

SWANS Provides Athletes With More Effective Eye Protection Using Carbon

Background

- Founded in Osaka, Japan in 1911, SWANS is the brand name of the Japanese eyewear manufacturer Yamamoto Kogaku Co., Ltd.
- SWANS produces and sells optical lenses, sunglasses, goggles, as well as safety glasses for a variety of sports

Challenge

- In July 2019, Yurie Nabeya, a member of the Japanese national volleyball team, reached out to SWANS for a solution that would provide better eye protection during games
- SWANS explored other 3D printing technologies but couldn't find a material that had sufficient strength, toughness, resilience, and durability to safely protect eyes

Solution

- SWANS used Carbon EPU 40 to produce Guardian-Fit, the first 3D printed eye guard to pass the strict requirement of its in-house test
- SWANS delivered a finished pair of Guardian-Fit eye guards in just one month. Nabeya debuted Guardian-Fit at the Volleyball World Cup in September 2019
- Guardian-Fit eye guards provide:
 - 1.5x wider field of vision vs. previous model
 - 5x longer wear than previous model due to increased breathability



“Carbon technology has enabled us to develop products that meet the high standards of top athletes. We believe that the realization of mold-less, high iteration cycle, and custom-made will open up a new manufacturing horizon.”

- **NAOYUKI YAMAMOTO**, CEO, Yamamoto Kogaku Co., Ltd.