

 **Mr Blue 2.0**

ESSILOR TRACER-CENTERER-BLOCKER



User Manual

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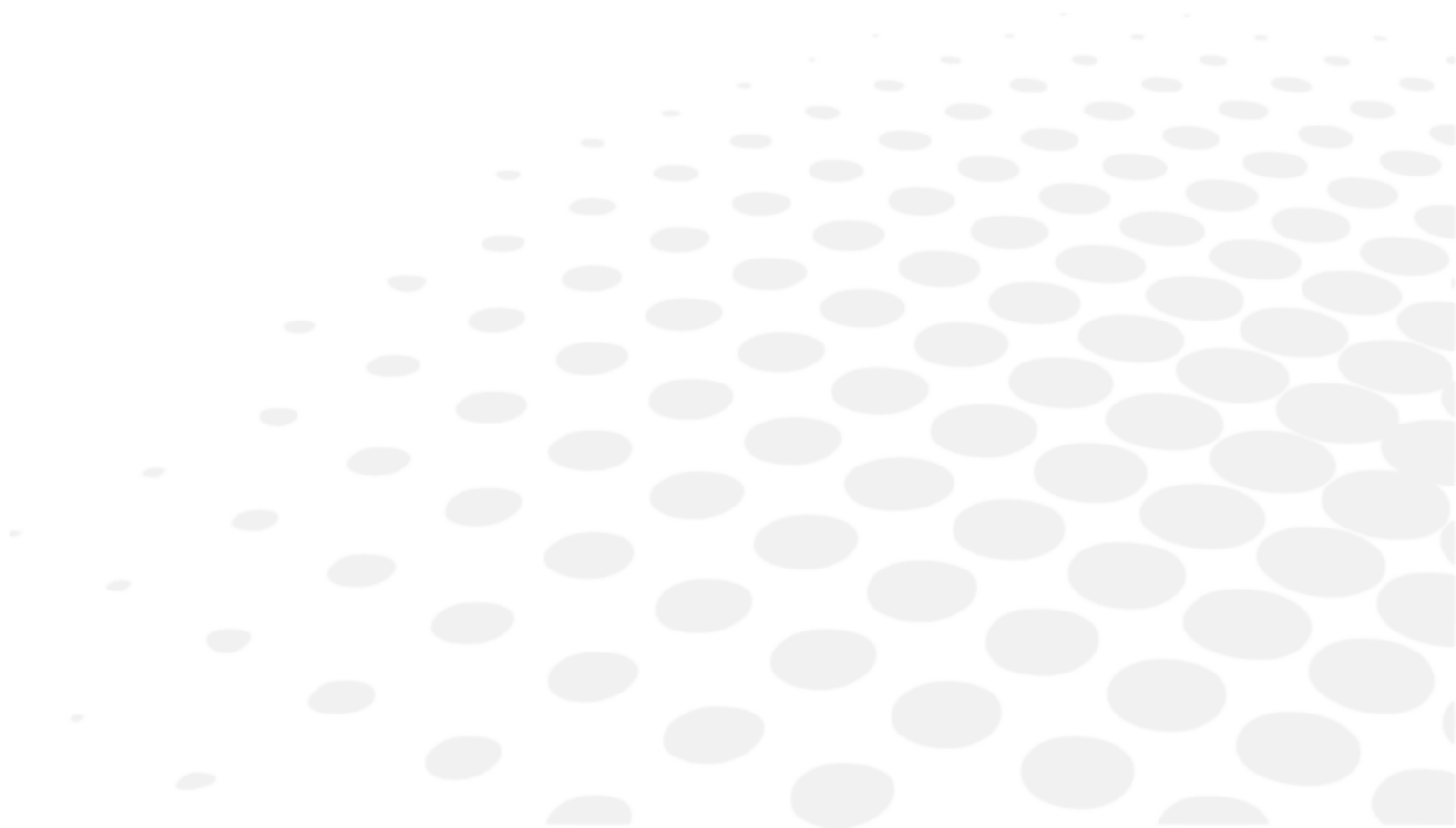
INTRODUCTION

To benefit fully from the functions of your Mr. Blue 2.0 tracer-centerer-blocker, we highly recommend that you read the documentation.

You have memory version: V9.0.0 (or higher)

- Addition of a menu on the “tracing” page allowing you to set the insertion height of the feeler in the groove (specific to the asymmetrical grooves: sport frames in particular)
- Addition of a centering menu with re-marked micro-engravings for the single vision lenses: the prp is set by default at 0.
- The “edging preparation screen” menu and the edger selection page associated with the product are accessible and configurable on the customization screen.
- An Essibox button is available on all the products on the tracing, centering and finishing page.
- The modification of IP settings is accessible: it is from now possible to configure the two DNS.
- A new tracing mode for demo lenses is available **for the “Nylor” frame**.
- If sphere and cylinder values are present in the job file, they are displayed on the screen in order to avoid the re-entering of the values.

I. FIRST STEPS WITH MR. BLUE 2.0

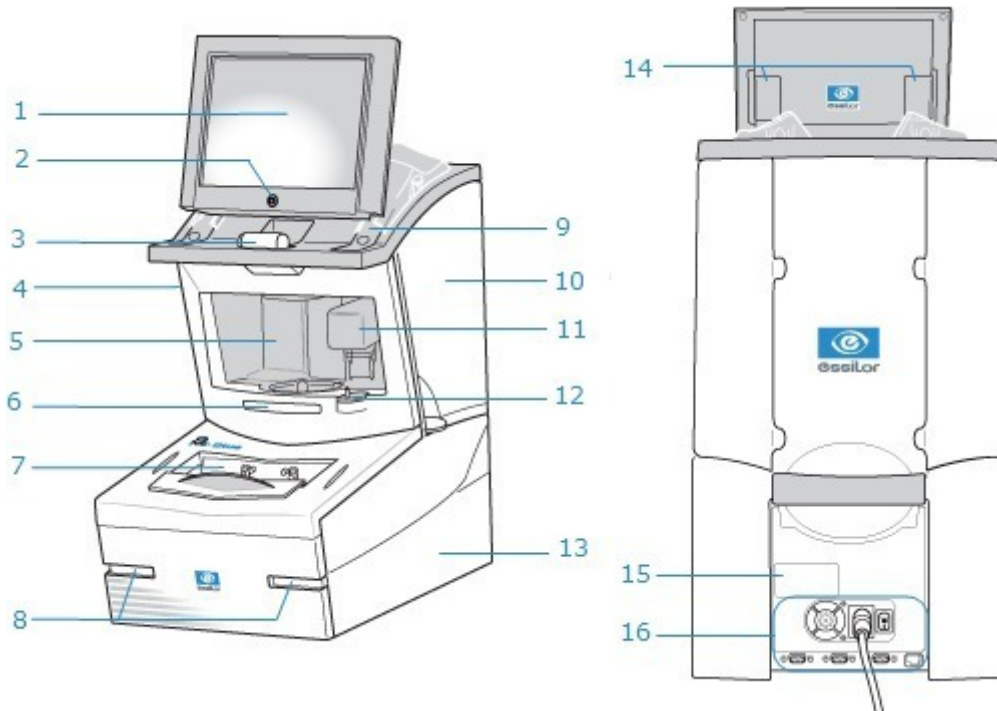


This chapter contains all the information concerning a first use of the tracer-centerer-blocker:

- Tracer (p.11)description
- Using the device (p.13)

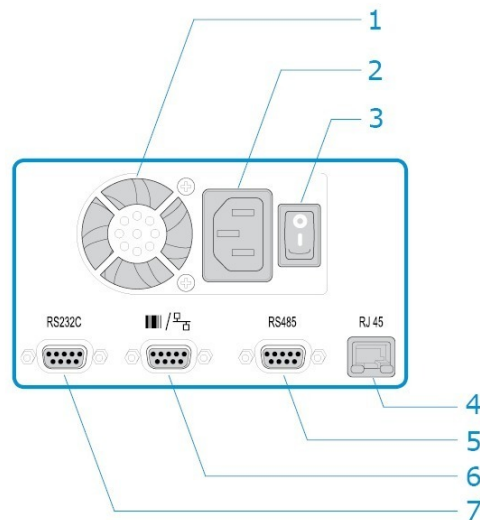
1. Descriptive diagrams

This section consists of descriptions and the list of accessories of the tracer-centerer-blocker:



1. Screen
2. ON/OFF button
3. Pattern holder
4. Operating accessory hatch
5. Centering chamber
6. Protective glass
7. Tracing table
8. Pad dispenser
9. Posiblock dispensers (on both sides of the screen)
10. Service accessory hatch
11. Blocking arm
12. Indexer
13. Access to roll of pads
14. Screen tilt buttons
15. Manufacturer plate
16. Connectors

Connectors



1. Fan
2. Power socket
3. Main switch
4. Ethernet port
5. RS485 port
6. Barcode reader port
7. Serial port

Tracer accessories

- Protective cover
- Pattern holder
- Bag of 22 mm posiblocks
- Bag of 18x14 mm posiblocks
- Transport wedges to be kept

Operating accessory hatch

- High-base tripod
- Recut lens tripod
- Stylus
- Small B-dimension wedges (quantity 2)
- White felt tip marker

Service accessory hatch

- Calibration posiblock
- Pattern gauge (metal)
- Frame gauge (black, numbered)
- CD-ROM of calibration gauge data

Lower hatches

- Roll of 22 mm pads
- Roll of 18 x 14 mm pads

Options

- Barcode reader
- Roll of barcode labels

Connection accessories

- 220 V power cable
- RJ45 cable for the tracer-edger connection
- Essibox connection cable

2. Instructions for use

In this section, you will find all the information concerning the following:

- turning the tracer-centerer-blocker on (p.13) and off (p.14),
- use of the touch screen and the keyboards (p.14),
- the description of the tracer (p.15) work screen.

a. Turning on the tracer-centerer-blocker

- 1 Before you switch on the tracer, make sure the tracing table is empty.
- 2 To switch on the tracer, press the main switch located at the rear of the machine.



The tracer may be switched on independently if you only want to do successive tracings.

- 3 Press the ON/OFF  button located under the touch screen.

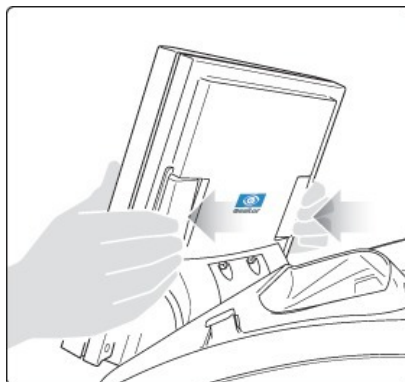
> The tracer is initialized.

A beep indicates that the initialisation was successful.



To ensure maximum precision and efficiency, the tracer needs 5 minutes to complete its initialisation after its switch-on.

- 4 Press the two buttons located at the back of the screen to adjust the tilt angle if necessary.



b. Turning off the tracer-centerer-blocker

- 1 Press briefly on the ON/OFF button  under the touch screen or press , then .



Do not press the ON/OFF button for several seconds. This would result in a shut-down of the machine and a warning message would be displayed at the next switch-on.

> A confirmation message is displayed on the screen.

- 2 Select  to confirm.

> The tracer is turned off.



Extended period of non-use

For a prolonged period of non-use (a few days), it is preferable to turn off the tracer using the main switch.

c. Using the touch screen and keypads

Using the touch screen

Use the stylus supplied with the machine to use the touch screen.



After each use, you can rest the stylus on one of the stylus rests, represented by oval stickers.

You can also touch the screen with your finger.

- If the screen is not sensitive enough to finger pressure, press lightly with a fingernail.
- If the response area does not correspond to the position of the key, you need to calibrate the touch screen. For more information, refer to the following section Maintenance and servicing > Checks and calibration > Calibrating the touch screen (p.125).



- Never press hard on the screen as this could break it.
- Never press on the screen with sharp objects such as pens, scissors, clamps, etc.
- Screen breakage is not covered by the guarantee.





On the screen, press the icon-buttons to access the menus and job functions required.

Using the keypads




When you need to input or modify data, two types of keypads are automatically displayed, according to the information to be input.

- The numeric keypad is displayed for the input of values.

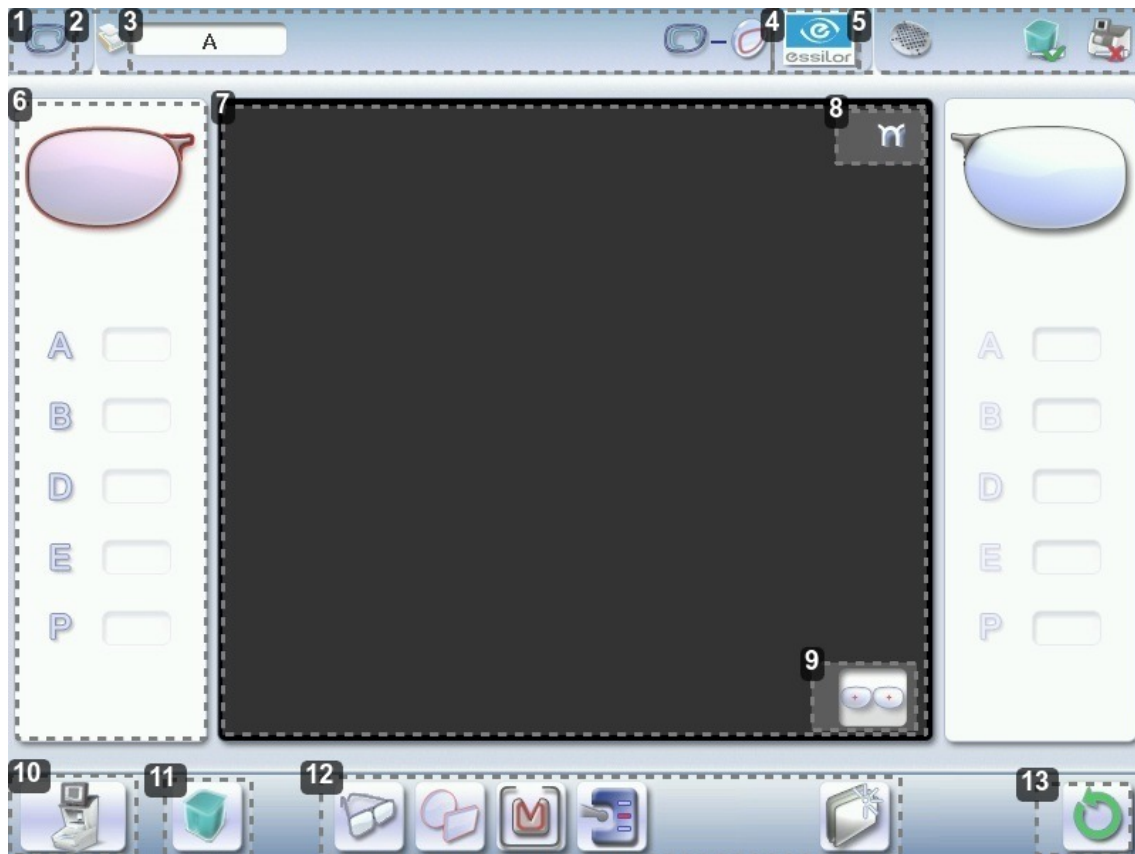




-  Reset the fields
-  Back
-  Confirm
-  Cancel and go back to the work screen
- The alphanumeric keypad is displayed to save or search for jobs.



- # Job ID
-  Job reference (alphanumeric characters)
-  list jobs (p.148)
-  Collection list

d. Tracing screen



1. Work screen indicator
2. Saved jobs list
 -  Job list
 -  Collection list
3. Information on the job and working mode
4. Settings
5. Devices connected

6. Active eye and information on the shape

The right eye is selected by default.

The data on the left of the screen relates to the right eye, the data located on the right of the screen relates to the left eye.






7. Work area

8. Bridge

Located on the right for a right lens, and on the left for a left lens.

9. Binocular display

10. Function button: Tracer menu

-  Machine shutdown
-  Tracing screen
-  Centering screen
-  Shape management screen
-  Edging preparation (accessible according to the configuration chosen, for more information, consult the chapter Set up the tracer-centerer-blocker>Customize the tracer>Work mode and display of measurements) (p.113)

11. Job call on Essibox

12. Actions available for the current screen

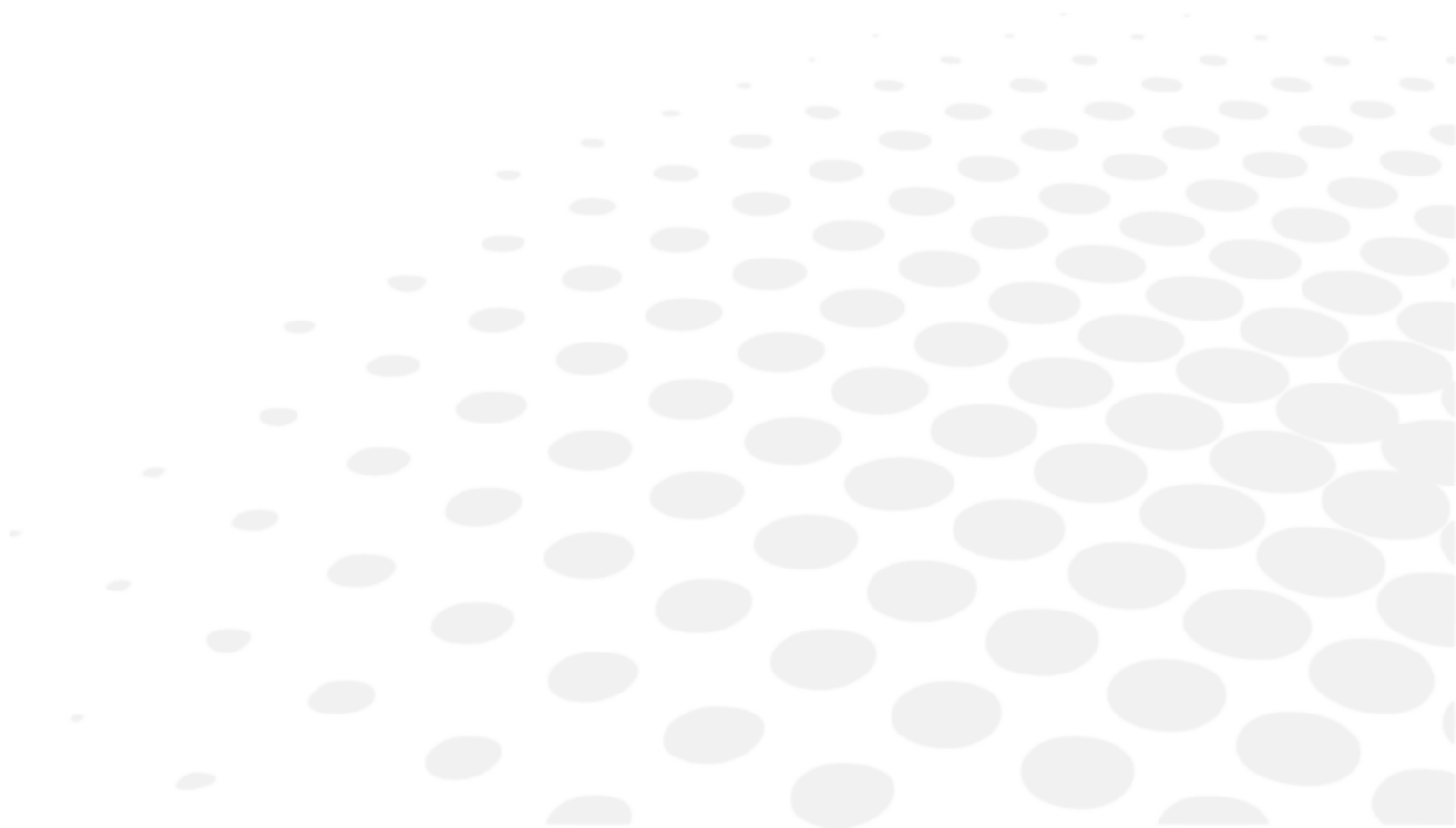
13. Tracing cycle initialization



Detailed functions

For more information, consult the section Perform a trace > Tracing environment > Captioned screen. (p.19)

II. TRACING



This chapter describes the procedures for the tracing of all types of frames, patterns, demo lenses and recut lenses:

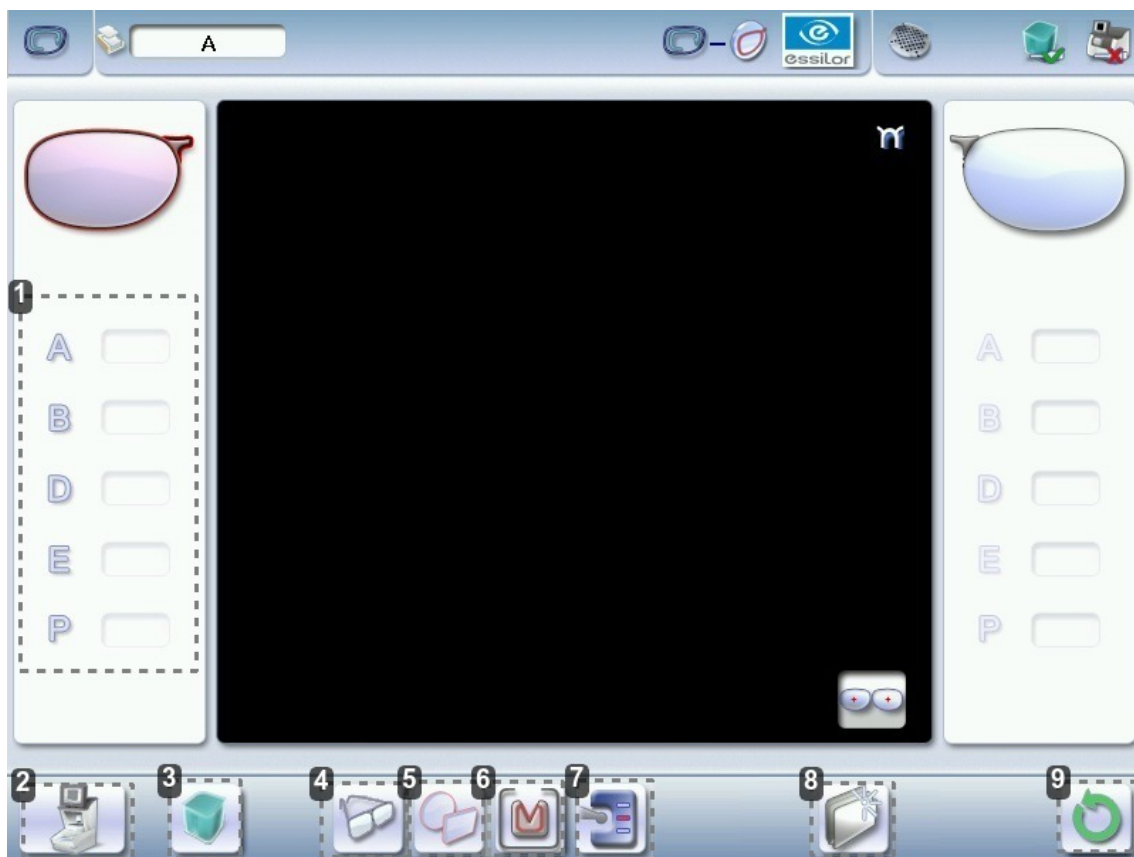
- Description of the tracing environment
- Shape management and storage (p.22)
- Tracing a rimmed frame (p.26) (including high-base frame)
- Tracing a high-base frame (p.28)
- Tracing a pattern, a demo lens or recut lens (p.30)

1. The tracing environment

This section describes the tracing screen and explains how to manage the jobs:

- Description of the tracing screen (p.19)
- Jobs and working modes (p.21)
- Displaying the tracing completed in binocular mode (p.21)




a. Menu screen





1. Dimensions display

- A: A-dimension
- B: B-dimension
- D: D-dimension
- E: Larger radius from the Boxing center
- P: Perimeter





2. Function buttons

-  Machine shutdown
-  Tracing screen
-  Centering screen

-  Shape management screen
-  Edging preparation







3. Job call on Essibox

4. Tracing mode

-  Rimmed frame (including high-base frame)
-  High-base frame
-  Optical tracing (patterns, demo lenses or recut lenses)
-  Mechanical tracing (patterns, demo lenses or recut lenses)




This mode cannot be selected. It is activated automatically upon detection of the pattern holder in the tracing table.

5. Type of tracing




-  Symmetric binocular tracing ^(p.149)
-  Asymmetric binocular tracing ^(p.148)
-  Right-eye monocular tracing
-  Left-eye monocular tracing
-  Single monocular tracing of the right eye (blocking and possible edging of the right eye only)
-  Single monocular tracing of the left eye (blocking and possible edging of the left eye only)

6. Frame material or optical tracing type

For mechanical tracing of a frame:




-  Metal frame: high-precision tracing, with feeling of the groove
-  Plastic frame
-  Optyl frame ^(p.149), for particularly flexible frames

For optical tracing:

-  Demo lens//Recut lens, for frame typeNylor[®]
-  Demo lens/Recut lens for drilled frame
-  Pattern

For mechanical tracing of demo lenses, recut lenses or patterns, the tracer automatically detects the pattern holder inserted in the tracing table.

7. Groove detection

-  : insertion in the middle of the frame (default value),
-  : high insertion (up to 75% the height frame),
-  : low insertion (up to 25% of frame height),

8. New Job

For more information on jobs ^(p.148), refer to the section Tracing > Shape management and storage ^(p.22).

9. Tracing cycle initialization



Always browse from left to right: depending on your selection, certain menus will be available while others will not.

Automatic detection

You can configure the tracing for automatic detection. The frame material and type of optical tracing (pattern or demo lens) are detected automatically.

To activate automatic detection on tracing, consult the section Configure the tracer-centerer-blocker > Customize the tracer > Action bar. ^(p.115)

b. Jobs and working modes

Jobs

A job consists in all the actions to be carried out to produce a pair of glasses. It can be managed in two ways:

- Saved job: allocating an ID ^(p.148) (ID) and a reference to the job makes it possible to save it and subsequently re-use it.
 - Automatic job archiving
 - Mandatory in the tracing - tracing work mode
- Without saving: working in current mode (job identification by the letter A) enables you to process a job quickly without saving it.
 - The job processing cycle must be finished before starting another.
 - If the cycle is stopped, a warning message is displayed and it is recommended to save the job.

Working modes

There are two working modes for managing your jobs:

- The tracing-centering mode (by default)
- The tracing-tracing mode

The selected work mode is shown in the information bar, to the left of the Essilor logo. You can change it in the tracer settings.

Working in the tracing - centering mode



After tracing, the tracer automatically displays the centering screen.



You can fully process a job before proceeding to the following:

1. Tracing or recovering a job from the database
2. Changing the shape and drilling position if necessary
3. Centering
4. Lens blocking
5. Lens edging

Working in the tracing - tracing mode






After tracing, the tracer displays the tracing screen again.


- You can carry out several tracings in succession.
- The tracings are saved with the job number you have allocated to them.
- The shape modification, positioning of the drilling points, centering, blocking and edging of the lenses are handled subsequently.
- All jobs must be saved.
- You can access the centering screen at any moment to centre the lens that corresponds to the active shape:
 - > Select  then .

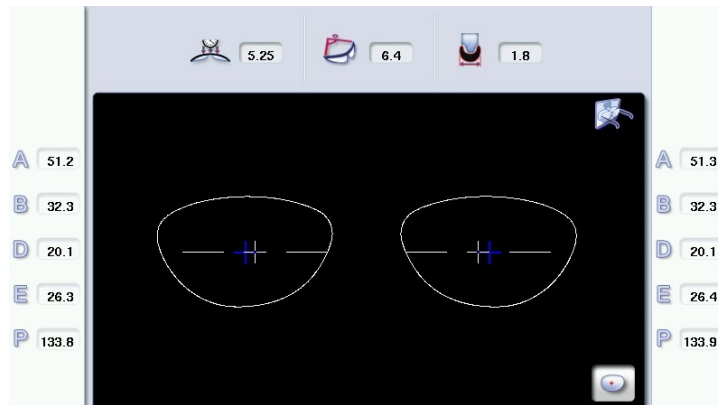
c. Displaying the binocular view

Once the tracing is finished, you can display a binocular representation of the job on a 1:1 scale, in order to check the frame shape and centering.








Three values are displayed above the image:

-  the frame base ^(p.148)
-  the curve angle ^(p.148)
-  the frame thickness

This symbol  indicates the view from the wearer side.






In tracing - centering mode, the centering screen is displayed at the end of the tracing:

- 1 Select  then  access the tracing screen.
- 2 Press   to display the binocular view.
 - > The binocular view is displayed.
- 3 Position the frame in front of the screen, against the faceplate to check its shape and centering.
- 4 Press  to return to the monocular screen.
- 5 Select  then  to go back to the centering screen.



Tracing - tracing mode

The tracing screen is displayed again once tracing is complete:



1. Press   to display the binocular view.
 - > The binocular view is displayed.
2. Position the frame in front of the screen, against the faceplate to check its shape and centering.
3. Press  to return to the monocular screen.

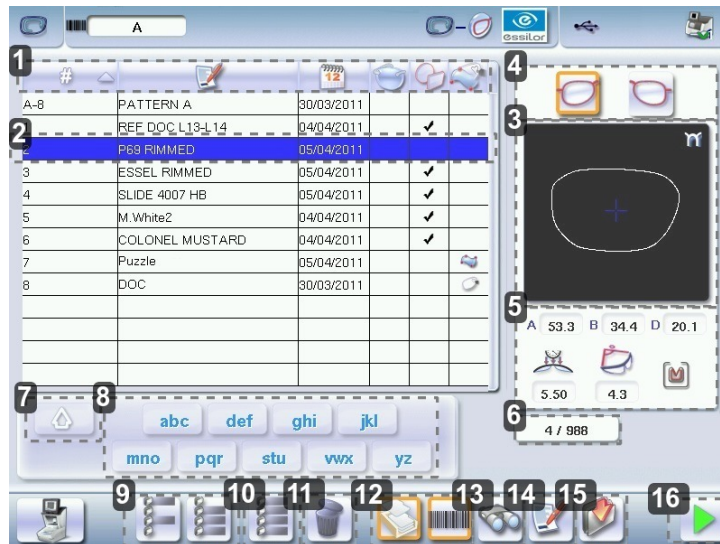
2. Shape management and storage

This section explains how to manage the available lists to store your shapes.


- Description of the shape storage screen (p.22)
- Job list and collection list (p.24)
- Creating a job (p.24)
- Working in current job mode (job A) (p.25)

a. Menu screen

From the tracing screen or the centering screen, press on the menu  then  to access the shape storage screen.



1. Sort the jobs

- # ID (p.148)
- Reference
- Date
- Types of jobs:
 - Drilled
 - Asymmetric tracings
 - Creative shapes/engravings:  creative shape,  shape with engraving

2. Selected job

3. Shape preview

4. Select the eye to be displayed in the preview

In monocular tracing mode, the eye just traced is displayed by default.

5. Information concerning the lens shape and frame

- A, B and D dimensions
- Frame base
- Curve angle
- Material of the frame / pattern / demo lens or recut lens

6. Job counter for the selected list

7. Back to the default display of the selected list

8. Display all jobs starting with the selected letter


To display the all jobs starting with the selected letter:

- Press once if it is in the first position on the button,
- Press twice in succession if it is in the second position,
- Press three times in succession if it is in the third position.


Example:

- Press 3 times on the **pqr** button to display all jobs starting with the letter R.
 - > The R goes into upper case: **pqR**.
 - > The jobs starting with the letter R are displayed.

9. Select several jobs

- Press  to select several non-consecutive jobs in the list.
 - Example: Press on the button then select jobs #1, #5, #7.

> Only jobs #1, #5 and #7 are selected.


- Press  to select a group of consecutive jobs in the list, then select the first and last job in the group.

Example: Press on the button then select jobs #1 and #10.


> All jobs from #1 to #10 are selected.

- Press to select all jobs in the list.

10. Select all jobs



Press  to select all jobs for the search in progress.

11. Delete the selected job(s)

Press  to delete the selected job(s). A confirmation message is displayed.

12. Job list or collection list

Select the list to be displayed:

-  Job list
-  Collection list

13. Search for a job by ID or by reference



14. Rename the selected job


15. Duplicate the selected job

16. Call the selected shape to the work area

b. Job list

Two lists are available for the storage of shapes:

-  The job list
-  The collection list

You can copy a job from one list to the other via the button .

The job list

The job list enables you to save jobs on a daily basis, without the possibility of re-using them at a later date. It can store up to 1,000 jobs.

The collection list

The collection list enables you to save specific jobs, for subsequent re-use:

- Recurrent jobs
- Standard shapes
- Drilling models

It can store up to 1,000 jobs. The barcode reader (optional) cannot be used to call or save a job in the collection list; only the numeric keypad can be used for that purpose.

c. Creating a job

There are several ways of creating a job:

- Scan the barcode corresponding to the desired ID using the barcode reader (optional): the job is saved to the job list.
- To create a job, use the alphanumeric keypad and follow the procedure below.



1 In the tracing screen, press  in the action bar to create a new job.


> The alphanumeric keypad is displayed.




For further information on data input and use of the keypad, refer to the following section: First steps > First use of the tracer-centerer-blocker > Using the touch screen (p.14).


2 Select the list in which you want to store the job:


- Press  to select the job list.
- Press  to select the collection list.


 For further information on the lists, refer to the section [Tracing > Managing and storing shapes > Job list and collection list \(p.24\)](#).

- 3 Press  to enter the ID ^(p.148) of the new job.

An ID is automatically allocated by the tracer (first free slot in the selected list). You can modify it: the ID can consist of alphanumeric characters.

 In the collection list, the ID solely consists of numeric characters.

- 4 Press  to enter the reference of the new job.

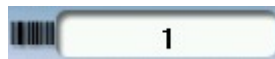
 Irrespective of the list selected, the reference may consist of alphanumeric characters. It can contain the information of your choice:

- Customer's name
- Frame brand or reference
- Manufacturer, etc.

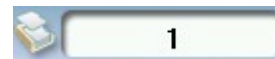
- 5 Press  to confirm.

- > The tracing screen is displayed. The ID allocated and the symbol of the list in which the job is stored appear in the information bar.


Job list:





Collection list:



- 6 The tracer is ready for tracing. For further information, refer to the section concerning your frame type.

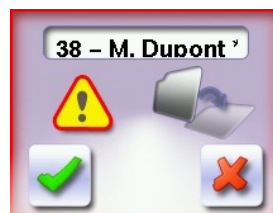
- > The symbol  is displayed at the bottom right of the job ID as soon as the job is being modified. It disappears once the job has been saved.



 The symbol  is displayed in the upper right of the job ID if the right lens has been blocked but not the left.

If you don't want to save the job, you can work in current job mode. For more information, refer to the following section [Tracing > Shape management and storage > Working in current job mode \(job A\) \(p.25\)](#).

Successive tracings and saving.

If you start a new tracing while a job is still active on the tracing screen, a message is displayed:



-  Replacement of the active shape: the tracing you have just started replaces the former one under the current ID.
-  Creation of a new job: the alphanumeric keypad is displayed to enable you to create a new job for the tracing you have just started (new ID). The two jobs are thus saved.

