KC2 Advanced Keratoconic Contact Lenses

Fitting Guide

SCOTLENS
CUSTOM FIT CONTACT LENSES

K-CONTOUR

CONTENTS

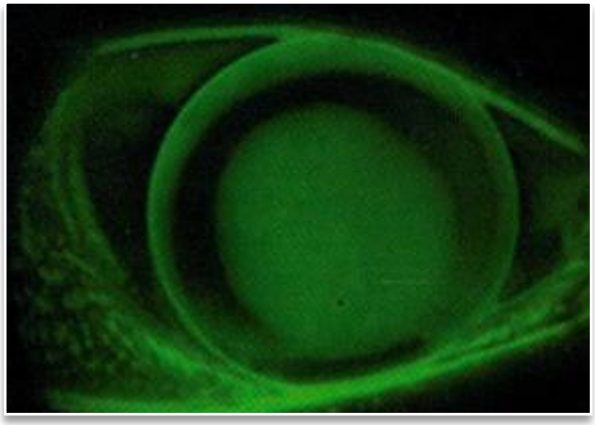
1. WHY K-CONTOUR?

Fitting K-Contour corneal lenses to your keratoconic patients can be completed effectively with trial lens fitting and no special equipment is necessary.

A high success rate can be achieved by following the straightforward fitting process, and availability of non-standard parameters in addition to the already extensive core range.

Lathe2i freeform manufacture ensure optimum surface qualities, accuracy and repeatability.

This is combined with fast delivery times, supporting your clinic time management.



2. SELECTING A TRIAL LENS

Keratometer method

Measure K readings and the first trial lens should be 0.30 steeper than your average K reading

Topographer method

Carry out topography and the first trial lens should be 0.30 steeper than your flat K reading

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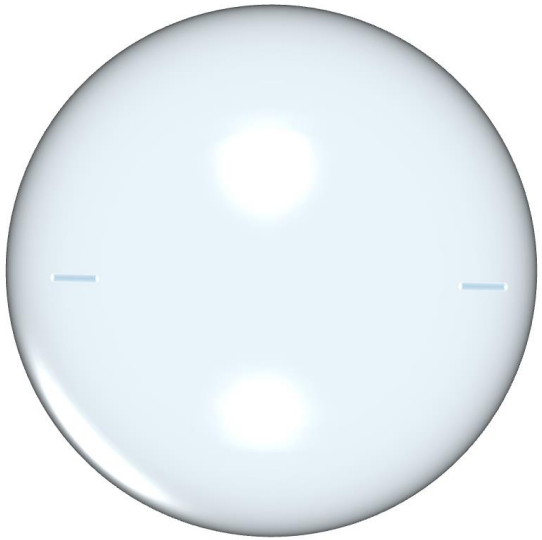
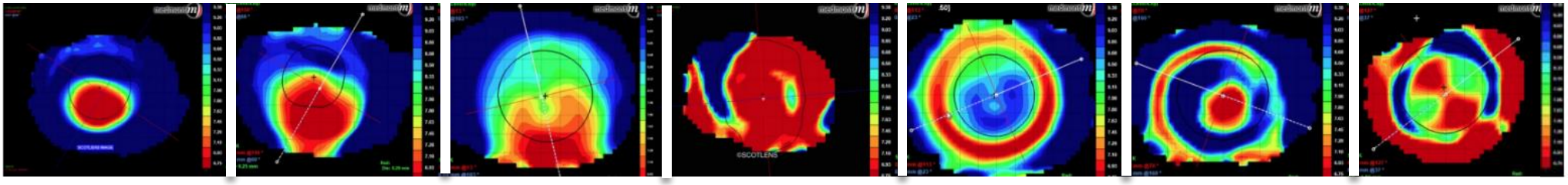
TOP TIPS FOR FITTING

- For new wearers, instil anaesthetic to optimise initial patient experience
- Assess lens fit with fluorescein and yellow filter at the slit lamp
- With toric lenses, note any rotation using flat axis marks (- -)



