Quick Guide

ScleraLens®

Custom Designed Just For You

WAVE® CONTACT LENS SYSTEM

Topography Based Since 1999

How to design a WAVE ScleraLens®

BEFORE YOU START

- Measure the patient's subjective refraction, corneal diameter, and pupil size carefully.
- Capture repeatable and good quality topography maps and check for coverage.

Step 1 – Import the Corneal Topography

- Once you are satisfied with the topography/tomography map quality, import it into WAVE.

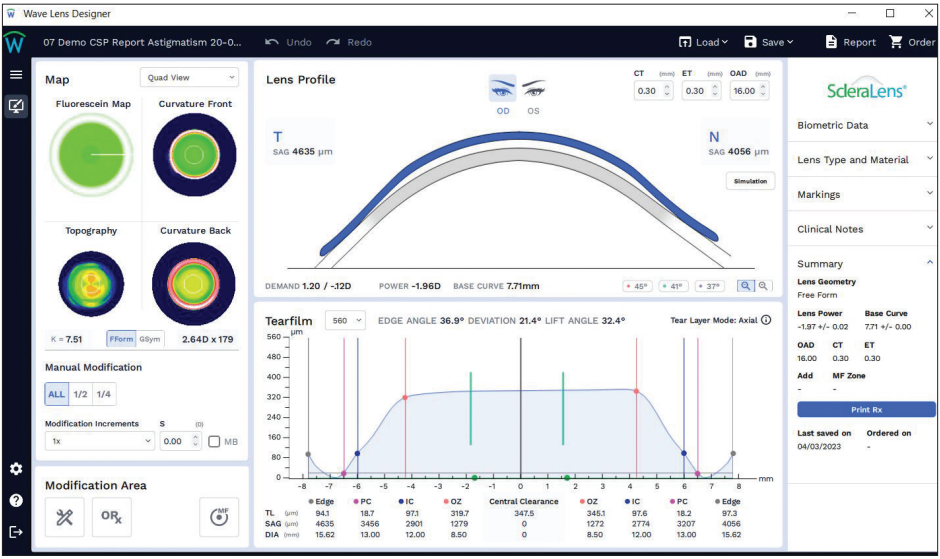
Step 2 – Data Input

There are two options for entering refractive data:

- **Spectacle Plane Refraction Error**
  You can enter the patient's Spectacle Plane Refraction Error. This option works well if a reliable and repeatable subjective refraction can be obtained.
- **Trial Lens Data & Over-Refraction**
  If a reliable subjective refraction cannot be obtained (for example, for an irregular cornea, advanced Keratoconus, or Post-graft), you may decide to use a trial lens to measure the over-refraction. You can enter the trial lens parameters here.
- Check and confirm the Corneal Diameter and Pupil size and click on **Next**.
- Choose **ScleraLens®**.
  - Confirm the Corneal Diameter, Lens Diameter and Central Clearance. By default, the Scleral **Lens Diameter** is set to be 4.00 mm larger than the corneal diameter. This is customizable

in Lens Design Preferences Settings.

- **Central Clearance** for the initial lens design:
  -When using the Pentacam® CSP data, start with 350 microns.
  -When using Eaglet-ESP data, start with 400-450 microns.
  -When using corneal topography data from Medmont, Keratograph, or Pentacam central corneal data, start with 300 microns.



- Click on **Start Design.**

Step 3 – Review and Finalize the Design

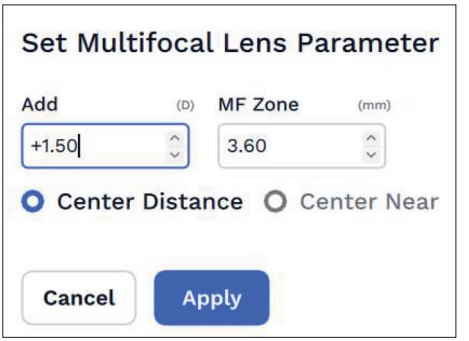
- Check simulated Fluorescein map and Tearfilm graph 360° to confirm design is suitable for the patient.
- On the right menu, check the material, color, or choose add-ons if desired. Review the Lens Summary.

Step 4 – Order

- Proceed to **Order** the lens or save it until a later time. You can track your orders online. To access the WAVE Internet Order Status System (IOSS), you can easily click on the Help button ? and access the WAVE resources page.

How to design a WAVE multifocal lens

You can design a multifocal scleral lens with WAVE Lens Designer. To do so, click on Multifocal Adjustment (MF) and enter the ADD value in the refraction box. You have the option to design a lens with CENTER NEAR or CENTER DISTANCE. Click on continue and WAVE Lens Designer designs a multifocal lens.



- For a successful multifocal design,
  - Start with a lens design that provides good distance vision and is well centered.
  - Determine which eye is the dominant eye. What is the average pupil size? What is the patient currently wearing, under-minus, mono-vision or previous MF lenses?
  - You may want to maximize the plus for both eyes when considering power. Sometimes even adding +0.25D or +0.50D in the non-dominant eye can be helpful.