To cancel, press again on .

d. Working in current job mode (job A)

- As soon as the tracer is initialised, you can work in current job mode: the letter A is displayed by default in the information bar. The job is not saved.

- If you want to save job A, refer to the job creation procedure (p.24).
- If you want to go back to job A after working on a saved job:
 - Scan barcode A using the barcode reader (optional), or
 - Use the numeric keypad and follow the procedure below.



1 In the tracing screen, press  in the action bar to create a new job.

> The alphanumeric keypad is displayed.




For further information on data input and use of the keypad, refer to the following section: First steps > First use of the tracer-centerer-blocker > Using the touch screen (p.14).

2 Select the list in which you want to store the job:

- Press  to select the job list.
- Press  to select the collection list.




For further information on the lists, refer to the section Tracing > Managing and storing shapes > Job list and collection list (p.24).

3 Press  to enter the ID (p.148) of the new job.

An ID is automatically allocated by the tracer (first free slot in the selected list). You can modify it: the ID can consist of alphanumeric characters.



In the collection list, the ID solely consists of numeric characters.

4 Press  to enter the reference of the new job.



Irrespective of the list selected, the reference may consist of alphanumeric characters. It can contain the information of your choice:

- Customer's name
- Frame brand or reference
- Manufacturer, etc.

5 Press  to confirm.

> The tracing screen is displayed. The ID allocated and the symbol of the list in which the job is stored appear in the information bar.


Job list:



Collection list:



6 The tracer is ready for tracing. For further information, refer to the section concerning your frame type.

> The symbol  is displayed at the bottom right of the job ID as soon as the job is being modified. It disappears once the job has been saved.

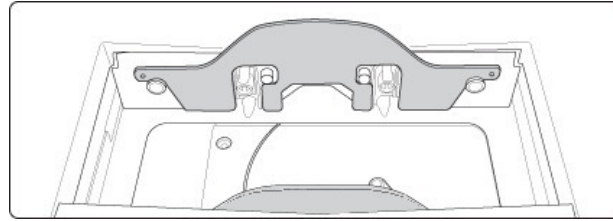


The symbol  is displayed in the upper right of the job ID if the right lens has been blocked but not the left.

3. Tracing a rimmed frame

 Prerequisite:

- For correct tracing of the shape, the frame to be traced must not be deformed and its hinges must be closed.
- For a small frame, place the two wedges between the tracing table clamps:



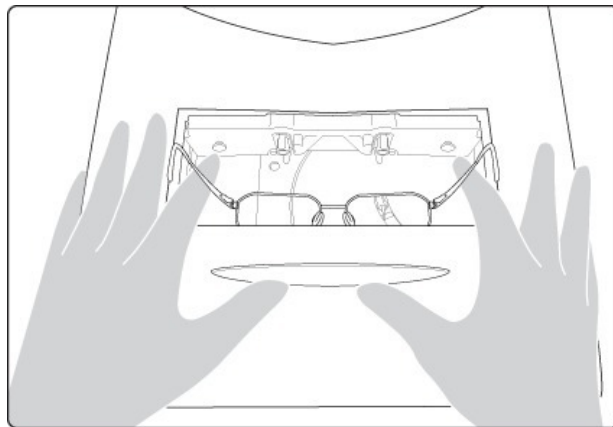
This section describes the procedure to follow for tracing rimmed frames including high-base frames:


- Symmetric binocular^(p.149) mechanical tracing of a rimmed frame
- Asymmetric binocular^(p.148) tracing of a rimmed frame
- Monocular tracing of a rimmed frame

- 1 Place the frame in the tracing table, between the two clamps located opposite you.
- 2 Gently close the jaw to hold the frame.

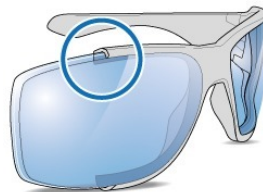


Optyl ^(p.149) frames: take care not to flatten the frame by closing the jaws.

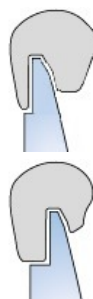


- 3 Press  to select the type of rimmed frame.
- 4 Select the required type of tracing.
- 5 Select the frame material.
- 6 Select the type of groove insertion, medium, high or low.


As part of the tracing of an asymmetrical groove frame (sport or safety frame): make sure to check the position of the groove in the frame.




Groove located at the back of the frame






Groove located on the front of the frame

In the case of a groove located at the back of the frame, select a high insertion .

In the case of a groove located in the front of the frame, select a low insertion .

7 Press on  to start the tracing cycle.

 To interrupt tracing at any time, press .

> If you selected a monocular tracing, the numeric keypad is displayed. Enter the value of the D-dimension, then press  to confirm.

> The tracing result is displayed in the centering screen, in monocular format on a 1:1.6 scale.



Tracing - tracing mode

In tracing - tracing mode, the result of the tracing is displayed in the work area of the tracing screen. For more information on working modes, consult the section [Perform a trace > Tracing environment > Jobs and working modes \(p.21\)](#).

Before Centering

- If you want to modify the shape of the lenses, consult the chapter [Modify the lens shape \(p.83\)](#)
- If you want to add drilling points to your lenses, refer to the section [Preparing a drilled job](#).

4. Tracing a high-base frame

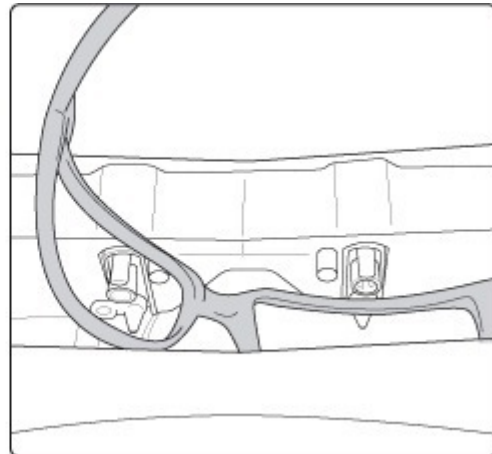
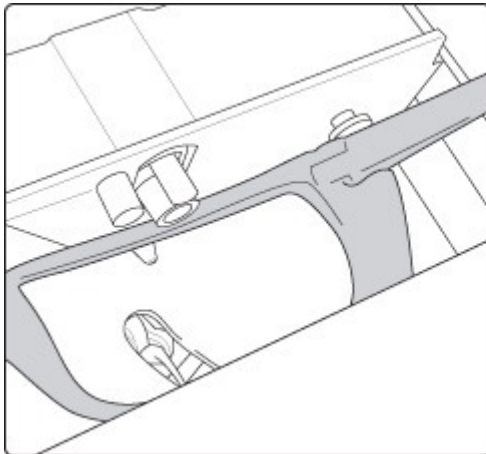
This specific procedure enables you to trace a high-base frame, if the standard rimmed frame tracing fails.

Tracing of a high-base frame is done in two stages:



- The frame is placed in the tracing table and mechanical tracing is done for each eye individually.
- The curve angle is measured and the tracing is completed.


Put the frame in place and start the tracing

1 When you place the frame in the tracing table, position the eye as flat as possible: the black clamps which hold the eye to be traced must be in the middle of the circle.




2 Gently close the jaw to hold the frame.



3 Press  to select the high-base frame type. 

4 Press  to select the first eye to be traced.

5 Select the frame material.

6 Select the type of groove insertion, medium, high or low.

7 Press on  to start the tracing cycle.

 To interrupt tracing at any time, press .


> The numeric keypad is displayed.

8 Enter the value of the D-dimension, then press  to confirm.

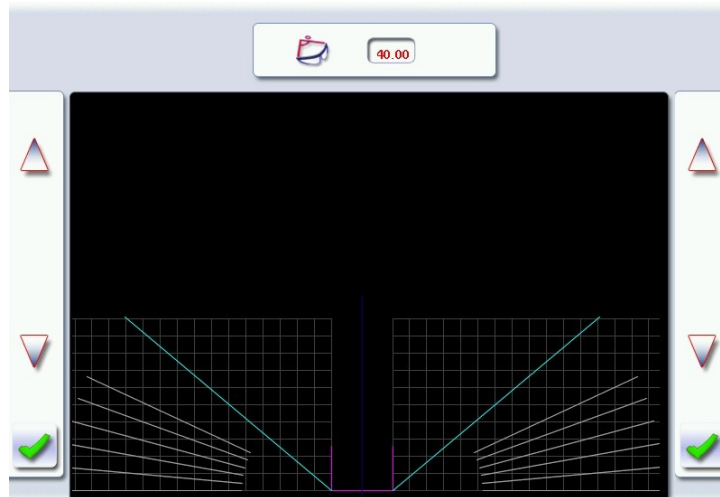
> Once the tracing of the first eye is finished, a message is displayed:



9 Position the frame to trace the second eye.

10 Press  to start tracing the second eye.

> The following screen is displayed:



Measuring the curve angle and completing the tracing.

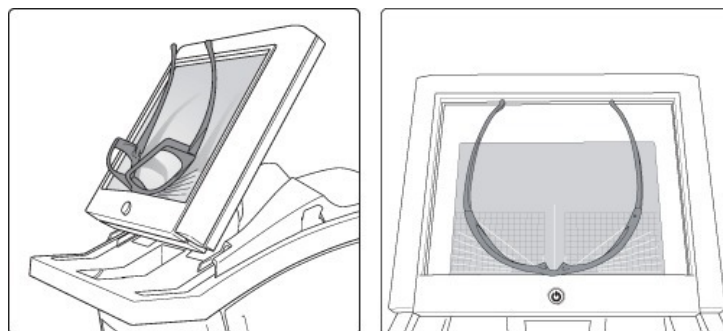
This screen enables you to measure the curve angle which cannot be captured in a monocular tracing.

1 Place the frame on the screen:

- The vertical blue line must be in the center of the frame
- The plane which is tangent to the two lenses must coincide with the pink line at the bottom.



If the frame doesn't stay straight, you can tilt the screen slightly by pressing the two side buttons at the back of the screen.



2 Use the  and  buttons to align the light blue lines with the nasal and temporal ends of the rims.



You can also press for a few seconds on the value and change it using the numeric keypad.

> The value of the curve angle is modified.

3 Press  to confirm.

> The tracing result is displayed in the centering screen, in monocular format on a 1:1.6 scale.



Tracing - tracing mode

In tracing - tracing mode, the result of the tracing is displayed in the work area of the tracing screen. For more information on working modes, consult the section *Perform a trace > Tracing environment > Jobs and working modes (p.21)*.

Before Centering

- If you want to modify the shape of the lenses, consult the chapter *Modify the lens shape. (p.83)*
- If you want to add drilling points to your lenses, refer to the section *Preparing a drilled job.*

5. Tracing a pattern, a demo lens or recut lens


Two types of tracing are available for patterns, demo lenses and recut lenses: optical tracing and mechanical tracing. This section also presents the operations to be carried out to enter the curve angle and frame base which cannot be captured in this type of tracing.

- Optical tracing (*p.30*)
- Mechanical tracing (*p.32*)
- Inputting the curve and the frame base after monocular tracing (*p.34*)

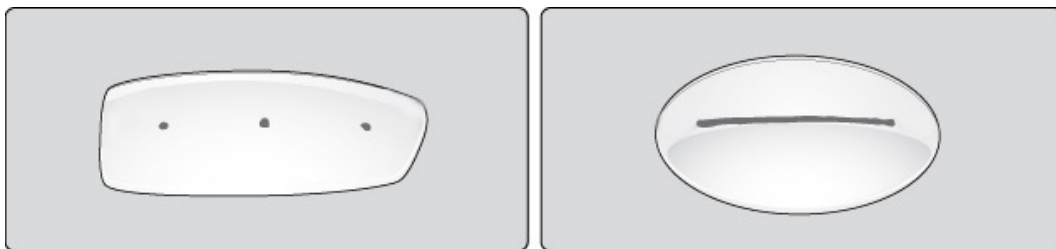
a. Optical tracing

Preparing optical tracing of demo or recut lens








This type of tracing makes it possible to retrieve the existing shape and drilling data of a lens.



 Prerequisite: for the tracer to correctly detect the horizontality of the lens, the lens must be clean and marked using the permanent felt tip marker with:

- either three focimeter dots,
- or a horizontal line which must not touch the edges of the lens (a space of at least 5 mm is required)




Tracing

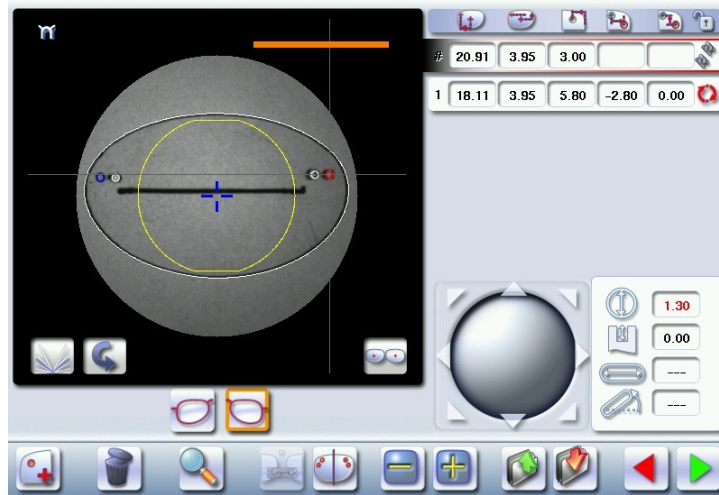
- 1 Place the pattern or the lens in the middle of the centering chamber.
- 2 Press  to select optical tracing .
- 3 Press  to select the eye to be traced.
- 4 Press  to select the pattern,  to select the demo or re-cut lens or  to select the lens for a Nylon frame [®].
- 5 Press on  to start the tracing cycle.

 To interrupt tracing at any time, press .

- > If the tracer does not detect either the focimeter dots or the line on the lens an error message will be displayed: check and / or mark the lens again with the focimeter dots or the line. If the tracing fails after the check, do a mechanical tracing using the pattern holder.
- > The numeric keypad is displayed.


6 Enter the value of the D-dimension, then press  to confirm.

- > The drilling screen is displayed.



7 Configure the drilling points if required.

For more information, refer to the section *Preparing a drilled job (p.91)*.

8 Press  to go to the centering screen.



Tracing - tracing mode

In tracing - tracing mode, the result of the tracing is displayed in the work area of the tracing screen. For more information on working modes, consult the section *Perform a trace > Tracing environment > Jobs and working modes (p.21)*.

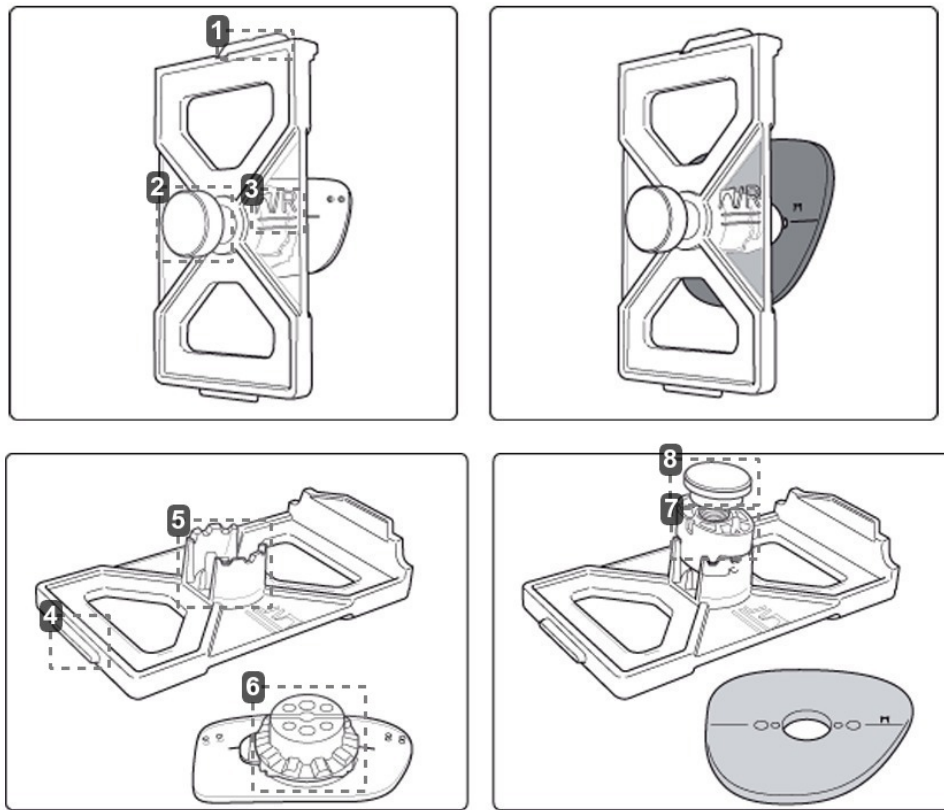
Before Centering

Once tracing has been carried out, you can:

- Input the curve angle and the frame base, for optimal centering precision
- Modifying the lens shape For more information, consult the chapter *Modifying the lens shape (p.83)*.
- Add drilling points on the shape. For more information, consult the chapter *Preparing a drilled job (p.91)*.

b. Mechanical tracing

Detailed view of the pattern holder



1. Front tab
2. Knurled knob to screw
3. "Right nose" inscription
4. Back tab
5. Posiblock clamp
6. 18x14 mm posiblock
7. Pattern-holder tip
8. Holding screw

Attaching a recut lens or demo lens to the pattern holder

- 1 Block the lens in the boxing center, making sure it is properly centered.
- 2 Insert the blocked lens in the posiblock clamp, holding it in position with your index finger.
- 3 Press on the knurled button, screwing, until the blocked lens is immobilized.
 - > The lens is clamped.



The feeling pressure on the lens being weak, it is pointless to excessively screw down the knurled button.

Attaching a pattern to the pattern holder

- 1 Unscrew the screw holding the pattern-holder tip.
- 2 Fix the pattern on the pattern-holder tip:

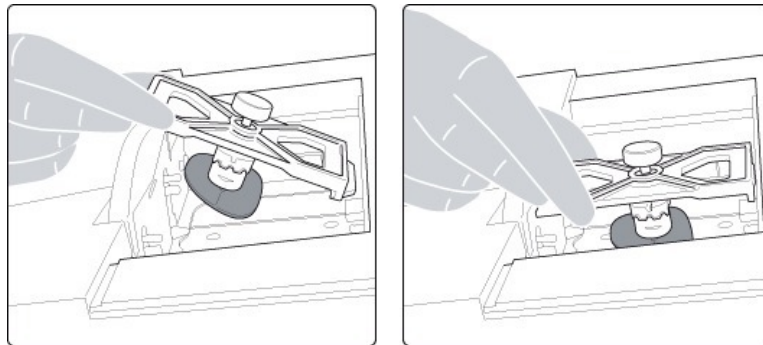
- nose to the right for a right lens, and to the left for a left lens
 - pattern-holder tip positioner towards the bottom of the pattern.
- 3 Align the marking \overline{TVR} (right nose) or \overline{TVL} (left nose) of the pattern holder with that of the pattern:
- nose to the right for a right lens, and to the left for a left lens
 - pattern-holder posiblock positioner towards the bottom of the pattern
- 4 Press on the knurled knob, screwing it, until the pattern is immobilized (as for fixing a lens).
- > The pattern is clamped.



The screwing of the knurled knob inside the posiblock of the nozzle has no functional impact on the latter.

Place the pattern holder in the tracing table

- 1 Insert the front tab of the support between the white cylindrical studs of the tracing table.

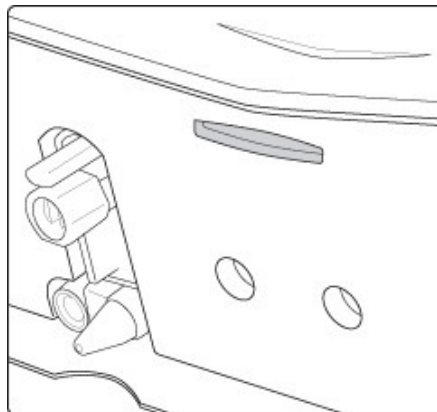


- 2 Block the back tab of the support.




Adjust the jaws of the tracing table so as to block the pattern holder.

- 3 Start the cycle.
- 4 Release the pressure on the white circles so the rear tab goes into the slit located opposite the cylindrical white pins (next to you - see illustration below).




- 5 Check that the pattern holder does not move in the table.

Tracing

- 1 Press  to start the mechanical tracing.




To interrupt the tracing at any time, press .

- > The tracer automatically detects the pattern holder.

> The buttons , ,  and  are displayed.

2 Select the eye to be traced.

> The numeric keypad is displayed.

3 Enter the D-dimension, then press  to confirm.

> The tracing result is displayed in the centering screen, in monocular format on a 1:1.6 scale.



Tracing - tracing mode

In tracing - tracing mode, the result of the tracing is displayed in the work area of the tracing screen. For more information on working modes, consult the section [Perform a trace > Tracing environment > Jobs and working modes \(p.21\)](#).


Before Centering

Once tracing has been carried out, you can:

- Input the curve angle and the frame base, for optimal centering precision
- Modifying the lens shape For more information, consult the chapter [Modifying the lens shape \(p.83\)](#).
- Add drilling points on the shape. For more information, consult the chapter [Preparing a drilled job \(p.91\)](#).

c. Inputting the curve and the frame base after monocular tracing

In a monocular tracing, the curve angle and frame base cannot be measured. For optimal centering precision, we recommend that you enter those values after the optical or mechanical tracing of a pattern, recut lens or demo lens.

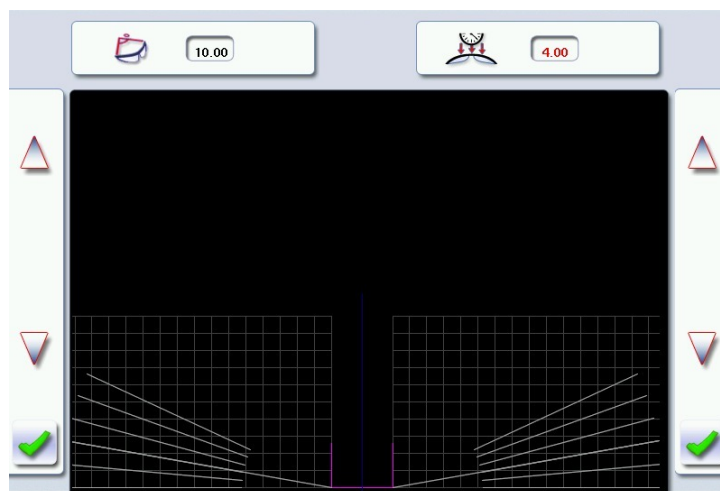
 Prerequisite: before entering the curve angle and frame base, one of the following operations must be performed:

- Optical tracing of a pattern, a demo lens or a recut lens [\(p.30\)](#)
- Mechanical tracing of a pattern, demo lens or recut lens [\(p.32\)](#)

Input the curve angle and the frame base.

1 Press the  button.

> The following screen is displayed:



2 Select the curve angle value  to modify it.

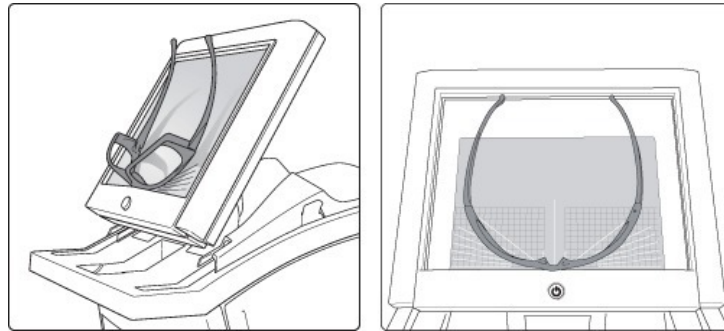
> The value is displayed in red.

3 Place the frame on the screen:

- The vertical blue line must be in the center of the frame
- The plane which is tangent to the two lenses must coincide with the pink line at the bottom.



If the frame doesn't stay straight, you can tilt the screen slightly by pressing the two side buttons at the back of the screen.




- 4 Use the  and  buttons to align the light blue lines with the nasal and temporal ends of the rims.





You can also press for a few seconds on the value and change it using the numeric keypad.

> The value of the curve angle is modified.

- 5 Select the frame base value  to modify it.

> The value is displayed in red.

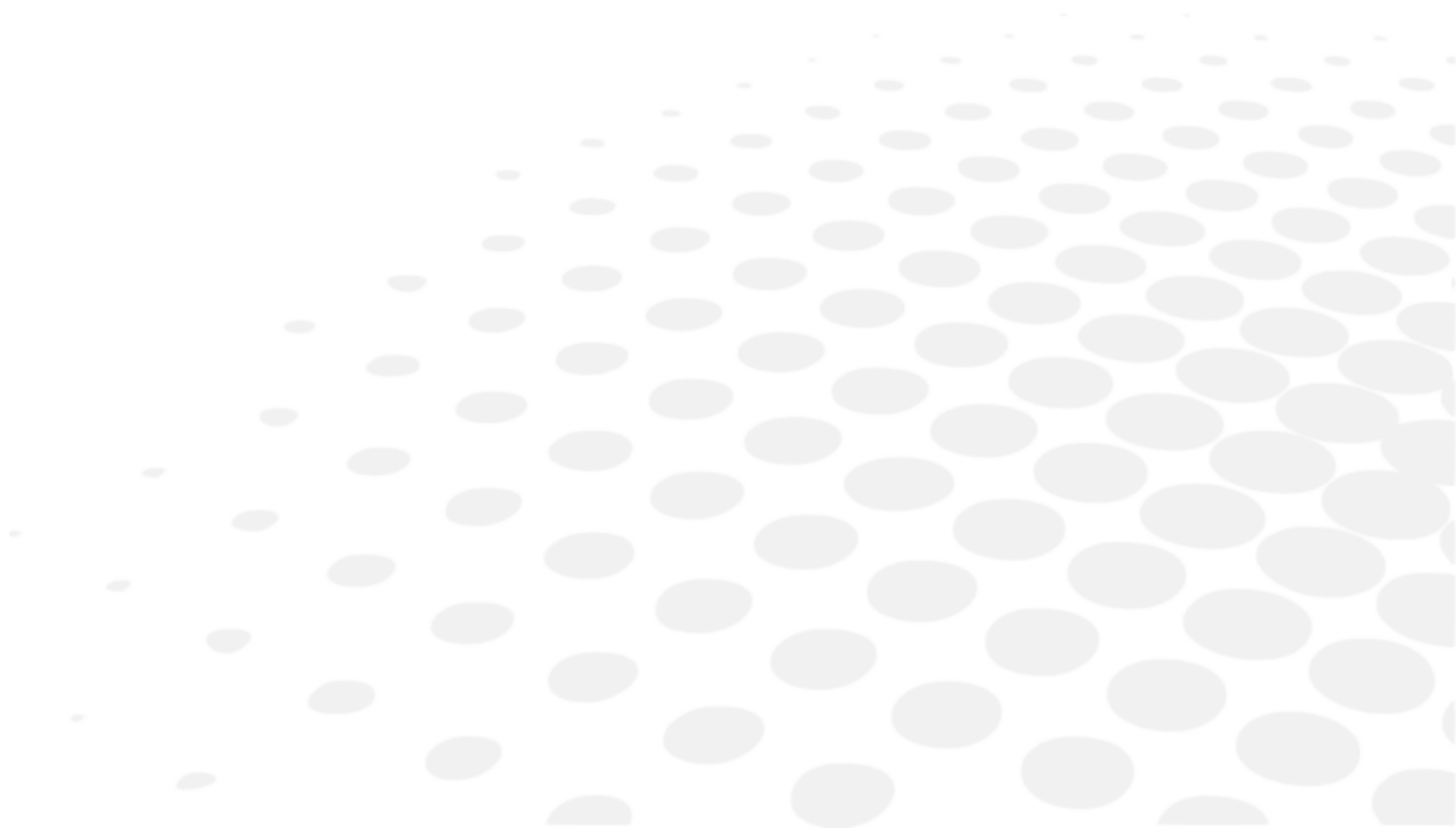
- 6 Use the  and  buttons to modify the frame base value.



You can also press for a few seconds on the value and change it using the numeric keypad.

- 7 Press  to confirm.

III. CENTERING A LENS



This chapter describes the lens centering procedures according to the type of lens.

- Description of the centering environment (p.39)
- Centering a single vision lens (p.42)
- Centering a progressive lens (p.52)
- Centering a bifocal lens (p.58)
- Centering an executive lens (p.64)
- Centering a mid-distance lens (p.69)
- Centering a lens for a high-base frame (p.76)
- Saving a new marking (p.77)

This chapter also describes the lens blocking (p.80) procedure.



The tracer can be used to calculate the lens power. Nevertheless, is not categorized as a focimeter. Standard ISO8598-1 implies measurement on a cone 5 mm in diameter.



Tracer-centerer-blocker performance

To get the most out of the tracer-centerer-blocker and take advantage of all its features, we recommend that you follow the advice below:

- Eliminate any source of light (natural or artificial) pointing directly towards the centering chamber, to avoid interfering with lens measurement and centering.
- Check that the lenses are clean before proceeding with automatic centering.
- Hartmann plate protective glass:
 - Clean the window located in the middle of the centering chamber regularly.
 - Replace it as soon as it shows traces of scratches in the center.

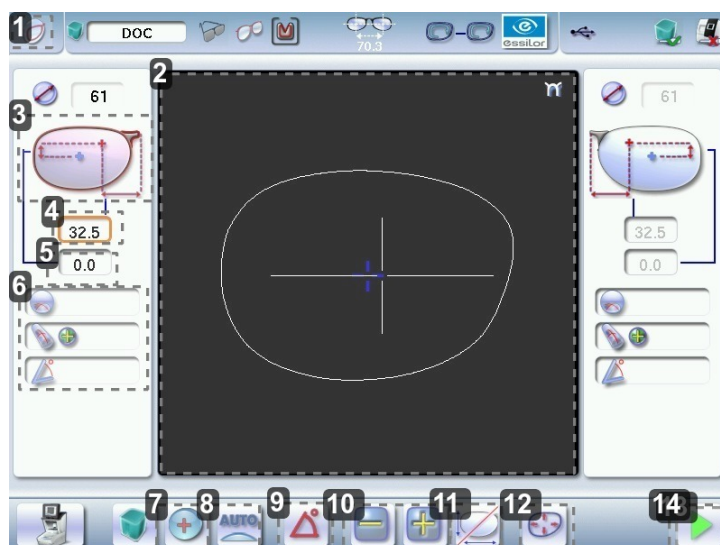
(For more information, consult the section Maintenance > Maintaining and cleaning the tracer-centerer-blocker > Cleaning the protective glass of the Hartmann plate (p.132).)

1. Centering environment

This section describes the centering screen and the various centering modes available:


- Description of the centering screen (p.39)
- Centering modes (p.41)

a. Menu screen



1. Centering screen indicator

2. Work area

-  Nasal side indicator
- Lens shape
- Centering target according to lens type (white cross)
- Boxing center of the shape (blue cross)

3. Active eye and type of display of PD and pupillary height

Four modes available:




- Boxing mode
- Datum mode
- ΔY mode
- $\Delta X + \Delta Y$ mode

For more information on the type of display, consult the section [Configure the tracer-centerer-blocker > Customize the tracer > Decentration mode \(p. 115\)](#).

4. Half PD

5. Pupillary height

6. Lens information






-  Sphere power in diopters
 -  Cylinder power in diopters
- Press on the area for a few seconds to switch from a positive cylinder power to a negative one.
-  Cylinder angle

The display of this data is customizable. For more information, refer to the section [Configuring the digital system > Customizing the tracer > Working mode and display of measurements. \(p. 113\)](#)

7. Lens type selection

-  Single vision lens (p.149)
-  Progressive lens (p.149)
-  Bifocal lens (p.149)
-  Executive lens (p.148)
-  Mid-distance lens (p.149)

8. Centering mode selection

-  Automatic centering
-  Centering using three focimeter dots
-  Centering using re-marked micro-engravings
-  Centering using manufacturer markings
-  Manual centering

9. Cylinder angle

Press on the area to display the numeric keypad and enter the desired value.

10. Value modification

Reduce or increase the previously selected value.

11. Change the value between the PD and pupillary height and vice-versa

12. Shape modification

Provides access to the shape modification screen. For more information, consult the following chapter [Modifying the lens shape \(p.83\)](#).

13. Drilling preparation

Provides access to the drilling screen. For more information, consult the chapter [Preparing a drilled job \(p.91\)](#).

14. Start the centering cycle

To start the centering.



Always browse from left to right: depending on your selection, certain menus will be available while others will not.

b. Centering modes

The centering modes available depend on the selected lens type.

Always refer to the specific procedure for your type of lens.

					
	✓	✓	✓		✓
			✓	✓	✓
	✓	✓			✓
	✓	✓			✓
			✓	✓	✓



Using the tripods

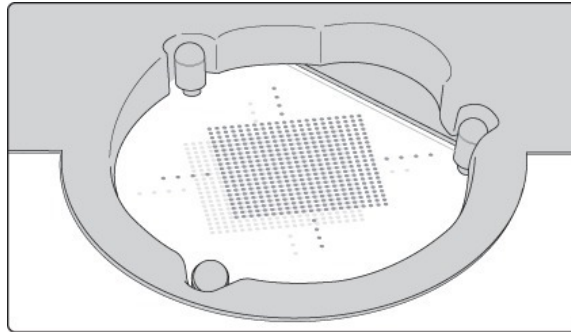
Two accessories are available to ensure better stability of high-curve lenses and small lenses. In the centering chamber, you can thus place:

- the high-base lens tripod^(p.149)
- the recut lens tripod^(p.149)



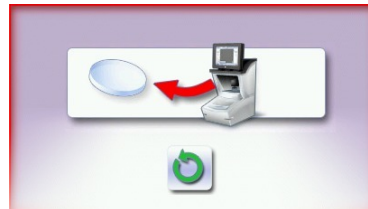
Hartmann plate calibration


The automatic calibration of the Hartmann plate is done periodically to ensure optimal precision.




- During the first half-hour following the booting of the machine: every 30 seconds.
- After the first half-hour: every minute.
- After three hours of operation: every 5 minutes.

If a lens is present in the centering chamber during the calibration, a warning is displayed:



1. Remove the lens and press .
 - > The calibration starts automatically.
 - > Once the calibration is finished, a warning message is displayed:




2. Put the lens back in place and press .
 - > The centering resumes.



To avoid all interference with the Hartmann plate calibration, place the lens in the centering chamber just before you start the centering.

2. Centering a single vision lens

 Prerequisite: Before centering the lens, you must first trace a shape in the centering screen.

If necessary, we recommend the following prior operations:

- Modifying or retouching the traced shape (p.83)
- Preparing drilling points (p.91) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.

This section describes the procedures for the centering of a single vision lens:

- Centering in automatic mode (p.43)
- Centering using three focimeter dots (p.45)
- Centering using re-marked micro-engravings (p.48)

- Centering in manual mode (p.51)

It also describes the job function “lens fit” (p.50) which makes it possible to limit the induced prism, and to ensure a job of quality.