3. USE OF TOPOGRAPHY

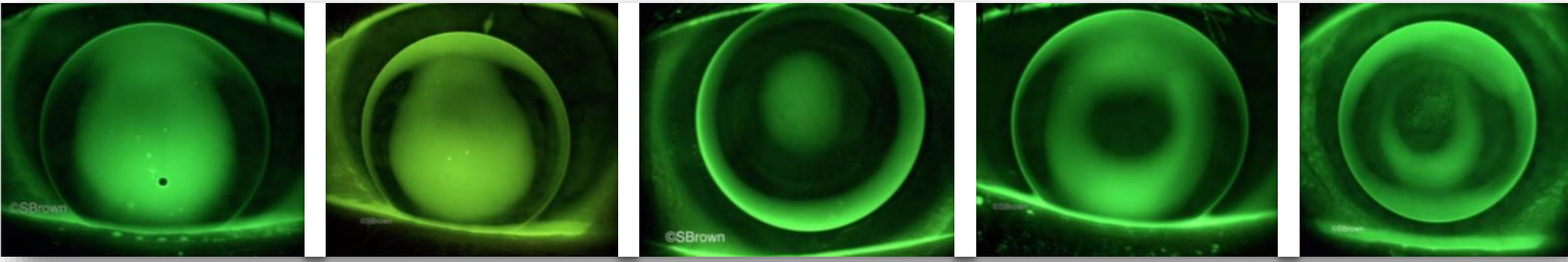
Topography identifies the corneal irregularity you are facing and can direct you to the appropriate first lens choice



Keratoconus Nipple cone:	Keratoconus Medium cone:	Pellucid Marginal Degeneration:	Keratoglobus:	Post Lasik:	Post Lasik Ectasia:	Post Graft:
Soft lenses, K-contour	KC2, CSL	EasyScleral 16mm	KC2/ EasyScleral 18mm	Soft lenses, CSL	CSL	EasyScleral 16 or 18mm

4. ASSESSING THE FIT-APICAL

- Minimal apical clearance is ideal when assessing the central fit, and there should be no apical staining following lens removal
- Apical bearing increases risk of cornea abrasion/scarring and excessive clearance can result in poorer visual acuity.
- Try steeper or flatter lenses from the fitting set until an optimum apical fitting pattern is achieved.
- Lenses commonly sit low on the cornea due to the corneal shape, This is acceptable unless the acuity or corneal epithelium is compromised



