BostonSight®
SCLERAL
Your partner in saving sight.®

Fitting Modifications Mini-Guide

FOR 16-19mm SCLERAL LENSES

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Fitting Modifications

Sagittal depth

Sagittal depth should be modified in FitConnect with the goal of achieving the suggested 200 – 300µ clearance, pre-settling. For reference, refer to the center thickness of the lens, which is 300µ. Our recommended starting point is the standard sagittal depth lens. Once the best trial diagnostic lens for both haptic alignment and sagittal depth is determined, proceed to make 50-micron adjustments in FitConnect as needed. For example, if you note corneal touch as shown in figure 3, for a desired 200µ clearance, increase sag value by 200µ in your FitConnect account as shown in figure 4.

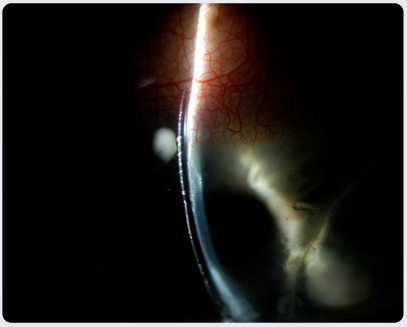


Fig. 3: Example of corneal touch

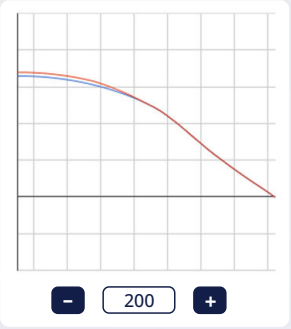


Fig. 4: Sag increase by 200µ in FitConnect

Quad-Specific changes

HAPTIC CHANGES

Lens haptics can be modified in a quadrant-specific manner to achieve a rotationally stable fit, properly align the conjunctival-scleral surface, and obtain a physiological endpoint.

Edge Impingement

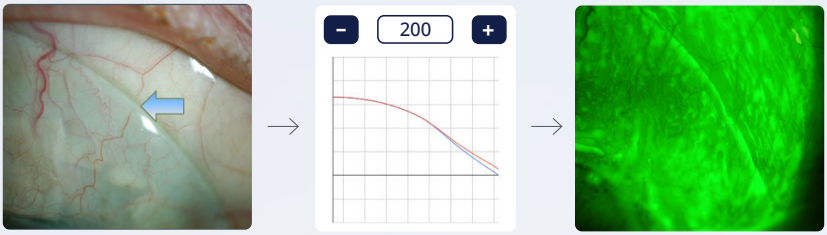
The minimum suggested micron changes to decrease edge lift or minimize impingement is 100µm. If working with the 16-17mm designs, and significant edge lift or impingement is noted, then go with 150µm changes or more as needed. **If working with the 18-19mm designs and significant edge lift or impingement is noted, then go with 200µm changes or more as needed.** 50µm changes should be used only to address symptoms of edge awareness – which most of the time will dissipate without the need for change and after lens adaptation.

The following are possible causes of localized peripheral edge impingement:

Sectorial/meridional localized edge impingement. This is usually resolved by flattening the haptic in the specified quadrant. If you notice edge impingement in a specific quadrant, first identify the quadrant: 1, 2, 3, or 4, and flatten accordingly using FitConnect.

If the impingement noted looks like figure 5, and upon lens removal, there's conjunctival staining similar to the image below, the minimal suggested amount of haptic flattening is **200µ if working with the 18-19mm FitKit and 150µ if working with the 16-17mm FitKit.**

Fig. 5: Example shown is for 18-19mm FitKit.

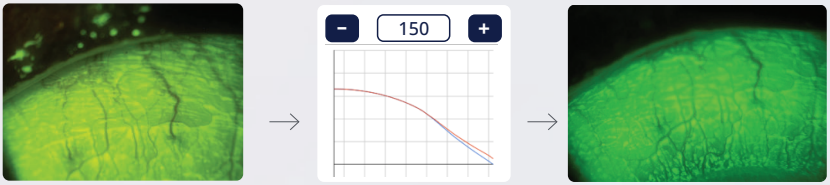


Flatten haptics
by 200µ

Edge Impingement, contd.

