EasyScleral Contact Lenses

Fitting Guide

SCOTLENS
CUSTOM FIT CONTACT LENSES

CONTENTS

1. WHY EASYSCLERAL™?

EasyScleral rest entirely on the scleral conjunctiva and vault over the cornea with no contact at all. This can provide comfortable option with good vision for patients with irregular corneas such as keratoconus and PMD. They are also ideal for post-surgical, post-traumatic corneas and protection of the ocular surface in dry eye patients.

Our technical team lab@scotlens.com or support@scotlens.com can support you with any adjustments or questions you may have.

A simple step by step fitting process using trial lenses enables quick and accurate fitting

The geometry of the lens can be customised enabling even the most complex eyes to be fitted successfully.

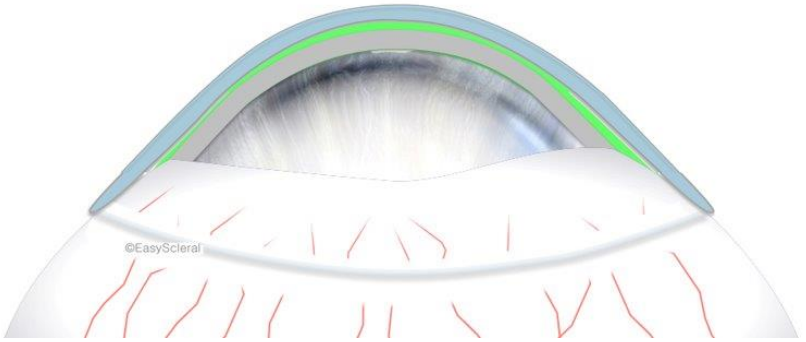
EasyScleral™ contact lenses can be worn during all activities allowing wearers full time clear and stable vision

2. STEP ONE: SELECTING FIRST TRIAL LENS

21 Lens set

16mm
1300 – 2300 microns Standard

18mm
1500 – 2900 microns Standard
2100 – 2700 microns Flat 1
1900 – 2500 microns +400 Limbus



2. STEP ONE: SELECTING THE SAG VALUE OF THE FIRST TRIAL LENS

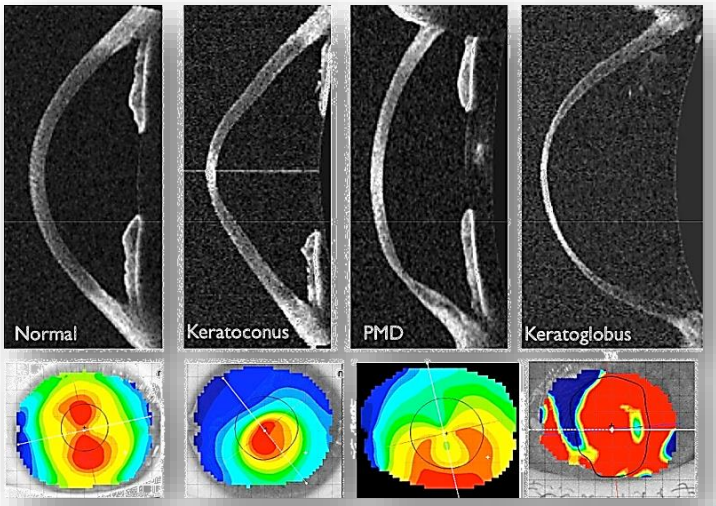
EasyScleral™ lenses are specified by their sag value. The more the cornea protrudes, the larger the required sag value will need to be in order to fully vault it

The sag value is measured at 10mm to allow selection of the first lens to be made by topography or OCT.

Selection of the first trial lens is an estimate to get a starting point, and the fit is assessed from there.

