



essilor

*Essilor***Perimeter**[™]



Fitting Guide

essilor
CONTACT LENS
SPECIALISTS

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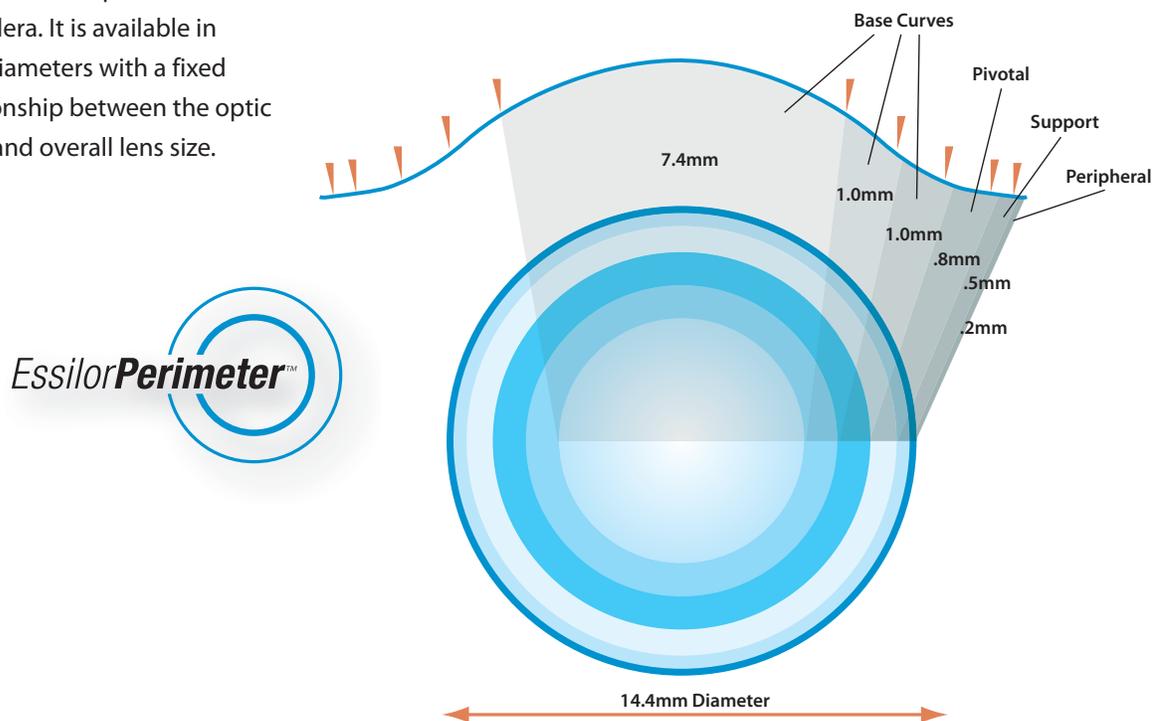
Denver 800-362-4233

Tulsa 800-685-5367


Bausch & Lomb
Boston® **XO₂**
Material

The Essilor Perimeter Lens Design

is predicated upon achieving a fitting relationship that aligns with the central cornea, vaults the limbal area, then aligns the peripheral lens portion with the sclera. It is available in four diameters with a fixed relationship between the optic zone and overall lens size.



Base curves (1, 2, 3): (central fitting zone)

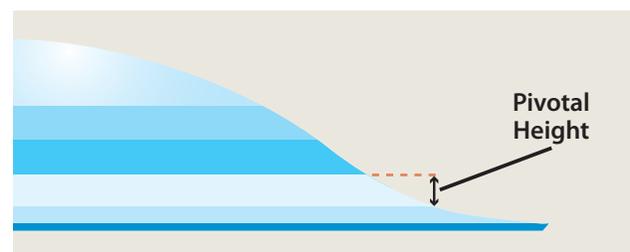
These curves are chosen to lay the lens lightly across the corneal surface, while being steep enough to lay the edge of the lens onto the sclera. The Optic Zone is 7.0mm–7.8mm in size depending on overall lens diameter.