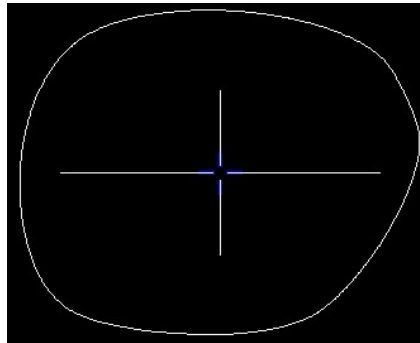
Do not center the lenses precalibrated (p.149) (thickness < 0.8 mm) in automatic mode or in three focimeter dots mode, you are likely to break them with blocking.

a. Centering a single vision lens in automatic mode



Do not use this mode for a lens marked with a focimeter: the markings can alter the precision of the centering.

- 1 Press  to select the type of single vision lens.
 - 2 Press  to select the automatic centering mode.
- > The centering target is displayed.





- 3 Press  to enter the cylinder angle (if the lens has one).




This information makes it possible to straighten the lens perfectly at the angle required by the prescription, then ensure that the posiblock is set on the same axis.



When you start the blocking of a cylindrical lens without having indicated the angle value, a warning is displayed at the start of the blocking operation:


- Press  if you don't want to change the default value (default value = 0°).
- Press  if you want to modify this value. The numeric keypad is displayed.

- 4 Enter the desired value, then press  to confirm.

> The angle value is displayed in the centering screen.

- 5 Enter the half-PD and pupillary height.

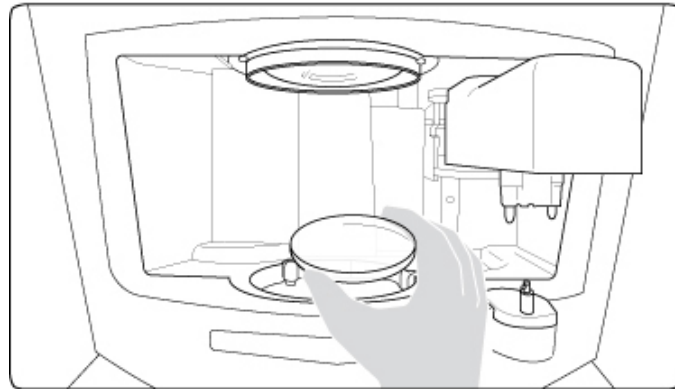
> The target moves.


- 6 Modify the distance between the PRP (point of reference prismatic) and centering cross, if necessary:  4



This value is configured by default at 4 mm for Essilor mid-distance lenses (EyeZen). This value may vary, depending on lens manufacturers.

- 7 Position the lens in the middle of the centering chamber.




8 Press  to start lens tracing.

> The clamps close on the lens to hold it in position until its blocking.



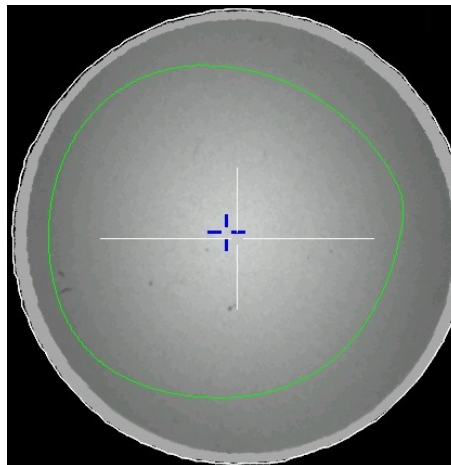
Once the lens is held by the clamps, it must not be handled.



To stop centering at any time, press .

> The lens analysis starts: the tracer searches for the optical characteristics of the lens.

> The centered lens is displayed in the work area:



- Display of the optical center of the lens (white cross) and boxing center of the shape (blue cross)
- Display of the power of the sphere (within the limit of + or -6°)
- Display of the cylinder power


> The lens is centered and ready to be blocked.



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

To get the shape to fit into the lens, you can:

- Use the lens fit function .

For more information, refer to the section Centering a lens > Centering a single vision lens > Lens fit function (p.50).

- Modify the PD and pupillary height.

If modifying the PD and pupillary height results in too great an induced prism, we advise you to order a new lens in the proper diameter.

To carry out lens blocking, refer to the section *Centering a lens > Blocking a lens (p.80)*.

b. Centering a single vision lens using three focimeter dots

This centering mode is suited to the following types of lenses:

- Lenses with cylinder values are above the automatic centering limits
- Polarising lenses
- Lenses with degraded colors
- Prismatic lenses

✓ Prerequisite: The lens must be marked with the focimeter.

The three focimeter dots must be:

- Lined up
- At the same distance from the central dot
- 0.5 to 1.5 mm in diameter

Centering the lens

1 Add a mark to enable the tracer to distinguish the top of the lens.


The "top of lens" mark must:


- be located in the upper part of the lens
- be positioned 1 to 2 cm above the focimeter dots
- be a thick shape contained in a 1 cm square.

The shape is free-form.

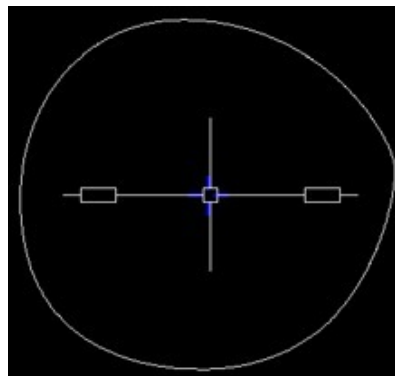
Do not make any mark in the lower part of the lens.



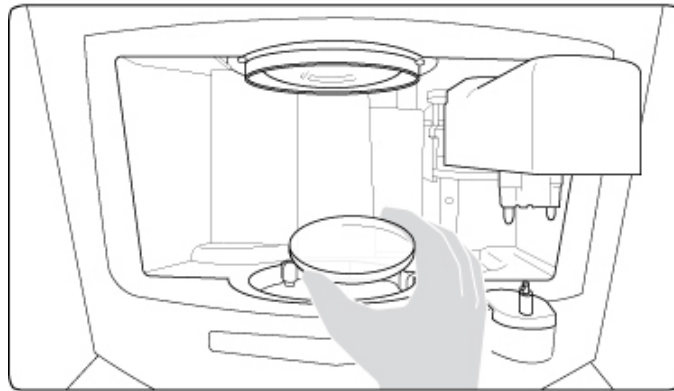
2 Press  to select the type of single vision lens.





3 Press  to select the automatic centering mode using three focimeter dots.

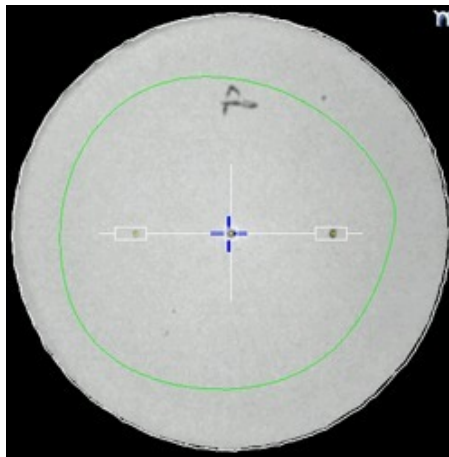
> The centering target is displayed:





- 4 Enter the half-PD and pupillary height.
 - > The target moves.
- 5 Position the lens in the middle of the centering chamber.



- 6 Press  to start lens tracing.
 - > The clamps close on the lens to hold it in position until its blocking.
 -  Once the lens is held by the clamps, it must no longer be handled.
 -  To stop centering at any time, press .
 - > The lens analysis starts: the tracer searches for the optical characteristics of the lens.
 - > The centered lens is displayed, along with its characteristics, in the work area:



Yellow indicators are displayed on the focimeter dots: the centering is perfect.


- Display of the optical center of the lens (white cross) and boxing center of the shape (blue cross)
 - Display of the sphere power
 - Display of the cylinder power
 - The cylinder angle is displayed:  13°
 - The lens base is displayed:  5.5 D
- > The lens is centered and ready to be blocked.



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

To get the shape to fit into the lens, you can:

- Use the lens fit function .
For more information, refer to the section [Centering a lens > Centering a single vision lens > Lens fit function \(p.50\)](#).
- Modify the PD and pupillary height.
If modifying the PD and pupillary height results in too great an induced prism, we advise you to order a new lens in the proper diameter.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

c. Centering a single vision lens using re-marked micro-engravings

- 1 Mark the micro-engravings present on the lens.


Mark the near vision micro-engravings with a felt tip marker.


- Remark each micro-engraving with a felt tip marker. The diameter of the dots must be between 0.5 and 1.5 mm.
- If the manufacturer marking forms two circles around the micro-engravings, erase them before marking the lens with a felt tip marker.



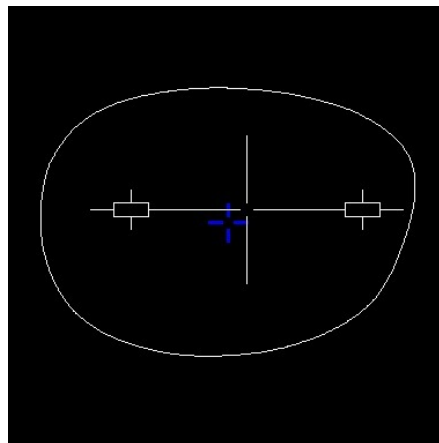
We advise you to use:

- the white felt tip marker supplied with the tracer to mark the lens
- an alcohol-based solution such as Essiclean™ to remove existing markings.

- 2 Press  to select the type of single vision lens.

- 3 Press  to select the centering mode starting at the micro-engravings.

> The centering target is displayed:



- 4 Enter the half-PD and pupillary height.

> The target moves.

- 5 Enter the half-PD and pupillary height.

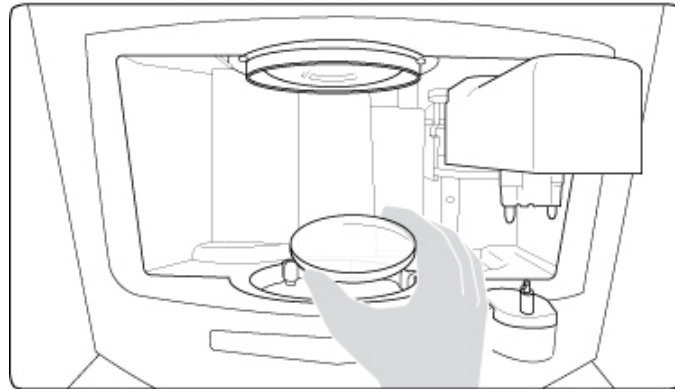
If necessary, modify the distance between the PRP (prismatic reference point) and the centering cross  0 .




This value is configured by default at 0 mm for the Essilor single vision lenses. This value may vary, depending on lens manufacturers.

> The target moves.

- 6 Position the lens in the middle of the centering chamber.




7 Press  to start lens tracing.

> The clamps close on the lens to hold it in position until its blocking.



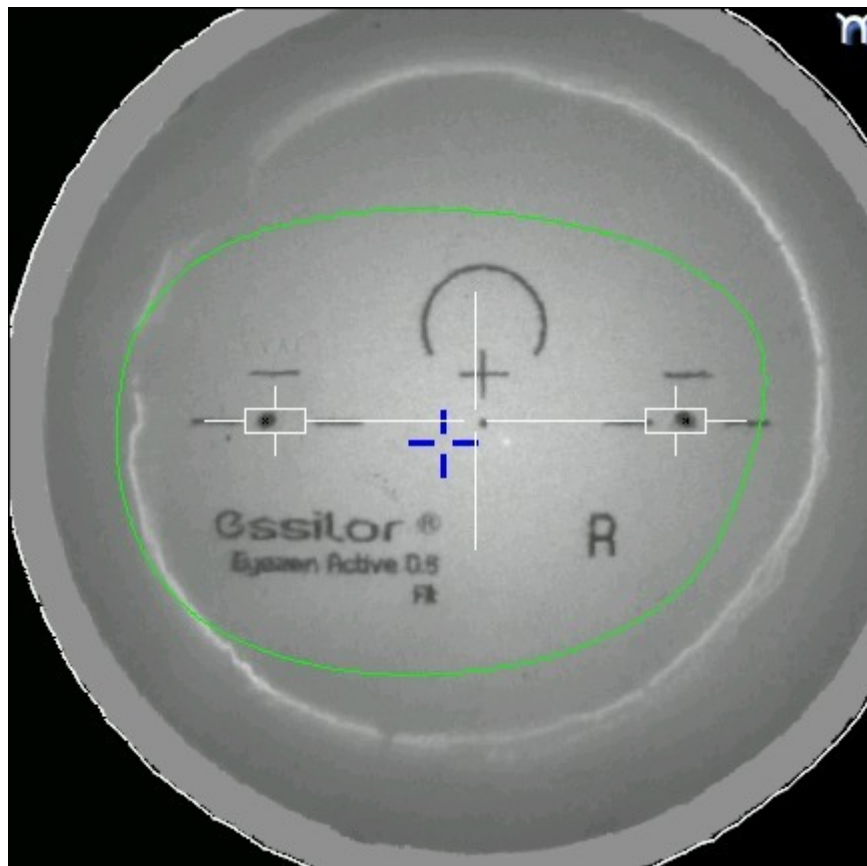
Once the lens is held by the clamps, it must not be handled.



To stop centering at any time, press .

> The lens analysis starts: the tracer searches for the optical characteristics of the lens.

> The centered lens is displayed in the work area.



> The lens is centered and ready to be blocked.



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

You can modify the PD and pupillary height to get the shape to fit into the lens, but if the induced prism is too great, we advise you to order a new lens in the proper diameter.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

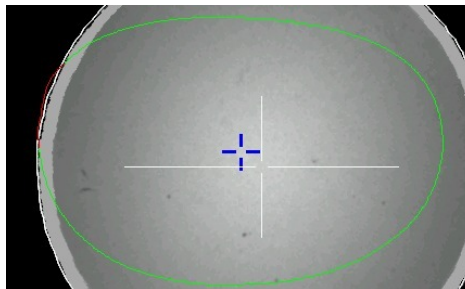
d. "Lens fit" function

This function is available only for single vision lenses centered in automatic mode or using three focimeter dots.

(Refer to the sections [Centering a single vision lens > Automatic mode \(p.43\)](#) and [Centering a single vision lens > Three focimeter dots mode \(p.45\)](#)).

It enables you to limit the induced prism and ensure a quality job.

Once the lens has been centered, if part of the shape representing the frame rim is outside the lens diameter, it is indicated in red:



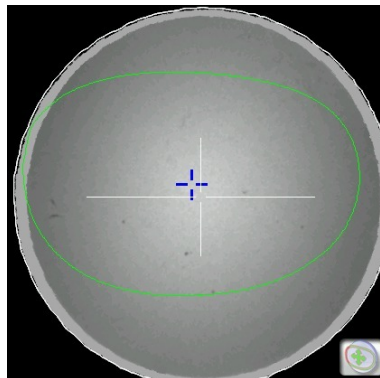
Modifying the pupillary half distances and heights may result in too great an induced prism and create a risk of discomfort for the wearer.

The maximum value is 0.25 prism diopter.

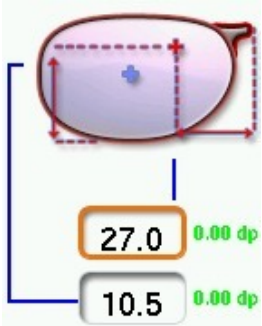
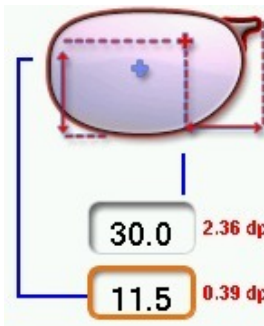
Using the "lens fit" function

Press .

> The shape appears in the lens.



> The induced prism power is displayed:

In green if it allows adequate job results	In red if does not allow adequate job results
 <p>27.0 0.00 dp</p> <p>10.5 0.00 dp</p>	 <p>30.0 2.36 dp</p> <p>11.5 0.39 dp</p>

e. Centering a single vision lens in manual mode

Manual centering enables you to center the lenses which:

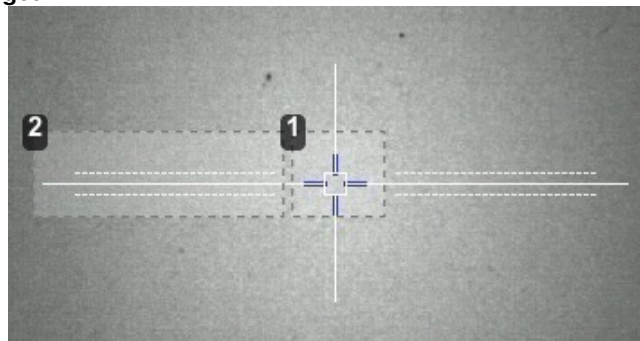
- cannot be centered in automatic mode
- cannot be centered automatically using the three focimeter dots

✓ Prerequisite: The lens must be marked with the focimeter.

The three focimeter dots must be:



- Lined up
- At the same distance from the central dot
- 0.5 to 1.5 mm in diameter

Description of the centering target





1. Optical center of the lens (white cross) and boxing center of the shape (blue cross)
2. Centering marks

Centering the lens

- 1 Press  to select the type of single vision lens.
- 2 Press  to select the manual centering mode.
 - > The clamps close: the image of the centering chamber is displayed in real time.
- 3 Enter the half-PD and pupillary height.
 - > The white target moves.
- 4 Position the lens on the clamps and center it in keeping with the target.

You can control the opening and closing of the clamps for better control of the stability of the lens:

- Press  to open the clamps.
- Press  to close the clamps.

As soon as you place the marked lens on the clamps, the tracer automatically detects the focimeter dots.



You can choose to center the lens on the protective glass: open the clamps completely.

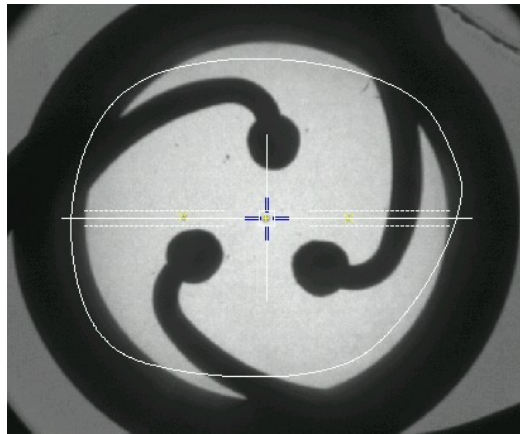


- Do not manually center the precalibrated lenses^(p.149) (thickness < 0.8 mm) directly on the window. The lenses would be liable to break during blocking.
- Take care not to damage the protective glass with glass lenses.



Press  to zoom.


- > Yellow indicators are displayed on the focimeter dots: the centering is perfect.



- > The lens is centered and ready to be blocked.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

3. Centering a progressive lens

 Prerequisite: Before centering the lens, you must first trace a shape in the centering screen.

If necessary, we recommend the following prior operations:

- Modifying or retouching the traced shape [\(p.83\)](#)
- Preparing drilling points [\(p.91\)](#) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.

This section describes the procedures for the centering of a progressive lens:

- Centering using re-marked micro-engravings [\(p.53\)](#)
- Centering using manufacturer markings mode [\(p.55\)](#)
- Centering in manual mode [\(p.57\)](#)



Do not center the precalibrated lenses [\(p.149\)](#) (thickness < 0.8 mm) in manufacturer markings mode or in re-marked micro-engravings mode, you are likely to break them with blocking.

a. Centering a progressive lens using re-marked micro-engravings

- 1 Mark the micro-engravings present on the lens. To do this, you have two options:

First option:

Mark the micro-engravings while keeping the original marks:

- Remark each micro-engraving with a felt tip marker. The diameter of the dots must be between 0.5 and 1.5 mm.
- If the manufacturer marking forms two circles around the micro-engravings, erase them before marking the lens with a felt tip marker.



We advise you to use:

- the white felt tip marker supplied with the tracer to mark the lens
- an alcohol-based solution such as Essiclean™ to remove existing markings.

Second option:



Mark the micro-engravings after having removed all original marks:

- Remark each micro-engraving with a felt tip marker. The diameter of the dots must be between 0.5 and 1 mm.
- Around the two micro-engravings, draw a circle with a diameter of 5 to 10 mm.
- Keep or redraw the near vision area.
- Make sure you close the circles and that they are not too small (minimum diameter 5 mm).

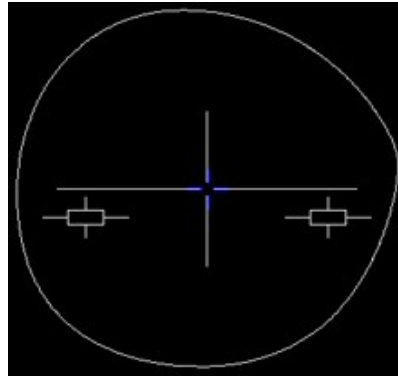


We advise you to use:

- the white felt tip marker supplied with the tracer to mark the lens
- an alcohol-based solution such as Essiclean™ to remove existing markings.

- 2 Press  to select the type of progressive lens.
- 3 Press  to select automatic centering using re-marked micro-engravings.

- > The centering target is displayed:



- 4 Enter the half-PD and pupillary height.

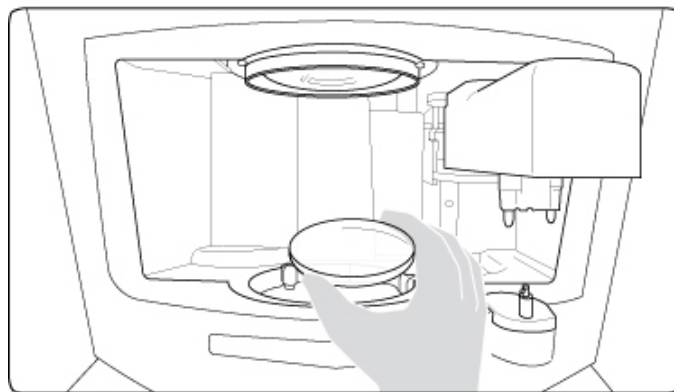
If necessary, modify the distance between the PRP (prismatic reference point) and the centering cross  4 .




This value is configured to 4 mm by default for Essilor progressive lenses. This value may vary, depending on lens manufacturers.

- > The target moves.

- 5 Position the lens in the middle of the centering chamber.




- 6 Press  to start lens tracing.

- > The clamps close on the lens to hold it in position until its blocking.



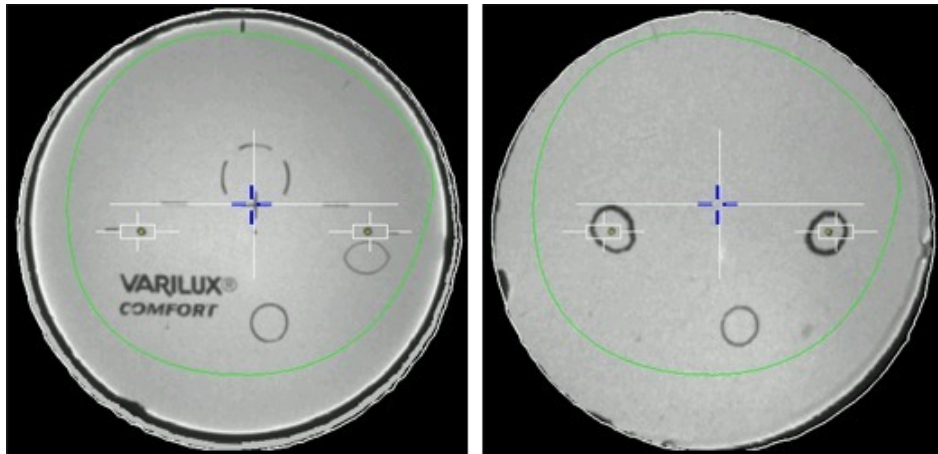
Once the lens is held by the clamps, it must not be handled.



To stop centering at any time, press .

- > The lens analysis starts: the tracer searches for the optical characteristics of the lens.

- > The centered lens is displayed in the work area:



Yellow indicators are displayed on the micro-engravings: the centering is perfect.

- Display of the optical center of the lens (white cross) and boxing center of the shape (blue cross)
- Display of the sphere power
- Display of the cylinder power
- Display of the cylinder angle

- > The lens is centered and ready to be blocked.



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

You can modify the PD and pupillary height to get the shape to fit into the lens, but if the induced prism is too great, we advise you to order a new lens in the proper diameter.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

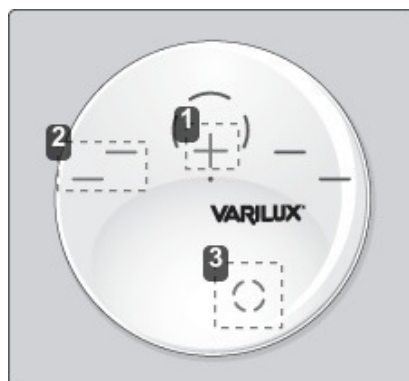
b. Centering a progressive lens using manufacturer markings mode

✓ Prerequisite:

- The markings must be clear
- The lens must at least have the following markings:



If the lens doesn't meet the criteria described above, we advise you to use another centering mode.



1. Far vision mark

- The cross must contain at least three branches: \perp , \top , $+$
- If there is no cross on the lens, draw one using the white felt tip marker.
- The mark must be surmounted by a full or discontinuous circle.


2. Centering marks

- At least two lines on the same axis
- Minimum length: 3 mm
- Average thickness: 0.5 mm

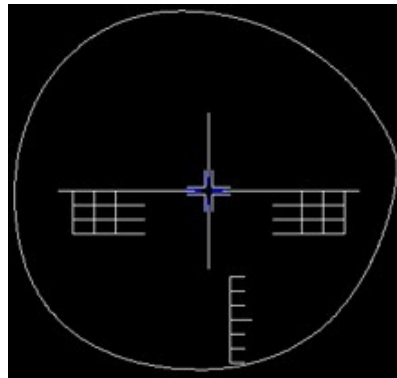
3. Near vision mark

- The mark must be a full or discontinuous circle.
- The diameter of the circle must be more than 5 mm.

1 Press  to select the type of progressive lens.

2 Press  to select automatic centering using manufacturer markings.

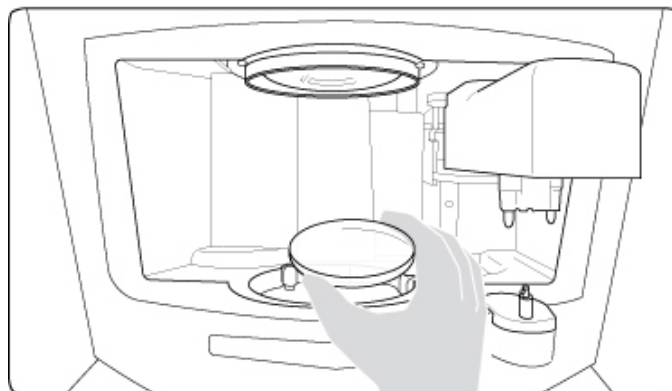
> The centering target is displayed:




3 Enter the half-PD and pupillary height.

> The target moves.

4 Position the lens in the middle of the centering chamber.




5 Press  to start lens tracing.

> The clamps close on the lens to hold it in position until its blocking.



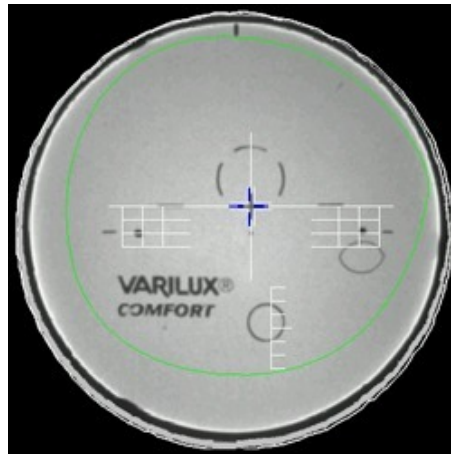
Once the lens is held by the clamps, it must not be handled.



To stop centering at any time, press .

> The lens analysis starts: the tracer searches for the optical characteristics of the lens.

- > The centered lens is displayed in the work area:



- Display of the optical center of the lens (white cross) and boxing center of the shape (blue cross)
- Display of the sphere power
- Display of the cylinder power
- Display of the cylinder angle

- > The lens is centered and ready to be blocked.



New manufacturer marking

If the marking is not recognized and the automatic centering fails, we advise you to record the marking of the lens (in "Interview" mode) in the embedded base so that it can be recognized automatically on next centering. Centering in "Interview" mode will allow you to compel the use of embedded customer base.

For more information, refer to the section [Centering a lens > Markings database \(p.77\)](#).



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

You can modify the PD and pupillary height to get the shape to fit into the lens, but if the induced prism is too great, we advise you to order a new lens in the proper diameter.

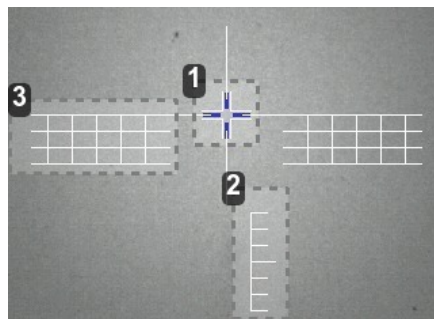
To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

c. Centering a progressive lens in manual mode

Manual centering enables you to center the lenses which:



- cannot be centered in automatic mode via re-marked micro-engravings
- cannot be centered automatically using the three focimeter dots

Description of the centering target





1. Centering cross (white cross) and boxing center of the shape (blue cross)
2. Near vision mark
3. Centering marks

Centering the lens

- 1 Press  to select the type of progressive lens.
- 2 Press  to select the manual centering mode.
 - > The clamps close: the image of the centering chamber is displayed in real time.
- 3 Enter the half-PD and pupillary height.
 - > The target moves.
- 4 Position the lens on the clamps and center it in keeping with the target.

You can control the opening and closing of the clamps for better control of the stability of the lens:

- Press  to open the clamps.
- Press  to close the clamps.



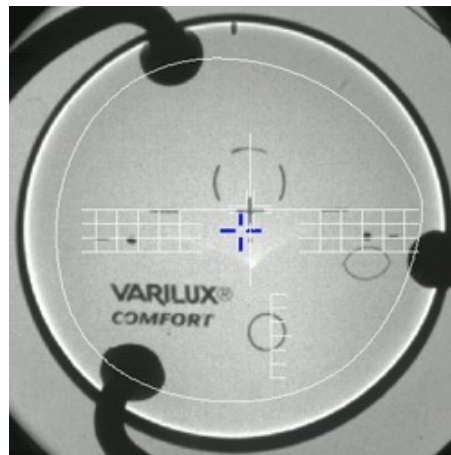
You can choose to center the lens on the protective glass: open the clamps completely.



- Do not manually center the precalibrated lenses^(p.149) (thickness < 0.8 mm) directly on the window. The lenses would be liable to break during blocking.
- Take care not to damage the protective glass with glass lenses.




Press  to zoom.



- The centering cross present on the lens must be superimposed on the target centering cross.
 - Make sure that the target centering marks line up with the lens centering marks.
- > The lens is centered and ready to be blocked.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

4. Centering bifocal / trifocal lenses

 Prerequisite: Before centering the lens, you must first trace a shape in the centering screen.

If necessary, we recommend the following prior operations:

- Modifying or retouching the traced shape (p.83)
- Preparing drilling points (p.91) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.

This section describes the centering procedures for bifocal and trifocal lenses with a round segment or D-segment:

- Centering in automatic mode (p.59)
- Centering using three focimeter dots (p.61)

- Centering in manual mode (p.62)

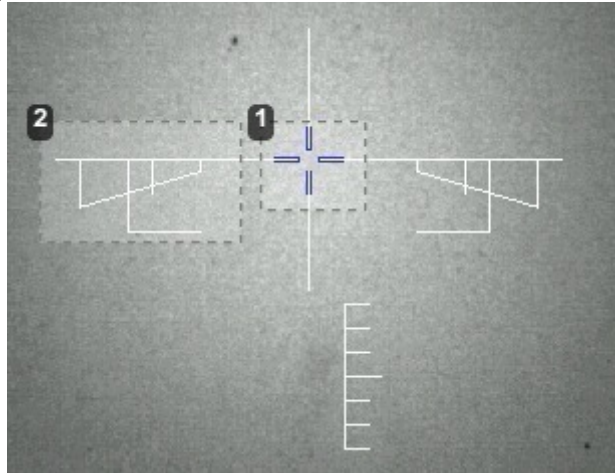


Do not center the lenses precalibrated^(p.149) (thickness < 0.8 mm) in automatic mode or in three focimeter dots mode, you are likely to break them with blocking.

a. Centering a bifocal lens in automatic mode



In this mode, the lens is centered in near vision.

Description of the centering target

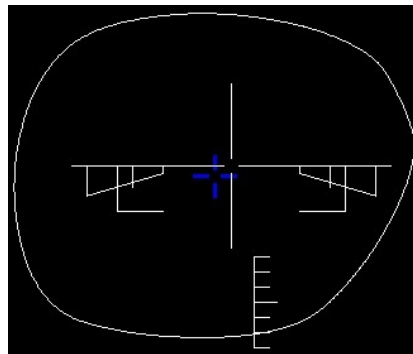


1. Centering cross (white cross) and boxing center of the shape (blue cross)
2. Centering marks

Centering the lens

- 1 Press  to select the type of bifocal lens.
- 2 Press  to select the automatic centering mode.

> The centering target is displayed:





- 3 Press  to enter the cylinder angle (if the lens has one).




This information makes it possible to straighten the lens perfectly at the angle required by the prescription, then ensure that the posiblock is set on the same axis.



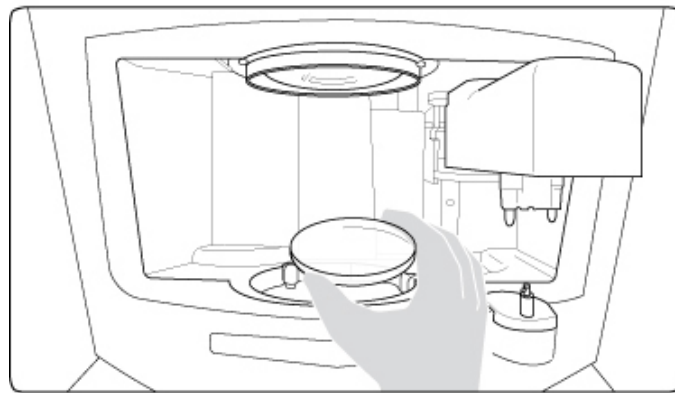
When you start the blocking of a cylindrical lens without having indicated the angle value, a warning is displayed at the start of the blocking operation:





- Press  if you don't want to change the default value (default value = 0°).
- Press  if you want to modify this value. The numeric keypad is displayed.

