3D PRINTING PUTS YOUR IMAGINATION IN YOUR HANDS

When you are developing a new packaging product, nothing beats being able to hold the thing in your hands before you sign off on it. Simulations with 3D graphics on computer screens take you a long way there, but they still don't give you the tactile experience and the ability to look at a solid product from any angle you want.

Enter additive manufacturing, better known these days as 3D printing. This is the ideal way to create your product prototype without having to cut any metal for your mold. Little more is needed than the digital (STL) file of the design, the 3D printer, and the printing material. Once set up, the actual process of creating your prototype takes just a few hours.

As part of its container design service, SIPA has for a few years now been offering customers the opportunity to have prototypes 3D printed. The technology is getting more sophisticated all the time, and an increasing number of customers are taking advantage of it. One reason is because it is now possible to make clear prototypes in a spitting image of stretch-blow molded bottles that you can actually color, fill, cap and label, just like the real thing. This enables SIPA to provide customers with the maximum level of customization. The mock-up service from SIPA, in collaboration with a specialist 3D printing bureau in Treviso, not far from SIPA's headquarters in Vittorio Veneto, Italy, makes use of various printing technologies. In the beginning, 3D printing was done using selective laser sintering, SLS, in an opaque white resin in powder form known as PA2200, which is a type of polyamide. More recently, SIPA and its partner have added stereolithography, SLA, which enables them to use a clear, almost water-white, liquid photopolymer resin from a range called Somos. SIPA also offers the option of creating prototypes machined from acrylic. They are even more transparent, and the surface quality and precision in the smallest details that can be obtained is at the highest level. These prototypes are solid.

"3D printing is incredibly versatile – and versatility is the strong point of our design center," says SIPA packaging designer Stefano Zugno. "We can create prototypes in sizes from 10mL all the way up to 4L. These rapid prototyping technologies allow us to provide our customers with the best solution for a real-time packaging assessment."