Pivot Curve (4): This curve sets the relationship between the base curve and support curve and provides for changes in the clearance of the lens over the limbus (pivotal height).

Support Curve (5): This auxiliary support curve is chosen to be in alignment with the sclera.

Peripheral Curve (6): The peripheral curve is designed to provide edge lift improving the flow of tears under the Perimeter lens.

Diameter: The overall diameter is 14.0mm–14.8mm. It is designed to be large enough to overlap the limbus uniformly and aid in lens centration.



Indications

Indications for the Essilor Perimeter Lens :

- Regular and irregular corneas unable to be adequately fit with small diameter corneal lenses
 - Symmetrical corneas where standard lenses can not offer the stability or comfort
 - Asymmetrical corneas that require a larger than standard lens but a full scleral design is too large
- GP intolerant patients unable to achieve adequate vision with soft lenses
- Unsuccessful hybrid lens wearers

Benefits

The Essilor Perimeter Lens:

- Easy-to-determine initial fit from Fitting Set.
- Provides crisp, clear optics.
- Has proven successful for the correction of many corneal irregularities including postsurgical cases.
 - Fits well in cases of corneal flattening inserts to offer good VA and comfort unsurpassed with soft lenses.
- Provides initial comfort that lasts all day long .
- Manufactured in Boston XO₂[®], providing hyper-transmissibility to a larger area of the ocular surface than most hybrid lenses and many soft lenses.

Fit Set Parameters

Stock Design	Material	R	Sph	D
		8.44	+1.00	14.40
		8.23	+0.00	14.40
		8.04	-1.00	14.40
		7.85	-2.00	14.40
		7.67	-3.00	14.40
		7.50	-4.00	14.40
		7.34	-5.00	14.40
		7.18	-6.00	14.20
		7.03	-7.00	14.20
		6.89	-8.00	14.20
		6.75	-9.00	14.20
		6.49	-11.00	14.20
		6.25	-13.00	14.20
		6.03	-15.00	14.20

Fitting Steps

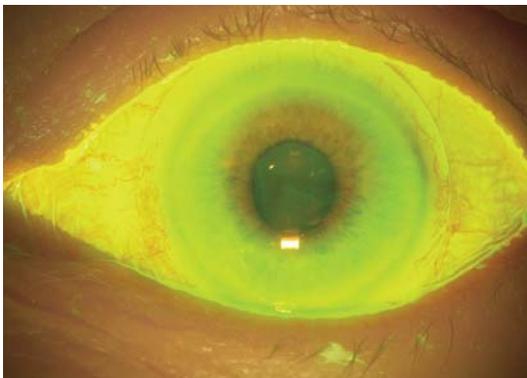
The Essilor Perimeter™ lens fits across a large area of the ocular surface. This unique design takes into consideration the shape and size of the cornea, the width of the corneoscleral junction and the scleral curve. Diagnostic lens fitting is necessary as there is a lack of instrumentation to easily measure these surface areas in a clinical setting.

Step 1: Select the initial diagnostic lens using one of these three methods:

- **Corneal Topography:** Use the Elevation Map to aid in determining the average sagittal height of the eye. The elevation map depicts the relative height differences from which the corneal curvature varies from a computer-generated reference sphere.
- **Keratometry:** Choose the base curve based on either mean K or the average of the Sim K's.
- **Empirical Lens Choice:** If accurate corneal measurements aren't possible, choose a lens from the steeper section of the trial set. Begin with a lens that has excessive vaulting, then select lenses with progressively flatter base curves until the fit has the proper relationship to the sclera.



