PROB 300

ESSILOR INSTRUMENTS

User Manual

Contents

INTRODUCTION

To take full advantage of the features of your Pro-B 300 tracer-centerer-blocker or centerer-blocker, we strongly recommend that you read the documentation.

I. First steps

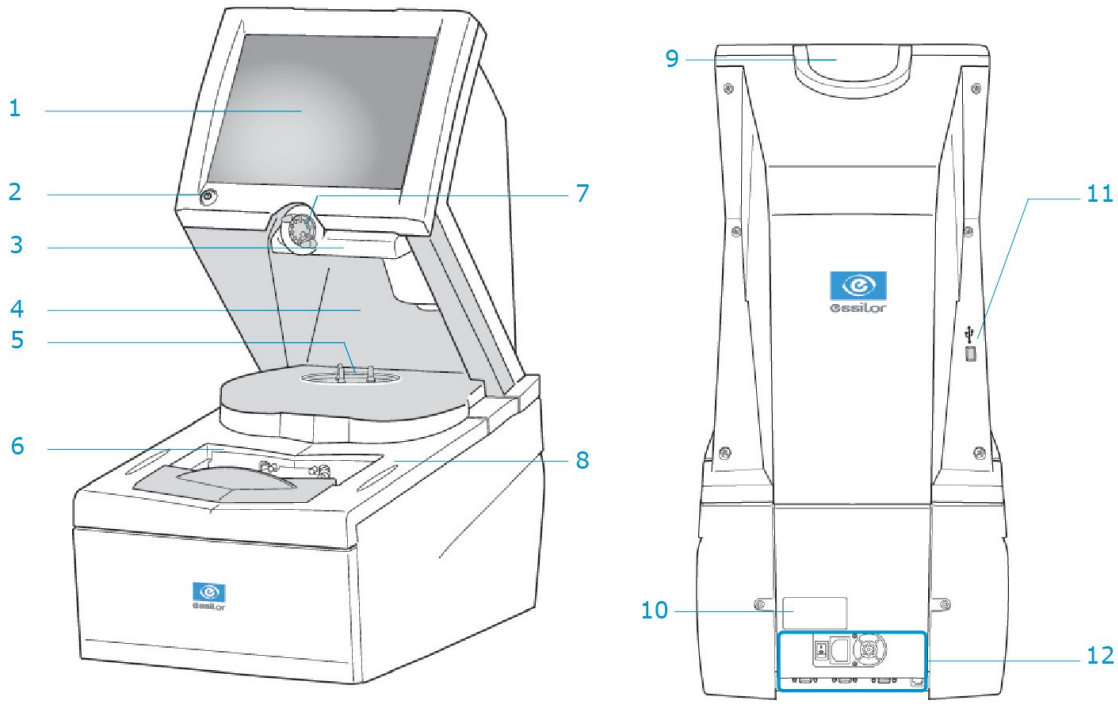
This chapter contains all the information about first using the tracer-centerer-blocker/blocker:

- Description of the tracer-centerer-blocker and center-blocker (☞ p.10)
- Using the device (☞ p.12)

1. Descriptive diagrams

This section contains descriptions and a list of accessories for the tracer-centerer-blocker and centerer-blocker.

Tracer-centerer-blocker



1. *Screen*

2. *ON/OFF button*

3. *Blocking arm*

4. *Centering chamber*

5. *Tripod*

6. *Tracing table (according to version)*

7. *Blocking head*

8. *Stylus rest*

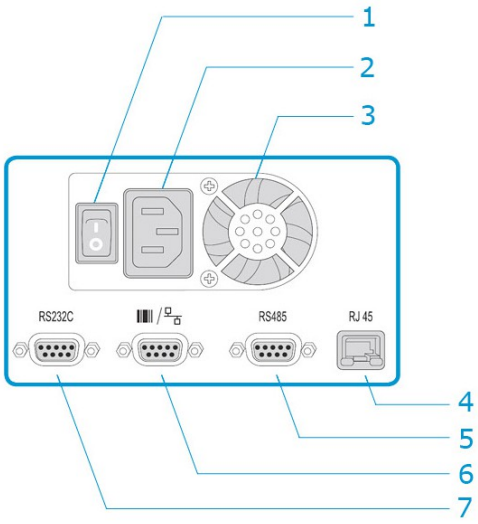
9. *Tripod rest*

10. *Manufacturer plate*

11. *USB port*

12. *Connectors*

Connectors



1. *Main switch*

2. *Power socket*

3. *Fan*

4. *Ethernet port*

5. *RS485 port*

6. *Barcode reader port*

7. *Serial port*

"Tracer-Centerer-Blocker" and blocker accessories

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

Use accessories

- Stylus
- Standard tripod
- High-base tripod
- Recut accessory
- Small B-dimension wedges (quantity 2)
- White felt tip marker
- Roll of 22 mm pads
- Roll of 18x14 mm pads

Maintenance accessories

- Calibration posiblock
- **Pro-B 300 specific metal pattern gauge with table**
- **Pro-B 300 specific frame gauge (Black, Numbered) with Table**

- **Pro-B 300 specific calibration gauge data USB Key with Table**

Options

- Barcode reader
- Roll of barcode labels
- Start Pedal

Connection accessories

- 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 device on (☞ p.12) and off (☞ p.12)
- The use of the touch screen and the keyboards, (☞ p.13)
- The description of the tracer work screen (☞ p.14).

a. Turning on device

1 Before the device is turned on, make sure the tracing table is empty (depending on the version).

2 To switch on the tracer, press the main switch located at the rear of the machine.

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

> The device is initialized.

> A beep indicates that the initialization was successful.

b. Turn off the device

1 Briefly press on the ON/OFF  buttons located under the touch screen or press  /, then  .

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

> A confirmation message is displayed on each screen.

2 Press  to confirm.

> The device turns off.

Extended period of non-use

For an extended period of non-use (a few days), it is best to turn off the device using the main switch.

c. Using the touch screen and keypads

Using the touch screen

Use the styli supplied with the machine to use the touch screens.

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 reaction area does not correspond to the position of the key, you need to calibrate the touch screen. For further information, refer to the section Maintenance and servicing > Check and calibrate > Calibrate the touch screen (☞ p.121).

- 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 each screen, press the icon-buttons to access the desired menus and functions.

Using the keypads

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

- The numeric keypad is displayed for entering values.

- Reset the fields
- Go back
- Confirm
- Cancel and go back to the work screen

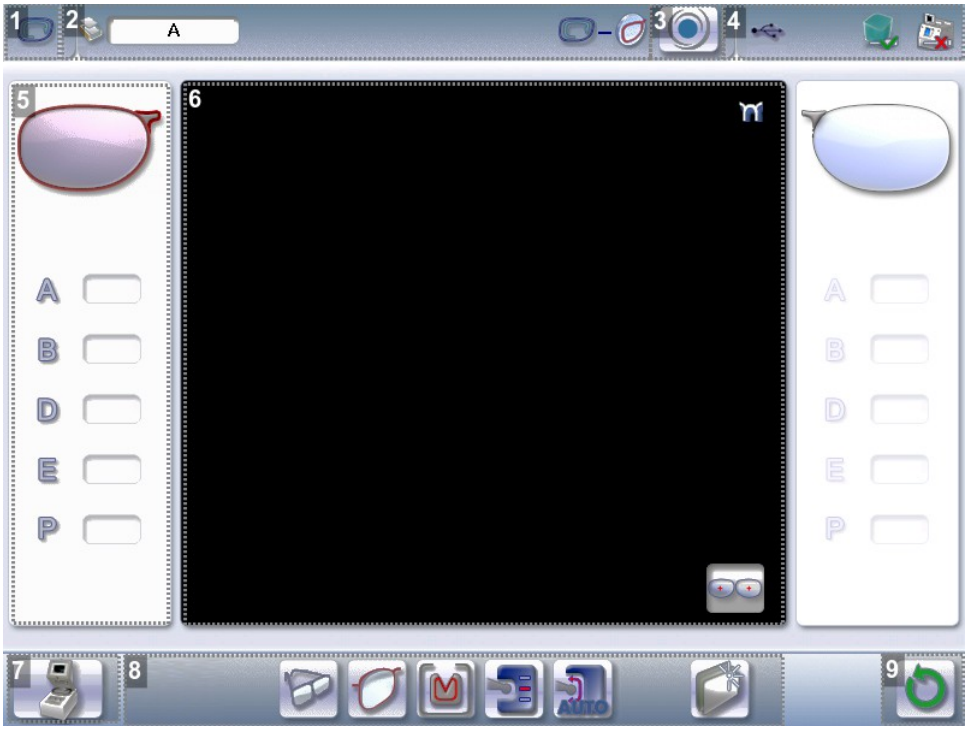
- The alphanumeric keypad is displayed to save or search for jobs.

- Job ID
- Job reference (alphanumeric characters)
- Job list
- Collection list

d. Tracing screen

Tracer-centerer-blocker

Main menus on the tracer-centerer-blocker screen:



1. *Work screen indicator*
2. *Job information*
3. *Settings*
4. *Connected devices*

5. *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 on the right of the screen relates to the left eye.

6. *Work area*

7. *Function buttons*

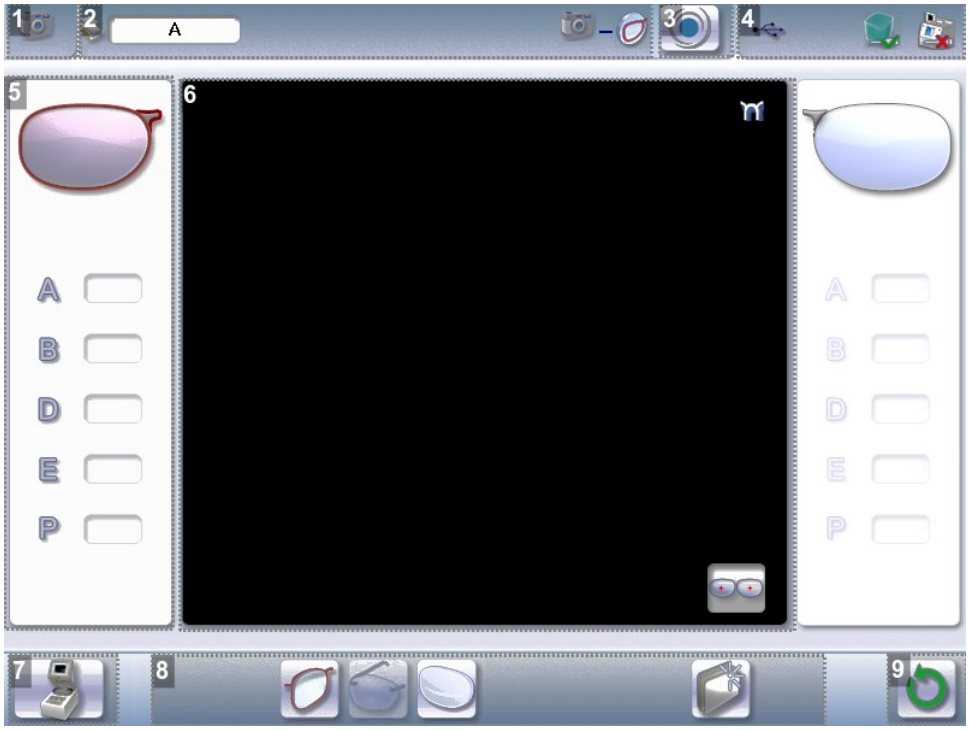
-  Machine shutdown.
-  Tracing
-  Centering
-  Shape management

8. *Actions available for the current screen*

9. *Tracing cycle initialization*

Centerer-blocker

Blocker screen main menus:



1. *Work screen indicator*

2. *Job information*

3. *Settings*

4. *Connected devices*

5. *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 on the right of the screen relates to the left eye.

6. *Work area*

7. *Function buttons*

-  Machine shutdown
-  Tracing
-  Centering
-  Shape management

8. *Actions available for the current screen*

9. *Tracing cycle initialization*

Detailed functions

For more information, consult the section Perform a trace > Tracing environment > Legend screen. *(☞ p.18)*

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 (☞ p.18)
- Shape management and storage (☞ p.23)
- Tracing a rimmed frame (☞ p.28) (including high-base frame)
- Tracing a high-base frame (☞ p.30)
- Tracing a pattern, a demo lens or recut lens (☞ p.32)

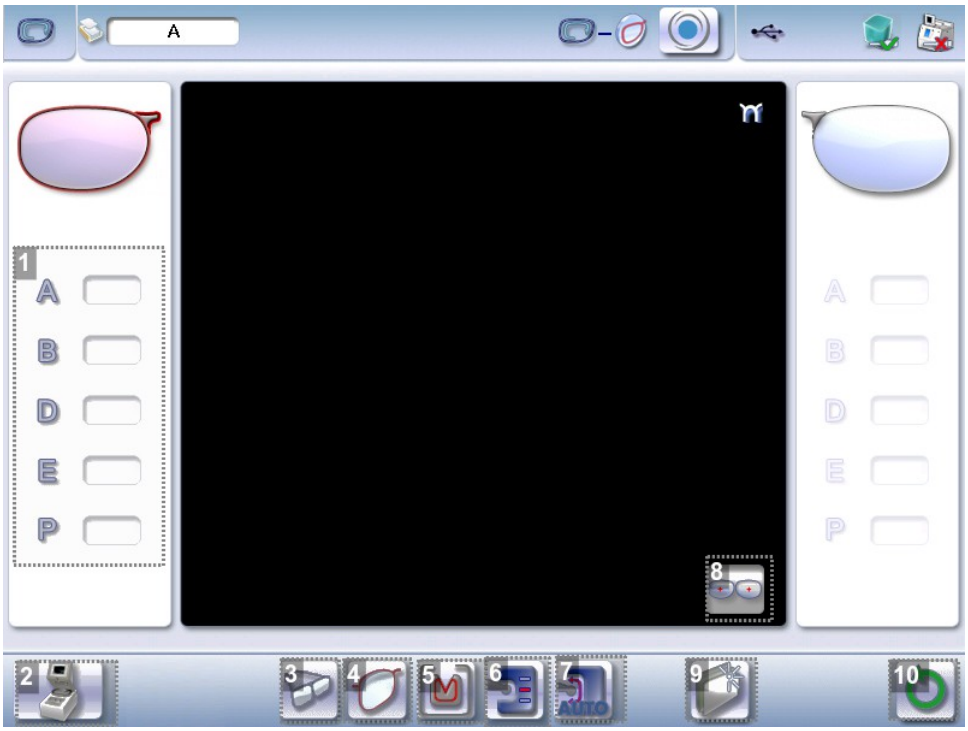
1. The tracing environment

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

- Description of the tracing screen (☞ p.18)
- Jobs and working modes (☞ p.21)
- Displaying the tracing completed in binocular mode (☞ p.22)

a. Legend screen

Tracer-centerer-blocker



1. *Dimensions display*

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

2. *Function buttons*

- Tracing

-  Centering
-  Shape management

3. *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.

4. *Type of tracing*

-  Symmetric binocular tracing📖
-  Asymmetric binocular tracing📖
-  Right-eye monocular tracing
-  Left-eye monocular tracing

5. *Frame materials or type of optical tracing*

For mechanical tracing of a frame:

-  Metal frame: high-precision tracing, with feeling of the groove cross-section
-  Plastic frame
-  Optyl frame, for particularly flexible frames

For optical tracing:

-  Demo lens//Recut lens for frame typeNylor ©
-  Demo lens / Recut lens
-  Pattern
-  Half jacket

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

6. *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),

7. *Groove detection*

-  : Automatic detection, default setting (systematically carried out on the metal frames).
-  : Groove acquisition never performed.
-  : Systematically groove acquisition performed.

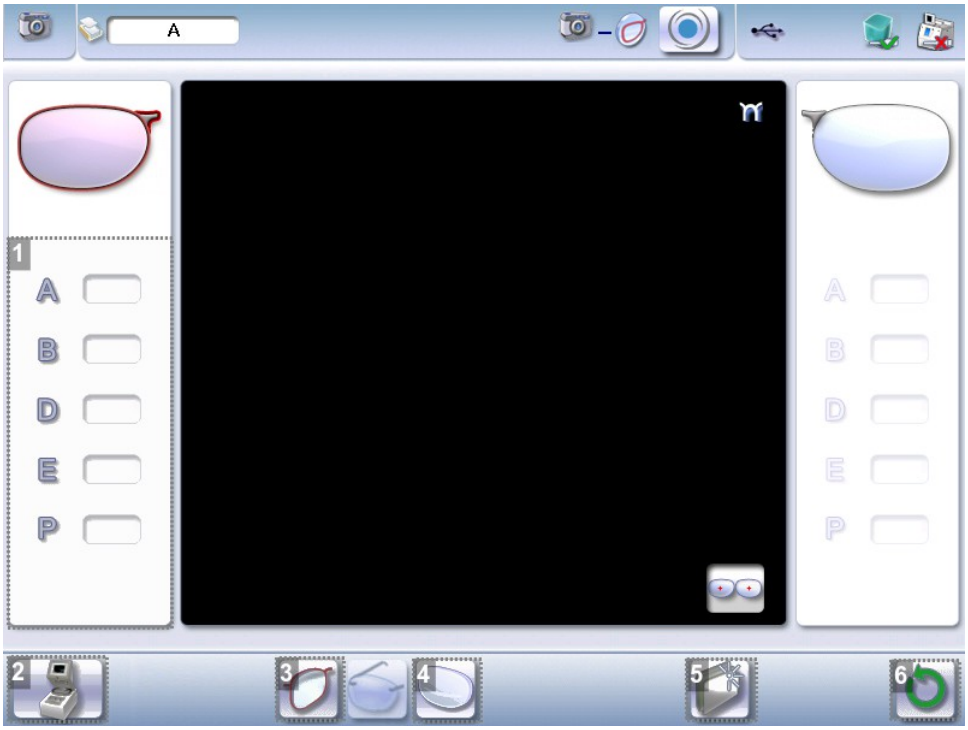
8. *Binocular view*

9. *New Job*

For more information on jobs, refer to the section Tracing > Shape management and storage (☞ p.23).

10. *Tracing cycle initialization*

Centerer-blocker



1. *Dimensions display*

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

2. *Function buttons*

-  Tracing
-  Tracing
-  Centering
-  Shape management

3. *Type of tracing*

-  Symmetric binocular tracing🕮
-  Asymmetric binocular tracing🕮
-  Right-eye monocular tracing
-  Left-eye monocular tracing

4. *Type of optical tracing*

-  Demo lens/recut lens for Nylor frame ©
-  Demo lens / Recut lens
-  Pattern
-  Half jacket

5. *New Job*

For more information on jobs🕮, refer to the section Tracing > Shape management and storage (☞ p.23).

6. *Tracing cycle initialization*

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

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:

- Saving: allocate an ID and a reference to the job to save it and re-use it later.
  - Automatic job archiving
  - Mandatory in the tracing - tracing work mode
- Without saving: working in common 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

 (depending on version)

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

 (depending on version)

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.
- Shape modification, centering, blocking and edging of the lenses are processed later.
- 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  .

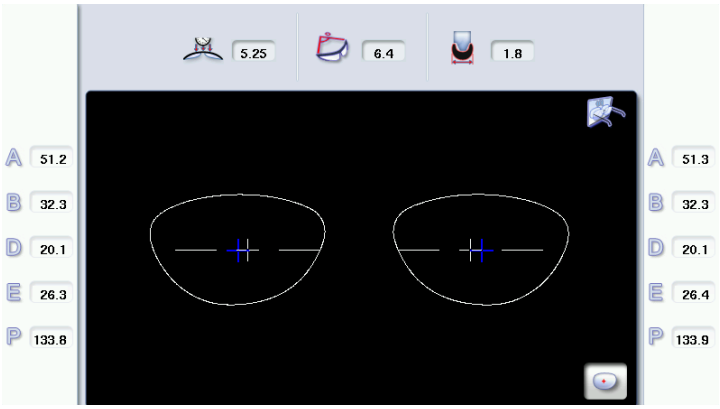
c. Displaying the binocular view

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
-  the curve angle
-  the frame thickness

The  indicator symbolizes the wearer side view.



