



DCF MEXICANA, S.A. DE C.V. ADVANCING LABELING AND MATERIAL HANDLING MACHINERY DEVELOPMENT WITH SOLIDWORKS SOLUTIONS



By moving from 2D to SOLIDWORKS 3D design, analysis, product data management, and technical communication solutions, DCF Mexicana accelerated development and improved the accuracy of its high-speed labeling and material handling machines, resulting in dramatic business growth.



Challenge:

Speed up development of high-speed labeling and material handling while improving accuracy and performance.

Solution:

Implement SOLIDWORKS 3D product development solutions, including SOLIDWORKS Standard design, SOLIDWORKS Professional design, SOLIDWORKS Premium design and analysis, SOLIDWORKS Electrical design, SOLIDWORKS PDM Professional product data management, and SOLIDWORKS Composer technical communication software.

Benefits:

- Cut development process by 50 percent
- Reduced electrical system design time by 50 percent
- Grew business by 500 percent
- Increased design accuracy resulting in improved machine performance

DCF Mexicana, S.A. de C.V., is the leading Mexican original equipment manufacturer (OEM) of advanced, high-speed labeling and material handling technology, machinery, and equipment. Based in El Salto, Jalisco, Mexico, the company provides effective automation solutions for labeling and material handling ranging in size from a roll of mints to an automobile, with applications at speeds as high as 400 packages labeled per minute. DCF Mexicana serves a growing set of customers, including large, multi-national corporations like Proctor & Gamble, Pepsico, Bimbo, Kimberly Clark, and Fresenius Kabi.

Founded in 2000, DCF Mexicana began developing its highspeed labeling and material handling using AutoCAD[®] 2D design tools. However, according to Director General Jorge Smart Cruz Arenal, the automation machinery manufacturer soon discovered that it needed a 3D design platform to increase throughput and support growth.

"In 2007, we decided to move to 3D to speed up our development process, increase accuracy, and improve machine performance," Cruz recalls. "Our business was growing, and we needed to improve our product development approach to support increased throughput by moving to 3D."

DCF Mexicana standardized on SOLIDWORKS® design software because it is easy to learn and use, includes automated design configuration tools, and provides access to a range of integrated add-on solutions. Since standardizing on the SOLIDWORKS platform, the company has added SOLIDWORKS Professional design, SOLIDWORKS Premium design and analysis, SOLIDWORKS Electrical Professional design, SOLIDWORKS PDM Professional product data management, and SOLIDWORKS Composer technical communication software solutions.

"It's so much easier to work in SOLIDWORKS," Cruz says. "Plus, the integrated solutions that we've added have all contributed

to achieving our goals of compressing design cycles to shorten customer delivery times, enhancing machine performance to boost customer satisfaction, and increasing accuracy to reduce development and assembly costs."

DESIGNING CONCURRENTLY INSTEAD OF CONSECUTIVELY

Since moving to SOLIDWORKS 3D solutions, DCF Mexicana has cut its development cycles by 50 percent, while simultaneously increasing accuracy—reducing scrap and rework in the process— and improving machine performance. "Before we moved to SOLIDWORKS, we use to tackle just one project at a time, which limited our ability to efficiently handle the greater throughput that accompanies growth," Cruz notes. "With SOLIDWORKS and the other integrated solutions that we've added, we're currently working on 13 projects at the same time."

"By utilizing SOLIDWORKS 3D design capabilities like design configurations, automated sheet-metal and large assembly tools, and weldments—as well as the ability to leverage our growing SOLIDWORKS library of assemblies and components we can work on projects concurrently instead of consecutively while increasing accuracy," Cruz adds. "The improvements to our product development process that SOLIDWORKS has enabled allow us to support growth of more than 500 percent."

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– Jorge Smart Cruz Arenal, Director General



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ADDING ELECTRICAL DESIGN, TECHNICAL COMMUNICATIONS

DCF Mexicana added SOLIDWORKS Electrical Professional design software to integrate and accelerate electrical system design, and SOLIDWORKS Composer technical communication software to automate the development of user manuals and product documentation. "The addition of SOLIDWORKS Electrical software not only helps speed up the development and improve the accuracy of electrical schematics, it also enables us to complete electrical design in parallel with mechanical design, show electrical enclosures to customers in 3D, and generate a single set of unified bill of materials (BOM) information," Cruz stresses. "Instead of entering electrical system BOM information, including wire strip lists and diagram lists, manually, which is prone to error, we can generate this information automatically when the design is finished, which has contributed to our dramatic improvements in accuracy.

"We added SOLIDWORKS Composer software to automate the development of end user manuals, but we've also found the software to be an effective sales tool, for showing how a machine will operate, and producing marketing materials."

INTEGRATING PDM AND ERP

By implementing SOLIDWORKS PDM software, DCF Mexicana realized the automated workflows, revision controls, and formalized processes that manage, organize, and support its concurrent product development approach. The company is currently integrating the SOLIDWORKS PDM system with its SAP enterprise resource planning (ERP) system to achieve additional internal efficiencies.

"As we've grown as a company, we've encountered many product development challenges," Cruz says. "From electrical design to product documentation to product data management, integrated SOLIDWORKS applications have provided the solutions that we've needed to increase throughput and sustain our growth rate. Our next step in our continuous improvement effort is to utilize SOLIDWORKS Simulation and SOLIDWORKS Motion analysis tools to further boost product development performance."



DCF Mexicana added SOLIDWORKS Electrical design software to its SOLIDWORKS installation to realize similar productivity gains in electrical system design that it enjoyed using SOLIDWORKS mechanical design solutions.

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