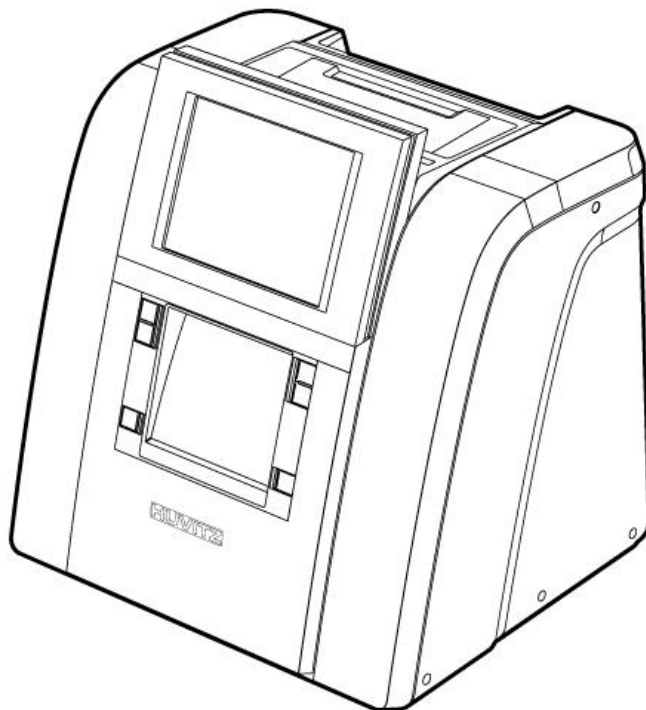


User Manual

EDGER HPE-8000



Huvitz

IMPORTANT NOTICE

This product may malfunction due to electromagnetic waves caused by portable personal telephones, transceivers, radio-controlled toys, etc. Be sure to avoid having the above objects, which affect the normal operation of the product, brought near the product.

The information in this publication has been carefully checked and is believed to be entirely accurate at the time of publication. HUVITZ assumes no responsibility, however, for possible errors or omissions, or for any consequences resulting from the use of the information contained herein.

HUVITZ reserves the right to make changes in its products or product specifications at any time and without prior notice, and is not required to update this documentation to reflect such changes.

9000ENGG301-A

Ver 1.1 (Nov. 2013)

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1. Introduction

1.1. Main Functions

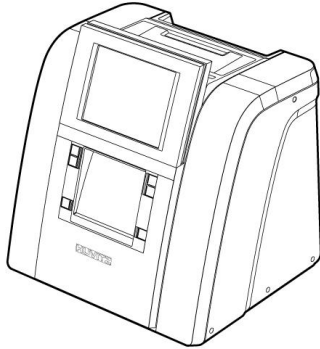
- This product is for processing lenses fit into eyeglasses frame, which automatically covers from tracing to edging.

Material \ Edging	Beveling	Flat Edging	Grooving	Polishing	Safety Beveling	Milling	Drilling
Plastic	○	○	○	○	○	○	○
Glass	○	○	X	X	○	X	X
High Index	○	○	○	○	○	○	○
Polycarbonate	○	○	○	○	○	○	○
Trivex®	○	○	○	○	○	○	○

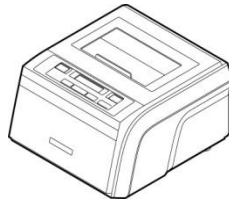
(Drilling function is available in drilling machine(HDM-8000))

- High Resolution TFT-LCD (10.4") and interface with touchscreen make it possible to use it easily and process intuitively with the actual sized data (frame, PD, FPD etc.)
- The "Digital Pattern Layout" modifies the lens shape in left/right, top/bottom as well as circumference and optimizes the fitting challenge for Rimless and Semi-Rimless.
- Frame Tracing, Layout and Lens Edging can be processed simultaneously. Frame Tracing and Layout work can be saved in advance during the lens edging process.
- Graphically Designed Test Mode enables you to effectively perform the routine maintenance without the technical assistance.
- It guarantees precise processing with its ability to scan every kind of frames from rimless to goggles.
- You can save the frame data in memory cards so that the processing can be restarted anytime.
- Hardware with durability and stability with effective processing algorithm makes the whole processing easy and perfect.

1.2. System Configuration



Edger (HPE-8000)



Frame Reader (HFR-8000)



Blocker (HMB-8000)

1.3. Classification

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- Class A equipment
Class A equipment is intended for use in an industrial environment. In the documentation for the user, a statement shall be included drawing attention to the fact that there may be potential difficulties in ensuring electromagnetic compatibility in other environments, due to conducted as well as radiated disturbances.
- Protection against electric shock: Class I (when earthed)
- Measurement Category: CAT II
- Pollution Degree: 2

2. Safety Information

2.1. Introduction

Safety is everyone's responsibility. The safe use of this machine is largely dependent upon the installers, users, operators, and managers. It is prerequisite to read and understand these specifications before installing, using, cleaning, fixing or revising. Fully understanding the whole instructions must be the first priority. For this reason, the following safety notices have been placed appropriately within the text of this manual to highlight safety related information or information requiring special emphasis. All users, operators, and maintainers must be familiar with and pay particular attention to all signs of Warnings and Cautions.



WARNING

"Warning" indicates the presence of a hazard that could result in severe personal injury, death or substantial property damage if ignored.



CAUTION

"Caution" indicates the presence of a hazard that could result in minor injury, or property damaged if ignored.-

NOTE

This is used to emphasize essential information.
Be sure to read this information to avoid operating the device incorrectly.

2.2. Safety Symbols

The International Electrotechnical Commission (IEC) has established a set of symbols, which are listed below.

This applies only to the instrument that has the certification symbol printed explicitly on the product label or sticker.



I and O on power switch represent ON and OFF respectively.



This symbol identifies caution, risk of danger. Ensure you understand the function of this control before using it. Control function is described in the appropriate User's or Service Manual.



Protective Earth Connection

Disposal of your old appliance




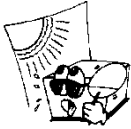
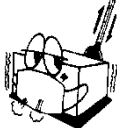
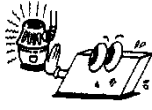


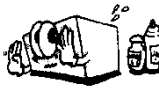

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.


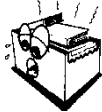




Alternating Current

2.3. Environmental Considerations

Avoid the following environments for operation or storage:

	<p>Where the machine is exposed to water vapor. Don't operate the machine with wet hands Indoor use only</p>
	<p>Where the machine is exposed to direct sunlight.</p>
	<p>Where there are big changes in temperature. Optimal temperature range for normal operation is from 10°C to 40°C. (Humidity : 30 ~ 80%)</p>
	<p>Where there is a hot equipment nearby</p>
	<p>Where the humidity is extremely high or there is a ventilation problem.</p>
	<p>Where the machine is exposed to excessive shocks or vibrations.</p>
	<p>Where the machine is exposed to chemical material or explosive gas.</p>
	<p>Be cautious so that things like dust and metal do not fall inside the machine.</p>

	<p>Don't disassemble or open the product. HUVITZ does not take responsibility for the possible problems</p>
	<p>Be careful not to block the fan located on the backside of the machine.</p>
	<p>Don't plug the AC power cord into the outlet unless all parts of the machine are completely connected. Otherwise, it will cause severe damage on the machine.</p>
	<p>Pull out the power cord with holding the plug, not the cord. To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.</p>

This instrument must be followed by these following conditions:

1. Operation

- An ambient temperature range of 10°C ~ 40°C (50°F ~ 104°F)
- A relative humidity range of 30% ~ 80%
- An atmospheric pressure range of 800 ~ 1060hpa
- An indoor use, Altitude up to 2000 m

2. Transportation

- An ambient temperature range of -25°C ~ 70°C (-13°F ~ 158°F)
- A relative humidity range of 10% ~ 95% (with non-condensing)
- An atmospheric pressure range of 500 ~ 1060hpa

3. Storage

- An ambient temperature range of -25°C ~ 70°C (-13°F ~ 158°F)
- A relative humidity range of 10% ~ 95% (with non-condensing)
- An atmospheric pressure range of 700 ~ 1060hpa

4. Temporary Overvoltage

- Short-term temporary overvoltage: 1440V
- Long-term temporary overvoltage: 490V

Please avoid where the equipment is exposed to excessive shocks or vibration.

Operation time : Max 6 minutes for short-term operation

Rest time : Min. 2 minutes

2.4. Safety Precautions

This machine has been developed and tested according to safety standards as well as national and international standards. This guarantees a very high degree of safety for this device. HUVITZ is legally required to inform the users of all the information regarding safety. Observance of the instructions is the requirement for the safety. Therefore, please read carefully all instructions before switching on this machine. For more detailed information, please contact our Customer Service Department or one of our local agencies

1. This equipment must not be used (a) in an area that is in danger of explosions and (b) in the presence of flammable, explosive, or volatile solvent such as alcohol, benzene or similar chemicals.
2. Do not place or store this machine in humid area. Humidity should be maintained between 30 and 80% for normal operation. Do not expose the device to water splashes, dripping water, or sprayed water. Do not place containers with fluids, liquids, or gases on top of this machine
3. The machine must be operated by a trained and qualified person or under his or her supervision
4. Repair of this machine must be conducted by HUVITZ's service technicians or other authorized persons.
5. Maintenance by users must observe the User's Manual and Service Manual. Any additional maintenance may only be performed by HUVITZ's service technicians or other authorized persons.
6. Manufacturers are responsible for the safety, reliability, and performance of this machine only when the following requirements are fulfilled: (1) When the machine has been installed in a proper area, following the manual. (2) When the machine has been operated and maintained according to the manual and service manual.
7. Manufacturers are not responsible for the damages caused by unauthorized alterations. Such tampering will forfeit any rights to receive services during the term of guarantee.
8. This machine must be connected with the accessories supplied by HUVITZ. If you are to use other accessories, their safety or usability must be checked and proved by their manufacturers or HUVITZ.
9. Only those who have undergone proper training and instructions are authorized to install,

use, operate, and maintain this machine.

