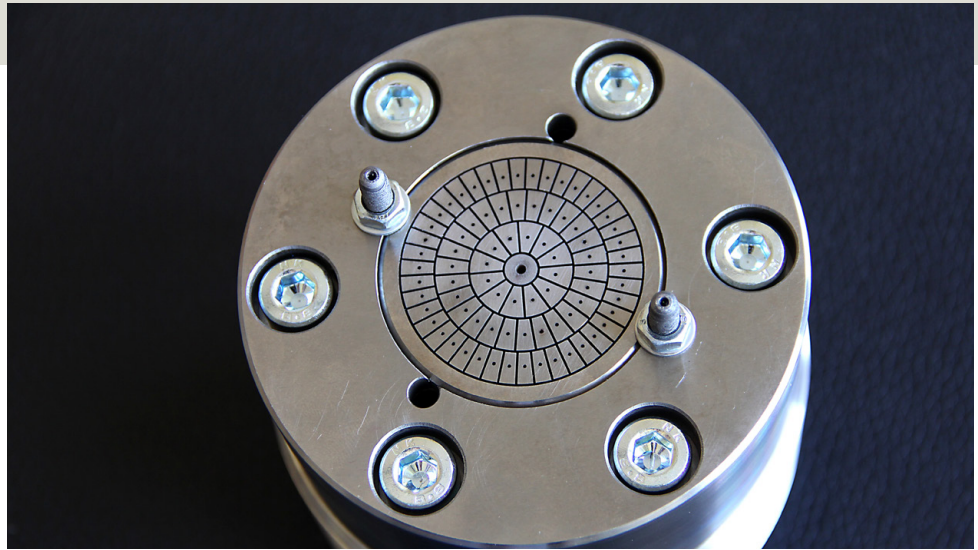
Compuplast International (Compuplast) was founded in 1991, and is mainly focused on design and delivery of tools for plastic profile extrusion. As a natural transition over time, plastic extrusion lines have been added to the company's tools. Today the company collaborates with well-known manufacturers such as IKEA, Mountfield, DuPont and Fatra.

Compuplast employs five designers. They spend most of their time working on tools for plastic profile extrusion, but depending on incoming projects, the designers are focused accordingly.

Between the founding of the company until 2002, designers used 2D computer-aided design (CAD), the prevalent tool at the time. Then the company purchased licenses for use of Solid Edge® software for 3D development and, soon thereafter, acquired licenses of Femap™ with NX™ Nastran® software for mean kinetic temperature (MKT) calculations. Both are solutions from product lifecycle management (PLM) specialist Siemens PLM Software.

“By using synchronous technology, the turnaround on model creation has been accelerated, in particular for modification of models taken over from subcontractors.”

Ing. Jan Král
Managing Director
Compuplast



Increased productivity using Solid Edge with synchronous technology

Due to the complexity of extrusion tools, the designers often choose a sequential process for creating models. However, they use synchronous technology exclusively to design machines and lines. Synchronous technology is more intuitive and aligned with the 3D environment. It is also highly suitable for adapting models that were developed in other computer programs.

Models can be created significantly faster by using Solid Edge with synchronous technology. “By using synchronous technology, the turnaround on model creation has been

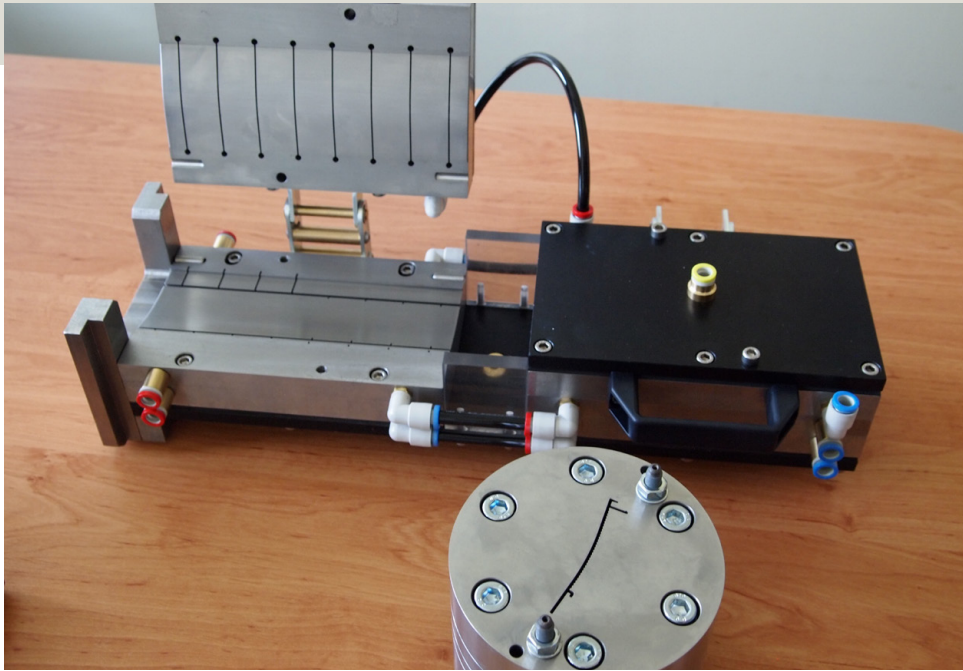
notably accelerated, in particular for modification to models taken over from subcontractors,” says Ing. Jan Král, managing director of Compuplast.