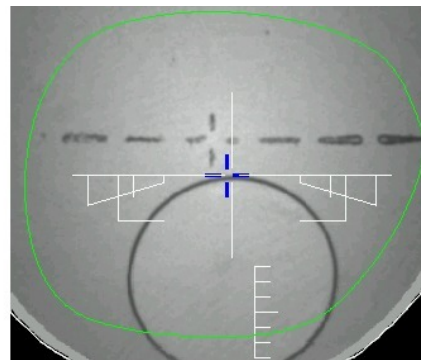
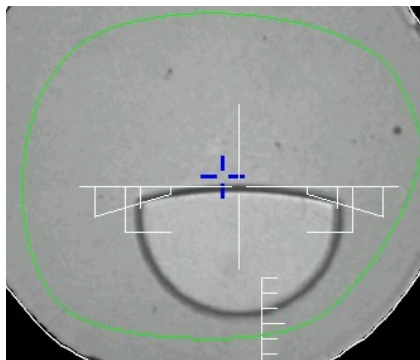
- 4 Enter the desired value, then press  to confirm.


> The angle value is displayed in the centering screen.

- 5 Enter the half-PD and pupillary height for near vision.
 - > The target moves.
- 6 Position the lens in the middle of the centering chamber.



- 7 Press  to start lens tracing.
 - > The clamps close on the lens to hold it in position until its blocking.
 -  Once the lens is held by the clamps, it must not be handled.
 -  To stop centering at any time, press .
 - > The lens analysis starts: the machine searches for the optical characteristics of the lens.
 - > The centered lens is displayed in the work area:



- Display of the optical center of the lens (white cross) and boxing center of the shape (blue cross)
- Display of the sphere power (far vision)
- Display of the cylinder power
- Addition display  2.75 D .

- > The lens is centered and ready to be blocked.



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

You can modify the PD and pupillary height to get the shape to fit into the lens, but if the induced prism is too great, we advice you to order a new lens in the proper diameter.

To carry out lens blocking, refer to the section Centering a lens > Blocking a lens (p.80).

b. Centering a bifocal lens using three focimeter dots

In this mode, the lens is centered in far vision.


✓ Prerequisite: The lens must be marked with the focimeter.


The three focimeter dots must be:

- Lined up
- At the same distance from the central dot
- 0.5 to 1.5 mm in diameter

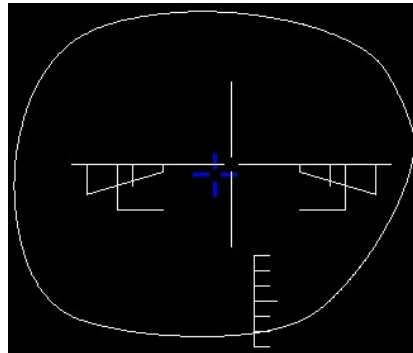
For bifocal lenses with a round segment, first remove any manufacturer markings.

Centering the lens

1 Press  to select the type of bifocal lens.

2 Press  to select the automatic centering mode from three focimeter dots.

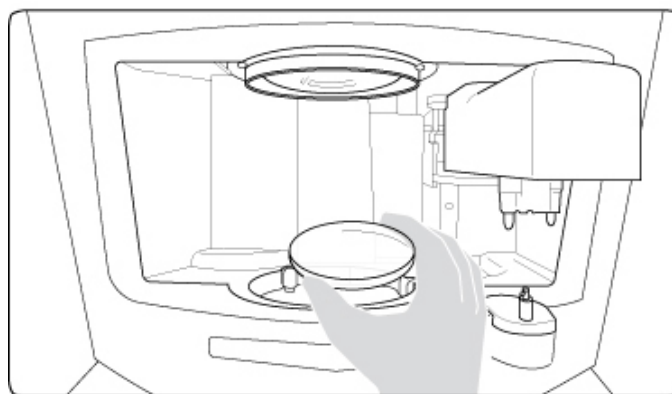
> The centering target is displayed:




3 Enter the half-PD and pupillary height for far vision.

> The target moves.

4 Position the lens in the middle of the centering chamber.





5 Press  to start lens tracing.

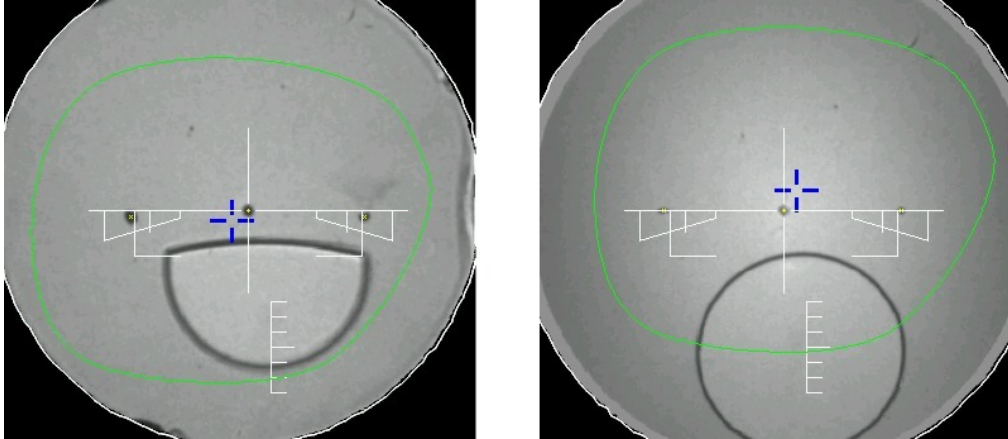
> The clamps close on the lens to hold it in position until its blocking.



Once the lens is held by the clamps, it must not be handled.

 To stop centering at any time, press .

- > The lens analysis starts: the tracer searches for the optical characteristics of the lens.
- > The centered lens is displayed in the work area:



- > Yellow indicators are displayed on the focimeter dots: the centering is perfect.
- > The lens is centered and ready to be blocked.



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

You can modify the PD and pupillary height to get the shape to fit into the lens, but if the induced prism is too great, we advise you to order a new lens in the proper diameter.


To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

c. Centering a bifocal lens in manual mode

Manual centering enables you to center the lenses which:

- cannot be centered in automatic mode
- cannot be centered automatically using the three focimeter dots

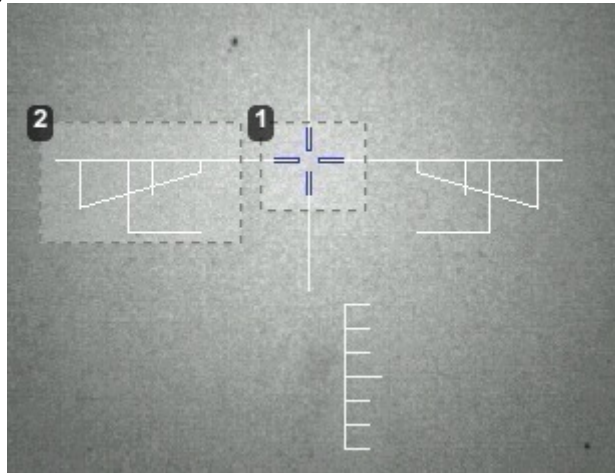
In this mode, the lens is centered in near vision.

 Prerequisite: The lens must be marked with the focimeter.

The three focimeter dots must be:



- Lined up
- At the same distance from the central dot
- 0.5 to 1.5 mm in diameter

Description of the centering target





1. Centering cross (white cross) and boxing center of the shape (blue cross)
2. Centering marks

Centering the lens

- 1 Press  to select the type of bifocal lens.
- 2 Press  to select the manual centering mode.
 - > The clamps close: the image of the centering chamber is displayed in real time.
- 3 Enter the PD and pupillary height for near vision.
 - > The target moves.
- 4 Position the lens on the clamps and center it in keeping with the target.

You can control the opening and closing of the clamps for better control of the stability of the lens:

- Press  to open the clamps.
- Press  to close the clamps.



You can choose to center the lens on the protective glass: open the clamps completely.

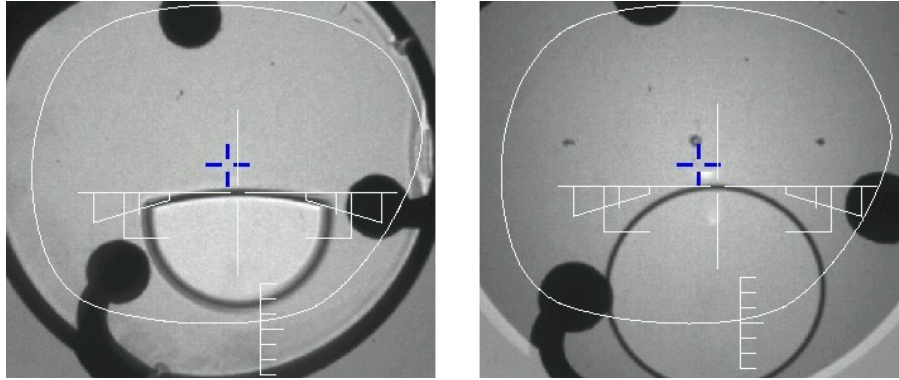


- Do not manually center the precalibrated lenses^(p.149) (thickness < 0.8 mm) directly on the window. The lenses would be liable to break during blocking.
- Take care not to damage the protective glass with glass lenses.



Press  to zoom.

Make sure that the segment is correctly lined up as shown below:




For lenses with a round segment, use the three focimeter dots as a centering mark.

- > The lens is centered and ready to be blocked.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

5. Centering an executive lens

 **Prerequisite:** Before centering the lens, you must first trace a shape in the centering screen.

If necessary, we recommend the following prior operations:

- Modifying or retouching the traced shape [\(p.83\)](#)
- Preparing drilling points [\(p.91\)](#) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.



This section describes the procedures for the centering of an executive lens:

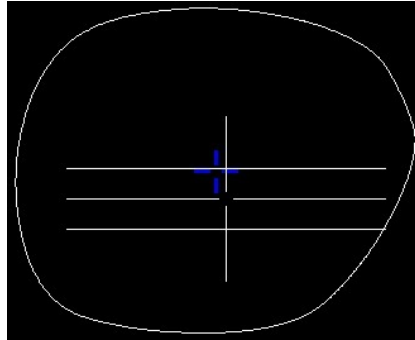
- Centering in automatic mode [\(p.65\)](#)
- Centering using three focimeter dots [\(p.66\)](#)
- Centering in manual mode [\(p.68\)](#)








Do not center the lenses precalibrated ^(p.149) (thickness < 0.8 mm) in automatic mode or in three focimeter dots mode, you are likely to break them with blocking.

a. Centering an executive lens in automatic mode

- 1 Press  to select the type of executive lens.
 - 2 Press  to select the automatic centering mode.
- > The centering target is displayed:





- > Two buttons  and  appear for each eye (right eye/left eye) on both sides of the work area.
- 3 Press  to do a far vision centering.
Press  to do a near vision centering.
 - 4 Press  to enter the cylinder angle (if the lens has one).




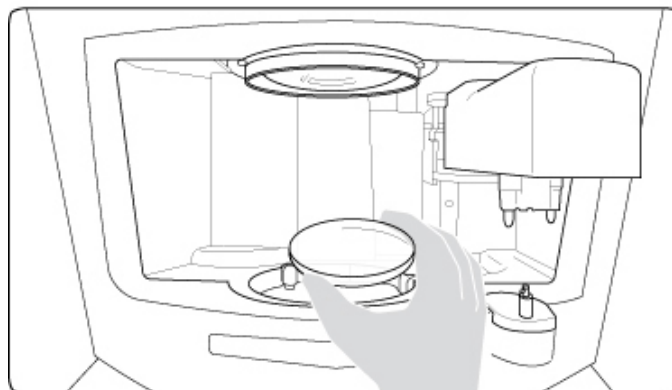
This information makes it possible to straighten the lens perfectly at the angle required by the prescription, then ensure that the posiblock is set on the same axis.




When you start the blocking of a cylindrical lens without having indicated the angle value, a warning is displayed at the start of the blocking operation:

- Press  if you don't want to change the default value (default value = 0°).
- Press  if you want to modify this value. The numeric keypad is displayed.

- 5 Enter the desired value, then press  to confirm.
> The angle value is displayed in the centering screen.
- 6 Enter the half-PD and pupillary height (for far vision or near vision, depending on your selection).
> The target moves.
- 7 Position the lens in the centering chamber.




- 8 Press  to start centering.

- > The clamps close on the lens to hold it in position until its blocking.



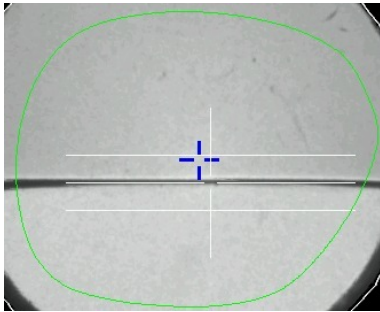
Once the lens is held by the clamps, it must not be handled.



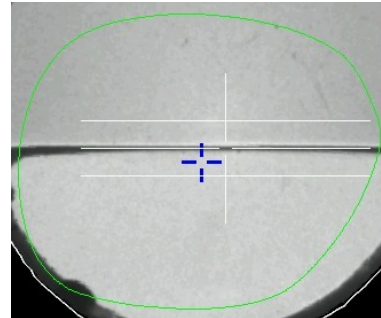
To stop centering at any time, press .

- > The lens analysis starts.
- > The centered lens is displayed in the work area:

Far vision centering



Near vision centering



- > The lens is centered and ready to be blocked.



Lens fit check


A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

You can modify the PD and pupillary height to get the shape to fit into the lens, but if the induced prism is too great, we advise you to order a new lens in the proper diameter.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

b. Centering an executive lens using three focimeter dots



In this mode, the lens is centered in far vision.

 Prerequisite: The lens must be marked with the focimeter.

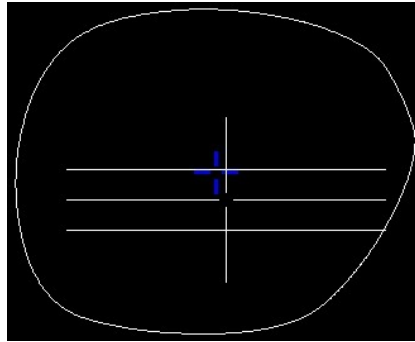
The three focimeter dots must be:

- Lined up
- At the same distance from the central dot
- 0.5 to 1.5 mm in diameter

Centering the lens

- 1 Press  to select the type of executive lens.
- 2 Press  to select the automatic centering mode using three focimeter dots.

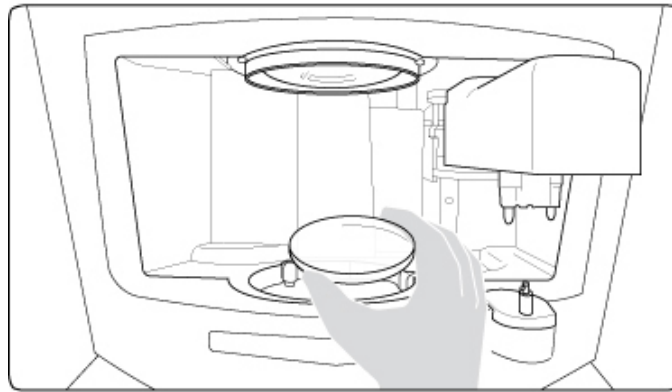
- > The centering target is displayed:




- 3 Enter the half-PD and pupillary height for far vision.

- > The target moves.

- 4 Position the lens in the middle of the centering chamber.




- 5 Press  to start lens tracing.

- > The clamps close on the lens to hold it in position until its blocking.



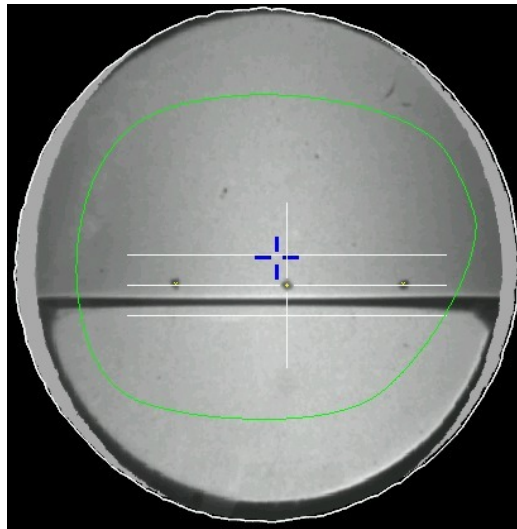
Once the lens is held by the clamps, it must not be handled.



To stop centering at any time, press .

- > The lens analysis starts: the tracer searches for the optical characteristics of the lens.

- > The centered lens is displayed in the work area:



- > Yellow indicators are displayed on the focimeter dots: the centering is perfect.
- > The lens is centered and ready to be blocked.



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.


You can modify the PD and pupillary height to get the shape to fit into the lens, but if the induced prism is too great, we advise you to order a new lens in the proper diameter.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

c. Centering an executive lens in manual mode

Manual centering enables you to center the lenses which:

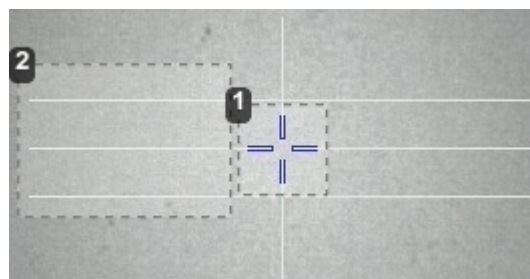
- cannot be centered in automatic mode
- cannot be centered automatically using the three focimeter dots

 Prerequisite: The lens must be marked with the focimeter.

The three focimeter dots must be:



- Lined up
- At the same distance from the central dot
- 0.5 to 1.5 mm in diameter

Description of the centering target





1. Optical center of the lens (white cross) and boxing center of the shape (blue cross)
2. Centering mark

Centering the lens

- 1 Press  to select the type of executive lens.
- 2 Press  to select the manual centering mode.
 - > The clamps close: the image of the centering chamber is displayed in real time.
- 3 Enter the half-PD and pupillary height.
 - > The target moves.
- 4 Position the lens on the clamps and center it in keeping with the target.

You can control the opening and closing of the clamps for better control of the stability of the lens:

- Press  to open the clamps.
- Press  to close the clamps.



You can choose to center the lens on the protective glass: open the clamps completely.

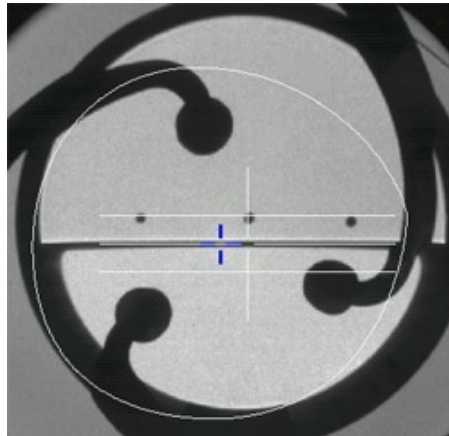


- Do not manually center the precalibrated lenses^(p.149) (thickness < 0.8 mm) directly on the window. The lenses would be liable to break during blocking.
- Take care not to damage the protective glass with glass lenses.



Press  to zoom.


- Line up the transition segment between near vision and far vision with the horizontal mark in the center.
- Position the central focimeter dot on the vertical axis of the target.



- > The lens is centered and ready to be blocked.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

6. Centering a mid-distance lens

 Prerequisite: Before centering the lens, you must first trace a shape in the centering screen.

If necessary, we recommend the following prior operations:

- Modifying or retouching the traced shape (p.83)
- Preparing drilling points (p.91) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.

This section describes the procedures for the centering of a mid-distance lens:

- Centering using re-marked micro-engravings (p.71)
- Centering using manufacturer markings mode (p.72)
- Centering in manual mode (p.74)



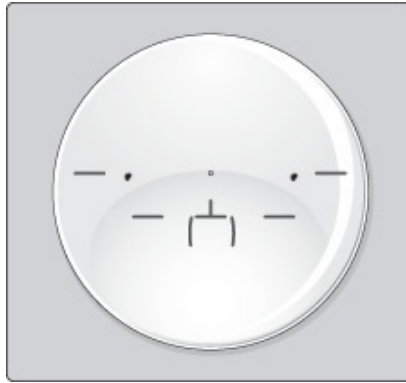
Do not center the precalibrated lenses^(p.149) (thickness < 0.8 mm) in manufacturer markings mode or in re-marked micro-engravings mode, you are likely to break them with blocking.

a. Centering a mid-distance lens using re-marked micro-engravings

- 1 Mark the micro-engravings present on the lens.


Mark the near vision micro-engravings with a felt tip marker.

- Remark each micro-engraving with a felt tip marker. The diameter of the dots must be between 0.5 and 1.5 mm.
- If the manufacturer marking forms two circles around the micro-engravings, erase them before marking the lens with a felt tip marker.



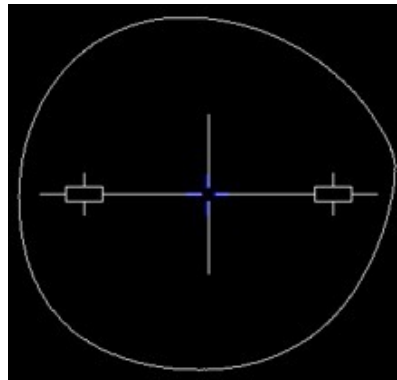
We advise you to use:

- the white felt tip marker supplied with the tracer to mark the lens
- an alcohol-based solution such as Essiclean™ to remove existing markings.

- 2 Press  to select the type of mid-distance lens.

- 3 Press  to select automatic centering using re-marked micro-engravings.

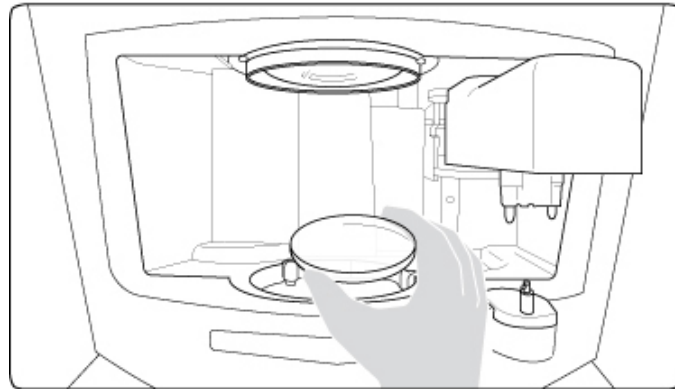
> The centering target is displayed:




- 4 Enter the half-PD and pupillary height for near vision.

> The target moves.

- 5 Position the lens in the middle of the centering chamber.




6 Press  to start lens tracing.

> The clamps close on the lens to hold it in position until its blocking.



Once the lens is held by the clamps, it must not be handled.



To stop centering at any time, press .

> The lens analysis starts: the tracer searches for the optical characteristics of the lens.

> The centered lens is displayed in the work area.



> The lens is centered and ready to be blocked.



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

You can modify the PD and pupillary height to get the shape to fit into the lens, but if the induced prism is too great, we advise you to order a new lens in the proper diameter.

To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

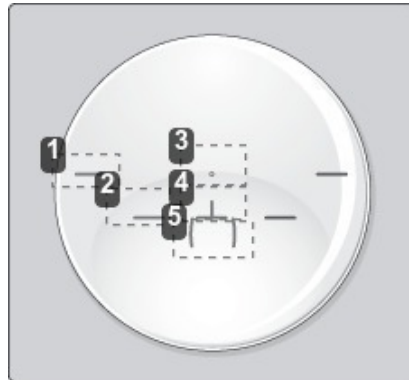
b. Centering a mid-distance lens using manufacturer markings mode

 Prerequisite:

- The markings must be clear
- The lens must at least have the following markings:





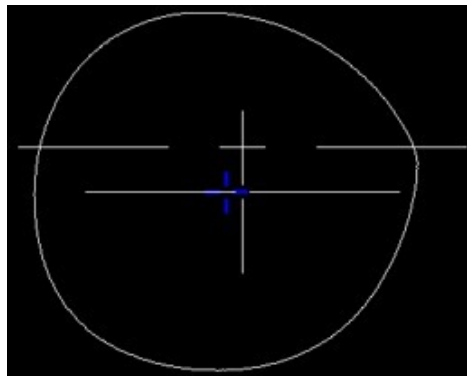
If the lens doesn't meet the criteria described above, we advise you to use another centering mode.



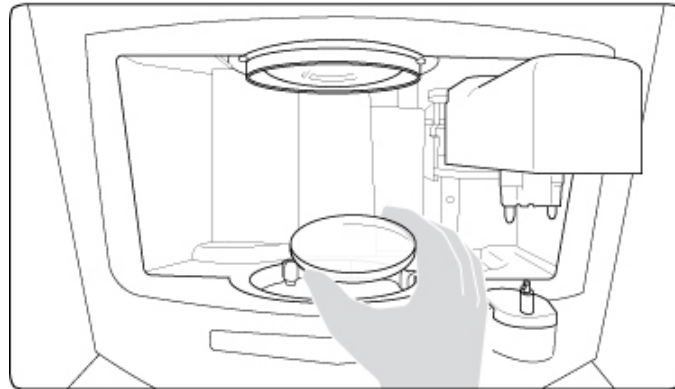
1. Centering marks for mid-distance vision
2. Centering marks for near vision
3. Mid-distance vision
4. Centering cross
5. Near vision


Centering the lens

- 1 Press  to select the type of mid-distance lens.
- 2 Press  to select automatic centering using manufacturer markings.
 - > The centering target is displayed:



- 3 Enter the half-PD and pupillary height for near vision.
 - > The target moves.
- 4 Position the lens in the middle of the centering chamber.




5 Press  to start lens tracing.

> The clamps close on the lens to hold it in position until its blocking.



Once the lens is held by the clamps, it must not be handled.



To stop centering at any time, press .

> The lens analysis starts: the tracer searches for the optical characteristics of the lens.

> The centered lens is displayed in the work area:



> The lens is centered and ready to be blocked.



New manufacturer marking

If the marking is not recognized and the automatic centering fails, we advise you to record the marking of the lens (in "Interview" mode) in the embedded base so that it can be recognized automatically on next centering. Centering in "Interview" mode will allow you to compel the use of embedded customer base.

For more information, refer to the section [Centering a lens > Markings database \(p.77\)](#).



Lens fit check

A visual warning enables you to check the lens fit: any part of the lens outside the shape is displayed in red.

You can modify the PD and pupillary height to get the shape to fit into the lens, but if the induced prism is too great, we advise you to order a new lens in the proper diameter.

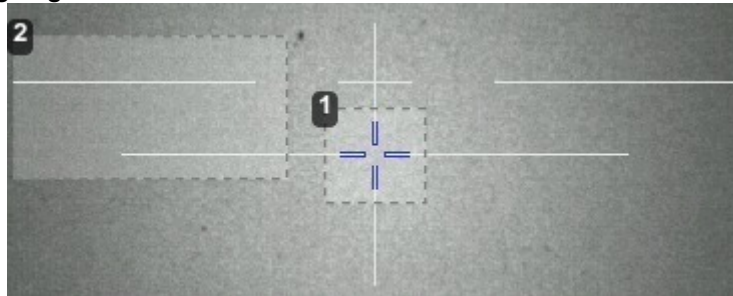
To carry out lens blocking, refer to the section [Centering a lens > Blocking a lens \(p.80\)](#).

c. Centering a mid-distance lens in manual mode

Manual centering enables you to center the lenses which:



- cannot be centered in automatic mode via re-marked micro-engravings
- cannot be centered automatically using the three focimeter dots

Description of the centering target





1. Centering cross (white cross located at the center of the target) and boxing center of the shape (blue cross)
2. Centering marks

Centering the lens

- 1 Press  to select the type of mid-distance lens.
- 2 Press  to select the manual centering mode
 - > The clamps close: the image of the centering chamber is displayed in the work area in real time.
- 3 Enter the half-PD and pupillary height for near vision.
 - > The target moves.
- 4 Position the lens on the clamps and center it in keeping with the target.

You can control the opening and closing of the clamps for better control of the stability of the lens:

- Press  to open the clamps.
- Press  to close the clamps.



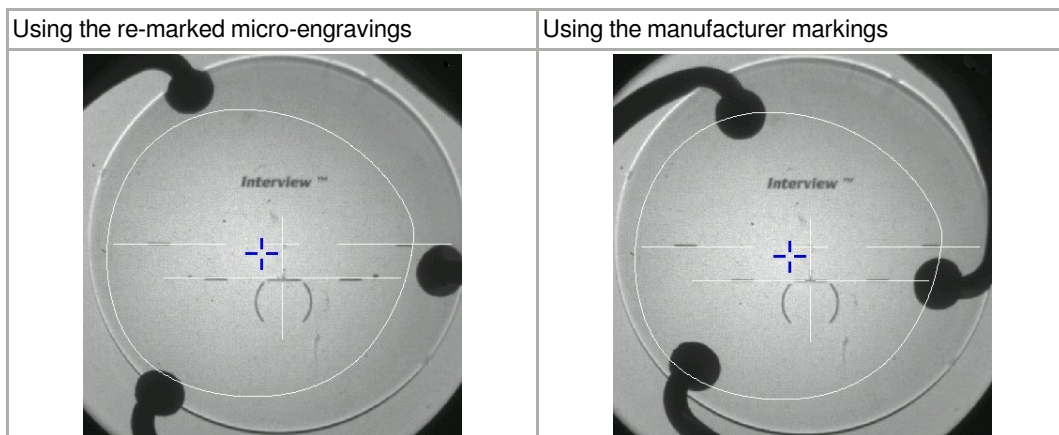
You can choose to center the lens on the protective glass: open the clamps completely.



- Do not manually center the precalibrated lenses^(p.149) (thickness < 0.8 mm) directly on the window. The lenses would be liable to break during blocking.
- Take care not to damage the protective glass with glass lenses.



Press  to zoom.




- The cross present on the lens must be superimposed on the target centering cross.

- Make sure that the target centering marks line up with the lens centering marks.
- > The lens is centered and ready to be blocked.

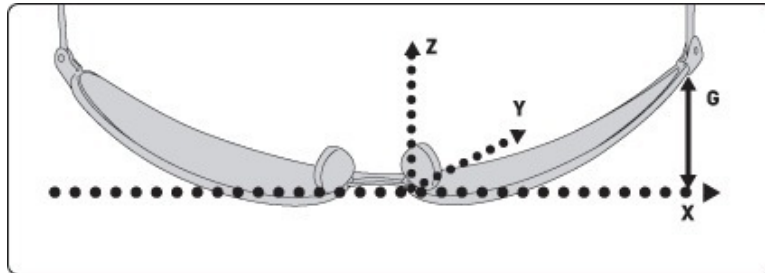
To carry out lens blocking, refer to the section Centering a lens > Blocking a lens (p.80).

7. Centering a lens for a high-base frame

At the end of a tracing, if a frame is considered as a high-base frame, this indicator  is displayed in the information bar.

3D compensation

The PD and pupillary height measurements as well as the lens centering are done in two dimensions. Yet, the frame is treated in three dimensions:



3D compensation takes into account all frame characteristics (x, y, z, curve, pantoscopic tilt, etc.) to ensure that the center of the wearer's pupil is at the optical center of the lens. For an optimal job, the on-screen positioning of the centering indicators always takes account of 3D compensation.



Match between frame base and lens base

To do a job involving a high-base frame, use lenses whose base matches that of the frame (maximum difference of 0.7 D).

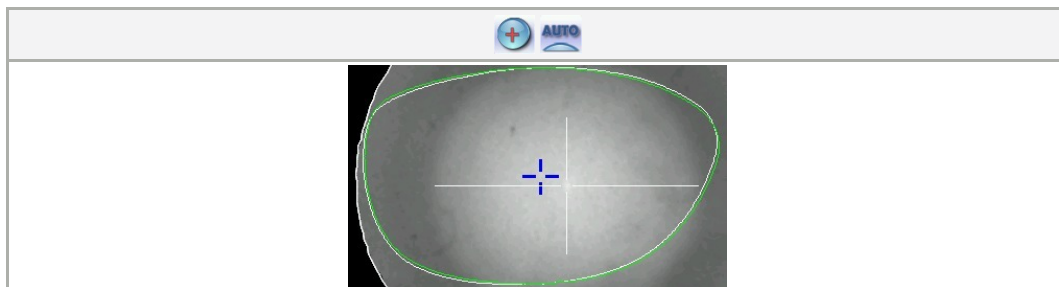
Refer to the centering procedure for the particular type of lens:

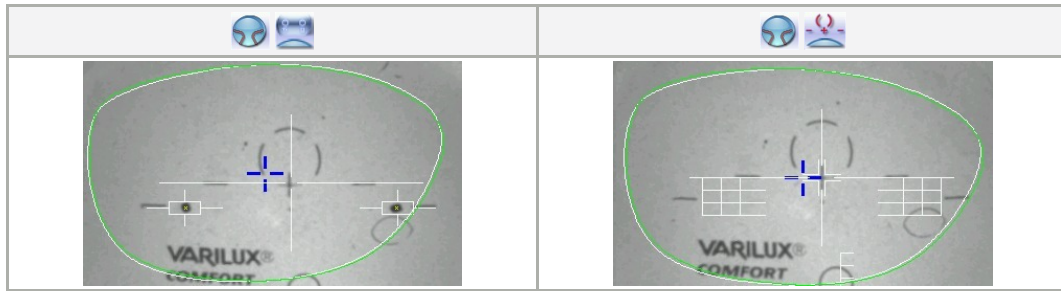
- Centering a single vision lens (p.42)
- Centering a progressive lens (p.52)
- Centering a bifocal lens (p.58)
- Centering an executive lens (p.64)
- Centering a mid-distance lens (p.69)

In automatic centering, centering using three focimeter dots, micro-engravings or manufacturer markings, two shapes appear in the work area:

- Initial shape (without 3D compensation)
- Corrected shape (with 3D compensation)

Examples:





8. Markings database

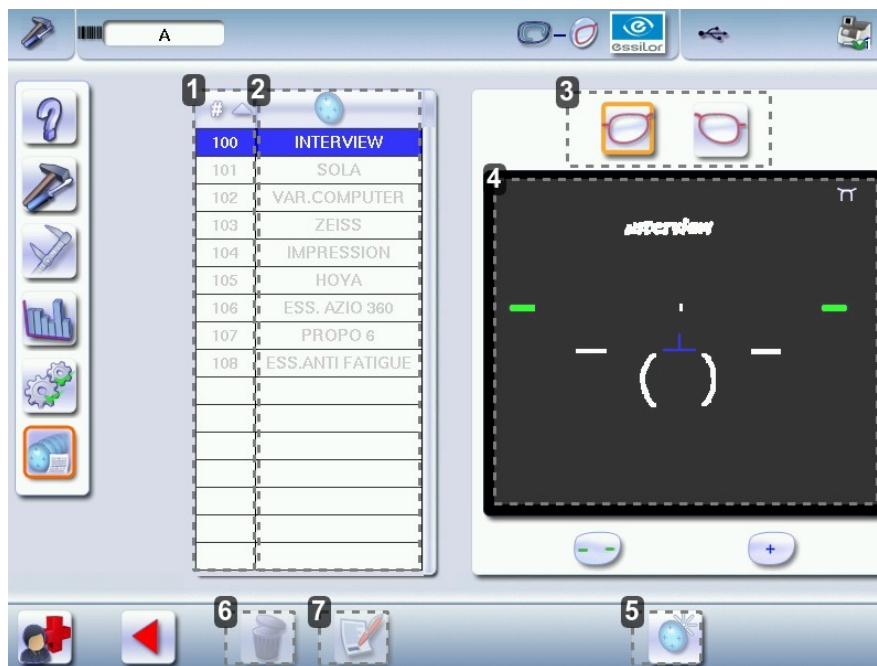
The markings database enables you to save lens markings to allow subsequent lens recognition through manufacturer markings.