Steep fit



Flat fit

Step 2: Evaluate the diagnostic lens fit

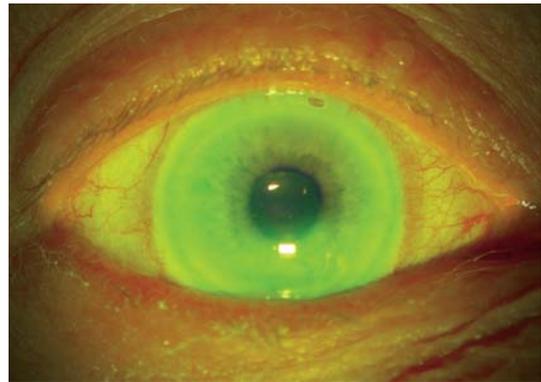
- Look at the overall fit and look for centration and for the clearance over the limbus. This lens is designed to just lift over the limbus and lie on the sclera.
Note: If you have chosen a lens with a base curve that is too flat there will be excessive edge lift away from the sclera while the rest of the fitting relationship appears to be ideal.
- The lens should move slightly during the blink, facilitating tear exchange and allowing for easy removal.
 - If there is not enough clearance over the limbus, order the Pivot Curve .5 steeper than standard.
 - If there is too much clearance over the limbus, order the Pivot Curve .5 flatter (only if there is a bubble that doesn't dissipate).

When this is done, the consultant will calculate the change in base curve needed (either steeper or flatter) to keep the rest of the lens fit the same.

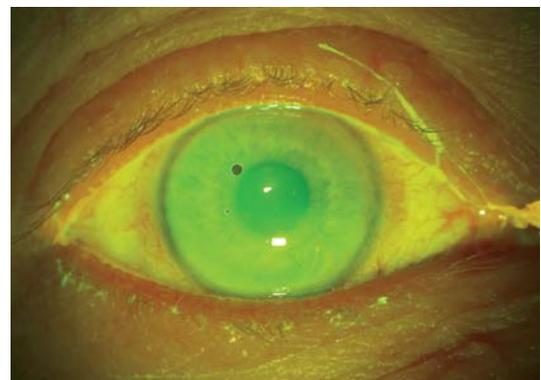
- If the Support Curve is too close to the outer edge of the limbus, increase the overall diameter of the lens. The consultant will calculate the new base curve needed for any change in diameter to keep the rest of the lens fit the same.
- Changes in the Support Curve and the Peripheral Curve are to parallel the sclera only.
 - These curves need to be aligned with the sclera or the initial Base Curve or Pivot Curve is incorrect.
 - If the fit is tight at the outer edge of the lens with clearance at the inner edge of the Support Curve, the Support Curve needs to be flattened.
- When changing the diameter only, the sagittal depth of the lens needs to be compensated:
 - .2mm larger: flatten base curves 0.75D
 - .4mm larger: flatten base curves 1.50
 - Once the best fit diagnostic lens is found, allow the lens to settle on the eye for at least 20 minutes. The lens should move slightly during the blink, facilitating tear exchange and allowing for easy removal.
 - If there is not enough clearance over the limbus, order the Pivot Curve .5 steeper than standard.
 - If there is too much clearance over the limbus, order the Pivot Curve .5 flatter (only if there is a bubble that doesn't dissipate).

When this is done, the consultant will calculate the change in base curve needed (either steeper or flatter) to keep the rest of the lens fit the same.

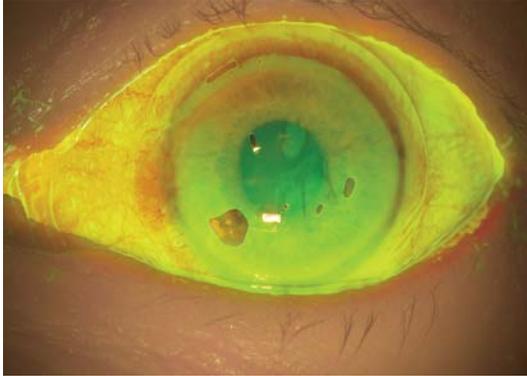
- If the Support Curve is too close to the outer edge of the limbus, increase the overall diameter of the lens. The consultant will calculate the new base curve needed for any change in diameter to keep the rest of the lens fit the same.