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:

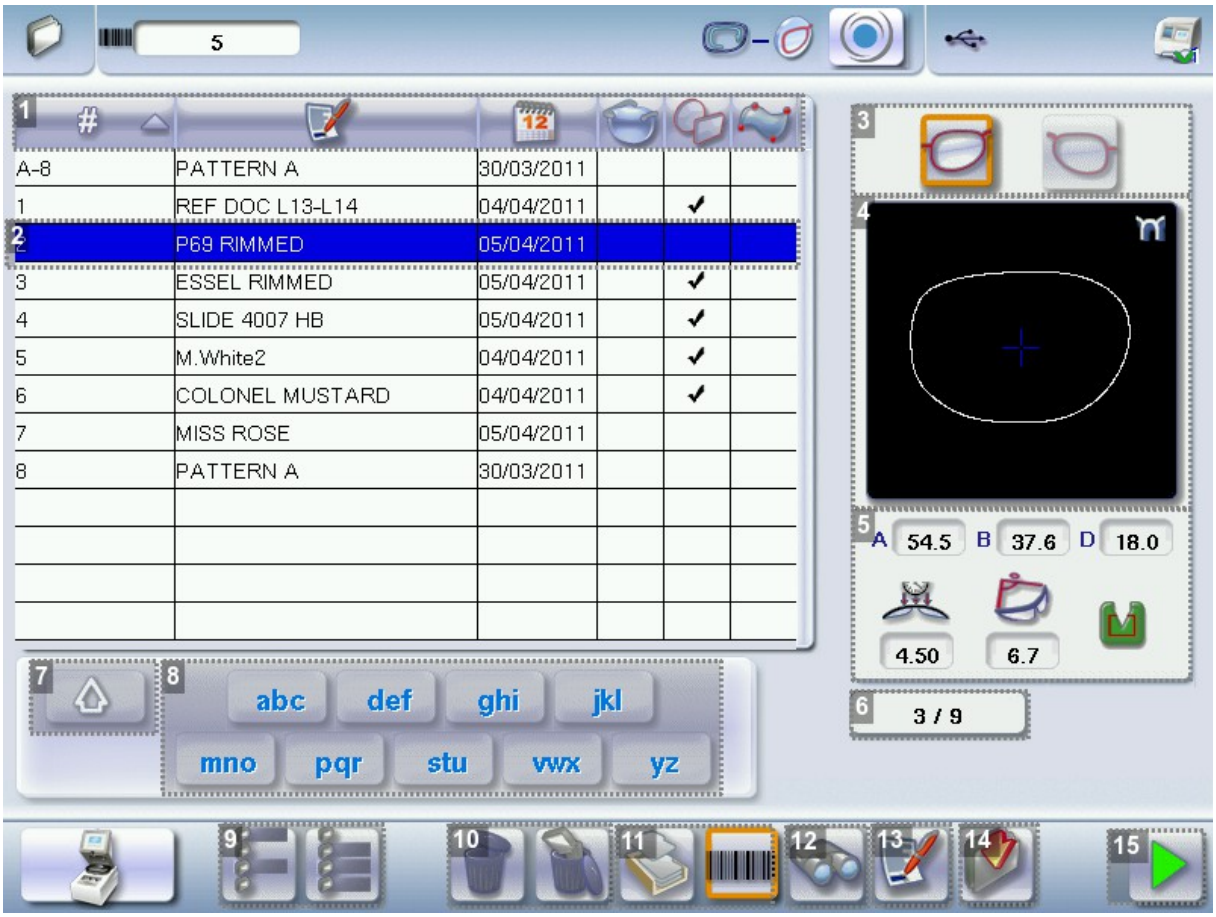
1. Press  to display the binocular view.
   > The binocular view is displayed.
2. Position the frame in front of the screen, against the faceplate to check its shape and centering.
3. Press  to return to the monocular screen.

2. SHAPE MANAGEMENT AND STORAGE

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

a. Legend 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
- Reference
- 12 Date
- Types of jobs:
  - Drilled
  - Asymmetric tracings
  - Creative shapes

2. *Selected job*

3. *Select the eye to be displayed in the preview*

4. *Shape preview*

5. *Information concerning the lens shape and frame*

- A, B and D dimensions
- Frame base
- Wrap 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.

10. *Delete one or more jobs*

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

11. *Job list or collection list*

Select the list to be displayed:

-  Job list
-  Collection list

12. *Search for a job by ID or by reference*

13. *Rename the selected job*

14. *Duplicate the selected job*

15. *Call the selected shape to the work area*

b. Job list

Two lists are available for shape storage:

-  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 From the tracing screen, press  in the action bar to create a new job.

> The alphanumeric keypad is displayed.

For more information on keyboard entry and use, refer to the section First steps > Start working with the tracer-centerer-blocker > Using the touch screen (☞ p.13).

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 more information on the lists, refer to the section Tracing > Shape management and storage > Job list and collection list (☞ p.25).

3 Press  to enter the new job ID🕮.

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 job type.

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

The symbol  is displayed into high right-hand side of the ID of job since the right lens was blocked whereas the left lens was not it.

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

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, you can create a new job for the tracing you have just started (new ID). The two jobs are thus saved.

To cancel, press again.

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, see the job creation procedure (☞ p.26).
- 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 From the tracing screen, press in the action bar to create a new job.

> The alphanumeric keypad is displayed.

For more information on keyboard entry and use, refer to the section First steps > Start working with the digital system > Using the touch screen. (☞ p.13)

2 Press to select the ID📖 field.

3 Press to delete the ID.

4 Press to confirm.

> The letter A is displayed in the information bar.

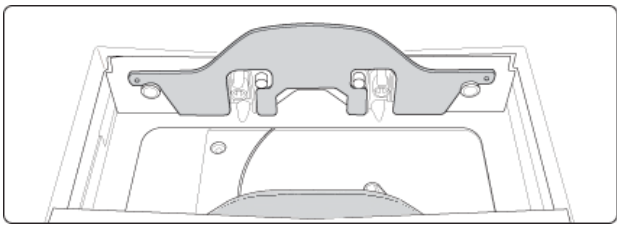
5 The tracer is ready for tracing.

For further information, refer to the section concerning your type of job.

3. TRACING A RIMMED FRAME (DEPENDING ON VERSION)

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:



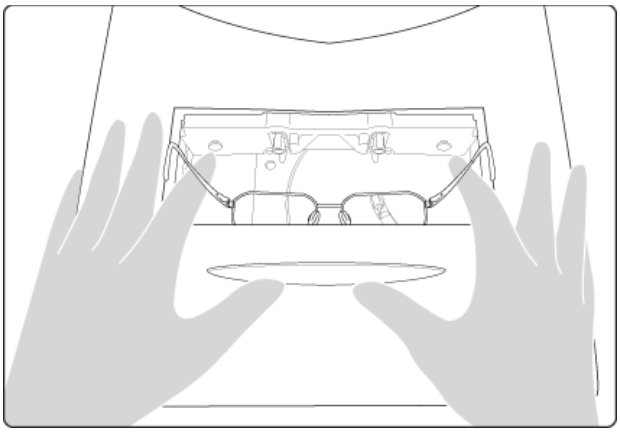
This section describes the procedure to follow for tracing rimmed frames including high-base frames:

- Symmetric binocular mechanical tracing of a rimmed frame
- Asymmetric binocular 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 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 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 D-dimension value, 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, refer to the section Tracing > Tracing environment > Jobs and working modes. (☞ p.21).

Before Centering

If you want to add drillings to your lenses, see Prepare a Drilled Job (☞ p.79).

4. Tracing a high-base frame (depending on version)

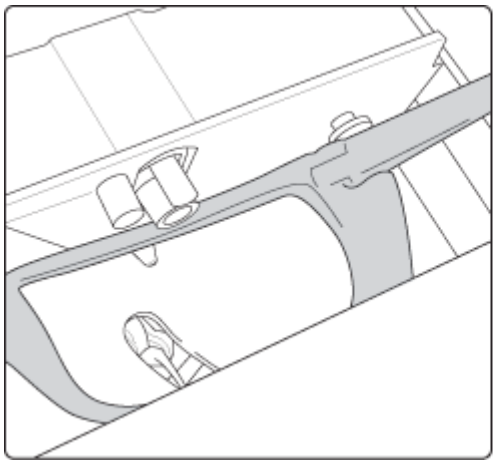
This specific procedure enables you to trace a high-base frame, if the standard rimmed frame tracing fails.

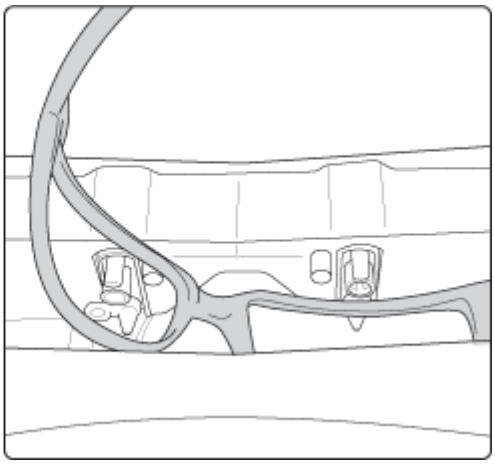
Tracing of a high-base frame is done in two stages:

- The frame is placed in the tracing table and mechanical tracing is done for each eye individually.
- The wrap 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 Press on to start the tracing cycle.

To interrupt tracing at any time, press .

> The numeric keypad is displayed.

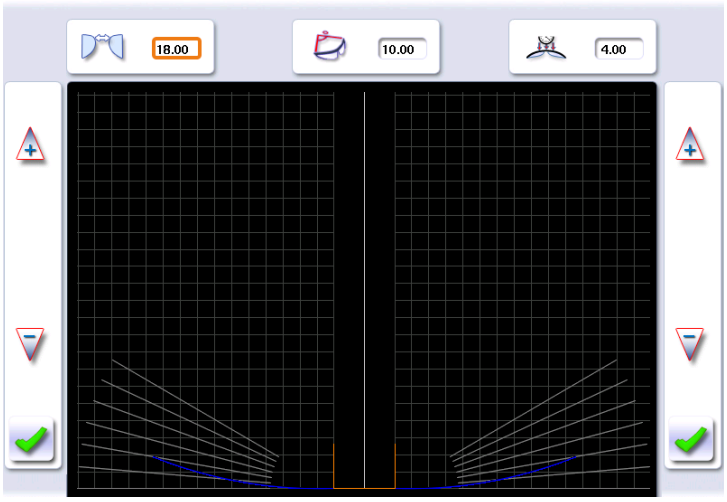
7 Enter the value of the D-dimension, then press to confirm.

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

8 Position the frame to trace the second eye.

9 Press to start tracing the second eye.

> The following screen is displayed:

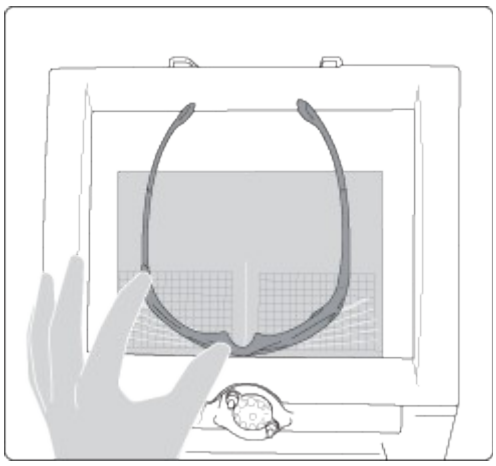


Measuring the wrap angle and completing the tracing.

This screen enables you to measure the wrap 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.



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 wrap 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, refer to the section Tracing > Tracing environment > Jobs and working modes. (☞ p.21).

Before Centering

If you want to add drillings to your lenses, see Prepare a Drilled Job (☞ p.79).

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 wrap angle and frame base which cannot be captured in this type of tracing.

- Optical tracing (☞ p.33)
- Mechanical tracing (depending on version) (☞ p.35)
- Inputting the curve and the frame base after monocular tracing (☞ p.38)

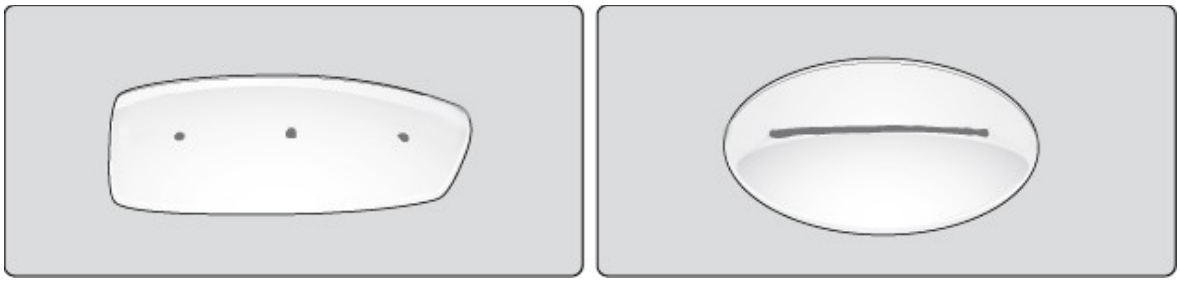
a. Optical tracing

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 demo lens in the center of the centering chamber.

On the equipped version of the tracing table: press  to select the type of optical tracing  .

2 Press  to indicate the eye to trace.

3 Press:

on  to select the demo lens/recut lens for Nylor frame ©

to  select the pattern,

on  to select the demo lens or recut lens,

on  Half jacket to select Half Jacket tracing mode.

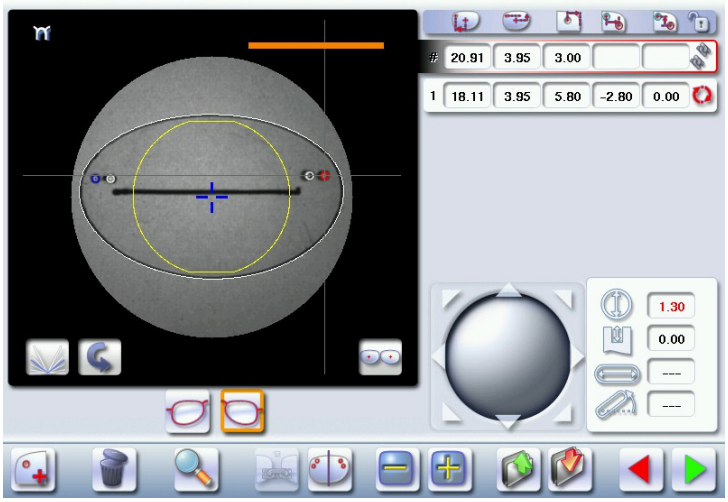
4 Press on  to start the tracing cycle.

> 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 focimer dots or the line. If the tracing fails after the check, do a mechanical tracing using the pattern holder.

> The numeric keypad is displayed.

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

> The drilling screen is displayed.



6 Configure the drilling points if required.

For more information, refer to the section Preparing a drilled job (☞ p.79).

7 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, refer to the section Tracing > Tracing environment > Jobs and working modes. (☞ p.21).

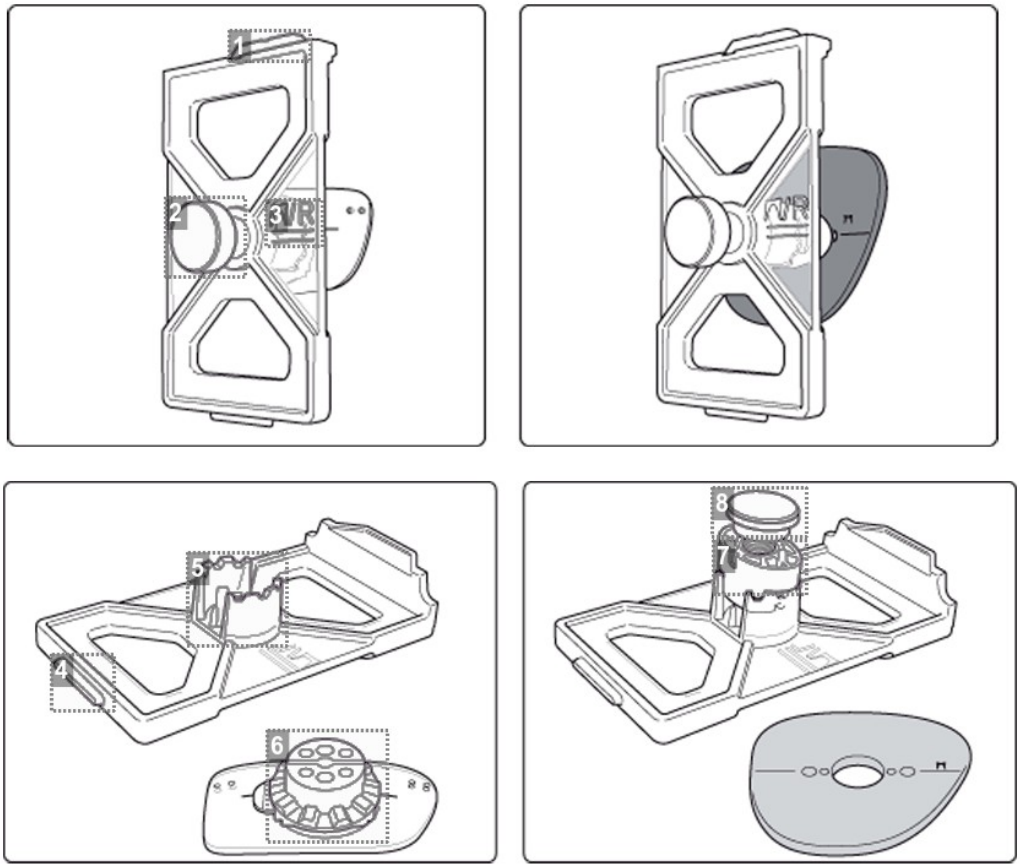
Before Centering

Once tracing has been carried out, you can:

- Input the wrap angle and the frame base, for optimal centering precision
- Add drilling points to the shape. For more information, consult the chapter Preparing a drilled job (☞ p.79).

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 ⌐¬/R (right nose) or ⌐¬/L (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

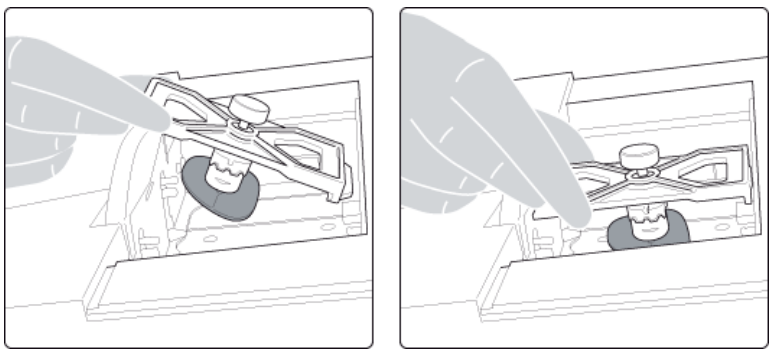
4 Press on the knurled knob, screwing it, until the pattern is immobilized (as for fixing a lens).

> 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 cylindrical white pins of the tracing table.

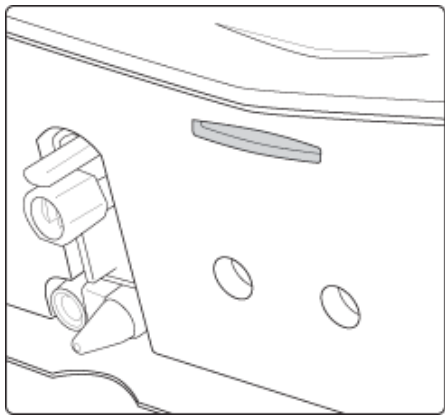


2 Block the back tab of the support.

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 mechanical tracing.

To interrupt 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 value, 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, refer to the section Tracing > Tracing environment > Jobs and working modes. (☞ p.21).

Before Centering

Once tracing has been carried out, you can:

- Input the wrap angle and the frame base, for optimal centering precision
- Add drilling points to the shape. For more information, consult the chapter Preparing a drilled job (☞ p.79).

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

In a monocular tracing, the wrap 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.

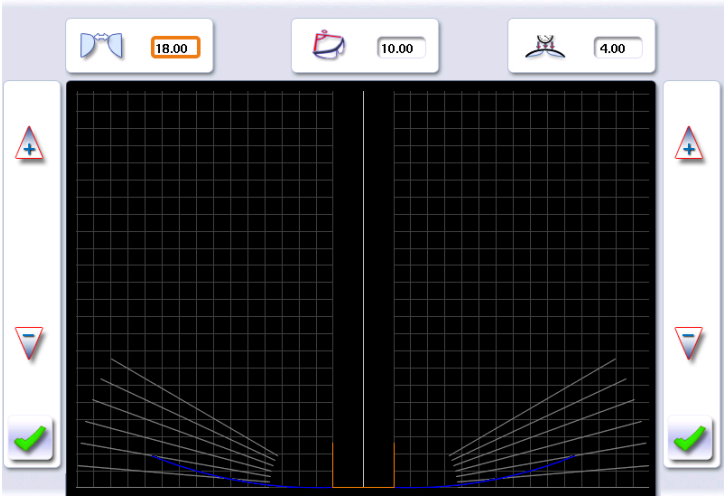
Prerequisite: before entering the wrap angle and frame base, one of the following operations must be performed:

- Optical tracing of a pattern, a demo lens or a recut lens (☞ p.33)
- Mechanical tracing of a pattern, demo lens or recut lens (☞ p.35)

Input the wrap angle and the frame base.

