COMPANY
Frumecar

LOCATION
Murcia

SOFTWARE
Product Design & Manufacturing Collection ®
Vault Professional ®
Inventor ®
AutoCAD ®
Inventor Tolerance Analysis ®
VRED ®

Frumecar

Transforming the concrete industry, a 30-year journey

3D machine plane simulation | **Source**: Autodesk

« The flexibility provided by the Product Design & Manufacturing Collection, with the use of virtual reality, allows verifying the assembly on the field, taking advantage of the exploded information and components integrated in the ERP. The process becomes more practical, easy to assemble and simple to transport in standard containers. »

– **Carlos Torregrosa**
Senior Vice President
Frumecar

Digitalization offers a stronger future for customers

It is impossible to conceive of current or future development without the presence of concrete, a key material in the creation of our urban landscape. Frumecar, a company dedicated to offering solutions to manufacturing, transport and digital technology within the concrete industry, has a clear idea: digital transformation and Industry 4.0 are vital for the survival of the sector.

This vocation for innovation, which is part of the company's DNA, has been the key to Frumecar's greatest milestone in its 30 years of existence: to overcome the global crisis in the construction sector and internationalize to reach more than 70 countries. Autodesk has been a companion on this journey.

FRUMECAR
Concrete, innovation and people.

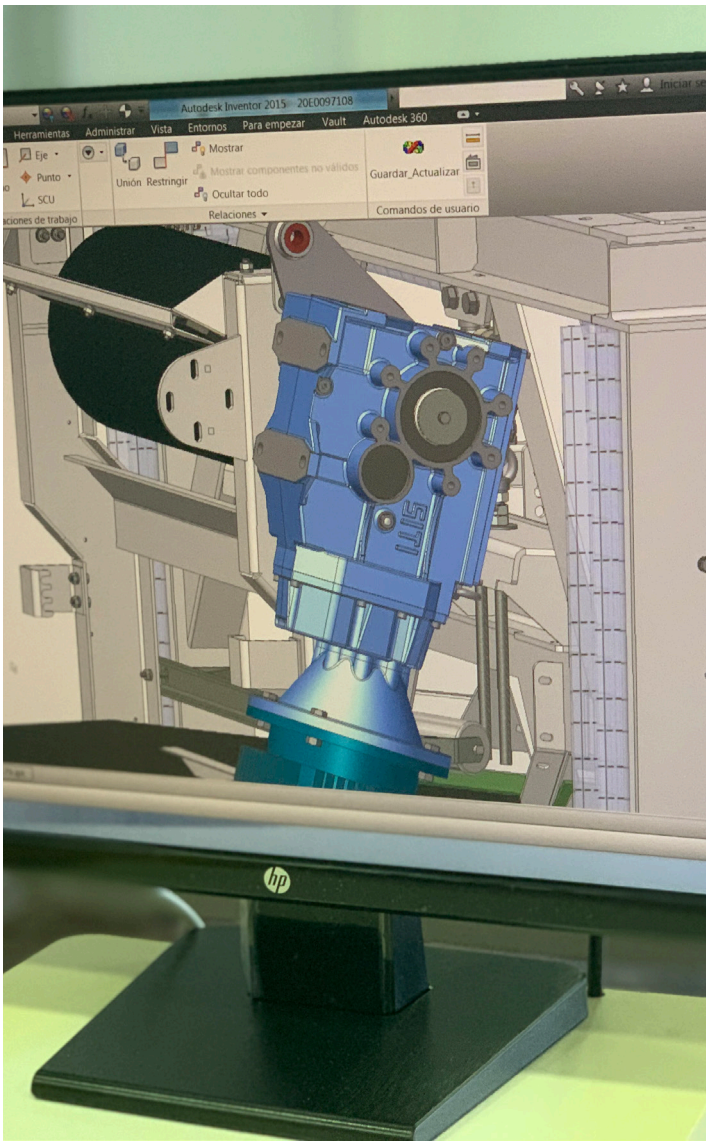
The foundations of Frumecar's digital transformation

From the development and manufacture of the first concrete plants in 1988 and the launch of the SCADA control equipment in 2000, to the sale of the first international plant at the Bauma international exhibition in Munich in 2007, the company has kept unmodified its principles of quality and aim to serve.

Innovation has been the true driving force and heart of the business, and Frumecar offers its customers complete quality, using the most effective building techniques and best materials, making the most of all the advantages that technology provides.

Autodesk solutions have been a turning point in engineering and construction, moving from the concept of drawing to virtual manufacturing using Inventor, the 3D design software.

The use of Autodesk software, implemented by Asidek, allowed the company to move from 2D design with AutoCAD to 3D using Inventor, which was a spectacular qualitative leap that made it possible to start manufacturing virtually with Fusion 360.



Component Modeling | **Source**: Frumecar

VR testing of a machine | **Source**: Autodesk

ECA 1000 | Source: Frumecar

ASIDEK
CT SOLUTIONS

AUTODESK.

Virtual Manufacturing of the MODULMIX 3000C Plant | **Source**: Frumecar

Reinventing the product catalogue

Frumecar offers complete solutions with a wide range of products and services that cover concrete plants, recycling plants and Intelligent Systems, the new business line. In addition to this extensive catalogue, the company's international expansion is based on modularity and logistics optimisation

As Carlos Torregrosa, Senior Vice President of Frumecar, explains, the flexibility provided by the Product Design & Manufacturing Collection, together with the use of virtual reality, allows the verification of the assembly in the site, taking advantage of the information from the exploded views and components integrated in the ERP. The process becomes more practical, easy to assemble and simple to transport in standard containers.

In addition to simplicity, a lot of collaboration is needed in the concrete industry. The use of Vault, Autodesk's data management software, has made it possible to guarantee the traceability of Frumecar's designs, optimising their change management and, at the same time, creating collaborative working environments.

This working scheme allowed the configuration of their Ecopapel project, which makes it possible to extract information from the previous 3D and 2D design and to integrate all the data within Vault in the central ERP program. In this way, all the metadata of the product designed, such as the code, material, or description of each component, can be automatically exploited.

Cost reduction is key for business

The digital transformation process generates key advantages in business development, such as the reduction of costs due to assembly issues, which do not happen or are reduced to a minimum.

In the words of Javier Molina, Frumecar's Engineering Director, "with Autodesk's virtual manufacturing tools, the company has achieved a significant reduction of around 70% of the costs caused by process incidents, and start-up times have been drastically shortened".

At the product level, dimensional optimization with Inventor Tolerance Analysis has enabled Frumecar to considerably cut logistics costs, as they are able to send any of their plants anywhere in the world inside standard containers.

Cement tank welding | **Source**: Autodesk

The age of connection and smart industry

Industry 4.0 is smart, made of digital innovations and technological solutions applied to the concrete sector. The future will bring the development of new lines of work such as the use of Big Data to further optimize the management of teams, as well as to simplify decision-making.

Frumecar's latest achievement took place in 2019 with the launch of a new business line: Frumecar Intelligent Systems, with the aim of integrating digitalisation into its products. Since then, the company bet on digital transformation, as Carlos Torregrosa points out, "the digitalization of production processes based on Big Data is transforming the ways of manufacturing and relating to customers".

With this view of the future, Frumecar has developed permanently connected plants and concrete mixers that transmit information in real time to optimise business performance, thanks to the Industrial Internet of Things (IIOT), using artificial intelligence.

In addition, they have already begun working on the autonomous power station project, which allows direct connection and operation with the mixer control centre via a mobile phone and a QR code.