



CASE STUDY /

## SpaceClaim + Billet Designs

"I found it tremendous working in cross sections in Ansys SpaceClaim. I could see everything at a glance and quickly understand how a part could be designed, redesigned or fabricated. My main goal in software selection was using something that was fast, easy and efficient, and nothing but SpaceClaim satisfied my criteria."

**Steven Aguirre**  
CEO / Billet Designs

As the owner of a small engineering firm, Billet Designs, Steven Aguirre has to balance product design with marketing, order fulfillment, sales, manufacturing and general development of his product line. While designing a CO2 dispenser for a beverage growler, his primary concerns were to design and produce an optimal product while efficiently using limited resources in a typically short product development cycle.

## Ansys SpaceClaim Ease-of-use Gives Billet Designs Fast, Efficient and Flexible CAD

### Company Description

Billet Designs is small engineering firm with a wide variety of offerings for their clients, including product design for automotive and consumer products, programming, automation, PLC controls and robotics. Their main focus is on the design of electromechanical components of consumer products.

### Challenges

Years ago Aguirre shifted his business model, outsourcing assembly, order fulfillment and inventory management so he could focus on product design. He had previous experience with popular 2-D and 3-D CAD tools, but he needed a better way to create 3-D models and make changes quickly. Speed and efficiency was of the essence, but every tool he tried was either too cumbersome or inadequate.

### Technology Used

- Ansys® SpaceClaim®

### Engineering Solution

Aguirre tried SpaceClaim and loved it immediately — its simple user interface with minimalist approach of menus, buttons and options was perfect for an engineer like Aguirre who was not a dedicated CAD engineer. He quickly learned how to create a model and the best practices for adding dimensions. SpaceClaim gave him the flexibility to start down a given path with an idea, then change his design any way he wanted without penalty.

### Benefits

Aguirre now spends less time on keystrokes and more time engineering his design. He has also found the SpaceClaim repair tools invaluable, both for cleaning imported geometry or to modify design mistakes. In one case, a CNC shop said they could machine something as a cast part, but not as currently designed. Using SpaceClaim, he altered the design by filling in some rounds, changing draft angles to zero, and pulling some surfaces. Within 15 minutes the part was optimized for machining, saving him and his vendor time and money.



Figure 1. Billet Designs CO2 beverage growler head, designed entirely in SpaceClaim.

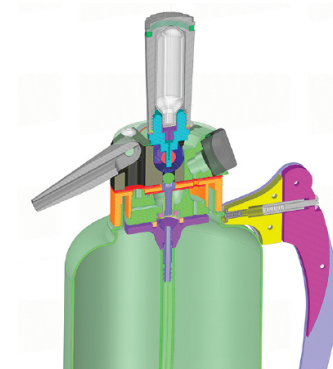


Figure 2. Working in SpaceClaim's cross section mode made visualization substantially easier.



Figure 3. Billet Designs complete CO2 beverage growler head system. Billet found SpaceClaim's manipulation and rendering capabilities particularly useful.

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