1 Press the  button.

> The following screen is displayed:

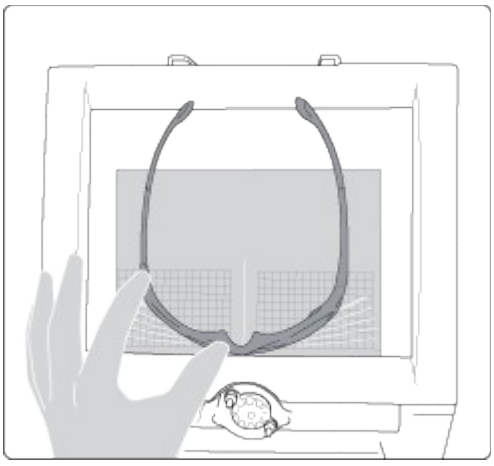


2 Select the wrap angle value  to modify it.

> 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.



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 wrap angle value is changed.

5 Select the of 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

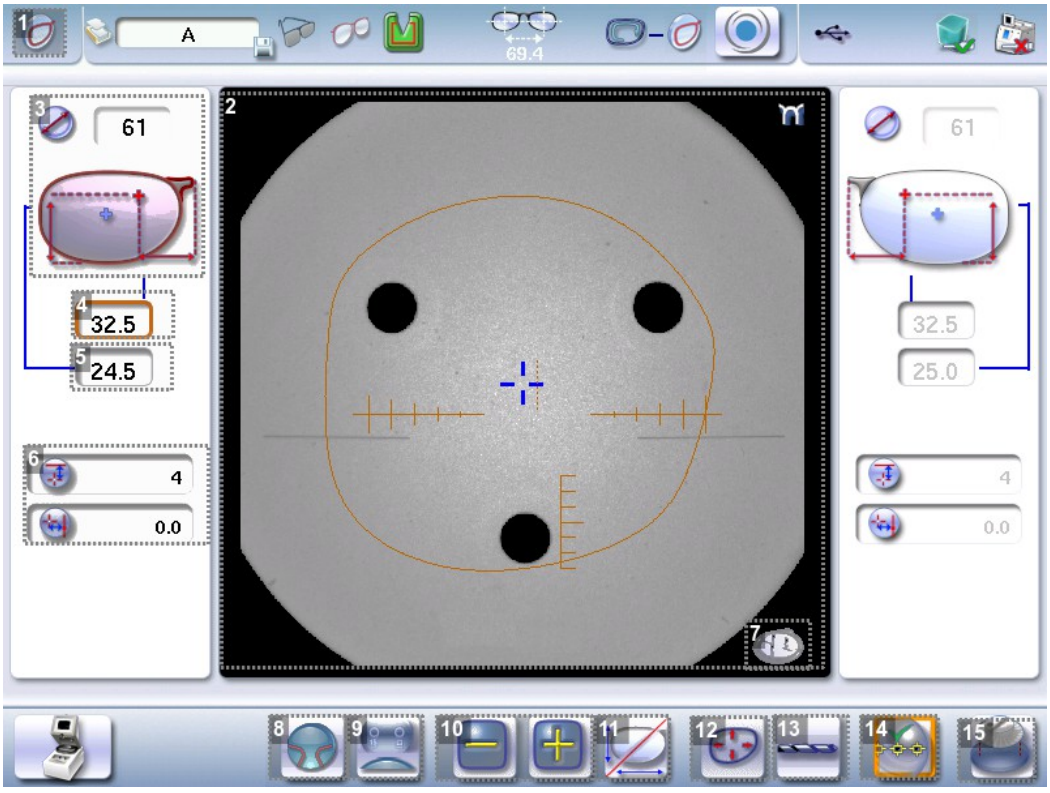
This chapter describes the lens centering procedures according to the type of lens.

This chapter also describes the lens blocking (☞ p.67) procedure.

1. Centering environment

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

a. Legend screen



1. *Centering screen indicator*

2. *Work area*

- Nasal side indicator
- Lens shape
- Centering target according to type of lens (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
- ΔX + ΔY mode

For more information on the type of display, refer to the section Configuring the digital system > Customizing the tracer > Decentration mode (☞ p.106).

4. *Half PD*

5. *Pupillary height*

6. *Distance between the PRP and the centering cross (progressive and mid-distance lenses only)*

7. *Tripod detection indicator*

-  Standard tripod with or without recut accessory
-  High- base tripod

8. *Lens type selection*

-  Single vision lens📖
-  Progressive lens📖
-  Bifocal lens📖
-  Executive lens📖
-  Mid-distance lens📖

9. *Centering mode selection*

-  Centering using three focimeter dots
-  Centering using re-marked micro-engravings
-  Centering using manufacturer markings
-  Centering using segments for bifocal/trifocal lenses

10. *Value modification*

Reduce or increase the previously selected value.

11. *Shift between the PD and pupillary height*

12. *Shape modification*

Provides access to the shape modification screen. For more information, consult the following chapter Modifying the lens shape (☞ p.69).

13. *Drilling preparation*

Provides access to the drilling screen. For more information, consult the chapter Preparing a drilled job (☞ p.79).

14. *Centering help*

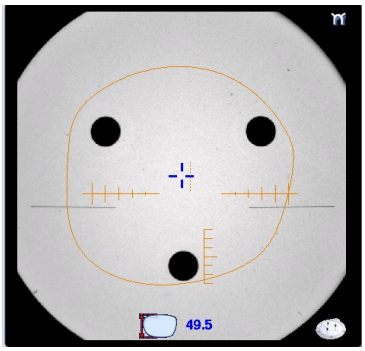
Used to enable / disable centering help.

15. *Blocking*

Used to start lens blocking.

As part of a WECO posiblock configuration.

A reminder of the shape's B-dimension limit appears on the screen.



If the B-dimension value is less than an "X" value (previously determined in the configuration screen), a warning appears on the icon and the text is displayed in red:  24.1.

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 type of lens selected.

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

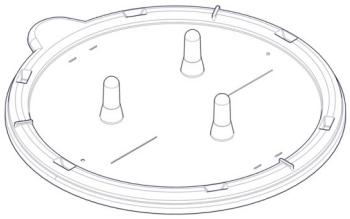
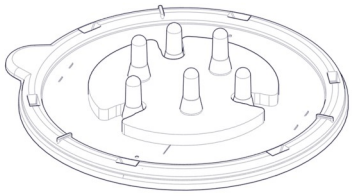
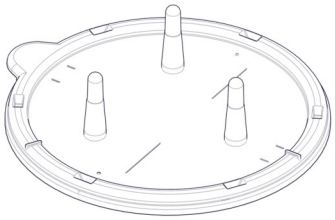
	✓	✓		
		✓	✓	
				✓
	✓			
		✓	✓	

c. Using the tripods

The centering of a lens requires using of the standard tripod📖.

Special cases: if the standard tripod does not hold the lens securely, two accessories are available:

- Small lens: use the recut accessory📖 to position in the center of the standard tripod
- Very high-base lens: use the high-base tripod📖, with plots higher and further apart than the standard tripod

Standard lens	Recut lens	Very high-base lens
		

d. Centering help

Centering help  is used to detect the centering marks of the lenses according to the centering mode selected.

Two types of help are available for the following lenses:

-  Single vision
-  Progressive

Arrowed help	Discrete help
Positioning indicators help you to place the lens accurately for centering. 	Only the centering marks detected on the lens are highlighted. 

Possible statuses on the centering screen:

-  Help Enabled
-  Help available

If none of these icons is displayed on the centering screen, centering help is disabled.

To select the type of help you want to use and choose automatic or manual activation, see the section Set digital system > Customize tracer > Action Bar (☞ p.107).

Centering help and micro-engravings

To use centering help with re-marked micro-engravings: erase any circles around the micro-engravings before re-marking them so as not to affect detection.

Essiclean™

You are recommended to use a water-alcohol solution such as Essiclean™ to erase the existing markings.

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:

- Preparing drilling points (☞ p.79) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.

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

- Centering using three focimeter dots (☞ p.46)
- Centering using re-marked micro-engravings (☞ p.48)

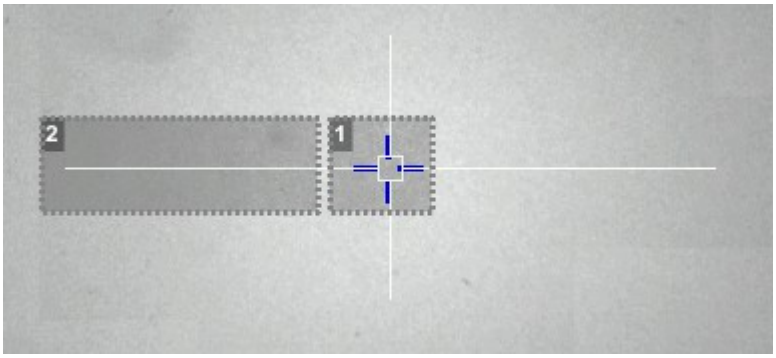
a. Centering a single vision lens using three focimeter dots

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

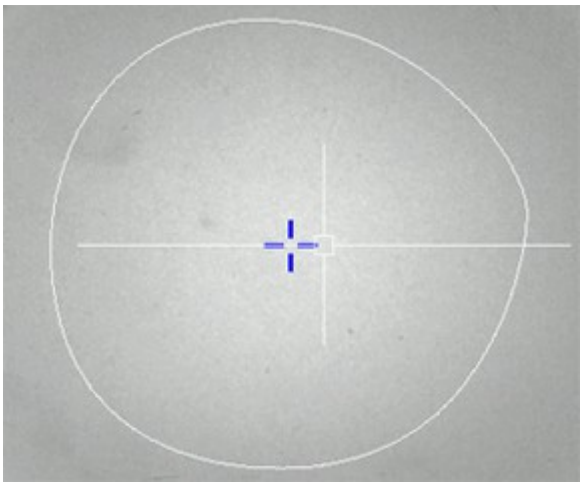


1. *Optical center of the lens (white cross) and boxing center of the shape (blue cross)*
2. *Centering marks*

1 Press  to select the type of single vision lens.

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

> The centering target is displayed:



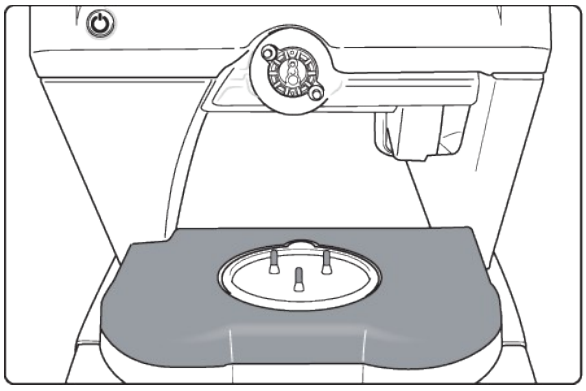
3 Enter the half PD and pupillary height.

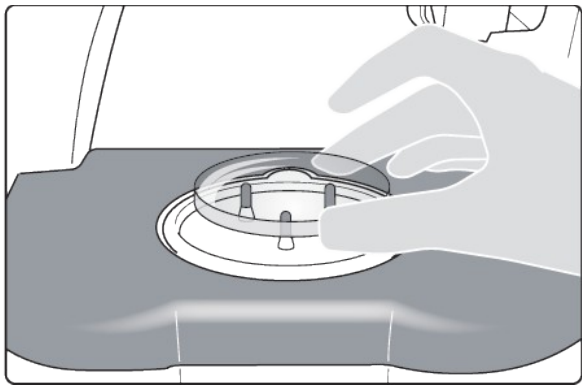
> The target moves.

4 Make sure that the standard tripod is inside the centering chamber.

- Use the high-base tripod for a high-base lens.
- Place the recut accessory in the center of the standard tripod for a small lens.

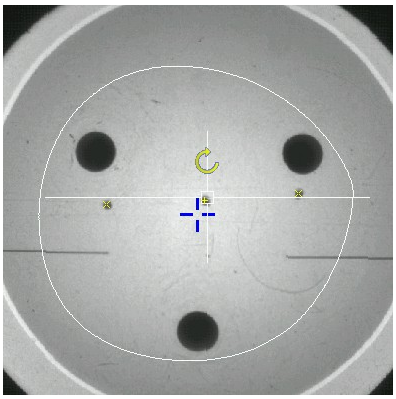
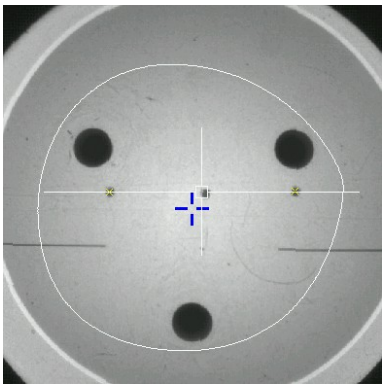
5 Position the lens on the tripod.





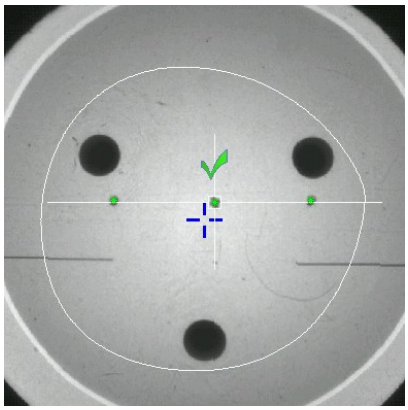
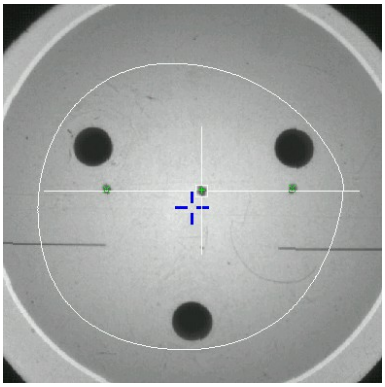
> If centering help is enabled, yellow indicators are displayed when the focimeter dots are detected.

For more information about Centering help, see the section Center a lens > centering Environment > centering help (☞ p.45).

With arrowed help	With discrete help
	

6 Move the lens slowly until the three focimeter dots are perfectly aligned on the target.

> If centering help is enabled, green indicators are displayed:

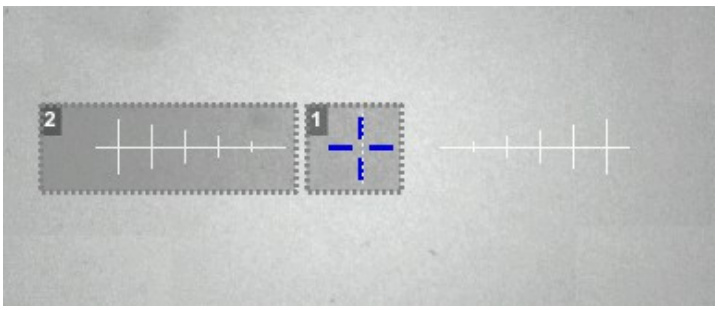
With arrowed help	With discrete help
	

> The lens is centered and ready to be blocked.

To block the lens, refer to the section Centering a lens > Blocking a lens (☞ p.67).

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

Description of the centering target



1. *Optical center of the lens (white dotted lines) and Boxing center of the shape (blue cross)*

2. *Centering marks*

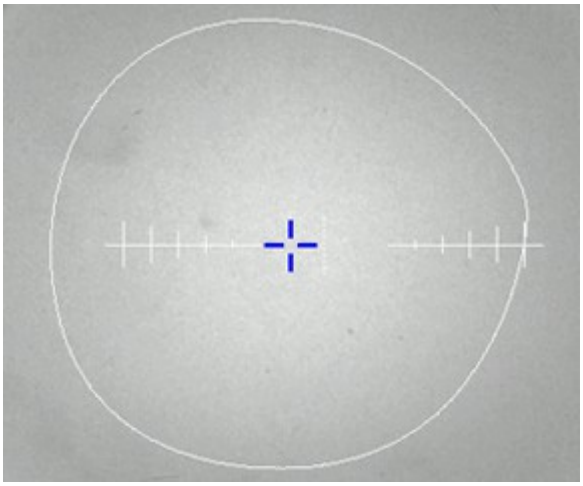
1 Mark the micro-engravings with felt tip marker. The diameter of the dots must be between 0.5 and 1.5 mm.

You are recommended to use the white felt tip marker supplied with the tracer to mark the lens.

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:



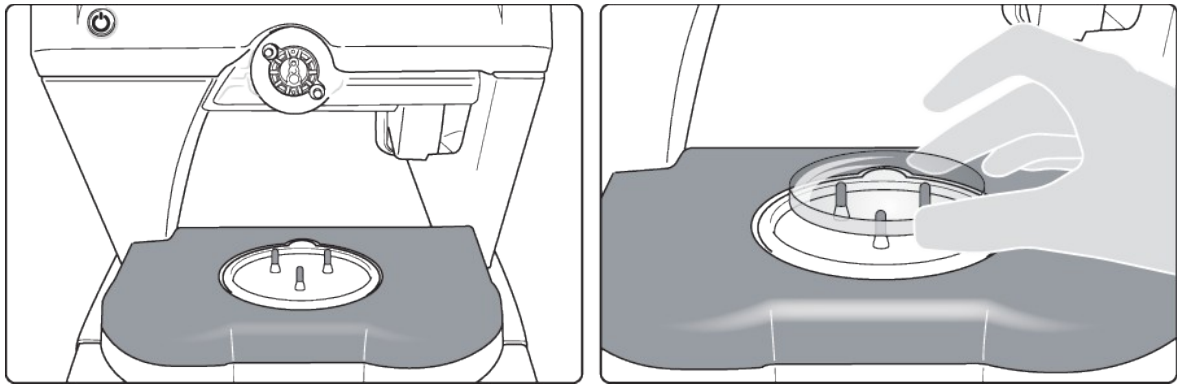
4 Enter the half PD and pupillary height.

> The target moves.

5 Make sure that the standard tripod is inside the centering chamber.

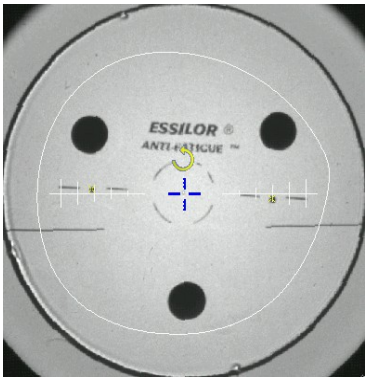
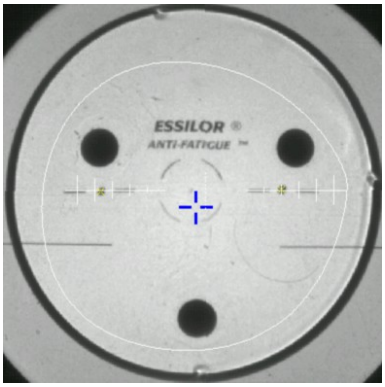
- Use the high-base tripod for a high-base lens.
- Place the recut accessory in the center of the standard tripod for a small lens.

6 Position the lens on the tripod.



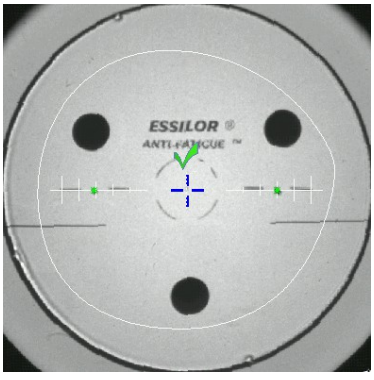
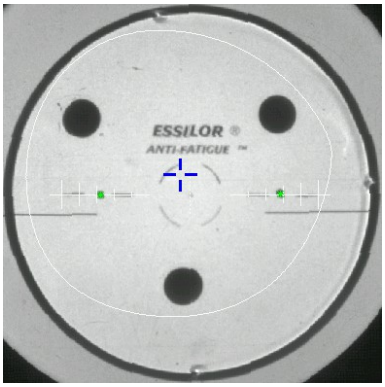
> If centering help is enabled, yellow indicators are displayed when the re-marked micro-engravings are detected.

For more information about Centering help, see the section Center a lens > centering Environment > centering help (☞ p.45).

With arrowed help	With discrete help
	

7 Move the lens slowly until the micro-engravings are perfectly aligned on the target.

> If centering help is enabled, green indicators are displayed:

With arrowed help	With discrete help
	

> The lens is centered and ready to be blocked.

To block the lens, refer to the section Centering a lens > Blocking a lens (☞ p.67).

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:

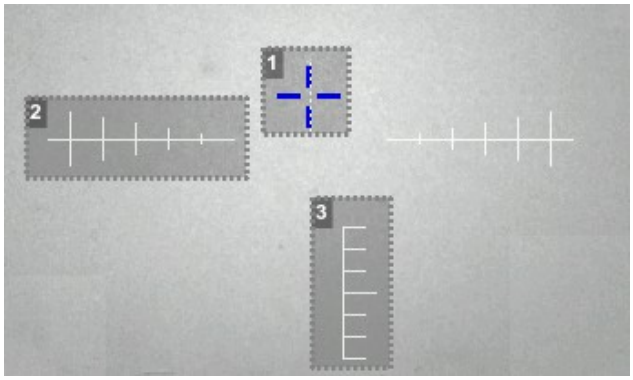
- Preparing drilling points (☞ p.79) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.