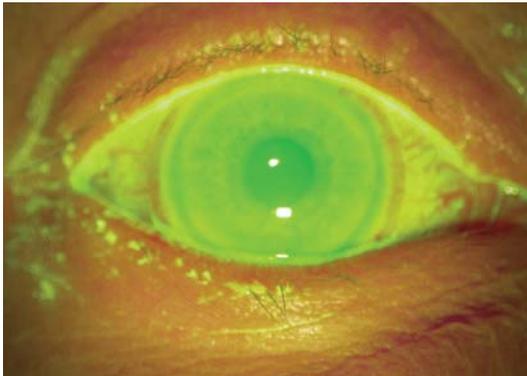
Steep pivot curve



Flat pivot curve



Flat support curve



Steep support curve

- Changes in the Support Curve and the Peripheral Curve are to parallel the sclera only.
 - These curves need to be aligned with the sclera or the initial Base Curve or Pivot Curve is incorrect.
 - If the fit is tight at the outer edge of the lens with clearance at the inner edge of the Support Curve, the Support Curve needs to be flattened.
- When changing the diameter only, the sagittal depth of the lens needs to be compensated:
 - .2mm larger: flatten base curves 0.75D
 - .4mm larger: flatten base curves 1.50
 - .2mm smaller: steepen base curves 0.75D
 - .4mm smaller: steepen base curves 1.50
- When changing the Pivot Curve:
 - Steeper increases the height of the lens
 - Flatter decreases the height of the lens
 - To keep the same overall height :
 - .5mm steeper pivotal curve:
 flatten base curves 1.00D
 - .5mm flatter pivotal curve:
 steepen base curves 1.00D

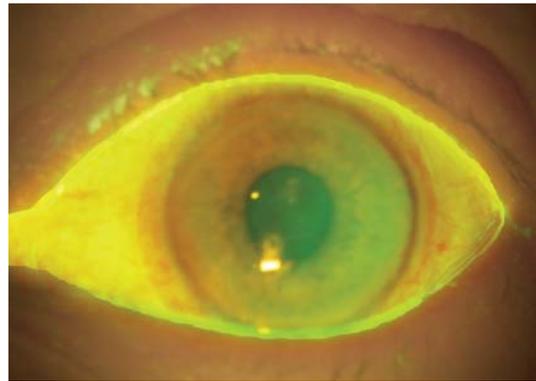
Step 3: Refine visual needs

Over-refract and call in final lens specs to consultant.

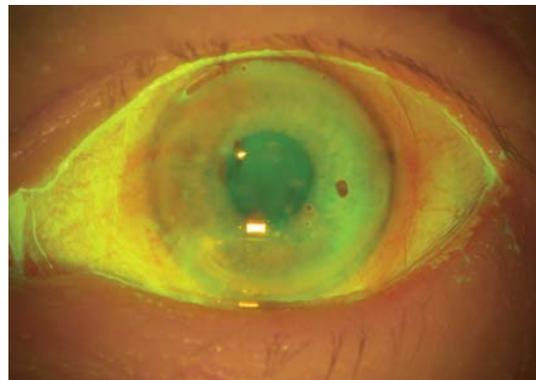
Thanks to Corey Dickson NCLC FCLSA, Tulane University and Lee Hewitt NCLC FCLSA, Winston-Salem for their input in the development of this fitting guide.

Fitting Tips

- When the proper trial lens is chosen, comfort should not be an issue. After insertion the lens very quickly settles onto the eye.
- There should be no compression of the blood vessels in the sclera and no compression marks left when the lens is removed.
- There should be no lens adherence or any difficulty with removal.
- The proper fitting curves first land on the sclera, then the weight is shared across the cornea while clearing the limbus.
- Your Essilor consultants are available to aid in designing more or less clearance in different areas and still maintain the same overall sagittal height.
- The lens can be manufactured as large as 14.8mm diameter if the patient has an exceptionally wide limbal area, or as small as 14.0mm for patients with a small cornea.
- The key to the fit is determining the height from the apex of the cornea to the sclera with the trial lens.
 - The lens shape can be customized to fit over most of the irregular corneal needs.
 - tilted corneal grafts
 - reverse geometry corneas
 - keratoconus
 - pellucid marginal degeneration
 - corneal flattening inserts
- If an eye cannot be fit with the Perimeter design diagnostic lens consider fitting with the Jupiter Lens.
 - Trial lenses for the Jupiter Scleral designs are readily available through your Essilor Lab.



Good fit



Small fit