- Description of the markings database screen (p.77)
- Add a new marking (p.78)


a. Menu screen

To access the markings database, select  in the information bar, then .

The following screen is displayed:



1. IDs of the markings

Press  to sort the markings by ID.

2. References of the markings

Press  to sort the markings by reference in ascending order: press again to sort them in descending order.

3. Active eye

Select the eye to view the corresponding marking.

4. Display the selected marking

5. Add a new marking

6. Delete a marking

7. Edit a marking




IDs 100 to 108 are pre-recorded and cannot be modified.

b. Add a new marking

The recording of a new marking is done in three stages:

1. Recording of far vision
2. Recording of centering data
3. Recording of near vision

For the recording of the marking to be effective, these three stages must be carried out for the right eye and the left eye.

 Prerequisite: to get the most out of the tracer and take advantage of all its features, we recommend that you follow the advice below when saving markings:

- Always record both sides of the lens (right and left markings may be different).
- To record the markings, use low-power lenses (up to 3 D).
- Carefully clean the lens before recording the marking.
- Select lenses with clear and complete markings; make sure there are no interfering marks.

1 Press .

> The numeric keypad is displayed.

2 Enter an ID and the reference of your new marking.



The first free slot in the database is proposed by default. You can modify the ID if you wish.

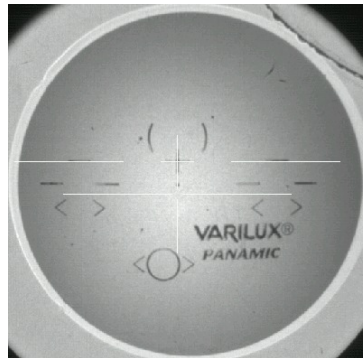
3 Press  to confirm.

> The image acquisition screen is displayed.

4 Position the lens in the centering chamber.

> The lens appears on screen: the image is displayed in real time.

5 Align and center the lens on the target:

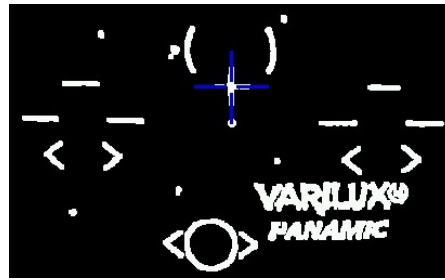



6 Press .

> The lens marking is displayed, as well as a blue centering mark.

> The far vision mark is selected: .

7 Position the blue cross on the point corresponding to far vision using the virtual mouse:




8 Press  to record the left centering mark.

- > The left centering mark is selected.
- > A green cross appears in the target.

9 Position the left-most cross on the marking using the virtual mouse:



10 Press  to record the right centering mark.

- > The right centering mark is selected.
- > A red cross appears in the target.

11 Position the right-most cross on the marking using the virtual mouse:




12 Press  to record the mark corresponding to near vision.

13 Position the yellow cross on the point corresponding to near vision using the virtual mouse:



- > The recording of the first eye is finished.

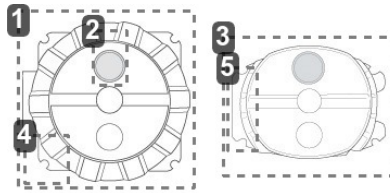
14 Now, record the data for the second eye.

15 Press  once the right-eye and left-eye markings have been saved.

- > The marking has been saved: the next lens with the same marking will automatically be recognised on centering.

9. Blocking a lens

Two accessories are available for the blocking operation:



1. 22 mm posiblock

The specific pads corresponding to the size of the posiblock are supplied with the tracer.

2. Magnet



3. 18x14 mm posiblock

The specific pads corresponding to the size of the posiblock are supplied with the tracer..

4. Fin

5. Tab

✓ Prerequisite:

- The lens must be centered.
- Take the posiblock adapted to the shape, indicated at the bottom right of the screen:  or .





Small frames

Depending on the B-dimension of the frame and the posiblock you choose to use, certain finishes may or may not be possible. In such cases, an alert is displayed.

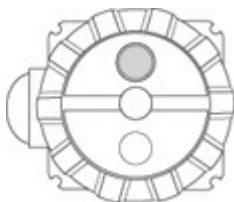
Example:



- Press  and block the lens with an 18x14 mm posiblock to do a high-base bevel and/or chamfer.
- Otherwise, press  and block the lens with a 22 mm posiblock.

1 Fit the appropriate pad on the posiblock:

- The fins of the posiblock must remain visible.
- The tab of the pad must be lined up with the tab of the posiblock.





- Always use the pads supplied by Essilor: they are specially designed to ensure the performance of your machine for quality jobs.
- The pads are non re-usable.
- Do not stick pads on posiblocks in advance as they may loose some of their holding power.
- The posiblock must never be placed on the rear (inner) surface of the lens.

- 2 Place the posiblock on the indexer.

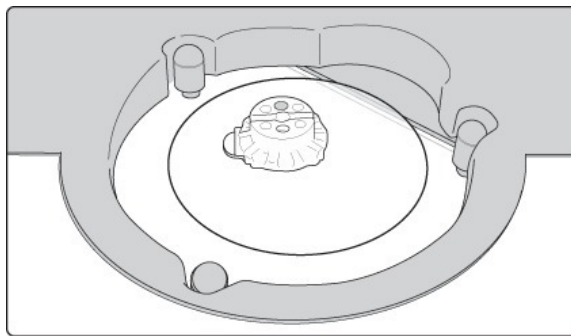


A positioner enables you to place the posiblock in the required position for automatic loading.

- 3 According to the display, press  or  to start blocking.

> The blocking arm automatically grasps the posiblock and places it on the lens, at the boxing center of the shape.



- 4 Leave the blocked lens in the centering chamber so that the tracer can check its centering via the fins.



> The Hartmann plate lights up then switches off at the end of the check.



For the centering check to be effective, at least two opposite fins must be visible to the tracer. If no fin is detected by the tracer, the check stops automatically.

- If the posiblock used does not correspond to the characteristics of the job, a warning is displayed: press  and restart the blocking operation.
- If the pad is stuck the wrong way round, a warning is displayed. We recommend that you restart the blocking operation: press .

> The lens is blocked.



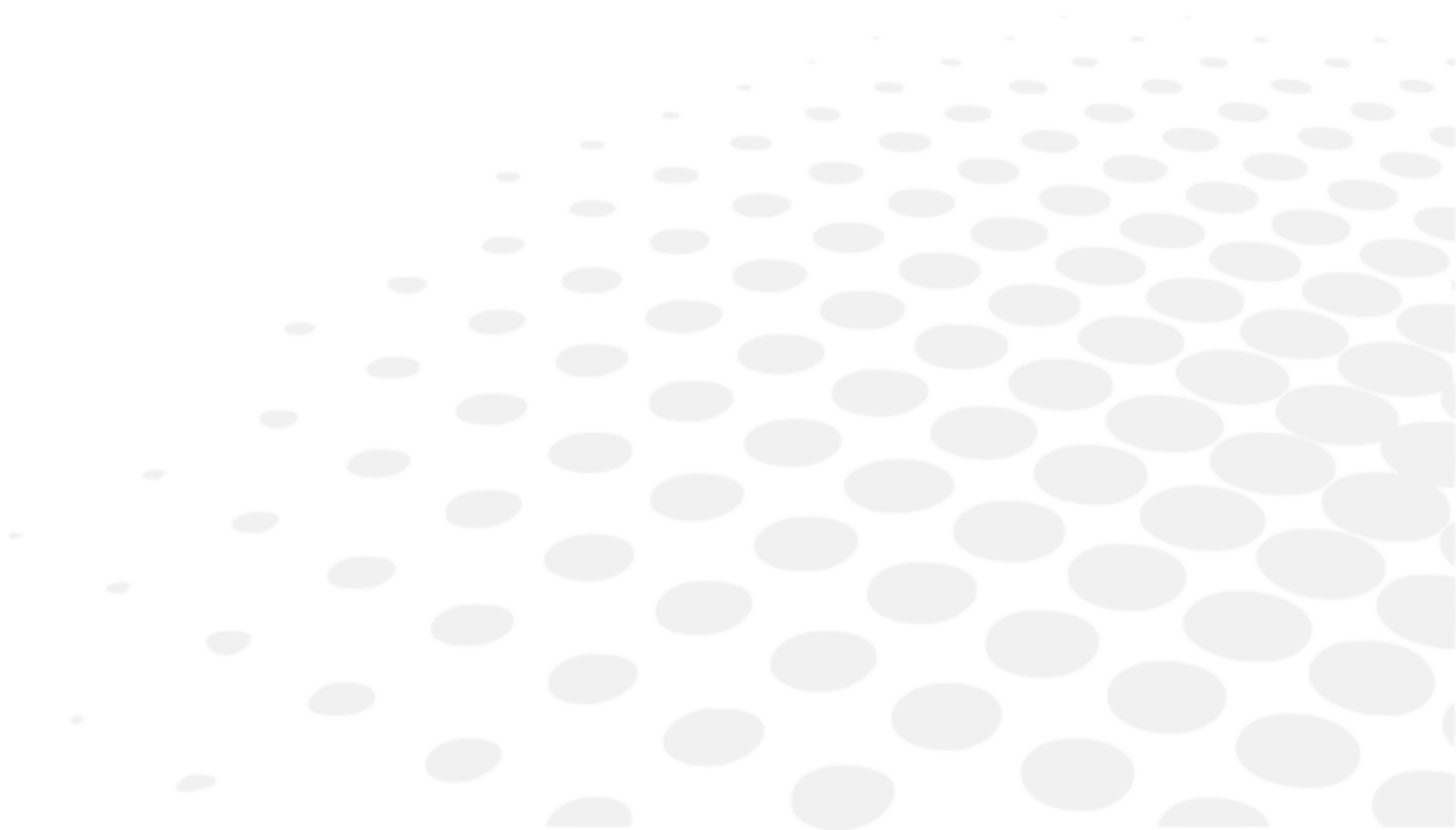
For a hydrophobic lens, press with your fingers on the posiblock so that it adheres to the lens properly.

> The centering screen for the second lens is displayed.

The adjustments made to the PD, pupillary height, type of lens and centering mode are displayed by default for the second lens.

- 5 Center and block the second lens.

IV. MODIFYING THE LENS SHAPE



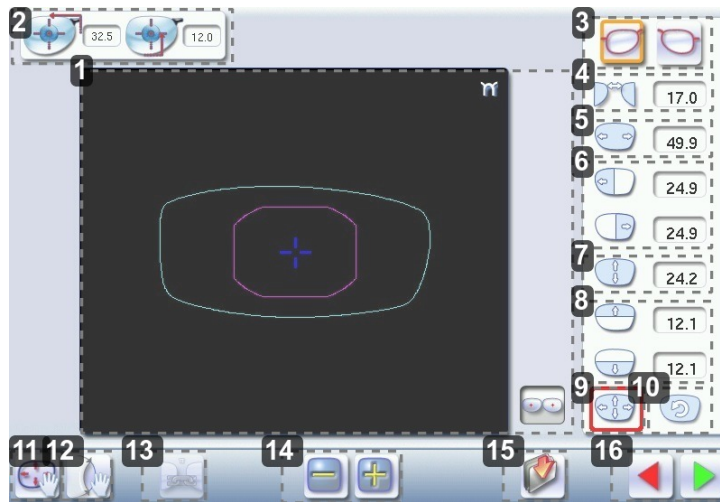
This chapter describes the lens shape modification procedures:

- Description of the shape modification screen (p.85)
- Modifying the lens shape (p.86)
- Archiving shapes (p.90)

1. Menu screen











From the centering screen, press  to access the shape modification screen.


The following screen is displayed:



1. Work area

Colours which may appear on screen:

-  (white) Current shape (from the shape traced) and associated drilling points
-  (cyan) Current shape (obtained by symmetry with the shape traced) and associated drilling points
-  (light red) Shape before modification
-  (grey) Part of the shape not selected for the modification underway
-  (purple) Smallest possible shape
-  (pink) Limit of the no-accessory area
-  (yellow) Limit of the drilling area
-  (red) Non-machinable shape
-  (blue) Reference drilling points
-  (green) Lens already blocked

 Binocular view

2. Half PD and pupillary height

3. Active eye

The selected eye has an orange frame around it.

4. D-dimension modification

5. A-dimension modification

6. Modification of half A-dimensions (temporal / nasal)

7. B-dimension modification




8. Modification of half B-dimensions (upper / lower)

9. Modification of the overall size of the shape




Scaling in relation to boxing center

10. Shape rotation around the boxing center

11. Free-form modification

-  Modification focused on the center of the selected area.
-  Uniform modification across all points of the selected area.
-  Modification directed towards the two ends of the selected area.

12. Shape retouch

-  Retouch to create a straight line.
-  Retouch to create a curve.
-  Retouch to create an angle.



13. Modify both eyes simultaneously or not

14. Modify the selected value

The modification is carried out in 0.5 mm or 1 mm steps depending on the precision setting (p.113).

15. Create a new job based on the job displayed

16. Back to the centering screen

- Press  to save the changes and go back to the centering screen.
- Press  to return to the centering screen without saving the changes.

2. Modifying a shape

The shape modification screen gives you access to several functions:

- Simple modifications (p.86): D-dimension, boxing dimensions, modification of size and rotation of the shape
- Free modification (p.88), within the constraints pertaining to lens edging
- The retouching of a shape (p.89) in the event of possible tracing defects



Any modification or retouch of the shape must be performed before centering the lens.

Shape modifications and retouches are only applied if all the dimensions and half-dimensions limits are included.

If a portion of the shape is not included within the machinable limits, it is displayed in red.

a. Enlarging, reducing or rotating a shape



The side panel on the right of the screen enables you to:

- Modifying each dimension or half-dimension separately
- Modifier the size of a shape as a whole
- Rotating a shape around the boxing center





Modifying both eyes simultaneously

If you have done an asymmetric binocular tracing, you can modify both shapes simultaneously.


-  Modification of both eyes simultaneously
-  Modification of each eye separately

In symmetric monocular or binocular tracing, modifications are automatically made to both eyes.

Modifying each dimension or half-dimension separately

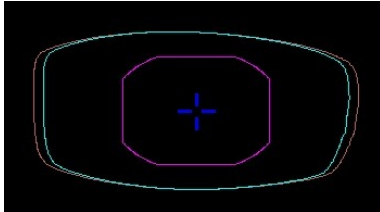
- 1 Select the icon showing the part of the shape you wish to decrease or increase.
 - > A red rectangle is displayed around the icon.
- 2 Use the buttons  or  to reduce or increase the corresponding value and view the modification in real time.



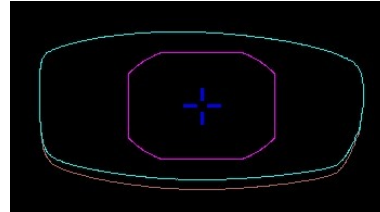
You can also press for a few seconds on the corresponding value to display the numeric keypad: enter a new value and press  to confirm.

- > The shape is modified.
- > The original shape is displayed in light red.




Example of an A-dimension reduction:




Example of a half B-dimension reduction:



Modify the overall size of the shape

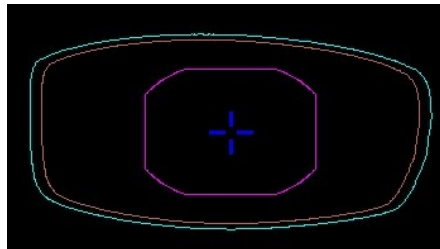
- 1 Press  to select modification by homothety.
 - > A red rectangle is displayed around the icon.
- 2 Use the buttons  or  to decrease or increase the shape and view the modification in real time.






You can also press for a few seconds on the corresponding value to display the numeric keypad: enter a new value and press  to confirm.

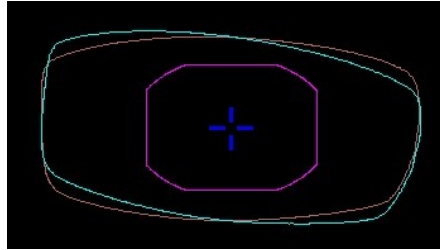
- > The shape is modified.
- > The original shape is displayed in light red.

Example of a total enlargement of the shape:





Rotating a shape around the boxing center

- 1 Press  to select modification by rotation.
 - > A red rectangle is displayed around the icon.
- 2 Use the buttons  or  to rotate the shape clockwise or anti-clockwise by 1° and view the modification in real time.
 - > The shape swivels: the rotation is applied.
 - > The original shape is displayed in light red.



Cancelling a modification

- Press once on  to cancel the last modification made to the shape.
- Double-press on  to go back to the original shape.

Once the shape has been modified, press  to save and go back to the centering screen.



b. Free-form modification

This function enables you to freely modify the shape of the lens.





Modifying both eyes simultaneously

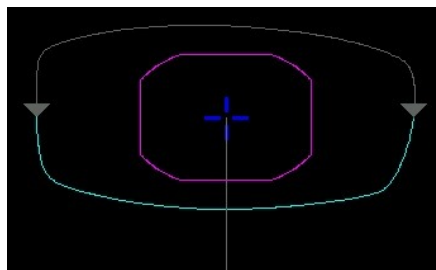
If you have done an asymmetric binocular tracing, you can modify both shapes simultaneously.

-  Modification of both eyes simultaneously
-  Modification of each eye separately




In symmetric monocular or binocular tracing, modifications are automatically made to both eyes.

1 Select .

- > The selection area is delimited by two cursors  and .
- > The area not affected by the modification is displayed in grey.



2 Select the type of modification.

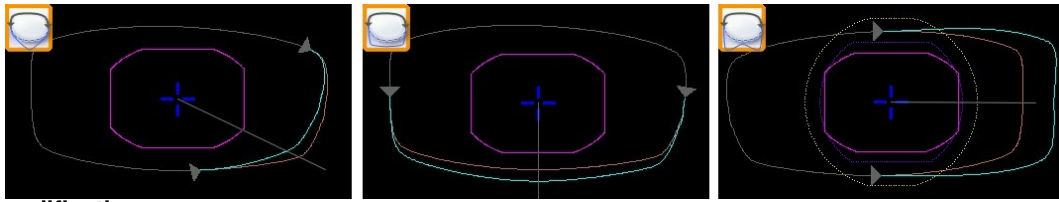
-  Modification focused on the center of the selected area.
-  Uniform modification across all points of the selected area.
-  Modification directed towards the two ends of the selected area.

3 Drag the cursors  and  to delimit the selection area.



4 Move the line starting at the boxing center to orient the modification.

5 Use the buttons  or  to reduce or enlarge the shape.

- > The shape is modified.
- > The original shape is displayed in light red.



Cancelling a modification

- Press once on  to cancel the last modification made to the shape.
- Double-press on  to go back to the original shape.

Once the shape has been modified, press  to save and go back to the centering screen.



c. Retouching a shape

This function enables you to retouch the shape of the lens.





Modifying both eyes simultaneously

If you have done an asymmetric binocular tracing, you can modify both shapes simultaneously.

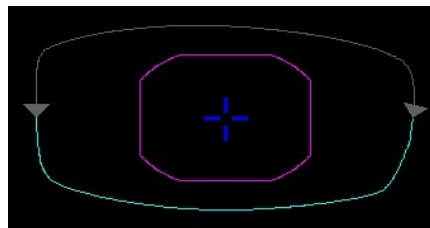
-  Modification of both eyes simultaneously
-  Modification of each eye separately

In symmetric monocular or binocular tracing, modifications are automatically made to both eyes.

1 Select .

- > The selection area is delimited by two cursors,  and .
- > The area not affected by the modification is displayed in grey.




2 Drag the cursors  and  to delimit the selection area.

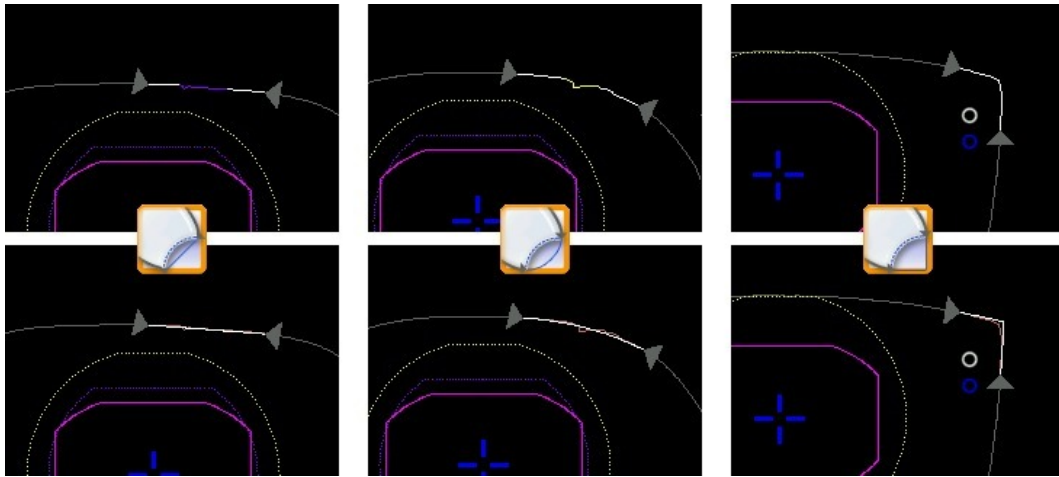


3 Select the type of retouch.





The types of retouch available vary according to the size of the selected area.

-  Retouch to create a straight line.
 -  Retouch to create a curve.
 -  Retouch to create an angle.
- > The selected area is retouched.
 - > The original shape is displayed in light red.




Cancelling a modification



- Press once on  to cancel the last modification made to the shape.
- Double-press on  to go back to the original shape.


Once the shape has been modified, press  to save and go back to the centering screen.

3. Archiving / saving a shape

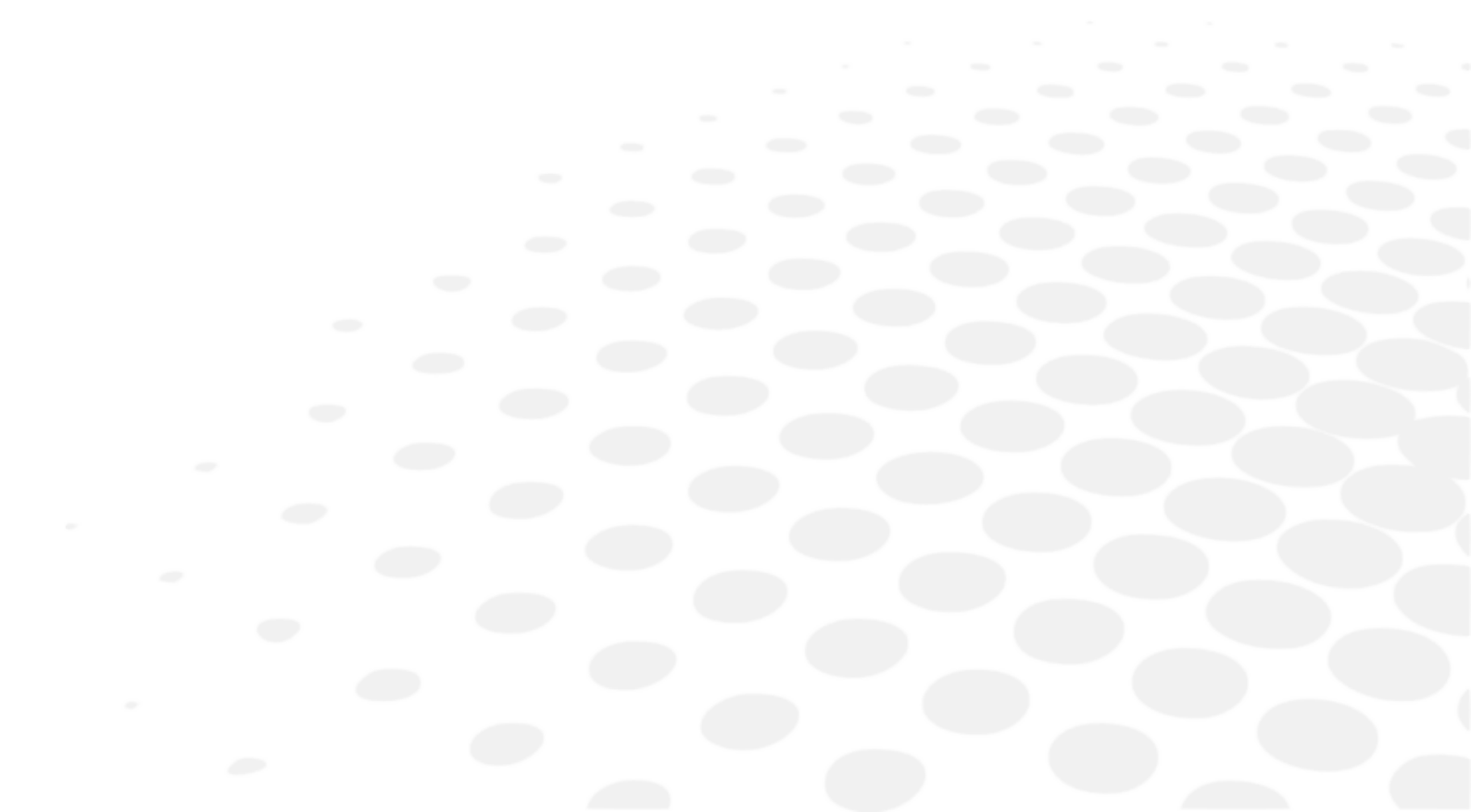
This function enables you to save a modified shape to a new job with a new ID while keeping the original job.

- 1 Press .
 - > The job-creation alphanumeric keypad is displayed.
- 2 Select the list in which you want to store the shape.

 Job list
 Collection list

 - > A new ID is allocated (first free slot in the selected list).
You can also give it a different ID.
- 3 Enter a reference for the shape to be saved.
- 4 Press  to confirm.
 - > The shape is archived in a new job with a new ID and is displayed in the shape modification screen.

V. PREPARING A DRILLED JOB



This chapter describes the procedure for the positioning of drilling points (drill-holes, slots, notches) on a lens.

- Description of the drilling screen (p.93)
- Drilling settings (p.94)
- Drilling models (p.101)

Once the drilling parameters have been set, you can go on to the centering of the lens.

✓ Prerequisite: to access this screen, you need to have carried out a lens tracing.



Optical tracing

If you trace a demo lens or a pattern using the optical tracing function, the drilling screen is displayed automatically once the tracing is complete.



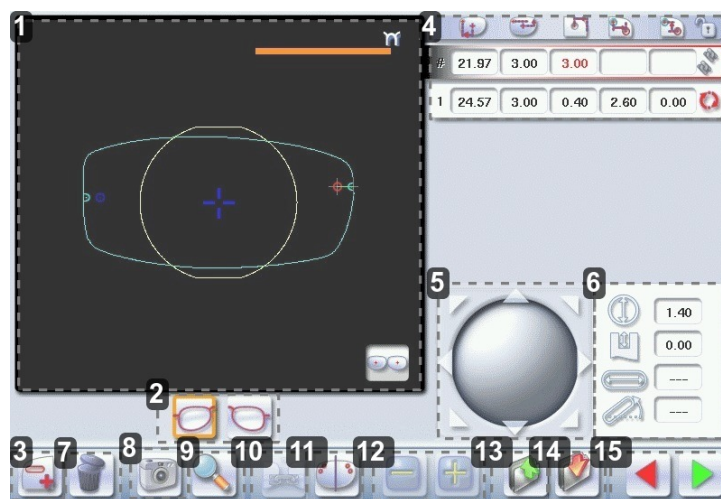
Glass lenses

The drilling function is not available for glass lenses.

1. Legend screen







In the centering screen, press  to access the drilling screen.

The following screen is displayed:



1. Work area

Colours which may appear on screen:

-  (white) Current shape (stemming from the shape scanned) and associated drilling points
-  (cyan) Current shape (obtained by symmetry with the shape scanned) and associated drilling points
-  (yellow) Limit of the no-drill area
-  (orange) Nasal or temporal side indicator
-  (red) Selected drilling point
-  (blue) Reference drilling point (by default, the first one created on each side – nasal and temporal)
- A drilling point with a colour infill indicates non-through drilling






Binocular view





2. Active eye

The selected eye has an orange frame around it.

3. Type of drilling

-  Hole
-  Slot
-  Notch





4. Drilling coordinates

-  X and Y coordinates in relation to the boxing^(p.148) center of the shape.
-  Distance between the center of the hole entrance point and the edge of the lens.
-  X and Y coordinates in relation to the reference drilling point.
-  Freezing of the distance between the drilling point and the edge of the lens.



5. Virtual mouse

Slide the stylus in this area to move the selected drilling points.

6. Drilling point dimensioning

-  Diameter in mm
 - default value: 1.40mm
-  Drilling depth in mm in the case of non-through drilling
 - default value: 0 (through-drilling)
-  Length of slot or notch in mm
 - default value of slot: 3.40mm
-  Angle of slot or notch in °
 - default value for right eye: 0° on nasal side, 180° on temporal side
 - default value for left eye: 180° on nasal side, 0° on temporal side

7. Delete one or all drilling points

-  Delete one drilling point
-  Delete all drilling points

8. Photo mode

Acts as an aid to manually position the holes on a shape as part of the mechanical tracing of a power lens, a demo lens or a pattern.

9. Zoom

10. Create and set the drilling points for both eyes simultaneously



11. Symmetrically transfer the drilling points from the nasal to the temporal side or vice versa

12. Modify the selected value

13. Import a drilling model from the shape management screen

14. Archive the shape and create a new job based on the job displayed

15. Back to the centering screen

- Press  to save the modifications and go back to the centering screen.
- Press  to go back to the centering screen without saving the modifications.

2. Configuring a drilling point

This section describes the procedures for the creation and positioning of a drilling point:





- Creating a drilling point (p.96)
- Deleting a drilling point (p.97)
- Dimensioning a drilling point (p.97)
- Adjusting the position of a drilling point (p.98)




The positions of the various drilling points must be set before the centering of the lens.



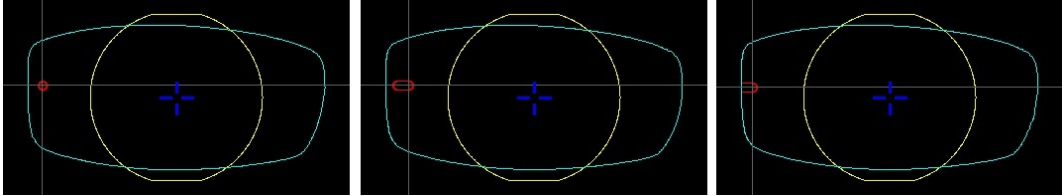
Setting the drilling points on both eyes simultaneously

- If you have done an asymmetric binocular tracing, you can create and set the drilling points simultaneously on both shapes.
 -  Create or modify drilling points for both eyes simultaneously
 -  Create or modify drilling points for each eye separately
- In monocular or symmetric binocular tracing, the drilling points are automatically positioned on both eyes, you can however manage the drilling points on the left side independently of the right side:
 - press  : drilling points are no longer linked .

a. Creating a drilling point


- 1 Press  to create a new drilling point.
- 2 Select the type of drilling (drill-hole, slot or notch).
- 3 Press on the shape at the spot where you want to position the drilling point.

> The drilling point created is displayed in red in the shape:



> The drilling coordinates are displayed on the right of the work screen;




Press  to copy the drilling points from the nasal area to the temporal area and vice-versa.

On the tracer, you can configure up to 6 drilling points per side (nasal and temporal) of a shape.



Photo mode

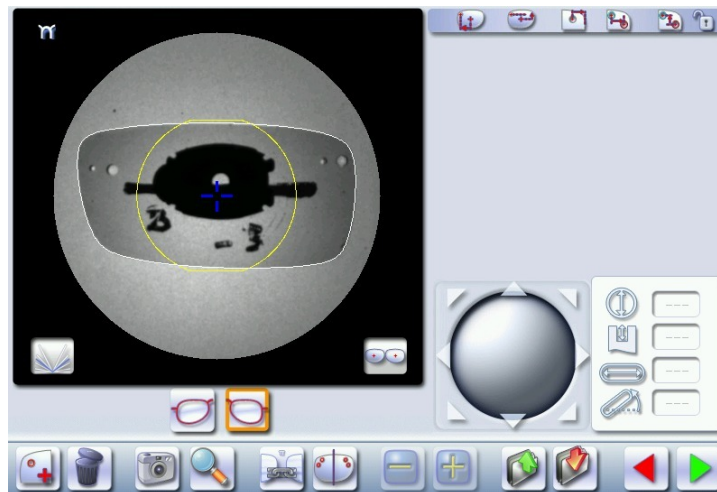
After tracing a pattern, it is possible to retrieve the drill holes on the corresponding demo lens:

- 1 Position the demo lens (corresponding to the pattern) in the centering chamber, press .



For photo mode, it is not necessary to mark the lens, the posiblock can also be kept: it is a simple shot.

> The photograph of the demo lens appears to be positioned correctly in the picture of the shape:



If the image is badly centered, repeat the operation.

- 2 Manually position the drill holes of the shape locating them using the photo.

b. Delete one drilling point



- 1 Select the drilling point to be deleted.





If you want to delete all drilling points from the shape, select any of them.

- > The drilling point is displayed in red.

- 2 Press .

- > Two buttons are displayed:  .

- 3 Press:

-  to delete the selected drilling point, or
-  to delete all drilling points from the shape.

- > The selected drilling point or all drilling points are deleted from the shape.





c. Dimensioning a drilling point

You can define a setting for each existing drilling point.

- 1 Press on the drill-hole, slot or notch to select it.

- > The drilling point is displayed in red in the shape.


- 2 Press a few seconds on the setting to be modified:

-  Diameter
-  Depth (for non-through holes)
-  Length of slot or notch
-  Angle of slot or notch

- > The numeric keypad is displayed.



You can also use the buttons  or  to reduce or increase the selected value.


- 3 Enter the new setting, then press  to confirm.



- > The drilling point has been modified.

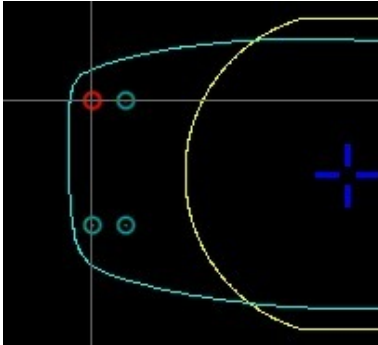


Grouping the drilling points


If you need to modify several drilling points simultaneously, you can group them together provided they are on the same side of the shape (nasal side / temporal side).

