Thank you for purchasing an Eye-Ruler™ 2!

IPADEYERULER2
(Eye-Ruler 2 with iPad)

You should have received an email with your login credentials from csr@essilorinstrumentsusa.com

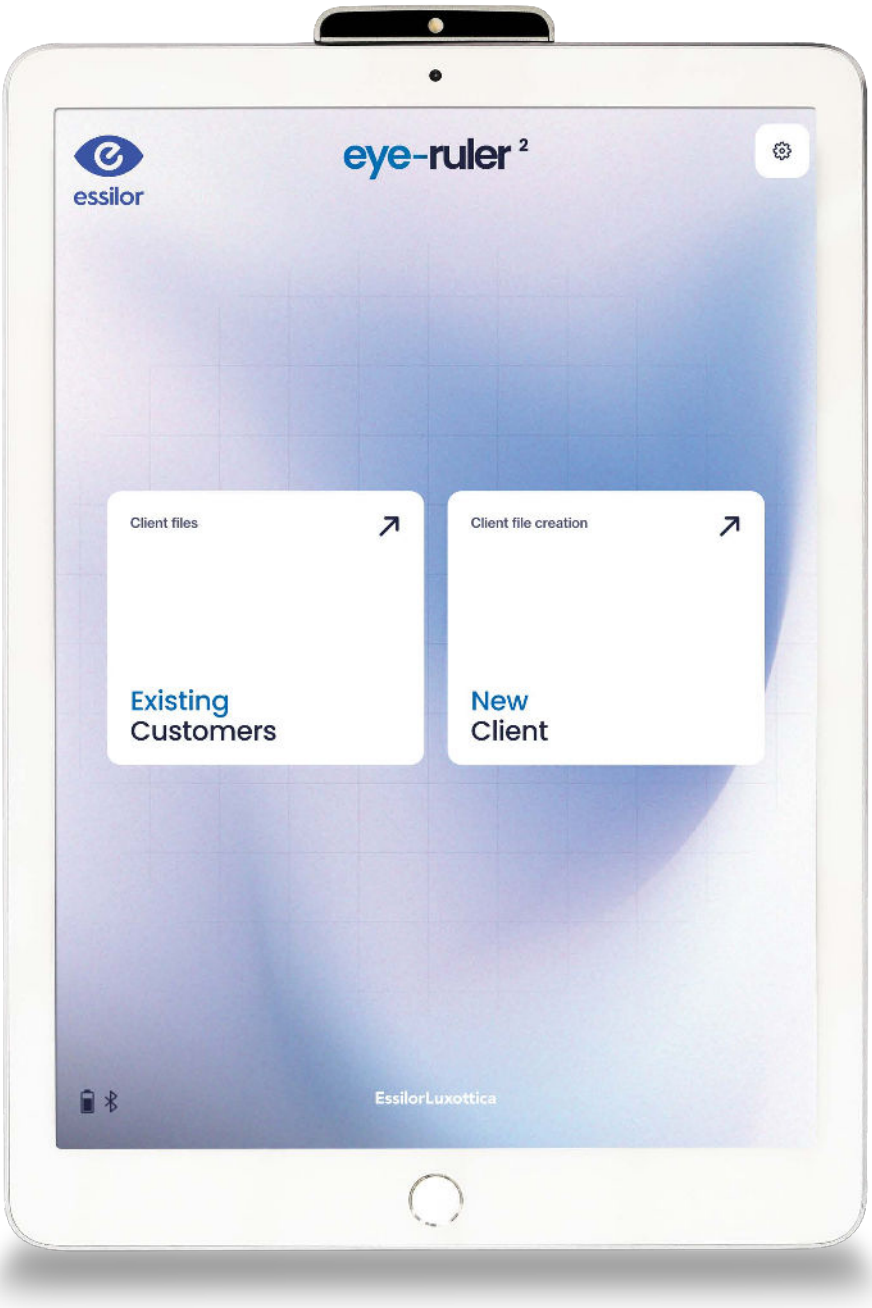
For technical support, please contact optosupport@essilorinstrumentsusa.com or call 833.973.0703.

There are three sections:

1. Installation Manual (Magnet): pp. 2-5
   (skip if magnet already installed)
2. Installation Manual (Configuration of iPad): pp. 6-8
3. User Manual

ESSILOR INSTRUMENTS

Eye-Ruler™ 2



INSTALLATION MANUAL (MAGNET)

ESSILOR INSTRUMENTS

Eye-Ruler™ 2

DESCRIPTION

Your package includes*:

(1) 1 jig for:
- iPad Pro 11 (1, 2, 3, 4)
- iPad Pro 12.9 (3, 4, 5, 6)
- iPad Mini 6, iPad 10

(2) 1 jig for:
- iPad (5, 6, 7, 8, 9)
- iPad Air (1, 2, 3, 4, 5)
- iPad Mini (4, 5)
- iPad Pro 9.7
- iPad Pro 10.5
- iPad Pro 12.9 (1, 2)

(3) 1 jig for:
- iPad 3
- iPad 4

(4) 1 Measurement Clip
(5) 1 Power Supply
(6) 1 Magnetic Charging Cable
(7) 1 Eye Ruler 2 Device
(8) 2 Magnets
(9) 2 Wipes
(10) 1 Adaptor for iPad 3
(11) Accessory kit

To find out which generation of iPad you have, use the model number. You can find the model number in two ways: Look on the back of the iPad or Open Settings, tap General, then tap About. Look for the model number in the top section.



*Note that this package is suitable for the global market and likely contains more than what the US customers will need.

DEVICE PREPARATION

Take the iPad on which you wish to install Eye-Ruler 2:

- Find the correct jig from the previous picture (1, 2, or 3) for the iPad.
- Find the magnet from the previous picture (8) and remove the paper so the glue/sticker is exposed.
- Position the jig onto the back of the iPad (image A).
- Center the jig between the holes (image B).



Image A



Image B

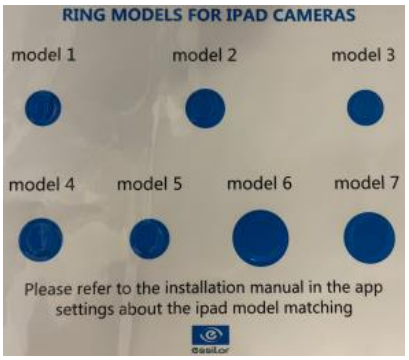
- Holding the iPad and jig so the jig does not move, turn the iPad to view the back and place the glue/sticker side of the magnet to the iPad. The magnet should fit inside of the hole on the jig.
- The jig can be removed (image C).



Image C

- **It is recommended to wait 12 hours for the sticker on the magnet to fully dry. After the 12 hours, the Eye-Ruler 2 device can be attached to the iPad using the magnet.**

- In the accessory kit, you will find stickers (Ring Models) to be placed around the camera of the iPad to highlight the camera area:



- Determine the correct ring sticker based on the model of iPad. Shown is an example for two iPad models as of June 2024. For both iPad (9th gen) and iPad (10th gen), the model 2 ring sticker should be used.

	LAUNCH DATE	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7
iPad **(9th gen)**			•					
iPad **(10th gen)**								•