While enabling the smooth transfer of data from outside vendors, the main advantage of using synchronous technology is that it enables designers to change entire part surfaces according to specific rules without affecting the history tree and changing multiple elements.

With exceptional success using synchronous technology, Compuplast is currently exploring and evaluating its use for highly complex parts containing general spline surfaces.

“Using Solid Edge with Insight, Compuplast designers can easily search and make use of all data from a similar order for use with a new one. A process that previously took a week now takes only two to three days.”

Ing. Jan Král
Managing Director
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By using Siemens PLM Software's sophisticated modeling and simulation tools to assess melt behavior under various extrusion conditions, the design department's analytical capabilities have measurably increased. As a result, the company has largely eliminated the need to make modifications to extrusion head designs, resulting in a substantial decrease in development cost and time as well as significantly fewer prototypes deployed at customer sites.



Single source for design data storage/retrieval

Effective data management is essential to information sharing and high productivity. Solid Edge® software with the Insight™ design data management solution is an especially practical and productive tool for designers. For Compuplast's designers, the biggest advantage of Solid Edge is that it always works with current versions of files, no matter who works on them. The previous process, which used a shared network disk to copy data to the appropriate user, caused lots of problems and confusion. This was quickly resolved by using Solid Edge with

Insight. Another benefit is the ability to place all standard parts in a single place on the server, eliminating the need to copy parts for each new order. Král adds, "Using Solid Edge with Insight, Compuplast designers can easily search and make use of all data from a similar order for use with a new one. A process that previously took a week now takes only two to three days."

Improved calculation capabilities with Femap with NX Nastran

Compuplast uses Femap with NX Nastran for a number of calculations needs, including calculating extrusion heads and pin carriers (tools for creating cavities in

Solutions/Services

Solid Edge with Insight
www.siemens.com/solidedge

Femap with NX Nastran
www.siemens.com/plm/femap

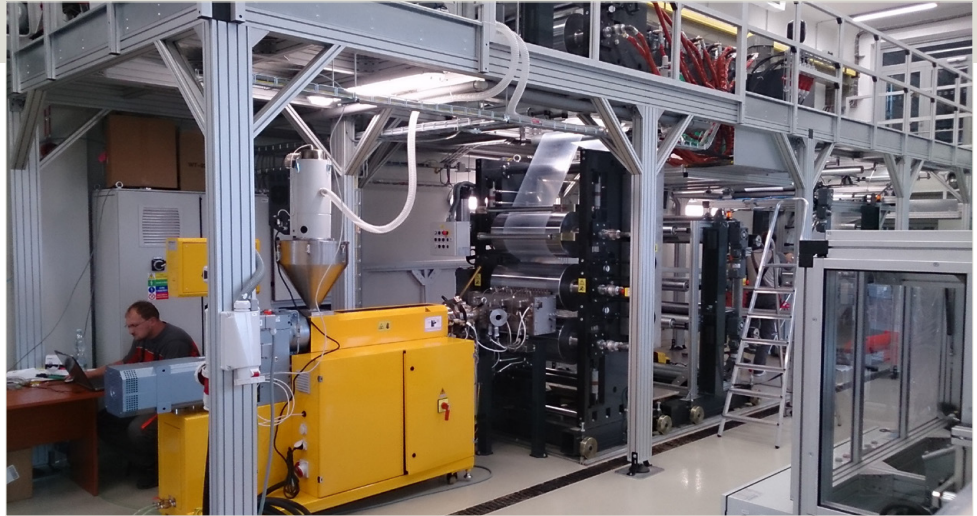
NX Flow
www.siemens.com/nx

Customer's primary business

Compuplast provides advanced plastics processing simulation tools and services to the polymer processing industry. The company is a one-stop shop for computer simulation analysis for most polymer processing techniques, including extrusion, thermoforming, blowmolding and injection molding.
www.compuplast.com

Customer location

Zlín
Czech Republic



profiles) in which there is a risk of ribs bending or even breaking off due to the high-melt pressure. Femap with NX Nastran is also used for the calculation of structure loads in which, for example, deflections or permissible stresses are checked.

Adding NX for rheological analysis

The company's continued development of various technical equipment has led it to employ Siemens PLM Software's NX™ software. Among the applications, NX Flow was used with Femap to address rheological analyses of liquid plastics in extrusion heads.

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