

CARBOMILL

ACHIEVING PRECISION PRODUCTION
IN RECORD TIME WITH DELMIA VERSION 6



Carbomill specializes in the production of carbon-fibre reinforced components. Machining of these parts place extreme demands on CAM programming, material handling and consequently require using the right tools.



Challenge:

Shortly after the company was established, production at Carbomill had to be up and running to satisfy customer expectations for rapid delivery of high quality products.

Solution:

The company uses Dassault Systèmes' DELMIA Version 6 (V6) solution to create its components made of fibre-reinforced materials and for mold design and construction.

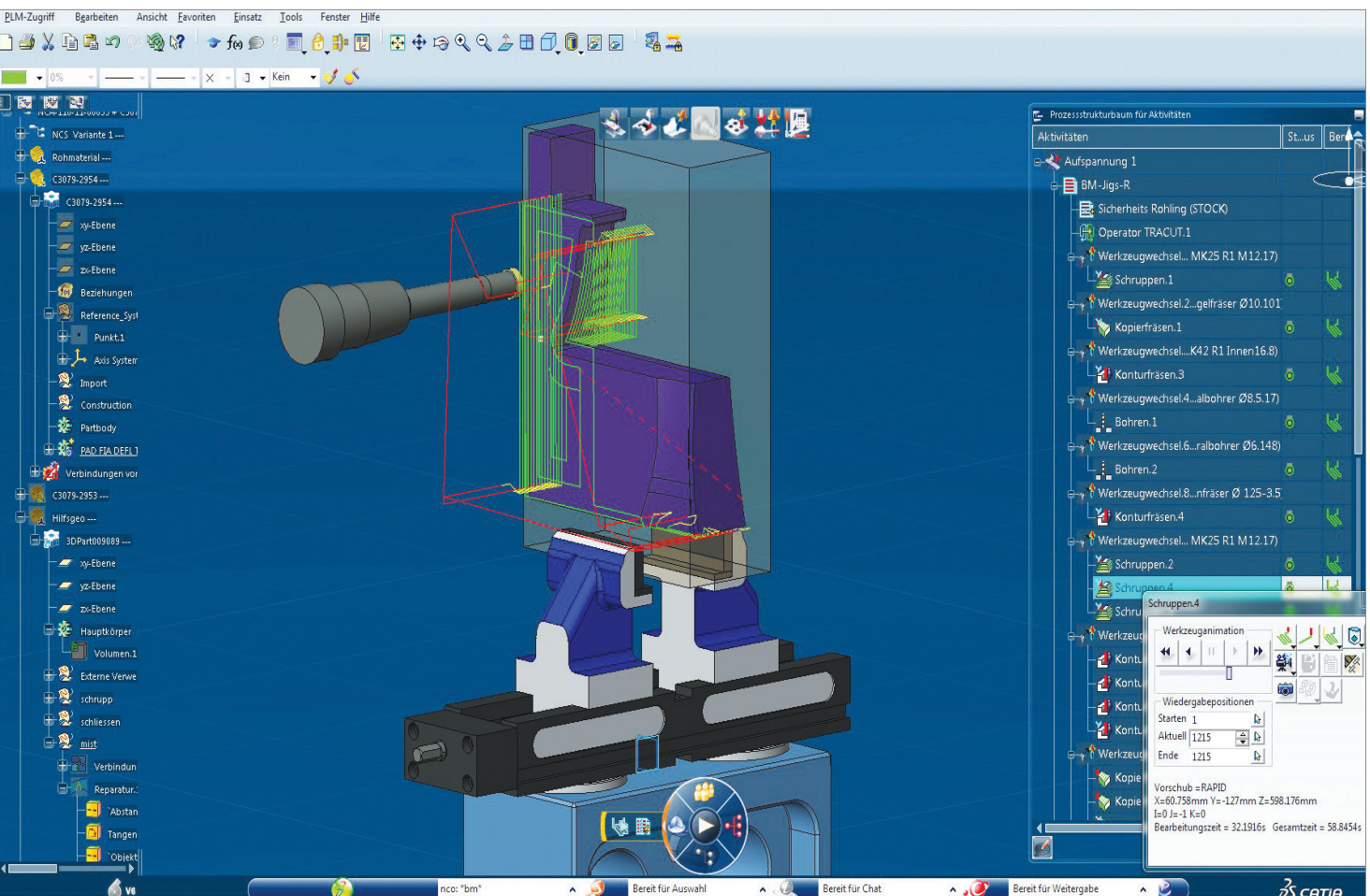
Benefits:

Just 24 hours after installing DELMIA V6, the company was already milling high-precision molds.

Swiss start up Carbomill specializes in the production of carbon-fibre reinforced components. Founded in June 2011, the young company faced some immediate challenges. "We could not afford to spend time on a start-up phase or a pilot project," says Patrick Meyer, Carbomill AG founder. "We had to operate efficiently from day one, otherwise the venture would have been deemed a failure."

