



Image courtesy of Autobuses AGA ©

## Buses and special vehicles

# Autobuses AGA de Colombia SA

The manufacturer uses SprutCAM to reduce costs of mould production for fiberglass parts from 33 to 50 percent

Founded under the trade name ARMANDO GUTIERREZ ACEVEDO and Co., on June 10, 1977, with the delivery of the first bus for Copetrán, it was launched as Autobuses AGA. Throughout these years Don Armando has led the Company as CEO.

Autobuses AGA has a wide recognition for the excellence of the intercity buses they produce. They are recognized by astounding designs, technological advances in materials selection and processes, also the quality and durability of their products.

In their search to lead and improve the processes of production of buses and special vehicles, they decided to implement the use of computerized numerical control technology to manufacture moulds, which represents a fundamental part in the development of this type of products. For this reason, they decided to use SprutCAM as a tool to program in an agile way and thus improve the process of expansion of his business.



### Product

SprutCAM 5 axis + FBM + HSM

### Business Challenges

- Support the production of moulds for diversified pieces with complex shapes.
- Compress the production cycle and reduce scheduling time to meet customer demands.
- Reduce manufacturing costs of mould production.

### Keys for success

Machining a wide range of moulds for parts used in different designs. Integrate CAD and CAM solutions for a more efficient flow.

### Results

The first machined product was produced only one week after the implementation of the software successfully. Reduction of costs for machining of medium and large moulds in 5 axes from 33 to 50 percent.

## Solutions/Services

SprutCAM 5ax HSM  
[www.sprutcam.com](http://www.sprutcam.com)

## Customer main activity

Autobuses AGA de Colombia SA is a company dedicated to the manufacture and assembly of buses and special vehicles, including in its portfolio preventive maintenance services, spare parts sales, corrective maintenance, exterior design and technical assistance.

## Customer Location

Duitama – Colombia

## Partner Information

[www.autobusesaga.com](http://www.autobusesaga.com)

## Long-term benefits with Advanced Simulation CAM

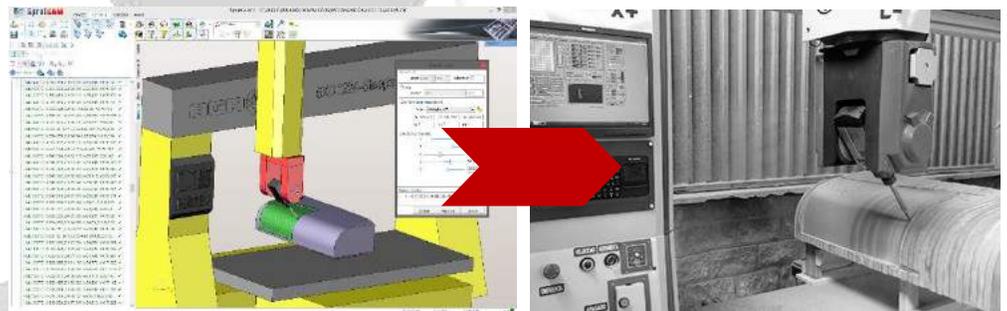
Now that many of its competitors also have 3D CAD technologies, Autobuses AGA implements CAM technology, to extend its competitive advantage.

By being able to integrate design solutions with SprutCAM, the manufacturing area can begin programming and generating G code, while designers are developing the models, minimizing time from design to manufacturing.

The machine simulation mode allows them to visualize any collision in the machined components that may occur, for example, if a material with a very low safety distance is machined by moving the 5 axes continuous.

The Feature Based Machining (FBM) helps to automatic generate the machining process based on the information extracted from the recognized features and some kind of a Machining Knowledge Base.

Mauricio Malaver (Facilitator of Innovation and Development) concludes: "The permanent accompaniment of XMARTPLM and its CAM software solution, SprutCAM, have made us a more competitive company in the automotive industry."



“We want to generate technological development in province, where XMARTPLM as an ally in innovation, assists us in improving our technology-based knowledge.”

Armando Gutiérrez Acevedo  
 President & CEO  
 Autobuses AGA de Colombia SA




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