Too steep
Try a lens 0.2 flatter

Apical clearance

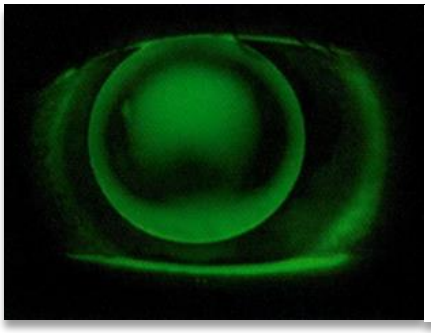
Optimum

Apical alignment

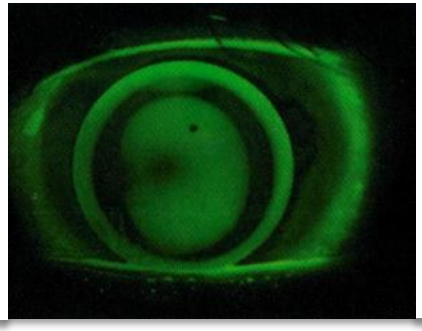
Too flat
Try a lens 0.2 steeper

Acceptable range

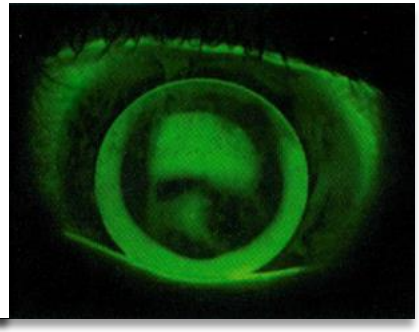
5. ASSESSING THE FIT-TORIC



Excessive edge lift in the vertical meridian.
Fit a toric



Toric lens fitted to the previous eye



Good central fit but steepen the edges one step

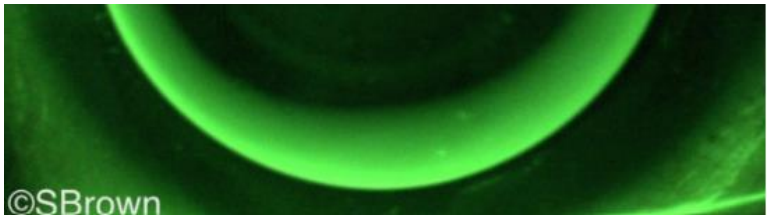
6. ASSESSING THE FIT-EDGE LIFT

A suitable edge lift will enable lens movement and tear exchange. The amount of edge lift around the lens usually varies but the ideal would be a 0.50mm wide band.

Excessive edge lift will result in an unstable fit on blinking or discomfort. Toric lenses can help if there is excessive edge lift in one merdian (see 'ordering back surface torics' for more information), and if the excessive lift is only in the inferior quadrant then reducing the diameter by 0.50 can help

Increased or decreased edge lifts can be ordered in step increments. Usually the BOZR will not need to be adjusted if altering the edge lift, but this can depend on the fit. If there is apical soft touch then steepen the BOZR 0.1mm for every step of increased (+) edge lift

Inadequate edge lift



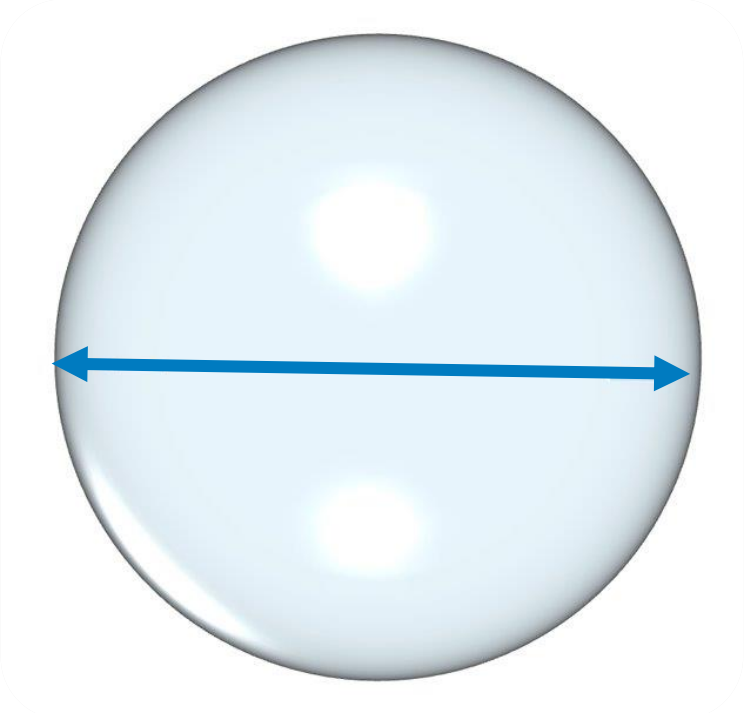
Maximum acceptable edge lift

7. DIAMETER SELECTION

The standard diameter of 8.70 will work well in most cases but it can be reduced if needed in 0.50 increment steps

Altering the diameter will significantly alter the fit so this should only be done in the case of poor fit or visual acuity

Diameter can also be increased to manage ghosting, flare or if a lens rides low



8. ORDERING BACK SURFACE TORICS

Toric back surfaces are specified by the difference between the steep and flat meridians, so decide on the fit for the flat meridian and order based on the chart