This section describes the procedures for centering a progressive lens:

- Centering using re-marked micro-engravings (☞ p.51)
- Centering using manufacturer markings mode (☞ p.54)

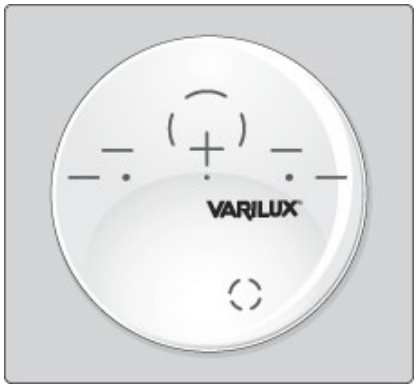
a. Centering a progressive lens using re-marked micro-engravings

Description of the centering target



1. *Far vision mark (white dotted lines) and Boxing center of the shape (blue cross)*
2. *Graduated axis mark*
3. *Near vision mark*

1 Mark the micro-engravings with felt tip marker. The diameter of the dots must be between 0.5 and 1.5 mm.

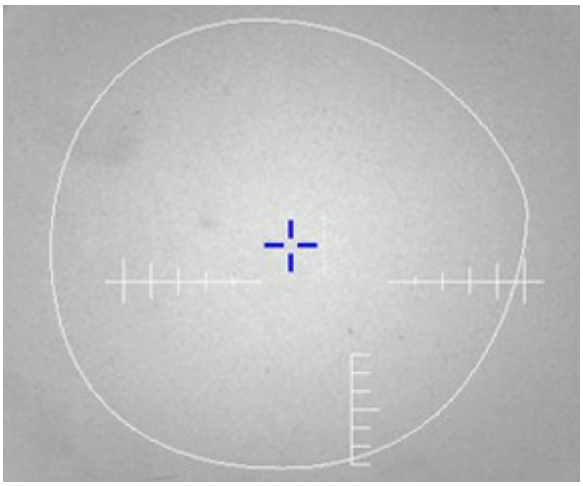


You are recommended to use the white felt tip marker supplied with the tracer to mark the lens.

2 Press  to select the type of progressive lens.

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

> The centering target is displayed:



4 Enter the half PD and pupillary height.

5 Change the distance between the PRP (prismatic reference point) and the centering cross 

if necessary.

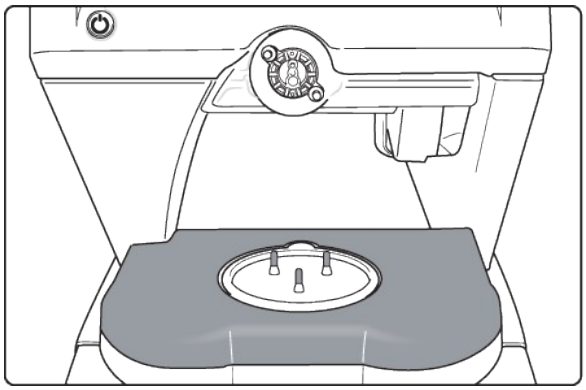
This value is configured to 4 mm by default for Essilor progressive lenses. This can vary depending on the lens manufacturer.

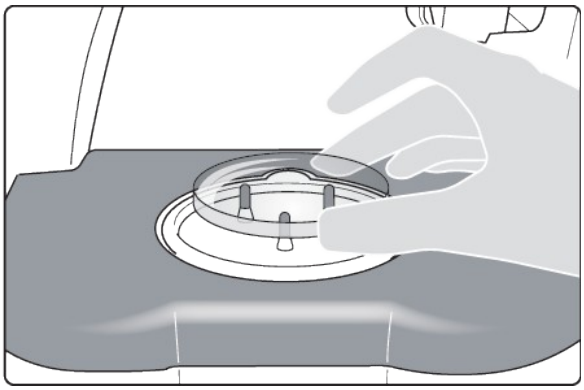
> The target moves.

6 Make sure that the standard tripod is inside the centering chamber.

- Use the high-base tripod for a high-base lens.
- Place the recut accessory in the center of the standard tripod for a small lens.

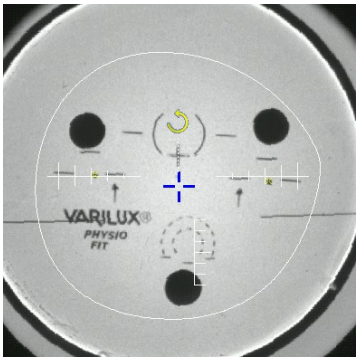
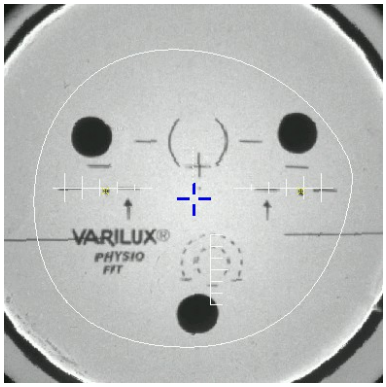
7 Position the lens on the tripod.





> If centering help is enabled, yellow indicators are displayed when the re-marked micro-engravings are detected.

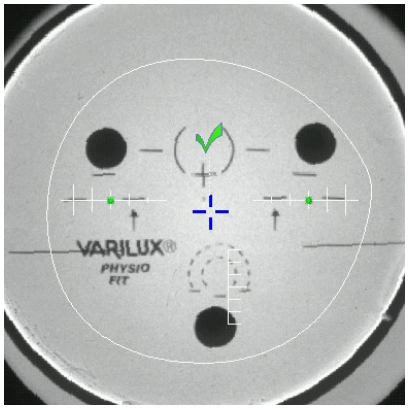
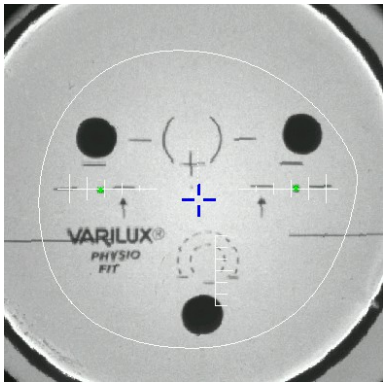
For more information about Centering help, see the section Center a lens > centering Environment > centering help (☞ p.45).

With arrowed help	With discrete help
	

8 Move the lens slowly until the micro-engravings are:

- Aligned on the graduated axis mark,
- Symmetrical with respect to the graduations.

> If centering help is enabled, green indicators are displayed:

With arrowed help	With discrete help
	

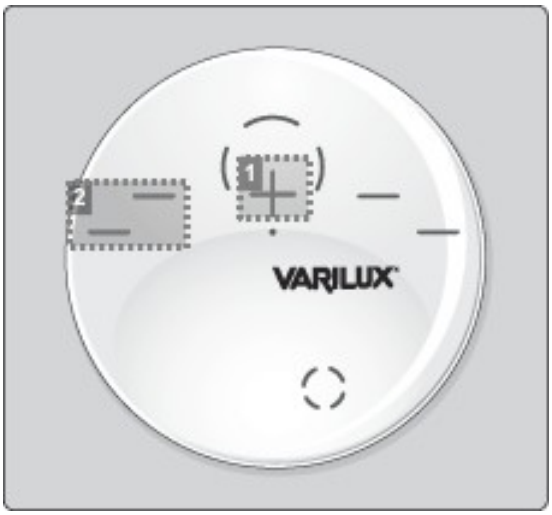
> The lens is centered and ready to be blocked.

To block the lens, refer to the section Centering a lens > Blocking a lens (☞ p.67).

b. Centering a progressive lens using manufacturer markings mode

Prerequisite:

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



1. *Far vision mark*

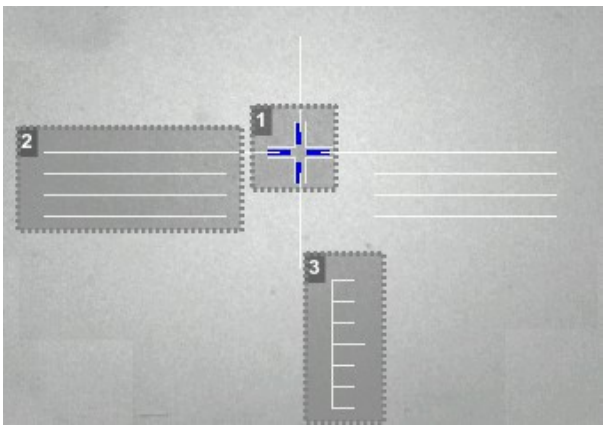
If centering help is enabled, the cross must contain at least three branches: ⊥, ⊤, +

2. *Centering marks*

If centering help is enabled, the marking must include at least two lines on the same axis at the centering point:

- Minimum length: 3 mm
- Average thickness: 0.5 mm

Description of the centering target



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

2. *Centering marks*

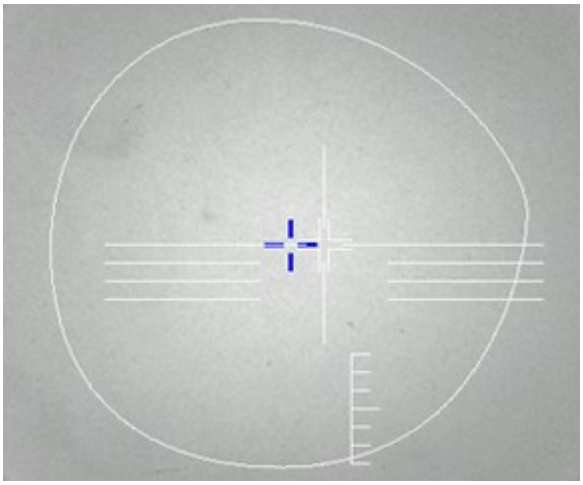
3. *Near vision mark*

Centering the lens

1 Press  to select the type of progressive lens.

2 Press  to select the centering from the manufacturer markings.

> The centering target is displayed:



3 Enter the half PD and pupillary height.

4 Change the distance between the PRP (prismatic reference point) and the centering cross 

if necessary.

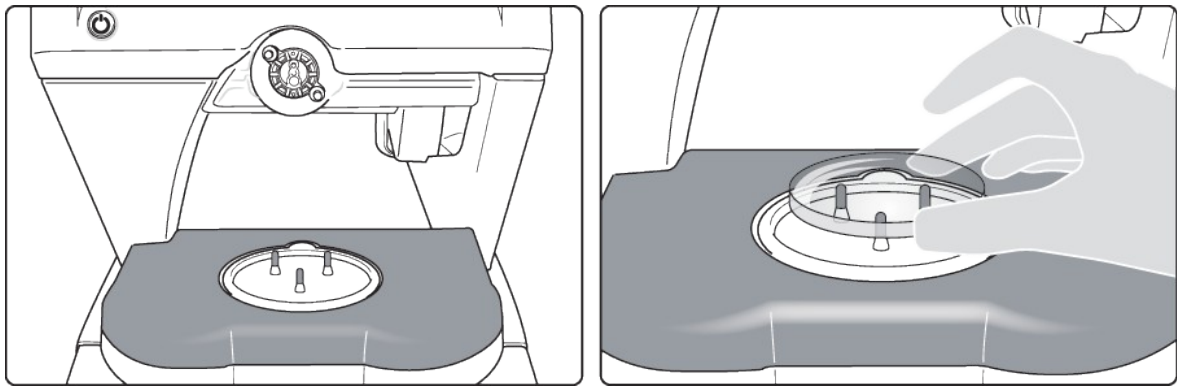
This value is configured to 4 mm by default for Essilor progressive lenses. This can vary depending on the lens manufacturer.

> The target moves.

5 Make sure that the standard tripod is inside the centering chamber.

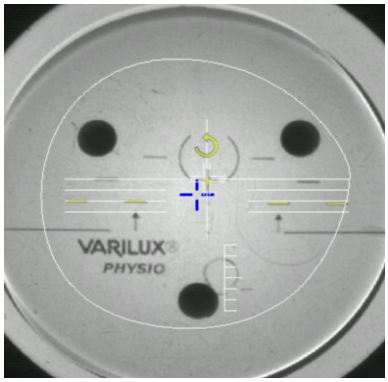
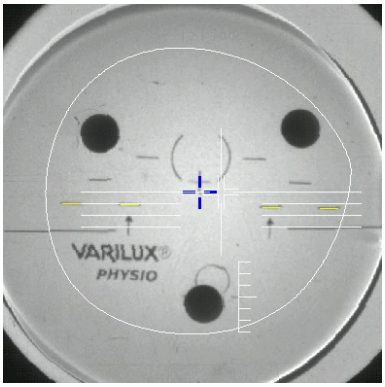
- Use the high-base tripod for a high-base lens.
- Place the recut accessory in the center of the standard tripod for a small lens.

6 Position the lens on the tripod.



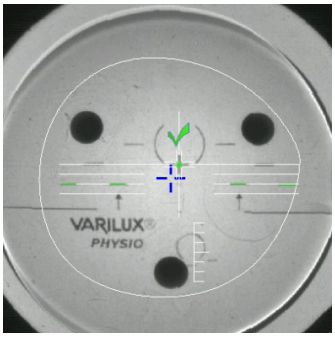
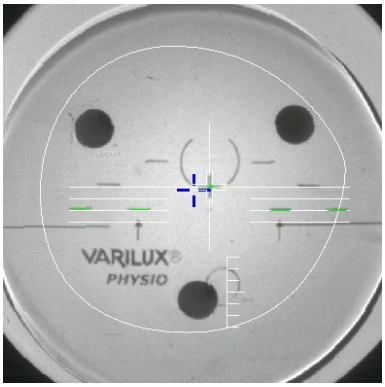
> If centering help is enabled, yellow indicators are displayed when the manufacturer markings are detected.

For more information about Centering help, see the section Center a lens > centering Environment > centering help (☞ p.45).

With arrowed help	With discrete help
	

7 Move the lens slowly until the manufacturer markings are superimposed on the target.

> If centering help is enabled, green indicators are displayed:

With arrowed help	With discrete help
	

> The lens is centered and ready to be blocked.

To block the lens, refer to the section Centering a lens > Blocking a lens (☞ p.67).

4. Centering bifocal/trifocal lenses

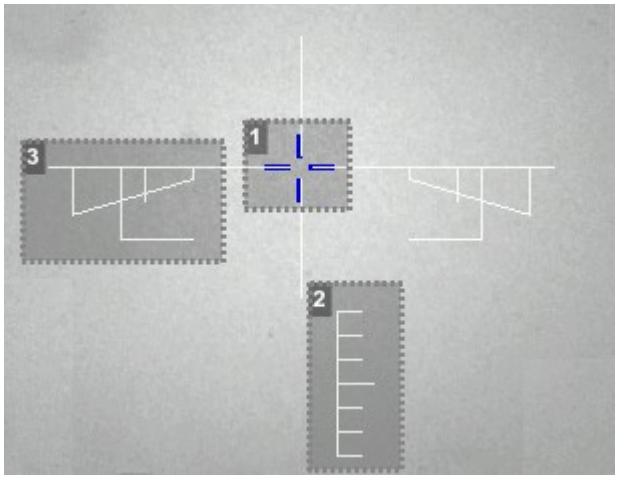
Prerequisite: Before centering the lens, you must first trace a shape in the centering screen.

If necessary, we recommend the following prior operations:

- Preparing drilling points (☞ p.79) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.

This section describes the centering procedure for a bifocal or trifocal lens with a straight, curved or round segment.

Description of the centering target



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

2. *Near vision mark*

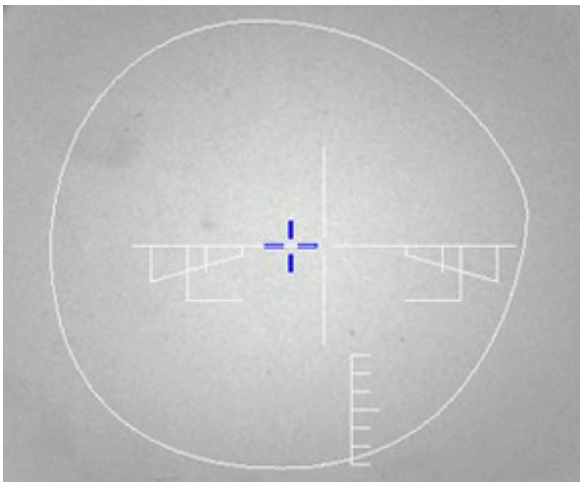
3. *Centering marks*

Centering the lens

1 Press  to select the type of bifocal lens.

> The bifocal lens centering mode  is displayed.

> The centering target is displayed:



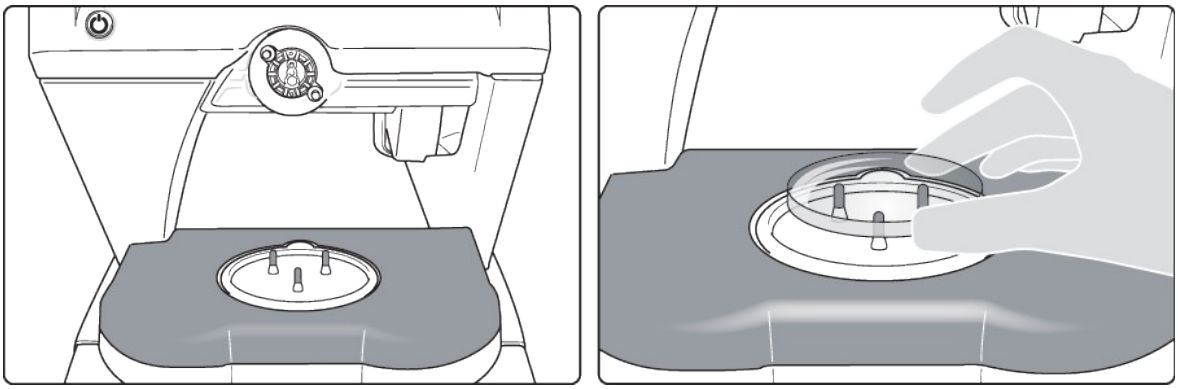
2 Enter the half PD for near vision and the frame height.

> The target moves.

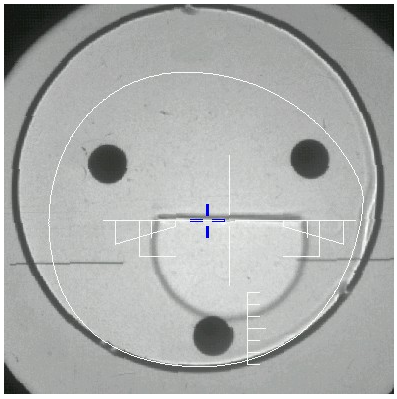
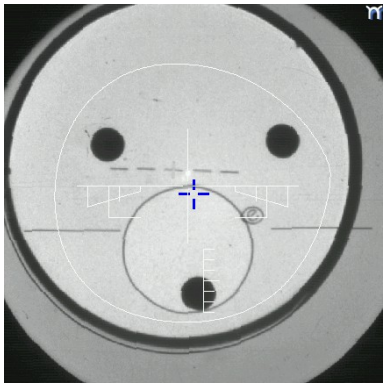
3 Make sure that the standard tripod is inside the centering chamber.

- Use the high-base tripod for a high-base lens.
- Place the recut accessory in the center of the standard tripod for a small lens.

4 Position the lens on the tripod.



5 Move the lens slowly until the top of the segment is in the center of the target.

D-segment	Round segment
	

> The lens is centered and ready to be blocked.

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:

- Preparing drilling points (☞ p.79) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.

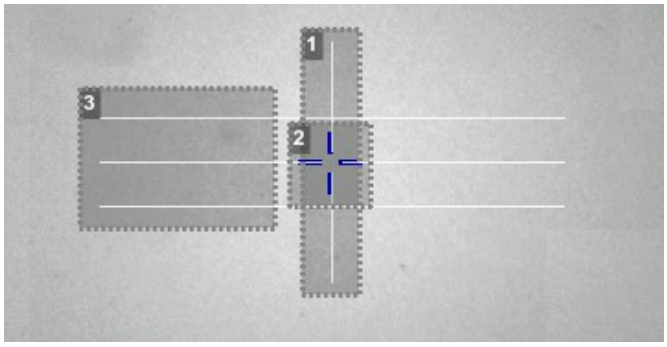
This section describes the procedure for centering an executive lens.

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



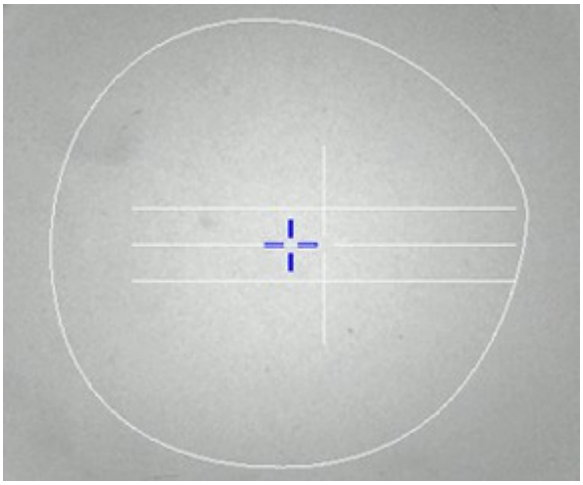
1. *Centering mark*
2. *Boxing center of the shape (blue cross)*
3. *Centering mark*

Centering the lens

1 Press  to select the type of executive lens.

> The centering mode from the three focimeter points  is displayed.

