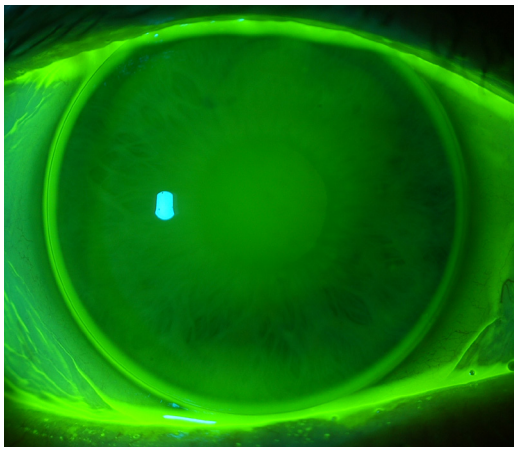
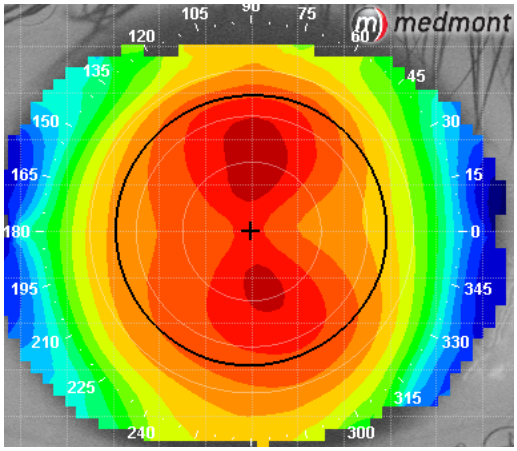
APEX® PC-IV

Corneal GP Lens Fitting Guide



Description:

The PC-IV is a GP lens with revolutionary construction employing both a larger diameter and highly aspheric back surface. It was designed as a platform to deliver both single vision and multifocal optics for patients. The larger diameter of the PC-IV serves to stabilize the lens and decrease movement. This results in improved initial and long term comfort. Additionally, the high aspheric back surface is meant to emulate the cornea's natural rate of flattening from apex to periphery. This improved alignment creates a high first fit success with its forgiving lens to cornea relationship.



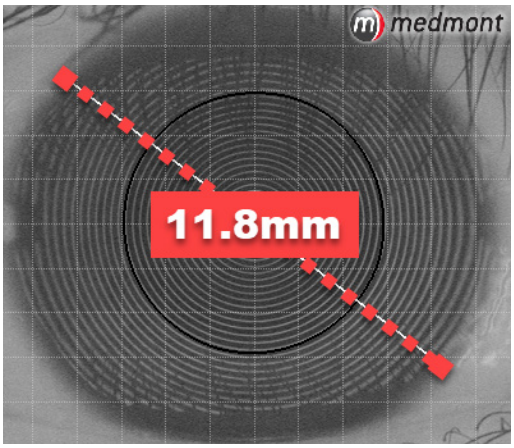
Step 1 : Base curve selection:

Determine the Flat K-reading and start with a base curve 1.50 diopters steeper.

The PC-IV lens employs a high aspheric back surface which is designed to follow the natural rate of flattening of the eye. This steep lens to cornea relationship does not create apical steepening because the high eccentricity back surface of the lens flattens quickly, mimicking the eye's inherent high eccentricity.

Base Curve Selection Example

K-readings:	42.00D / 43.25 @ 90°
Flat K:	42.00
Add	+ 1.50
	=
Initial BC:	43.50D



Step 2: Diameter selection:

Determine the visible iris diameter (VID) and subtract 1.3mm.

The PC-IV's larger diameter is meant to reduce movement and increase centration and comfort. The lens edge may appear to cross the limbus during the blink which is acceptable provided there isn't any sign of conjunctival staining.

Step 3: Power selection:

Determine the sphere component of the Rx and add -1.50 diopters to the power.

Remember to vertex the spherical Rx, where necessary, prior to adding the lacrimal lens power compensation. The steep base curve to cornea relationship results in the power adjustment of -1.50 diopters being added to the final Rx. Consider this normal for the high aspheric PC-IV design.

Step 4: Eccentricity:

Start with the "Standard" Eccentricity

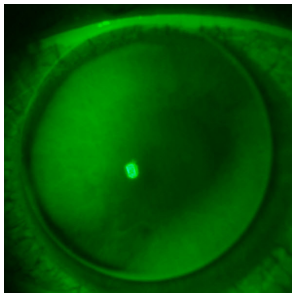
The back surface eccentricity of the PC-IV can be increased or decreased to alter the landing and edge lift. The eccentricity can be altered in increments of ±0.5, however, a ±1.0 adjustment is used to make a noticeable change in fit. For a tight edge, the typical adjustment is "Standard +1" to loosen the periphery of the lens and increase the edge lift. For a loose edge, the typical adjustment is "Standard -1" to decrease the edge lift and tighten the fit.