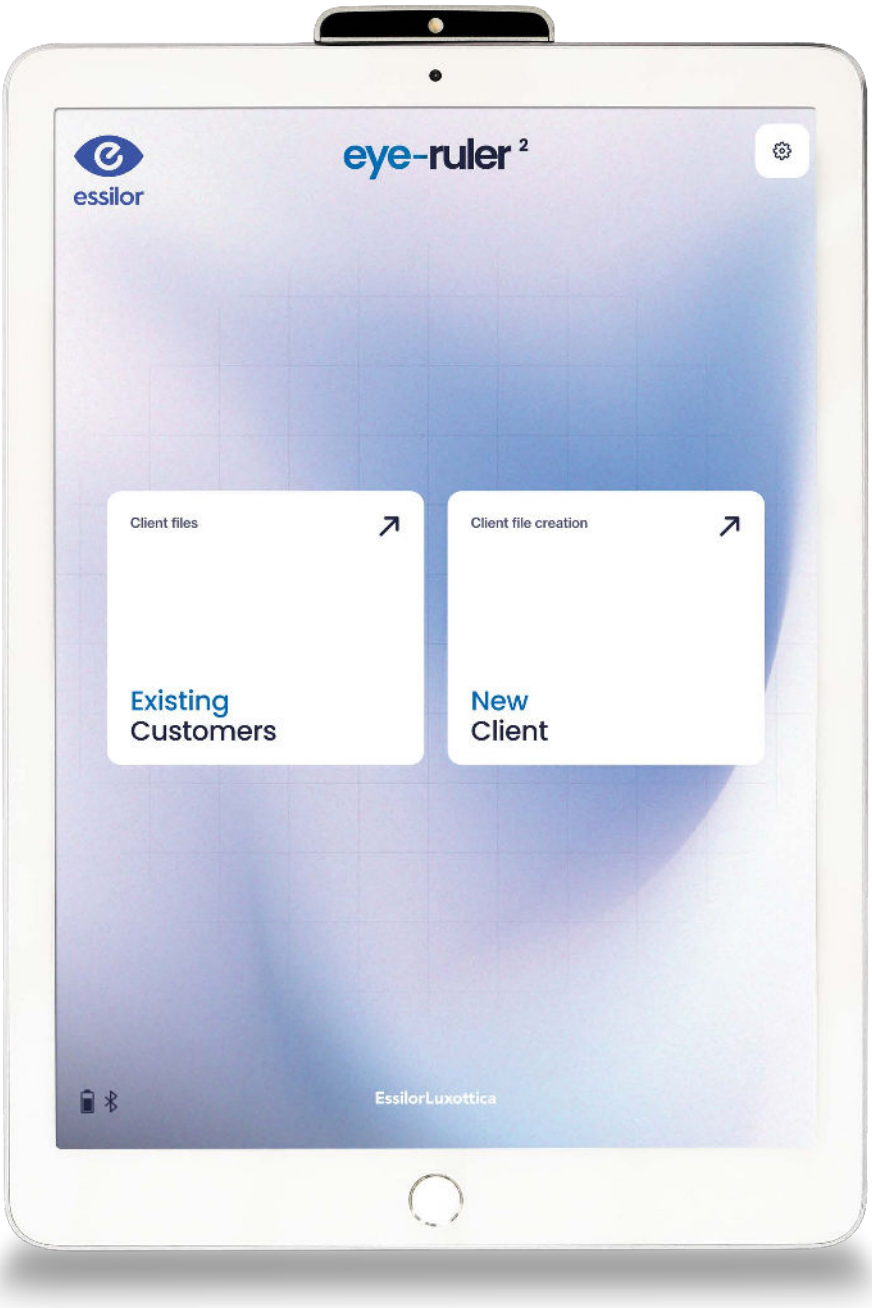
- Remove the ring sticker from the page.
- Place the ring sticker around the camera on the back side of the iPad. Be certain not to block the camera view with the ring sticker.



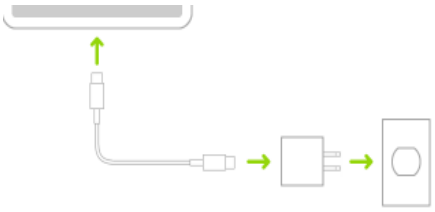
- If you have a model not listed in the table, please contact Essilor Instruments to determine the correct model ring sticker, at optosupport@essilorinstrumentsusa.com.

ESSILOR INSTRUMENTS

Eye-Ruler™ 2

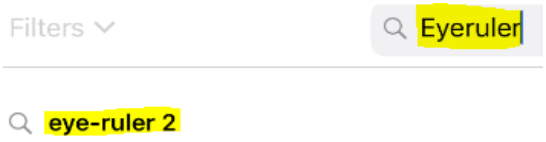


INSTALLATION MANUAL (CONFIGURATION OF IPAD)

- Charge your iPad 



- Charge your Eye-Ruler 2 device with the provided cable, **(6)** shown on page 3.
- (Skip this step if you do not have an IT department) If you have an IT department, please have your IT person contact Essilor Instruments for a list of required websites. This will prevent any Internet and login issues. The email is optosupport@essilorinstrumentsusa.com.
- Setup your iPad using your existing iTunes account if you already have one. If you do not already have an iTunes account you want to use, then an iTunes account can be created during setup:
  - Apple website for creating an iTunes account Create Your Apple ID - Apple
  - Apple instructions for setting up an iPad Turn on and set up iPad - Apple Support
- After the iPad is setup, go to the App Store and search Eyeruler, then select the Eye-Ruler 2 app for installation.



- When you first set up the iPad, you should always have the latest software. As of July 2024, the version should be 2.2.5-63418.

Bluetooth Pairing

- Attach the Eye-Ruler 2 device to the iPad using the magnet.
- Once the Eye-Ruler 2 device is attached to the iPad, turn on the Eye-Ruler 2 device. A blue light should appear on the side of the device.
- The Eye-Ruler 2 device must be powered on **before launching the app**.
- Launch the Eye-Ruler 2 app.
- Use the login and password provided to you via email from csr@essilorinstrumentsusa.com to login to the Eye-Ruler 2 app.
- When the battery icon in the lower left corner of the app is black, the Eye-Ruler 2 device is connected.



- Your setup is now complete and you should be ready to start taking measurements.

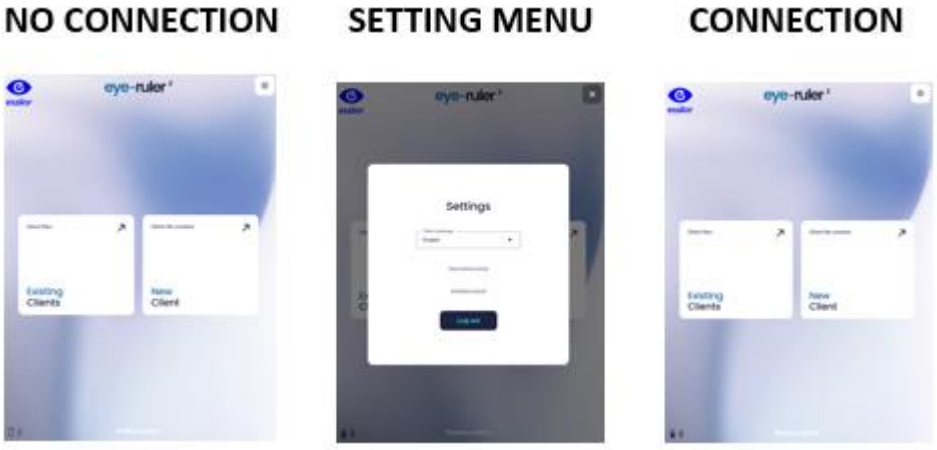
Troubleshooting Steps

Review in order if issues arise.

1. Ensure the iPad has the latest software.
    - The iPad should install updates automatically during the setup. To check if the iPad is up to date, go to Settings, General, and Software Update. Perform any available updates.
2. Ensure the Eye-Ruler 2 app is up to date.
    - To check if the Eye-Ruler 2 app is up to date go to Settings, eye-ruler 2, under System. As of July 2024, the version should be 2.2.5-63418.
3. Turn off the iPad and Eye-Ruler 2 device.
    - Turn on the iPad, do not launch the Eye-Ruler 2 app.
    - Turn on the Eye-Ruler 2 device.
    - Check for blue and green lights on the side of the device.
    - Launch the Eye-Ruler 2 app.
4. If the connections fails,
    - Select the Settings menu. 
    - Select the Reset Device Pairing option and wait for the device to repair.



5. Check the device is charged.
    - When the light on the device is green, the device is charged.
    - When the light on the device is yellow, the device needs charging.
    - If there is no light, the battery is drained and needs charging.



USER MANUAL



eye-ruler 2

DIGITAL MEASUREMENTS ON IPAD

ESSILOR INSTRUMENTS

eye-ruler 2

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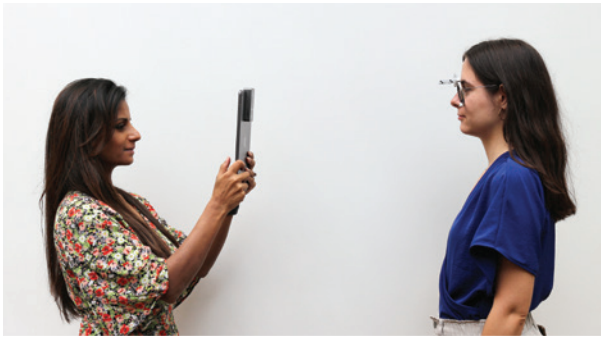
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eye-ruler 2

1. CONCEPT



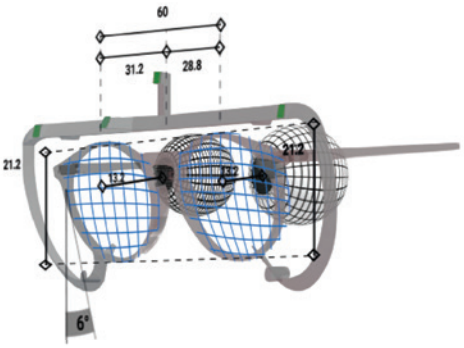
eye-ruler™ 2

Eye-Ruler™ 2 is an all-in-one mobile measurements solution, providing personalized centration parameters for all lens types, even high-end complex lenses.