> The centering target is displayed:



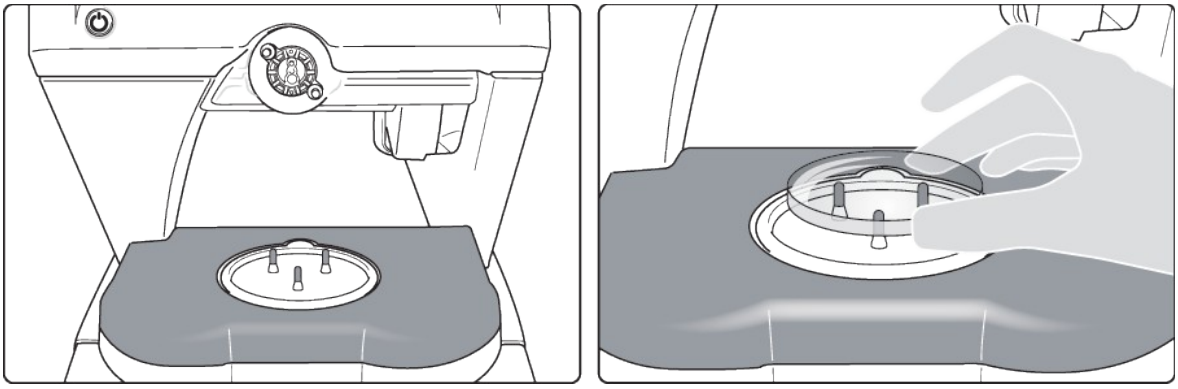
2 Enter the half PD (for near vision or far vision) and the frame height.

> The target moves.

3 Make sure that the standard tripod is inside the centering chamber.

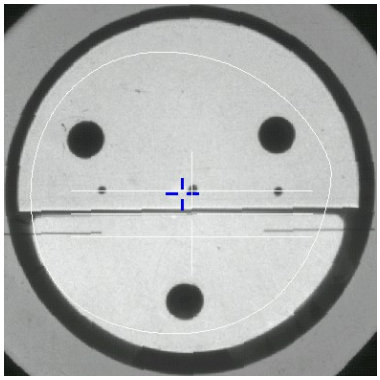
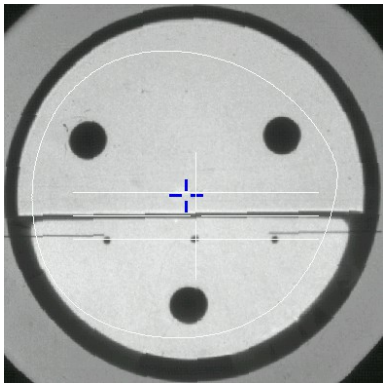
- Use the high-base tripod for a high-base lens.
- Place the recut accessory in the center of the standard tripod for a small lens.

4 Position the lens on the tripod.



5 Move the lens slowly until it is perfectly centered:

- 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

Far vision centering	Near vision centering
	

> The lens is centered and ready to be blocked.

To block the lens, refer to the section Centering a lens > Blocking a lens (☞ p.67).

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:

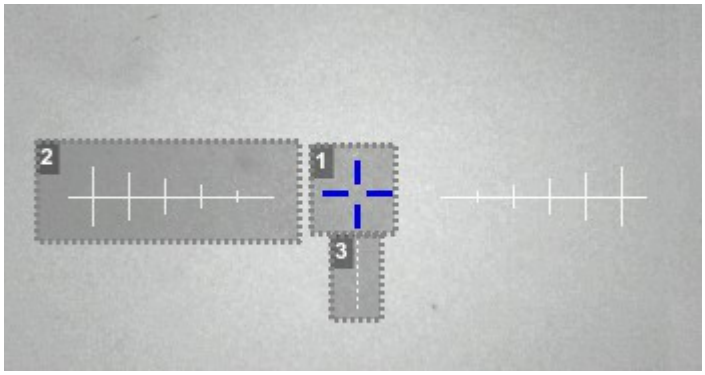
- Preparing drilling points (☞ p.79) to be created
- Place the stickers recommended by the manufacturer on hydrophobic lenses.

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

- Centering using re-marked micro-engravings (☞ p.61)
- Centering using manufacturer markings mode (☞ p.64)

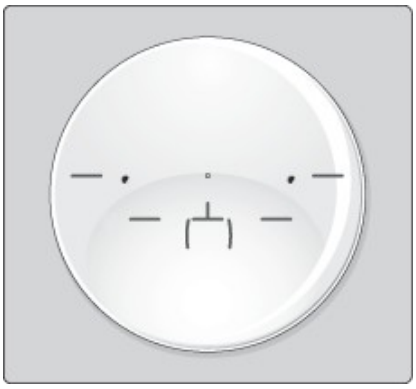
a. Centering a mid-distance lens using re-marked micro-engravings

Description of the centering target



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

1 Mark the micro-engravings with felt tip marker. The diameter of the dots must be between 0.5 and 1.5 mm.

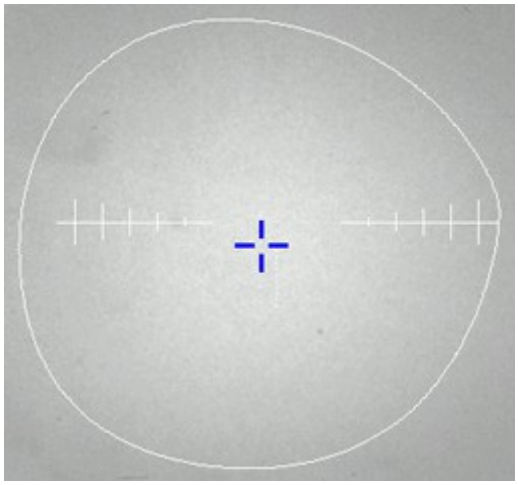


You are recommended to use the white felt tip marker supplied with the tracer to mark the lens.

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

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

> The centering target is displayed:



4 Enter the half PD and the frame height.

5 Change the distance between the PRP (prismatic reference point) and the centering cross  if necessary.

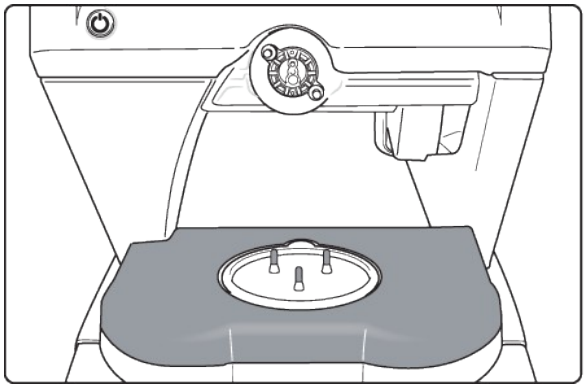
This value is set by default to 6 mm for Essilor mid-range lenses. This can vary depending on the lens manufacturer.

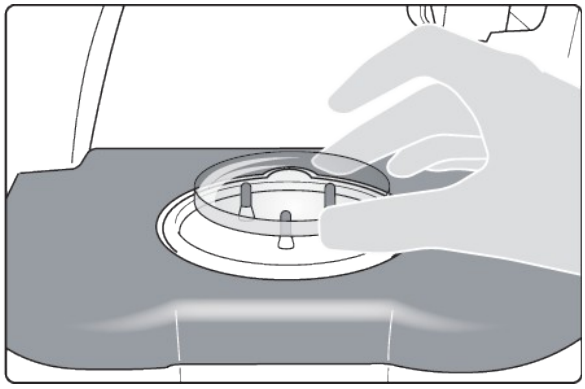
> The target moves.

6 Make sure that the standard tripod is inside the centering chamber.

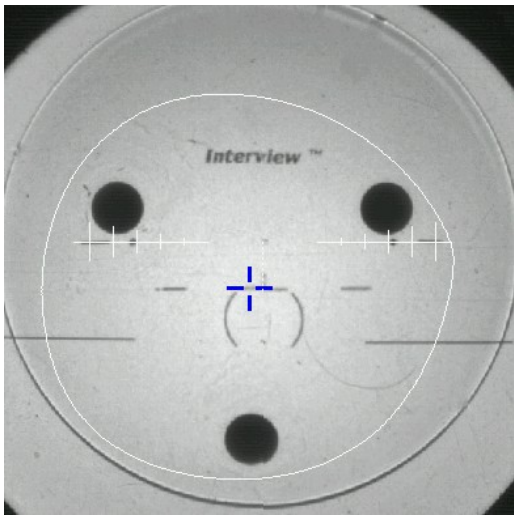
- Use the high-base tripod for a high-base lens.
- Place the recut accessory in the center of the standard tripod for a small lens.

7 Position the lens on the tripod.





8 Move the lens slowly until the micro-engravings are perfectly aligned on the target.



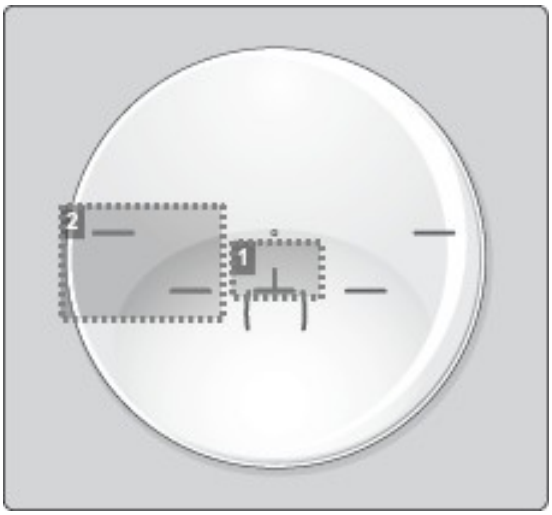
> The lens is centered and ready to be blocked.

To block the lens, refer to the section Centering a lens > Blocking a lens (☞ p.67).

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

Prerequisite:

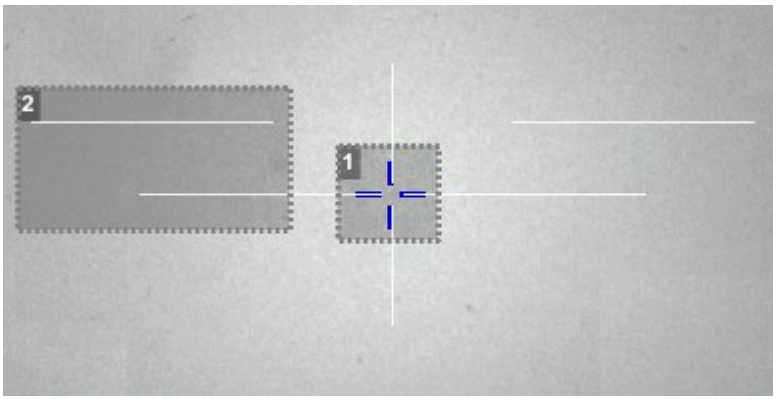
- The markings must be clear
- The lens must at least have the following markings:



1. *Centering cross*

2. *Centering marks*

Description of the centering target



1. *Centering cross (white cross) and Boxing center (blue cross) of the shape*

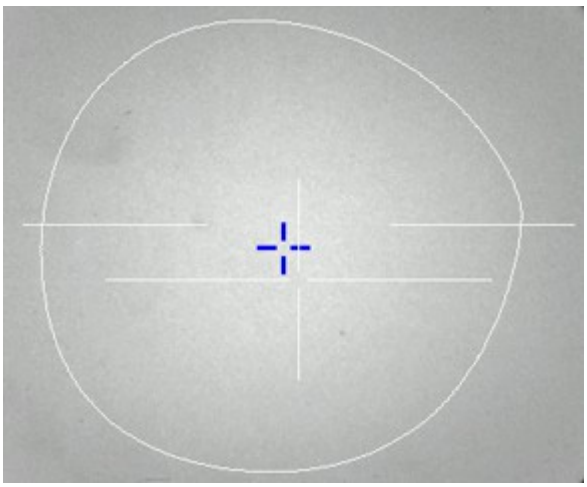
2. *Centering marks*

Centering the lens

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

2 Press  to select the centering from the manufacturer markings.

> The centering target is displayed:



3 Enter the half PD and the frame height.

4 Change the distance between the PRP (prismatic reference point) and the centering cross

if necessary.

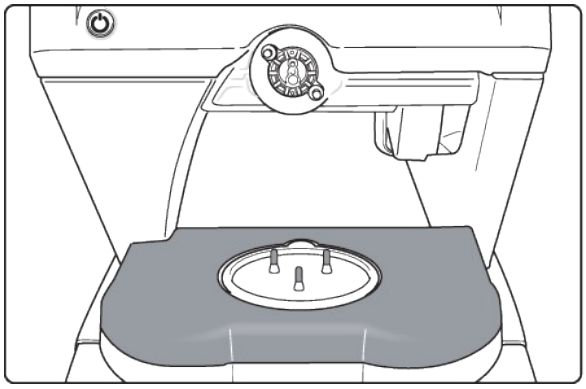
This value is set by default to 6 mm for Essilor mid-range lenses. This can vary depending on the lens manufacturer.

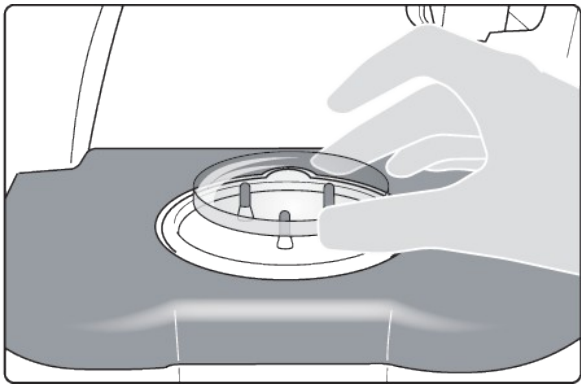
> The target moves.

5 Make sure that the standard tripod is inside the centering chamber.

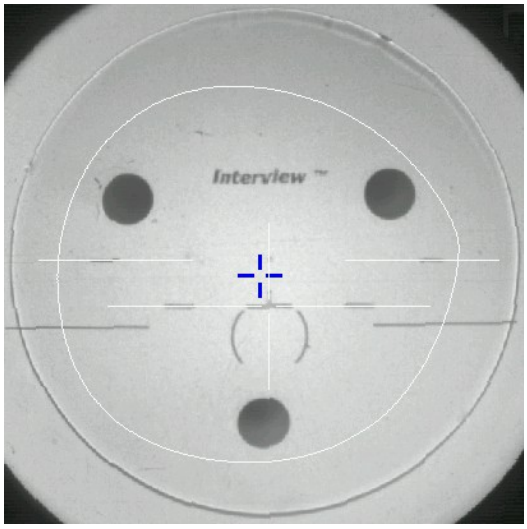
- Use the high-base tripod for a high-base lens.
- Place the recut accessory in the center of the standard tripod for a small lens.

6 Position the lens on the tripod.





7 Move the lens slowly until the manufacturer markings are superimposed on the target.



> The lens is centered and ready to be blocked.

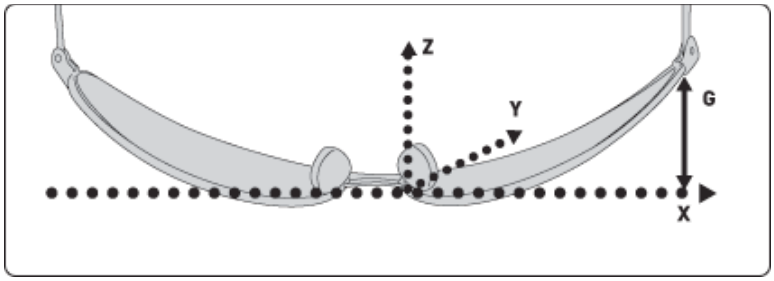
To block the lens, refer to the section Centering a lens > Blocking a lens (☞ p.67).

7. CENTERING A LENS FOR A HIGH-BASE FRAME

At the end of a tracing, if a frame is considered to be high based, the  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).

To center a high-base lens, use the high-base tripod.

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

- Centering a single vision lens (☞ p.46)
- Centering a progressive lens (☞ p.51)
- Centering a bifocal lens (☞ p.57)
- Centering an executive lens (☞ p.59)
- Centering a mid-distance lens (☞ p.61)

8. Blocking a lens

The tracer is set to a WECO posiblock usage by default.

To set the limit values based on the posiblocks used, see the section Set tracer-centerer-blocker/Blocker> Customize tracer > working mode and Display Metrics (☞ p.104).

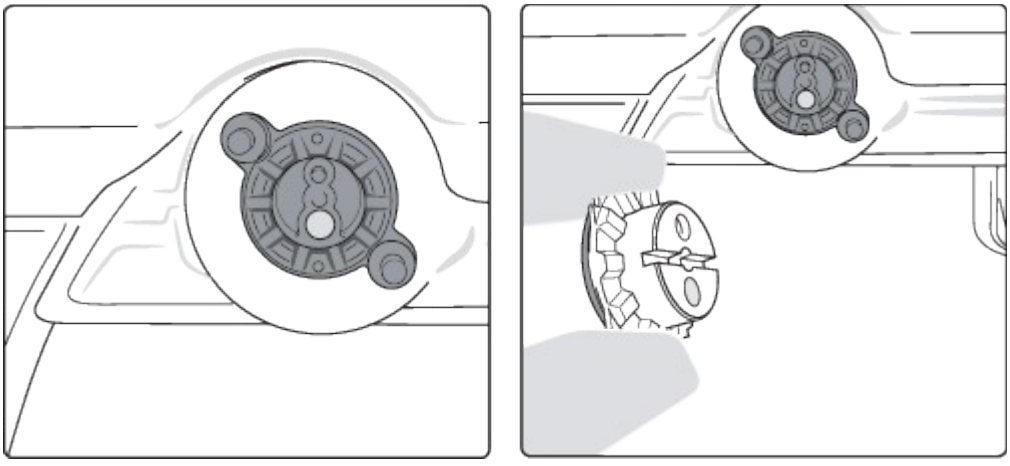
Prerequisite:

- The lens must be centered.
- Use the posiblock adapted to the shape.

1 Fit the appropriate pad on the posiblock, making sure to align the pad lug with that of the posiblock.

- 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 Position the posiblock in the blocking head.



3 Press  to start the blocking.

> The blocking arm places the posiblock on the lens at the shape Boxing center.

> 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.

4 Center and block the second lens.

IV. Modifying the lens shape

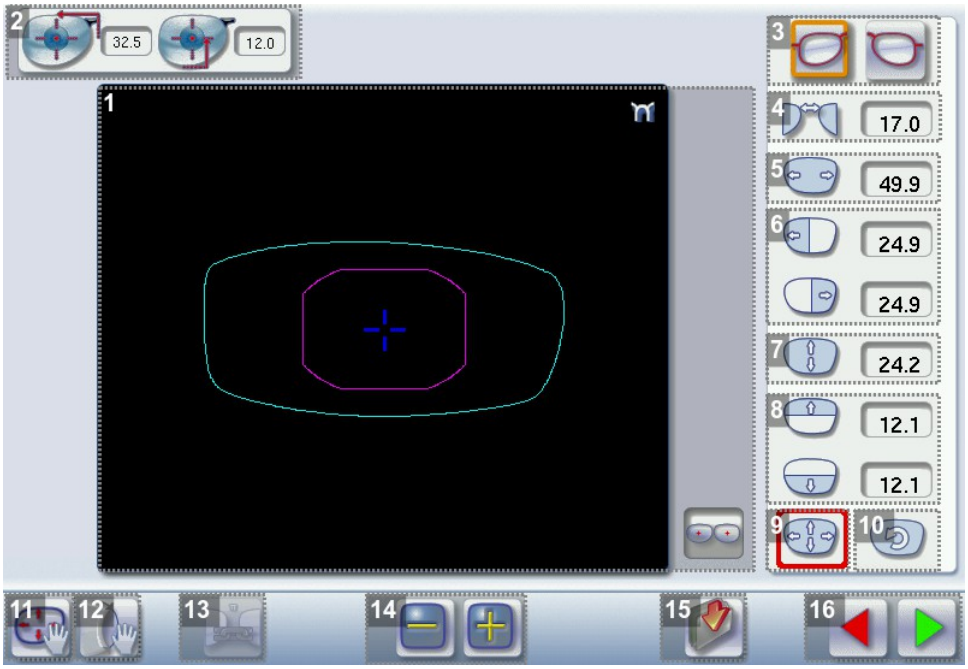
This chapter describes the lens shape modification procedures:

- Description of the shape modification screen (☞ p.70)
- Modifying the lens shape (☞ p.71)
- Archiving shapes (☞ p.76)

1. Legend screen

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

The following screen is displayed:



1. *Work area*

Colors which may appear on screen:

- (white) Current shape (from the traced shape) and associated drilling points
  (cyan) Current shape (obtained by symmetry with the traced shape) and associated drilling points
- (light red) Shape before modification
- (grey) Part of the shape not selected for the current modification
- (purple) Smallest possible shape
- (pink) Limit of the no-accessory area
- (yellow) Limit of the drilling zone
- (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.