By default, the symbol  is displayed: each drilling point can be modified individually.

- Press  .
- >  is displayed. All future modifications will be applied to all drilling points in the same way:
 - only the reference drilling point is modifiable,
 - the coordinates of the other drilling points are greyed out.





#	-22.95	6.68	1.85			
1	-19.95	6.68	4.85	3.00	0.00	
2	-22.95	-4.52	1.61	0.00	-11.20	
3	-19.95	-4.52	4.61	3.00	-11.20	

- To ungroup the drilling points, press again on .

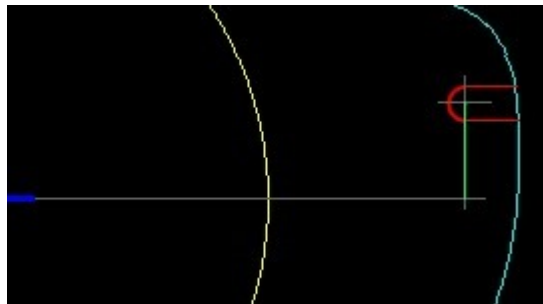
d. Adjusting the position of a drilling point





You have three options for adjusting the position of a drilling point on a shape:

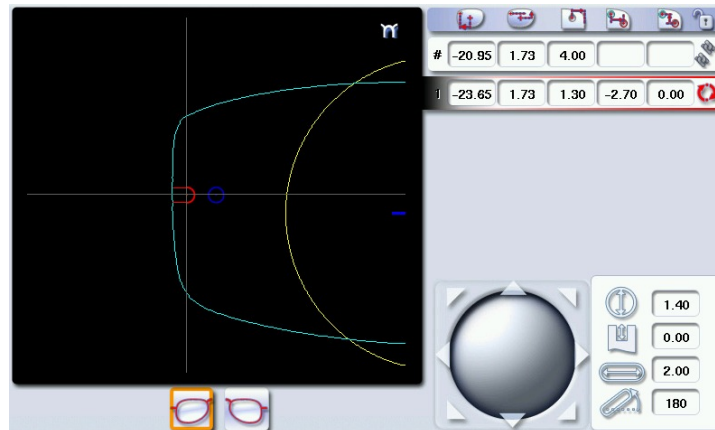
- Use the virtual mouse
- Use the buttons  or  to reduce or increase the selected value
- Input the exact coordinates of the drilling point






The drilling coordinates are those of its entrance drill-hole.



- For a drill-hole, it is the center.
- For a slot and a notch, the entrance point is always on the side which is furthest away from the edge of the lens:




 For greater precision, when you use the virtual mouse or the buttons  and , press  to zoom in on the selected drilling point: the displacement step is 0.01mm (0.1mm for normal display).



- 1 Press on the hole, slot or notch to select it.
 - > The drilling point is displayed in red.
- 2 Press a few seconds on the value corresponding to the coordinates to be modified:
 -  X coordinates
 -  Y coordinates
 -  Distance from the edge of the lens.
 -  X coordinates in relation to the reference drilling point
 -  Y coordinates in relation to the reference drilling point

 Freeze  the distance to the edge of the lens and adjust only the Y position of the drilling point.

- > The numeric keypad is displayed.
- 3 Enter the new value, then press  to confirm.
 - > The drilling coordinates have been modified.

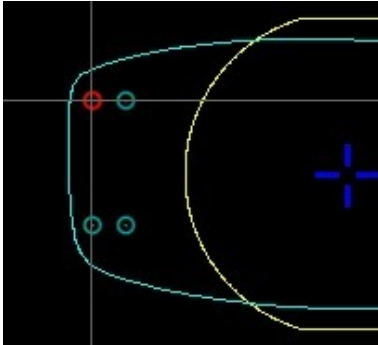


Grouping the drilling points

If you need to modify several drilling points simultaneously, you can group them together provided they are on the same side of the shape (nasal side / temporal side).

By default, the symbol is displayed: each drilling point can be modified individually.

- Press .
- > is displayed. All future modifications will be applied to all drilling points in the same way:
 - only the reference drilling point is modifiable,
 - the coordinates of the other drilling points are greyed out.



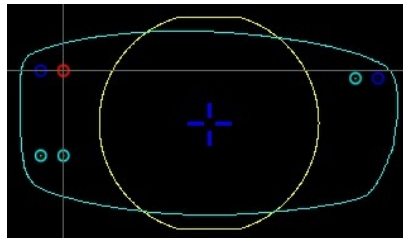
#	-22.95	6.68	1.85			
1	-19.95	6.68	4.85	3.00	0.00	
2	-22.95	-4.52	1.61	0.00	-11.20	
3	-19.95	-4.52	4.61	3.00	-11.20	

- To ungroup the drilling points, press again on .

Reference drilling point

The first drilling point you set on a shape automatically becomes the 'reference drilling point' in relation to which you will be able to position the other ones:

- Each side (nasal and temporal) has its reference drilling point, identified by its dark blue colour .



- It is identified by the symbol # on the left of its coordinates.


#	-22.36	7.00	2.38			
1	-19.36	7.00	5.38	3.00	0.00	
2	-22.36	-4.20	2.25	0.00	-11.20	
3	-19.36	-4.20	5.25	3.00	-11.20	

You can position each drilling point in relation to the reference drilling point by modifying the values in the columns:


- X coordinates in relation to the reference drilling point
- Y coordinates in relation to the reference drilling point

To select another drilling point as the reference drilling point:

1 Select the drilling point you wish to have as the reference drilling point

2 Press  on the right of its coordinates.

> The selected drilling point is displayed at the top of the list:

- The symbol # is displayed on the left of its coordinates
- The drilling point is displayed in dark blue  in the work area

> The coordinates of the other drilling points are also updated.

3. Drilling models

A drilling model consists of all the drilling points configured and positioned on a shape. You can retrieve a model in order to re-use it. This section describes the following:


- Importing a model to a shape (p.101)
- Saving a model (p.102)

a. Importing a model

This function enables you to re-use the drilling points of a job in the shape management screen in the current job.

Importing a drilling model enables you to retrieve:

- The settings of the drilling points (diameter, depth, length, angle)
- The height of the drilling points in relation to the center of the shape (Y coordinates)
- The distance between the reference drilling point and the edge of the lens


1 In the drilling-point positioning screen, press  to access the list of drilled jobs saved in the shape management screen.

2 Select the desired list.

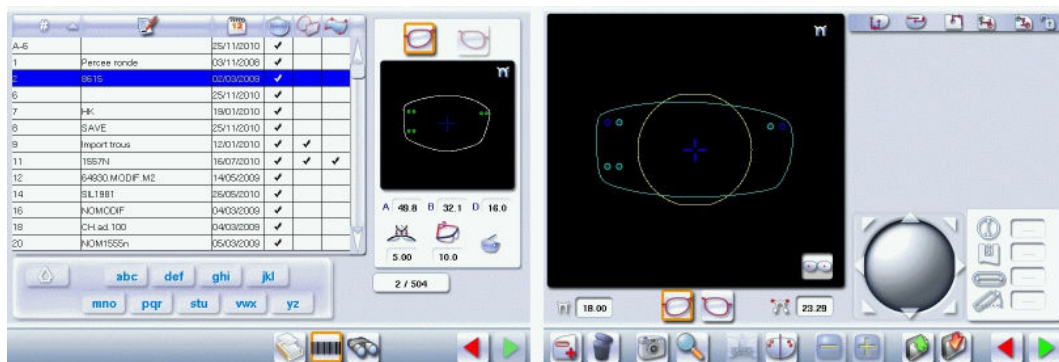
> The drilled jobs in the selected list are displayed.

3 Select the desired job as a drilling model.

> The model is displayed in the preview.

4 Press  to confirm the import of the model.


> The drilling screen is displayed:

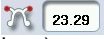


> The drilling points are positioned in keeping with:

- The settings of each drilling point in the model
- The Y coordinates of each drilling point in relation to the boxing center of the model shape
- The distance between the reference drilling point and the edge of the lens

> Two values are displayed under the work area

-  18.00 The D-dimension (in mm) you have entered for the tracing

-  The difference (in mm) between the two reference drilling points on the nasal side (right lens and left lens)




Once the model has been imported, you can move the drilling points if you wish. For further information, refer to the following sections:

- Preparing a drilled job > Positioning a drilling point > Configuring a drilling point (p.97)
- Preparing a drilled job > Positioning a drilling point > Adjusting the position of a drilling point (p.98)

b. Saving a model

This function makes it possible to memorize a shape and its drilling points in a new job with a new ID whilst saving the original job. Saving a model enables you to save in a new job:

- The traced shape
- The value of the D-dimension
- The drilling point settings
- The drilling point heights in relation to the Boxing center of the shape (Y coordinates)
- The distance from reference drilling points in relation to the edge of the lens (other drillings, in relation to reference drilling)

1 Press  to save the drilling points you have just configured to the current job shape.

> The job-creation alphanumeric keypad is displayed.

2 Select the list in which you want to store the shape.

> A new ID is allocated (first free slot in the selected list).


You can also give a different ID.

3 Enter a reference for your model.

4 Press  to confirm.

> The model is saved in a new job.

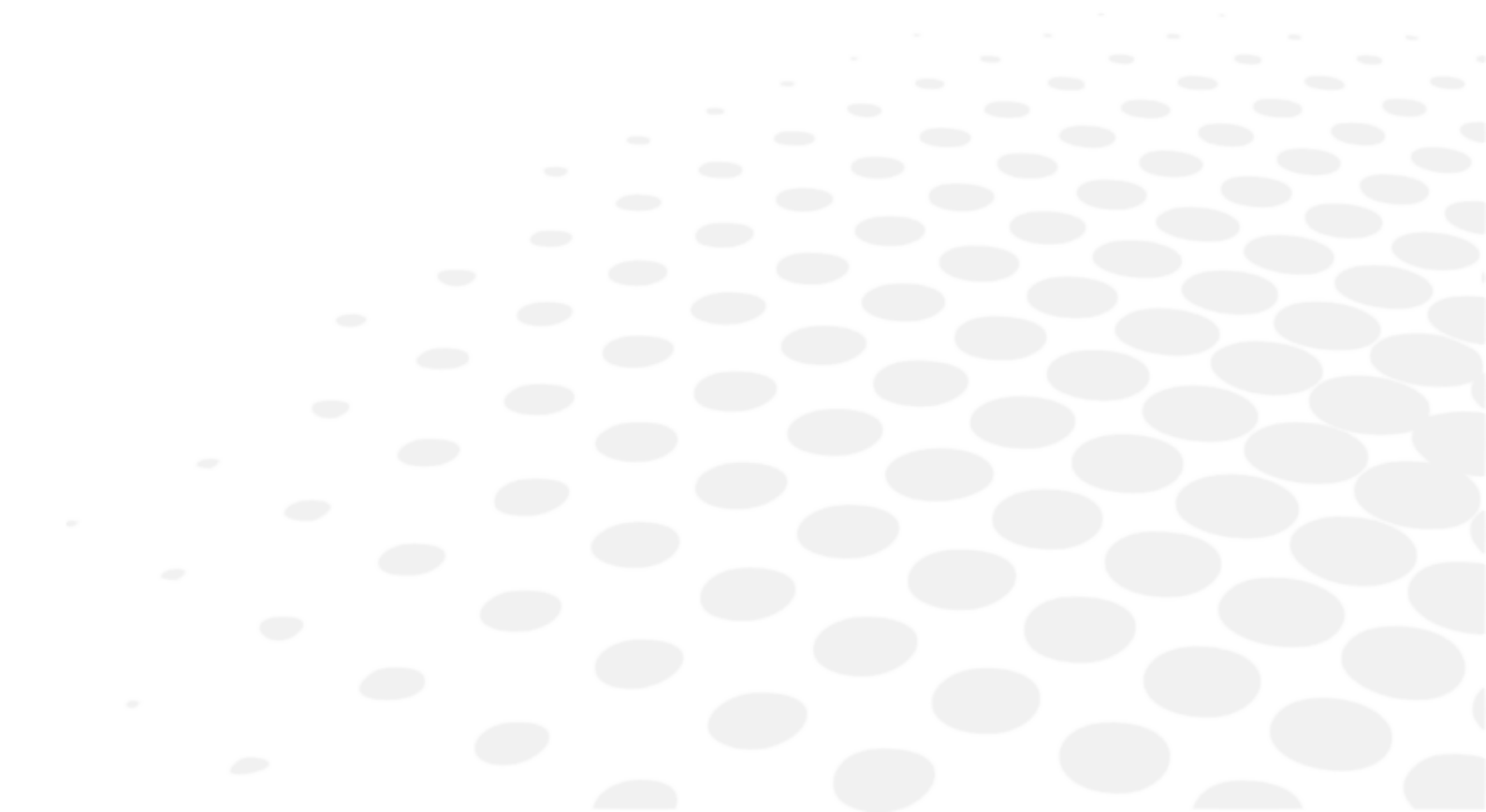
> The new job with the new ID is displayed on the drilling screen.

5 Press  to go back to the centering screen.



You can go back to the previous job via the shape management screen if it has an ID.

VI. PREPARING LENS EDGING



This chapter describes the procedure for preparing lens edging using the tracer-centerer-blocker, before calling the shape from the edger.



- Description of the edging preparation screen (p.105)
- Edging settings (p.106)



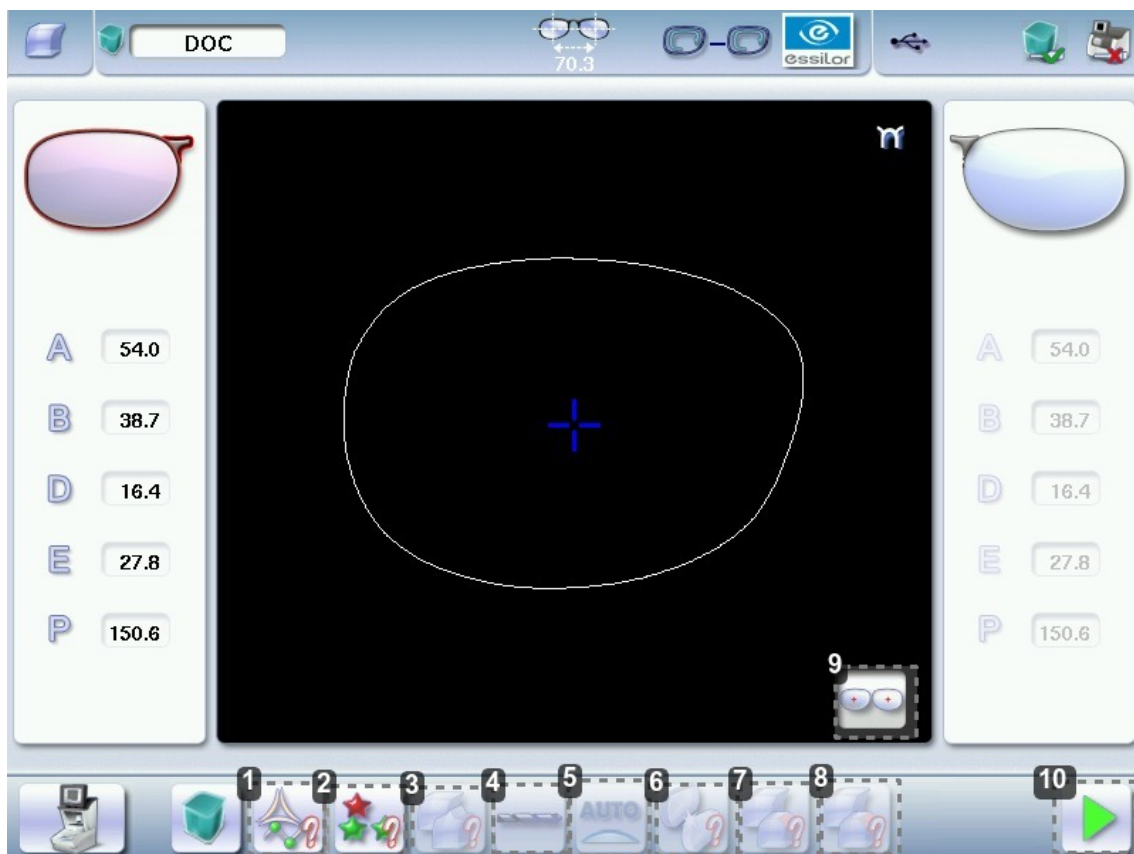
The activation of this function is carried out in the machine configuration screen.

For more information, consult the chapter Setting up the tracer-centerer-blocker>customizing the tracer>work mode and display of measurements) (p.113)







1. Menu screen

Press  >  to access the edging preparation screen.

The following screen is displayed:




1. Lens material

-  Plastic lens index 1.5 (p.149)
-  Polycarbonate lens
-  Medium/High index plastic lens - index > 1.5
-  Trivex lens™
-  Glass lens
-  Tribrid™

The configuration of the edging cycles depends on the type of material. An incorrect choice may result in material damage.








2. Type of cycle

-  Standard cycle
For all types of material.

-  EAS™

For all types of materials. This cycle offers a more sophisticated edging mode than the standard cycle, specifically for thin or small lenses and hydrophobic lenses.

3. Type of finish

-  Bevel
-  Customized bevel
-  Groove
-  Customized groove
-  Flat-edge
-  Flat-edge and drilling
-  Existing drilling disabled

4. To access the drilling preparation screen

5. Edging mode



-  Automatic mode

The finish parameters are automatically calculated according to the information acquired when tracing the frame and feeling the lens.




-  Customized mode

The finish settings can be fully customized.




6. Polishing

-  Polished lens
-  Non-polished lens

7. Front surface chamfering

-  Small chamfer
-  Large chamfer
-  No chamfering

8. Rear surface chamfering

-  Small chamfer
-  Large chamfer
-  No chamfering

9. Displaying the binocular view

10. Save the settings / Return to the centering screen

2. Edging settings

You can input the edging settings before calling up the shape onto the edger.



Both lenses are set simultaneously.







- 1 Press  to select the lens material.



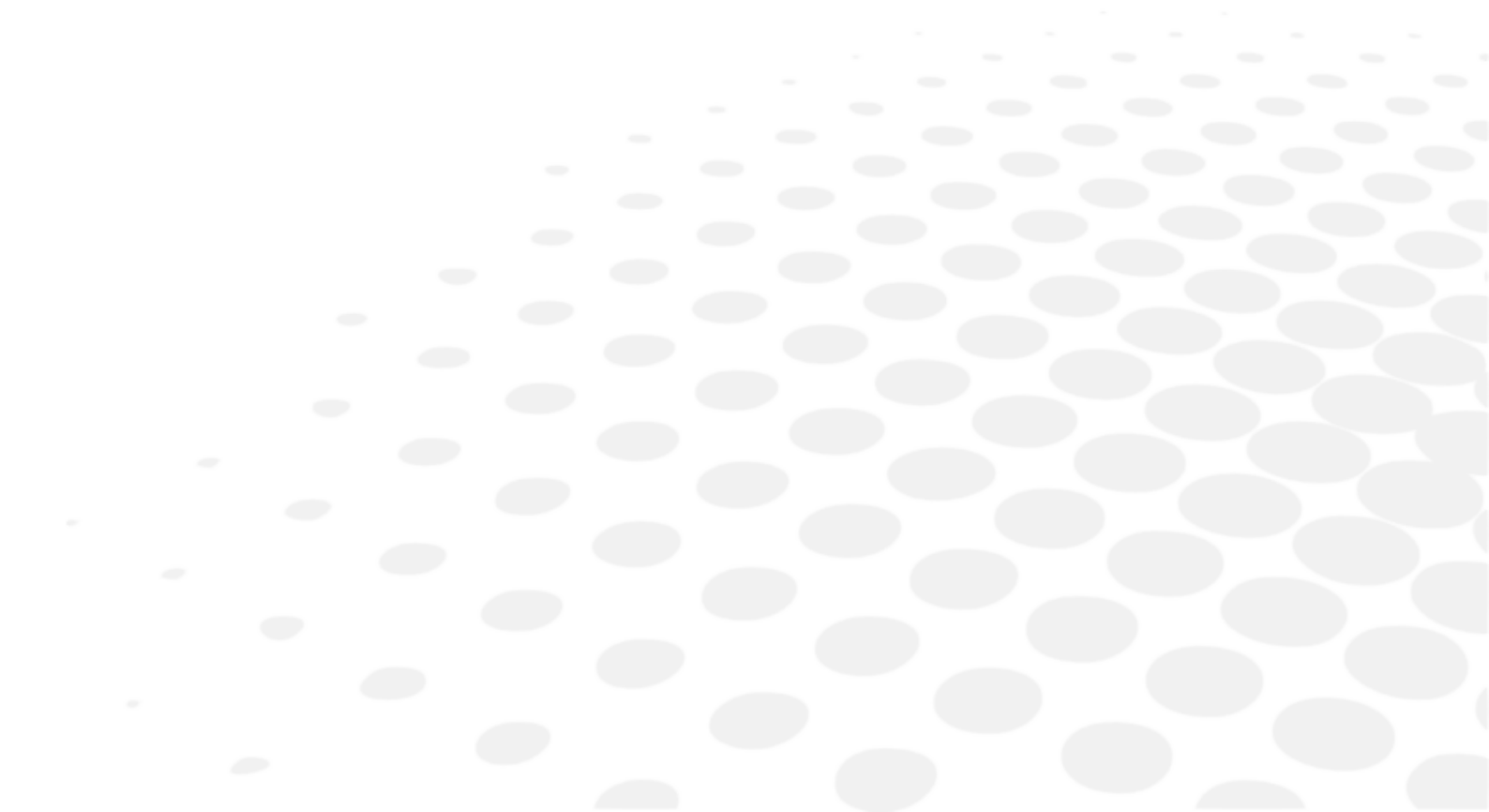
The configuration of the edging cycles depends on the type of material. An incorrect choice may result in material damage.

- 2 Press  to select the type of cycle.

- 3 Press  to select the type of finish.

- 4 Press  to access the drilling screen.
 - 5 Press  to choose the edging mode.
 - 6 Press  to activate/deactivate polishing.
 - 7 Press  to select back chamfering.
 - 8 Press  to select front chamfering.
 - 9 Press  to memorize the parameter setting and go back to the centering screen or the tracing screen, if the option is activated.
- > When you call the shape from the edger, its edging settings will be automatically recovered.

VII. TRACER-CENTERER-BLOCKER CONFIGURATION



This chapter explains how to configure the tracer according to your requirements. You can:




- Configure the tracer (p.111) (time, date, language, connections, screensaver)
- Customizing the tracer (p.113)
- Restore the factory settings (p.118)

1. Configure the tracer-centerer-blocker

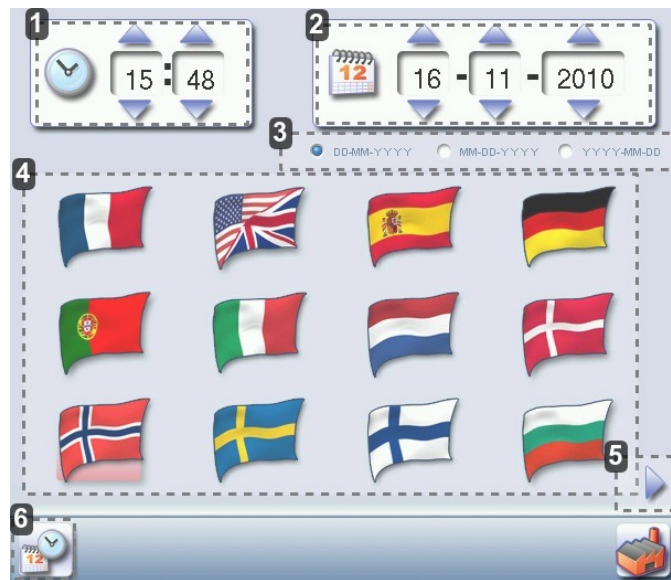
This section describes the procedures to:

- Set the time, date and language (p.111)
- Access the connections and the network (p.111)
- Configure a screensaver (p.113)



a. Time, date and language

To access this menu from your work screen, select  >  > .



The following screen is displayed:



1. Time

Use the arrows  and  to set the time.

2. Date

Use the arrows  and  to set the date.


3. Type of date display

Select the type of display out of the available formats.


4. Language


Select the flag corresponding to your language.

5. Other languages

Press  to display the other languages.




6. Confirm

Press  to save the time.

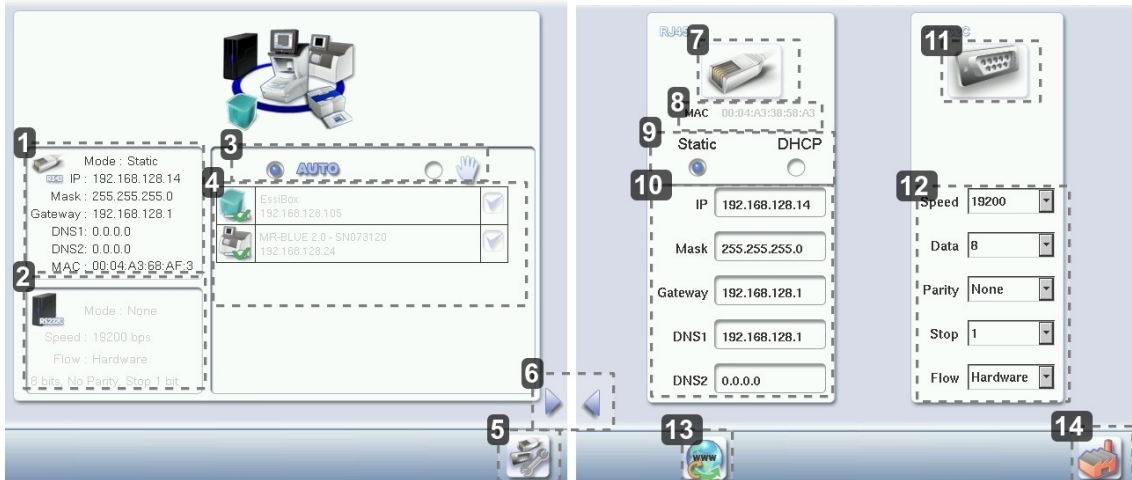
Once the settings has been adjusted, press  to go back to the work screen.

b. Connections

The connections are configured from the tracer.

To access this menu from your tracer work screen, select  >  > .

The following screen is displayed:



1. Settings linked to the configuration of the serial port
2. Settings linked to the configuration of the Ethernet port
3. Select the mode of detection for devices connected to the tracer
 - In automatic mode, all devices detected are connected to the tracer.
 - In manual mode, check the products you want connected to the tracer.
4. List of devices connected to the tracer
5. Reinitialization of communication ports
6. Next page/Previous page
7. Ethernet port (RJ-45)

Press on this button to activate or deactivate the Ethernet port.
8. MAC address: preset before leaving the factory -unchangeable
9. Addressing mode
 - Static: mandatory if the machines are connected to one another
 - DHCP: the addressing settings of the optician's network have been recovered
10. Ethernet network settings
 - IP: IP address: preset before leaving the factory
 - MASK: subnet mask, preset before leaving the factory
 - GATEWAY: gangway (never fill out)
 - DNS1: by default the DNS 1 address (server) is configured at 0: the address used is identical to that of the gangway.
 - DNS2: sometimes certain network settings require a DNS server different from the gangway.
11. Serial port (RS232C)

Press on this button to activate or deactivate the serial port.
12. Network series settings



They must be set up according to the connected software.

 - Transmission speed
 - Length of frame
 - Parity
 - Stop bit
 - Flow control
13. Test of Internet connectivity
14. Restoration of factory settings.

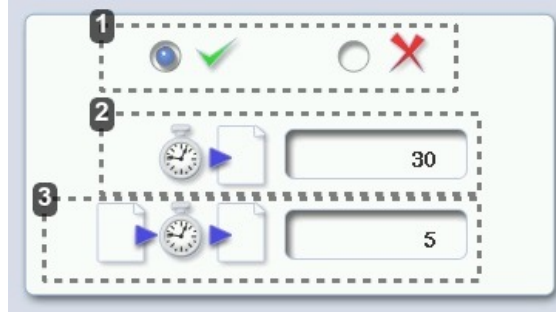
Once the modification is made, press  to return to the work screen.

c. Screensaver

This menu enables you to configure a screensaver.

To access this menu from your work screen, select  >  > .

The following screen is displayed:



1. Screensaver display


Enable  or disable  the screensaver.

2. Triggering

Set the waiting time before the display of the screensaver (in seconds).

3. Transition

Set the transition time between each image (in seconds).

Once the modification has been made, press  to go back to the work screen.




2. Customize the tracer

This section will enable you to customize the tracer according to your requirements:

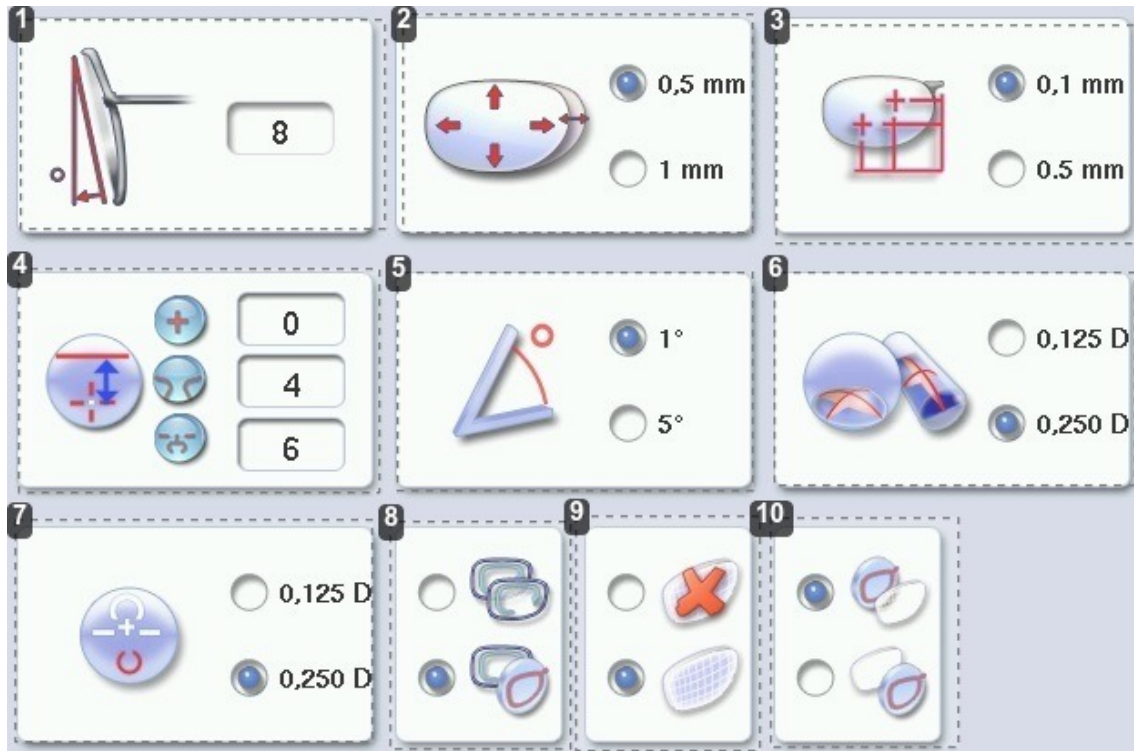
- Choose a Working mode, a measurement display mode and set up the functions. (p.113)
- Choosing a decentration mode (p.115)
- Customising the action bar (p.115)

a. Working mode and measurement display


This menu enables you to customize the working mode and display precision of the tracer.

To access this menu from your work screen, select  >  > .

The following screen is displayed:



1. Pantoscopic tilt

1. Press on the tilt value to modify it.
> The numeric keypad is displayed.
2. Enter the tilt value.
3. Press  to confirm.

2. Shape modification

Select the desired step for the shape modification.

3. Decentration

Select the step to be applied for decentration.

4. Progressive lenses_PRR

- Enter the value of the PRP according to specificities of the single vision lenses with which you work.
- Enter the PRP value according to the specific features of the progressive lenses you work with.
- Enter the PRP value according to the specific features of the Interview lenses you work with.

5. Cylinder angle

Select the step to be applied for the data entry of the cylinder angle.

6. Sphere and cylinder display

Select the step to be applied for the display of the sphere and cylinder measurement.

7. Addition

Select the step to be applied for the display of the addition.

8. Working mode

Select the default working mode:

- Tracing - tracing
- Tracing - centering

9. Preparation of the lens for edging

Select the display or not for the menu "Preparation of the lens for edging"

10. Working mode

Select the Working mode by default (if the display of the menu "Preparation of the lens for edging" is selected):




- I center - I prepare edging

- I prepare edging - I center

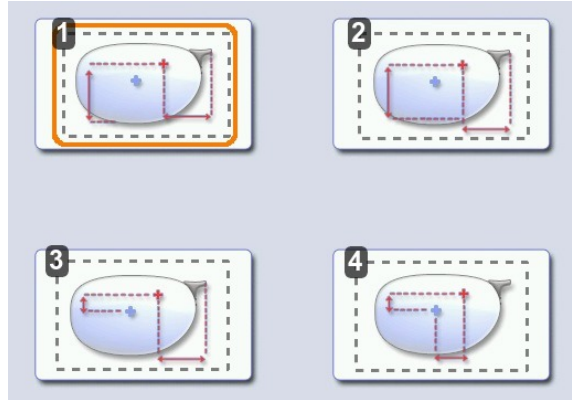
Once the modification is made, press  to return to the work screen.

b. Decentration mode

This menu enables you to select a default input mode for decentration data.

To access this menu from your work screen, select  >  > .

The following screen is displayed:



1. Boxing mode ($\frac{1}{2} PD + \text{Boxing Height}$)

The wearer's pupillary height is calculated in relation to the lowest point on the frame.

2. Datum mode ($\frac{1}{2} PD + \text{Datum Height}$)

The wearer's pupillary height is calculated in relation to the point of intersection with the frame.


3. ΔY mode ($\frac{1}{2} PD + \Delta Y$)

ΔY : This value corresponds to the difference in height between the boxing center of the shape and the center of the wearer's pupil.

4. $\Delta X + \Delta Y$ mode

ΔX : This value corresponds to the horizontal distance between the boxing center of the shape and the center of the wearer's pupil.

ΔY : This value corresponds to the difference in height between the boxing center of the shape and the center of the wearer's pupil.