If the impingement noted looks like figure 6 upon lens removal, then the amount to flatten haptic is **150µ if working with the 18-19mm FitKit and 100µ if working with the 16-17mm FitKit.**

Fig. 6: Example shown is for 18-19mm FitKit.



Staining pattern upon lens removal

Flatten haptics by 150µ

Fitting endpoint after modification: No conjunctival staining

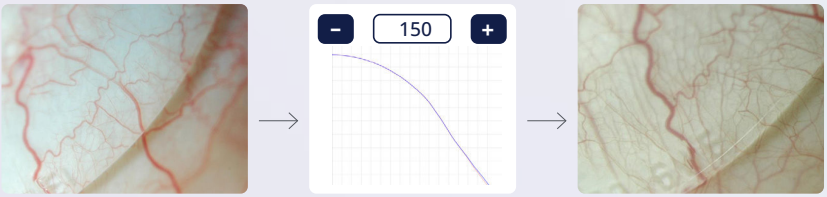
Edge Lift

If edge lift occurs, the haptic should be steepened in the corresponding haptic. First identify which quadrant corresponds to the observed edge lift: 1, 2,3, or 4.

For example, if the amount of edge lift noted looks like figure 7, and it corresponds to quadrant 1, then haptic should be steepened by at least 150µ at quadrant 1 for 18-19mm FitKit and 100µ for the 16-17 FitKit.

Log in to your FitConnect account and use the graphical representation at quadrant 1 as shown in figure 7.

Fig. 7: Example shown is for 18-19mm FitKit.



Edge lift scenario

Steepen haptics by 150µ

Fitting endpoint after modification

QUAD-LIMBAL™

Change Limbal Clearance in a quadrant-specific mannerwith Quad-Limbal™.

Standard

The default choice in FitConnect is based on our data-driven design with built-in oval optic zone. However, if you need to modify in any given quadrant because of touch or over-vaulting, then we have created a simple STEP system for you to address limbal clearance changes in a quadrant-specific manner as shown in figure 8.

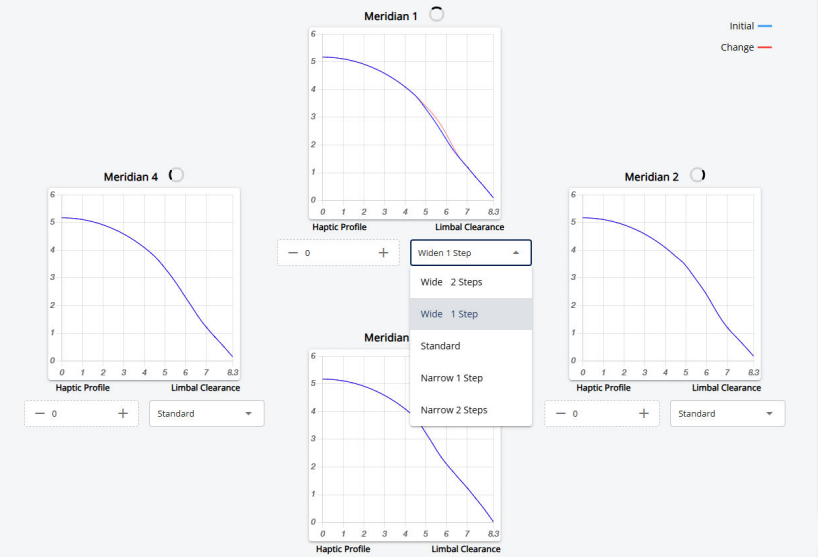
Narrow 1/Wide 1 Step

If HVID is between 11-12mm and/or you need to decrease the limbal clearance by ~100-140µm, choose Narrow 1 step. If HVID is between 12-13mm and/or you need to increase the limbal clearance by ~100-140µm, choose the Wide 1 step.

Narrow 2/Wide 2 Step

If HVID is <11mm and/or you need to decrease the clearance by ~150-200µm choose the Narrow 2 step. If HVID is > 13mm and/or you need to increase the clearance by ~150-200µm choose the Wide 2 Step.

