

Case Report:

Fitting Atlantis Quad Specific Scleral Lens

Reinier Stortelder

Reinier Stortelder is an optometrist with a degree from the University of Applied Sciences Utrecht in the Netherlands. He has more than 10 years of experience fitting contact lenses with a focus on scleral lenses, orthokeratology and soft specialty lenses in private practice. He also gained experience in corneal and refractive surgery with his focus on the preoperative imaging devices.

Reinier has lectured internationally on specialty contact lenses. Currently he is employed by Eaglet Eye in the Netherlands and has his main focus on research in ocular shape and its implications for fitting all types of contact lenses. He is both working closely with practitioners and with lens manufacturers in the pursuit of optimal lens solutions for healthy and more challenging eyes.



Introduction

The patient is a 64 year old male with dry eyes. Rx: S-3 = C-3x70. A Profilmometry measurement has been made of the patient's eye using the Eye Surface Profiler (Eaglet Eye, The Netherlands).

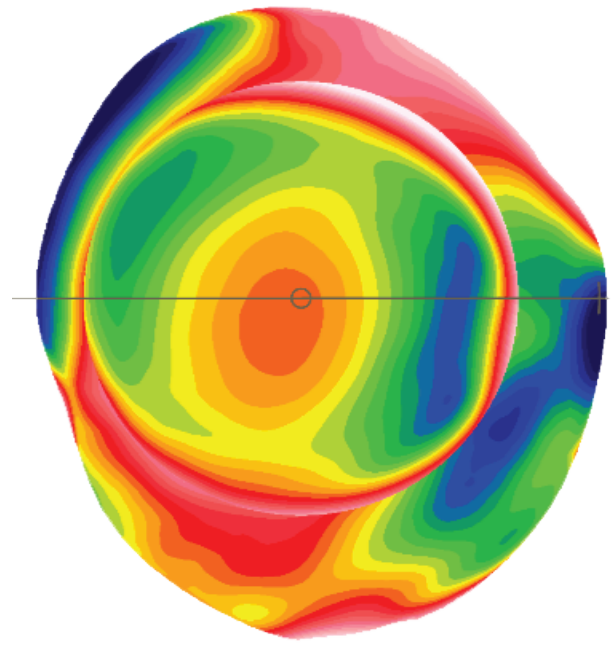


Figure 1

Oblique Toric Landing Zone

Oblique toric scleras tend to be difficult to fit with scleral lenses due to de-centration of the lens. Scleral lenses with toric design landing zones often de-center towards the inferior temporal side. In these cases a quadrant specific scleral lens should be considered. For this patient the Atlantis Quad Specific lens was fitted (X-Cel, USA)

First Lens Fit Algorithm

An algorithm has been developed for the Eye Surface Profiler to help fit the Atlantis Quad Specific lens. The goal is to achieve a near-sealed fit with low apical clearance, ensuring optimal oxygen transmission.

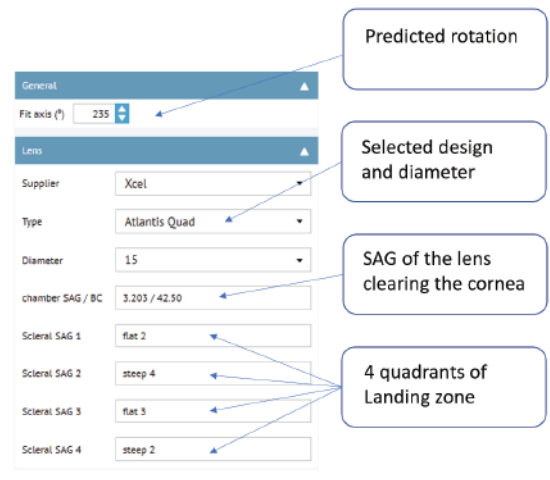


Figure 2

Fit Evaluation

Central vault, edge fit and lens centration need to be evaluated for every lens fit after the lens has been given time to settle. A slit lamp offers a fast solution to evaluate a scleral lens fit. Upon inspection both central clearance, edge fit and centration were good.



Figure 3, clockwise: central vault, edges and centration

Conclusion

Quad specific design provides a good near-sealed fit for this oblique toric sclera. The First Lens Fit algorithm that was specifically developed for the Atlantis Quad lens and found the best fitting lens for this patient. One and done is therefore also possible for more complex scleral shapes and quadrant specific haptic designs.