Once the modification has been made, press  to go back to the work screen.

c. Action bar

This menu enables you to customize the action bar according to your requirements. You can deactivate certain options that you do not use so that they no longer appear in the choices of jobs (tracing and centering screens) and by selecting other default options (press and hold)

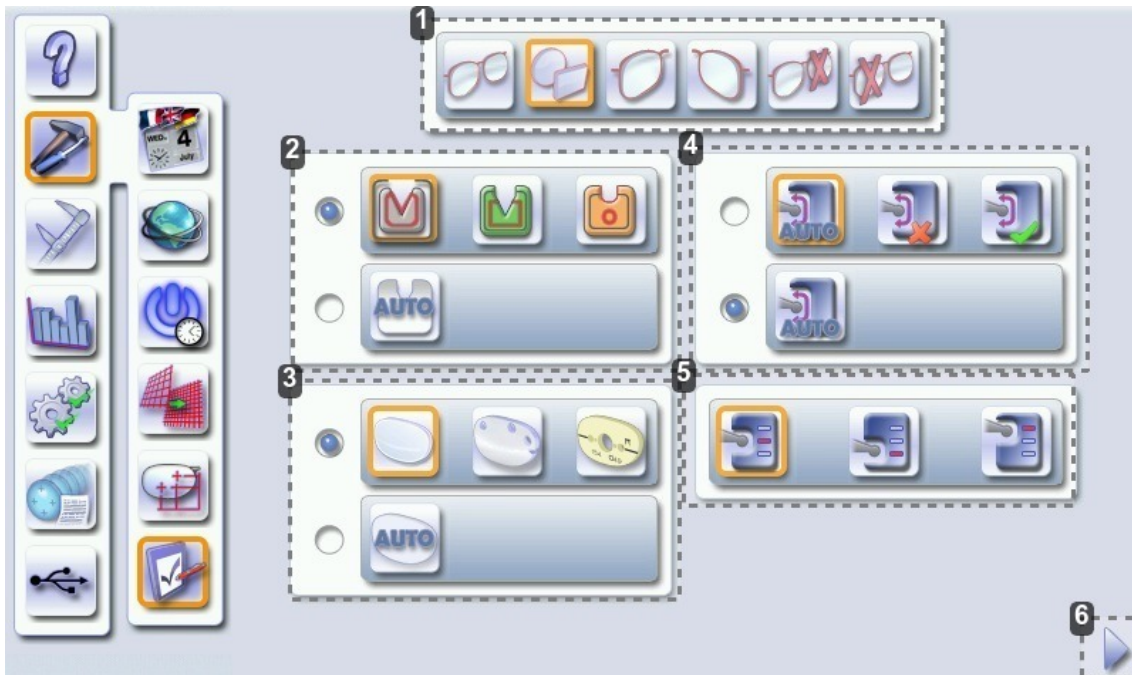
Customizing the action bar

Press an option button several times to change its status in the tracing or centering screen:







-  Option activated: the option can be selected in the rolling menus on the action bar.
-  Option disabled: the option is no longer displayed in the action bar.
-  Option circled in orange: the option is displayed and selected by default in the action bar (press and hold).

To access the customization menu of the action bar from your work screen, select  >  > .

The following screen is displayed:







1. Type of tracing





-  Symmetrical binocular
-  Asymmetric binocular
-  Right eye monocular
-  Left eye monocular
-  Monocular right eye only
-  Monocular right eye only

2. Type of frame





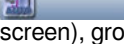
Four choices are possible.

-  Metal frame
-  Plastic frame
-  Optyl frame, for particularly flexible frames
-  Automatic detection




3. Tracing mode

-  Demo lens for Nylon® frame/Recut lens
-  Pattern
-  Demo lens for drilled frame/Recut lens
-  Automatic detection of the type of demo lens/pattern


4. Groove detection

-  The menu is displayed and selected by fault in the action bar.
 -  : Automatic detection, default setting (systematically carried out on the metal frames).
 -  : Groove detection never carried out
 -  : Groove detection carried out systematically
-  The menu is displayed and selected by fault in the action bar (not another possible choice on the work screen), groove detection will be carried out systematically and only on the metal frames.

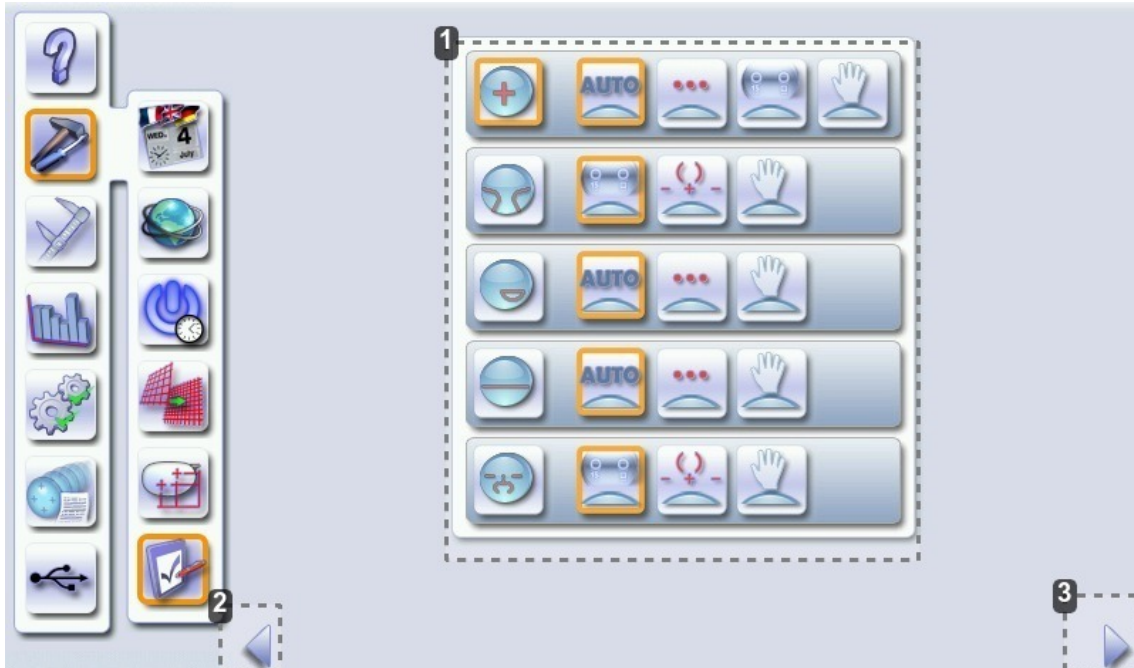
5. Feeler insertion

-  : insertion in the middle (default value),
-  : low insertion (up to 25% of frame height),
-  : high insertion (up to 75% of frame thickness),






6. Press to move to the next page

Press .

The following screen is displayed:




1. Type of lens

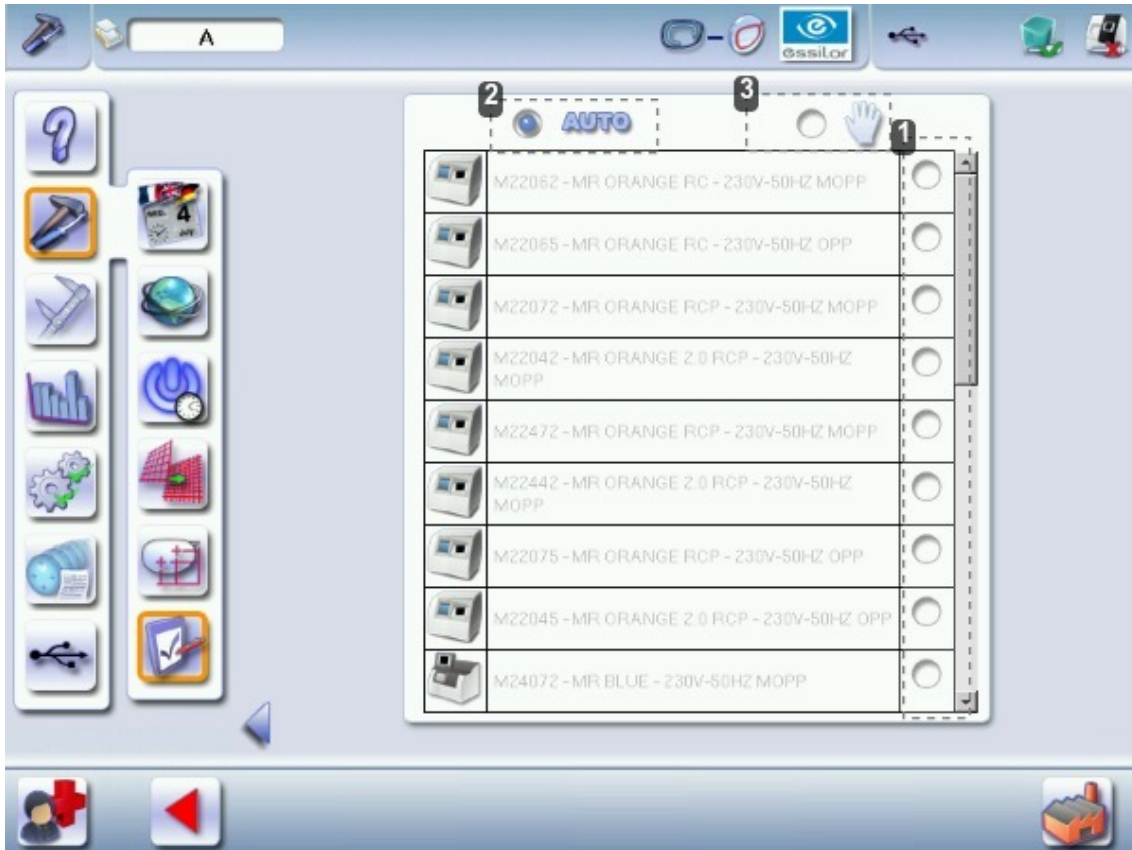
-  Single vision lens
-  Progressive lens
-  Bifocal lens
-  Executive lens
-  Mid-distance lens (Interview)

2. Press to go back to the first page

3. Press to move to the next page

Press .

The following screen is displayed:





1. *Associated edger*
Select the associated edger.
2. *Automatic connection*
3. *Manual connection*

Once the modifications are made, press  to go back to the work screen.

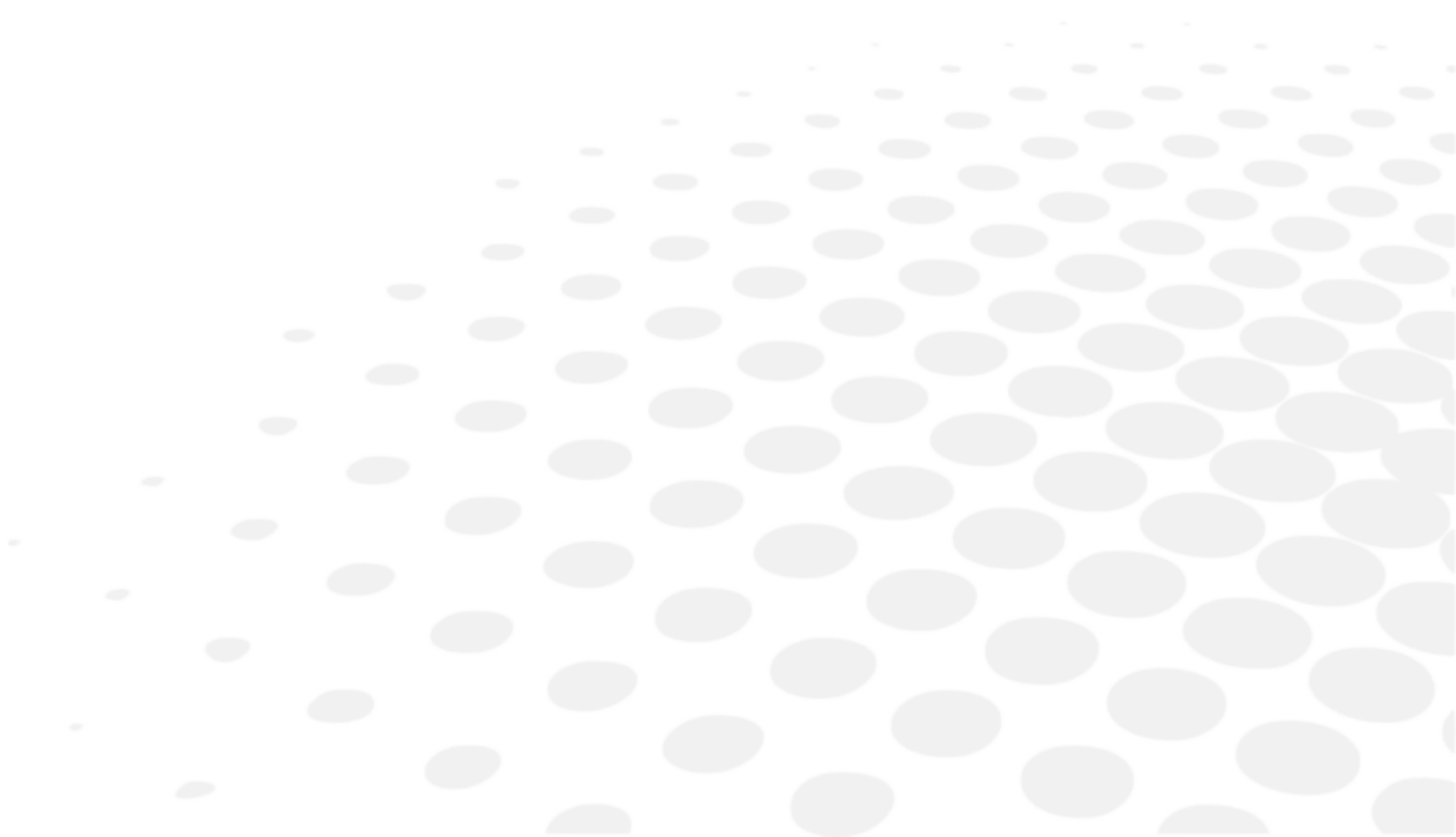
3. Restore the factory settings

At the bottom right of certain settings screens, the  button enables you to restore the page's factory settings.



- Press  to cancel and go back to the settings screen.
- Press  to confirm the reset.

VIII. MAINTENANCE & SERVICING



This chapter describes the maintenance procedures you can carry out on the tracer-centerer-blocker without the help of a technician.

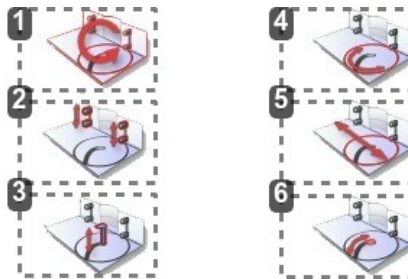
- Performing tracer auto-tests (p.121)
- Checking and calibrating the tracer (p.122)
- Making a backup of the jobs (p.127) *Ref. manquante* and the display configuration (p.127) *Ref. manquante* (p.127)
- “Remote control” Function (p.128)
- Viewing the statistics and technical history (jobs and actions carried out) (p.131)
- Maintain and clean the tracer (p.132)

1. Carrying out the autotests


This menu is used for auto-diagnosis of the tracer functions:


Tracing table

To test the operation of the tracing table, select  >  >  from your work screen.





1. Tracing table autotests
2. Clamps
3. Vertical movement of the feeler
4. Rotation of tracer core
5. Displacement of tracer core
6. Feeler movement




1. Select the autotest to be carried out.
2. Press  to start the test cycle.

You can press  to stop the cycle at any moment.

> The result is displayed on the right of the icon of the autotest carried out:

-  The equipment is operational.
-  A malfunction has been detected; a description is displayed in the message box on the right.

Centerer-blocker

To test the operation of the centerer-blocker, select  >  >  from your work screen.




1. Blocking arm autotests


Movements performed to test the operation of the blocking arm and clamps.

2. Vertical movement of the arm
3. Horizontal rotation of the arm
4. Rotation of the blocking head
5. Transfer of the blocking head
6. Opening and closing of the clamps

7. Optical autotests

Operations performed to test the operation of the centering function.

1. Select the autotest to be carried out.
2. Press  to start the test cycle.

You can press  to stop the cycle at any moment.

> The result is displayed on the right of the icon of the autotest carried out:

-  The equipment is operational.
-  A malfunction has been detected; a description is displayed in the message box on the right.




2. Checks and calibration

This section describes the procedures to follow if you notice mounting problems that may be due to tracing or centering operations.

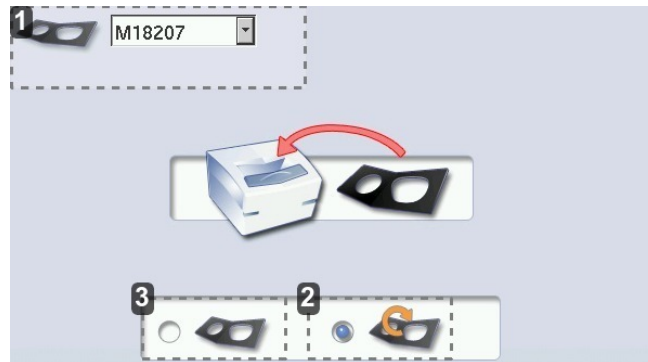
- Check the tracing table then calibrate it if required (p.122),
- Check the centerer-blocker then calibrate it if required (p.124)
- Calibrate the touch screen (p.125).

a. Checking and calibrating the tracing table

If you encounter mounting problems, you can check the calibration of the tracing table.


From the work screen of your tracer, select  >  > .


The following screen is displayed:






1. *Frame gauge reference*
2. *Calibration test*
3. *Calibration*


Calibration test

 Prerequisite: Before you start the calibration test, make sure that the reference of the frame gauge displayed on the screen is the same as that marked on the gauge.

- If it is not identical, press  to display the drop-down list: select the reference corresponding to the gauge.
- If none of the references match that marked on the gauge, contact the technical department.


- 1 Select .
- 2 Insert the pattern gauge in the tracing table.
- 3 Press  to start the test.
- 4 Wait: a timer  is displayed for a few minutes.

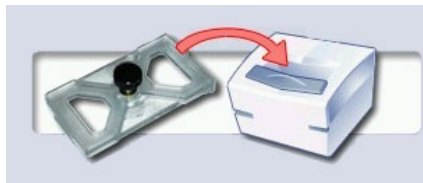
> The test is finished:

-  The test is successful: press  to go back to the work screen.
-  The test has failed: start a calibration cycle.

Calibration

This procedure must be followed if the above calibration test has failed.



- 1 Select  to start the cycle.
- > The image of the pattern holder is displayed:




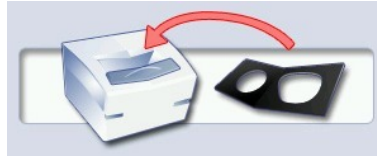
- 2 Attach the pattern gauge to the pattern holder then insert it into the tracing table.







The pattern gauge is considered a left lens. For more information on fixing the gauge on the pattern holder, refer to the section [Tracing > Tracing a pattern, a demo or re-cut lens > Mechanical tracing \(p.32\)](#).

- 3 Select  to start the cycle.
- 4 Wait: a timer  is displayed for a few minutes.

- > : The first calibration phase is finished.
- > The image of the frame gauge is displayed:




- 5 Insert the frame gauge in the tracing table.
 - 6 Close the jaws.
 - 7 Select  to start the cycle.
 - 8 Wait: a timer  is displayed for several minutes.
- > : The calibration is finished.

When the calibration is finished, you can restart the control cycle  to check it.






If the calibration fails, restart the cycle. If it fails again, contact the technical department.

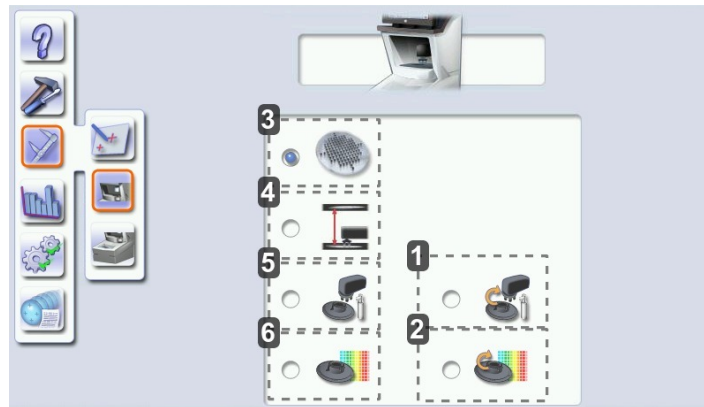
Press  to go back to the work screen.

b. Checking and calibrating the centerer-blocker







If you encounter problems with centering, blocking, or posiblock grasp or release, you can check the calibration of the centering chamber and blocking arm.

From the work screen of your tracer, select  >  > .



The following screen is displayed:









1. Checking the posiblock grasp





1. Place the calibration posiblock on the indexer.
2. Select the  test and press  to start the cycle.
 - > The blocking arm moves to grasp the calibration posiblock: it does a series of movements, coming into contact with the indexer several times.
 -  The test is successful: go to the next test.
 -  The test has failed: run the calibration cycles for the height under the lens  and the blocker .

2. Checking the posiblock release





1. Select the  test and press  to start the cycle.
 - > An information message is displayed.

2. Place the calibration posiblock in the blocking head.
3. Press  to confirm.
 - > The blocking arm does a series of movements above the Hartmann plate.
 -  The test is successful: press  to go back to the work screen.
 -  The test has failed: run the calibration cycles for the Hartmann plate  and centerer .






3. Calibrating the Hartmann plate

1. Select the calibration .
2. Press  to start the cycle.
3. Wait : the points of the plate light up.
 - > : The calibration is finished.






4. Calibrating the height under the lens

1. Select the calibration .
2. Press  to start the cycle.
3. Wait : the blocking arm performs a series of vertical movements to recalculate the height under the lens.
 - > : The calibration is finished.

5. Calibrate the blocker

1. Select the calibration .
2. Press  to start the cycle.
 - > An information message is displayed.
3. Place the calibration posiblock on the blocking head.
4. Press  to confirm.
5. Wait : the blocking arm performs a series of movements.
 - > : The calibration is finished.

6. Calibrate the centering device

1. Select the calibration .
2. Press  to start the cycle.
 - > An information message is displayed.
3. Place the calibration posiblock on the blocking head.
4. Press  to confirm.
5. Wait : the blocking arm performs a series of movements above the Hartmann plate.
 - > : The calibration is finished.

Once the calibration is finished, you can re-start the  and  test cycles to check it.



If the calibration fails, restart the cycle. If it fails again, contact the technical department.

c. Calibrating the touch screen







Calibrate the touch screen if your operations have become difficult due to lack of precision.



Touch screen malfunction

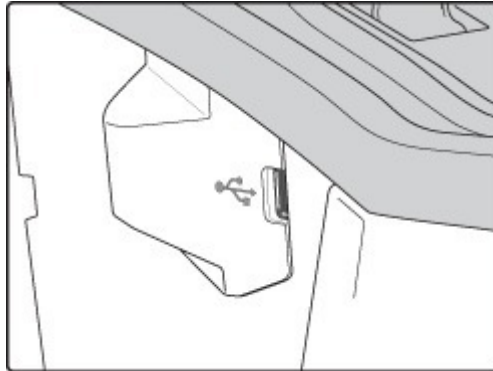
You can directly access the calibration screen without using the settings menu. To do this, press on the centering screen for 5 seconds.



Calibrating the touch screen

- 1 Select  >  >  in the work screen.
 - > A confirmation message is displayed:
 - Press  to start the calibration.
 - Press  to cancel and go back to the menu.
- 2 Point precisely on each cross as they are displayed, holding the stylus perpendicular to the screen so as not to alter the calibration.
 - > The settings menu is displayed automatically once the calibration is finished.
- 3 Press  to go back to the work screen.

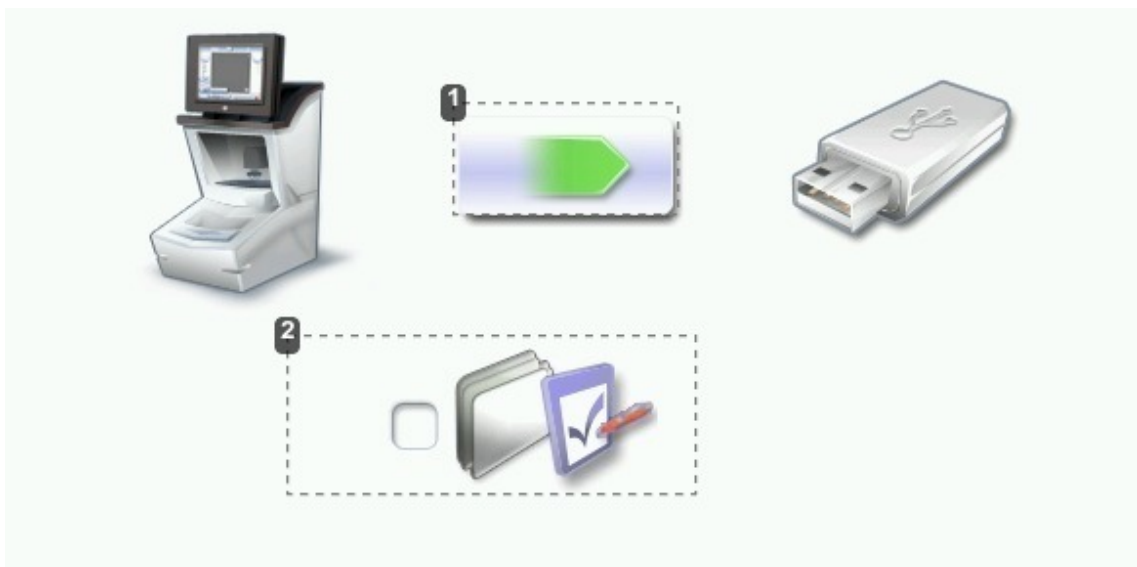
3. Make a backup of the jobs and the display configuration

- 1 Connect the backup USB key to the tracer.





- 2 From the work screen, select  > .

> The following screen is displayed:




1. *import/export data*
2. *Jobs and display customisation*

- 3 Press  to select the action to perform.

-  : perform a backup
-  : import a backup.

- 4 Click on to backup the customization of the tracer display: .

- 5 Press  to start the operation.

> Once the backup is performed, a file is created on the backup key:

Product number L14XXX - Product serial number XXXXXX- Optician- Date "XX/XX/XXXX"-Time "XXhXXmXXs"



Example: L14011-052141-Optician-14-08-2013_13h28m31s





It is advisable to backup your jobs regularly.


To import on the tracer:

- a previously created backup
- the jobs and configuration of another Mr. Blue 2.0 tracer.

1 Connect the backup USB key to the tracer.

2 From your work screen select  > .

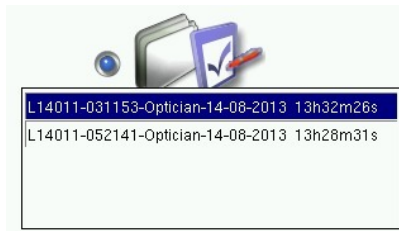
> The backup screen is displayed.


3 Press  to import the data present on the backup key.

4 Click on to import a display customization:



If several backups are present on the key, take care to choose the one you want to restore.
Check the product serial number and the date and time of backup.



5 Press  to start the operation.

> A message is displayed asking you to remove the USB key.

6 Remove the USB key.

> The product restarts with the selected configuration.

4. "Remote control" Function

As part of a maintenance operation, your technical correspondent can remotely control your machine.

Check the tracer's connection to the Internet

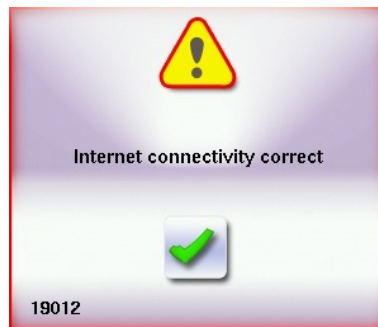
1 Press  >  >  > 

> The following screen will appear:




2 Press .

> The following message appears:



3 Press  to confirm.

 If Internet connection is not correct, contact your customer support.


Start a session of remote maintenance

1 Press .

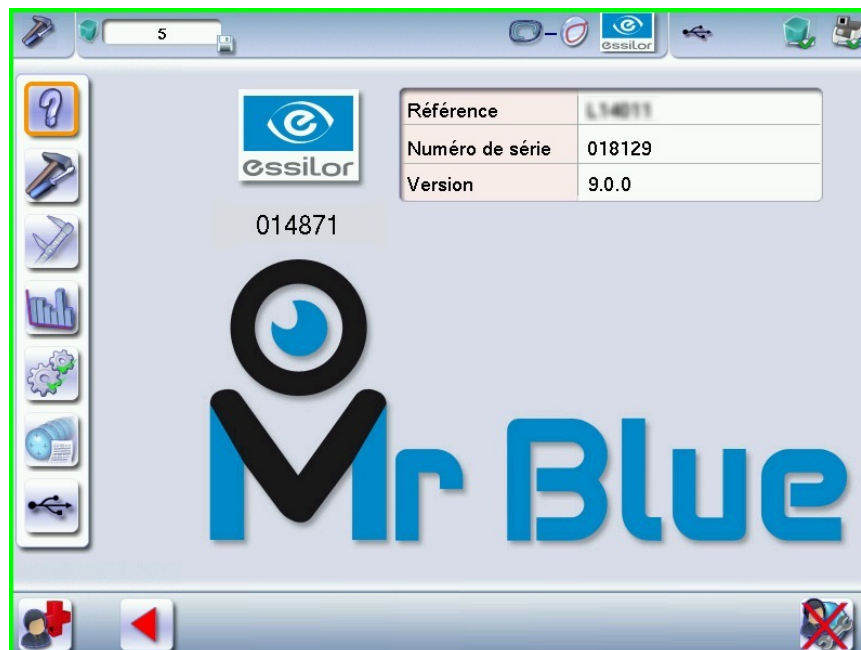
> The product page is displayed:




1. Product reference
2. Serial number
3. Memory version
4. Remote control


2 Press  to start the session of remote maintenance.


> The following screen will appear:



 A green frame appears around the screen.

3 Note the number which is displayed in the center of the screen and communicate it to your technical correspondent.

 Once the connection is established, a red frame appears around the screen.




4 Press  to end the session.

5. Statistics and technical log



This menu allows you to visualize the number of cycles performed by the tracer. It also gives you access to the technical history.

- Tracer cycles (p.131)
- Technical log and errors (p.131)

a. Tracer cycles

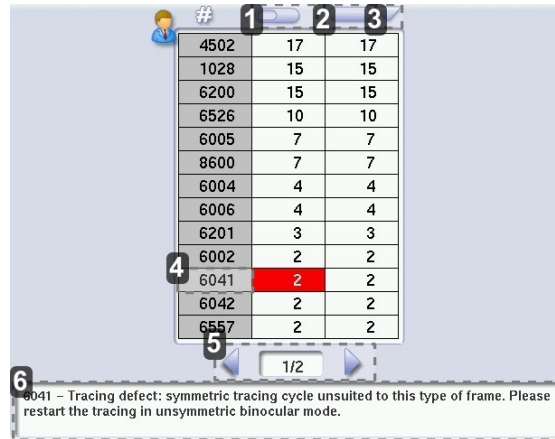
From the work screen, select  >  >  to view the number of cycles carried out by the tracer, the centerer and the blocker. The following screen is displayed:



- 1. Partial counter**
Number of actions performed since the last reset to zero.
- 2. Total counter**
Total number of actions performed.
- 3. Mechanical tracings**
 Total number of mechanical tracings
- 4. Traced frame materials**
The optyl frame tracing cycles are recorded in the tracing cycles of plastic frames.
- 5. Optical tracings**
- 6. Tracing table tests and calibrations**
- 7. Reset**
You can reset a partial counter to zero:
 1. Select the cycle counter to reset to zero.
 2. Press  to reset it to zero.
- 8. Next page/Previous page**
- 9. Centering operations**
- 10. Blocking operations**
- 11. Calibrations**

b. Technical history and errors

In the work screen of your tracer or edger, select  >  >  to access the list of error messages. The following screen is displayed:




#		
4502	17	17
1028	15	15
6200	15	15
6526	10	10
6005	7	7
8600	7	7
6004	4	4
6006	4	4
6201	3	3
6002	2	2
6041	2	2
6042	2	2
6557	2	2

6041 - Tracing defect: symmetric tracing cycle unsuited to this type of frame. Please restart the tracing in unsymmetric binocular mode.

1. Partial counter



Number of error messages displayed since the last reset to zero.

You can sort the error codes generated by the machine by frequency of appearance.

Sorting is applied to the partial counters by pressing  , a second button  is used to define the direction of the sorting (ascending, descending).

2. Total counter

You can sort the error codes generated by the machine by frequency of appearance.

Sorting is applied to the total counters by pressing  , a second button  is used to define the direction of the sorting (ascending, descending).

3. Sorting

Button used to define the direction of sorting (ascending, descending).


4. Error message codes

Classed by display frequency.

5. Error message pages

6. Description of selected error

Use the scroll box on the right of the message box to scroll through the text.

Press  to go back to the work screen.

6. Maintain and clean the tracer-centerer-blocker

This section describes tracer maintenance and cleaning procedures:

- Precautions required (p.132)
- Clean the protective glass of the Hartmann plate (p.133)
- Change the roll of pads (p.133)

a. Precautions required



To avoid any incidents, unplug the device before all cleaning operation.

- Clean the tracer covers regularly: use a neutral detergent (e.g. washing-up liquid) diluted with water on a soft cloth.
- Clean the window of the centering chamber regularly with a dry soft cloth.
- Clean the touch screens with a dry cloth: they must never come into contact with liquids (e.g. water, alcohol, window cleaner).
- Use protective covers on the machines and keep them dust-free as dust alters the precision and operation of the machine.



- Do not touch the lens on the optical block as this could affect the performance of the tracer.
- Never clean the tracer with chemical products (e.g. petrol, thinners, solvents).
- Never clean the machine elements (feeler, tracing table) with a wet rag.

b. Cleaning the protective glass of the Hartmann plate



A dirty or scratched protective glass may cause tracing and centering defects. Replace it as soon as it is scratched in the center. For further information, contact the technical department.

- 1 Put your hand on the glass and slide it out using the recess (back right-hand side).
- 2 Clean the glass with a soft cloth, taking care not to scratch it.
- 3 Put the glass back in place.



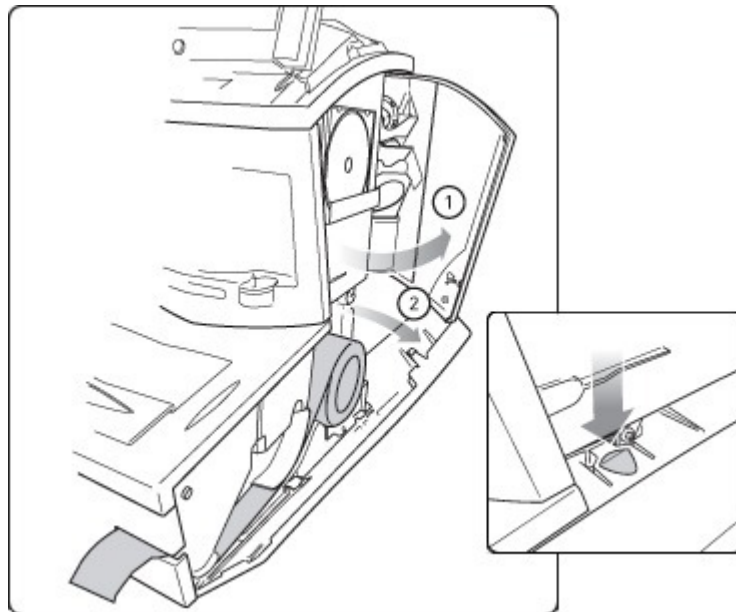
Gently lift the lens clamps if you find it difficult to insert the glass.