The measurements are calculated using 3-D reconstruction technology of the client's frames position in relation to their eyes.

The available modules include frames comparison, and a measurements process comprising of taking up to two photos to obtain all the necessary measurements for lens centration.

This makes Eye-Ruler ™ 2 a well-rounded and efficient measurements solution.



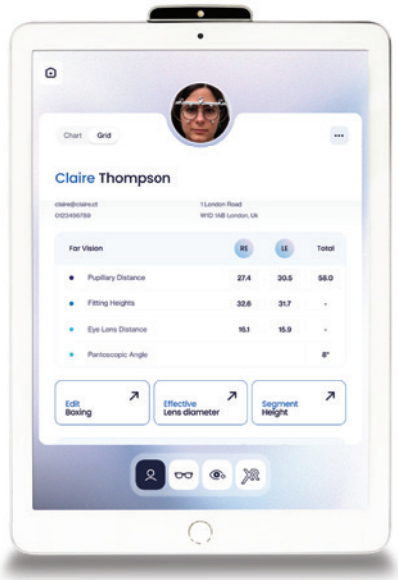
Personalized far vision measurements

- PDs
- Fitting heights
- Segment heights
- Pantoscopic angle
- ELD (Eye-Lens Distance)
- Wrap angle
- Effective diameter

Near vision measurements
- Reading distance

Exclusive measurements
- NVB (Near Vision Behavior)





Device

In order to obtain corneal reflections, a device emitting a flash is attached to the iPad.

The Bluetooth logo indicates that the device is connected to the iPad and the battery icon indicates its battery level.

Find more details on how to set your device in the Installation manual, available on the Homepage in the Settings.

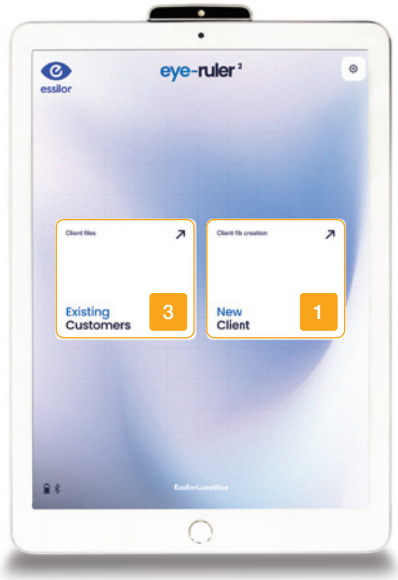


2. CLIENT FILES

a. NEW CLIENT

Step 1

On the homepage, select **New Client** (1) to create a new client file.

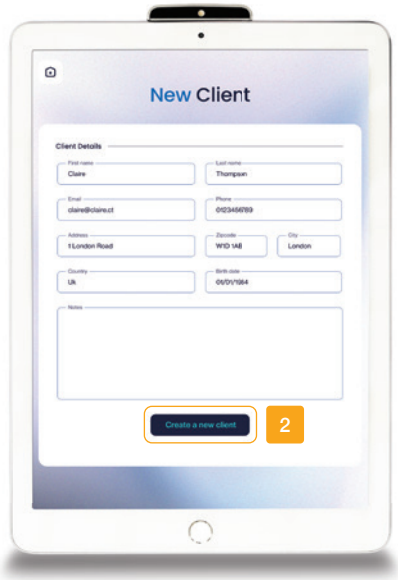


Step 2

Enter the client's name, contact details and other information, however only the name or surname (at least one character per field) is obligatory to create a file.

Step 3

Once the client's information is entered, press on **Create a new client** (2) to save it.

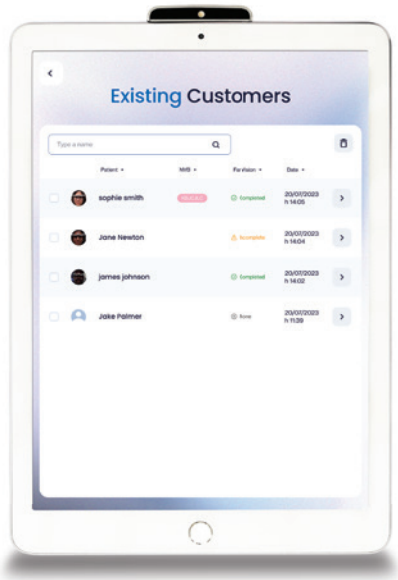


b. EXISTING CLIENTS

Step 1

On the homepage press on **Existing customers** (3) to access your client database.

Here you can see the status of each client file:
- Complete = Measurements results are available
- Incomplete = The boxing needs to be done.

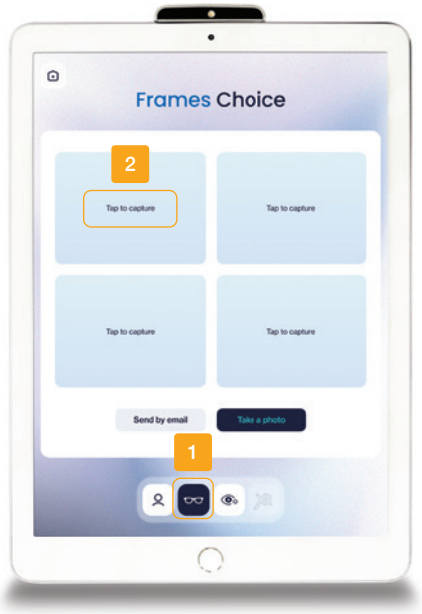


eye-ruler 2

3. FRAMES CHOICE

Step 1

Select the **Frames** icon (1).



Step 2

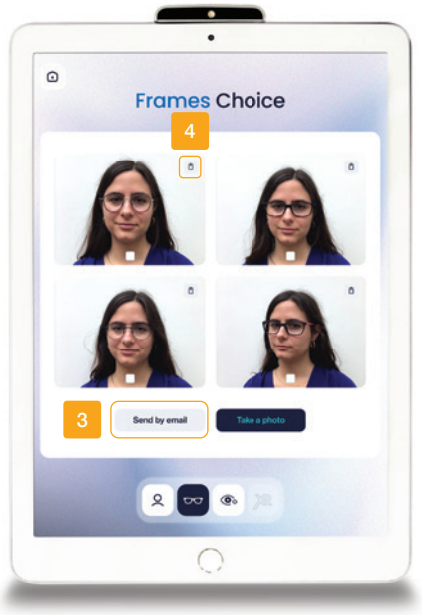
Press on on any **Tap to capture** button (2) to take photos of your client with different frames tried on.

You can compare the photos taken and send them by email by pressing on **Send by email** (3).

NOTE: In order to send the photos by email, the client's email address must be filled in their client file.

You can also delete the photos by pressing on the **trash can** icon (4).

Ideal for patients with high ametropia.



4. PREREQUISITES

Step 1: Prepare the frames

Perfectly adjust the frames before taking measurements.

Frame-positioning heavily influences the measurements; therefore it is crucial that they are adjusted correctly.

Remove the presentation lenses where possible.



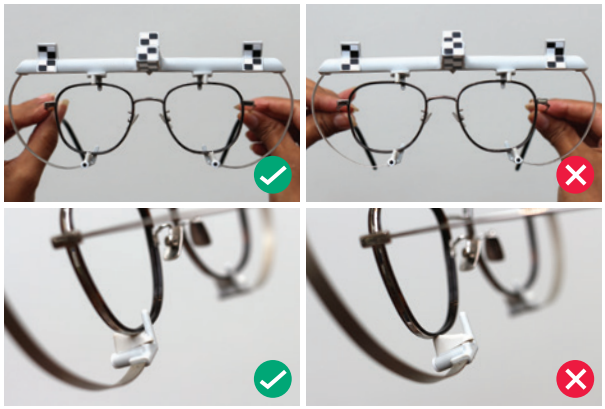
Step 2: Placing the clip onto the frames

The clip allows Eye-Ruler™ 2 to carry out a 3D reconstruction of the eye-to-lens structure.

