



GO Orthotics embraces Stratasys H350 SAF printer and High Yield PA11 material to **deliver custom, 3D printed orthotics at scale**

“

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Tim Ganley

**Founder and Managing Director
of GO Orthotics**





The opportunity

Delivering high-quality, functional, patient-specific foot orthotics at scale

Podiatrist Tim Ganley, the founder and managing director of GO Orthotics, has a history of embracing cutting-edge technology. Over the past 30 years, this forward-thinking approach has consistently positioned Tim and his team at the forefront of advanced orthotic manufacturing in New Zealand.

So when Tim recognized 3D printing as the next frontier for delivering high-quality and functionally effective foot orthotics, he seized the opportunity.

“Our key organizational goals are to be the leader in advanced orthotic manufacturing in our market, to innovate with leading technology in our business, to get the latest technology into the hands of our clients, and to provide excellent customer service,” says Tim. “Partnering with Stratasys is a key factor in achieving those strategic goals.”

The technology

Leveraging Stratasys technology to reduce cost per part and maximize efficiency—without compromising quality

The printer: H350™ SAF™ Technology Printer

“Custom foot orthoses are individually designed, so each is unique to a patient’s individual needs,” says Tim. “3D printing is extremely efficient in producing each pair of custom orthotics required for the best patient outcome.”

With its innovative features specifically designed for volume production and its small footprint, GO Orthotics chose to invest in not one, but two [SAF powered H350 powder bed fusion 3D printers](#).

“Foot orthoses lend themselves extremely well to the H350 3D printing system because they can be efficiently nested within the build chamber, significantly reducing cost per part,” says Tim. “The quality and surface finish of parts from the H350 also meets our goal of producing the highest-quality orthotics, which we pride ourselves on and is demanded by our clients. The SAF H350 also suited our space requirements with its smaller footprint, allowing us to later install a second H350 instead of one printer from a similar technology on the market.”

The H350's unconstrained design space also allows GO Orthotics to fit more insoles per build, enabling higher throughput while optimizing material consumption.

"The H350 can print 28 pairs of foot orthotics in a 12:45 print cycle with excellent packing density, also reducing cost per part," says Tim.

The material: High Yield PA11

To produce its unmatched custom 3D-printed orthotics on the H350, GO Orthotics uses Stratasys High Yield PA11, an engineering-grade polymer with high ductility and impact resistance. PA11 delivers high-quality surface parts and high elongation, which increases the longevity of the orthotics while offering the same therapeutic benefits.

PA11 is a bio-sourced material that, unlike most polyamides coming from oil byproducts, comes from castor seeds, allowing for 100% renewable origin.

"The exciting thing for us is that we are able to talk about the benefits of 3D printing in terms of design capability," says Tim. "Within the 3D printed product and with PA11, we can make our orthotic designs much more intricate. We can include more features and more design variables within the print itself. We can vary the thickness, add reinforcing areas to make one part of the orthotic stiffer, and blend out another area to make it more flexible. Ultimately, 3D printing of orthotics has enabled greater choice for our clients when it comes to orthotic prescription and design specification."

GO Orthotics' Technology Considerations

- Small footprint due to limited lab space
- Optimized build chamber space, allowing to fit high-volume insoles in one print to increase throughput and lower cost per part
- High-quality materials and surface finishes
- Powerful design software

The Value of H350 and PA11 for GO Orthotics

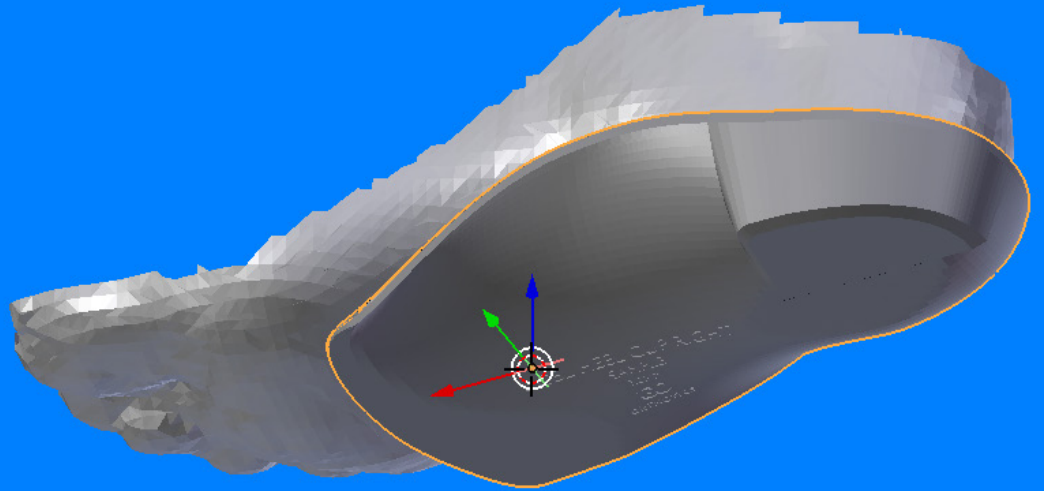
- High-quality surface finish
- Dimensional accuracy
- Fast print time
- High density nesting
- Fast turn around time between builds with minimal cleaning



PA11 has a proven track record in foot orthotics as a trusted raw material that we knew performed to our needs. It's more flexible and withstands high-stress loads from the foot during a range of patient activities—and the raw material is produced from plant crops rather than heavily relying on a petrochemical."

Tim Ganley

**Founder and Managing Director
of GO Orthotics**



The process

Building confidence in additive manufacturing and rolling out new capabilities to customers

When Tim was ready to dip his toes into additive manufacturing, he focused first on getting customers comfortable with the products. Some podiatrists were leery about the transition from polypropylene to 3D-printed products, concerned about product longevity and achieving the same therapeutic outcomes. To help everyone feel confident that 3D printing would allow GO Orthotics to maintain their rigorous quality standards, they initially worked closely with a few key clients, demonstrated positive outcomes, and then expanded to additional clients.

Growing demand quickly allowed GO Orthotics to add a second H350 printing system, further boosting capacity while enabling factory flexibility and redundancy. The fast print time and hands-off process of the H350 removed a labor-intensive, multi-stage process from GO Orthotics' manufacturing system, and their staff now have more time to focus on hand finishing with specialized covers and padding.

"We just couldn't do what we do now with traditional manufacturing methods," says Tim. "3D printing opened up new opportunities to create better outcomes for patients because of the power of our bespoke design software called gR8 and the intricacy of how the H350 prints the device."

“

The quality and surface finish of parts from the H350 also meets our goal of producing the highest-quality orthotics, which we pride ourselves on and is demanded by our clients.”

Tim Ganley

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The result

Achieving strategic goals through partnership with Stratasys

The synergy between the H350's efficiency and the PA11's versatility has empowered GO Orthotics to set a new standard for their custom orthotics and make a shift toward more eco-conscious manufacturing practices.

Today, GO Orthotics is proud to be the only orthotics lab in the country with onsite additive manufacturing capabilities and the first print facility in New Zealand to adopt [Stratasys High Yield PA11](#) material, a testament to the lab's continued commitment to push the boundaries of innovation.

"Because New Zealand is geographically isolated, having a Stratasys 3D printer here at our facility means that we can produce the highest-quality, latest-technology orthotics for our clients much faster, so they can provide them to their patients quickly," says Tim. "Stratasys helps us keep our competitive advantage in our market and ultimately, meet our strategic goals."

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