> The glass is now clean.

c. Change the roll of pads

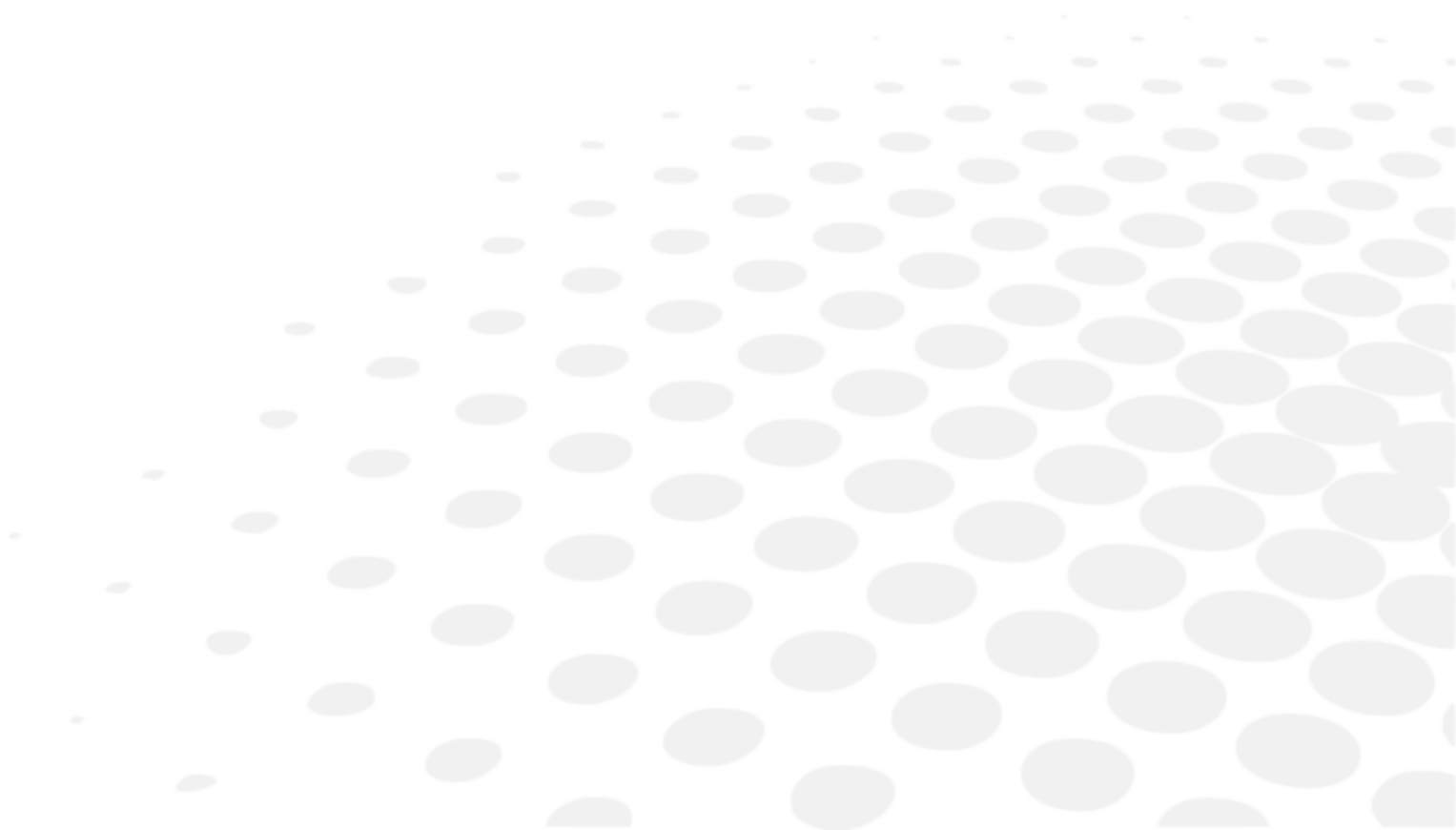
To order new rolls of Essilor pads suited to your digital system, contact the technical department or the sales department.

- 1 Open the accessory hatch.
- 2 Press with your thumb on the grey dot, place your fingers under the groove and pull to open the roll compartment.



- 3 Replace the empty roll with a new one by unrolling about 40 cm of tape and feeding it through the channel then out the slit.
- 4 Close the roll compartment, then the accessory hatch.

IX. M'EYE SIGN AND M'EYE TOUCH



This section describes the operation of the tracer relating to:

- the M'EYE Sign function (function engraving), *Ref. manquante*
- the M'EYE Touch function (creative distortion). *Ref. manquante*

✓ Necessary tools before using M'EYE Sign:

1. a Mr Blue 2.0 chain (V8.1 minimum and/or higher version),
2. Essibox:
 - equipped with the 5.1 (minimum) memory version,
 - with "Centered Essibox" setup.



For engraving function training, a tutorial is available on the "MEYE Sign" USB key, which is in the box.

1. The "engraving" function on the tracer-centerer-blocker

For further information, refer to the documentation included on the USB key supplied with your pack, or refer to the Essibox on-line guide.

Once the shape with the engravings of Essibox is received, the following functions are available:

- centering
- saving the shape in the shape management screen
- sending of a shape to Essibox
- blocking

For further information, refer to the procedures concerning each function.



The "drilling" and "shape modification" functions are not available on a job involving an engraving (the icons are grayed on centering page).

2. Using the "creative distortion" function on the tracer-centerer-blocker

For further information, refer to the documentation included on the USB key supplied with your pack, or refer to the Essibox on-line guide.

To create your own shapes, you can:

- use the pre-cut patterns supplied in the pack and do an optical tracing
- cut out your own patterns using your imagination and do an optical tracing
- use the software available on Essibox via the function "Job management" and its "M'EYE Touch" library.

Once the creative shape is read on the tracer-centerer-blocker or delivered from your Essibox, it is processed like any other type of shape. The following functions are thus available:

- Centering
- Shape modification
- Drilling
- Saving the shape in the shape management screen
- Sending of a shape to Essibox
- Blocking

For further information, refer to the procedures concerning each function.






For the edging of certain shapes, the use of accessory 18/14 can be mandatory.

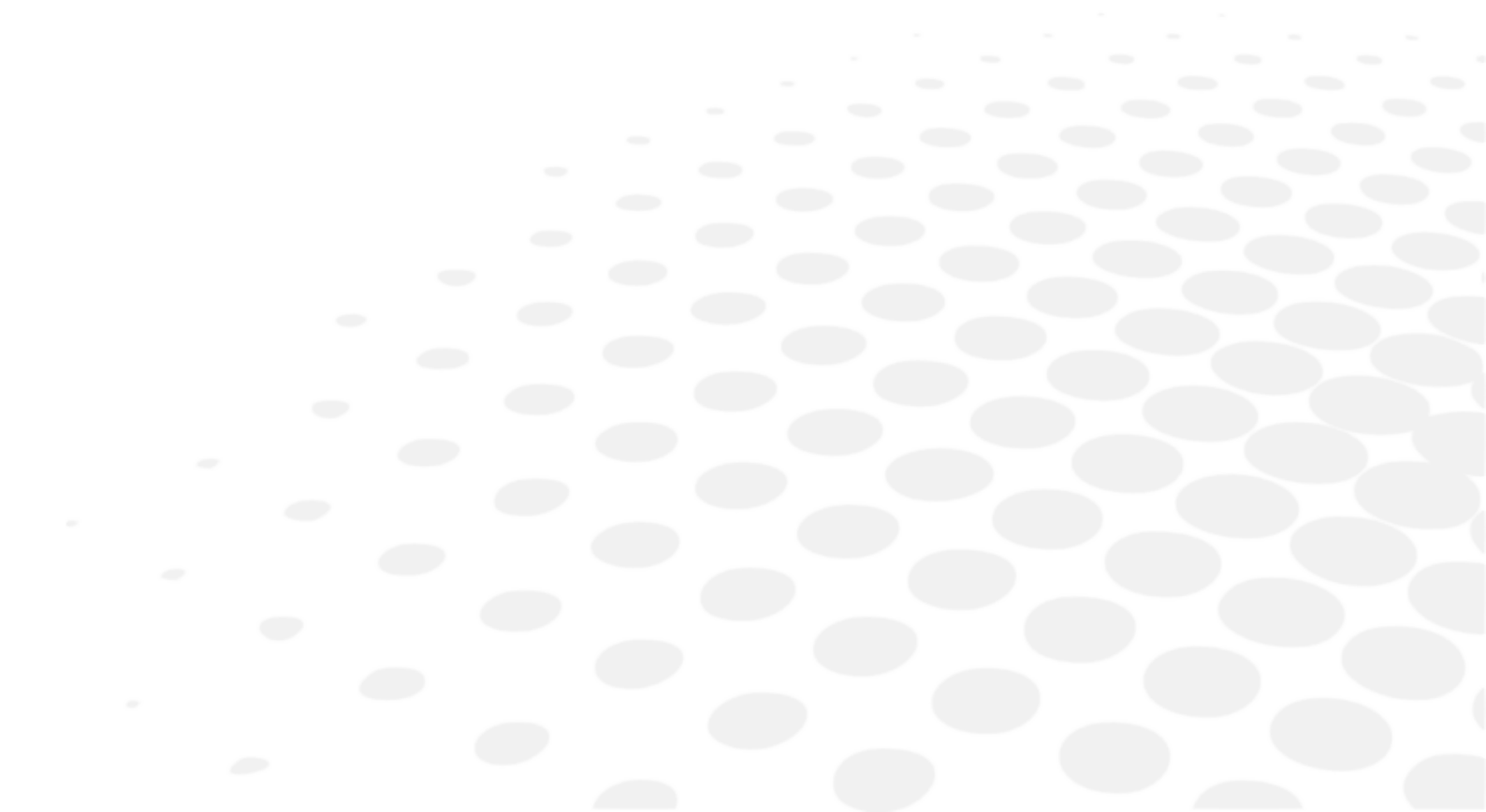


It is possible to encounter incompatibility between the desired shape and the functional limits of the edger. In this case contact your correspondent.

The following indicators are displayed to indicate that the shape scanned is a creative shape:

-  Centering screen indicator for creative shapes
-  Shape modification screen indicator for creative shapes
-  Drilling screen indicator for creative shapes

TECHNICAL DATA



- Tracer-centerer-blocker (p.140)
- Environment (p.141)

Tracer-centerer-blocker

Centering-blocking mode: boxing center (passive)

Automatic initialization

Automatic centering of the frame

Automatic insertion of the feeler

Frame dimension limits (for tracing and shape modification):

- B-dimension: minimum of 18.5 mm (pattern: 17 mm) | maximum of 58 mm
- A-dimension: minimum of 28 mm | maximum of 68 mm
- Z-height: maximum of 30 mm in binocular | 40 mm in monocular
- Frame thickness: minimum of 1.45 mm | maximum of 17 mm

Mechanical tracing:

- Frame tracing in 3 dimensions
- Tracing of patterns, demo lenses and recut lenses in 2 dimensions
- High-precision tracing with groove capture (metal frame)
- Automatic binocular tracing (automatic RE/LE transfer)
- Symmetric binocular tracing
- Asymmetric binocular tracing
- High-base frame tracing
- Automatic detection of frame material
- Automatic measurement of the D-dimension of the frame in binocular tracing
- Automatic measurement of frame thickness

Optical tracing:

- Tracing of patterns and demo lenses in 2 dimensions
- Automatic tracing of patterns, demo lenses and recut lenses
- Pre-positioning of drilling points and their parameters on a demo lens or recut lens
- Recut lens: equivalent sphere [-1 D; +1 D]

Automatic centering:

- Single vision lenses: management of lenses [-20 D; +20 D]; measurement of sphere and cylinder [-6 D; +6 D] and cylinder axis; display of power: 0.12 D or 0.25 D; detection of focimeter dots
- Progressive lenses: management of lenses [-10 D and +10D]; measurement of sphere and cylinder [-3 D and +3 D]; detection of re-marked micro-engravings or manufacturer markings; measurement of FV sphere and cylinder within the range [-6; +6, including cylinder 2.50 D]; measurement of addition [0.75 D; 3.75 D]
- Bifocal lenses: management of lenses [-10 D and +10 D]; measurement of sphere and cylinder [-3 D and +3 D]; detection of curved segments and D-segments:
- Executive lenses: FV or NV centering; detection of segment axis
- Mid-distance lenses
- Round or elliptical lenses

2-track optical video system: without parallax

Magnification: 1.59

Input of mounting data (steps of 0.5 mm):

- PD: 1/2 PD, ΔX
- Boxing height, Datum height, ΔY

Specific centering target for each type of lens: single vision, bifocal, progressive, executive, mid-distance

Pantoscopic angle: 5 to 25°

Display steps:

- Sphere power in diopters: 0.125 D or 0.250 D
- Cylinder power in diopters: 0.125 D or 0.250 D
- Cylinder angle: 1° or 5°

Shape modification:

- Scaling, A-dimension, B-dimension, 1/2 A-dimension, 1/2 B-dimension, D-dimension modification in one point, rotation
- Creative modification via the touch screen

- Retouch
- Modification by steps of 1 mm or 0.5 mm

Display of Precal dimensions

Toolbar customization

Electrical blocking command with pressure control

Networking possibility:

- Tracers-centerers-blockers
- Edgers
- PC
- Essibox

RS232C and RJ45 ports

Memory update via USB key, external Essilor key or via the Essibox system

Integrated auto-maintenance functions (self-calibration, autotests)

Size of colour touch screen: 10 inches

Dimensions: L 320, D 520, H 700 mm

Weight: 25 kg

Power supply: 230 V – 50/60 Hz, or 115 V – 50/60 Hz

Power consumption: 250 W



Due to constant improvements, these specifications may be modified without prior notice.

Environment

Your machine should preferably be installed on a perfectly flat and stable work surface of suitable height (about 70 cm), free from shocks and vibrations, to benefit from the high accuracy of your tracer-centerer-blocker. Your tracer may be installed on the right or left of your edger. The tracer may be installed up to 5 m away from the edger (a 5 m cable is supplied with the edger). Longer cables are also available on an optional basis.

The temperature and the humidity of the room where you use your machine must be within the following ranges of values:

Operation:

- temperature between +10 °C and +40 °C
- Humidity: between 30% and 75%

Storage:

- temperature between -5 °C and 50 °C
- Humidity: between 25% and 95%

Altitude: < 2,000 m

Level of pollution: 2

Avoid sudden changes in temperature and humidity and install your system:

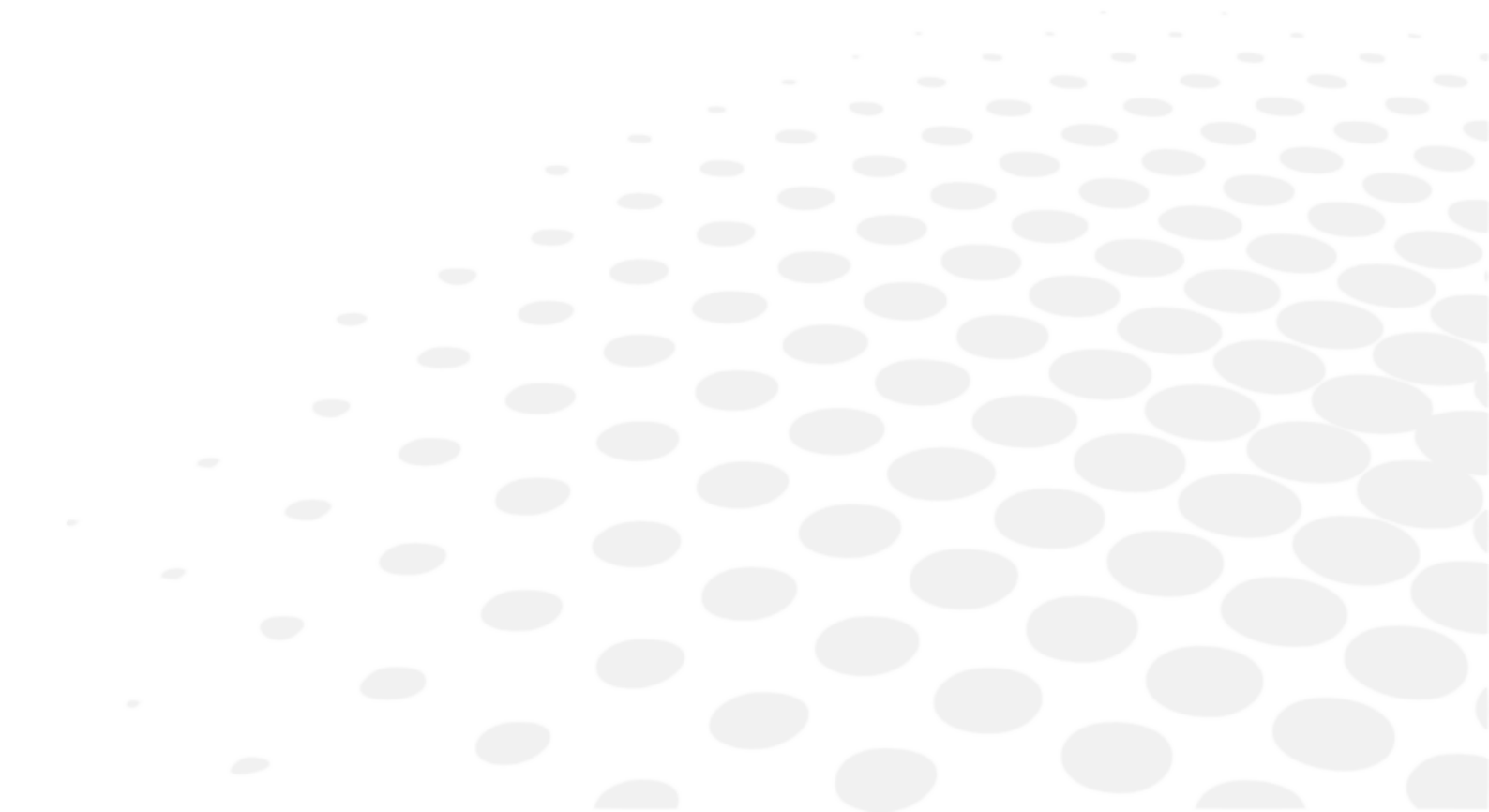
- in an area not directly exposed to sunlight
- away from all heat sources
- away from all strong magnetic fields
- away from all chemical products, corrosive vapours and liquids

Take care not to block the vents and to leave enough space above the device. Do not place any object on the device. Avoid exposing the device to vibrations or shocks.






The back of your machine must be at least 20 cm away from a wall.







GENERAL INFORMATION



- Description of the symbols (p.144)
- Modifications (p.144)
- Compliance (p.144)
- Copyright (p.144)
- Materials and products (p.144)
- Security (p.145)
- Electromagnetic waves (p.145)
- License agreement for M'EYE Sign™ (Engraving) software (p.145)

Symbols


SYMBOLS PRESENT ON THE DIGITAL SYSTEM	
O	Off (power)
I	On (power)
	D.C. current
	Caution: risk of electric shock
	Caution: danger, refer to the user manual


SYMBOLS PRESENT IN THE DOCUMENT	
	Danger: risk of injury
	Caution: risk of damage for the machine or the lens
	Note: additional information
	Tip: practical advice for use
	Glossary: indicates a word defined in the glossary
	See also: indicates the page number to consult for further information

Modifications

The information contained in this document is non-contractual and provided as a guide. It is subject to change without prior notice. Errors or omissions may occur in this type of document, although the greatest care has been taken to ensure the accuracy of the information provided. Essilor cannot be held responsible for any malfunction or loss of data resulting from such errors or omissions.

Declaration of conformity

Complies with marking: 

EurAsia Conformity : 

Complies with ISO 16284 standards, IEC 61010-1 and IEC 61326-1 and with directives 200/42/CE, 2014/30/UE, 2014/35/UE.

This equipment complies with the limits imposed by Part 15 of the FCC rule. Its use meets the following conditions: (1) this device must not cause interference and (2) must accept interference from external sources, notably that liable to cause malfunctions.

In accordance with the requirements of FCC rules, any modification made to this equipment which is not expressly approved by ESSILOR INTERNATIONAL would nullify the user's right to use this device.

This equipment has been tested and is deemed compliant with the limits imposed for Class-B digital devices according to Part 15 of the FCC rule. Those limits are set so as to ensure reasonable protection against interference in a residential environment. This equipment generates, uses and may emit radiofrequency energy liable to interfere with radio communications if the device is not installed and used in strict compliance with manufacturer instructions. However, nothing guarantees the absence of interference under particular conditions. If this equipment is the source of interference with radio or television reception (this can be confirmed by switching off the device then turning it back on), the user may be able to eliminate this interference through one or more of the following measures:

- Swivel or move the affected receiver or its receiving antenna;
- Move the device away from the affected receiver;
- Connect the device to a different circuit to that powering the affected receiver;
- Request help from the retailer or a qualified radio / television technician.

Copyright

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Materials and products

Do not place this machine in a dusty environment, in a room where the temperature is too high or too low, or in a wet place.

Safety instructions:

All mechanical or electronic adjustments and electrical maintenance must be carried out by a customer service technician approved by Essilor.

The use of an accessory or a cable other than those recommended in this manual can be dangerous for users.

Keep the power cables and the solenoid valve/pump cables away from sources of heat, sharp objects and grease.

Check the power cable regularly; if damaged, have it replaced by an approved repairer.

Do not use your system in any way other than described in this document. Otherwise, the protection provided by the device could be compromised.

Never try to modify or dismantle this product yourself. In addition to the fact that you are likely to damage the instrument, you can also injure yourself.

Your digital system must be carefully maintained, in accordance with the instructions detailed in this document.

Your system is an electrical appliance compliant with the applicable safety standards. In the event of malfunction, repairs must be carried out by qualified personnel approved by Essilor. Otherwise, user safety is likely to be compromised.

In the event of a long period of non-use and before maintenance and/or replacement of certain accessories, you must unplug your system from the mains.

The equipment must be plugged into an earthed power supply. The earth connection must comply with public standards and be checked by a technician. Avoid using extension cables or adaptors which could create a poor contact.

Never pull on the cables to unplug them from the power socket.

Before connecting your digital system to the mains, ensure that the switch is set to OFF or 0.

If the switch no longer operates ON/OFF (0/1) you must stop using your digital system. Defective switches must be replaced by an approved repairer.

Your system is a professional tool which must only be used by specialized, responsible operators. It must not be used by anyone apart from these operators.

This machine is neither adapted nor intended to operate in an environment where there is a risk of explosion. Do not use this system in the presence of liquids or flammable gases.

Make sure that the equipment is connected to a mains supply which complies with standard NFC 15-100. In addition, make sure that the plug type is 3-pin 10/16 A (earthed) protected by a high sensitivity differential circuit-breaker, maximum 30 mA, and that the wall outlet is easy to access.

It is strongly advised to wear gloves to protect your hands when you empty the tank to clean it.

Electromagnetic waves

Electromagnetic waves emitted by television sets or radios, mobile phones, radio transmitters, etc. are liable to cause malfunctions in the instrument. This instrument is also liable to interfere with television sets or radios, mobile phones, radio transmitters, etc. Avoid installing or positioning devices which may create interference near the instrument. Likewise, never place the instrument on or near this type of device. This could generate malfunctions or faults in the instrument.

Interference and micro-outages

The products have been designed to withstand interference and operate despite its presence and the possibility of micro-outages on the network.

However, if these malfunctions are too serious and abnormal, the machine cannot be guaranteed to operate normally.

License agreement for M'EYE Sign™ (Engraving) software

Please read this licence agreement closely before using the m'eye sign™ software, by using this software, you acknowledge being bound by the terms of this licence, unless otherwise agreed. If you disagree with the terms of this license, do not use the software.

General information

Essilor International (hereafter called "Essilor") grants you a license for use of its M'Eye Sign™ software exclusively for the use set out in these terms and conditions. Essilor reserves all rights which are not expressly granted to you. Rights granted by the terms of this license and its updated version (available at the following address: <http://www.mleiyceesnicgen.com/fr>), apply to possible software updates used to replace and/or complete and/or correct the original M'Eye Sign™ software (hereafter "Software"), unless these updates have a separate license.

You acknowledge having been informed that the installation of the M'Eye Sign™ software requires an internet connection. Essilor does not guarantee that the connection will be uninterrupted and does not guarantee that it will work or the quality of the connection.

Accepted use of the Software and restrictions

- A. Subject to the conditions set forth herein, Essilor grants you a personal, non-exclusive, non-transferable license to use the Software for purposes of engraving eligible lenses. The Software must be used exclusively for your professional activity as an optician to enable you to engrave your customers' lenses, in strict compliance with standards and applicable regulations, especially with respect to the field of vision.
- B. You can neither rent, nor lease, nor lend, nor redistribute, nor grant licenses to the Software.
- C. You are not authorized, and you agree not to authorize a third party: to copy the Software, nor to decompile it, nor to change the programming, to dismantle it, to attempt to derive the source code from it, to decrypt it, to modify it or to create derived products from it (unless these restrictions are prohibited by current legislation). Failure to comply with any of these conditions constitutes a violation of Essilor's rights.
- D. The Software contains an existing image database, property of Essilor or free of copyright, as well as an alphabet allowing words to be engraved on the lenses. In no case may the Software be used to reproduce words, initials, signs, logos, fonts, images or other creations protected by copyright or other intellectual property rights belonging to a third party, without valid authorization from the third party.
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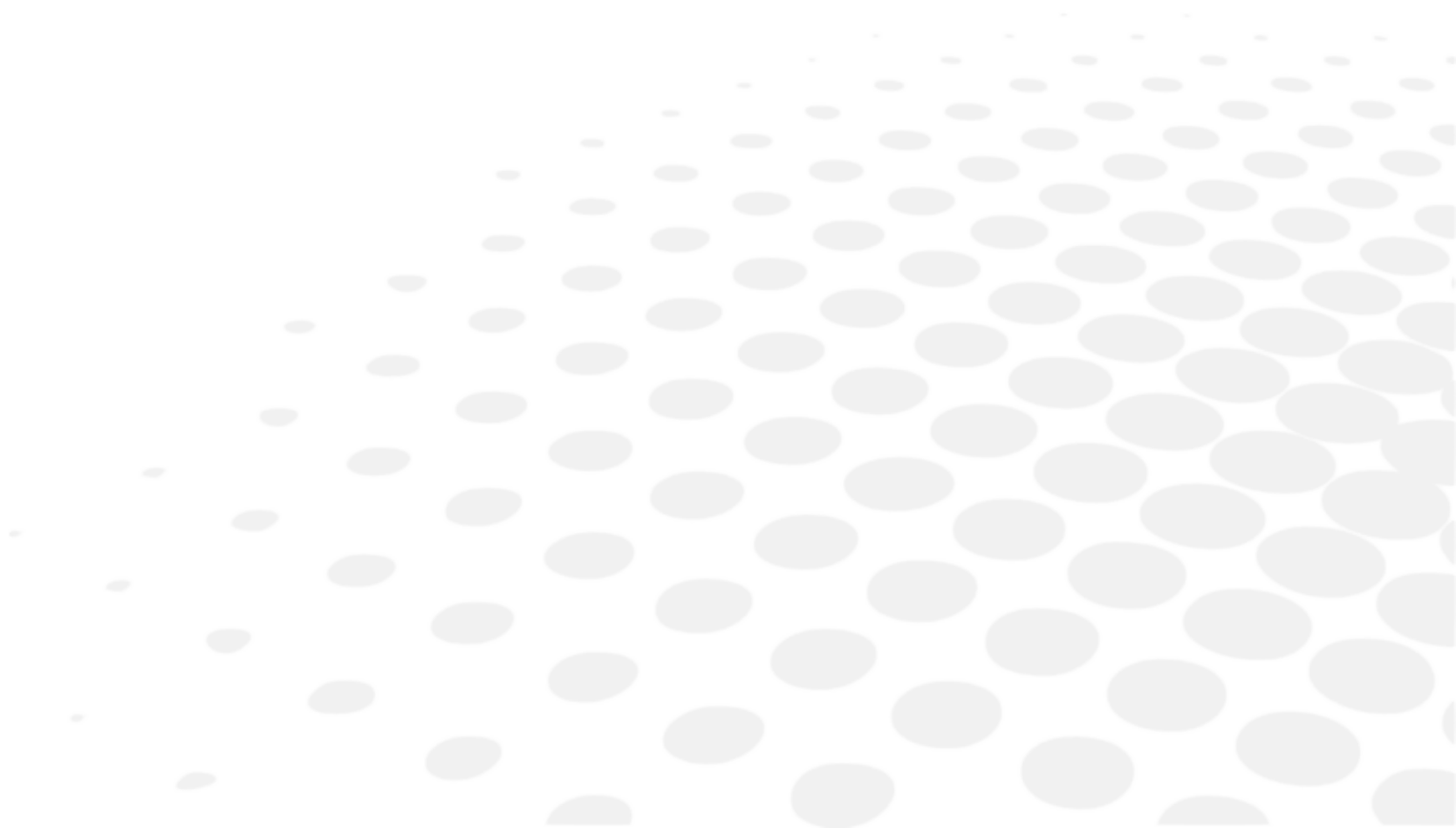
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Entirety of the agreement; authentic language

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GLOSSARY



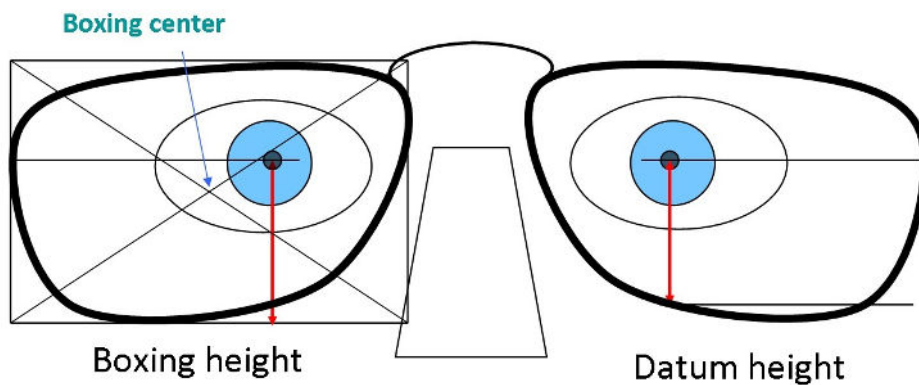
ASYMMETRIC BINOCULAR TRACING

The two circles of frame are read as if they have different shapes; the perimeters and the shapes are preserved.

BOXING DIMENSIONS

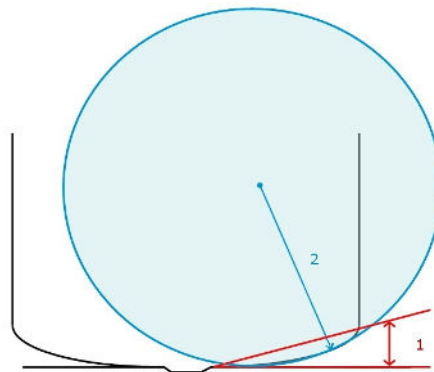
The boxing system is a standard method to indicate the dimensions of frame contours (or gauges). This operation consists in fitting the frame into a rectangle whose dimensions are indicated.

- Boxing center: geometric center of the rectangle
- Boxing axis: horizontal axis of the frame passing through the boxing center
- A-dimension: length of the rectangle
- B-dimension: height of the rectangle
- D-dimension: nominal nose (DBL)
- E-dimension: greatest radius from the boxing center
- Boxing height: calculated from the tangent line at the bottom of the frame



CURVE ANGLE AND FRAME BASE

1. Curve angle: relative parameter formed between the median plane of each frame rim and the general plane of the frame. It is used to compute the decentration necessary for curved corrective lenses. The curve angle is expressed in degrees.
2. Frame base: parameter corresponding to the radius of the sphere going through the maximum number of points traced on the circle. It allows a better correspondence between lens bases (bevel) and the frame. Frame base is expressed in dioptres.



EXECUTIVE LENS

Type of bifocal lens with two full fields: one which corrects far vision defects and one which corrects near vision defects. They are available in two models:

- separation line present on the front surface of the lens
- separation line present on the rear surface of the lens
- Example of lenses of this type: Telex lenses™

ID

The (ID) identifier of job is composed of alphanumeric in the list of jobs and of numbers in the list of the collections. It is unique.

JOB

All of the actions to be carried out together on the tracer and the edger to manufacture a pair of glasses. It is recorded in the shape management screen under a specific identifier.

MID-DISTANCE LENS

Type of lens intended for near vision but with a greater depth of field (e.g. Interview lenses™).

OPTYL

High flexibility plastic material used for certain frames.

PRECALIBRATED LENS

Precalibration ensures that the lenses are suited to the characteristics of the frame and wearer.

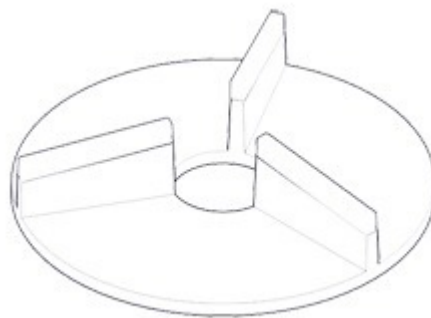
Example: Precal lenses™

PROGRESSIVE LENS

Type of lens whose power varies gradually between the far vision for the upper part of the lens and the near vision for the lower part, without optical rupture or unaesthetic line.

RECUT LENS TRIPOD

Specific tripod to center recut lenses or the small lenses.



REFRACTIVE INDEX

Characterizes the refractive power of a transparent optical material.

The indices vary according to the materials used for the lenses:

- Plastic lens: 1.5
- Polycarbonate lens: 1.59
- Medium or High Index lens: > 1.5
- Trivex™ lens: 1.5 to 1.6
- Tribrid™ lens: 1.6
- Glass lens: 1.5 to 1.9

SINGLE VISION LENS

Type of single vision lens correcting amétropies. The power of the lens is the same over all its surface.

SYMMETRIC BINOCULAR TRACING

The shape of the right circle of frame is applied symmetrically to the left circle; the traced perimeters are preserved.

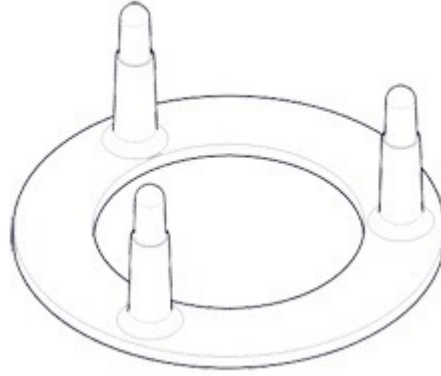
TRIFOCAUX BIFOCAL LENSES/

Type of lens with distinct correction areas:

- the upper part of the lens is used for far vision.
- the lower part of the lens is used for the near vision.

TRIPOD FOR HIGH-BASE LENSES

Specific tripod to center high-base lenses





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