

EnvisionTEC Perfactory machine has the fastest build speed in the rapid prototyping industry; with four builds from the close of business on day one to the start of business on day 3, some 36 hours later.

Case Study



Visteon | Perfactory®

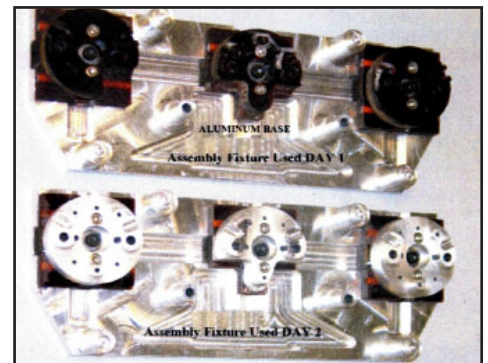
Driving tomorrow's technology today

Automotive component supplier Visteon successfully implements the Perfactory® system of 3D printers, saving time and increasing versatility.

Visteon is a leading automotive component supplier with over 80 years experience. With 170 design and manufacturing facilities in 26 countries and a turnover in excess of 17 billion dollars, they have become one of the highest awarded automotive suppliers for innovation and design in the world. Visteon has to come up with exact solutions for their clients needs and by utilizing the Perfactory machine from EnvisionTEC they achieve these goals.

Jim Carlisle, a Visteon Core Mechanical Engineer for climate control electronics, has been using EnvisionTEC's Perfactory machine on a regular basis

since the beginning of 2006. Mr. Carlisle has shared a few of his past successes of how the EnvisionTEC Perfactory machine has been an invaluable tool for his company.



His first story highlights how fast the EnvisionTEC Perfactory machine builds models for fit and function. Mr. Carlisle's team was creating a module assembly and used the Perfactory machine to build the module's housing and button components. These parts were built over night and the assembled the next morning. The assembly revealed an interference problem between one button and the components on the circuit board. As a result his team went back and redesigned the Solid model and started build #2. The build was finished at lunch and assembled only to find that the interference problem still existed. The design team made more changes to their design and build #3 was finished mid-afternoon. Once the parts were assembled the interference problem was gone, but a new problem was found. A light leak between the button and housing was visible. The team had enough time to go

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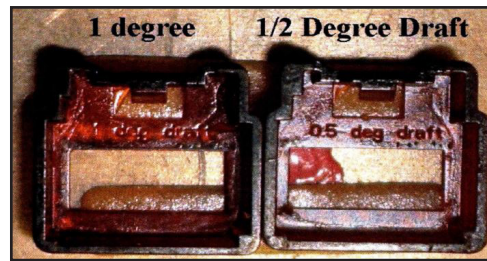
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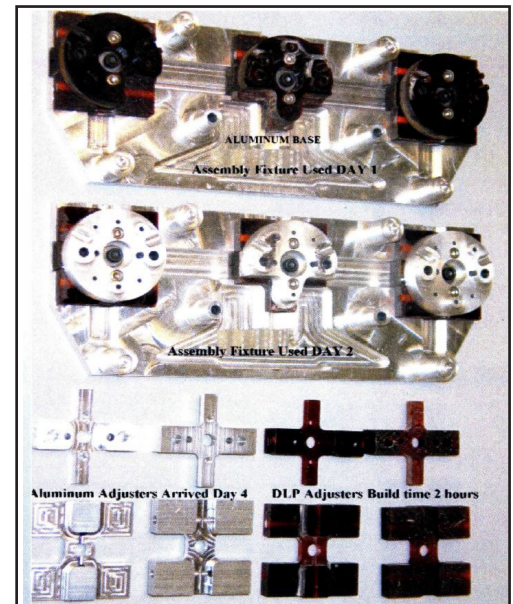
back and adjust the Solid model, and started build #4 as they were walking out the door that evening. In the morning, when they assembled the parts, all the design problems had disappeared. This example demonstrates that the EnvisionTEC Perfactory machine has the fastest build speed in the rapid prototyping industry; with four builds from the close of business on day one to the start of business on day 3, some 36 hours later.



Mr. Carlisle's second story highlights the functionality of the Perfactory machine. Mr. Carlisle's team was working on a prototype build and needed a set of assembly fixtures. His regular contract machine shop was unable to supply all the parts for the fixtures in time for the build, so they used the Perfactory machine to build the missing parts. Within two hours, the parts were created using EnvisionTEC's RS photopolymer, a durable polypropylene-like material that you can work with. These parts were drilled and tapped to receive screws and used directly on the build. His team succeeded in completing the build two days before his machine shop sent the needed assembly fixtures.

Mr. Carlisle's last story demonstrates the versatility of the Perfactory machine. While Mr. Carlisle was designing an injection molded plastic connector, he had to decide whether to mold with a one degree or a half degree draft angle. He chose to build both molds at the same time on the Perfactory, allowing his team to evaluate both sizes. The team concluded that it was possible to reel the difference between the two models; the one degree draft angle was too much. By creating both models at once, the team was able to perform a physical A-B-A comparison allowing the project to proceed quickly with the production tooling. Thus, saving the time and the cost on prototype tooling; estimated at 4-6 weeks and less than \$10,000.

These are great examples of how, by using the Perfactory machine, any company can step up and go beyond their set production goals.



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