10. Keep the User's Manual and Service Manual in a place easily accessible at all times for persons operating and maintaining the equipment.
11. Do not apply excessive force to cable connections. If the cable does not connect easily, make sure that the connector (plug) is appropriate for the receptacle (socket). If you caused any damage to a cable connector(s) or receptacle(s), let the damage(s) be repaired by an authorized service technician.
12. Please do not pull on any cable. Always grab the plug when disconnecting cables.
13. Before you use, check the exterior of the machine and its conditions
14. Do not block any ventilation outlet necessary for proper heat dissipation.
15. If smoke, sparks or any abnormal noise or smell is noticed coming from the machine, please switch the power off immediately and pull out the plug.
16. You may use your earplug as the machine makes noise while operating.
17. When you carry this product, please use a hand cart. At least three people are required to lift the machine. If you want to move the product to other area, please contact customer service center.
18. To avoid the risk of electric shock, this machine must only be connected to protective earth.
19. Do not place the machine where it is difficult to operate the disconnecting device (disconnecting device: power cord)
20. The machine may be impaired if it is used in a manner not specified by the manufacturers or manual.
21. For protection against electrical shock, all accessories connected to the outlets interfaces, such as Pump, Vacuum Cleaner and etc, must be certified ones.(IEC/UL)



WARNING

- Be sure that your body does not touch the machine while the edging wheel operates. Otherwise, you may be seriously injured.
- Edging room cover should be fully closed during the lens finishing process. If the lens is broken during the process, the broken pieces of lens may cause damage to the person. The debris may also cause damage to the human eyes.
- Be sure not to press the clamp button unless the wheel completely stops. Otherwise, the

lens may be fallen and broken by the wheel, and cause a serious injury

- If you find any crack on the edging wheel or on the bottom of the machine, immediately stop the operation and ask for the service. If the edging wheel is broken during the operation, the broken pieces may cause a serious injury
- Be sure not to edge the materials other than the spectacle lenses. Otherwise, it may weaken the wheel performance and cause a crack on it. If the edging wheel is broken during the operation, the broken pieces may cause a serious injury.
- Be sure not to operate the product unless the front cover of edging body is fully closed. Otherwise, it may cause a serious injury.
- The machine should be properly installed and operated based on the instructions on this manual. If the power is turned on without unlocking the locking device for the carriage and feeler, it may cause damage to the product and cause malfunction of the product.
- Do not disassemble the product without receiving regular training. It may cause electric shock or serious injury during the operation or cause the malfunction of the product.
- Make sure that the material of the authentic lens is identical with that of selected lens in the system before starting the edging mode. Otherwise, it may cause damage to the wheel and shorten the lifetime of wheel.
- Safety beveling for a lens made of glass should be processed at both front and rear sides of the lens. Otherwise, it will cause damage to the wearer's skin
- The product should be properly installed and maintained at flat and even ground. Otherwise, it may affect the normal operation of the machine.
- Be sure that your fingers are not caught during clamping.
- When detaching the lens adapter from the process-finished lens, use the Adapter Remover supplied as the standard accessory. Do not pull out the lens adapter with your hands.
- Be sure that the water supply hose is not folded or interfered with other objects causing the problem of water supply. It may deteriorate the quality of lens finishing. The debris of lens may cause damage to the respiratory organ of human and malfunction of the product.
- The water entry should be closed every day.



CAUTION

- When moving the machine, first fix the stage and check whether the power supply is off. Then, two or more persons should lift the bottom of the product with both hands.
- When setting down the machine, make sure not to be interfered with the obstacles. Set down the product slowly in order to prevent any injury of human body or damage to the product.
- When moving the machine, make sure the locking device and the screw for the cover are properly tightened.
- When wrapping the machine, use recommended packaging and shock-absorbing materials in order to prevent damage during the transportation.

- Be sure to use the standard accessories or tools provided together with the product for the maintenance. Otherwise, it may cause the malfunction of the product.
- When processing wheel dressing, be sure to use dressing sticks that fit each wheel. The dressing stick should be replaced when its length becomes so short that you cannot hold it easily.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment
- Make sure that the power cord is the correct type that is required in your area. This Device has a universal power supply that allows operation in either 100-120 Vac or 200-240 Vac voltage areas (no user adjustment is required).

Power Cord Requirements :

For 100-120 Vac use

- UL style SV, SVT, SJ or SJT, 18AWG, 3 conductor
- One end with NEMA 5-15P min. 10A, 125V
- Other end IEC 60320 C13 max. 3 m long

For 200-240 Vac use - Plug end

- Cable H05VV-F 3G, min. 1.0 mm²
- Other end (with appliance coupler connected to unit IEC 60320 C13), 3 m long
- CEBC, DEMKO, KEMA, NEMKO, OVE, SEMKO, VDE, UTE, FEMKO
- Conductor Colors – brown, blue, green/yellow stripe

NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

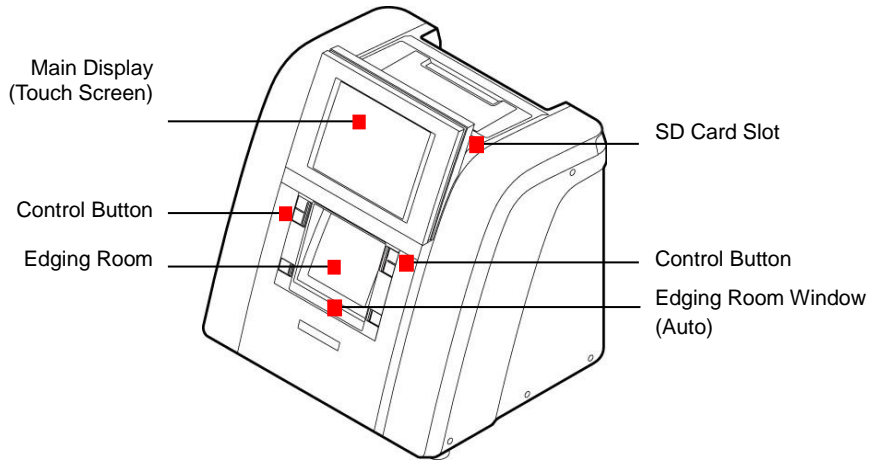
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

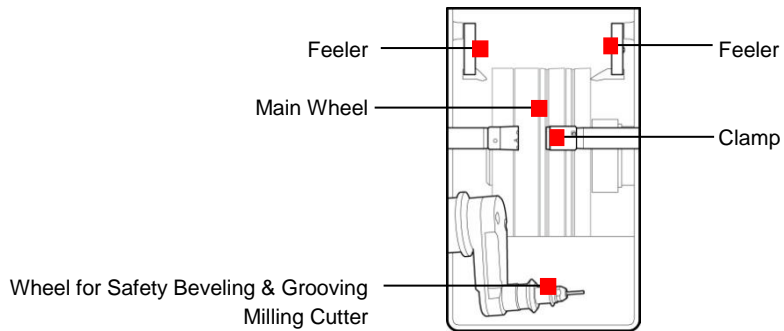
3. System Overview

3.1. Edger (HPE-8000)

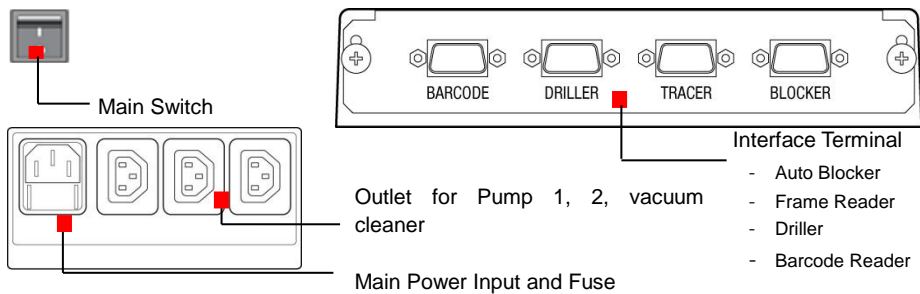
Front View

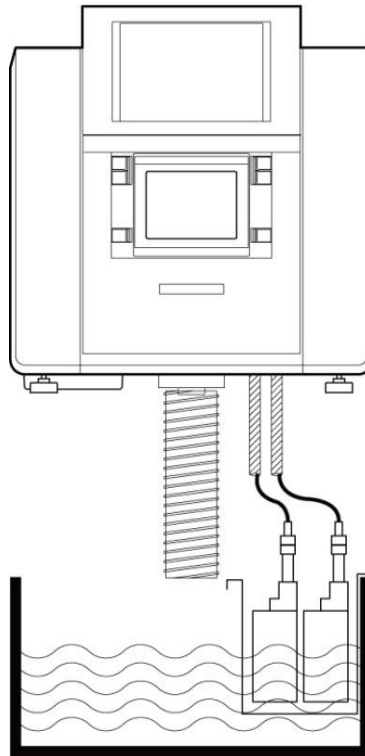
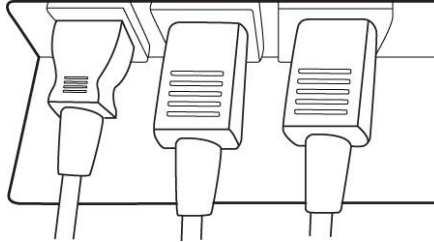


