

ALK[®]

The design of the ALK[®]

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The central curve is spherical which generates cone clearance effectively. Spline curve geometry is employed in order to generate a junction-less transition zone and the desired peripheral construction to achieve the on eye central and peripheral fit.

Fitting ALK[®]

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The ALK[®] is fitted based on Keratoconus severity, not K-reading measurements. There are 0.1mm BOZR increments between adjacent lenses, no rigid restrictions on BOZD, TD or peripheral lens design.

Predictable and accurate utilisation of spline curve geometry generates an exact central and peripheral lens surface, which will generate accurate, predictable and reproducible lenses.

The ALK[®] lens enables optimal vision by using UltraVision's SAM[®] optics. SAM[®] reduces the spherical aberration induced blur significantly, resulting in a visual image that is clearer than that achieved with the naked eye. This is essential as optical quality varies greatly with other complex lenses.

Good centration, movement and optical performance are essentials of optimal fitting.

Fitting Set

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The basic set consists of 18 lenses*, these allow 60% - 70% of cases encountered in general and hospital practices to be fitted. Each lens is designed for a different stage of the disease.

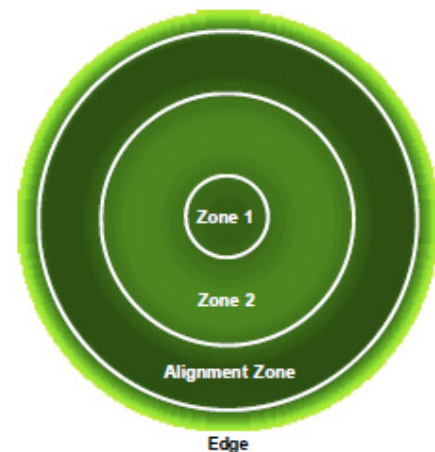
*22 lens set is also available, which includes the standard 18 lens range but has other possible fitting variations

Lens No.	Severity	Bcr	Td
0 - 3	Early cone	7.35 - 8.00	9.50 - 9.60
3 - 5	Moderate Cone	6.41 - 7.09	9.30 - 9.50
6 - 8	Advanced Cone	5.55 - 6.11	9.00 - 9.20
4+ - 8+	Enhanced	5.25 - 6.74	9.00 - 9.40
5S - 8S	Peripheral Fit	5.50 - 6.41	8.50 - 8.80

Fitting Steps

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1. Select suitable trial lens from standard set according to the table above (e.g. lens no 5).



2. Assess fitting with fluorescein on eye as follows:

- Assess central fit (Zone 1 and Zone 2)
- If clearance is excessive, select lower lens number (e.g. lens no 4)
- If clearance is insufficient, select higher lens number (e.g. lens no 6)
- Once the central fit is optimal, assess the peripheral fit (Alignment Zone and Edge)
- If peripheral fit gives insufficient clearance, select lens with the same number and increased peripheral clearance designated with a plus sign (e.g. 5+)

3. Allow best fitting lens to settle for 20-40 minutes, then over-refract.

4. Re-assess fitting and establish fine tuning adjustments.

5. Order the best fitting lens, with over-refraction or BVP and fine tune as follows:

Zone 1: If more or less clearance is needed either specify the required BOZR (see above table) or specify a half way step between lens numbers (e.g. lens no 4-5)

Zone 2: If a narrower or wider annulus is needed specify the desired change in millimetres (e.g. 0.1 mm smaller zone 2)

Edge: If more or less edge clearance is required, specify the desired AEL change in millimetres (e.g. 0.05 mm more AEL)

TD: If a slightly larger or smaller lens is required, specify the desired TD change in millimetres (e.g. 0.10 mm reduction in TD)

Please note that after modifying one or more of the above parameters, the laboratory will compensate other critical parameters to retain optimal fitting characteristics and supply a code which allows exact reproduction of the lens ordered.

General points

Physiologically, an ideal central fit is when the cone is vaulted (no contact between lens and cone). This however may have a poorer visual outcome compared to cornea/lens contact. So aim at a 'feather' (light) cone bearing if vaulting produces less than acceptable visual outcome.

Peripheral fit: an area of contact with the cornea in the mid-periphery (a full annulus of contact is not necessary) followed by an optimal edge clearance (as in a standard lens fit), excessive edge clearance is undesirable as it may compromise comfort.

Ideal Fit

Centrally: Light cone touch/alignment.

Circum-cone: Pooling of tears.

Mid periphery: Alignment.

Edge: Optimal clearance.

Action: Allow to settle, recheck fit, then over-refract.



Flat Fit

Centrally: Heavy cone bearing.

Circum-cone: Pooling of tears, may extend to mid periphery.

Mid periphery: Areas of alignment and pooling, due to lens rocking.

Edge: Excessive, may stand off due to lens rocking.

Action: Try steeper (BOZR).

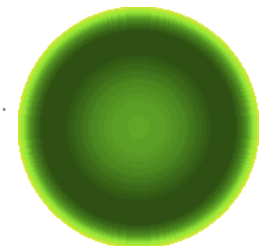


Steep Fit

Centrally: Cone and circum-cone clearance, may trap an air bubble.

Mid periphery: Alignment/bearing.

Edge: May be minimal or acceptable.



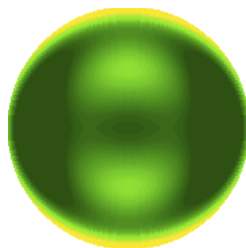
Action: If only slightly steep in the centre, allow settling as may settle back and give an optimal 'feather' touch cone. If remains too steep try a flatter BOZR.

Peripheral Astigmatic Fit

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Centrally: An ideal fit may appear marginally steep.

Mid periphery: May be ideal or flat in one meridian and steep in another.



Edge: Shows minimal or no clearance in one meridian, and excessive clearance in the other.

Action: If a flatter lens was unacceptable, try an increased edge lens. Or use the same number trial lens with smaller diameter (ie No. 55).

Edge Fit

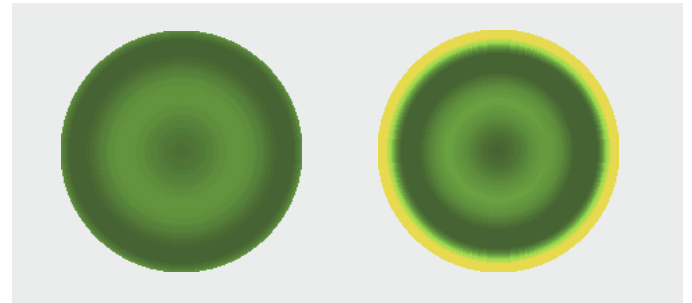
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Centrally: Ideal fit achieved.

Mid periphery: Alignment.

Edge: Too little or too much edge clearance.

Action: If too little, try same number, increased clearance lens. If too much, order reduced edge.



Material selection:

UltraVision carries most RGP materials that are available. However we would suggest that the ALK[®] be manufactured from our Optimum Extra DK 100 material, which exhibits good wetting and stability characteristics. For patients prone to dry-eye and wetting problems, we suggest the Optimum Comfort material.

Clinical Support

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If you have any technical queries or fitting problems, please call our Clinical Services Advisors on 0800 585115. UltraVision recommend all system lenses are ordered with a full 90-day exchange and fitting warranty (optional).

FOR FURTHER DETAILS
CALL **0800 585115**
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