How to modify a WAVE ScleraLens®

- Evaluate the lenses with fluorescein at the slit lamp to assess central and limbal clearance, alignment angle, and complete an over refraction. OCT and Anterior segment imaging is also recommended if available.
- If there are no concerns about the health of the cornea or obvious fit issues, we suggest the next evaluation be done after the lenses have settled on the eye for at least 4 hours.
- If you find that you need to modify a lens, WAVE Lens Designer has a great set of modification tools to make specific adjustments. It is located at the bottom left corner of the design screen:

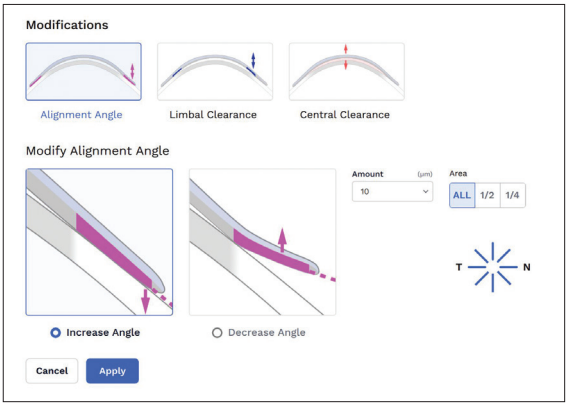
Making lens modifications are categorized into two main categories:

- Modifying the Lens Fit
- Modifying the Lens Power

To proceed with modifications, open the design file and click on modification area.

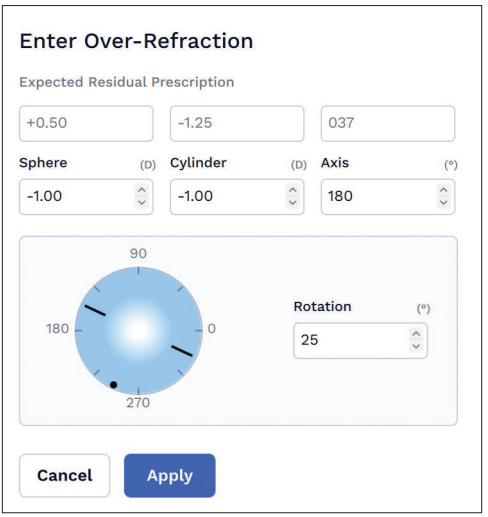
Step 1 – Modifying the Lens Fit:

The most common adjustments to the lens design are the following:



Step 2 – Modifying the Lens Power:

- After ordering the WAVE ScleraLens® for a patient, you may need to perform an over-refraction to fine-tune the lens power.
- To enter the over-refraction, click on Over Refraction (ORx) button in the Modification Area. Here you can enter the over-refraction amount and any lens rotation and click Apply to adjust the power of the lens.



Troubleshooting Lens Fit for WAVE ScleraLens®

Inadequate Central Clearance

Ideal central clearance after 4 hours settling is around 150-250um

Excessive Central Clearance: when after lens settling the central clearance is more than 500um

- Patient may complain of MDF or reduced acuity
- May present with edema
- Consistent air bubbles

Decrease Central Clearance by desired amount in 10 um intervals.

Too little Central Clearance:

- Corneal touch or bearing
- Patient may complain of discomfort and poor vision
- Appears dark or black in fluorescein images
- Corneal staining

Increase Central Clearance by desired amount in 10 um intervals.

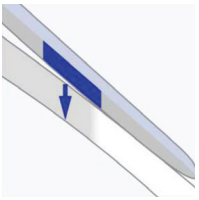
Inadequate Limbal Clearance

Ideal limbal clearance after 4 hours settling is around 50-100um

Excessive Limbal Clearance

- Patient may experience fogging and reduced acuity

Decrease Limbal Clearance by desired amount in microns. Changes can be to ALL, ½ or ¼ of lens.



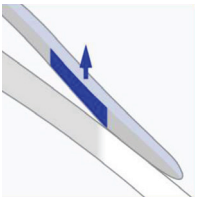
Inadequate Limbal Clearance (continued)

Ideal limbal clearance after 4 hours settling is around 50-100um

Too Little Limbal Clearance

- Patient may complain of discomfort.
- Staining in limbal area.
- Black area observed in limbus in fluorescein images indicate bearing or too little clearance.

Increase Limbal Clearance by desired amount in microns. Changes can be to ALL, ½ or ¼ of lens.



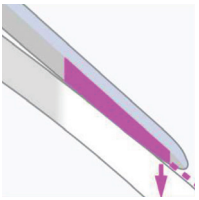
Inadequate Edge Lift

Optimal alignment after 4 hours settling is when 50% of the lens edge is sunken into conjunctiva and 50% is above the surface. *(Best evaluated w/OCT)*

Excessive Edge Lift

- More than 50% of the lens edge above the surface
- Shadow under the lens edge.
- Patient may complain of discomfort or lens awareness.

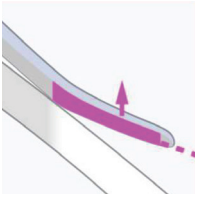
Increase Alignment Angle by desired amount in microns. Changes can be to ALL, ½ or ¼ of lens.



Too Little Edge Lift

- More than 50% of the lens edge appears in conjunctiva.
- Blanching
- Impingement
- Lens is difficult to remove

Decrease Alignment Angle by desired amount in microns. Changes can be to ALL, ½ or ¼ of lens.



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