Place the clip onto the adjusted frames:

- Place the central notch of the clip at the middle of the bridge of the frames (tolerance of 2 mm on either side of the notch for frames with a standard wrap angle and 1 mm for a higher wrap angle).

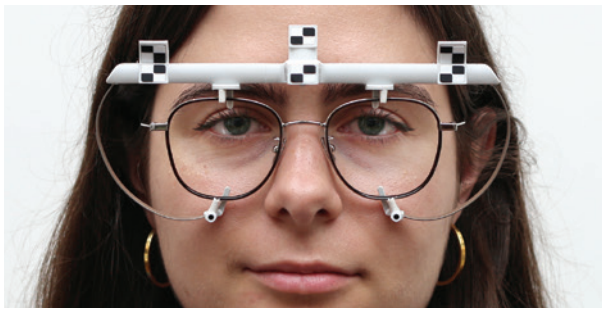
- The back of the frames must rest on the back of the clip.



Step 3: Natural posture of the client

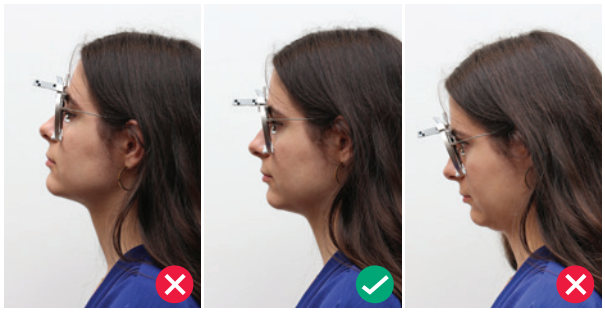
Ensure that your client remains in their natural posture throughout the measurements process. The client's posture will greatly influence the measurements.

The client may be sitting or standing, whichever that makes it easier for the client to remain in their natural posture when going through the measurement process.



If their head is tilted up or down, this will influence the frame's pantoscopic tilt and therefore the fitting heights.

Reminder: 1° of pantoscopic tilt modifies the fitting heights by 0.5 mm.



Head tilt up *Head tilt OK* *Head tilt down*

Taking measurements with Eye-Ruler™ 2 is not recommended if corrective lenses are in place due to their prismatic effects.

Eye-Ruler™ 2 is not adapted for taking measurements in the following cases: nystagmus, strabismus and/or severe ptosis.

eye-ruler 2

5. TAKING MEASUREMENTS - PERSONALIZED MEASUREMENTS

a. FRONT- & 3/4-VIEWS

Step 1

Select the **Measurements** icon (1) on the taskbar.



Step 2

Select **Far vision Personalized** (2).

Step 3: Client posture

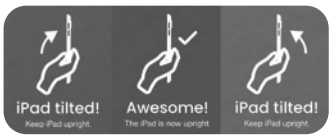
Verify that your client is in their natural posture, and ask them to look straight ahead as if fixating on an object in far vision.

Reminder: Variations in head tilt will alter the fitting heights.

Step 4: Correctly placing the iPad

Place the iPad in front of your client and use the indicators on the screen to place it vertically, and at the correct distance.

If the iPad is too tilted, the indicators on the screen will tell you how to place it as vertically as possible.



If the circle around the distance on the iPad (3) is in red, you are too close or too far from your client, and the camera buttons will become inactive. If the circle is green, you are at the correct distance.

Move the iPad up or down to place the eyes of the client in the middle of the clear part of the screen. You can use the green line (4) as a guide.

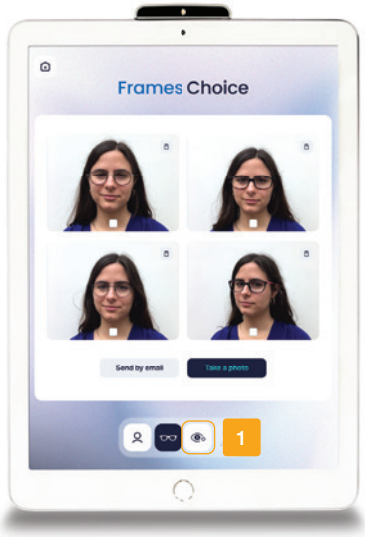
NOTE: The clip markers don't need to be in the clear part of the screen; only the eyes.

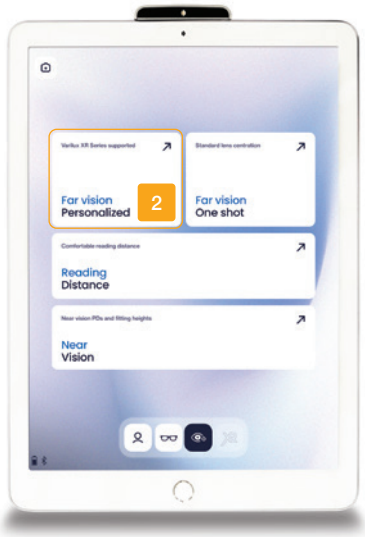
It is recommended to **adjust the brightness of the flash** (5) to the maximum in order to obtain more visible corneal reflections.

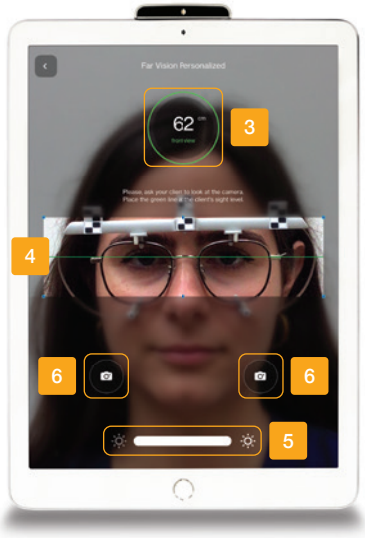
Step 5: Taking the front-view photo

Once the iPad is correctly positioned, ask your client to look at the iPad's camera.

Press on one of the **camera buttons** (6) to take the front-view photo.







Head Cape

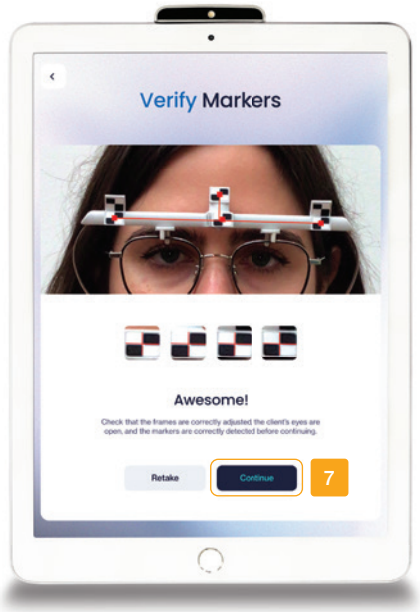
- If the client naturally turns their head left or right (called head cape) when looking straight ahead, this will impact the mono PDs.
- A calculation to neutralize the head cape is applied which will readjust the mono PDs.
- The reason for neutralizing the head cape is that sometimes when taking the measurement photos with a mobile solution such as Eye-Ruler™ 2, the head cape can be accidental due to the positioning of the iPad in relation to the wearer.

Step 6: Verifiying the detection of the clip markers

Check that the clip markers are correctly detected.

The red lines going through the markers means they are correctly detected and captured by the camera.

Press on **Continue** (7) to verify the detection of the corneal reflections.

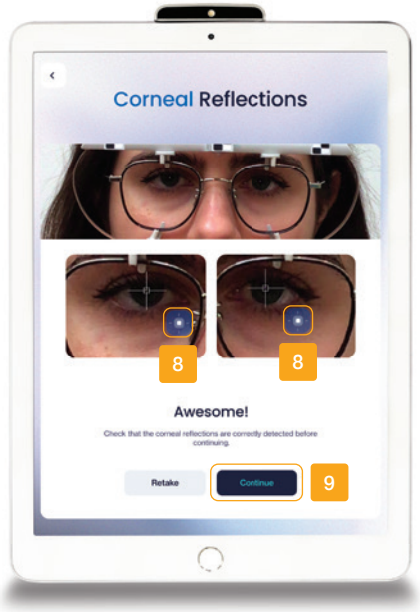


Step 7: Verifying the detection of corneal reflections

Check that the corneal reflections are correctly detected. The detection cross should be on the reflection that comes from the iPad's flash, and not on a stray reflection from the shop lighting for example.

