

Modelleria CPC

“ Thanks to CimatronE, it's never happened that we couldn't manufacture a part, no-matter how complex it was.

Gianpiero Marchi, CPC

Industry Molds and prototypes, specializing in the aeronautical and automotive industries

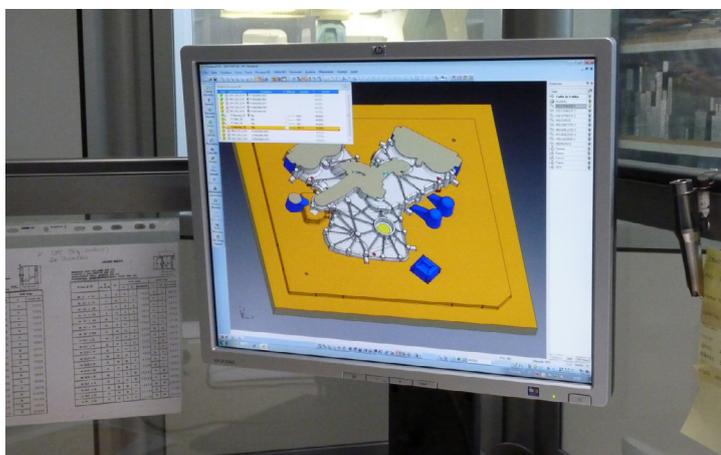
Location Modena, Italy

Website www.modelleriacpc.com

Established in the 1960s in Modena, Italy, Modelleria CPC produces molds for composites (carbon fiber), resin, steel and aluminum prototypes, and complex mechanical parts. Specializing in the aeronautics and automotive fields, its customers include major motor racing brands participating in the Formula One and MotoGP championships. With over 140 employees, CPC has become one of the largest and most important mold makers in Europe.

The company was among the first in its sector to use a 3D CAD/CAM system and to develop 3- and 5-Axis toolpaths in CNC machines with its adoption of Cimatron software in the early 1990s. Cimatron's solutions have evolved significantly since that time and CPC has continued to benefit from the new technologies and functionality over the years.

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The Challenges

- Remaining competitive by using the most advanced technologies for manufacturing complex parts, particularly those with an aerodynamic shape.
- Undertaking quick and effective machining with access to a full range of 5-Axis strategies.
- Ensuring that NC programming procedures are both error-free and the most suitable for the job at hand.
- Reducing programming time by maximizing opportunities for automation in the production process.

The Solutions

CimatronE's MoldDesign and NC

The Results

- As a customer of Cimatron for 20 years, CPC has access to the latest machining technologies and capabilities that can handle any mold, be it simple or complex. Cimatron has also welcomed the company's suggestions for additional functionality that have since been integrated into the software.
- CPC's 5-Axis jobs are handled quickly and with greater ease with CimatronE's range of programming functionality, user-friendly interface, NC process manager, and templates.
- With the software's simulation and verification capabilities, CPC is able to ensure safe machining and effective procedure evaluation.
- CPC has been able to automate much of its NC programming with CimatronE, utilizing the most advanced automation-friendly technology on the market.

For more information, please visit www.CimatronE.com

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One of the challenges that CPC has faced is working with the aerodynamic shapes of race cars. Originally this involved manually assembling every toolpath and creating support geometries outside of the part in order to facilitate 5-Axis manufacturing. However, "today CimatronE allows us to use complex 5-Axis technology without any effort, providing all the necessary strategies for this type of milling," says Gianpiero Marchi, one of CPC's owners. "A collection of features, capabilities and utilities enable our NC programmers to optimize the system to their work flow and to re-use work from previous projects, with a user-friendly interface and NC process manager."

An aspect of CimatronE that CPC has found particularly useful is the software's simulation and verification capabilities. Aside from safe machining, the capabilities offer the programmer the confidence of knowing that they have programmed the procedures that are most appropriate to their aims. The programmer can also evaluate any procedure and make decisions by inspecting the "remaining stock map", which displays a color-coded dynamic image of the state of the stock in comparison to the part after the procedure.

CPC has also benefited greatly from CimatronE's automated procedures. "With only a few commands, the system is intuitively able to choose the best possible strategy to manufacture the part quickly and properly," says Marchi. "Sure, full automation is difficult and complex to get, but we have noticed that CimatronE is way ahead on that front."

Marchi acknowledges the support and openness of Microsystem, Cimatron's Italian subsidiary, particularly in taking on board many of CPC's ideas for product improvement: "We have always had a very good relationship with Microsystem and its technicians, who have always supported us with strong cooperation. We feel great satisfaction in seeing many of our suggestions included in newer versions of the software."



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