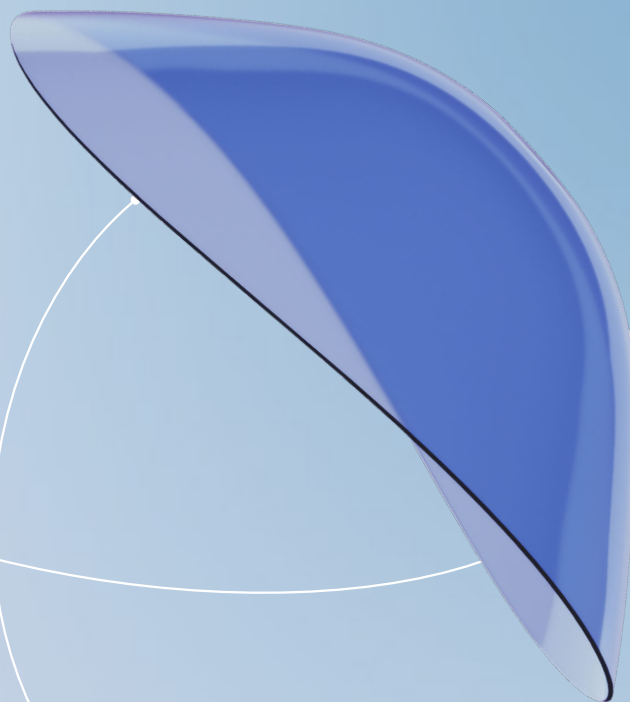


# BOSTONSIGHT<sup>®</sup> SCLERAL

The only lens you'll ever need.



## FitGuide<sup>®</sup> Basics

**FOR 14.5mm-19.0mm SCLERAL LENSES**

Achieve a smart, efficient, and predictable fit that provides optimal vision, comfort, and long-term ocular health for your patients.

This guide is intended to help you immediately start fitting BostonSight SCLERAL with basic fitting principles. For guidance on advanced features including Quad-Elevation™, Quad-Limbal™, SmartChannels®, SmartFocus™ multifocal, and SmartSight HOA® please see the FitGuide- Advanced.

## Ways to Fit

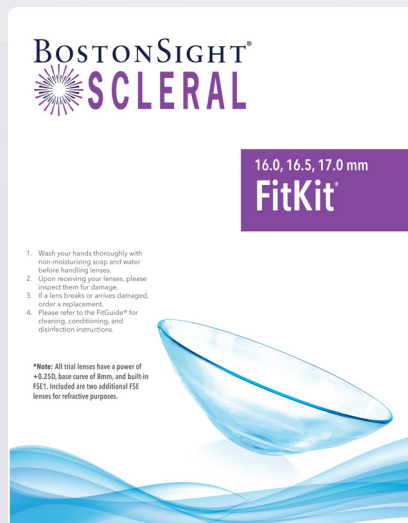
### TRIAL LENS SET

The BostonSight SCLERAL FitKit® is designed to simplify the fitting process. Our fitting system is based on scleral anatomy and driven by clinical data. Trial lenses are provided for the left and right eye. FitKits have three diameters each.

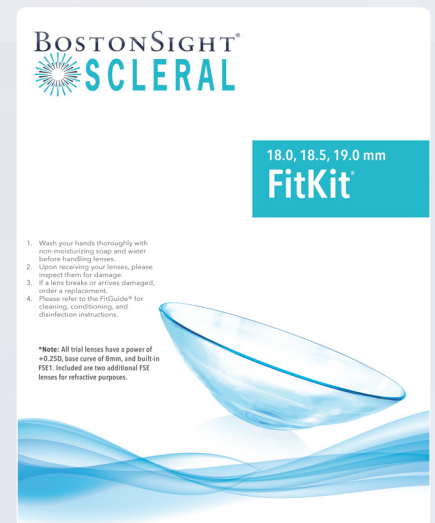
#### 14.5, 15.0, AND 15.5mm



#### 16.0, 16.5, AND 17.0mm



#### 18.0, 18.5, AND 19.0mm



3 out of 4 patients are successfully fit with the Standard lens from the FitKit

### FREE-FORM FITTING WITH SMART360®

Design a custom lens for your patient without the need for trial lenses. BostonSight's Smart360 feature integrates your profilometer with FitConnect® to transfer scan data to BostonSight's manufacturing lab.

