

envisiontec



US aftermarket wheel designer embraces EnvisionTEC 3D printers to provide exceptional prototypes

Design Infini is an automotive wheel designer based in Corona, California. Established in 1995 by CEO Suny Chung, the business provides design and prototyping services for numerous wheel brands such as Center Line, GEAR and ATD Wheels. The business has seven designers and a mission to create and develop designs and products that will lead the marketplace.

Why 3D Printing?

Often the difficulty with designs is fully explaining the concepts to the customer. Drawings only go so far and often customers can't visualise a 3D concept from a two dimensional drawing. A 3D model of the design allows the customer to truly understand what the wheel will look like.

"Putting a quality prototype into a customer's hands is very helpful. We can visualize from a sketch because we're trained but some of our customers may not be able to" said Edvine Mallari, a wheel designer at Design Infini.

The production of prototypes allows the customer to not just visualise but to hold and manipulate the design before any expensive casting or machining takes place. Allowing customers to handle prior 3D designs allows the team to show concepts and ideas even before design starts.

To produce the prototypes quickly and to the required quality the DI team knew that 3D printing was the solution. The only issue was choosing the correct printer and materials for their needs.



"The reason we started rapid prototyping is we needed to show some of the concepts to our customers. We've been doing this for 20 years, so our customers have high expectations."- Donnie Han, Director of Design





Design Infini

Industry: Automotive

Machines: Vector 3SP

Materials: E-Model Light

Why EnvisionTEC?

When considering their options, the team had a number of considerations:

Size - The 3D printer must be able to produce large wheel designs. Speed - Prototypes must be able to be produced quickly. Surface quality - Models must have exceptional surface quality. Materials - The printer must have a good range of materials allowing for intricate details and strong, robust models.



"Most of the companies don't even offer that build size, and at the speed that we needed" - Edvine Mallari, Wheel Designer

After looking at their options, the team settled on an EnvisionTEC Vector 3SP, which offered them a range of material options. The company most often uses E-Model Light.

Results

The EnvisionTEC Vector allows the team to produce and re-iterate prototypes guickly and accurately without the need for expensive milling and manufacturing. The wheel prototypes show customers a true representation of the final product, allowing them identify changes faster and make more informed decisions about when they are ready to manufacture.

EnvisionTEC materials, the perfect choice for automotive

• ABS Flex White - An extremely flexible ABSlike 3D printing material.

high quality prototypes of items.

• E-CE - A stiff, heat-resistant, high-performance dual-cure material that also offers chemical resistance.

• E-Model - a tough material, suitable for high quality prototypes as well as stable productionquality end use parts.

• E-Poxy - A partially biosourced, tough, dualcure material that delivers strong, thin-walled final products.

• E-Rigid PU - A polyurethane-like resin that 3D prints end-use and prototype parts that compete with injection molded plastics.

About EnvisionTEC

• E-Glass 2.0 - An ideal 3D printing solution for simulating clear plastics.

- ABS Hi-Impact A tough material, suitable for E-RigidForm A polyurethane-like resin that 3D prints strong, hard and stiff parts that can be used for prototypes and end use.
 - E-Shore A A soft material developed for end-use applications such as footwear and sporting goods.
 - E-Tool 2.0 E-Tool is known for its heat and chemical resistance, to deliver injection molds that can withstand high heat and pressure.
 - FormCast Delivers large castable patterns and functional prototypes.
 - Pro-Gray An accurate and functional resin for producing robust and durable parts.

• RC Series - RC materials allow manufacturers to build tough and stiff parts at very high resolutions.

EnvisionTEC is a leading global provider of professional-grade 3D printing solutions. Founded in 2002 with its pioneering commercial DLP printing technology, EnvisionTEC now sells a variety of printer configurations based on six distinct technologies that build objects from digital design files. The company's premium 3D printers serve a variety of medical, professional and industrial markets, and are valued for precision, surface quality, functionality and speed.









To printed prototype

"We always strive to be the best. It's important for us to engage in today's fastmoving technology. More and more, 3D printing is going to be a big part of the plan." - Suny Chung, CEO

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