Fig. 8



QUAD-ELEVATION™ — MID-PERIPHERAL CORNEAL ADJUSTMENTS

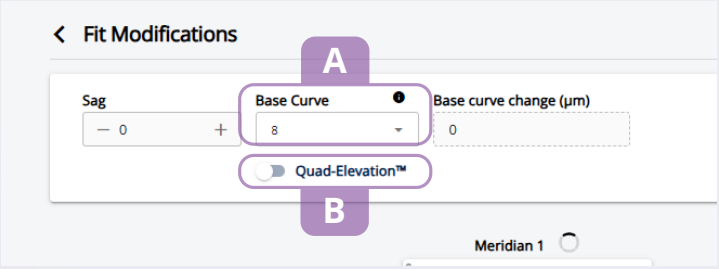
Quad-Elevation allows you to modify the mid-peripheral corneal zone by manipulating the base curve (BC) independently in each quadrant. In the BostonSight SCLERAL lens design, BC changes only affect the mid-peripheral corneal zone. This feature is particularly important to avoid touch in the mid-peripheral corneal zone in any given quadrant.

Modifying the BC (marked with A in Figure 9) changes the BC around the entire lens.

To change BC in a quadrant-specific manner, toggle on Quad-Elevation™ (marked with B in figure 9). A selection box appears under each meridian as shown in figure 9.

NOTE: Quad-Elevation is available to toggle on only when spherical changes are made to the lens. If you change the cylinder or axis of the lens, Quad-Elevation will not be available. **SmartFocus cannot be combined with Quad-Elevation.*

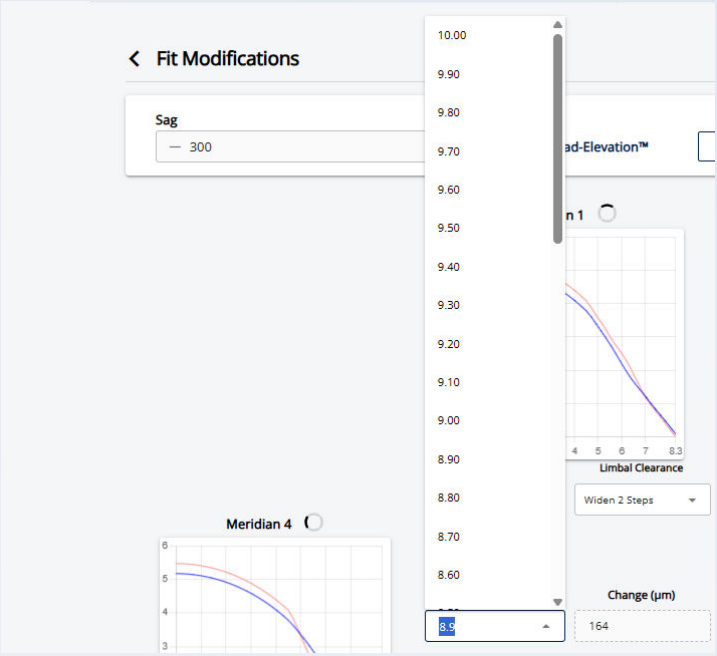
Fig. 9



Choose the BC value that corresponds to the micron amount by which you need to increase or decrease the mid-peripheral corneal zone as shown in figure 10. The lens design will change accordingly showing the chosen micron change in the adjacent micron conversion calculator and in your Order Summary column on the right.

- To **increase** the clearance at the mid-periphery, select a value **greater** than 8.0 BC.
- To **decrease** the clearance at the mid-periphery, select a value **less** than 8.0 BC.

Fig. 10



Note that if you do NOT change the BC in a particular quadrant, the Order Summary screen will show 0 in the corresponding quadrant. This does not mean the BC is 0. This indicates that the BC remains the same as the parent order.

Click the meridian wheel icon above each quadrant to zoom in on real-time graphical changes as indicated in figure 11.

Fig. 11

SmartChannels®

With BostonSight SCLERAL SmartChannel Technology, you can easily customize your lens to facilitate fits over anatomical obstacles, promote tear exchange, and reduce suction. You can add up to four (4) SmartChannels per lens, and they can be positioned in any degree location in the lens.

