

Multicolor, multimaterial fashion accessories produced by Florenradica using the Stratasys $^{\odot}$ J750 $^{\rm TM}$ 3D printer.

Designing Success

Florenradica Uses Full-Color, Multimaterial 3D Printing to Innovate Fashion Design and Drive New Business

Founded in 1992 in Florence, Italy, Florenradica is a manufacturer and provider of accessories to the fashion industry, including many of the world's leading fashion brands. In 2014, a new iteration of the company was formed with a business model focused on leveraging 3D printing to service its customers. Today, 3D printing is the sole technology deployed in-house for design and manufacturing. Florenradica has experienced incredible success during this short period of time, being recognized as one of Europe's fastest growing companies by the *Financial Times*¹.

To maintain its competitive edge and strengthen innovation, the company established a long-term business goal to increase its development capability, enabling the fastest possible time-to-market for its illustrious clientele.

¹ The FT 1000: https://www.ft.com/content/238174d2-3139-11e9-8744-e7016697f225



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Mr. Mauro Baratti Co-Owner, Florenradica





"At Florenradica, we continuously aim to innovate and push the boundaries of design and manufacturing throughout all our development work," said Mauro Baratti, Co-Owner of Florenradica. "The fashion industry is everchanging, and the particular fashion houses we work with demand a certain level of quality and consistency from the products we produce. Thanks to recent investment in 3D printing across our operations, we're able to develop these designs in an unrivalled way for our sector."

Advancing Design, Development and Production

Having explored a number of 3D printing technologies, Florenradica approached a Stratasys[®] local partner, Energy Group, to purchase a Stratasys $J750^{TM}$ — a full-color, multimaterial 3D printer. Used mainly for advanced prototyping, the J750 lets Florenradica test new fashion ideas using ultra-realistic 3D models. It also helps the team create development samples for clients who need specialized models that can't be feasibly produced with traditional techniques. And depending on the product type and volume, the technology is also used for in-house production.

"There are two different ways we make use of the J750 3D printer," explained Baratti. "Firstly, we produce samples and prototypes of fashion items and accessories, such as fashion buttons and bag accessories. The big advantage of the J750 here is the significantly reduced lead time in developing these prototypes compared to our previous desktop 3D printer, but even more importantly, the quality of the prototype itself — in terms of the intricate level of detail and vividness of color — as well as the diverse range of materials.

"On the other hand, we also run our in-house production work on the 3D printer," he continued. "Whether it's one-off customized products that can only be cost-effectively produced using the J750, or for certain parts, utilizing the 3D printer for low- to mid-volume production. For example, we recently 3D printed 1,000 to 1,500 buttons and small plates for one of our fashion brands, which simply would not have been cost-effective using traditional manufacturing."



Added Capabilities Drive New Business

In the fashion industry, visuality and tactility are the most important aspects of a fashion piece's design since its success depends on the immediate impact it has on a consumer. As a result, fashion brands are continually pushing the envelope to create more striking designs and differentiate. According to Baratti, the ability to 3D print prototypes and final pieces with greater material and color options has enabled Florenradica to service more complex requests from fashion houses and has opened up several new business opportunities.

Baratti explained: "Having been limited to singlematerial and color printing on our previous 3D printers, we bought the J750 because we needed greater speed and flexibility to produce the types of models we need. Its unique full-color,

multimaterial capabilities give us the freedom we need to manifest new ideas and designs with ease, as we can now produce complex multicolor parts in a single print that would have previously required significant assembly and post-processing. The early stages of design and development are vastly accelerated, and we can get fashion concepts from our customers validated faster than ever before. Not only does this mean we have happy clients and can take on more jobs, but having this 3D printing capability in-house has also attracted new business projects for more specialized low-volume production requests. The ability to address this level of design and production with one 3D printer makes for a much better return on investment."

A Bright Future

While the technology is delivering tangible benefits to its product development process, a booming order book sees the company determined to expand its 3D printing capability.

"We estimate that following the installation of the J750, we have seen an increase in customer visits of about 25%. This includes strengthening our service to existing customers and increasing return rates as well as securing new customers who want to leverage our advanced in-house design and development capabilities. When prospects have seen what we can do with the J750, they are keen to work with us," stated Baratti. "As a result, we're looking at investing in a second J750 to enable us to further boost our service offering and meet demand."

While there's no doubt having this 3D printing capability in-house is key to driving and maintaining business, having local service providers who can help Florenradica optimize the use of the technology is just as essential to help the company achieve its goals.



Baratti concluded: "Stratasys' local distributor, Energy Group, has proved to be a dependable and valued partner whose expertise has enabled us to get the most out of the J750 for a wide range of applications. As we continue to advance its use into other areas of our production process, Energy Group's continued high-level support and training will be important to us.

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