A guide based on the type of cornea you are fitting:

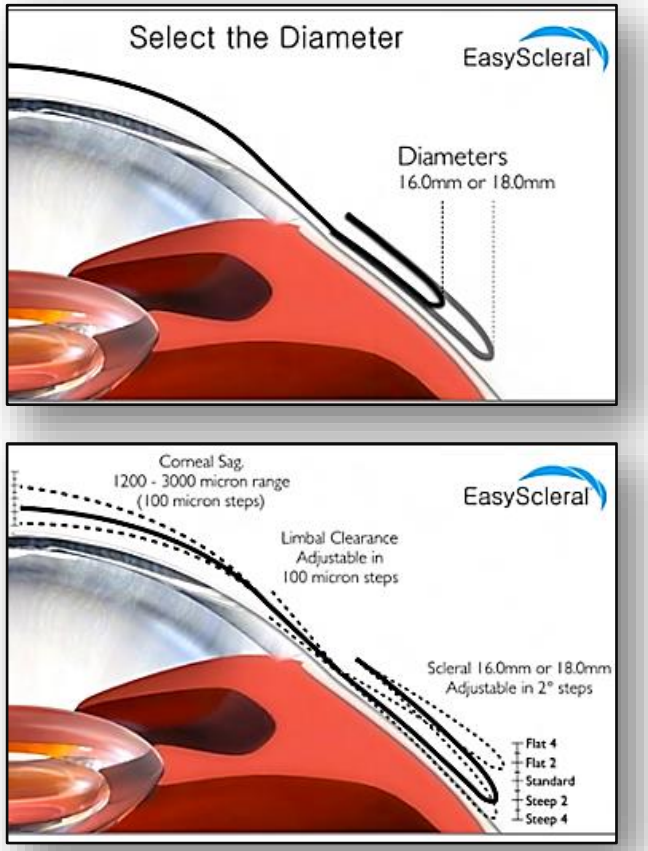
Regular corneas	1600 microns
Keratoconus	1600-2600 microns
PMD	1800 microns
Keratoglobus	>2400 microns



2. STEP ONE: SELECTING THE DIAMETER OF THE FIRST TRIAL LENS

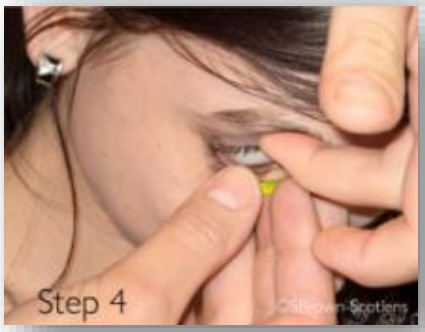
As a guide, you are more likely to need a larger diameter when fitting a larger cornea or using a larger sag value.

The standard diameters are 16mm and 18mm but any diameter in between can be specified.



3. TOP TIPS FOR FITTING

1. Clean lens with Topocare or alcohol based lens cleaner
2. Rinse and fill lens with preservative free saline
3. Dip Fluorescein strip into saline inside the lens
4. Place lens on patients eye with their head tipped forward to minimise the loss of saline. Cover patient's clothing with an apron and cover surfaces that might be stained by the fluorescein
5. Lenses can be removed by the lid margins in the same way as a corneal RGP or a sucker can be used. This is placed at the inferior edge and then the lower lid used to release it. It should come away easily



4. STEP TWO: FIT ASSESSMENT

INITIAL ASSESSMENT

Immediately after insertion, use a cobalt pen torch torch or slit lamp to check there are no bubbles trapped.

If there are, you need to remove, refill and re insert the lens as a useful fit assessment can't be carried out. Also look for apical touch, and if any is observed, remove the lens and re insert one with a deeper sag value.