Edging Room



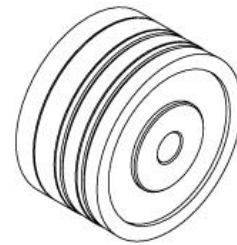
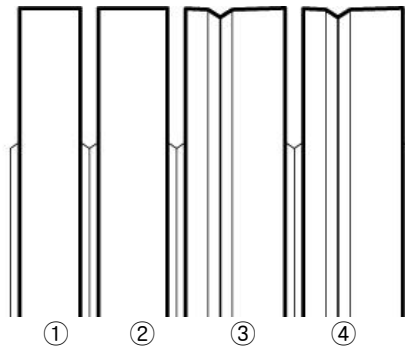
Rear View



Devices for Edging Polycarbonat

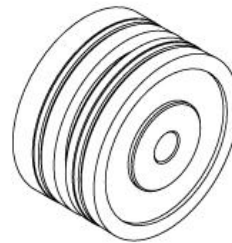
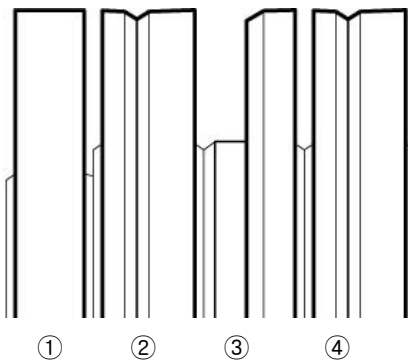
NOTE

- User can choose one of four kinds of wheel types, which provide four different types of processing respectively
- RPG Type : Bevel, Flat edging (It processes glass lens)



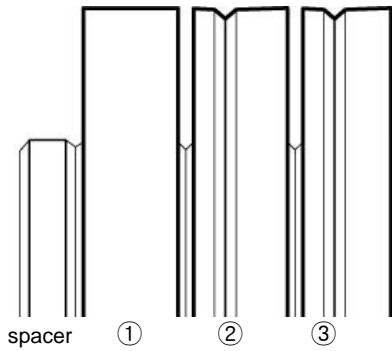
- ① Glass Roughing Wheel
- ② Roughing Wheel
- ③ Finishing Wheel
- ④ Polishing Wheel

- RPA Type : Bevel, Asymmetric Bevel, Flat edging (It cannot process glass lens)



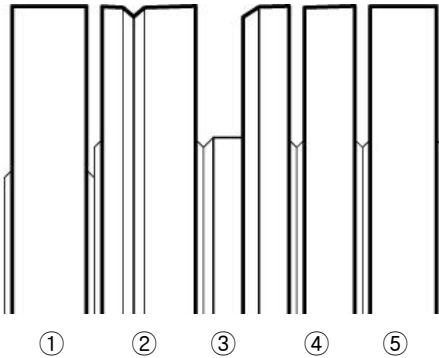
- ① Roughing Wheel
- ② Finishing Wheel
- ③ Asymmetric Wheel
- ④ Polishing Wheel

- RPW Type : Bevel, Flat edging (It cannot process glass lens)



- ① Wide Roughing Wheel
- ② Finishing Wheel
- ③ Polishing Wheel

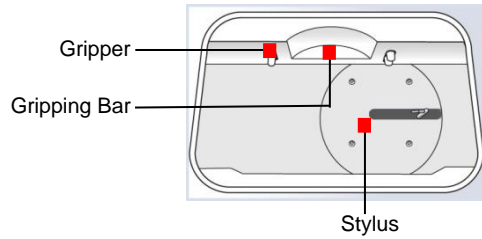
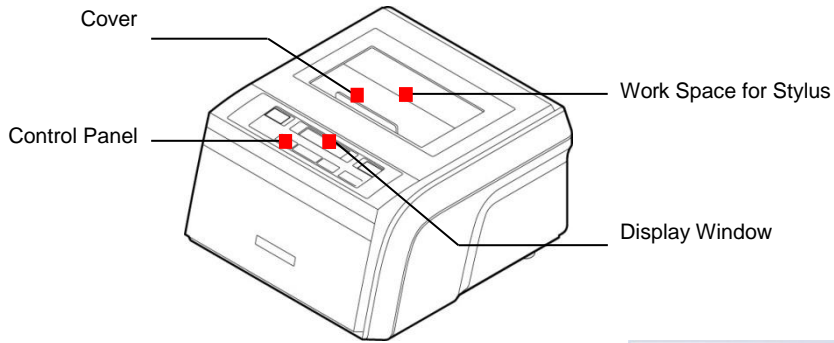
- RPGA Type : Bevel, Asymmetric Bevel, Flat edging (For all types of lenses. But it cannot process Bevel Polishing)



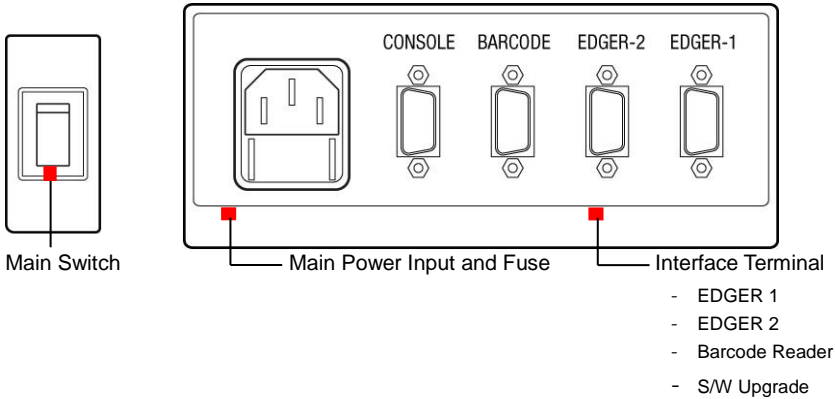
- ① Roughing Wheel
- ② Finishing Wheel
- ③ Asymmetric Wheel
- ④ Rimless Polishing Wheel
- ⑤ Glass Roughing Wheel

3.2. Frame Reader (HFR-8000)

Front View

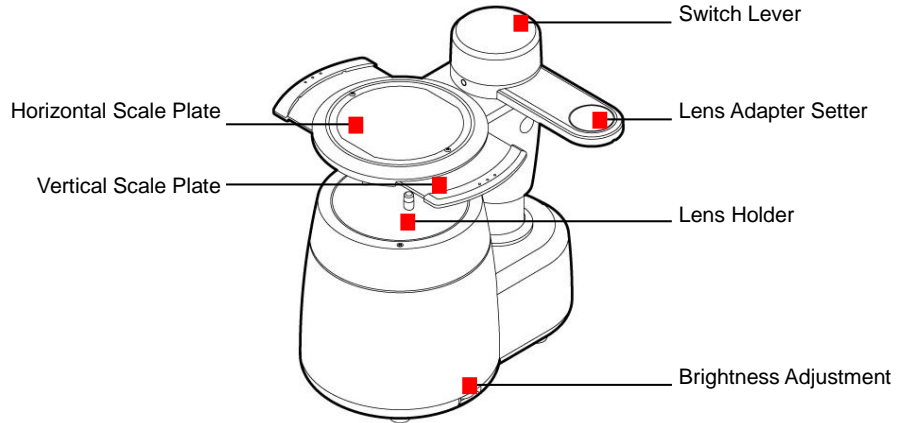


Rear View

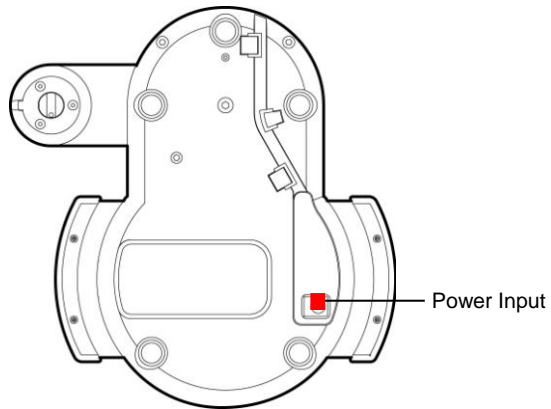


3.3. Blocker (HMB-8000)

Front View



Bottom View



3.4. Standard Accessory (Tool Box)



Lens Adaptor



Spanner(10-11)



LEAP-III Tape



Clamp Adaptor



Lens Adaptor Remover



Fuse(250V, 10A)



Standard Frame



Standard Pattern



Pattern Holder



Standard JIG for Edger



Wrench Set



Carriage-Fixing Bracket



Feeler Tip



Dressing Sticks

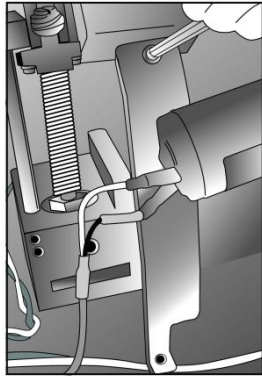
NOTE

- Only 3M LEAP-III™ is available for this product. Otherwise, the lens axis may move
- We do not provide a sticker for Super Hydrophobic Lens, but you should use qualified ones, or the lens axis may move

