Sym-Toric Design – Anterior Surface Toric for Onefit Lenses

There are currently 2 main types of axis orientation (stabilization) methods for scleral lenses.

1- Prism or added thickness of various designs (prism base down, sector prism or double slab-off). Each of these designs result in a lens being thicker in one specific area of any given lens. Not only does this design approach create a barrier for oxygen transmission due to excessive lens thickness, but also diminished comfort wearing the scleral lens. Due to these design characteristics, prism ballast should be considered as a last alternative to anterior surface cylinder axis orientation for scleral lenses.
2- A second method relies on the natural toricity of the sclera/conjunctiva. With principal opposing meridians exhibiting different elevation (toricity), it is possible to make a lens with matching elevation difference (toric haptic) that will find its equilibrium on the sclera/conjunctiva.

Although a toric haptic does not increase lens thickness, any toric haptic will need to create a minimum of 75 microns in edge elevation difference – matching the conjunctiva/sclera – to effectively stabilize cylinder axis orientation of the scleral lens in situ.

Discussion on conjunctiva/scleral symmetry published by Markus Ritzman, Sheila Morrison OD, MS, Patrick Caroline, Beth Kinoshita OD, Matthew Lampa OD and Randy Kojima found; at a 12.8mm chord diameter there is no meaningful sagittal height difference between principal meridians and at a 12.8 mm chord diameter, the ocular surface can best be described as spherical (rotationally symmetric). From 12.8mm cord diameter and larger, toricity on the sclera increases gradually.

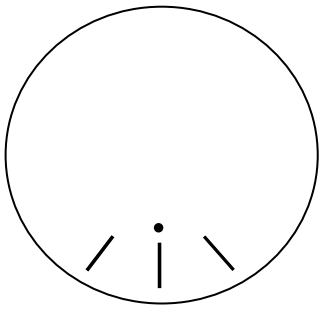
Scleral lenses of 16.0mm diameter and greater generally provide sufficient sagittal height difference between principal meridians, allowing for a scleral lens with a matching toric haptic design to be rotationally stable on the ocular surface. With smaller scleral lenses (16.0 mm and less) this it is not always the case. There is rarely enough height differential between the principal meridians to warrant a toric haptic to enhance stability of cylinder axis orientation.

A new anterior surface toric lens design for stability of scleral lens cylinder axis orientation was needed for all scleral lenses large or small. Blanchard's proprietary Onefit Sym-Toric design addresses the issue, stabilizing the anterior surface cylinder lens axis orientation on the ocular surface, without resorting to prism ballast or toric haptics.

Continued next page for Onefit Sym-Toric Fitting -

Onefit Sym-Toric

Onefit Sym-Toric does not rely on the prism ballast or toricity in the haptic as is typically used to stabilize axis orientation. While keeping the same edge elevation 360 degrees, the Onefit Sym-Toric posterior surface aligns to the different radii values of the cornea and sclera. Utilizing a thin lens design, Sym-Toric is stable, comfortable and promotes optimum oxygenation of the cornea and limbal stem cells.



One Hour = 30° Axis Rotation
LARS: Rotation Left ( ) Add
Rotation Right ( ) Subtract

Fitting

No additional trial lenses are needed to fit Onefit Sym-Toric lenses.

Fit the lens as you would a spherical Onefit lens. If you have residual cylinder, incorporate the cylinder and axis into the Rx and specify Onefit Sym-Toric as your lens choice.

When you dispense the lens, have the patient insert the lens with the orientation dot at or near 6:00 o'clock. Let the lens settle for 2 or 3 minutes and note the axis at which the lens has settled (habitual position).

To confirm stability of axis orientation, manually rotate the lens 20 degrees clockwise and counter clockwise and observe if the lens always comes back to the same "habitual axis orientation". If the dot is not exactly at 6:00 o'clock, evaluate visual performance. If not affected, there is no need to make an axis change.

If the dot is not at 6:00 o'clock and the vision is not optimal, manually rotate the lens so that the dot is at 6:00 o'clock and re-evaluate vision. If vision is optimal when the dot is at 6:00 o'clock, compensate for the "habitual cylinder axis orientation" using LARS.