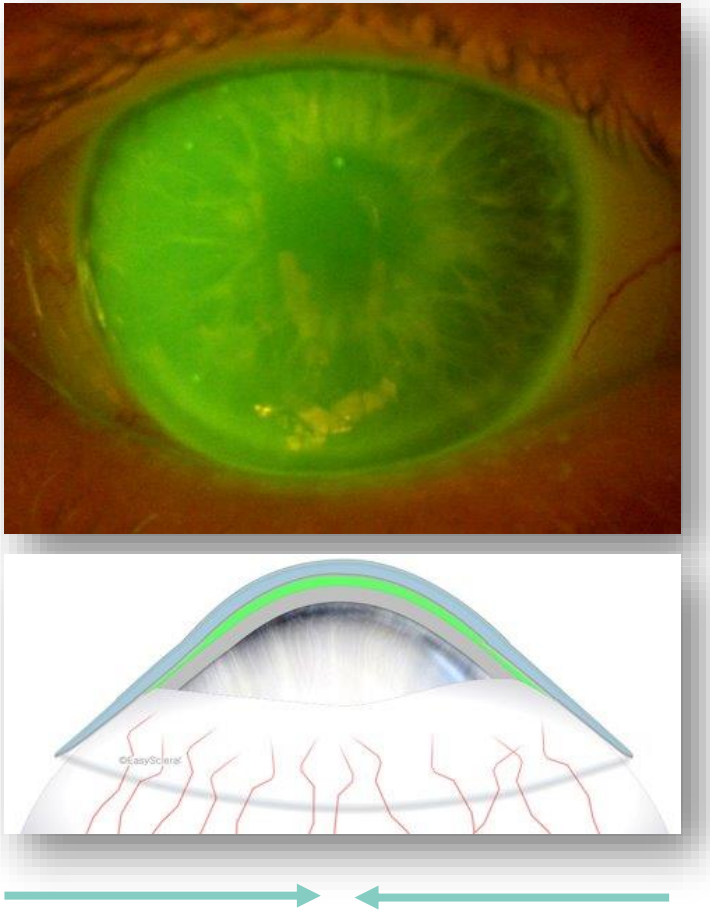
FULL ASSESSMENT

Easyscleral lenses do not significantly settle back onto the eye so the fit can be assessed right away

The scleral zone should be assessed first then the corneal clearance and finally the limbal fit

4. STEP TWO: FIT ASSESSMENT

- Assess fit from outside to inside
- All bearing of lens is on sclera from 14mm to edge
- Should vault entire cornea and limbus.
- Greater vaulting needs larger diameter to increase bearing weight bearing



4. STEP TWO: FIT ASSESSMENT-SCLERAL ZONE

Assessment should be made with the slit lamp using diffuse white light. If trialling a 16mm diameter and blanching is noted when assessing the scleral alignment, remove and try an 18mm instead

When the scleral part of the lens is aligned, the lens will feel comfortable and there will be no hyperaemia during wear or after removal

If you can only achieve a good scleral fit in one meridian, we can provide a toric periphery

Flat scleral fit

1600 18mm Flat 1

- Blanching at inner edge of alignment band
- Patient will have lens awareness due to the edge
- Hyperaemia will increase

Select a trial lens with 1 step steeper scleral fit

Alignment Scleral fit

1400 18.mm Standard

- Alignment with no blanching
- Patient has minimal lens awareness
- Minimal hyperaemia

Optimal scleral fit, continue onto corneal sag assessment

Steep Scleral fit

1200 18mm Steep 1

- Blanching at lens edge
- Patient has increasing lens awareness or stinging
- Increasing hyperaemia

Select a trial lens with 1 step flatter scleral fit

4. STEP TWO: FIT ASSESSMENT-LIMBAL ZONE

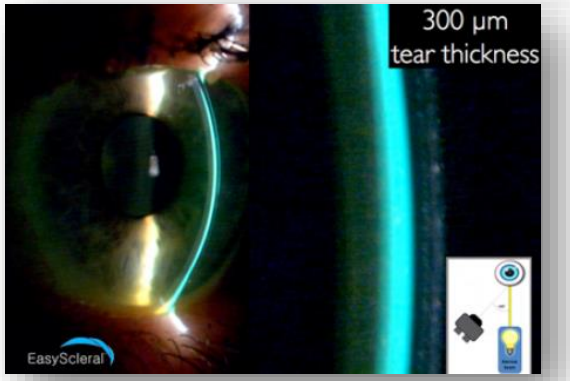
If the scleral fit is altered, it will change the corneal clearance so that needs to be optimised before moving on to assess the scleral fit.