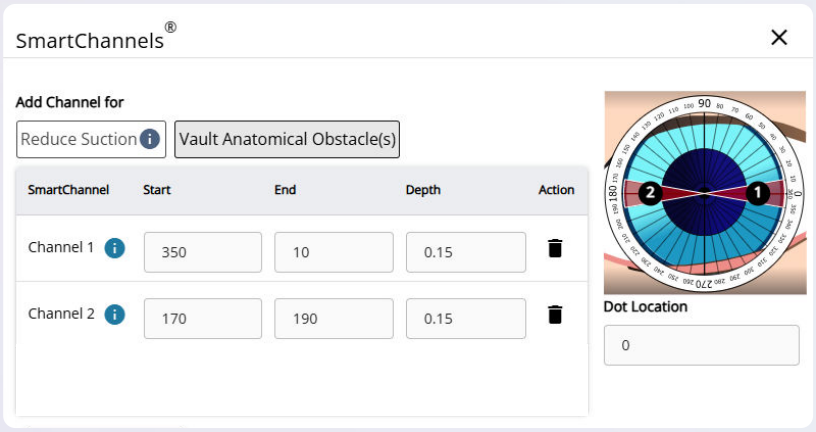
Now, you have the option of selecting the application for which you'd like to use SmartChannels for, making it easier and more efficient to design lenses!

REDUCING SUCTION

FitConnect powers the "Smart" in lens design with its new auto-design feature, providing built-in efficiency for providers. If reducing suction is your primary goal for adding SmartChannels, simply click the REDUCE SUCTION tab in FitConnect and leverage the auto-design feature (see figure 12). Two (2) channels will be added in the horizontal axis with default depths and widths. To add two additional channels, click REDUCE SUCTION again, and two more channels will be added in the vertical axis, for a total of four (4), the maximum.

You can still modify the Channel location, width, or depth by typing in the box.

Fig. 12



VAULTING OVER ANATOMICAL OBSTACLES

1. Adequately fit the lens until you achieve a rotational stable fit with aligned peripheral haptics.

2. Notate the location of the dot in degrees using the slit rotation control ring in your slit lamp. FitConnect will compensate for the lens rotation; the channel will be adequately positioned regardless of where the dot is resting on the eye.

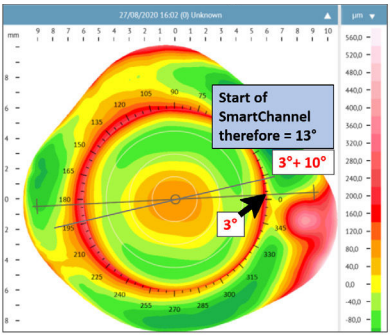
    - Determine the start and end position of the channel (in degrees), the width (in degrees), and the depth of the channel (mm) required to vault the anatomical obstacle.

3. Utilizing CSP or ESP data to design a SmartChannel:

    - Move the cursor to the area of elevation to find information about location and depth and determine starting point and end point of your SmartChannel in degrees.
    - We recommend adding 10° to each side, as shown in figure 13.

Fig. 13

SmartChannel Starting Point



SmartChannel End Point

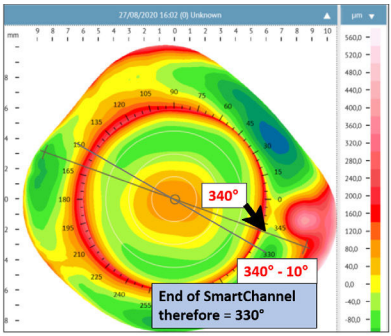
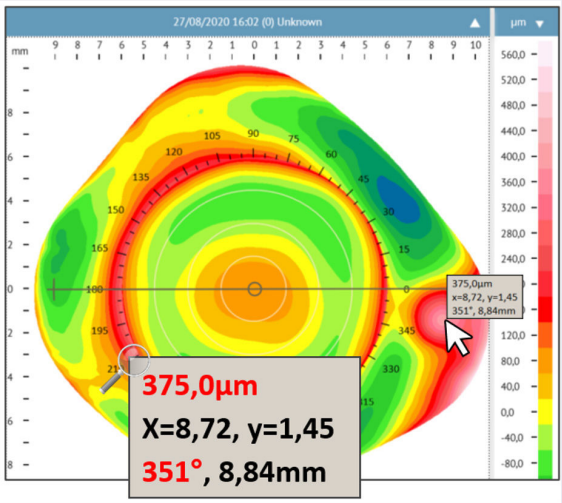


Fig. 14: Pinguecula example

Data obtained from Eaglet Eye's ESP:

1. Location: 351°
2. Depth: 375µ
3. Move cursor to the superior and inferior edge of the pinguecula to determine starting point and end point of SmartChannel in degrees.



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