Step 5: Evaluating the Fit

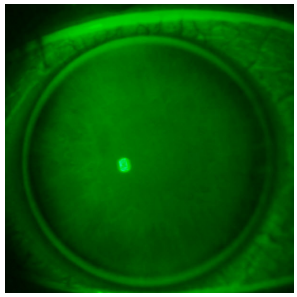
Centration: The PC-IV should position within the borders of the visible iris diameter and center well. A lens that habitually positions itself on the conjunctiva would be considered unacceptable.

Fluorescein Pattern: The optimal fluorescein pattern should exhibit apical clearance, a wide area of peripheral alignment and approximately a 0.5mm width of edge lift circumferentially. If central bearing is present along with an excessive edge lift, then the base curve should be steepened 0.50D/ 0.10mm. Flat lenses such as this will normally ride high, lateral or appear loose on eye. If the pattern shows excessive apical clearance and a tight edge, then the base curve should be flattened 0.50D/0.10mm. Steep lenses will normally ride low.

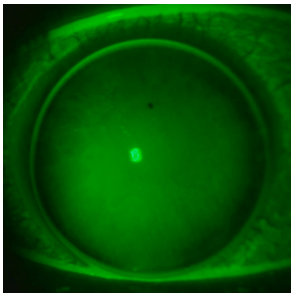
Vision: Over-refract the lens as you normally would with any GP. Determine if a spherical over Rx provides quality vision? If not, discuss toric lens options with your Precision or Cardinal consultant.



Flat Fit



Optimal



Steep Fit

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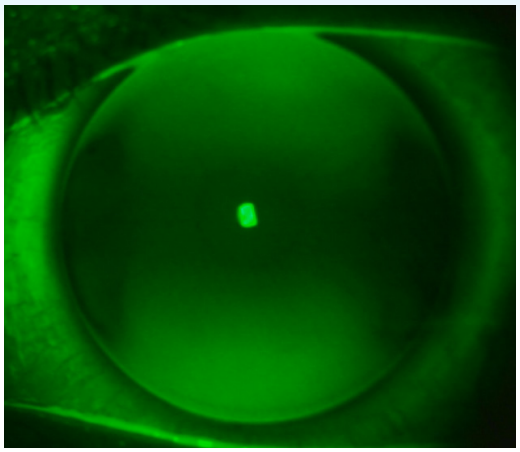
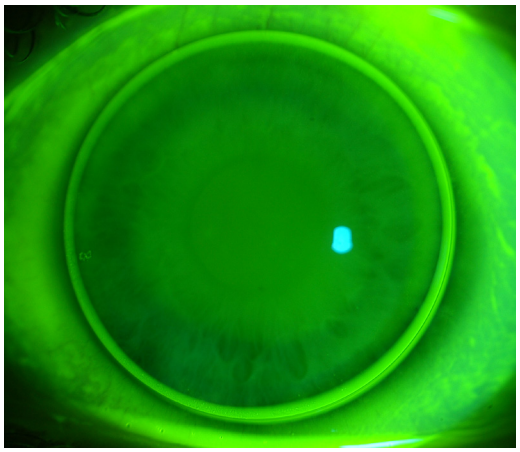
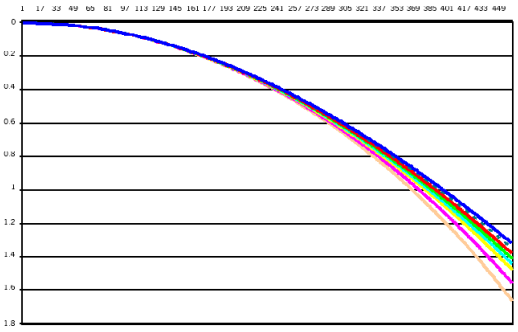
Additional Considerations:



Symmetric Vs. Toric: When the corneal astigmatism is high, a toric GP lens may be the best option for the patient to create alignment, centration and comfort. If the symmetric PC-IV shows a dumb-bell like fluorescein pattern on eye, with a lack of stability and poor comfort, then switch to a toric GP lens.



Large Diameter Lenses: The PC-IV lenses are typically larger than conventional GP's and can appear to cover most of the cornea. This can be a concern if the edge were to impinge upon the conjunctiva. Consider that a 10.5mm PC-IV will have a landing point or alignment with the cornea of approximately 9.0mm. This diameter of bearing is well within the border of the visible iris and therefore lens movement should not result in pressure on the limbus and conjunctival staining is only likely if the edge lift is inadequate.



Sagittal Depth: Adjustments to the eccentricity change the sagittal depth of the lens and therefore the apical clearance. For example, increasing the eccentricity of the PC-IV will decrease the sagittal depth. Conversely, decreasing the eccentricity will increase the apical clearance. The lab consultant can assist with adjustments to the eccentricity to ensure the apical clearance comes out correctly.

For Fitting or Technical Support, Contact Your Apex® PC-IV Distributor

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