The relationship between these is 100-200 microns change to corneal clearance for every step change in the scleral zone to keep consistency

EasyScleral™ should clear the cornea by 200-400 microns initially. This can be assessed on OCT or on the slit lamp using a narrow parallelpiped beam.

The trial lenses are around 300 microns thick, so the thickness of the saline/fluorescein mix can be compared with the lens thickness is using a slit lamp.

Once the clearance has been optimised, the lens should be allowed to settle for one hour before re assessing and over refraction takes place at this point.

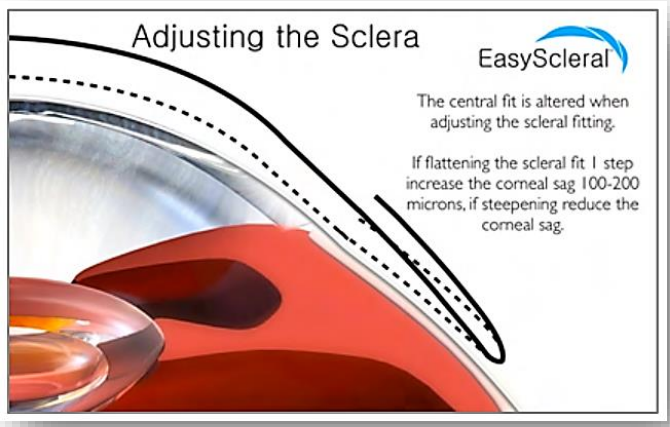


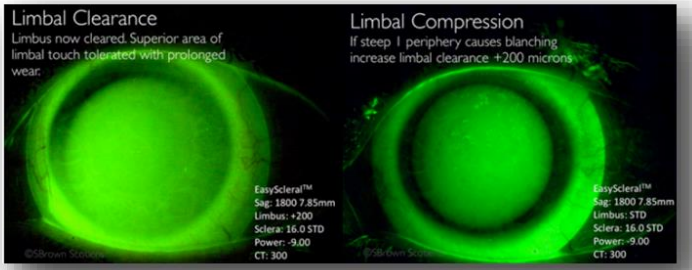
4. STEP TWO: FIT ASSESSMENT-LIMBAL CLEARANCE

It is essential that the lens fully clears the limbus to maintain corneal integrity. The clearance in this region should be around half that of the minimum corneal clearance after settling, and is again assessed using OCT or slit lamp.

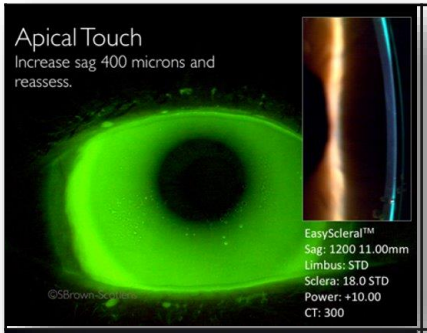
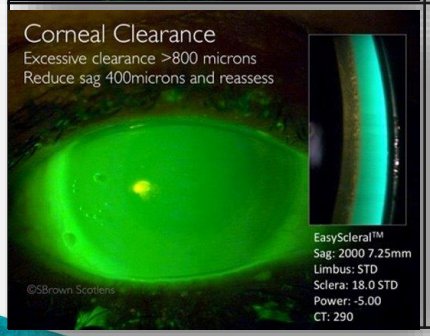
If the clearance is insufficient in this zone, it can be ordered with additional limbal clearance in 100 micron steps.