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 settings (☞ p.104).

15. *Create a new job based on the job displayed*

16. *Back to the centering screen*

- Press  to save the changes and return 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.72): D-dimension, boxing dimensions, modification of size and rotation of the shape
- Free modification (☞ p.74), within the constraints pertaining to lens edging
- The retouching of a shape (☞ p.75) in the event of possible tracing defects

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.

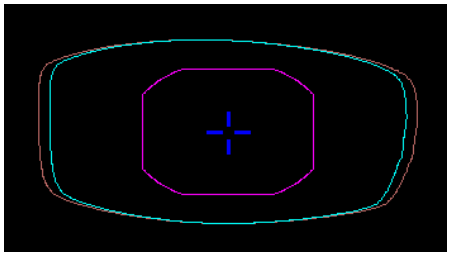
2 Use the  or  buttons to decrease or increase the corresponding value and view the modification in real time.

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.

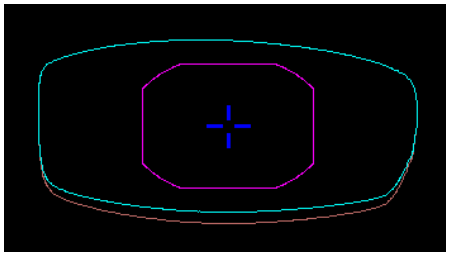
> The shape is modified.

> The original shape is displayed in light red.

Example of an A-dimension reduction:



Example of a half B-dimension reduction:



Modify the total size of the shape

1 Press  to select modification by scaling.

> A red rectangle is displayed around the icon.

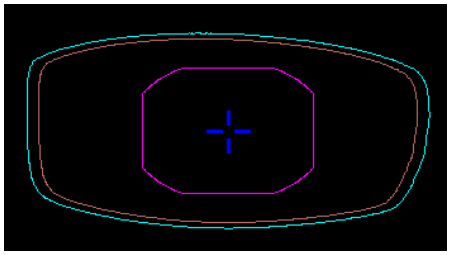
2 Use the or buttons to decrease or increase the shape and view the modification in real time.

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

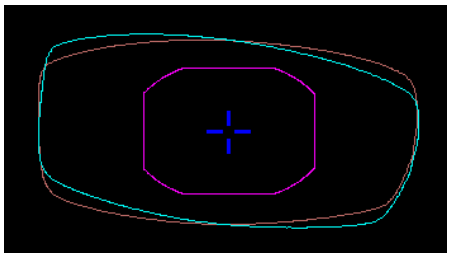
1 Press to select modification by rotation.

> A red rectangle is displayed around the icon.

2 Use the or buttons 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 to cancel the last modification made to the shape.
- Press twice consecutively to return to the original shape.

Once the shape is 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.

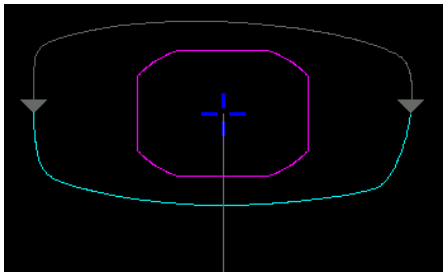
-  Modification of both eyes simultaneously
-  Modification of each eye separately

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.

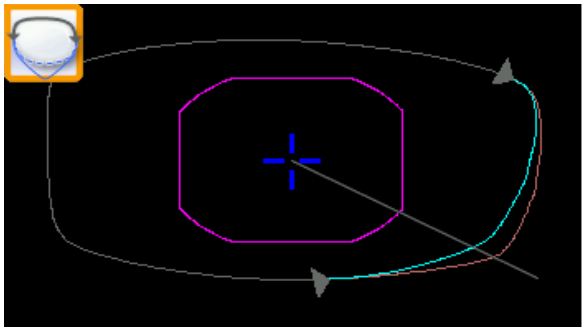
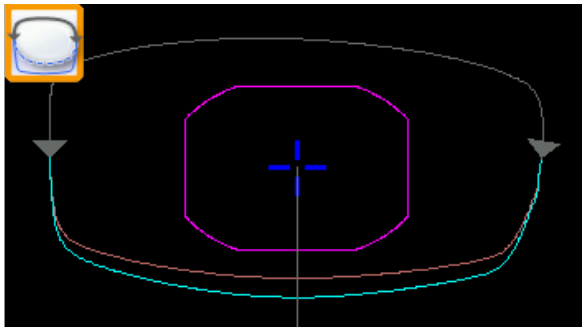
3 Drag the cursors → and ← to delimit the selection area.

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 to cancel the last modification made to the shape.
- Press  twice consecutively to return to the original shape.

Once the shape is 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

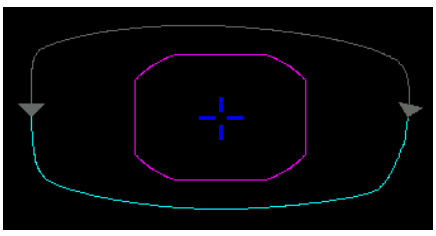
In symmetric monocular or binocular tracing, modifications are automatically made to both eyes.

1 Select  .

> The selection area is defined by two cursors → and ←.

> The area not affected by the modification is displayed in gray.

2 Drag the cursors → and ← to delimit the selection area.



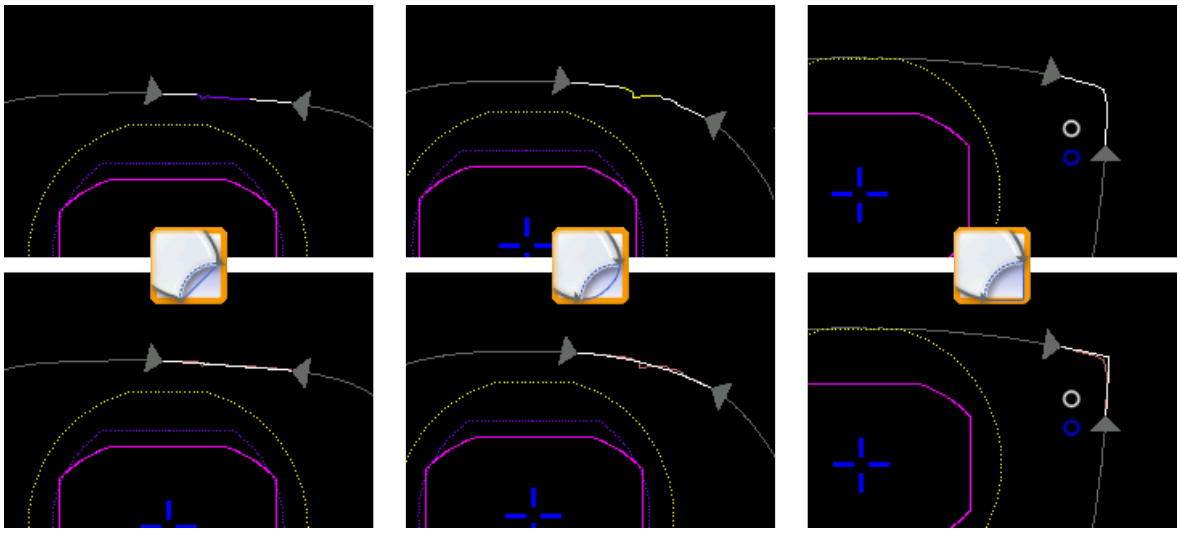
3 Select the type of retouch.

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 to cancel the last modification made to the shape.
- Press twice consecutively to return to the original shape.

Once the shape is 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.80)
- Configuring drilling settings (☞ p.82)
- Drilling models (☞ p.88)

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

Prerequisite: to access this screen, you must already have carried out 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.

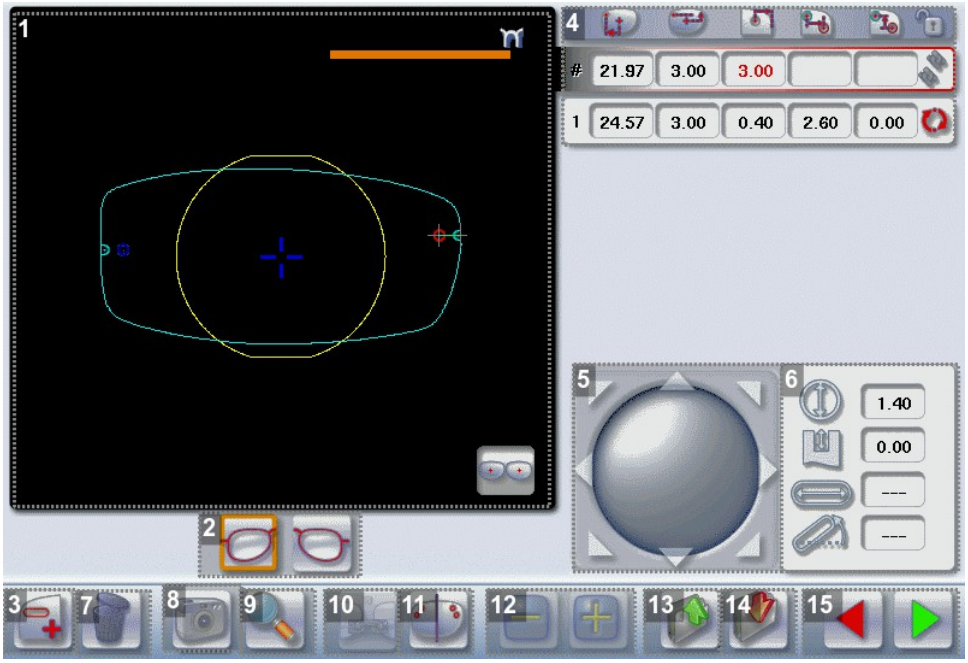
Glass lenses

The drilling function is not available for glass lenses.

1. LEGEND SCREEN

From the centering screen press  to access the drilling screen.

The following screen is displayed:



1. *Work area*

Colors which may appear on screen:

- (green) Current shape (from the traced shape) and associated drilling points

- (cyan) Current shape (obtained by symmetry with the traced shape) and associated drilling points
  - (yellow) Limit of the no-drilling area
  - (orange) temporal or nasal 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*

-  Drill-hole
-  Slot
-  Notch

4. *Drilling coordinates*

-  X and Y coordinates in relation to the boxing center of the shape.
-  Distance between the center of the drill-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. *Picture mode*

Acts as an aid to manually position the drill-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 temporal to the nasal 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 changes and return to the centering screen.
- Press  to return to the centering screen without saving the changes.

2. CONFIGURING A DRILLING POINT

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

- Creating a drilling point (☞ p.82)
- Delete one drilling point (☞ p.84)
- Dimensioning a drilling point (☞ p.84)
- Adjusting the position of a drilling point (☞ p.86)

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 symmetric binocular or monocular 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  : drillings are no longer linked  .

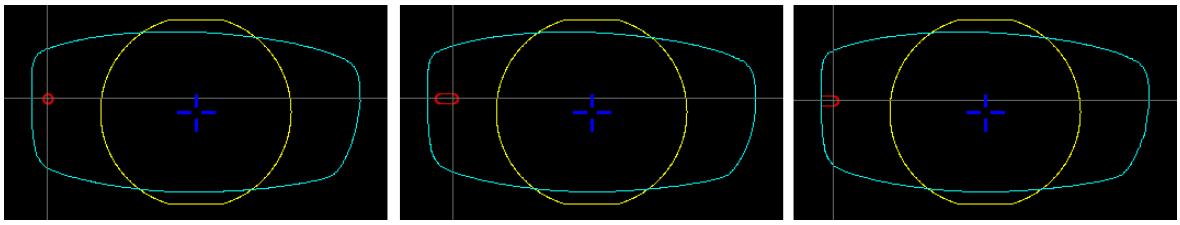
a. Creating a drilling point

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;

- X coordinates
- Y coordinates
- Distance in relation to the edge of the lens.
- X coordinates in relation to the reference drilling point
- Y coordinates in relation to the reference drilling point

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.

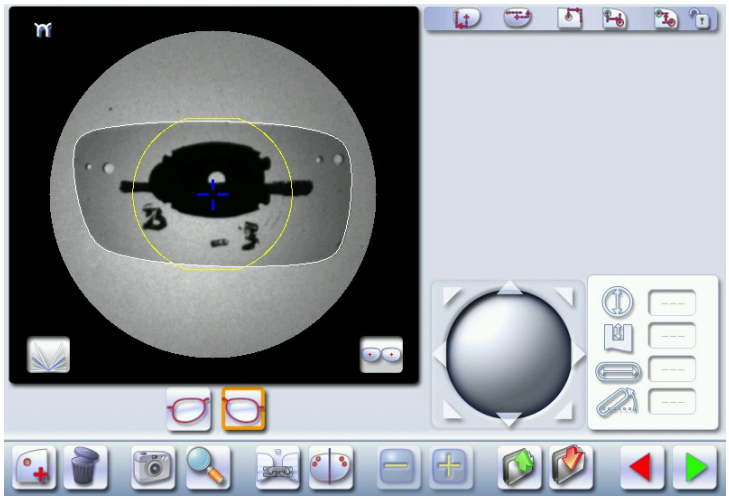
Picture mode

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 picture 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 picture.

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 or buttons to decrease or increase the selected value.

3 Enter the new value of the parameter and press to confirm.

> The drilling point has been modified.

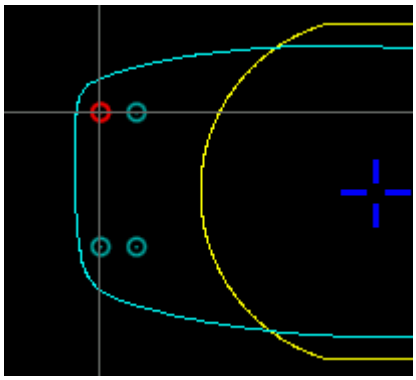
Grouping the drilling points

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.



- To ungroup the drilling points, press again.

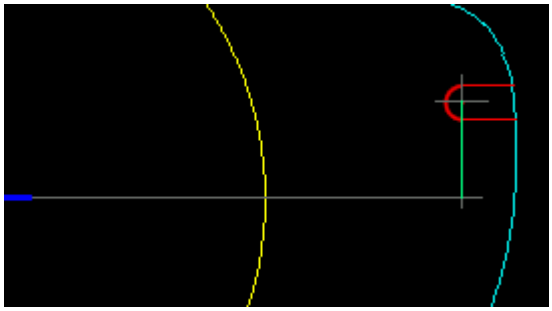
d. Adjusting the position of a drilling point

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

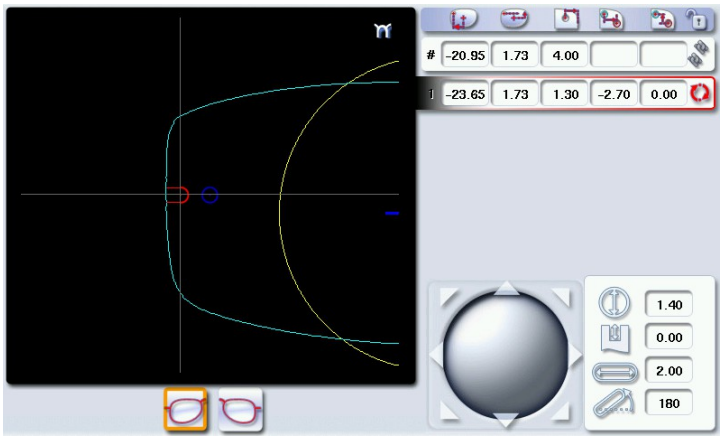
- Use the virtual mouse
- Use the  or  buttons to reduce or increase the selected value.
- Enter the exact coordinates of the drilling point directly.

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  and  buttons, press  to zoom in on the selected drilling point: the displacement step is 0.01mm (0.1mm for normal display).



1 Press on the drill-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 in relation to the edge of the lens.

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

Lock the distance in relation to the edge of the lens to adjust only the Y position of the drilling point.

> The numeric keypad is displayed.

3 Enter the new value and press to confirm.

> The drilling coordinates are modified.

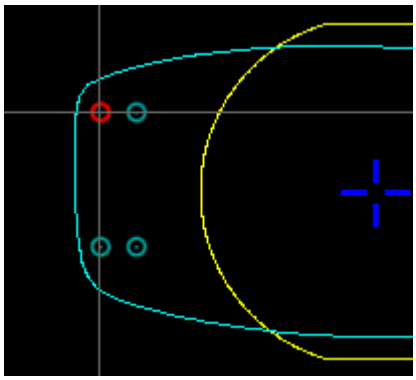
Grouping the drilling points

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.

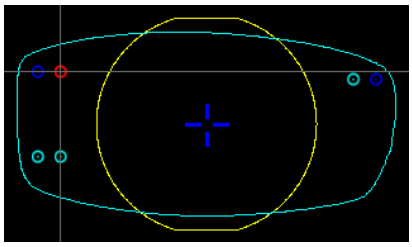


- To ungroup the drilling points, press again.

Reference drilling point

The first drilling point you create on a shape automatically becomes the 'reference drilling point' in relation to which the others are positioned:

- 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.

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 want to use as the reference drilling point

2 Press to 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 on a job (☞ p.89)
- Saving a model (☞ p.90)

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 drilling settings (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 From the drilling positioning screen, press  to access the list of drilled jobs saved in the shape management screen.

2 Select the desired list.

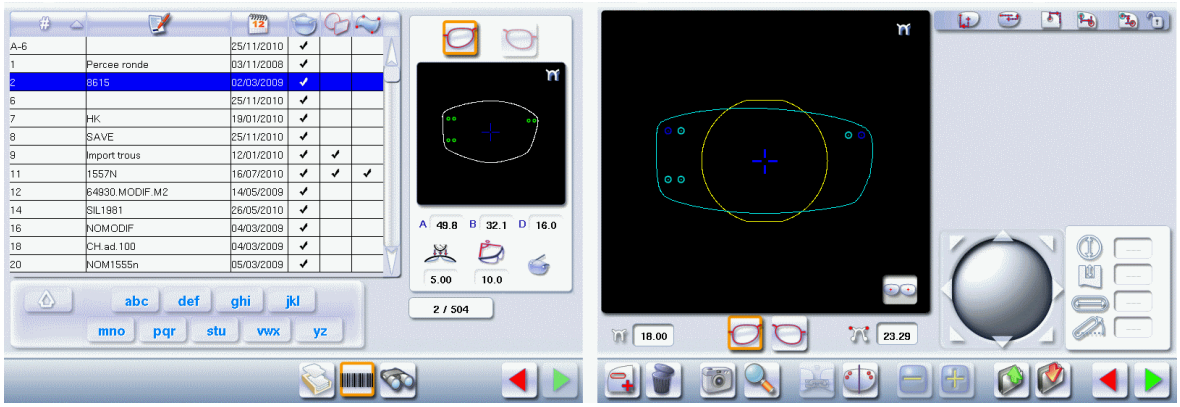
> The drilled jobs in the selected list are displayed.

3 Select the desired job as a drilling model.

> The model is displayed in the preview.