*Details on fitting with Smart360 can be found in the Smart360 Mini-Guide.*

# Lens Handling and Conditioning

Trial lenses in the FitKit are shipped wet to ensure proper wetting. The conditioning solution must be replaced with fresh solution (e.g. Boston Simplus) upon FitKit receipt and must be replaced every 30 days. Proper cleaning, rinsing, and disinfection is required before each use.

- ① Wash hands thoroughly with a mild soap, rinse completely, and dry with a lint-free towel before handling lenses.
- ② Place one lens in the palm of your hand. Place one or two drops of daily cleaning solution on the outside surface of the lens and rub gently for 15 seconds. Flip the lens over and do the same on the inside surface of the lens.
- ③ Rinse the lens thoroughly with fresh, unexpired, preservative-free saline.
- ④ Place lens in a disinfection and conditioning solution, such as Boston Simplus, for at least 1 hour before use.

**Your BostonSight SCLERAL trial lens is now ready for patient application.**

## Lens Identification

### TRIAL LENS

**E-R 80-1 e1**

LENS SET  
SERIES

EYE  
R VS. L

DIAMETER

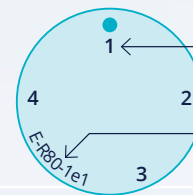
LENS  
NUMBER  
1-12

FRONT SURFACE  
ECCENTRICITY  
FSE0, FSE1 OR  
FSE2

Laser engraved model  
number location

Example Shown:

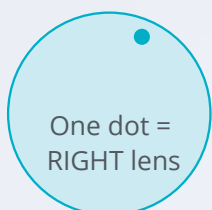
Lens Set Series: E  
Right Lens  
18.0mm diameter  
Lens #1  
FSE1



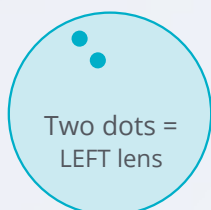
Easy ID number to  
identify each quadrant

Trial lens model number.  
On patient's lens, order  
number + lens number +  
first 3 letters of patient's last  
name are engraved.

**Apply trial lenses with the dot at the 12 o'clock position.** It is okay for the lens to rotate on eye as shown below.

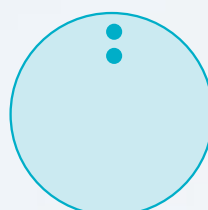
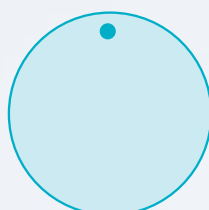


One dot =  
RIGHT lens



Two dots =  
LEFT lens

60% - 80% of the time



20% - 40% of the time

# FitKit Layout

Right



All trial lenses have a power of +0.25D, base curve of 8mm, built-in FSE1, and built-in oval optic zones.

Each FitKit includes 14 trial lenses for each eye:

- 9 core lenses
- 3 lenses for additional sag—one per diameter
- 2 SmartSight® FSE lenses for residual higher aberration control to achieve best corrected visual acuity without the need for an aberrometer



## Diameter Recommendations

**14.5mm – 15.5mm**

- Micro Corneas
- Small HVID's ( $\leq 11.00\text{mm}$ )
- Small Apertures
- Tight Lids
- Difficulty Handling Lenses
- Pediatric Patients
- SJS Limited by Symblepharon