Should the fitting in the spherical optic zone be acceptable, but alignment in the periphery cannot be achieved, a toric periphery can be ordered in the same way

T 0.5	0.5mm steeper in the steep merdian
T 1.0	1 mm steeper in the steep merdian
T 1.5	1.5mm steeper in the steep merdian
T 2.0	2 mm steeper in the steep merdian

TP 0.5	0.5mm steeper in the steep merdian
TP 1.0	1 mm steeper in the steep merdian
TP 1.5	1.5mm steeper in the steep merdian
TP 2.0	2 mm steeper in the steep merdian

9. OVER REFRACTION

Spherical

- A spherical optic zone will usually give the best results so try fitting best vision sphere first and small amounts of residual astigmatism can be overlooked or incorporated into the the rx as best vision sphere.

Toric

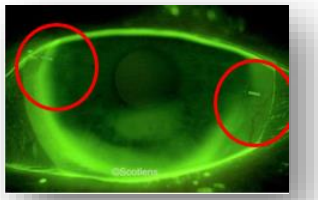
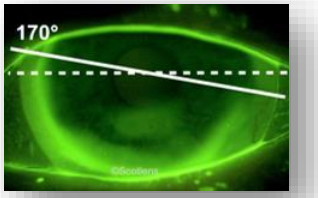
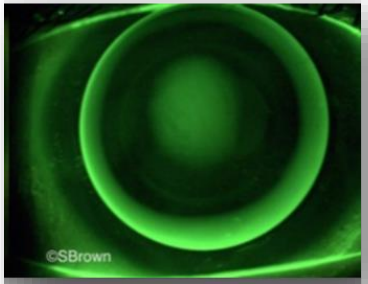
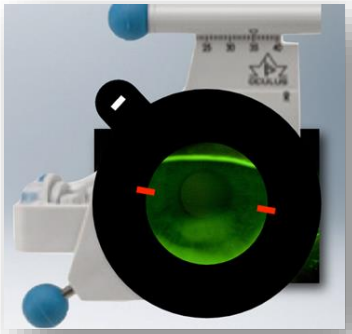
- If acuity is reduced provide the cyl correction in over spectacles or fit a toric lens.
- If a toric lens is fitted' perform a full over refraction with minus cyl in alignment with the flat axis marks on the lens so any oblique cyl will need to be provided as over spectacles. More information on this technique can be found here https://youtu.be/DldFSnTSLfY

- If a cyl is required, the toric over refraction is best performed over the lens once optimal fit has been achieved

In advanced keratoconus visual acuity of 6/9 should be achievable. If this is not the case, try a flatter lens 0.1-0.2 but this does increase the risk of long term corneal scarring

Remember to adjust any over refraction for BVD or specify the BVD when ordering.

10. TORIC OVER REFRACTION

Locate	Adjust	Over Refract	Combine
Locate the flat meridian axis marks on a fully settled toric lens. These should be aligned to within 20 degrees of the flattest K reading and be stable  	If there is rotation of the markings, address any issues with the fit by adjusting the BOZR before attempting a toric over refraction 	Carry out your over refraction with the minus cyl axis aligned with the lens markings as shown 	The sphere power is combined with both merdians, and the minus cyl power is combined with the steep merdian, as the cyl power is at 90 degrees to the axis This information can then be recorded on the online form on the website www.scotlens.com

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11. FITTING ADJUSTMENTS PART 1

	Steepen BOZR	Flatten BOZR	Increase edge lift	Decrease edge lift	Increase diameter	Decrease Diameter	Toric Fitting	Other lens option
Apical touch/staining	✓							
Excessive movement	✓			✓	✓		✓	CSL
Immobile/binding lens		✓	✓		✓			
High riding lens	✓			✓		✓		
Low riding lens		✓	✓		✓			EasyScleral
3 &9 o'clock staining			✓			✓	✓	Piggyback DD/ CSL
Poor adaption or comfort				✓				Piggyback DD/ CSL
Inferior stand off						✓	✓	EasyScleral
Inf/sup stand off							✓	