If needed, you can move the detection cross by pressing on the **blue cursor** (8).

Press on **Continue** (9) to validate the front-view and go to the 3/4-view stage.



Step 8: Taking the 3/4-view photo

Ask your client to turn their head either to the left or right at a 20° angle (tolerance of +/-5°).

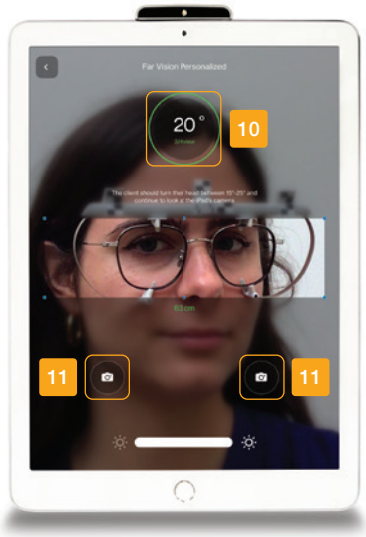
The angle of the client's head cape (10) is noted in the circle above the photo. If their head cape is not within this tolerance, the circle will be red and the camera buttons will be inactive, meaning you won't be able to take the photo.

The client must then continue to fix their gaze on the iPad's camera without moving their head.

Once the client is correctly positioned, take the 3/4-view photo by pressing on one of the **camera buttons** (11).

NOTE: There is no need for the green line in the 3/4-view; the eyes just need to be in the clear part of the screen.

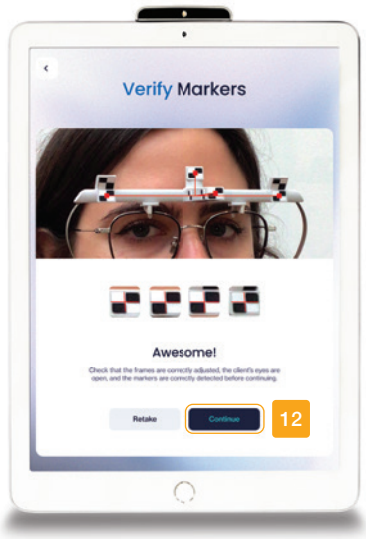
- **Alternative way of taking the 3/4-view:**
Instead of the client turning their head to the left or right, the ECP moves the iPad to the left or right of the client. The client then simple looks at the iPad's camera without moving their head.

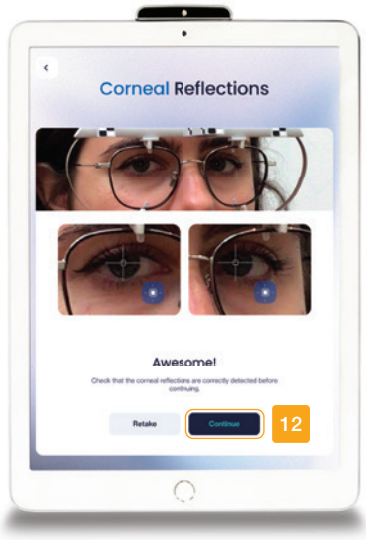


Step 9: Verifying the clip markers and corneal reflections

Check that the clip markers and corneal reflections are correctly detected as before.

Press on **Continue** (12) to either carry out the boxing, or take other measurements.

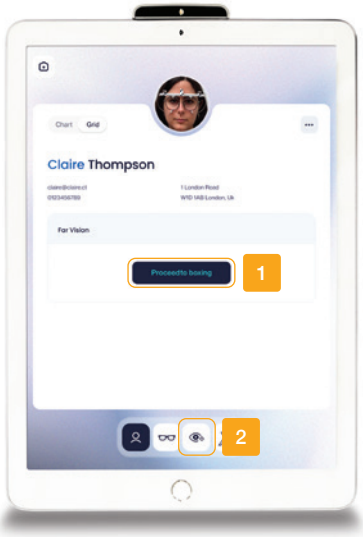




eye-ruler 2

5. TAKING MEASUREMENTS - PERSONALIZED MEASUREMENTS

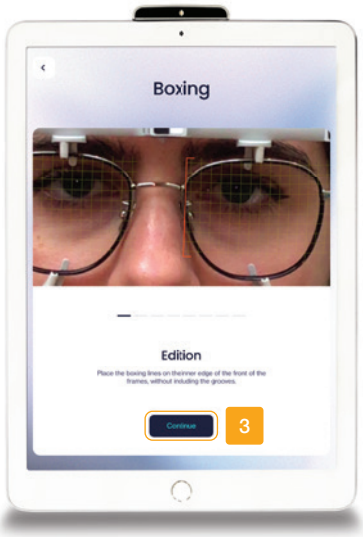
b. BOXING



Cannot be compared with results obtained with Datum, an older standard to measure fitting heights.

The Boxing can be done immediately after taking the 2 photos by pressing on **Proceed to boxing** (1), or you can take other measurements by pressing on the **Measurements icon** (2), before completing the boxing.

Step 1: Placing the boxing lines

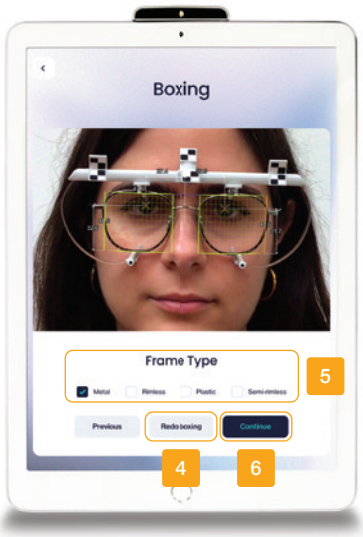


Place the 7 boxing lines on the inner edge of the front face of the frames, without taking the frame's grooves into account.

Make sure to press on **Continue** (3) after placing each boxing line.

Check that the boxing lines are correctly placed in the global view. If the boxing lines are incorrectly placed in the global view please redo the boxing by pressing on **Redo boxing** (4).

Step 2: Choose the frame type



In the global view, please choose the **type of frames** (5) worn by the client. This will incorporate the correct depth of the grooves into the measurements.

Press on **Continue** (6) to obtain the far vision personalized results.

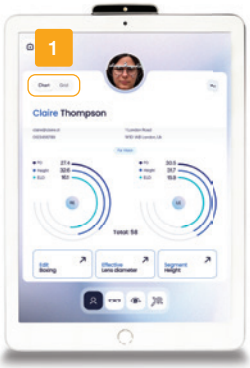
eye-ruler 2

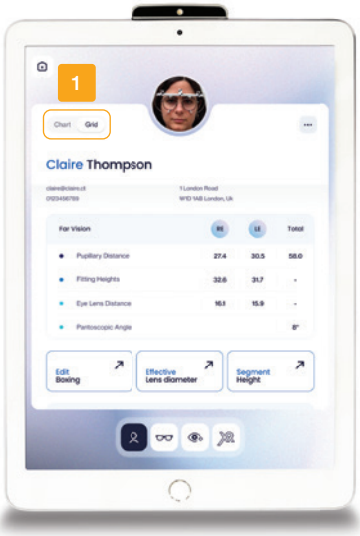
5. TAKING MEASUREMENTS - PERSONALIZED MEASUREMENTS

c. PERSONALIZED FAR VISION RESULTS

List of available results

- PDs
- Fitting heights
- ELD (Eye-Lens Distance)
- Pantoscopic tilt
- Wrap angle
- Frame dimensions

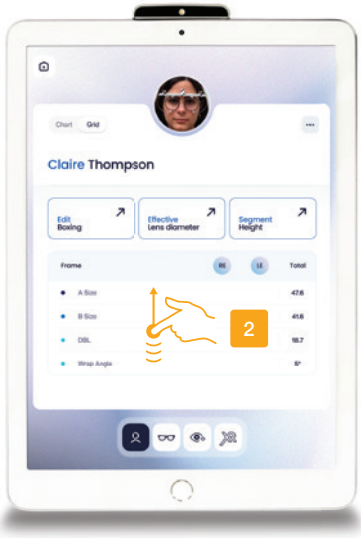


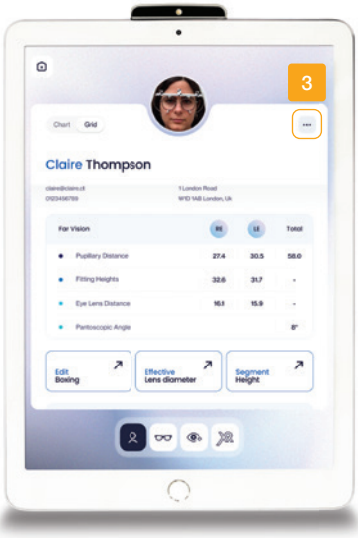


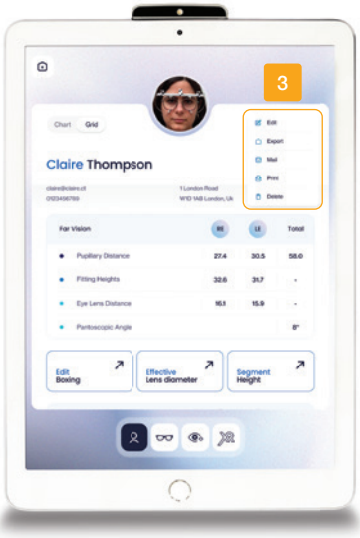
You can also change the display results by pressing on the **Chart/Grid** button (1).