4. Installation Procedure

4.1. Edger

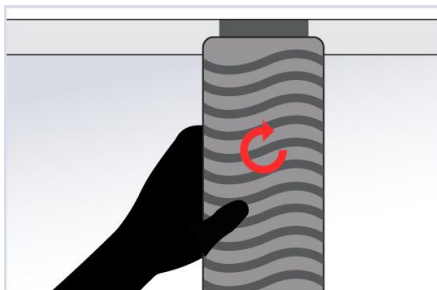
- ① Remove the shock-absorbing material from the packing box and take the Edger out of the box carefully.
- ② Loosen the screw at the Edger Front Cover and open the cover
- ③ Open the edging room window with hands
- ④ Remove the fixing materials (tape, sponge, ...)
- ⑤ Remove the Carriage Fixing Bracket at the bottom left
- ⑥ Plug the Pump Power Cable into the socket for Pump at the rear side of the machine.
- ⑦ Connect Water Supply Hose with the Pump.
- ⑧ Fit the water drain hose into the pipe joint. Tie the fixing clip for water drain hose in order that the end of the fixing clip would touch the table.
- ⑨ Close the Edger Front Cover.
- ⑩ Check if it operates well



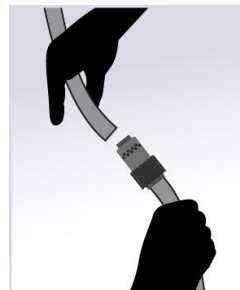
[Removing the Carriage Fixing Bracket]



[Fixing Clip for Water Drain Hose]



[Connecting the Water Drain Pipe]



[Connecting the Water Supply Hose]

NOTE

- Keep the removed fixing materials in the tool box and use them again when you move the machine
- Fill up more than 2/3 of the tank with water. Make sure that the water supply hose is located upper than the pump. Check if water in the hose circulates without any interference.
- Tie the Water Supply Hose properly using the clip

4.2. Frame Reader

- ① Remove the shock-absorbing material from the packing box and take the Frame Reader out of the box carefully.
- ② Remove the shock-absorbing material from the workspace of Stylus.
- ③ Plug the Power Cable into the socket at the rear side of the machine and turn on the power to check the initial operation.
- ④ If the initial operation works properly, connect Edger and Frame Reader by using 9-pin D-sub Crossed Interface Cable.

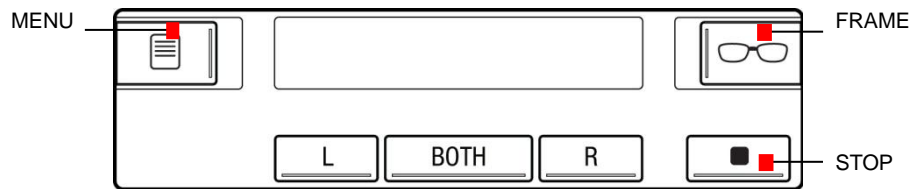
4.3. Blocker

- ① Remove the shock-absorbing material from the packing box and take the Manual Blocker out of the box carefully.
- ② Plug the AC Adapter cable into the socket at the rear side of the machine and check the lamp is ON.

5. Operation

5.1. Frame Reader

5.1.1. Control Panel



Material Selection - FRAME Button

You must press FRAME button and select one of the following options (frame materials) before the frame is traced.

- METAL
- PL-HARD (Hard Plastic)
- PL-SOFT (Soft Plastic)

The specified value is used in Edger for the size adjustment.

Curve Selection - FRAME Button

If the pattern or the demo lens is placed in the tracer, the FRAME button is automatically changed from material selection to curve selection.

- LO CURV (2D Tracing)
- HI CURV (3D Tracing)

With 'HI CURV' mode, the tilt correction will be conducted automatically. Therefore, select HI CURV mode for a lens with extreme curve.

L / BOTH / R Button - Tracing

- BOTH for two eye tracing. This is only for frame tracing.
- R for right eye tracing.
- L for left eye tracing.

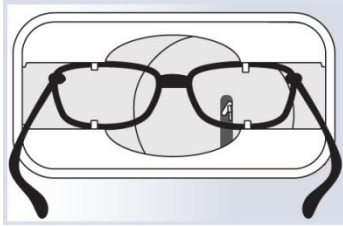
STOP Button

Stop tracing.

MENU Button

Configuration and Automatic Calibration of the frame reader.

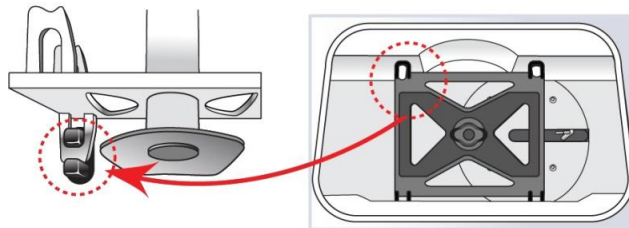
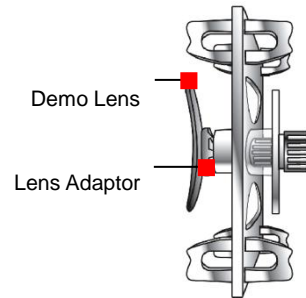
5.1.2. Frame Tracing



- ① Place the frame between the upper grippers and the lower grippers.
- ② Move the frame in order that the bridge of frame is located at the central position between the left and right side grippers.
- ③ Press the FRAME button and select the frame material.
- ④ Press the Reading button(BOTH, R, L).

5.1.3. Pattern Tracing

- ① Make a marked spot on the optical center of the demo lens by using Lensmeter.
- ② Block the Lens Adaptor at the center of the marked spot by using Blocker.
- ③ Place it on the Pattern Holder.
- ④ Press the FRAME button and select the tracing mode (LO CURV, HI CURV).
- ⑤ Press the Reading Button (R, L).



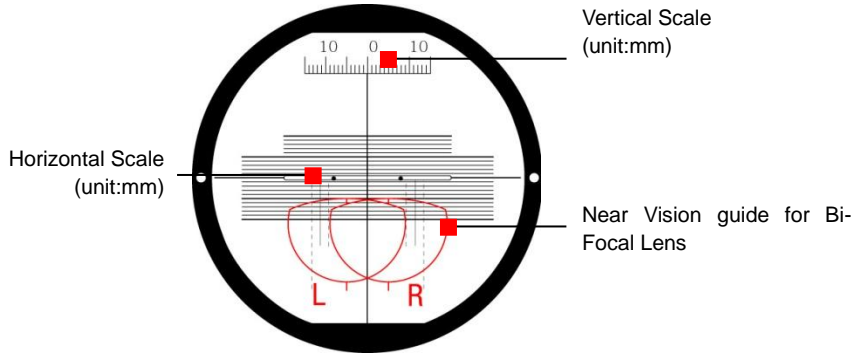
[How to place the Pattern Holder on the Gripper]

NOTE

- The data will be automatically transmitted after finishing the tracing.
- With one side tracing, the data for R or L will be symmetrically copied to the data of the other side automatically.
- When tracing pattern or demo lens, press the 'L' or 'R' button for more than 3 seconds to execute concave shape tracing mode.
- When tracing frame, press the 'L', 'BOTH' or 'R' button for more than 3 seconds to execute concave shape tracing mode. (if MENU >> ETC >> SEMI-AT option is set to YES, Semi-Automatic tracing mode will be executed instead of concave mode)
- Semi-Automatic tracing mode will be useful for tracing the frame with the lopsided groove.

5.2. Blocker

5.2.1. Scale Plate



5.2.2. Lens Adapter Setter

Lens Adapter should be inserted into the Lens Adapter Setter as shown like (a).

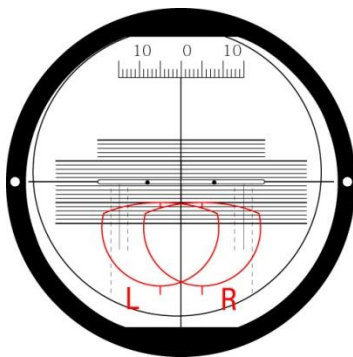
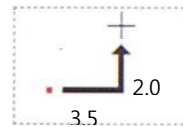


5.2.3. Blocking Mode

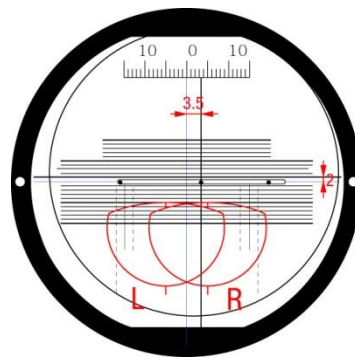
Active Blocking vs Passive Blocking

There are two kinds of blockings, Active blocking and Passive blocking. Active blocking is a way that the Lens Adaptor is fixed at the optical center. Passive blocking is a way that the Lens Adaptor is fixed at 'Boxing Center' of the frame. The examples of active blocking and passive blocking are as followings:

Hints for boxing center on Edger GUI



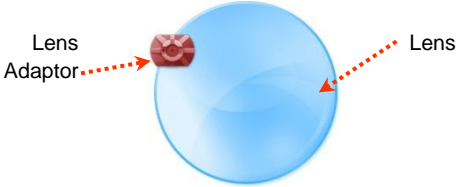

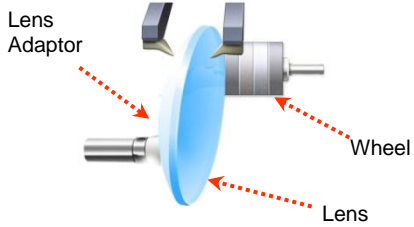
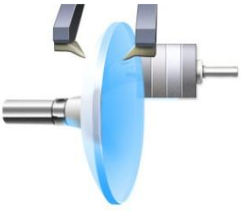
[Active Blocking]



[Passive Blocking]

The edger shows movement amount of the optical center for blocking on the screen. Active blocking is much easier than Passive blocking for blocking. However, active blocking has some limitations, which may result in unexpected outputs. The following table compares active blocking and passive blocking and summarizes the advantages and disadvantages of them. As it says, if the optical center is far from the frame center, active blocking could make a little bit poor qualified output. So, in this case, passive blocking is recommended.

