Learn more about the Swiss eyewear manufacturer Götti, DyeMansion customer from the very beginning and read how DyeMansion technology helped an eyewear collection to the production stage - through high-quality finish and stable processes.
In addition to a wide range of acetate and ultra-light titanium frames, Götti’s „Dimension“ collection features striking, 3D-printed eyewear.

The successful development of 3D-printed eyewear has been possible by DyeMansion technology, which provides stable processes and reproducible results for finish and color. In 2014, Götti was one of the first eyewear manufacturers to employ industrial 3D-printing. The goal of a collection ready for serial production was always in mind, moving from a 3D-printed prototype to a high-quality end product. The benefits were already obvious: an extensive range of customization options, lightweight and flexible materials and local on-demand production.

We were facing a big challenge: we wanted to dye 3D-printed glasses in any color of our choice with an individually created color palette.

Sven Götti, CEO

So early on, the company began the search for the right finish and a suitable dyeing solution. The eyewear manufacturer found its answer in the partnership with DyeMansion, marked by a constant transfer of knowledge regarding technologies and applications.

The 3D-printed glasses have since been produced and finished locally in Switzerland. Through varied designs and specially developed trend colors, the collection gets its own unique look, from classy, yet subtle to bold statement pieces.
In 2014, Götti launched a sports eyewear project that would use 3D-printing technology for the first time. It quickly became clear that the use of the technology has many advantages, including the flexibility and lightness of the material. At the time, however, there was no industrial dyeing solution that met the eyewear manufacturer’s demands for custom, yet reproducible colors. Beyond the demands for the frame color, the regular contact of the frames with the skin meant that the materials had to be allergen-free and not irritating to the skin. Since sports eyewear should be suitable for both indoor and outdoor use, the UV resistance of the colors also played a major role. The demands for the finish were so high from the beginning, the developers were initially unable to come up with a solution. After an extensive search, Götti finally came across DyeMansion.

“...It was also particularly important that the colors be UV-resistant, skin-friendly and, above all, reproducible.”

Sven Götti, CEO
The successful implementation of the DyeMansion print-to-product workflow, consisting of the blasting systems Powershot C and Powershot S, as well as the DM60 dyeing system, achieved an ideal surface finish for the frames and homogeneous, reproducible coloration, thus resulting in a marketable 3D-printed eyewear collection. All machines are on site at Götti. Due to the high production volumes, the eyewear manufacturer also relies on the Swiss service provider Rapid Manufacturing, also a long-time DyeMansion customer.

From 3D-printed raw part to high-value product:

The perfect finish for the surface of the frames is achieved through a combination of grinding and the DyeMansion PolyShot Surfacing with the Powershot S. After producing the individual parts of the glasses on an EOS Formiga, the powder is first removed with the DyeMansion Powershot C (1), then grinded, treated with PolyShot Surfacing (PSS) in the Powershot S (2), and finally dyed through the DeepDye Coloring (DDC) process in the DM60 (3). To achieve the desired glossy look, the pieces are then treated again in the Powershot S with the PolyShot Surfacing. Then the individual pieces (frame and temples) are assembled, the lenses inserted, and the glasses are packed for shipping.
The products only became marketable when it became possible to apply the colors that appealed to the consumers. — Sven Götti, CEO

Thanks to the RFID chip in the ink cartridge and the storage of the corresponding information read by the DM60 before dyeing, Götti is very flexible in the choice of process parameters, such as color, badge size and finish.

The 3D-printed „Dimension“ collection has been very well received by end customers. Not only because of the appealing trend colors, but also thanks to the lightness and flexibility of the material, which ensures a high wearing comfort.

Maximum individuality is provided by the „Dimension X“ project, in which the spectacles are perfectly aligned with the wearer’s physiognomy. Here the head and nose width are taken into account and the temples and frames are adjusted accordingly. This makes a pair of 3D-printed glasses even more custom.
THE BENEFITS
The benefits of 3D-printing & DyeMansion technology for eyewear manufacturer Götti and its customers

MAXIMUM INDIVIDUALITY
59 models, with three especially for children, a choice between normal glasses or sunglasses, eight different colors, and the ability to adapt the glasses to the customer’s actual face dimensions through „Dimension X“ make these eyeglasses the new favorites of many customers. This level of customization is made possible by the use of SLS printing technology. This allows a single piece, such as a spectacle frame, to be produced economically and on-demand.

SPECIALLY DESIGNED COLORS
In close collaboration with the designers at Götti and with the help of the DyeMansion Color Matching eight different color tones have been developed. From subtle tones such as „Stone“ to trend colors such as „Denim“ and expressive colors such as „Brick,” the color palette fits perfectly with the design requirements of Götti and can be expanded as desired.
SKIN COMPATIBILITY & LIGHT RESISTANCE

Especially the skin compatibility is a critical factor with lifestyle products that come into contact with the skin on a daily basis. In addition, light resistance plays an important role, especially for sunglasses. The developed colors provide just that and allow a long-term wearing of the glasses without fading and or loss of color intensity.

NEW DESIGNS & SHORTER INNOVATION CYCLES

New designs are possible through the use of 3D printing and DyeMansion technology. Models can be designed without having to consider any material deviations, such as abrasion or paint application. This allows new options for pairing frames and temples, while reducing design complexity. Götti can respond more quickly to the needs of the market and the ever-changing trends. Compared to conventional manufacturing methods, the designs of the models can be quickly adapted, tested, and produced under real conditions as needed.

Thanks to the close exchange we are constantly learning about finish, coloring and new innovations in technology.

Sven Götti, CEO
For the Swiss eyewear manufacturer, time does not stand still. New trends are observed and models are changed or newly developed. Going forward, Götti wants to differentiate itself collection by collection with more unusual designs of 3D-printed eyewear. It will continue to rely on a close exchange with DyeMansion when it comes to the right finish and the development of new colors. Nothing stands in the way of a colorful future.

Find out more about the project in our Coffee & Cases Interview with Sven Götti: https://youtu.be/FwygYPF-uXE
TRYMANSION - TRY OUR TECHNOLOGY FREE OF CHARGE

Not familiar with DyeMansion technology yet? Feel free to test our finishing and coloring solutions with your own parts. Contact us for your first, free benchmark.

YOUR SAMPLES
Send us your non-depowdered parts that were agreed with our team.

CHOOSE FINISH
Choose between PolyShot Surfacing (PSS) or VaporFuse Surfacing (VFS). Our guidelines answer open questions and help to choose the right finish.

CHOOSE COLOR
Following the surfacing process of your choice, the parts in the DM60 are dyed in your desired color. Click here for color options.

GET SAMPLES
Receive your finished parts. Delivery date depends on scope of delivery and location.

1 CLEANING
2 SURFACING
3 COLORING