If the scleral zone is being steepened this will increase limbal clearance, so it can be helpful to place the S1 scleral zone trial lens on eye to assess the limbal clearance with this lens on eye

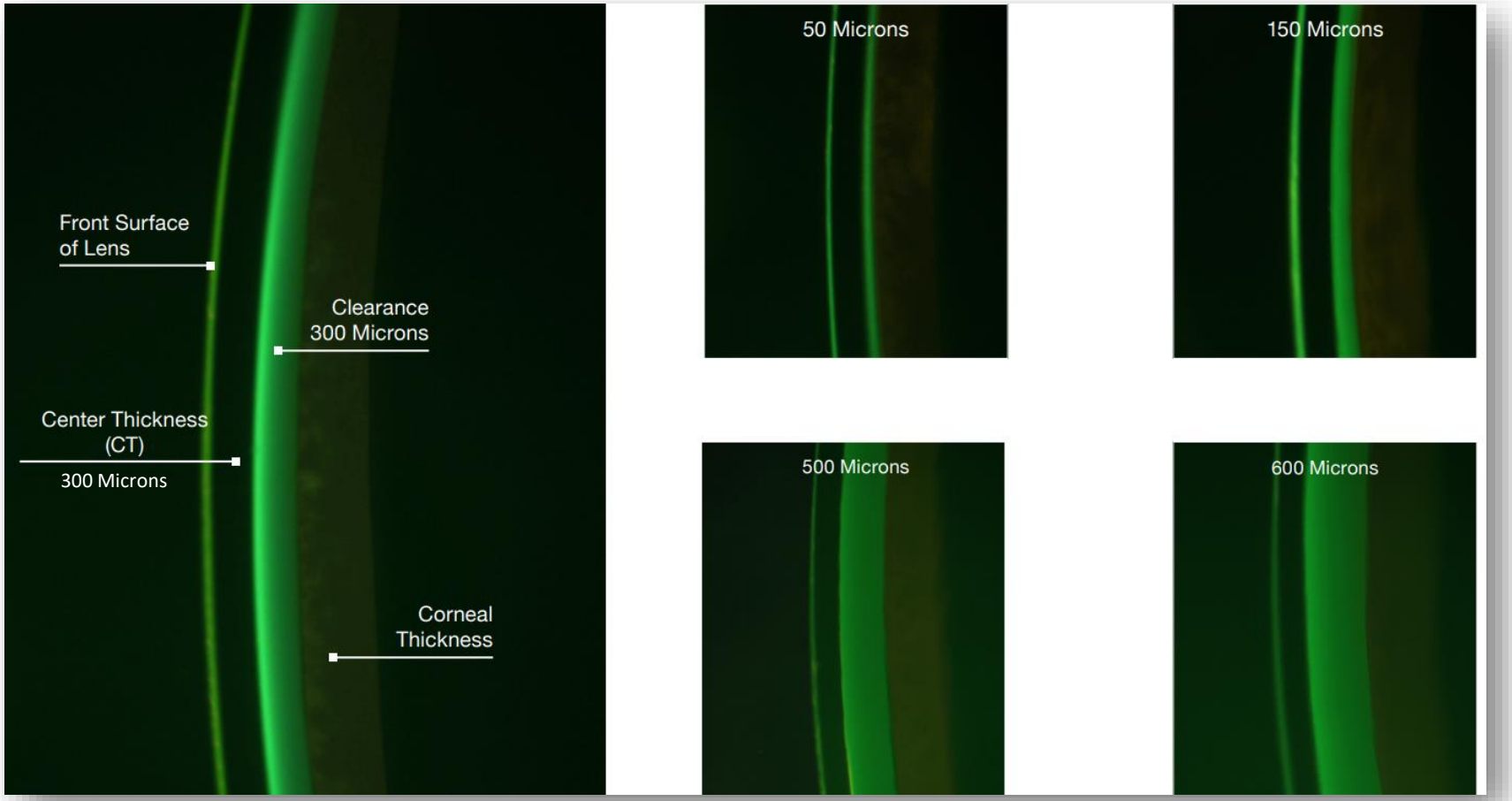




4. STEP TWO: FIT ASSESSMENT-CORNEAL CLEARANCE

	Apical touch	Increase sag by 400 microns and re assess
	Optimal clearance	None required
	Excessive clearance	Reduce sag by 400 microns and re assess

4. STEP TWO: FIT ASSESSMENT-CORNEAL CLEARANCE USING OPTIC SECTION



https://www.ferris.edu/optometry/vision-research-institute/pdfs-docs/Scleral-lens-fit-scales_v2.pdf