Comparison with active blocking and passive blocking

	Active Blocking	Passive Blocking
Blocking	Optical Center of Lens	Geometrical Center of Frame
User Convenience	Just following the Marking Spot of Lensmeter	Have to move the Lens according to GUI
Minimum Edging Size	There can be additional limitations because of PD, OH(Optical Height) 	No additional limitation 
Edging Quality of Beveling or Grooving	Eccentric Edging 	Centric Edging 

NOTE

Boxing center is recommended with following situations.

- PD(=Pupil Distance) is in eccentric position
- Horizontally wide frame
- Super hydrophobic lens or ultra hi-index lens

5.2.4. Operation

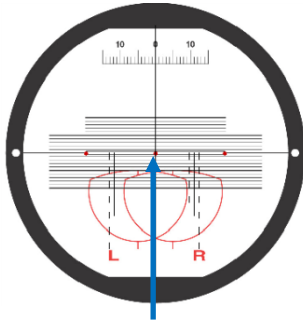
- ① Plug the Power Cable into the socket at the rear side of the machine.
- ② Put the Lens Adapter into the Lens Adapter Setter (Pay attention to the direction).
- ③ Place the marked Lens on the Lens Holder.
- ④ Adjust the location of marking point according to the lens type (Bi-focal, Progressive) and Blocking Type (Optical Center, Box Center). Please use scale plate for this task.
- ⑤ Turn the Switch Lever so that the Lens Adaptor Setter is located over the lens and push down the Switch Lever to finish the blocking.

NOTE

- Push down the switch lever and place the scale plate as close as possible to the lens. In this way, you can minimize the optical illusion.
- Do not force too much on the Switch Lever for blocking. Otherwise, it may scratch or damage the Lens.

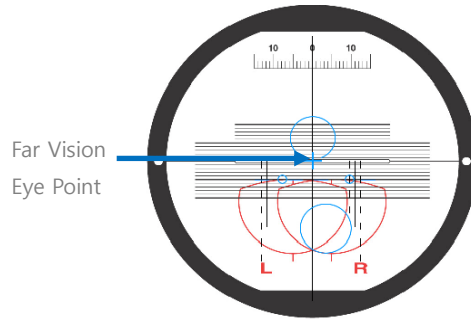
Blockings according to the lens types

Single Vision



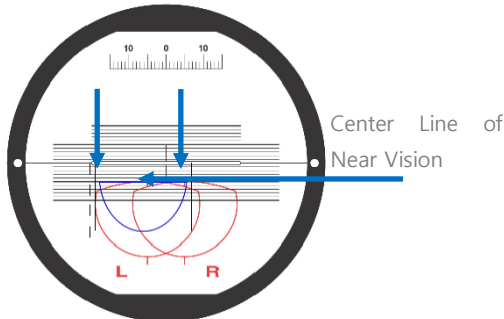
Adjust the marking point of the lens to the center of scale plate

Progressive Lens



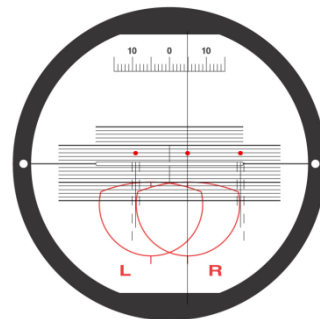
Adjust the Far Vision Eye Point of the progressive lens to the center of scale plate

Bi-Focal Lens

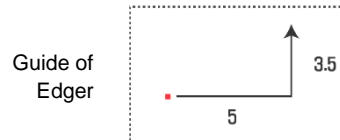


Place the Center Line of Near Vision 5mm below the center of the scale plate. Move vertical center line 5mm toward the sign L, R and fit the semicircle of Near Vision into the guideline of Left/Right.

Boxing Center

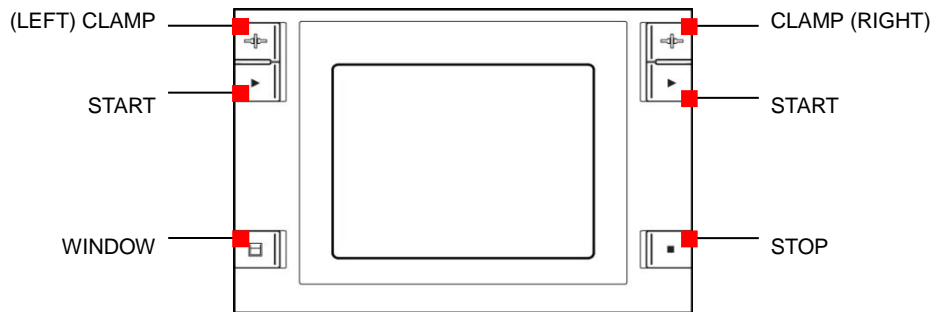


Move the marking point toward where the Edger Display guides.



5.3. Edger

5.3.1. Control Button



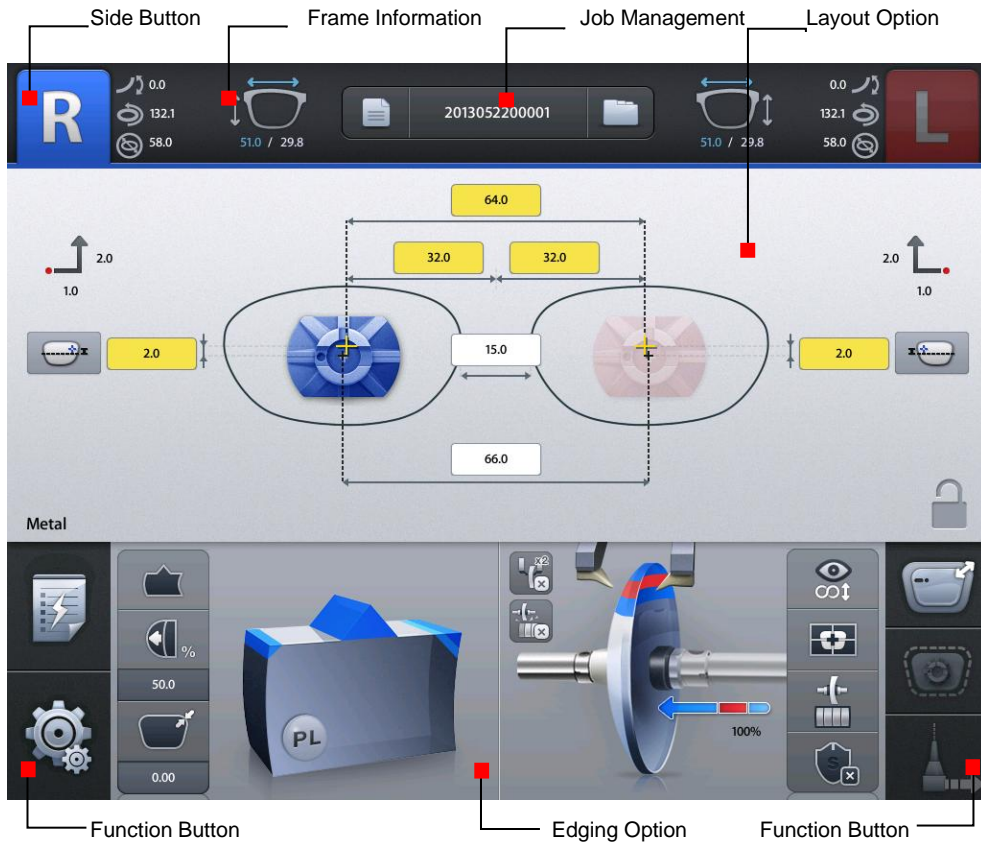
- START Start Edging
- STOP Stop Edging
- WINDOW Open/Close Edging Room Window
- CLAMP Open/Close Clamp (Lens Position)

NOTE

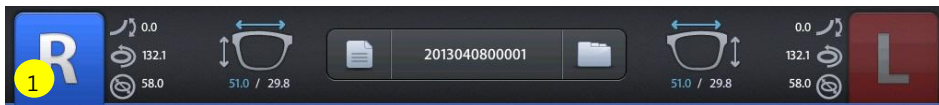
- Clamp Buttons on left and right sides serve identical function. Even when you use your hand to hold a lens, you can press the Clamp Button with the other hand.
- Lens Position (LEFT/RIGHT CLAMP) Buttons are used to adjust the position of a lens during the Roughing process. Even when the lens is too thick, it can process immediately adjusting its position.

