ULTRA-THIN CUSTOM CONTACT LENS FOR KERATOCONUS AND IRREGULAR CORNEAS
FITTING SET PARAMETERS

The Standard Fitting Set is available with 8 x 14.50mm diameter lenses comprising:

- 6 x STD periphery Base Curve 7.80 to 8.80 in 0.20 mm steps
- 1 x FLT2 periphery Base Curve 8.20 (for Nipple Cones)
- 1 x STP2 periphery Base Curve 8.60 (for post-graft and other reverse-geometry corneas)

It is possible to order a powered KeraSoft® Thin lens from KeraSoft® IC Plano Trial Lens. However, if a KeraSoft® IC powered lens is ordered from a KeraSoft® Thin Plano Trial Lens, the final lens may fit differently due to the thicker profile shape.

FIRST CHOICE LENS CALCULATION

A good approximation of the Base Curve required can be calculated using the Tangential map on a topographer. For best results, use a Normalized map with 5mm zone included and numerical values displayed.

For more information, refer to the KeraSoft® Thin Topography Guide.

This calculation does NOT work with the Axial (Sagittal) maps, as the mid periphery values are different.

COMPENSATION FACTORS (CF)

These are numerical values within the calculation depending on the central Sim K Readings of the cornea.

FOR CENTRAL CONES

Base Curve = \frac{\text{Average (Flat Central Sim K + Steep 5mm ring Sim K)}}{2} + \text{CF}

FOR LOW & OFFSET CONES

Base Curve = \frac{\text{Average (Ave of Sim K + Ave K on 5mm ring)}}{2} + \text{CF}
**FIRST CHOICE LENS ASSESSMENT**

Insert lens and allow to settle for **no more** than 5 minutes. It is helpful to start observing the lens immediately to see whether rotation is stable or variable. For best results, assess lenses on eye with a slit lamp using the MoRoCCo VA characteristics outlined below. Note the centration, movement and rotational stabilization and ask the patient about the comfort of the lens as it settles on eye.

**MoRoCCo VA CHARACTERISTICS**

<table>
<thead>
<tr>
<th>MOVEMENT</th>
<th>Up to 2mm is acceptable as long as the patient is comfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROTATION</td>
<td>Laser mark should sit at 6 o’clock.</td>
</tr>
<tr>
<td></td>
<td>Rotation of the lens that does not change on upward gaze is classed as stable, indicating a Tight fit.</td>
</tr>
<tr>
<td></td>
<td>Rotation of the lens that changes on upward gaze is classed as unstable, indicating a Flat fit</td>
</tr>
<tr>
<td>CENTRATION</td>
<td>Centered lens indicates an Optimal fit.</td>
</tr>
<tr>
<td></td>
<td>Decentered or dropping lens indicates a Flat fit</td>
</tr>
<tr>
<td>COMFORT</td>
<td>An Optimal lens is comfortable. A Tight lens may be comfortable at first but will then start to be uncomfortable. Non-settling discomfort indicates a Flat fit.</td>
</tr>
</tbody>
</table>

If the fit appears Tight or Flat, remove and choose the next appropriate base curve. If fit appears Optimal, move straight to over-refraction, using the spectacle refraction as the starting point. If this is difficult to obtain, use the topography astigmatism as a starting point.

**OVER-REFRACTION**

Always assess the over-refraction straight away. Leaving lenses to settle for an hour or so will change fitting characteristics. Use 0.50D steps or more when assessing sphere and cyl. It is often easier to assess the cyl before finalizing sphere correction, as large amounts of uncorrected astigmatism cause excessive ghosting.

VA with a Tight lens will be better after the blink. VA with a Flat lens will be worse after the blink. VA should be at least the same or better than spectacle refraction. If you attain a worse result, this means the fit is not optimal.
SECTOR MANAGEMENT CONTROL

It is possible for up to 2 sectors of the periphery to be modified independently of the Base Curve. The most common use of this design is to 'tuck in' the inferior of the lens for Low Cones/PMD or to improve contact with the sclera in complex post-graft cases.

Before using SMC, try a 15.00 diameter STD configuration, as this will often resolve fit issues.

Record angles counter-clockwise around the lens as A1, A2, A3 & A4.

A1 & A2 define the beginning and end of sector 1.
A3 & A4 define the beginning and end of sector 2.

Each sector can be ordered as STD, STP 1-4 or FLT 1-4, though STP4 & FLT4 are rarely used.

Blend areas are automatically set once sector angles are defined. There must be a minimum of 30 degrees between each sector and no more than 4 step changes between periphery values.
**Diameter & Periphery Guide**

KeraSoft Thin’s increased flexibility improves drapage over the peripheral cornea. This reduces the need for peripheral changes, which can often be better managed by moving to a larger diameter lens. The guide below suggests where larger diameters or different peripheries may be appropriate.

Fitting Lenses with different diameters or peripheries are available on request.

<table>
<thead>
<tr>
<th>Corneal Type</th>
<th>Periphery</th>
<th>Diameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Cone (mild to moderate)</td>
<td>Standard</td>
<td>14.50</td>
</tr>
<tr>
<td>Nipple Cone (advanced)</td>
<td>Flat 2 or Flat 3</td>
<td>14.50</td>
</tr>
<tr>
<td>Low or Decentered Cone</td>
<td>PMD (mild to moderate)</td>
<td>Standard</td>
</tr>
<tr>
<td>Low or Decentered Cone</td>
<td>PMD (advanced)</td>
<td>SMC (STD:STP1 or STD:STP2)</td>
</tr>
<tr>
<td>Post-Graft</td>
<td>Post-Refractive Surgery</td>
<td>Standard</td>
</tr>
<tr>
<td>Complex Post-Graft</td>
<td>Post-Refractive Surgery</td>
<td>Steep 2 or SMC design</td>
</tr>
</tbody>
</table>

**Making Periphery Changes**

Always use STD lenses before trying a lens with a different periphery. Each periphery change is equivalent to 0.20 change in Base Curve.

**Nipple Cones**

If the First Choice Lens Rule gives a relatively flat Base Curve (ie. 8.60) and this is acting very flat, use that value as the peripheral fit and go down at least 2 steps for the Base Curve (ie. 8.20 FLT2).

**Reverse Geometry Corneas**

Topography does not tend to record the peripheral cornea, so the First Choice Lens Rule is likely to provide a lens that fits the central cornea but tends to flute at the edge.

Keep the Base Curve as it is and tighten periphery by 1 or 2 steps or increase diameter to 15.00.
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