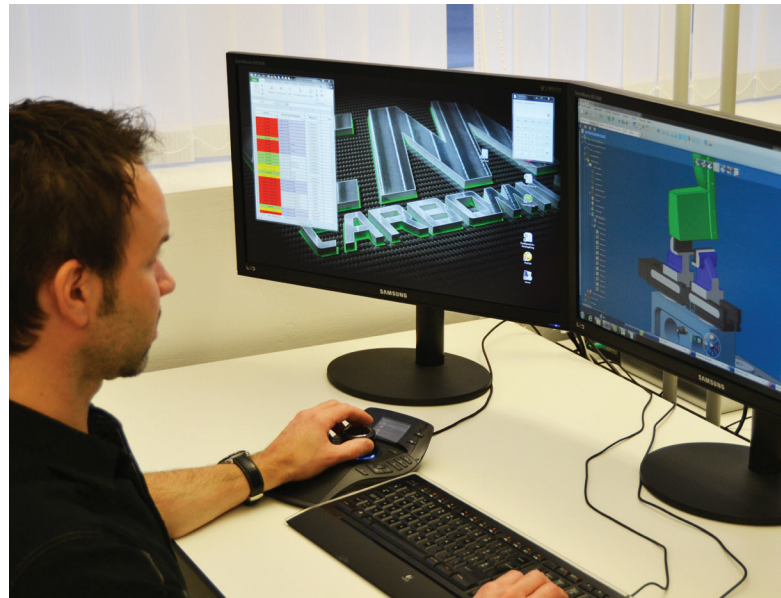
The most important condition the company had to meet was to have its processes in place and working. "It was absolutely essential that the software and its interfaces function smoothly," explains Meyer. In addition, the machining of carbon fibre reinforced plastic (CFRP) structural parts place extreme demands on CAM programming, material handling and consequently require using the right tools. "With our state-of-the-art and dynamic CNC-controlled five-axis milling machine, we offer machining quality that is second to none in surface quality and precision," he says.

"Due to our specialized knowledge in the manufacture of parts made of fibre-reinforced materials, we are able to prevent structural damage to very expensive components that could arise from mechanical processing. Milling fibre-reinforced materials is a delicate process, starting with the CAM programming and extending through the clamping stage all the way to the actual machining."



“With DELMIA V6 Machining, we benefit from powerful new features such as the user interface, which is clear and efficient. Fewer clicks are required to complete each task, making designing more logical and intuitive.”

– Patrick Meyer Founder Carbomill



POSITIVE EXPERIENCES RIGHT FROM THE START

DELMIA V6 Machining enables manufacturing companies to plan, detail, simulate and optimize their machining processes. Through close integration between machine tool simulation and the definition of the machine tool paths, NC programmers can detect and solve potential problems at an early stage during NC programming. “With DELMIA V6 Machining, we benefit from powerful new features such as the user interface, which is clear and efficient. Fewer clicks are required to complete each task, making designing more logical and intuitive,” says the young entrepreneur.

Meyer also particularly appreciates the new integrated machine tool data management function. “This enables complex machine tool constructions to be managed without requiring additional separate products as was previously the case,” says Meyer. And thanks to faster processing times, operation and simulation are now much quicker.

In the Version 6 environment, Carbomill can easily access up-to-date data such as production resources, NC programs, component versions or clamping information. The storage and reuse of intellectual property in DELMIA V6 enables a higher level of standardization and automation when generating NC programs. Since Carbomill’s data is now stored in a central database rather than a file-based system, employees have rapid and convenient access to data.

Documentation can now be easily traced and retrieved on screen with little effort. “This is very beneficial, especially for follow-up orders that are often very similar to previous orders,” explains Meyer. “We can effortlessly view everything on screen that is relevant to the new job. In this way, new components that are similar to previous ones can be easily manufactured, saving precious time.” Thanks to the integrated database and the ease of use of DELMIA V6 Machining, we save up to 20% in the CNC programming process,” says Meyer.

COMMON PLATFORM FACILITATES COLLABORATION

A single secured environment from design to production facilitates better collaboration among internal and external persons involved in projects. The use of a common platform



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Focus on Carbomill

Products: Carbon-fibre reinforced components.

Headquarters: Seon, Switzerland

For more information: www.carbomill.ch

with integrated communication functions improves collaboration between the designer and the NC programmer or between the NC programmer and the machine operator. DELMIA V6 Machining is located on its own server, which allows external access and support.

Altogether, the installation took three days. Transfer of the old data records was then a simple process. After four-days of training, everything was implemented and full production began. "Just one day after the DELMIA V6 installation, we were milling parts and shipping them to satisfied customers!" recalls a delighted Meyer.

"We needed our processes in place and working rapidly, and we were able to achieve this goal thanks to the efficient collaboration between Dassault Systèmes, Carbomill and Dassault Systèmes' local partner responsible for sales and onsite support."

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