4 Press  to confirm 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

- 

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

- 

The separation (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.84)
- Preparing a drilled job > Positioning a drilling point > Adjusting the position of a drilling point (☞ p.86)

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 on 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 it 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 return 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.94)
- Edging settings (☞ p.96)

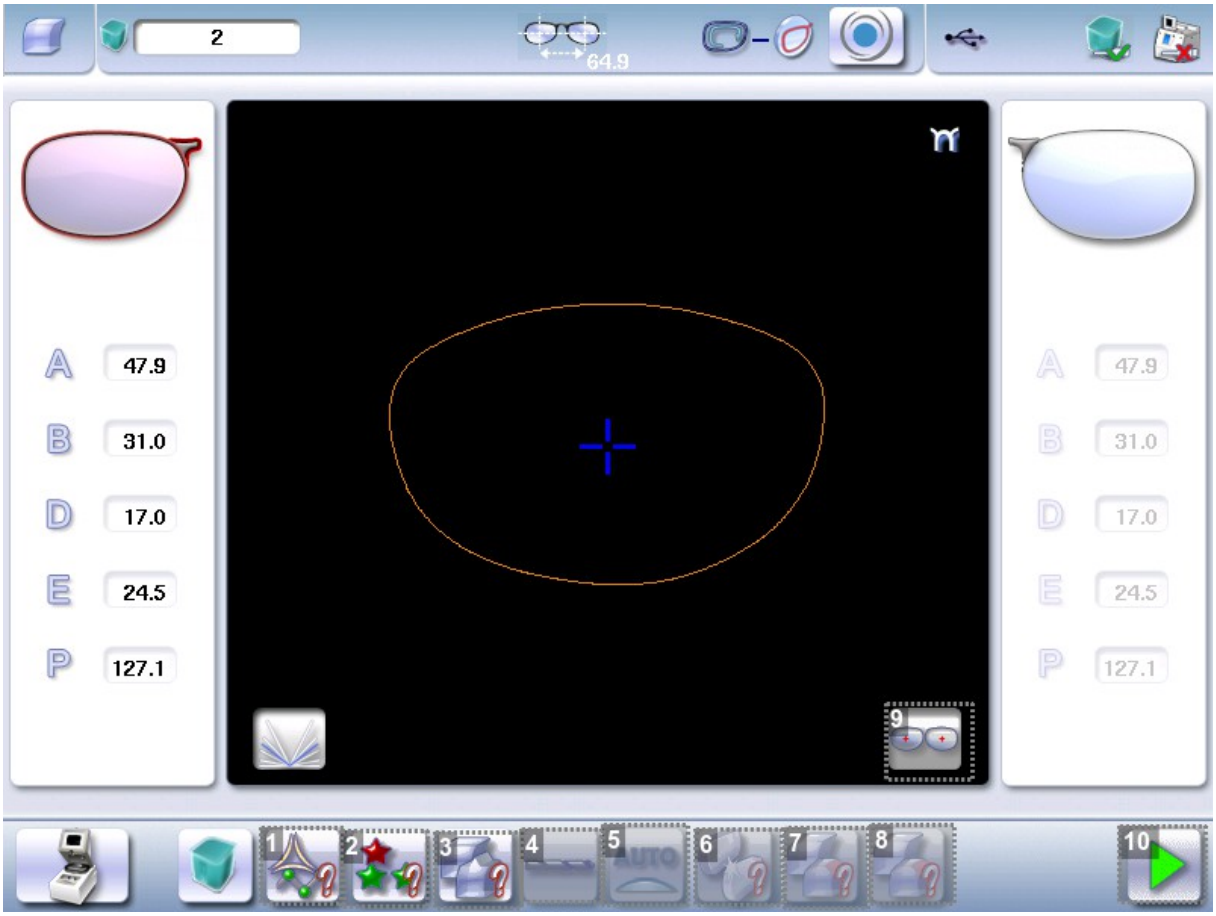
The activation of this function is carried out in the machine configuration screen.

For more information, see the chapter Setting up the tracer-centerer-blocker>Customize tracer>working mode and Display Metrics (☞ p.104)

1. LEGEND SCREEN

Press  >  to access the edging preparation screen.

The following screen is displayed:



1. *Lens material*

- Plastic lens -index 1.5
- Polycarbonate lens
- Medium or 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 lenses with hydrophobic coating.

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 finishing parameters are automatically calculated according to the information acquired when tracing the frame and feeling the lens.
-  Customized mode

  The finishing parameters 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 automatically be retrieved.

VII. To set up the device

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

- Configure the device (☞ p.100)(time, date, language, connections, screen saver),
- Optimize the device's "centering" function (☞ p.102)
- Customize the device (☞ p.104),
- Restoring the factory settings (☞ p.112).

1. CONFIGURING THE DEVICE

This section describes the procedures to:

- Set the time, date and language (☞ p.100)
- Access the connections and the network (☞ p.101)
- Configure a screen saver (☞ p.102)

a. Time, date and language

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

The following screen is displayed:

1. *Time*

Use the and arrows to set the time.

2. *Date*

Use the and arrows 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.

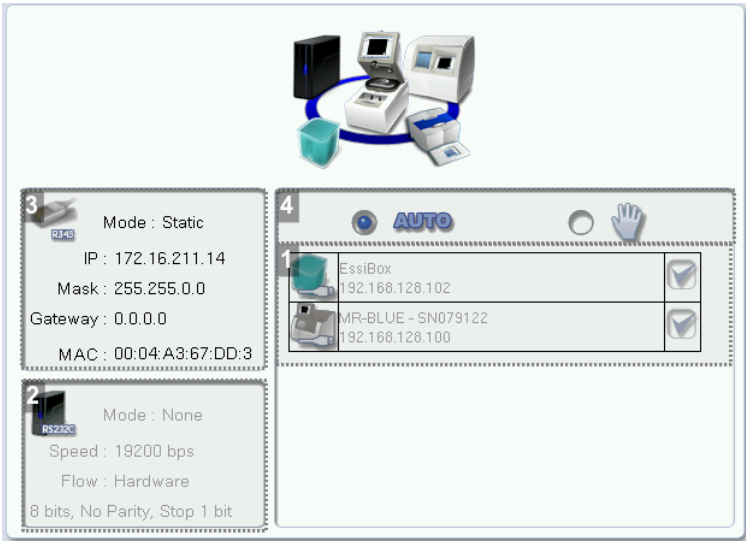
Once adjustments have been completed: press  to go back to the work screen.

b. Connections

The connections are configured from the tracer. The screen which you access from the edger is only available for consultation purposes.

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

The following screen is displayed:



1. *List of devices connected to the tracer*

2. *Settings linked to the configuration of the serial port*

3. *Settings linked to the configuration of the Ethernet port*

4. *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 to connect to the tracer.

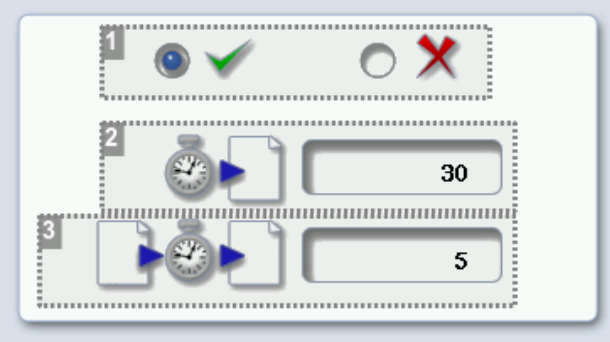
Once the modification is made, press  to return to the work screen.

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*

Activate  or deactivate  the screen saver display.

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 is made, press  to return to the work screen.

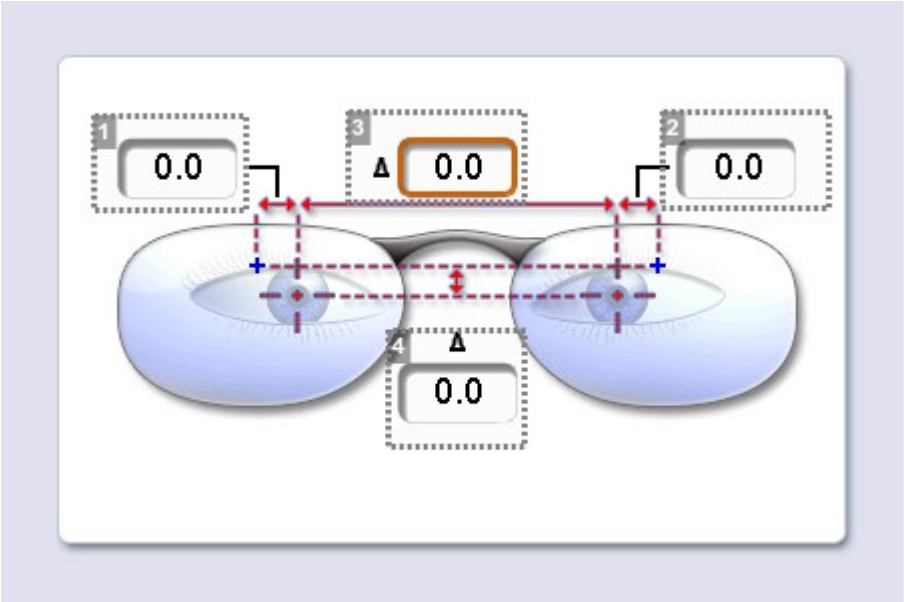
2. OPTIMIZE THE DEVICE'S "CENTERING" FUNCTION

This menu maximizes the accuracy of the centering in terms of the pupillary distance and height.

In some cases, this screen allows you to re-focus any centering deviation and adhere again to the product specifications.

 Press  >  > 

The following screen will appear:



1. *Modification of the right eye half PD*
2. *Modification of the left eye half PD*
3. *PD modification*

   This value corresponds to the sum of the two 1/2 pupillary distances.
4. *Height modification*

PD and half-PD (area 1/2/3)

1 Press and hold on the value you want to change.

> The value input keyboard appears.

2 Enter a value that's **positive** to shift the centering cross to the patient's temple.

Enter a value that's **negative** to shift the centering cross to the patient's nose.

You can also use the  and  buttons to enter the values.

Pupillary height (area 4)

1 Press and hold on the value you want to change.

> The value input keyboard appears.

2 Enter a value that's **positive** to move the centering cross up**.**

Enter a value that's **negative** to move the centering cross downward.

You can also use the buttons to enter the values.

The specified values will be applied by default for all types of centering.

For all one-time corrections, this screen is not suitable.

3. CUSTOMIZING THE DEVICE

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

- Choosing a working mode and a measurement display mode (☞ p.104)
- Choosing a decentration mode (☞ p.106)
- Customising the action bar (☞ p.107)

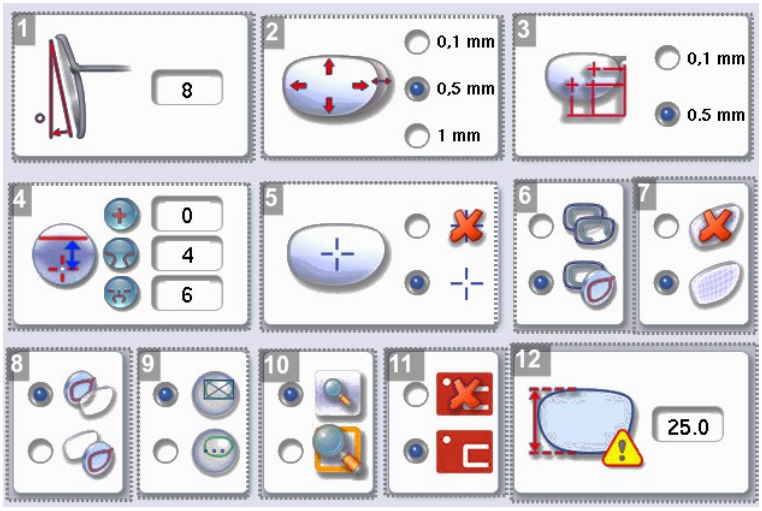
a. Working mode and measurement display

This menu allows you to customize the working mode and display accuracy on the device.

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

The following screen is displayed:

Tracer-centerer-blocker



1. *Pantoscopic angle*

a. Press on the tilt value to modify it.
> The numeric keypad is displayed.
b. Enter the angle (between -5° and +25°).
c. Press to confirm.

2. *Shape modification*

Select the desired step for the shape modification.

3. *PD and pupillary height*

Select the desired step for input of the PD and pupillary height.

4. *Progressive lenses_PRP*

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

5. *Boxing cross in the centering screen*

-  Displayed
-  Not displayed

6. *Working mode (depending on version)*

Select the default working mode:

- Tracing - tracing
- Tracing - centering

On the centerer-blocker:

-  Tracing - tracing
-  Tracing - centering

7. *Preparation of the lens for edging*

Select the display or not for the menu “Preparation of the lens for edging”

8. *Working mode*

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

- centering - preparing edging
- Preparing edging - centering

9. *Lens blocking*

Select the lens blocking mode:

-  in the boxing center
-  in the optical center

10. *Zoom*

-  The work area is scale 1:1 by default in the centering screen.
-  The work area is in zoom mode by default on the centering screen.

11. *Chemistrie Function*

-  Chemistrie function™ activated
-  Chemistrie Function™ not activated

12. *Definition of the lower B-dimension limit of the shape*

Enter the minimum value for the B-dimension of the shape based on the posiblock used.

In the centering screen, if the B-dimension value is less than the value entered on this screen: a warning appears.

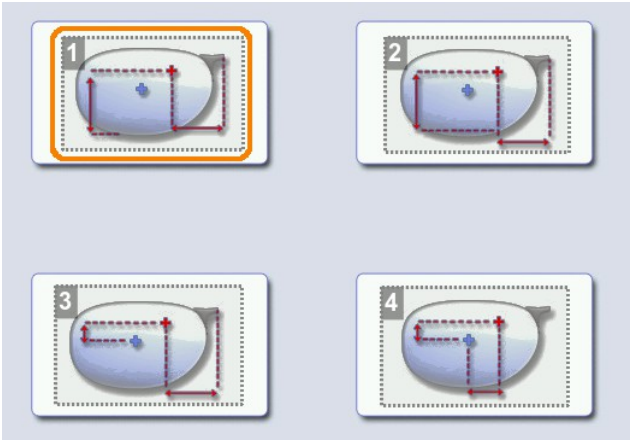
Once the modification is made, press  to return to the work screen.

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 (½ PD + Boxing Height)*

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

2. *Datum mode (½ PD + Datum Height)*

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

3. *ΔY mode (½ PD + ΔY)*

   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. *ΔX + ΔY 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 is made, press  to return to the work screen.

c. Action bar

This menu enables you to customize the action bar according to your requirements. You can:

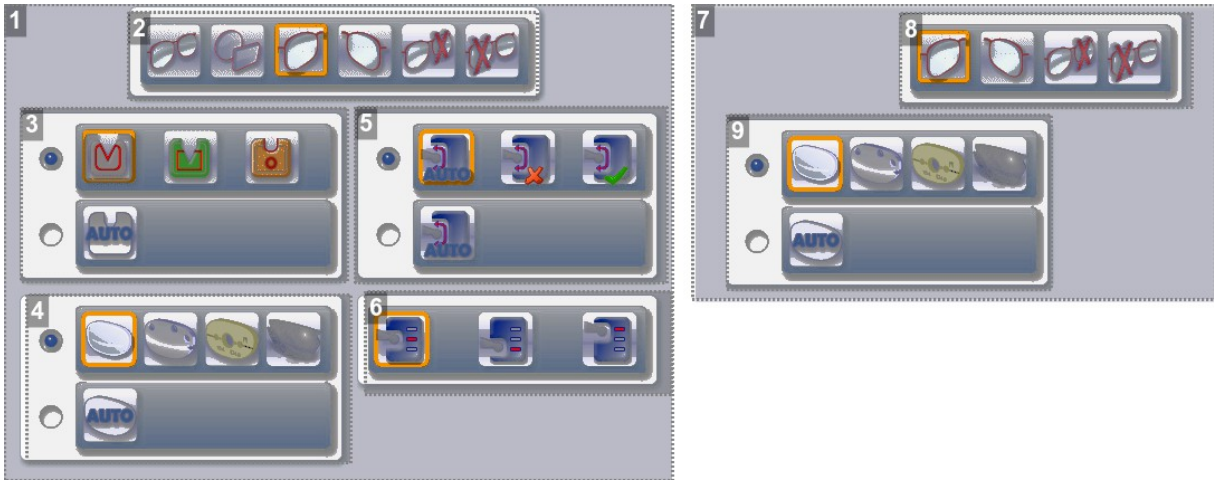
- Enable default options so that they are displayed first in the job options (centering and tracing screens)
- Disable the options you do not require so they are no longer displayed in the job options.

You can also configure centering help.

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

The following screen is displayed:

Tracer-centerer-blocker



1. *Tracer-centerer-blocker*
2. *Type of tracing*
   - Symmetrical binocular
   - Asymmetric binocular
   - Right eye monocular
   - Left eye monocular
   - Monocular right eye only
   - Monocular right eye only
3. *Frame type (depending on model)*

   Four choices are possible.
   - Metal frame
   - Plastic frame
   - Optyl frame, for particularly flexible frames

-  Automatic detection

4. *Tracing mode*

-  Demo lens for Nylor© frame/Recut lens
-  Pattern
-  Demo lens for drilled frame/Recut lens
-  Half Jacket lens
-  Automatic detection of the type of demo lens/pattern

5. *Groove acquisition (depending on model)*

-  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.

6. *Feeler insert (depending on model)*

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

7. *Centerer-blocker*

8. *Type of tracing*

-  Right eye monocular
-  Left eye monocular
-  Monocular right eye only
-  Monocular right eye only

9. *Tracing mode*

-  Demo lens for Nylor© frame/Recut lens
-  Pattern
-  Demo lens for drilled frame/Recut lens

- Half Jacket lens
- Automatic detection of the type of demo lens/pattern

Customizing the action bar

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

- Option enabled: the option can be selected in the action bar drop-down menus.
- 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 .

The following screen is displayed:

1. *Customization of the color of the target and shape*

   See the procedure below.

2. *Customization of the centering assistance sensitivity*

   See the procedure below.

3. *Customization of blocking controls*

   See the procedure below.

4. *Type of lens*

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

5. *Centering mode*

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

6. *Press to go back to the first page*

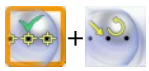
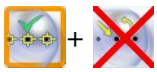
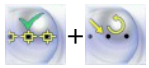
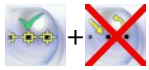
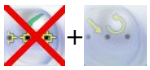
7. *Press to move to the next page*

Set up centering help

1 Select the centering help you want:

-  Discrete Help: only centering markers detected on the lens are highlighted.
-  Arrow Help: lens positioning indicators help you place it precisely for the centering.

 Enabling arrow help requires using the default discrete help

Combination	Result
	Arrow assistance activated by default
	Discrete help activated by default
	Assistance with arrows to be activated manually
	Discrete help to be activated manually
	Centering help disabled

2 Adjust the sensitivity of the help with the cursor.

The adjustment is done from left to right: from the most precise to the most tolerant.

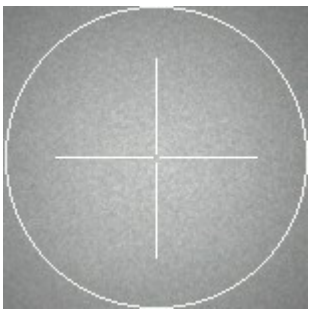
The value entered by default is considered the best compromise.

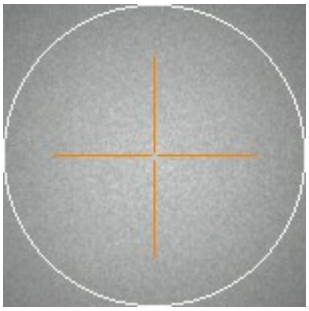
This setting affects the speed of manual centering, the more refined the sensitivity and fine-tuning (cursor completely to the left), the more time the centering will take because the harder it will be to reach the target value.

Customizing the display of the target and shape

Press  to change the color of the target.

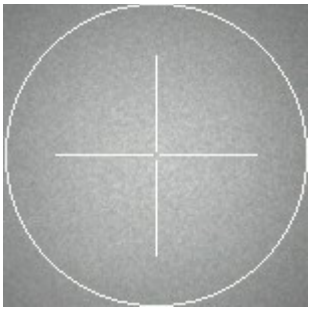
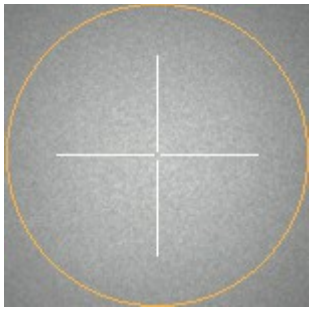
Each press corresponds to a color (three colors are available).





Press  to change the color of the shape.

Each press corresponds to a color (three colors are available).