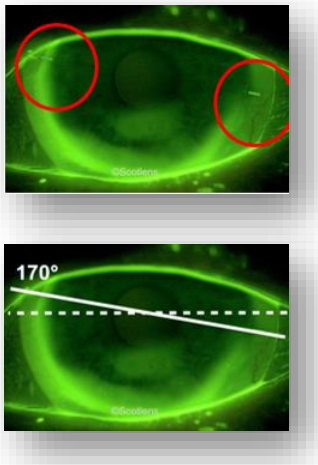
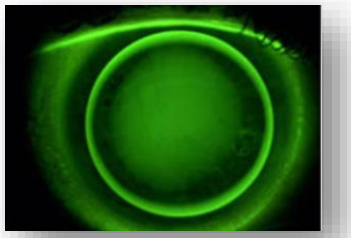
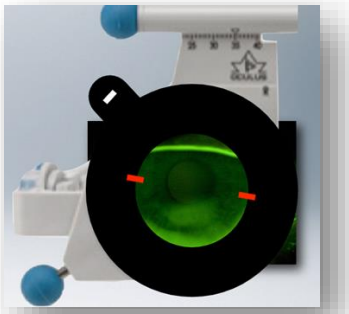
5. STEP THREE: OVER REFRACTION

- Over refraction takes place after lenses have settled for one hour
- Assess the acuity with a distance chart and check the lens power with spherical over refraction first
- Remember to adjust over refraction for BVD if necessary. They are often larger values than over refracting over corneal lenses
- Sph/cyl over refraction if needed

5. STEP THREE: OVER REFRACTION

- Over refract over the best fitting lens available from the trial set
- Assess the acuity with a distance chart and check the lens power with spherical over refraction first
- Sph/cyl over refraction if needed

6. STEP THREE: TORIC OVER REFRACTION

Locate	Adjust	Over Refract	Combine
Locate the flat meridian axis marks on a 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

5. MATERIALS

Dk		Material	Recommended Application
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	

6. PARAMETERS

Central Zone Sag	1200-3000 microns (100 micron steps) Toric Central Zone available
Scleral Zone	+/- 5 step increments (2°, 100 micron steps) Toric central zone available
Power	Spherical+20.00D- -30.00D Cyls +/-7.00DC
Diameter	16 or 18mm
Modality	Daily wear, annual replacement

7. TROUBLESHOOTING

Symptoms		
Smeary Vision	Prone to lipid deposition. Poor lens wetting. Poor surface quality. MGD	Ensure cleaning with topocare or equiv. Advise wetting drops / lid care. Replace lens if scratched. Treat MGD / tear supplementation.
Reducing vision with wear.	Accumulating tear lens debris. Hypoxia (central corneal haze) Also rule out Smeary Vision causes.	Remove and reinsert lens periodically. Increase corneal sag 100-200microns. Increase corneal sag 100-200 microns. Re-fit with corneal / corneoscleral design. Minimise lens wear.
Poor visual acuity.	Trial lens power different to what is needed. Residual astigmatism in over-refraction. No good acuity achievable with over-refraction.	Order lens incorporating over-refraction. Provide over-refraction in over specs. Toric scleral fit may allow incorporation of over-refraction. Try a different lens mode.
Worsening discomfort after insertion.	Scleral fit too steep. Limbal compression. Solution toxicity. Trauma caused during insertion. Lens intolerance.	Assess a 1 step flatter scleral fit. Steepen scleral fit 1 step or increase limbal clearance. Ensure PF saline is used for insertion. Improve insertion technique. Try a different lens design.