You can **swipe up** (2) to access more results.

Press on the **Results page menu** (3) to either print, export or delete your client file, amongst other options (if available).



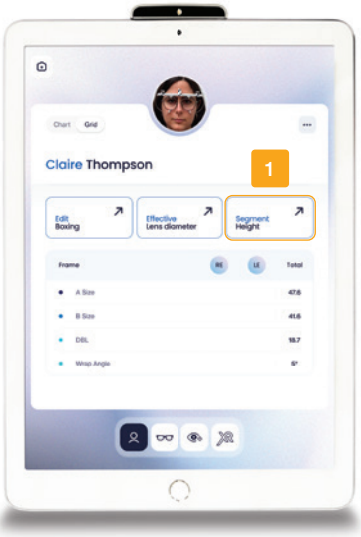




eye-ruler 2

5. TAKING MEASUREMENTS - PERSONALIZED MEASUREMENTS

d. SEGMENT HEIGHTS

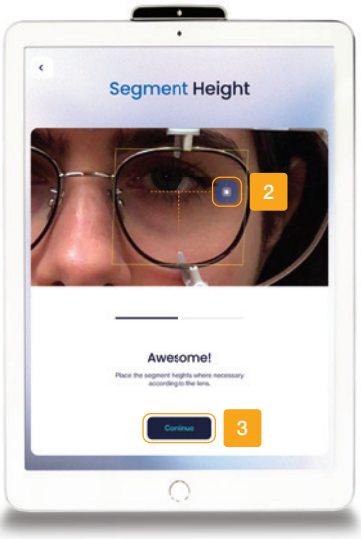


Step 1

From the results page, press on the **Segment height** button (1).

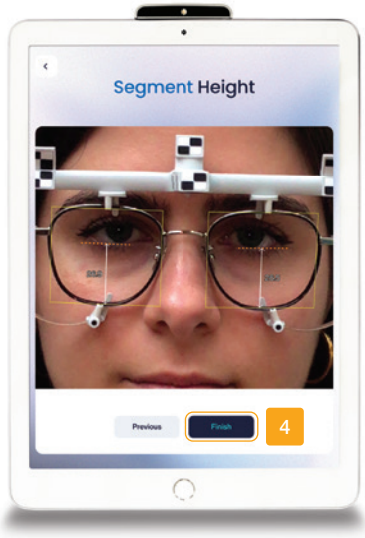
Step 2

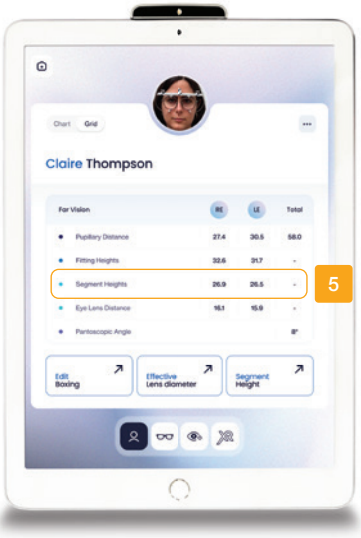
Place the segments from where you wish the heights to be measured on both eyes (e.g. pupil border, lower eyelid…) by using the **blue cursors** (2) and then press on **Continue** (3).



Step 3

Once you have correctly placed the segment heights on both eyes, press on **Finish** (4) to obtain the segment heights on the **results** page (5).

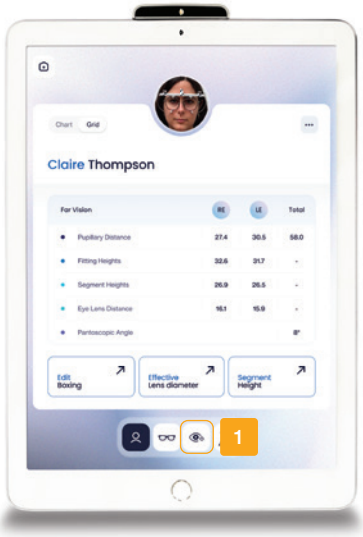




5. TAKING MEASUREMENTS - PERSONALIZED MEASUREMENTS

e. READING DISTANCE

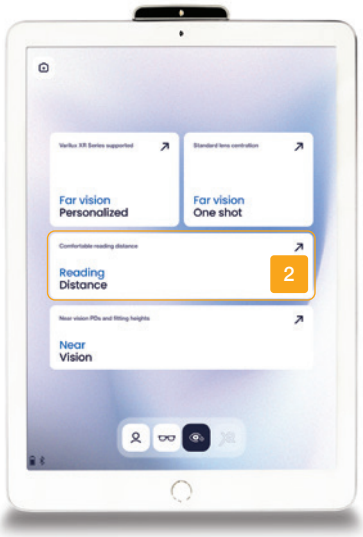
The reading distance measurement is best taken seated.



Step 1

From the results page, press on the **Measurements** icon (1).

Press on **Reading distance** (2).



Step 2

Hand the iPad to your client and ensure that they are seated in their natural and comfortable reading position.

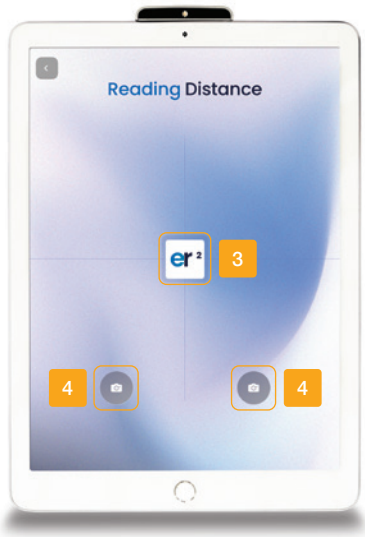
Ask them to fix their gaze on the "**ER2**" logo (3).

Step 3

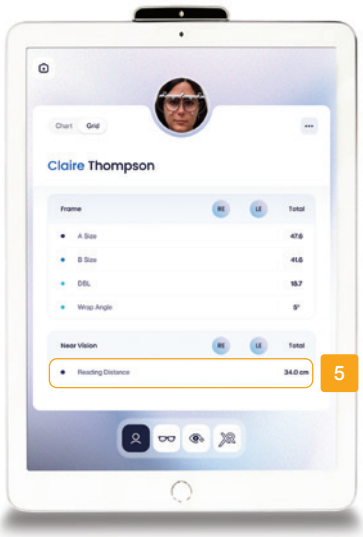
Once the logo lights up, ask them to press on one of the **camera** buttons (4).

The reading distance is then shown on the results page (5).


Logo off




Logo lights up



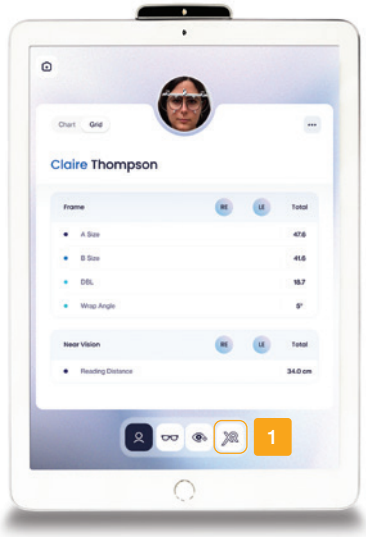
5. TAKING MEASUREMENTS - PERSONALIZED MEASUREMENTS

f. NEAR VISION BEHAVIOR (NVB)

The NVB measurement is best taken seated.