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11. FITTING ADJUSTMENTS PART 2

	Steepen BOZR	Flatten BOZR	Increase Edge Lift	Decrease Edge Lift	Increase Diameter	Decrease Diameter	Toric Fitting	Other Lens Option
Bubbles/trapped debris		✓			✓			
Mid peripheral stain		✓			✓			
Irregular/ advanced cone					✓			EasyScleral
Corneal nebula	✓				✓			CSL
Poor VA nipple cone		✓						Daily disposable/CSL
Poor VA early cone					✓			
Poor VA advanced cone								EasyScleral
Unstable VA	✓			✓	✓		✓	
Ghosting/Flare					✓			CSL

12. MATERIALS

Dk		MATERIAL	RECOMMENDED APPLICATION
LOW	11	F2 Low	Daily wear for lenses below 9.00mm
	17	Scotlens GP1 (No exchange)	
	18	Boston ES	
	26	Contamac Optimum Classic	
MID	58	Boston EO	Daily wear for lenses below 10.00mm
	65	Contamac Optimum Comfort	
	40	Paragon HDS	
HIGH	100	Boston XO	Night lenses, daily wear, extended wear, scleral and corneoscleral
	100	Acuity 100	
	100	Contamac Optimum extra	
	100	Paragon HDS 100	
HYPER	125	Contamac Optimum Extreme	All day wear, extended wear, corneal pathology present, 6 monthly frequent replacement, sclerals
	141	Boston XO2	
	160	Optimum Infinite	
	200	Acuity 200	

13. PARAMETERS

BOZR	4.00-12.00mm
Diameter	Fitting set varies with BOZR, 8.00 to 9.50
Power	Spherical+/-25.00D Toric <7.50 dioptres between meridians
Back Surface	Spherical Toric (>1.50mm betweenmeridians)
Front surface	Spherical Toric
Axial edge lift	Varies based on BOZR

14. ADVANCED FITTING TECHNIQUES

K-Contour™ KC2 can correct most degrees of keratoconus. In advanced keratoconus or other irregular corneas it may be necessary to consider alternatives. Patient comfort or lifestyle may mean that corneal lenses are not optimum for full time wear.

Piggy Back with KC2- This can be a useful technique to help patient adaption, post-graft patients so that the soft lens protects the junction or for patients in dusty environments. Firstly establish an acceptable KC2 fit without any soft lens worn. Then check the fit of this lens worn over a low powered daily disposable soft contact lens. Typically the KC2 fit will still be acceptable, which enables the KC2 lens to be worn with or without soft lenses. If the original soft lens causes an over refraction, alter the soft lens power assuming the change in labeled value will only have ¼ the affect. E.g. Wearing +1.00, OR is -0.50, alter soft lens power to -1.00.

EasyScleral™ & Corneoscleral- Larger diameter lenses can provide an optimum correction for certain corneal irregularities. Fitting sets for these designs are available from Scotlens. These designs are especially useful in post-surgical corneas, pellucid marginal degeneration and when failure or intolerance to corneal lenses occurs.

15. WARRANTY

RETURNS, EXCHANGES & CREDITS

- Lenses come with standard exchange.
- Order the adjusted power lens(es), patient can continue to wear initial pair.
- New lenses will arrive with a warranty card. Issue the new lenses and return initial with warranty card.
- Standard exchange is one free exchange, thereafter 50%, within 3 months of initial order. There is a £4 administration charge per lens.
- Any right that you have to reject the goods as not complying with the contract or delivery note/invoice must be exercised within 5 days of delivery.
- See current price list for full current T&C.

t: 01506 844272 | e: lab@scotlens.com | w: scotlens.com

Scotlens Ltd, Mill Road Industrial Estate, Linlithgow, EH49 7SG