6. Edger User Interface

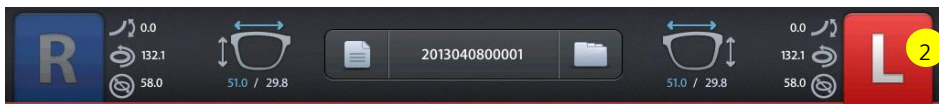
6.1. Main Screen



6.1.1. Side Button



- ① Press the R button to select right side.



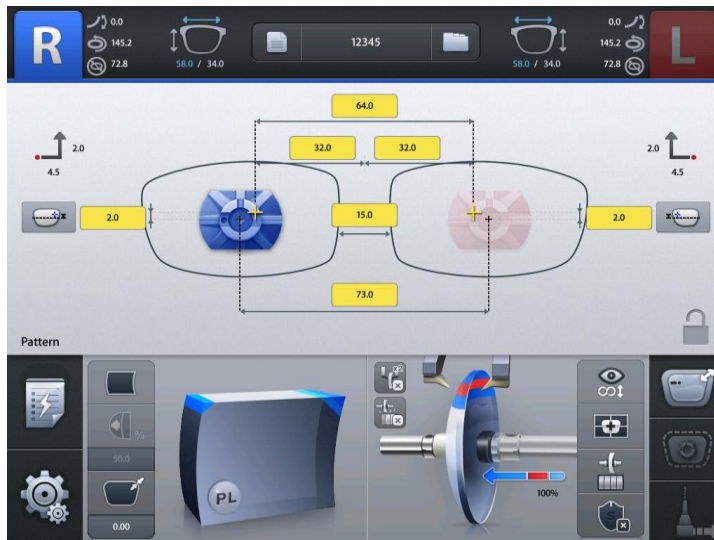
- ② Press the L button to select left side.

NOTE

- Each side of frame shape is exchanged by pressing the R button for a while.
- The function of exchange R/L is useful when you selected wrong side while reading demo lens or patterns.

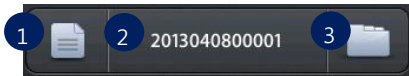


(Message pops up when press the R button for a while)



(Left and Right sides are exchanged. The other job options remain unchanged)

6.1.2. Job Management



- ① New : Clear current job screen and wait new job.
- ② Job Number : Display current job number (Press the button to change job number)
- ③ Job Manager : Press the job manager button to load a new job or move on to another job

NOTE

- Virtual Keyboard
Use the virtual keyboard to change Job number.



- ① Job number
- ② Backspace
- ③ Apply
- ④ Reset (Cancel) – If you press the button, the value goes back to original value. If you press the reset button one more time, the virtual keyboard disappears
- ⑤ Move cursor
- ⑥ Cancel (Close) – Close the virtual keyboard without saving changes.

NOTE

- Following additional functions are available by pressing 'Job Management' button for a while.
- If you press 'New' button for a while, you can delete the current job on display immediately.



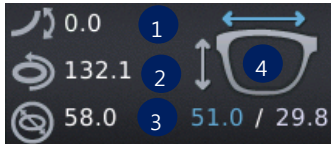
- You can save current job on SD card by pressing 'Job Number' for a while.



- You can start jobs with auto-blocker or remote edging host pc by pressing 'Job Manager' button for a while.

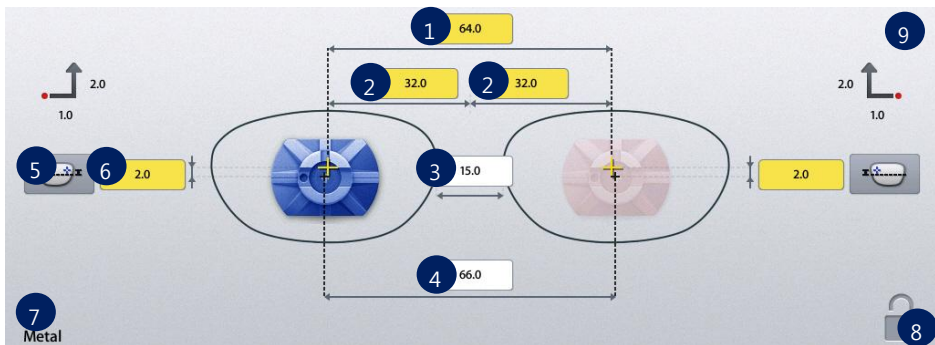
● The function of job request works only when communication option on configuration menu is set properly.

6.1.3. Frame Information



- ① Frame Curve
- ② Circumference
- ③ Minimum Lens Diameter
- ④ Width/Height

6.1.4. Layout Option

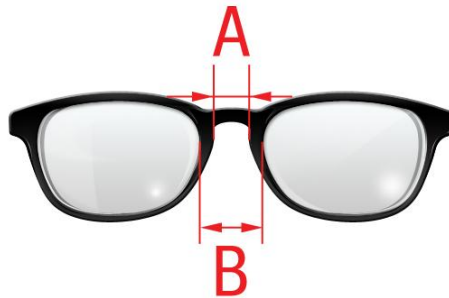


- ① Binocular PD: Input prescribed binocular PD value.
- ② Monocular PD : Input PD values for each side (L/R)
- ③ Bridge Size (DBL): Input value of bridge size.

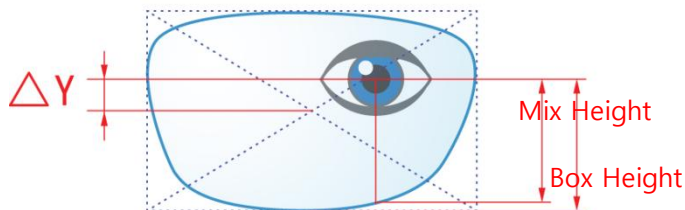
- ④ FPD: Input value of FPD.
- ⑤ OH Type: Select one of three, ΔY , Box Height, Mix Height.
- ⑥ OH (Optical Height): Input OH value.
- ⑦ Frame Material : Display frame material
- ⑧ Touch Screen Lock On/Off
- ⑨ Blocking Offset: Display movement amount of the les to perform Boxing center blocking with manual blocker.

NOTE

- When you input Binocular PD value, Monocular PD values for each side are automatically calculated and vice versa.
- When you input Bridge Size value, FPD value is automatically calculated and vice versa.
- In case of Two Eye Tracing, the value of FPD will be automatically transmitted and displayed.
- In case of pattern tracing, be sure to change the standard value to the actual Bridge Size.
- In case of One Eye tracing, it will be helpful to use Bridge Size Input function. (It is much easier to measure the Bridge Size)
- Measure B, not A, for the Bridge Size. Remember that the Bridge Size is not from frame to frame, but from lens to lens.



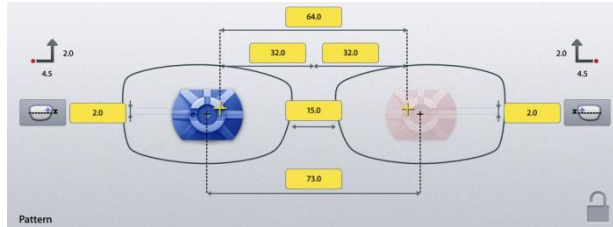
- OH value is recalculated when you change OH type.
- The exact meaning of the mix height and the box height is as following.



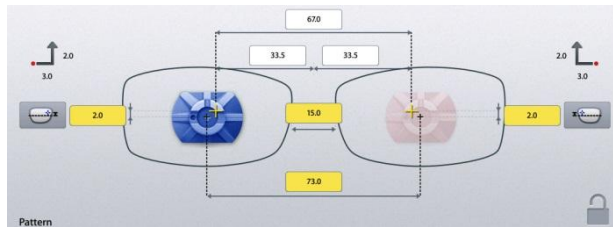
- It is important to measure the optical height of the patient precisely when edging a progressive lens. Sometimes, too short optical height might cut out the near vision area.

NOTE

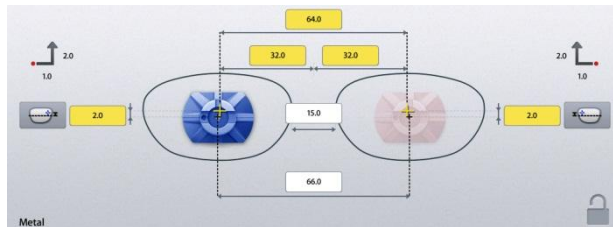
- In layout information, dialog PD, OH, Bridge Size, FPD are mandatory value. The color of input box of these values is changed when you input value.



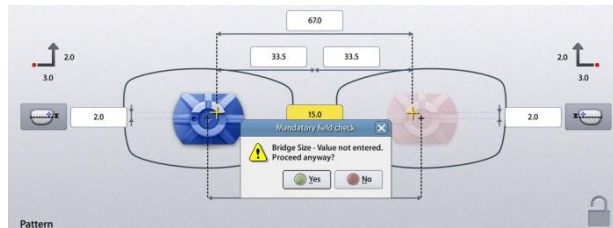
- The box which is not changed from Default value is colored yellow. It changes into white when you input value.



- If frame reader traces shape of frame for both side, FPD value is calculated automatically. Therefore, input boxes of bridge size and FPD are displayed white.



- Warning message pops up if you start edging with the yellow box remained.