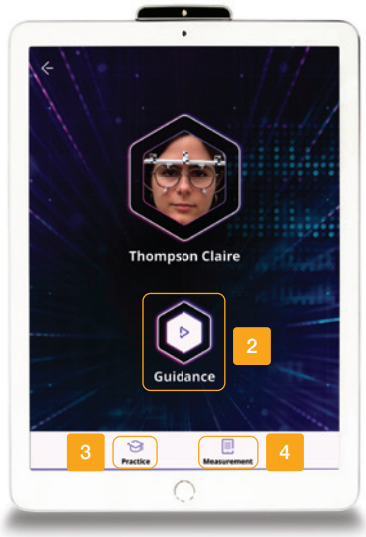
The clip and frames must not be moved or touched between far vision and the NVB measurement.

The client must not rest against the back support of the chair or place their elbows on the armrests.



Step 1

From the results page, press on the **Varilux® XR logo** in the task bar (1).

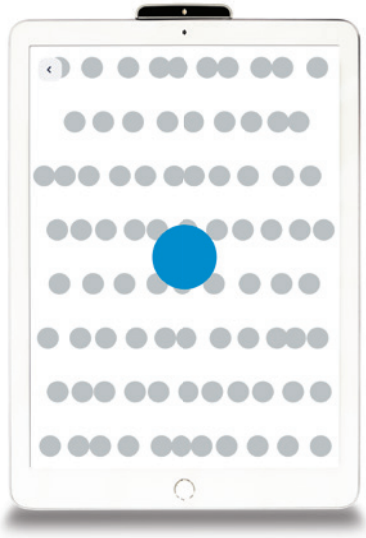


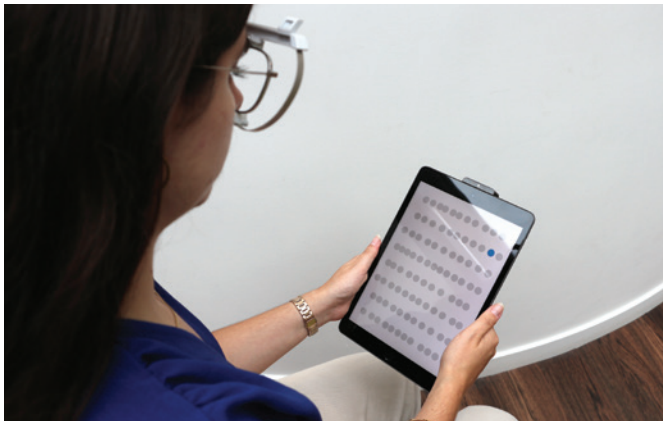
Step 2

Hand the iPad to your client.

On the Varilux® XR page, you can either:
- Press on **Guidance** (2) which will show an animation explaining the NVB concept and exercise.
- Press on **Practice** (3) to carry out a practice test of the NVB exercise.
- Press on **Measurement** (4) to directly take the test.

During the exercise, the client follows the blue circle as it passes along the grey ones as if carrying out a reading task.

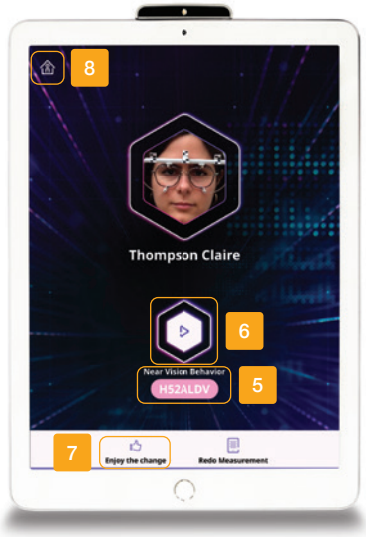




Once the measurement is complete, the result which is an **alphanumeric code** (5) is shown on the page.

You can show your client an animation of their visual behaviour by pressing on the **Play** icon (6).

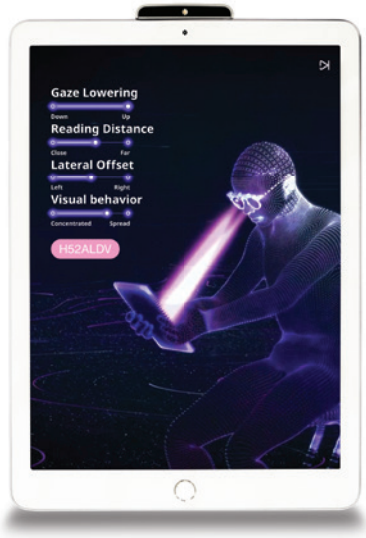
You can also show various scenarios of visual improvement with Varilux® XR lenses by pressing on **Enjoy the change** (7).



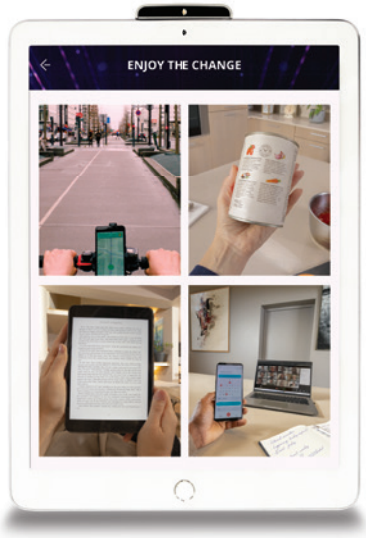
Step 3

Press on the **Home** button (8) to return to the main results page.

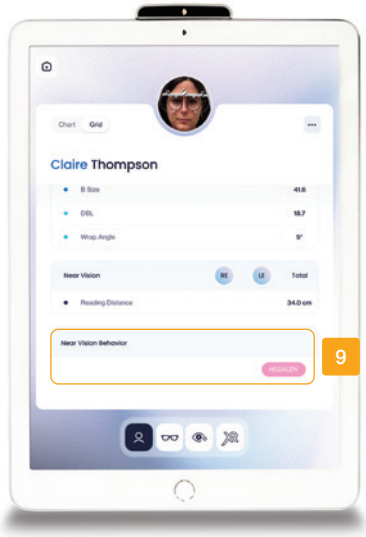
The NVB code is shown on the page (9).



Near vision behaviour explanation



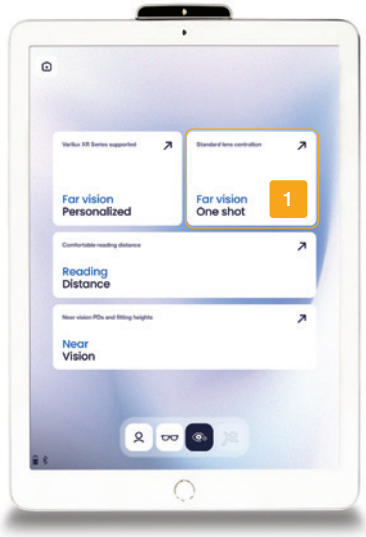
Enjoy the change with Varilux® XR



6. TAKING MEASUREMENTS - ONE SHOT

The One Shot module will allow you to obtain, in one photo, the essential measurements to center standard lenses:

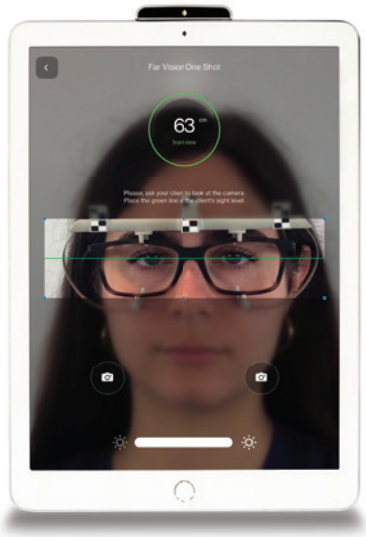
- PDs
- Fitting heights



Step 1: Taking the One shot photo

In the Measurements menu, press on **Far vision One shot** (1).

Follow the instructions of the Front-view photo stage in "Far vision – Personalized measurements" until the boxing stage.

