



3D Systems ZPrinter® is Pratt & Miller's Full-Color, In-House Champion

A leading innovator for automotive, commercial, military and aerospace industries, Pratt & Miller has found uses for its ZPrinter® that enhance its end-results and improve efficiency: two critical aspects for the overall success of its competitive business.

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Gary Latham
Lead Design Engineer
Pratt & Miller



When Pratt & Miller got its full color 3D Systems ZPrinter® to support its high-performance engineering and manufacturing operation, the company planned to use the machine primarily for marketing purposes to better communicate capabilities and boost enthusiasm for its products. As designers and engineers familiarized themselves with the ZPrinter, however, more applications occurred to them that expanded the role they initially outlined.

In terms of its marketing applications, lead design engineer Gary Latham says the visualization prints are very effective in engaging the attention, interest and business of many big name, big dollar contracts. Coupled with Pratt & Miller's reputation for excellence, the 3D prints have helped inspire confidence in Pratt & Miller's design promises. Printed 3D models have also proven effective for Pratt & Miller's own teams, who find the ability to 3D print parts for off-screen evaluation to be of great benefit in answering the demands of their timeline and quality standards.

Latham says that as a designer, handling and inspecting the full- or scaled dimensions of a part or product often inspires insight into what changes are necessary. “It’s amazing how influential a 3D part can be in helping you make a decision on something,” Latham said. Inspired by this line of thinking, Pratt & Miller now uses its ZPrinter to examine color-coded stress test prints so its designers can more clearly see what issues they are up against and where they need to make compromises in their designs.



With the success of this innovation, Pratt & Miller engineers decided to test how well ZPrints worked for mold designs, and were pleasantly surprised with the results. They discovered they could use the ZPrinter to create wax infiltration molds for carbon fiber part production. And as it turns out, the molds not only work remarkably well with wax infiltration to produce accurate parts with smooth surfaces, but they can be used for multiple runs.





This reusability translates to unexpected and appreciable benefits to their restricted timeline, allowing them to save time and materials spent on molds and reprinting. This helps them to focus their energies on propelling their designs forward.

The success of wax infiltration molds led to yet another innovation in the form of lost mold casting, which has enabled Pratt & Miller teams to achieve extremely complex parts with fully smooth interior surfaces, enhancing airflow. Unique and effective methods such as these are a tremendous part of the ZPrinter's contribution to Pratt & Miller, enabling the engineering house to breed better champions. Bringing ideas to life quickly and reliably means that Pratt & Miller wastes no time with anything short of the best in either software or prototyping. In fact, the full color 3D Systems ZPrinter saves Pratt & Miller time and has increased the profitability of their business. "It's ideal for what we're trying to achieve," says Latham.

