

3D SCANNING WITH ARTEC EVA FOR ORTHOTICS & PROSTHETICS



*We now use the Artec Eva scanners
and these devices help us to increase productivity by saving time*

CREATING CUSTOMIZED ORTHOPEDIC PRODUCTS VIA 3D SCANNING

Located in the Netherlands, Orthin creates impact where traditional methods have fallen short. In particular, they specialize in customizing a wide range of orthopedic products for their clients, from knee braces to orthopedic corsets for patients with scoliosis. In this field, ensuring precision is essential to fulfilling the medical needs of patients.

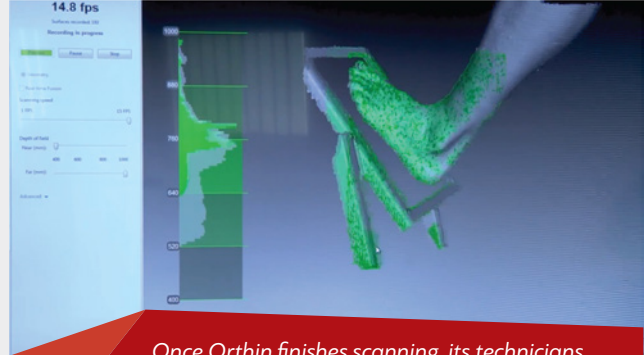
This is why Orthin chose the Artec Eva from Artec 3D, a professional handheld 3D scanner used around the world in fields such as medicine, reverse engineering, science, and more.

*As a result of adopting Eva into their workflow,
Orthin has cut time, labor, and costs in the design
and manufacture of prosthetic aids
by an astounding 90%!*

Prior to Artec Eva's arrival, Orthin used a traditional plaster mold method when creating prosthetic and orthotic solutions. The process involved multiple stages. First, technicians would "copy" a part of the patient's body or his or her previous prosthetic aid using plaster. Second, tape measures and calipers helped obtain the object's geometry – a time-consuming step that generated results that were mediocre, prone to errors, and lacking in accuracy. Finally, the measurement data would be combined with two-dimensional drawings and photographs of the copied object. All in all, the gathered data helped bring to life the final product.



To Orthin's delight, Artec Eva did away with all this! At the same time, it elevated the bar on quality of measurement and value of data



Once Orthin finishes scanning, its technicians run the gathered 3D images through the post-processing tools in Artec Studio

To Orthin's delight, Artec Eva did away with all this! At the same time, it elevated the bar on quality of measurement and value of data.

"We now use the Artec Eva scanners and these devices help us to increase productivity by saving time, lowering the time for processing the order, and to reduce the labor costs, because scanning and creating a mold for production from the scan requires less labor than the traditional way of doing it," says orthopedic technician Karel Wilbrink.

Orthin's confident reliance on Artec Eva stems from two key benefits that effectively meet the needs of Orthin and its patients.

First, error minimization – by eliminating the ineffectual method of measuring by hand, technicians improve accuracy drastically. An entire toolbox full of measurement devices, including tape measures and calipers and pens and paper, has given way to one streamlined solution: Artec Eva, which offers true point-and-shoot ease, capturing a patient's surface anatomy in high-resolution color 3D at up to 16 frames per second.

Second, portability – for Orthin, this translates into a huge advantage for customers. Eva's light weight and battery pack, giving up to 6 hours of scanning freedom, make scanning almost anywhere a reality. When unable to visit Orthin's office, customers can elect to have the scan done in the comfort of their own home.

Karel details the way Orthin's mode of operation changed with Eva's arrival.

"This is now the new way that we do our job: the client is scanned wherever this is needed. This can be done at every location possible, even at their home, and next to the scan, we list the individual wishes of the client. Back in the office, the raw data is saved on an internal server. Then it is saved as an stl-file. After that we use our orthopedic software to create a mold or the end-product can be milled or 3D-printed."

Orthin also notes that scanning with Artec Eva requires virtually no direct physical contact with the individual patient – a stark contrast to Orthin's bygone plaster method. Previously, creating molds with plaster was a slow and frequently messy task. And the experience for the patient, especially children, could also be "unpleasant, oppressive, and intimidating," according to Karel. But now, "scanning our customers is clean, fast, and physical contact with the customer is a thing of the past."

Once Orthin finishes scanning, its technicians run the gathered 3D images through the post-processing tools in Artec Studio. From there, creating the final product via a mold or milling or 3D-printing is only a few easy steps away, a far cry from how things were in the past.