- But, this warning message pops up only when the warning option is turned on in the Preferences menu.

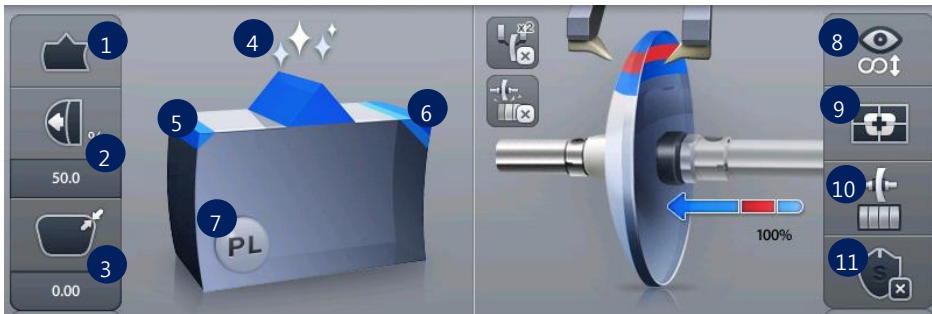
NOTE

- Numeric Keypad
Click the value you want to change then this numeric keypad will pop up.



- ① Name of the value
- ② Range of the value
- ③ Value
- ④ Increase/Decrease
- ⑤ Backspace
- ⑥ Reset (Cancel) – If you press it, the value goes back to original value. If you press it one more time, the numeric keypad disappears.
- ⑦ Change Sign
- ⑧ Apply
- ⑨ Cancel – Close numeric keypad without saving the changes. Reset button is helpful when you are in trouble with small size of cancel button.

6.1.5. Edging Option



① Edging Type



Bevel



Flat



Groove



Mini Bevel



Asymmetric Bevel



Semi U Bevel

NOTE

- Available edging types can vary by wheel types of the edger.

RPG, RPW

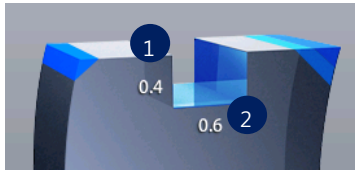


RPA, RPGA



NOTE

- You can input additional parameters according to the selected edging type.
- Grooving



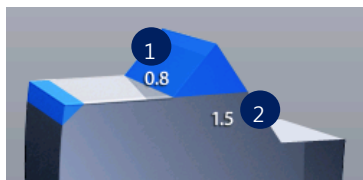
- ① Groove Depth
- ② Groove Width

- Mini Bevel



- ① Bevel Height

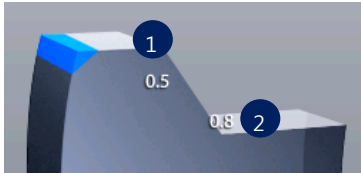
- Asymmetric Bevel



- ① Front Height
- ② Rear Height

-

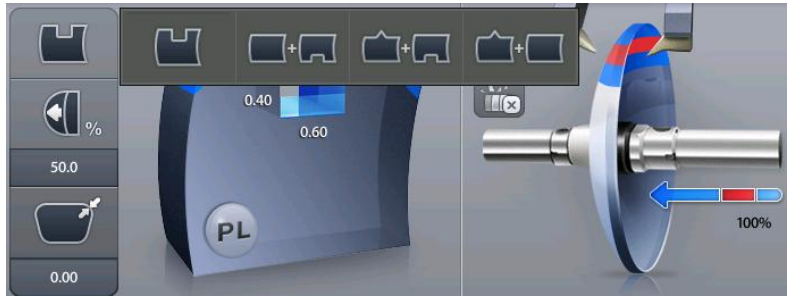
- Semi U Bevel



- ① Tip Width
- ② Rear Height

NOTE

- After you've selected grooving as the edging type, you can select partial grooving by pressing 'Edging type' button for a while.



- There are three ways of partial grooving.



Grooving



Partial Grooving
(Flat + Grooving)

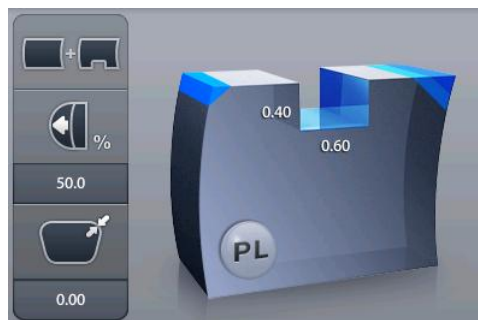


Hybrid Grooving
(Bevel+Grooving)



Partial Bevel
(Bevel + Flat)

- Relevant icon is displayed at edging type when partial grooving is selected.



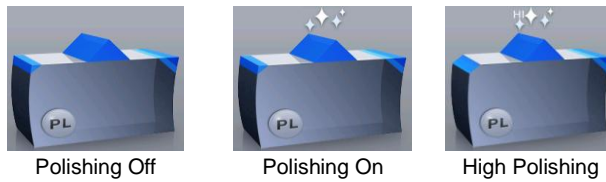
- To cancel the partial grooving mode, press the edging type button and change into another mode.
- Processing with partial grooving needs an editing step of partial grooving for set boundary position after feeling process.

② Bevel/Groove Position

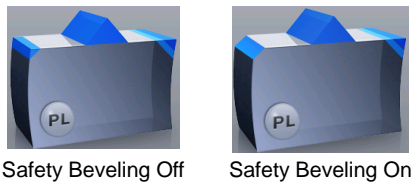


③ Size Adjustment (-2.0 ~ 2.0mm)

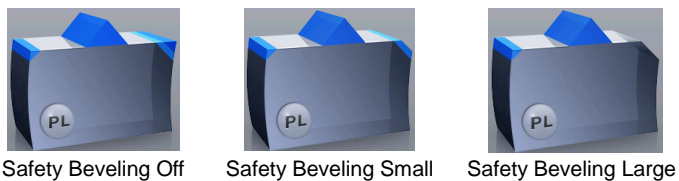
④ Polishing



⑤ Front Safety Beveling

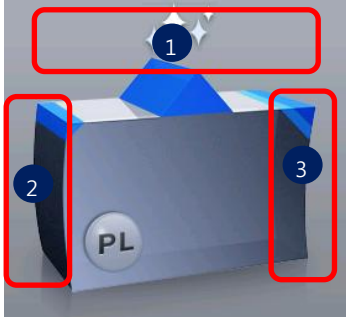


⑥ Rear Safety Beveling



NOTE

- Polishing / Safety Beveling touch screen area



- ② Polishing On/Off
- ③ Front Safety Beveling On/Off
- ④ Rear Safety Beveling Off/Small/Large

- When you selected 'Asymmetric Bevel' or 'Semi-U Bevel', Rear Safety Beveling is not available.
- When you selected 'Hybrid Grooving', Safety Beveling is not available.

⑦ Lens Material



Plastic



Polycarbonate



Hi-Index



Glass



Trivex®

NOTE

- If the wheel type of the edger is RPA or RPW, Glass lens cannot be selected.
- Glass lens cannot be processed in the following edging process.
Polishing, Grooving, Milling, Drilling(HDM-8000)

⑧ Lens Type



Single Vision



Bi-focal (Flat)



Bi-focal (Round)

⑨ Blocking Mode



Optical Center



Boxing(Frame) Center

⑩ Roughing Mode



Normal



Spiral



Axial



Milling

NOTE

- Normal mode is a mode where a lens contacts the wheel directly while processing.
- Spiral mode is a mode where a lens contacts the wheel gradually with spiral rotation.
- Axial mode is a mode where a lens horizontally contacts the wheel while processing. In rotating, the lens is detached from the wheel while processing.
- Milling mode is a mode where a lens is cut by milling cutter.
- Super Hydrophobic Lens and Ultra Hi-Index Lens have strong possibility of axis rotation. In this case, 'Axial mode' or 'Milling mode' can minimize the movement of axis.
- Sometimes, 'Milling mode' has possibility of failure in processing because of the interference of the lens and the wheel (or feeler). In this case, using 'Axial mode' is recommended.

⑪ Safety Mode









Safety Mode Off

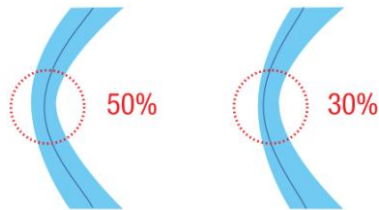


Safety Mode On

NOTE

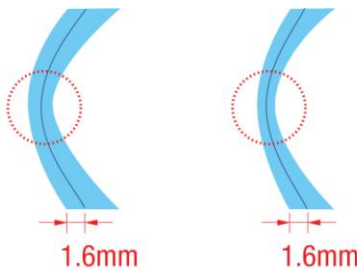
- Boxing Center is useful for the following cases.
 - When PD is in eccentric position
 - When frame is horizontally wide
 - Super Hydrophobic Lens or Ultra Hi-Index Lens

- When you choose the options for Bi-Focal, Near Vision Shape will be displayed on the screen. If you input the diameter, you can see the frame shape similar to the actual lens shape and check the interference.
- According to the Edging Options, you can control the Beveling and Grooving position.
 -  Ratio(%) from the front side of the lens
 -  Distance(mm) from the front side of the lens
 -  Distance(mm) from the rear side of the lens
 -  Adjust the position according to the lens base curve and the minimum thickness (0-10)
 -  The position determined automatically to follow the frame curve
 -  Adjust the position manually
- Final outputs according to the edging options are different just like the following pictures.



