

Mirgor

Increasing design productivity by 30% with CATIA PLM Express

With the use of CATIA PLM Express in some key stages of new product development, we have increased the reuse of our designs and hence cut back on time spent on modification and reengineering processes by over 30%.



Juan Kulha
CATIA Designer
Mirgor

Challenge

Mirgor needed to maintain its leading market position in Latin American by supplying innovative products in line with evolving customer requirements and specifications.

Solution

Mirgor uses CATIA PLM Express including CATIA Analysis and Digital Mock-Up modules to automate the design of its air-conditioning tubing systems.

Benefits

The use of CATIA increased Mirgor's design team's productivity by over 30%, which allowed the company to position itself as the certified provider of parts and products for the automotive and consumer cooling market.



Climate control systems leader in Latin America

Founded in 1983, Mirgor S.A. is headquartered in Argentina. It develops and manufactures climate control solutions. Originally focused on the automotive industry, the company has expanded its portfolio to include the design and production of heat exchangers and air-conditioning systems for consumers.

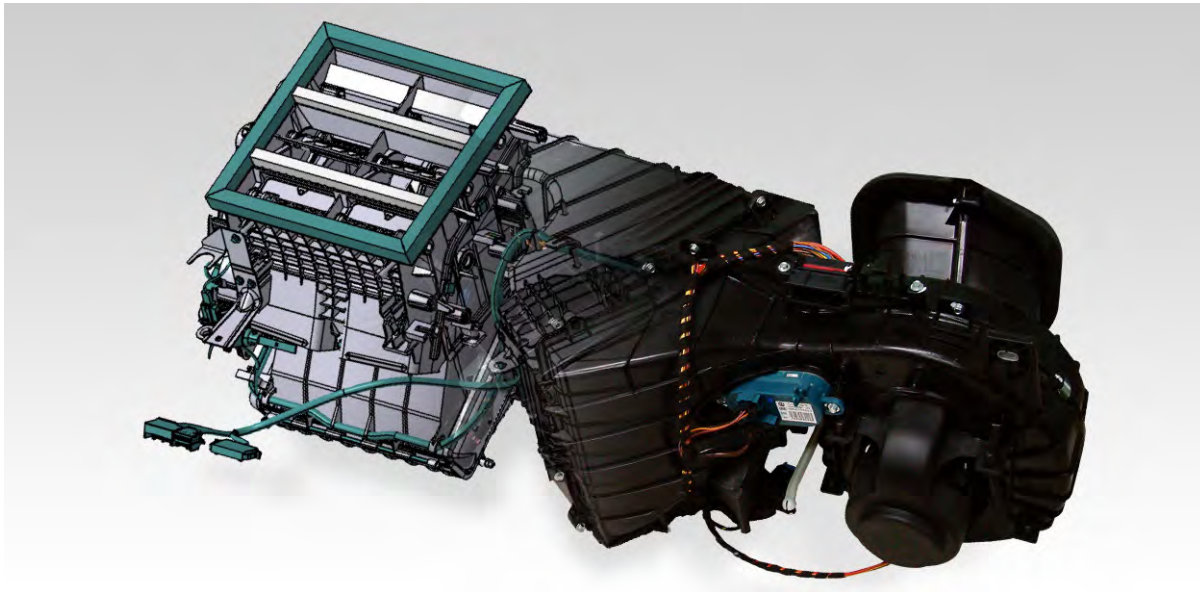
In the automotive sector, Mirgor's main activity focuses on supplying climate control solutions. However, Mirgor also develops other automotive components such as instrument panels, wheels and small parts as well. Mirgor has six factories throughout Argentina and its principal automotive customers in the region include PSA Peugeot Citroen, Mercedes Benz, Volkswagen, Renault, and General Motors among others.

Improving the design processes

Mirgor began using CATIA in 1997 primarily for mechanical design and complex surfaces. The benefits were immediate – a more realistic and precise design experience, greater design precision and reliability, and the ability to design within a contextual framework. Over the last 12 years, Mirgor designers have reported a 50% reduction in time spent on new product design, modification and reengineering processes.

Despite these improvements, Mirgor wanted ensure its leadership position in Argentina's cooling systems market by supplying better products in line with new customer specifications. In 2007, Mirgor acquired CATIA PLM Express including CATIA Analysis and Digital Mock-Up (DMU) modules.

"The solution provided greater dynamism and interactivity to the design process, facilitated designers' learning abilities, and made it possible for designers to handle greater product design complexity, said Walter Calvanese, Head of Mirgor's Technical Office. "With CATIA PLM Express, Mirgor's designers saved time by reducing modification and reengineering processes by 30%. The solution reduced the number of errors detected and corrected at the design stage and provided greater design validation by tapping into structural behavior tools during the virtual testing stage."



For over ten, years we have been loyal users of CATIA as this solution has systematically helped us reach our yearly business goals.



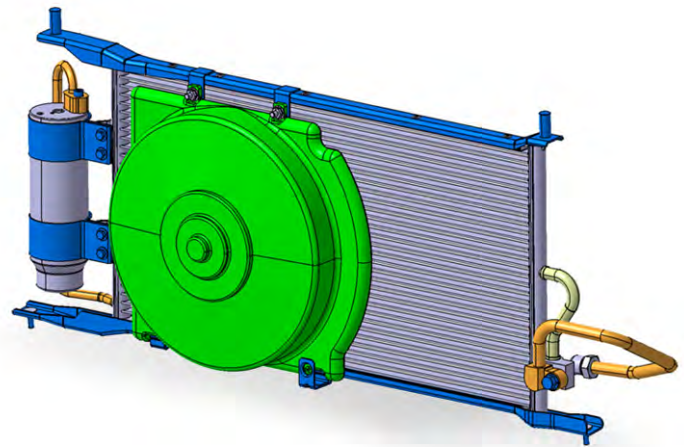
Walter Calvanese
Technical Office manager
 Mirgor

Optimized condenser designs for General Motors

CATIA was a clear asset during Mirgor's work for General Motors in Latin America. Mirgor worked on the Chevrolet Corsa 4200 project as part of a General Motors contract to develop an air-conditioning condenser for the Chevrolet Corsa model. Originally, the project was awarded to a Mirgor competitor in Brazil.

With the help of Dassault Systèmes, through its value selling partner in Latin America, Teckdes, Mirgor redesigned the brackets using CATIA Analysis and its finite element analysis capabilities to test the brackets virtually using a variety of physical performance criteria and specifically testing performance behavior under vibration scenarios typical of a moving car. "The results surpassed our expectations. The virtual context allowed us to reach a design we knew would not be impacted by external forces such as car vibrations. We produced initial samples and sent them to General Motors' plant in Brazil so they could complete track durability tests knowing that the part design would not fail," affirmed Calvanese.

Product trials consisted of driving a car over all sorts of terrain in adverse climatic conditions for 50,000 km over a period of six months. The designs were tested every 10,000 km to make sure there was no deterioration. "The road test was declared a success by General Motors Brazil. At once, negotiations started with GM Argentina, with a view to produce the parts right here in Argentina. Today, Mirgor is in charge of making these condensers for General Motors Argentina," said Calvanese.



Dassault Systèmes
 10, rue Marcel Dassault
 78140 Vélizy-Villacoublay
 France
 Tel: +33 (0) 1 61 62 61 62

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