CANTOR+NISSEL

RGP EXTRAS

ALL OF THE FOLLOWING DESIGNS/MODIFICATIONS CAN BE MADE TO OUR 4F & OXYFLEX (PERCON) LENSES

TORIC DESIGNS

Toric Periphery
Manufactured with a spherical optic and a toroidal periphery. Used as a method of improving the fit of a lens on an astigmatic cornea without introducing the problem of induced astigmatism. Specify the lens material and specification required and request a toric periphery.

Back Surface Toric
Used when the corneal astigmatism is greater than 2.00-3.00D – difference in K readings is greater than 0.4-0.6mm.

Available in the following RGP designs; 4F, Oxyflex, Aqualine MF, MetrO2.

The base curves required can be calculated by making the radius 0.05mm flatter than flattest K and 0.10mm flatter than steepest K, the powers on each meridian need to be adjusted according to the deviation from the K's.

Eg. K readings 8.00mm @ 180 / 7.40mm@ 90
Spec Rx -0.50/-3.00 x 180

Flat BOZR Flat K + 0.05mm
8.00mm + 0.05mm = 8.05mm

Because we are adjusting the radius of the contact lens in relation to the K reading, we need to take into consideration the tear lens which will be produced and adjust the power accordingly. For every 0.05mm change in Base curve: K reading we need to adjust the power by 0.25D. As we are flattening the base curve in relation to the K reading this will produce a negative tear lens, so the power needs to be adjusted by a positive amount in order to compensate. Therefore when we are changing the base curve by 0.05mm we will need to change the power by +0.25D.

Power on Flat BOZR = Power on Flat Meridian + 0.25D
= -0.50D + 0.25D
= -0.25D
Steep BOZR Steep K + 0.10mm
7.40mm + 0.10mm = 7.50mm

The same applies to the power adjustment needed, for every 0.05mm change in curvature the power needs to be adjusted by 0.25D, however as the difference in K reading and BOZR for the steep meridian is 0.10mm, the power will need to be adjusted by 0.50D, and once again as we are making the lens flatter than the steeper K, we need to change the power by +0.50D.

Power on Steep BOZR = Power on Steep Meridian + 0.50D
= -3.50D + 0.50D
= -3.00D

Therefore base curves and powers to be ordered;

8.05mm x 7.50mm -0.25D on the FLAT/-3.00D on the STEEP

Alternatively supply Cantor & Nissel with the following information:

- K readings
- Spec Rx & BVD (if over 4.00D)
- HVID
- Material required
- Handling Tint
- Engravings

These lenses do not need to be stabilised.

CSD 328 | Issue 3 - April 2018 | Original issue April 2013

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Front Surface Toric
Used when the cornea is spherical, but there is refractive astigmatism.

Lens needs to be stabilised with a prism ballast. The standard amount of prism ballast supplied is 1.5 Δ.

Use a spherical trial lens to assess the fit and then carry out an over refraction noting the sphere, cyl and axis. Alternatively supply Cantor & Nissel with the following information:

- K readings or Base curve of current lens
- Spec Rx & BVD (if over 4.00D)
- HVID or Total diameter required
- Lens design & Material required
- Handling Tint
- Engravings

Bi-Toric
Used when the Back Surface Toric lens has created sufficient induced astigmatism. Normally over 1.00DC to necessitate correction with a front surface cyl.

If already happy with fit of a back surface toric, carry out an over refraction and advise Cantor & Nissel of the lens specification and the over refraction. Alternatively contact Professional Services with the following information:

- K readings or Base curve of current lens
- Spec Rx & BVD (if over 4.00D)
- HVID or Total diameter required
- Lens design & Material required
- Handling Tint
- Engravings

These lenses do not need to be stabilised.

Negative Carrier
A negative carrier is a peripheral zone that is thinner at the optic zone junction than at the edge. It is used to encourage lid attachment if the lens is sitting low and aide centration.

Positive Carrier
Peripheral zone thicker at the optic zone junction than at the lens edge.
Used to discourage lid attachment.

Concentric Bifocal
The central 3.50mm zone is powered for distance vision. This is surrounded by an annulus of reading power. The lens-cornea relationship must be designed to provide on-eye dynamics such that the lens will translate on downgaze. The lens must be well-centred on forward gaze to make sure that the patient is looking through the distance zone.

Reverse Geometry
These lenses have a central back optical zone with a flatter radius of curvature compared to the adjacent intermediate curve, it is an option for fitting the post-refractive cornea. The BOZR selected is based on the patients' post-op K readings, the second curve is based on the patients' pre-op K readings.