

# WHY CHOOSE SOLIDWORKS PLASTICS?

## A BUYER'S GUIDE



### OVERVIEW

SOLIDWORKS Plastics takes the guesswork—and the risk—out of designing plastic parts, allowing you to accurately assess manufacturability, functionality, and quality, early in the design process. SOLIDWORKS Plastics accurately simulates the flow of molten plastic during the injection molding process, enabling users to quickly identify and correct manufacturing defects in parts and molds. By shortening cycle times, reducing product defects, and eliminating costly mold rework, SOLIDWORKS Plastics lets users make better products and bring them to market faster.



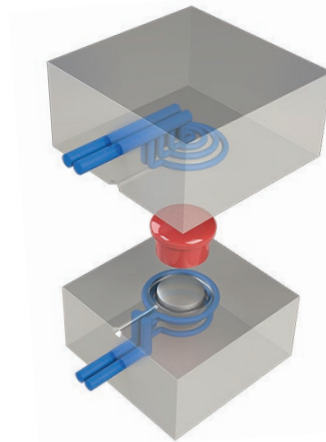
## A CASE IN POINT

Carlisle Food Service Products is a leading manufacturer of foodservice, sanitary, and healthcare products and equipment. Carlisle designs and manufactures professional-grade products using SOLIDWORKS Premium, SOLIDWORKS Plastics, and SOLIDWORKS PDM Professional.

Competitive pressures to boost productivity led Carlisle to reassess its 3D design software needs. After thorough review, the company added SOLIDWORKS Plastics and SOLIDWORKS PDM Professional software in order to improve product design for manufacturability, reduce the number of prototype molds required, and streamline development processes.

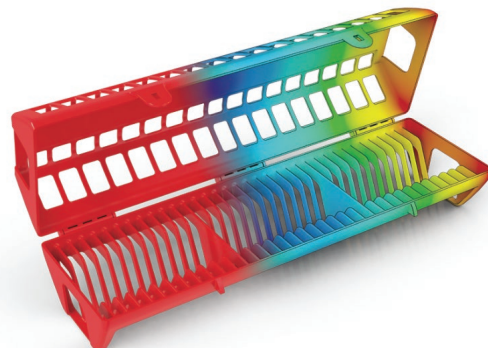
SOLIDWORKS Plastics injection-molding simulation and analysis software enabled Carlisle to bring simulation and analysis functions in-house, lessen the company's reliance on outside injection-molding consultants, and improve development and production efficiency. Since implementing SOLIDWORKS Plastics, Carlisle is already realizing the cost savings potential.

By completely eliminating outsourced flow studies, Carlisle saved an estimated \$20,000 in the first year. This equates to 12 to 15 weeks of time saved because the company no longer struggles with long lead times for analysis completion. The software has also helped reduce production cycle times for many of its products.



"We can do more than simply validate the design of a part or optimize mold geometry. We can study how plastic cools over time, specify what the mold wall temperature is as a simulation input, and assess the eddies and shear in the flow of molten plastic in an integrated modeling environment. With SOLIDWORKS Plastics Premium, we can optimize the part and the mold."

– Christopher Mullens,  
Team Lead, RapidMade





## THE SOLIDWORKS PLASTICS ADVANTAGE

With SOLIDWORKS Plastics, designers, engineers and analysts can easily and accurately simulate plastic flow within molds, rapidly identifying possible problems or defects. The system enables users to create multiple simulation models to accommodate different materials, temperatures, or other conditions, and to maintain visibility and control throughout the mold-making and manufacturing processes.

SOLIDWORKS Plastics includes a user-customizable interface and customizable function sets, enabling users to optimize productivity by adapting the program to suit their individual needs and workflows. As with all SOLIDWORKS specialized functions, Plastics users can easily collaborate with their colleagues, whether onsite, offsite or anywhere in the world.

SOLIDWORKS Plastics lets users eliminate expensive mold re-works, optimize part quality, and ensure manufacturability in a familiar, efficient environment.

- **Prevent manufacturing errors.** SOLIDWORKS Plastics lets users easily identify and correct potential manufacturing errors during the design process.
- **Eliminate expensive mold rework.** By sidestepping rework, manufacturers can save thousands of dollars and weeks of lost production time.
- **Reduce the need for secondary processes.** An optimized molding process cuts the need for secondary processes, such as polishing, deburring, or flash removal.
- **Optimize manufacturing cycle times.** Reducing cycle time requirements enables more cycles and more productivity.
- **Perform tests quickly and accurately.** Complex simulation functions are conducted through an intuitive, streamlined interface.
- **Reduce material waste.** Optimal placement of stringer channels and vents reduces material consumption.

### The Fast Track to Better Parts and Processes

SOLIDWORKS Plastics lets design engineers create with confidence. It allows them to easily and accurately model the behavior of molds and material during the design process, which makes it easy to optimize designs for quality and manufacturability.

**Shared design and materials data** helps ensure compatibility with other project components and compliance with other part requirements.

**Maintain multiple simulation configurations** to account for differences in materials, operating temperatures, machine types or other variables.

**Easily alternate between design and analysis functions** to increase productivity.

Direct integration with SOLIDWORKS embeds testing into the design process, eliminating the need for costly external studies.

**Familiar interface and functions** mean that minimal additional training is needed for SOLIDWORKS users.



**Work directly from design data** without the need for file import or export.

**Benefit from an established, proven platform** with a vast global user base.

With SOLIDWORKS Plastics Professional injection-molding simulation software, Ambix can more efficiently and cost-effectively resolve manufacturability issues without compromising design intent.



“Instead of discovering errors related to underestimating draft, not allowing for shrinkage, failing to identify air traps, having knit lines in critical areas, or creating stresses by placing gates in the wrong locations, we can use SOLIDWORKS Plastics Professional to resolve these types of issues before cutting a mold. Our success rate is so high because we’ve validated close correlation between the results we get from SOLIDWORKS Plastics Professional and actual production.”

– Jeffrey D. Nicoll, President,  
Ambix



“Our injection mold specialist used SOLIDWORKS Plastics software to determine where the gating locations should be to minimize the appearance of sink marks and knit lines. The simulations also enabled us to understand that by keeping the device in the mold a little longer, and at higher pressure, we could contain the sink marks to an acceptable level. SOLIDWORKS tools saved us time while improving quality.”

– Mario Simoes, Chief Engineer,  
Center for Advanced Medical  
Learning and Simulation

## LEARN MORE

To learn more about SOLIDWORKS Plastics solutions, visit [www.solidworks.com/plastics](http://www.solidworks.com/plastics) or contact your local authorized SOLIDWORKS reseller.

SOLIDWORKS systems requirements are posted on the SOLIDWORKS website at [www.solidworks.com/systemrequirements](http://www.solidworks.com/systemrequirements).

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