



Global Leader in Juice Technology Uses 3D Printing for Continuous Innovation

The Birth of Innovative Juicing

Since its start in 1974, Hurom — a global leader in juicing — has sold its products in over 85 countries around the world. It has also developed various kitchen appliances and food products that contribute to the health and well-being of humankind.

Hurom constantly innovates to bring healthy juice with a natural flavor and aroma to the market. In the past 40 years, it has conducted extensive research on the juice extraction method and finally invented a screw-based juicer that slowly and gently squeezes vegetables and fruits.

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Choi Eunju

Hurom R&D Center Division Manager



Before the Slow Juicer, people had to use either a high-speed blender or a hand-held squeezer to make juice. A squeezer extracts juice with less impact or friction on the food — preserving its flavor and nutrients — but it's limited in the types of food it can squeeze. The blender, on the other hand, can easily grind the ingredients, but juice made in this way is often gritty and sometimes nutrients can be destroyed in the process. Hurom's innovative Slow Juicer made it possible to easily squeeze various ingredients using a method that slowly presses and twists the materials at the same time.

Since the introduction of the Slow Juicer, Hurom has been committed to healthy juice innovation and developing more convenient designs for consumers. This commitment has resulted in Hurom obtaining more than 100 patents and winning three major design awards — the iF Design Award, IDEA (International Design Excellence Award) and Red Dot Design Award.

Overcoming Obstacles in the Prototyping Process

Hurom used to produce all the mockups by cutting directly with a CNC. However, as the product lineup gradually increased and the design cycle iterated, cutting a mockup by CNC machining proved to be too time-consuming. But when Hurom learned about the possibilities 3D printers allowed, the search began for a new prototyping solution.

After comparing several 3D printers and technologies, Hurom purchased the Objet260™, a multi-material 3D printer from Stratasys®. The Objet260 3D printer would allow Hurom to print precise, durable parts using Digital ABS™ material. The 3D printer also supported vapor deposition plating, which would make it easy to obtain the same model as the actual finished product.

Instantly, prototyping with the Objet260 became an essential part of the product development process at Hurom. To cope with the increasing demand for making prototypes needed in design confirmation and operational testing, the Hurom R&D center felt the need for additional

equipment and purchased the Dimension SST 1200es™ printer — which uses real ABS and makes functional testing possible.

Because of the molding size, the FDM® equipment was more economical to operate and dramatically reduced post processing. Plus, FDM used breakaway support, which Hurom used to print the drums that are mounted on juicers for testing.



Squeezing in More Time for Design Iteration

At Hurom's Products Laboratory R&D center, Stratasys 3D printers are constantly molding and are used widely throughout the pre-design and parts design process for prototyping. These prototypes help them verify and improve upon ideas and also allow for numerous iterations at any stage in the development process.

Before, the product development process typically took about six months, with one month exclusively spent on modifying the molds. Given that the product must be released on an annual basis and the product development cycle changes every six months, one month was a substantial period of time.

Now, with the introduction of 3D printers, the modification period has drastically shortened. "Using 3D printers from the pre-development stage to the mechanical structure review reduced overlapping work between teams and shortened the development process by two months. Moreover, by immediately applying the modified design, it dramatically decreased the mold cost," says Manager Choi Eunju.

Time is the most important asset that money cannot buy, and by enhancing its capability to develop products at a faster speed, Stratasys granted Hurom a huge competitive advantage.





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