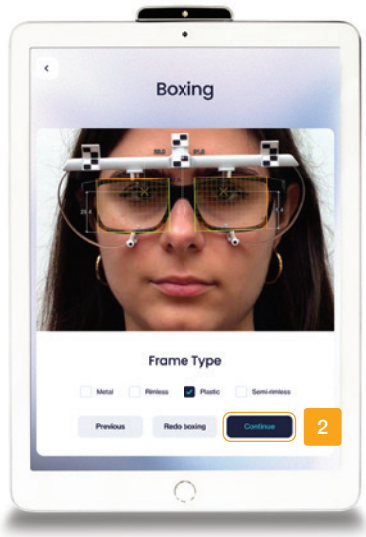


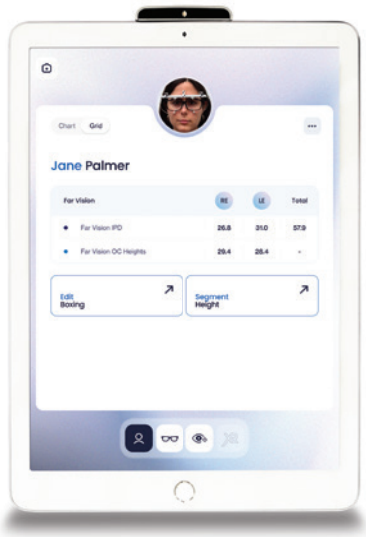
Step 2: One shot boxing

Carry out the boxing stage the same way as in Far vision – Personalized measurements, however, only 3 boxing lines need to be adjusted.

NOTE: Only the yellow boxing lines need to be correctly placed. The orange ones are placed automatically and are not used to calculate the measurements.

Press on **Continue** (2) to obtain the One shot results.



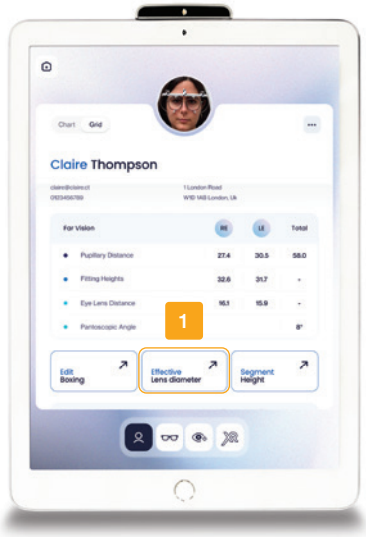


7. OTHER OPTIONS

a. EFFECTIVE LENS DIAMETER

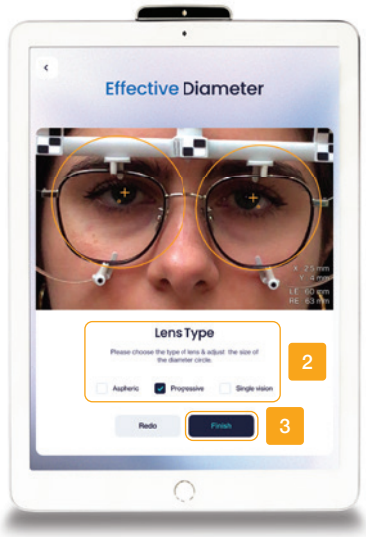
Step 1: Access effective lens diameter module

On the results page, press on **Effective Lens diameter** (1).



Step 2: Choice of lens type

Choose the **type of lens** from the selection (2).



Step 3: Calculation of the effective diameter

When you press on a lens type, the dedicated diameter appears on each eye.

In order to modify the diameter, simply adjust the size of the circle by pressing on it and moving your finger towards the furthest border of the frame.

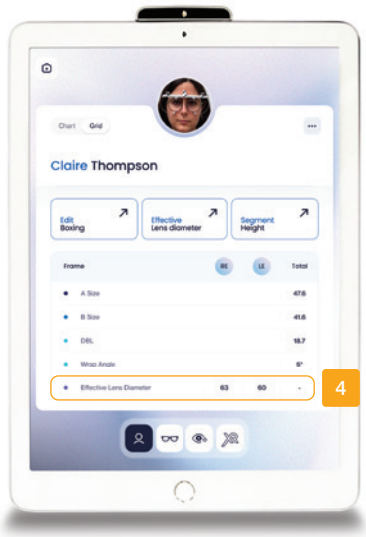
NOTE: Sometimes the centration cross on the diameter and the corneal reflection will not overlap. This is simply due to a perspective effect between the 3D photo and the 2D diameter circle. The lens diameter is always calculated from the position of the corneal reflection or its decentration according to the chosen lens.

Depending on the lens type, a decentration will be applied:

- The effective diameter of an aspheric lens is measured from the decentered point of the corneal reflection according to Martins rule of tilt.
- Concerning a progressive lens, the standard decentration values between the centration cross and the geometrical center of the lens are shown on the bottom right of the screen.

Press on **Finish** (3) to save the changes to the lens diameter.

The effective diameter values are shown on the results table (4).



If you modify the boxing, you will have to redo the lens diameter.

eye-ruler 2

7. OTHER OPTIONS

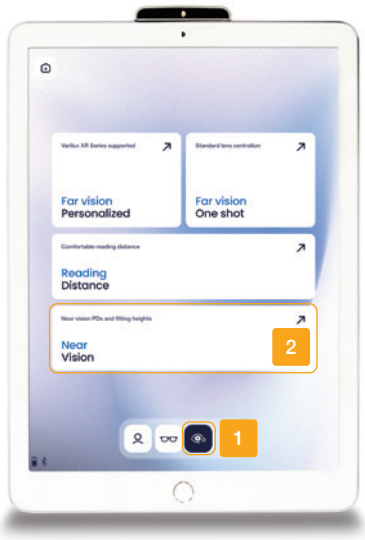
b. NEAR VISION PDS & FITTING HEIGHTS

The near vision measurements are best taken seated.

The clip and frames must not be moved or touched between far vision and the near vision measurement.

Step 1

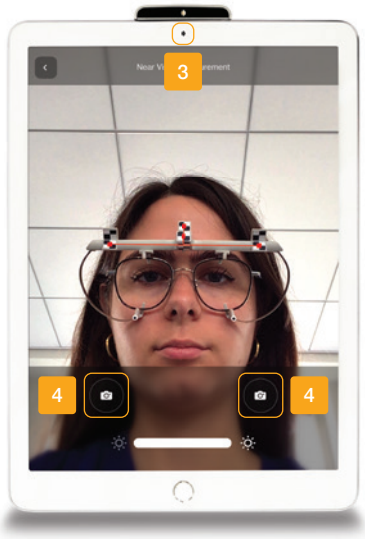
From the Results page, press on the **Measurements** icon (1), then press on **Near vision** (2).



Step 2

Hand the iPad to the client, and ask them to fix their gaze on the front camera (3).

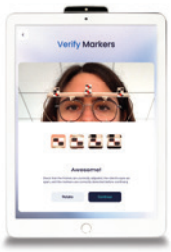
Then ask them to press on one of the **camera** buttons (4) to take the measurements photo.

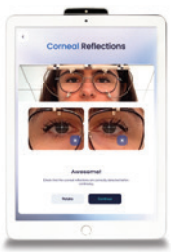


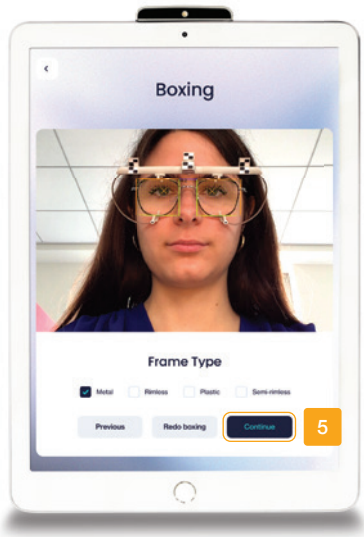
Step 3

Take the iPad back and verify that the markers of the clip and corneal reflectons are correctly detected, as before.

Proceed to the boxing, and place the 3 boxing lines. Press on **Continue** (5) to obtain the results.

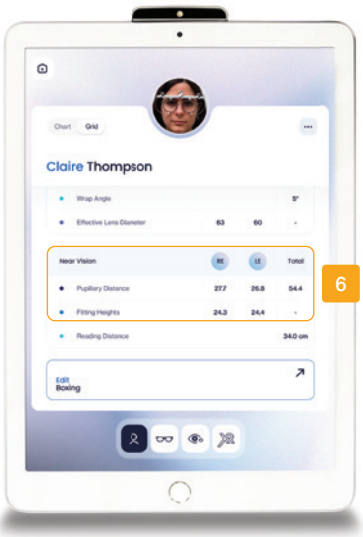






Step 4

The near vision PDs and fitting heights are shown on the results page (6).



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