**16.0mm**

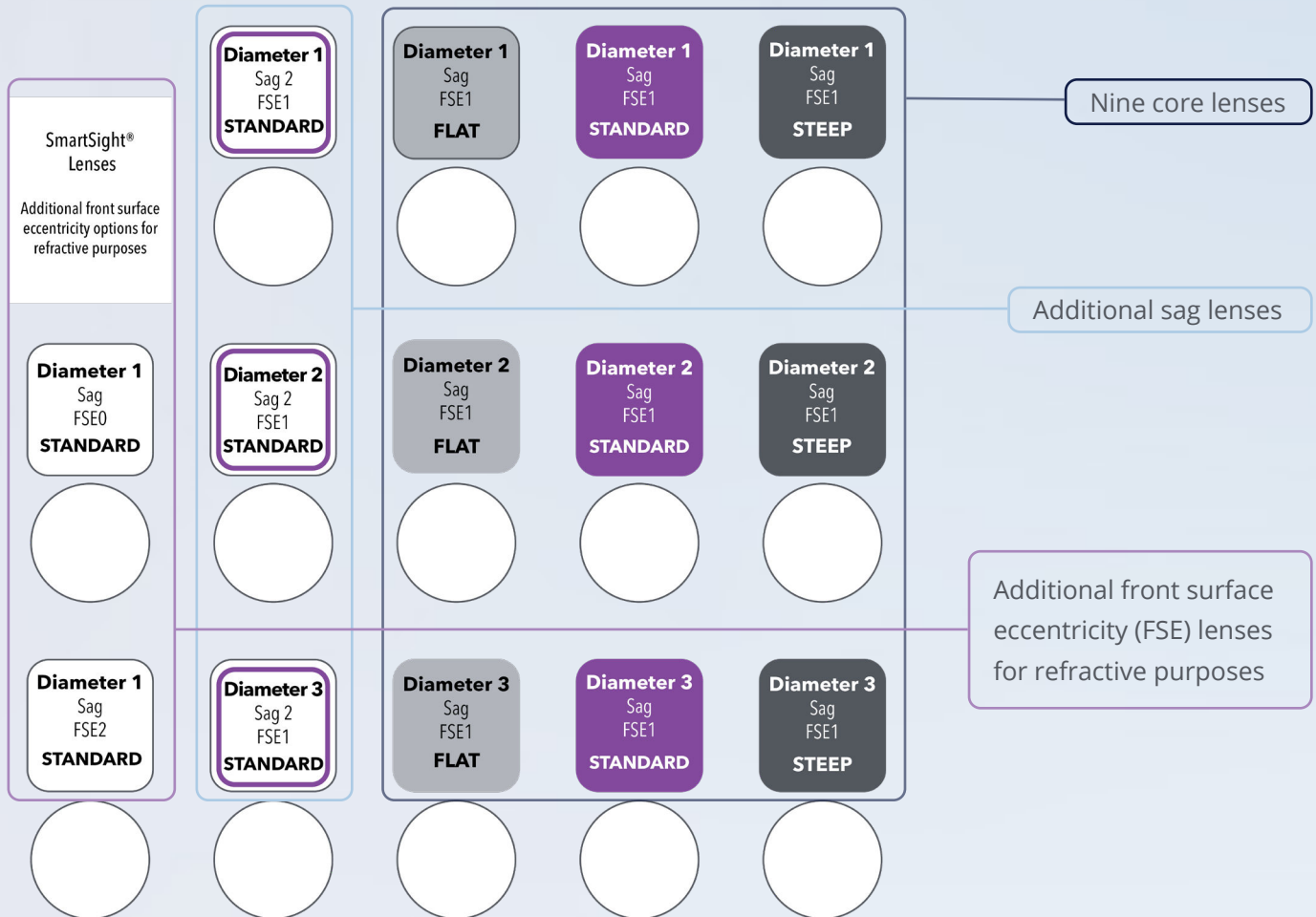
- Pediatric Patients
- Tight Lids
- Small Apertures
- SJS Limited by Symblepharon
- Small HVID's ( $\leq 11.00\text{mm}$ )

**16.5mm**

- Regular Corneas
- Average Sag
- HVID 11.00–11.50mm



# Left



## 17.0mm

- Higher Elevation Corneas
- Post Surgical with Mild Ectasia
- Limbal to Limbal Astigmatism
- Mild Keratoconus
- HVID 11.50–12.00mm

