Fitting protocol for fitting KeraSoft® Thin FLT peripheries using STD periphery lenses

FLT

FLT periphery KeraSoft® Thin lenses are generally used for those corneas that demonstrate flat peripheral corneal curvature relative to the central area on topography. Examples would be nipple cones.

Goals:
1. Stable and optimal vision between blinks
2. Optimal MoRoCCo fit

Always try STD periphery lenses first, as these can work in many situations. Peripheral changes are made in cases where several Fitting Lenses have been tried and all satisfy one goal, but not the other.

Often, this strategy will require using multiple fitting lenses until the best VA and fit are achieved. In these situations you will combine the data for 2 separate lenses to order the lens for the patient. Examining the type of cornea being fitted can give guidance as to which changes to make to the periphery.

Cases of Keratoconus with moderately flat peripheral cornea

- Generally topography shows a steep central or para-central area and a flat periphery
- They most likely will require FLAT periphery design.

Procedure:

1. Steeper lenses will demonstrate stable rotation
   a. Rotation may slowly creep a few degrees with repeated blinking but is stable on straight ahead and upwards gaze
   b. VA will be clearer after the blink
   c. Lens will be centred
2. Fitting flatter lenses will reduce rotation
   a. VA will improve but will still not be optimal and may fluctuate during the blink cycle
   b. Lens will behave flatter, with decentration and increased drop

Overview

The lens giving the **best VA** and **least rotation** determines the **peripheral fit.**

The lens giving **best centration** determines the **base curve.**

Every **0.20 change** in base curve corresponds to **1 step** change in the periphery.

Example: 8.40 STD lens

Mo	1.5 mm	🔴
Ro	Stable or very slightly unstable range from 0 to 5CCW	🟢
C	Decentered inferior temporal	🔴
Co	Not aware of lens	🟢
VA	20/25, 6/7.5, 0.8 fluctuating	🟢

In this example, the 8.40 lens gives the best **VA** of all lenses but it is still not optimal. Movement is good and rotation acceptable. The decentration indicates the lens may be too loose or flat.

However, going steeper improves centration but the other categories are made worse.

8.20 STD lens

Mo	0.5 mm	
Ro	10 degrees CCW stable	
C	Slightly decentered	
Co	Comfortable	
VA	20/40, 6/1812, 0.5 F fluctuating vision	

8.00 STD lens

Mo	0.1 mm	
Ro	15 degrees CCW stable but creeping slowly round on repeated blinking	
C	Well centered	
Co	Comfortable	
VA	20/60, 6/18, 0.33 Fluctuating vision	

Using the information that you have from these trial lenses you can now determine the best lens to order.

The **8.40 STD** gave best **VA** and **rotation:**

Choose this as the **periphery**

The **8.00 STD** gave best **centration:**

Choose this as the **base curve**

As there was only a small amount of unstable rotation, it is assumed the final lens will have **NO** rotation when the SMC sector is applied.

Each **0.20** change in the base curve corresponds to **1 step** in the periphery, therefore the final lens to order is:

8.00:FLT2

In cases of significant nipple cones, good **VA** may be impossible to achieve with any STD periphery lens. Using the **8.20:FLT2** lens should immediately improve the VA. From the behavior of this lens, you should be able to determine whether the base curve should be made steeper or flatter, keeping the **FLT2** periphery.

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