Customizing blocking controls

1. Enabling lens fit (lens fit):  .

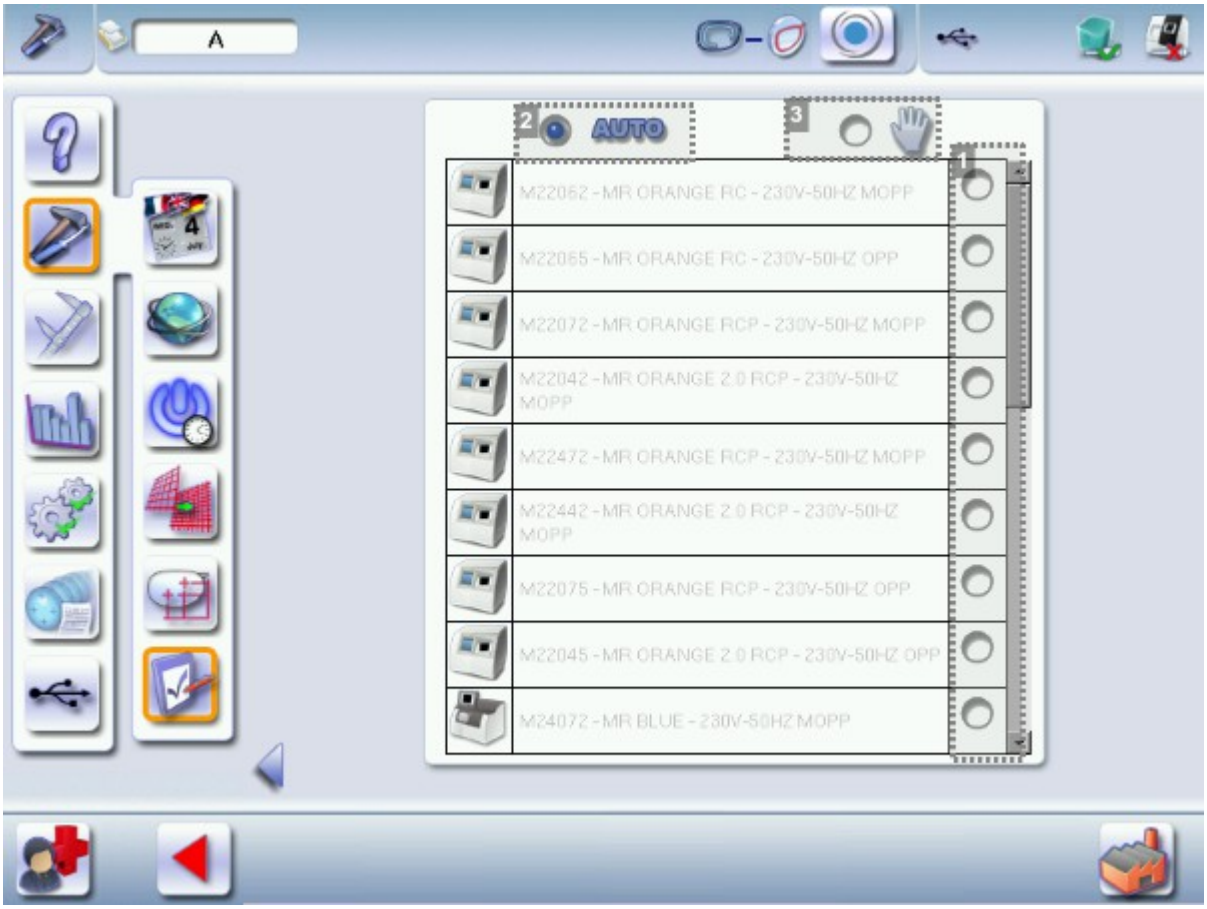
   A visual warning controls the lens fit: any portion of the lens outside of the shape is shown in red. You can change the pupillary height and PD to put the shape back into the lens, but if this change involves an too widely induced prism, we recommend that you order a new lens with a better diameter.

2. Activation of lens-side detection:

   The tracer is able to distinguish the right lens from the left lens on progressive lenses through the markings. If reversed: an warning message warns you.

After you make the changes, press to return to the work screen or press to go to the next screen.

The following screen is displayed:



1. *Associated edger*

Select the associated edger.

2. *Automatic connection*

3. *Manual connection*

4. RESTORING THE FACTORY SETTINGS

At the bottom right of certain settings screens, the button can be used to restore the factory parameters of the page.

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

VIII. Maintenance & servicing

This chapter describes the maintenance operations you can carry out on the digital system without the aid of a technician.

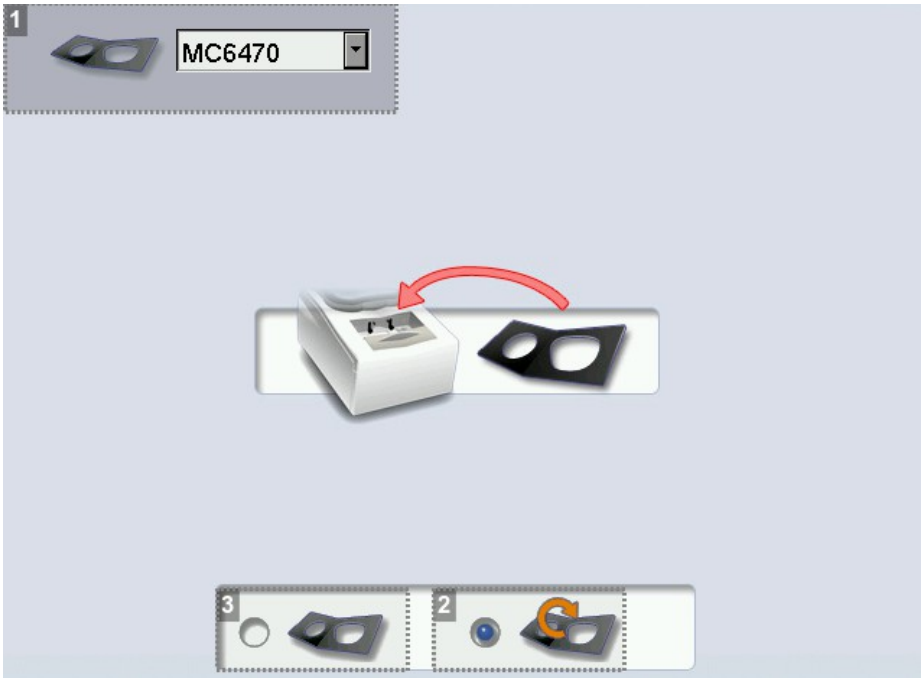
- Perform autotests (☞ p.116),
- Control and calibrate the tracer (☞ p.117),
- Viewing the statistics and technical history log (☞ p.122) (jobs and actions carried out)
- Servicing and cleaning the digital system (☞ p.125)

1. Carrying out the autotests

This menu allows you to perform diagnostics on the tracer-centerer-blocker functions:

Tracing table (according to version)

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



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

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

   To interrupt the cycle at any time, press .

   > 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 good working order of the centerer-blocker, select > > from your work screen.

1. *Blocking arm movements*

2. *Optical tests*

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

   To interrupt the cycle at any time, press .

   > 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.117) (depending on the product),
- Check the centerer-blocker then calibrate it if required (☞ p.120)
- Calibrate the touch screen (☞ p.121).

Tracer calibration

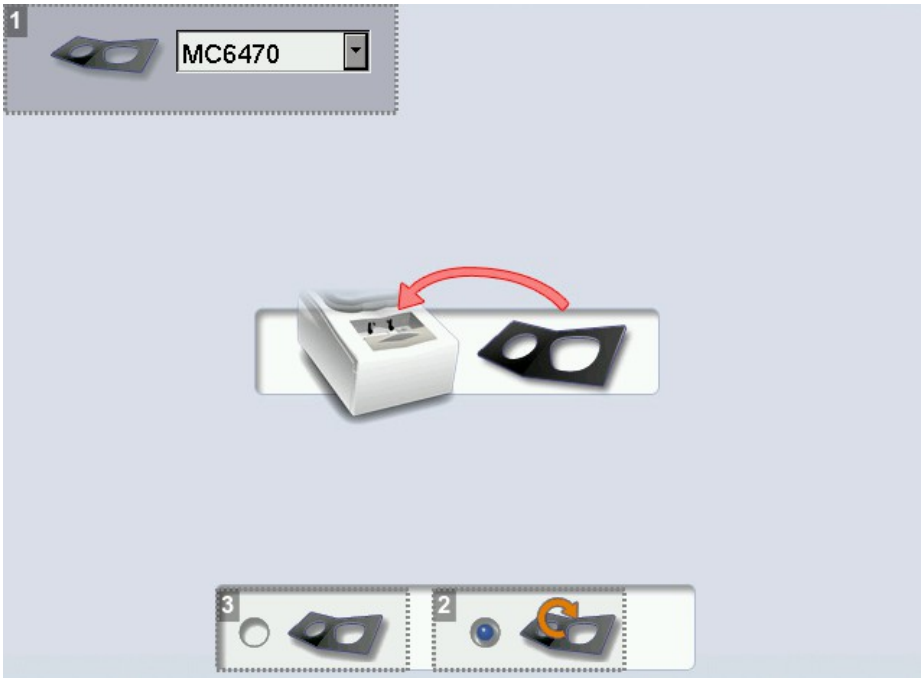
The calibration of the tracer can only be done by a qualified technician.

a. Checking and calibrating the tracing table (depending on version)

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*

Checking the calibration of the tracing table.

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: run a calibration cycle.

Calibrating the tracing table

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.35).

3 Select  to start the cycle.

Apply pressure on the jaws throughout the calibration cycle to ensure that the pattern holder remains in place.

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.

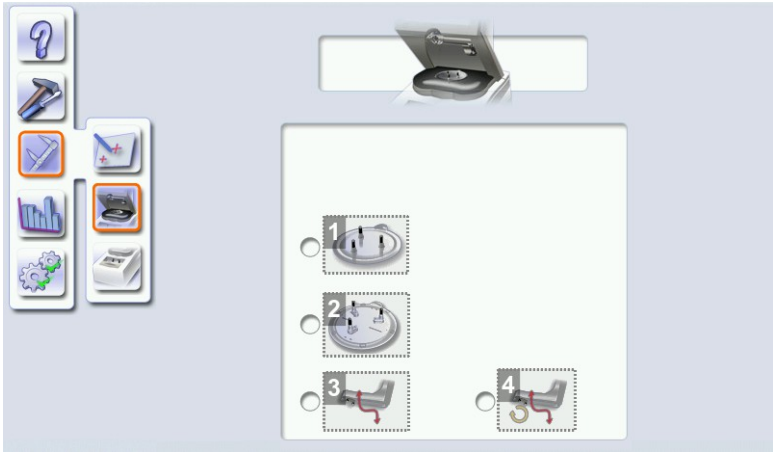
Press  to return to the work screen.

b. Checking and calibrating the centerer-blocker

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

From the tracer work screen, select  >  >  .

The following screen is displayed:



1. *Standard tripod*

The tracer detects the position of the feet and the axes on the tripod to optimize correction of the axis deviation and decentration due to the power of the centered lenses.

2. *High-base tripod*

The tracer detects the position of the feet and the axes on the tripod to optimize correction of the axis deviation and decentration due to the power of the centered lenses.

3. *Blocking arm calibration*

Only calibrate the blocking arm if the check fails.

During calibration, the tracer detects when the arm is in blocking position, to guarantee its accuracy.

4. *Checking the calibration of the blocking arm*

If the check fails, calibrate the blocking arm.

Checking or calibrating the centerer-blocker

Prerequisite: Make sure the blocking head is empty before starting the check or calibration.

1 Select the desired option.

2 If necessary, place the tripod corresponding to the selected option, without the recut accessory, in the centering chamber.

3 Press to start the cycle.

> The procedure was successful

The procedure failed

- If the check fails, calibrate.
- 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 > > from the work screen.

> A confirmation message is displayed:

- Press to start calibration.

- Press  to cancel and return 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 return to the work screen.

3. Statistics and technical history

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

- Tracer cycles (☞ p.122)
- Technical history log and errors (☞ p.124)

a. Device cycles

From the work screen, select  >  >  to view the number of cycles carried out by the device.

The following screen is displayed:

Tracer-centerer-blocker

1. *Mechanical tracings*

 Total number of mechanical tracings

2. *Traced frame materials*

The optyl frame tracing cycles are recorded in the tracing cycles of plastic frames.

3. *Optical tracings*

Tracing Cycles "Demo Lens/Recut Lens for Typical frame Nylor ©  and "half jacket"  are counted in the "Demo Lens/Recut lens"  cycle.

4. *Tracing table tests and calibrations*

5. *Partial counter*

Number of actions performed since the last reset to zero.

6. *Total counter*

Total number of actions performed.

7. *Reset*

You can reset a partial counter to zero:

a. Select the cycle counter to reset to zero.

b. Press  to reset it to zero.

8. *Next page/Previous page*

9. *Centering operations*

10. *Blocking operations*

11. *Blocking arm calibration and calibration checks*

Centerer-blocker

1. *Optical tracings*

Tracing Cycles "Demo Lens/Recut Lens for Typical frame Nylor ©  and "half jacket"  are counted in the "Demo Lens/Recut lens"  cycle.

2. *Partial counter*

Number of actions performed since the last reset to zero.

3. *Total counter*

Total number of actions performed.

4. *Reset*

You can reset a partial counter to zero:

a. Select the cycle counter to reset to zero.

b. Press  to reset it to zero.

5. *Next page/Previous page*

6. *Centering operations*

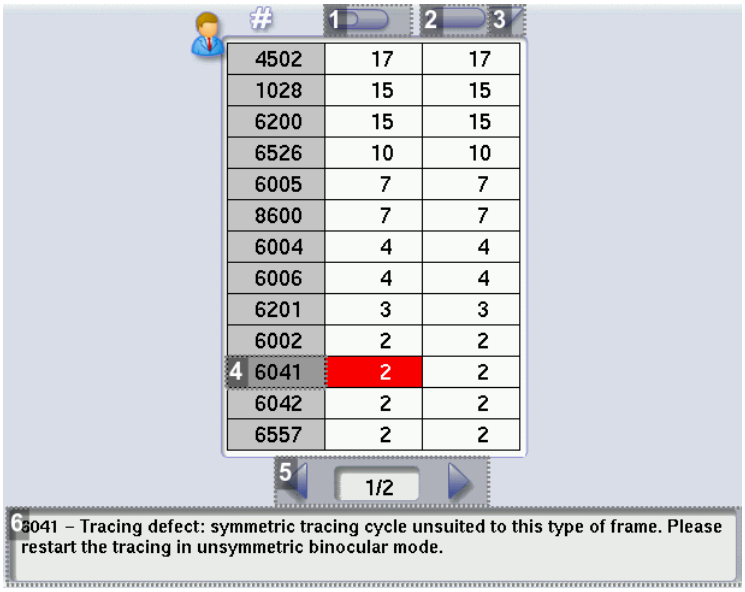
7. *Blocking operations*

8. *Blocking arm calibration and calibration checks*

b. Technical log and errors

From the work screen, select  >  >  to access the list of error messages.

The following screen is displayed:



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.

To sort the partial counters press  , press  again to define the sort direction (ascending, descending).

2. *Total counter*

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

To sort the total counters press  , press  again to define the sort direction (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 return to the work screen.

4. Maintain and clean the tracer-centerer-blocker

This section describes tracer maintenance and cleaning procedures:

- Precautions required (☞ p.125)
- Cleaning the centering chamber glass (☞ p.125)

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 centering chamber glass

A dirty or scratched glass may cause centering or tracing defects. It must be replaced by a technician.

Take care of it and clean it regularly with a soft cloth.

Whenever possible, leave the standard tripod in position in the centering chamber. It protects the glass.

TECHNICAL DATA

1. 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 curve 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 tinted lenses
- Tracing of patterns, demo lenses and recut lenses in 2 dimensions
- Automatic tracing of patterns, demo lenses and recut lenses
- Pre-positioning of drilling points and their settings on a demo lens or recut lens
- Recut lens: equivalent sphere [-1 D; +1 D]

Manual centering:

- Single vision lenses: using focimeter dots or re-marked micro-engravings
- Progressive lenses: using re-marked micro-engravings or manufacturer markings
- Trifocal and bifocal lenses
- Executive lenses
- Mid-distance lenses: using re-marked micro-engravings or manufacturer markings

Centering help:

- Single vision lenses: assisted centering: detection of focimeter dots or re-marked micro-engravings
- Progressive lenses: assisted centering: detection of re-marked micro-engravings or manufacturer markings

Specific centering target for each type of lens: single vision, bifocal/trifocal, progressive, executive, mid-distance

2-track optical video system: without parallax

Magnification: 1.59

Input of job distances:

- PD: 1/2 PD, ΔX
- Boxing height, Datum height, ΔY
- Modification by steps of 0.1 mm or 0.5 mm

Pantoscopic angle: from -5° to +25°

Shape modification:

- Scaling, A-dimension, B-dimension, ½ A-dimension, ½ B-dimension, D-dimension, one point modification, rotation
- 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 300, D 500, H 620 mm

Weight: 22.5 kg (tracer-centerer-blocker)/ 17.5 kg (centerer-blocker)

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.

2. 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

Degree 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,
- protected from all chemical products, corrosive vapors 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

1. Symbols

Symbols present on the digital system	
O	Off (power)
I	On (power)
	D.C. current speed
	asynchronous motor speed
	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: indicate the number of the page to be consulted for further information

2. 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. The manufacturer cannot be held responsible for any malfunction or loss of data resulting from such errors or omissions.

3. Declaration of conformity

Complies with marking: CE

Eurasian conformity: EAC

Complies with ISO 16284 standards, IEC 61010-1 and IEC 61326-1 and with directives 2006/42/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 radio frequency 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 of 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.

4. Copyright

5. 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.

6. 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 machine 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 adapters 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/I) you must stop using your machine. 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.

LEDs used by the tracer:

Radiation emitted by the LEDs.

Do not look directly at the light when you use optical instruments.

Class 1M LED device

Maximum power emitted: 1.3 MW; 107 mJ

Wavelength: 400-800 nm

Name of the standard and publication date (IEC 60825-1: 1993/A2: 2001).

7. 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

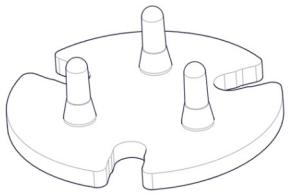
The products have been designed to withstand interference and operate despite its presence and the possibility of micro-outages on the network.

However, if these malfunctions are too serious and abnormal, the machine cannot be guaranteed to operate normally.

Glossary

Accessory for recut lens

Specific accessory to center the recut lenses or the small lenses, to place in the center of the standard tripod.



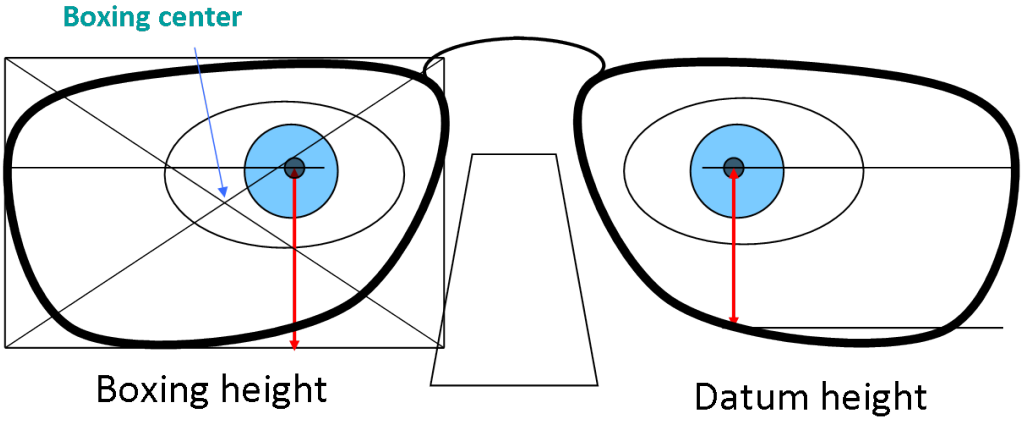
Asymmetric binocular tracing

The two circles of frame are read as if they have different shapes; the perimeters and the shapes are preserved.

Boxing dimensions

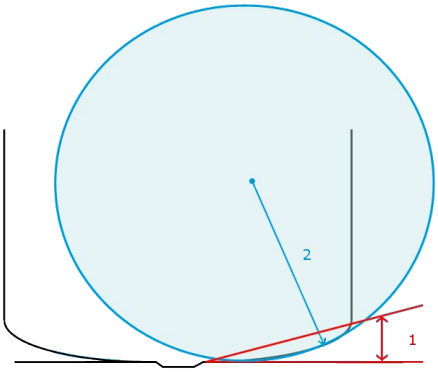
The boxing system is a standard method to indicate the dimensions of frame contours (or gauges). This operation consists in fitting the frame into a rectangle whose dimensions are indicated.

- 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 alphanumerics 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.

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.

Refractive index

Characterizes the refractive power of a transparent optical material.

The indexes vary according to the materials used for the lenses:

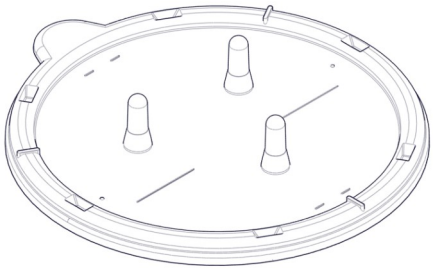
- Plastic lens: 1.5
- Polycarbonate lens: 1.59
- Medium or High Index lens: > 1.5
- Trivex™ lens: 1.5 to 1.6
- Tribrid™ lens: 1.6
- Glass lens: 1.5 to 1.9

Single vision lens

Type of single vision lens correcting amétropies. The power of the lens is the same over all its surface.

Standard tripod

Tripod used to center all types of lens, except for recut lenses and at very high-base.



Symmetric binocular tracing

The shape of the right circle of frame is applied symmetrically to the left circle; the traced perimeters are preserved.

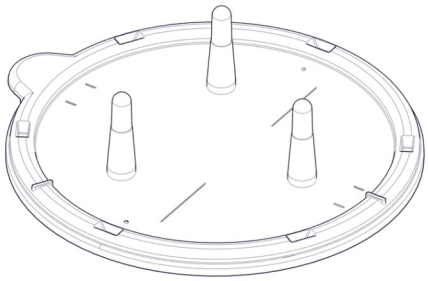
Trifocaux bifocal lenses/

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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