7. TROUBLESHOOTING

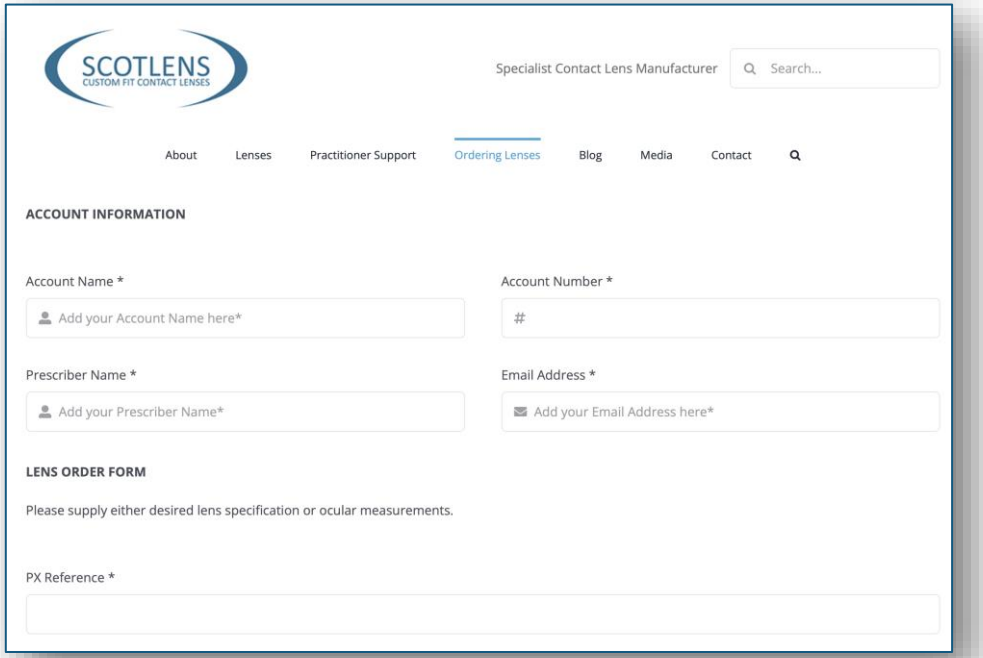
Fitting		
Apical touch fitting pattern	Insufficient corneal clearance	Assess lens with 400 micron more corneal sag.
Persistent bubble (central)	Poor insertion, insufficient saline in lens. Excessive corneal clearance.	Ensure good insertion, fill lens with saline. Assess lens with 400 micron less corneal sag.
Persistent bubble (mid-periphery)	Highly conic corneal shape / corneal nebula	Reduce limbal clearance and increase corneal sag by the same amount to maintain apical clearance.
Edge awareness.	Scleral fit too flat. Lid pathology (GPC, follicles, concretion)	Steepen scleral fit 1 step and reassess. Treat lid pathology.
Lens dropping / mobile	Insufficient scleral fitting area Toric sclera. Excessive corneal clearance.	Increase lens diameter from 16.0 to 18.0mm. Fit toric scleral lens. Reduce corneal clearance.
Seal-off	Scleral fit too steep.	Flatten sclera / increase lens diameter.
Ocular		
Nasal sector scleral blanching.	Nasal conj. is generally the flattest quadrant. Pingueculae / conj thickening.	Can be asymptomatic. Flatten scleral fit and reassess. Reduce/increase lens diameter.
Corneal staining.	Local area of stain- lens bearing / poor insertion. Pan-corneal punctate- toxic solution / tear film.	Increase clearance over area / coach I&R. Ensure PF saline for insertion. Increase refresh rate / increase corneal clearance.
Conjunctival drawn under lens. (aka conjunctival prolapse / hooding)	Conjuntiva has reduced attachment to Tenon's capsule either due to age or surgeries/trauma.	Usually asymptomatic. Refit with corneal / corneoscleral lens if corneal neovascularization occurs.
Conjunctival staining.	Ocular dryness.	Tear supplementation / lid care.

8. ORDERING

Visit us to place your order

https://www.scotlens.com/new-lens-order/

Or email us lab@scotlens.com



A final order should follow this format

Eye	Corneal Sag. (value between 1200 - 3000)	Limbal Clearance (only required if not standard)	Diameter (16mm or 18mm)	Scleral Angle (only required if not standard)	Power (0.25 D steps)
Right	2100		16		/-3.00
Left	2500	+400	18	Flat 1	/-6.75

**See 'materials' section for more information*

9. 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.

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