



Gelflex 
Australian contact lenses

PROFESSIONAL FITTING GUIDE

MINI SCLERAL LENSES

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SEALED MINI-SCLERAL CONTACT LENS

INFORMATION

INDICATIONS FOR A SCLERAL LENS

- All irregular corneal topographies
- Keratoconus
- Corneal transplant
- Trauma
- High refractive powers or astigmatism
- Therapeutic or protective
- Corneal hydration
- Corneal protection against Trichiasis
- Ptosis
- Pellucid marginal degeneration
- Keratoglobus
- Post lasik ectasia
- Corneal scars
- Terrien's marginal degeneration
- Anterior corneal dystrophies
- Post intacs

ADVANTAGES

- Any corneal distortion
- Any spherical power
- No lid sensation as with the corneal lens
- Easy lens handling
- Lenses are rarely lost
- Lens power alternation on the same lens
- Last opportunity before PKP

DISADVANTAGES

- Insertion
- Size
- Bacterial keratitis
- Corneal edema

SEALED SCLERAL LENS

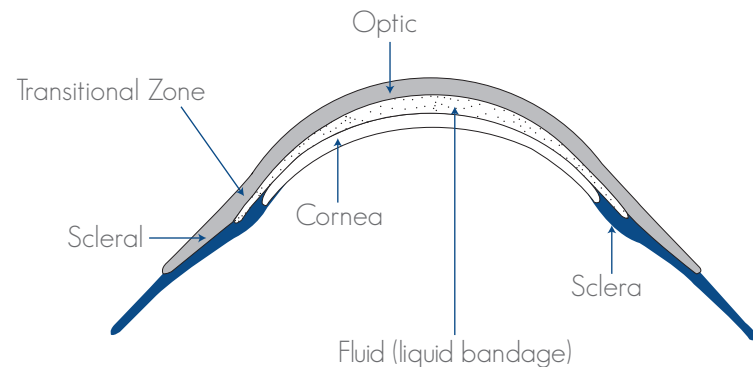
Any lens resting on the sclera is a scleral lens. A non-fenestrated lens with a full fluid pre-corneal chamber is assumed to be sealed. Lenses ranging 14.00mm to 26.00mm are available. Most fittings are done with an 18.50mm diameter lens. The basic diagnostic set has 20 lenses with radii 6.80mm to 9.00mm, a constant optic zone of 12.50mm and an overall diameter of 18.50mm.

The scleral portion has the option of three radii:

- 13.75
- 14.50
- 15.25

TECHNICAL INFORMATION

Lens	Back Optic Radius	Back Optic Diameter	Scleral Radii	Rx	Sag
A1	6.80	12.50	13.75	-8.00	7.250
A2	7.00	12.50	13.75	-6.50	6.874
A3	7.30	12.50	13.75	-4.50	6.422
A4	7.70	12.50	13.75	-2.00	5.944
A5	8.00	12.50	13.75	+0.00	5.669
A6	8.40	12.50	13.75	+1.12	5.355
B1	6.80	12.50	14.50	-7.25	7.157
B2	7.00	12.50	14.50	-6.00	6.777
B3	7.30	12.50	14.50	-3.50	6.331
B4	7.70	12.50	14.50	-1.50	5.852
B5	8.00	12.50	14.50	+0.25	5.577
B6	8.40	12.50	14.50	+2.00	5.253
B7	8.80	12.50	14.50	+3.50	4.999
C1	6.80	12.50	15.25	-6.50	7.081
C2	7.00	12.50	15.25	-5.25	6.701
C3	7.30	12.50	15.25	-2.75	6.234
C4	7.70	12.50	15.25	-0.75	5.767
C5	8.00	12.50	15.25	+0.75	5.482
C6	8.50	12.50	15.25	+2.25	5.101
C7	9.00	12.50	15.25	+4.50	4.791



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The mini scleral lens is made of a material with a high DK 97, to prevent corneal hypoxia. The pre-corneal aqueous reservoir masks irregular astigmatism and protects the cornea from the friction/ shearing of blinking and the exposure to air. A definite clearance of the cornea and limbus with the lens fitted is required so that the lens is entirely supported by the sclera.

To assess patients with Keratoconus, the bulge of the cornea is assessed by Munson sign evaluation. It may be shallow, average or high. This indicates a lens with low, medium or high sag.

When unsure of which lens to use, we recommended a lens from the mid-range of the fitting set. This would be B4 7.70/14.50.

The optimal lens vault is determined by an on-eye evaluation of a diagnostic lens. The lens is filled with physiological saline with a drop of fluorescein and inserted. It is important to eliminate all air bubbles that may become trapped between the cornea and the lens. Insert the lens whilst the patient's face is parallel to the floor, retaining as much saline as possible. This method should eliminate air bubbles.

Check the lens fitting with a cross section beam with the white illumination on the slit lamp. If there is corneal touch, change the lens to one with a greater sag. The clearance should be approximately 300 microns (half the thickness of an average cornea).

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When the corneal fit is satisfactory, allow the lens to settle on the eye for at least 30 minutes. Then check that there is no vascular blood flow obstruction (no blanching or vascular congestion).

The scleral fit is very important

The scleral portion of the lenses must be loose enough to enable unobstructed blood circulation underneath it.

Excessive stand-off of the lens rim from the sclera is contraindicated. If there is scleral edge off, a steeper scleral lens portion must be used. If any pressure on blood vessels is observed, a flatter sclera portion must be used.

Once an acceptable fit is determined, the lens should be inserted with saline, but without fluorescein and should be worn for at least 30 minutes. After this time, a generous amount of fluorescein should be inserted into the cull de sac. Slight manipulation of the lens edge is advised. There should be traces of fluorescein in the pre-corneal chamber within 15 minutes, showing that the lens has not altered and that there is circulation of tears by capillary attraction under the lens.

If the fluorescein has reached the pre-corneal chamber, it is a positive test.

If the fluorescein has not reached the pre-corneal chamber, it is a negative test.

Before ordering the lens, it is advisable to give the patient full handling training.

Important

- 1.** The lens should be removed every four (4) hours, the physiological saline changed and the lens reinserted.
- 2.** No scleral blanching is present.
- 3.** Apical clearance but not exaggerated (approx. 300 microns)
- 4.** No lens adhesion to the globe.

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