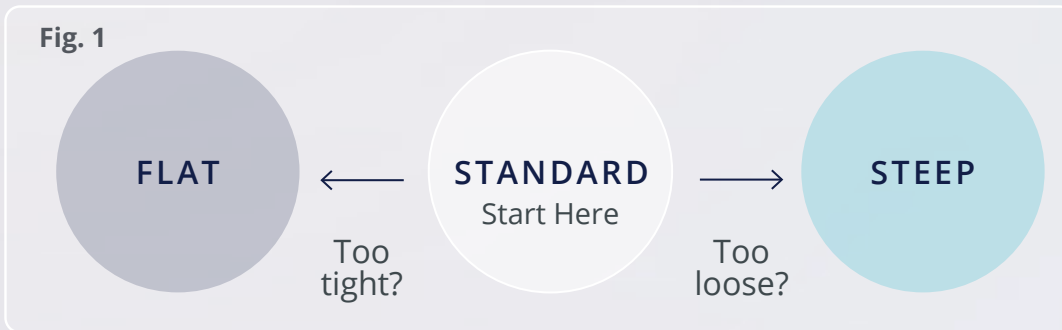
## 18.0mm – 19.0mm

- Highly Ectatic Corneas
- Large HVIDs ( $\geq 11.50$ mm)
- Compromised Ocular Surface
- Chronic Exposure
- Compromised/Fragile Grafts
- Severe Dry Eye

# Fitting Principles

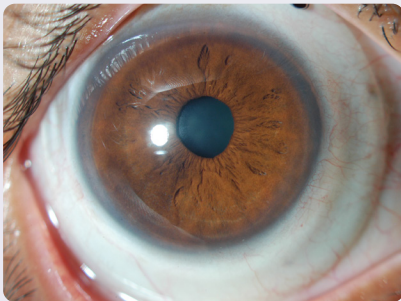
## Initial Lens Assessment

- ① Choose diameter and identify the trial lens having the best initial fit using the fitting algorithm shown in figure 1.
  - Apply the **Standard** scleral shape lens in the selected diameter.
  - If the Standard scleral shape lens fits loose, choose the **Steep** scleral shape lens.
  - If the Standard scleral shape lens fits tight, choose the **Flat** scleral shape lens.

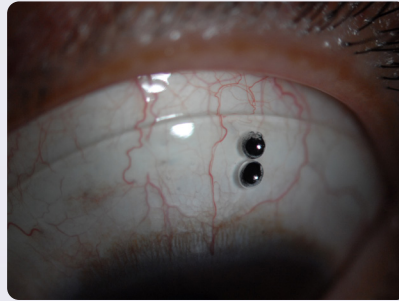


- ② Evaluate the fit after the lens has settled for 20 minutes. Fitting goals are illustrated below.
- ③ When indicated, change the lens diameter.
- ④ Repeat until the best fitting trial lens is identified.

### Fitting goals

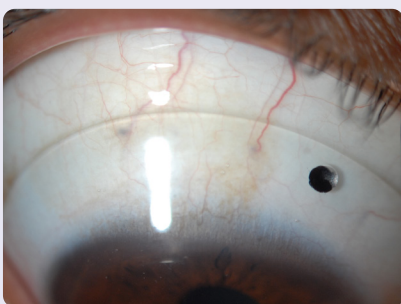


The lens centers well, is rotationally stable, and has between 0.5-1mm movement. No air bubbles.

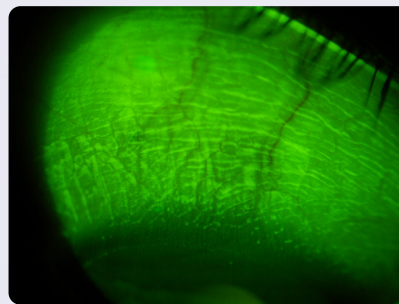


Episcleral blood vessels underlying the haptic are not compressed for adequate haptic scleral alignment.

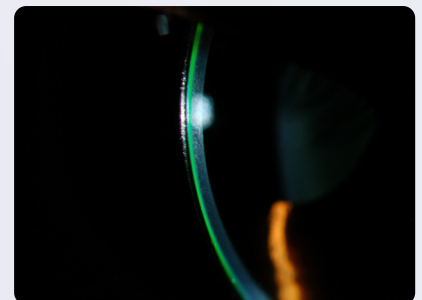
**Allow lens to settle at least 20 minutes.**



The edge of the lens does not impinge on the bulbar conjunctiva.



There should be minimal-to-no imprint of the edge of the lens on the bulbar conjunctiva upon lens removal.



Corneal clearance: The thickness of the fluid compartment over the corneal apex is approximately 200µm to 300µm. In comparison, the center thickness of the lens is 300µm. Vaulting should occur at the limbal area.

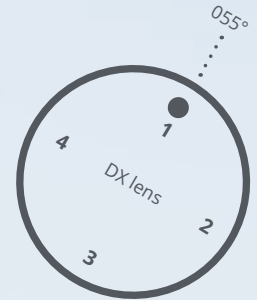
# Optics and Astigmatism

- ① Perform sphero-cylindrical over-refraction to determine lens power.
- ② Astigmatic corrections should be applied only to rotationally stable lenses. To measure astigmatic power:
  - Use the trial lens that provides best haptic alignment and stability and perform a sphero-cylindrical over-refraction.
  - Measure the location of the lens dot in degrees using your slit lamp (figure 2).  
**The dot location in degrees is crucial to obtain accurate results.**
- ③ Vision may be optimized using a trial lens with different FSE values.

**Fig. 2: Residual astigmatism correction scenario**

Example: Sphero-cylindrical over-refraction

−1.00 −1.25 x 075

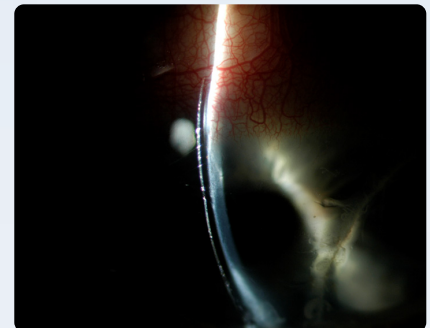


If satisfactory vision is not achieved, refer to the FitGuide-Advanced to learn more about **SmartSight® Technology**.

## Fit Modifications

### Sagittal depth

Ideal sagittal depth should have 200–300µm corneal clearance, post-settling. For lenses ≤18.0mm in diameter, lens settling is ~130µm after 4 hours of wear. For lenses >18.0, lens settling is ~85µm after 4 hours of wear. For reference, refer to the center thickness of the lens, which is 300µm. Sagittal depth may be adjusted by 50µm increments. If you note corneal touch as in figure 3, for a 200-300µm clearance, increase sag value by 300µm.



**Fig. 3: Example of corneal touch**

### Haptic changes

Lens haptics should properly align to the conjunctival-scleral surface to achieve a centered and rotationally stable fit and obtain an ideal physiological endpoint. Lens haptics can be modified in a quadrant-specific manner in 50µm increments.

Issue	14.5mm-15.5mm lens	16.0mm-17.0mm lens	18.0mm-19.0mm lens
Sectorial/meridional localized edge lift or impingement	Tighten (-) or loosen (+) haptic in specified quadrant	Tighten (-) or loosen (+) haptic in specified quadrant	Tighten (-) or loosen (+) haptic in specified quadrant
Edge awareness ( <i>often dissipates without the need for change and after lens adaptation</i> )	50µm	50-100µm	100-150µm
Mild edge lift or impingement	100µm	100µm	150µm
Significant edge lift or impingement	150µm	150-200µm or more as needed	200-250µm or more as needed

## Order

Order lens(es) with any Optical or Fit Modifications as needed in FitConnect®, BostonSight's lens design, ordering, and management system. Refer to the FitConnect Guide for more information.

## LENS PARAMETERS

DIAMETERS	14.5mm–19.0mm in 0.5mm increments; 17.5mm available only with Smart360®	
SPHERE POWER	-25.00 to +35.00 Diopters in 0.25D steps	
BASE CURVE	6.0mm to 10.0mm in 0.1mm steps	
CYLINDER	Up to -8.00 Diopters in 0.25D steps	
MULTIFOCAL	+1.00 to +3.00 Diopters in 0.25D steps	
OPTIONS	SmartSight technology: SmartSight® FSE SmartSight HOA® SmartFocus™ multifocal	SmartChannel® technology: Reduce suction Vault over anatomical obstacles Front surface toric Rx

## LENS MATERIALS

PRODUCT	MATERIAL	DK
Contamac	Optimum Extra	100
Contamac	Optimum Extreme in clear or light blue	125
Contamac	Optimum Infinite	180
Bausch + Lomb	Boston® EQII	85
Bausch + Lomb	Boston® XO2 in clear or ice blue	141
Acuity Polymers	Acuity 200™ in clear or ice blue	200

## COATINGS

PRODUCT	AVAILABILITY
Tangible Hydra-PEG	On all materials except Boston® EQII



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BostonSightSCLERAL.org

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