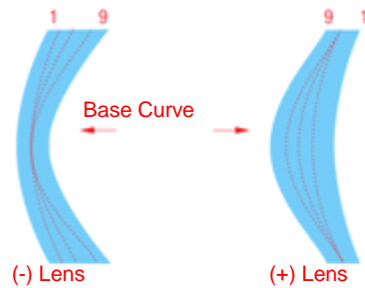
[Ratio(%) mode from the front side]

- Please be cautious that the thinnest part of a lens may be broken when you use ratio (%) mode from the front side.



[Distance(mm) mode from the front side]

- Using the distance (mm) mode from the front side, the operator can designate the specific moving distance. However, if the thickness of the thin part is less than twice the designated value, the machine will process at internal center, which is 50% in ratio.



[Base curve mode]

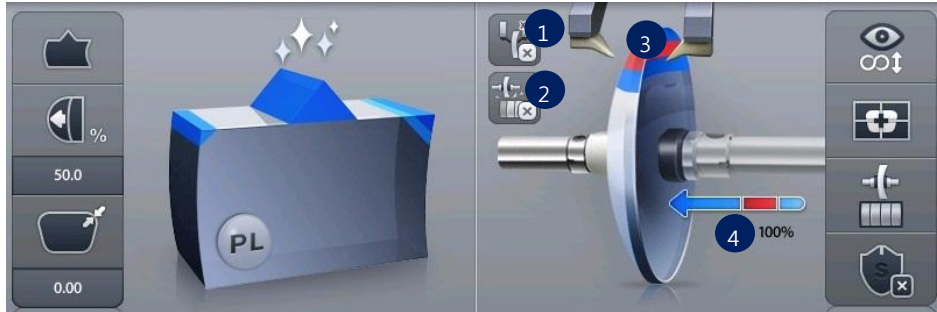
- In the base curve mode, base curves of (+) lenses and (-) lenses exist the opposite side. In this mode, the bevel or grooving line always passes the mid of the thinnest parts, one of which is located at the midst zone of (-) lens and the other is located at the edged zone of (+) lens. And much bigger position value makes the curve closer to the base curve.
- Frame Material, Lens Material and Lens Thickness may affect the quality of Lens Fitting. If needed, execute the Size Adjustment in advance. Frequently used Adjustment Value can be saved at "Frame Fitting" in "Configuration Menu".



CAUTION

- Be sure to carry out the Edging Process in Safety Mode when the lens is fragile or the axis easily moves.
- Grooving and Polishing is not available for the Glass Lens. Be sure the material of lens is matched with the job options selected in the display before starting the edging process.
- Always be sure to use a new Tape or Sticker and remove moisture on the Lens surface.
- The safety beveling for glass lenses should be performed both at front and rear side. Otherwise, it will cause damage to the human skin or eyes.
- To prevent the distortion of axis, you must use stickers provided by lens manufacturers for blocking of hydrophobic lenses. We do not guarantee the quality of the stickers.

6.1.6. Detailed Edging Option



① Feeling after roughing



Off



On

② Pre-Roughing

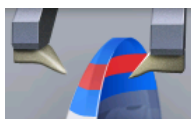


Off



On

③ Feeling Position



Normal

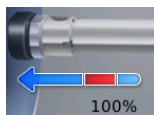


Frame Change

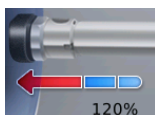


Outside of Bevel

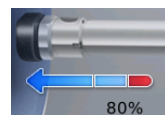
④ Clamp Pressure



Normal



Strong



Weak

NOTE

- If you use the function of feeling after roughing, you are provided with a more precise information with double-checked lens thickness after the roughing.
- You can change feeling mode to one-side feeling mode by pressing the feeler icon for a while.
 - Long press to front feeler: front feeling.
 - Long press to rear feeler: rear feeling.



Both Feeling



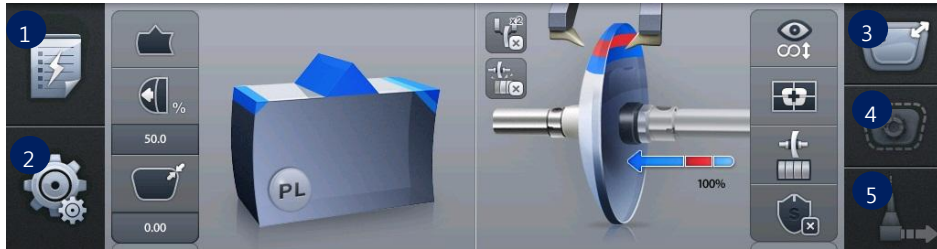
Front Feeling



Rear Feeling

- One side feeling mode gets information from one side of a lens like EX-lens having different surface and curve compared to normal lens.
- One side feeling mode generates following constraints because it gets information from one side of the lens
 - Cannot select Axial roughing mode and Milling roughing mode.
 - Safety beveling is possible conditionally. – front feeling(only front safety beveling), rear feeling(only rear safety beveling)
 - Bevel/Grooving position designation is possible conditionally. – front feeling (only front distance(mm)), rear feeling (only rear distance(mm))
 - In rear feeling mode, pre-roughing is not available.
- If you want to cancel the one side feeling mode, press feeler icon for a while.
- You can input clamp pressure value by pressing modification icon of clamp pressure for a while. (50~150)

6.1.7. Function Button



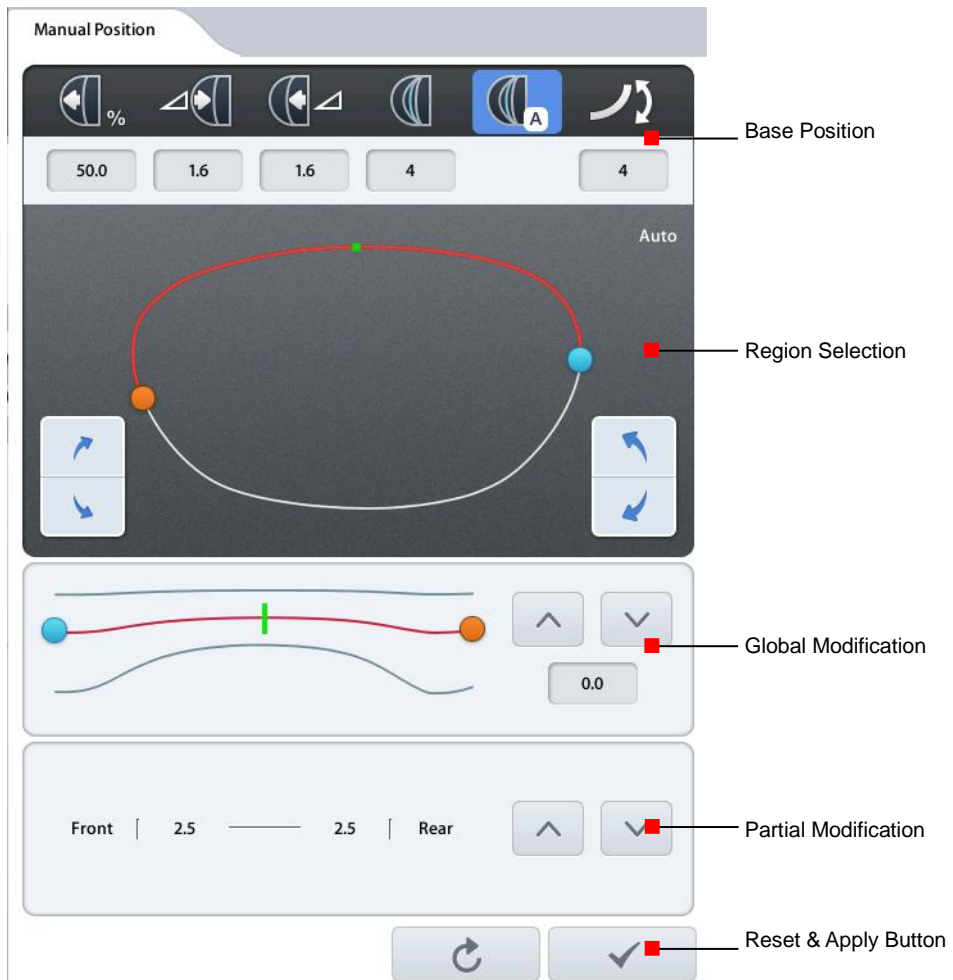
- ① Expert Job Editor
- ② Menu
- ③ Digital Designer (Digital Pattern + Hole Editor)
- ④ Retouch Mode
- ⑤ Drilling Assignment (HDM-8000)

NOTE

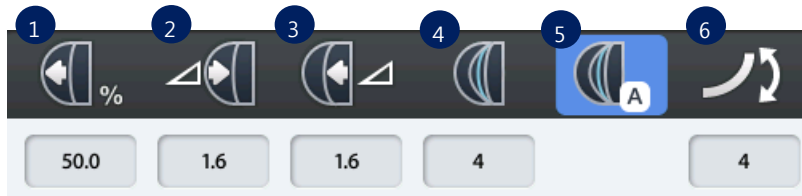
- The expert user can work more quickly by using 'Expert Job Editor'.
- 'Retouch Mode' button is available after edging process is finished.
- 'Drilling Assignment' button is available when the edger has connection with HDM-8000 model.

6.2. Manual Bevel/Groove Position Modification

The manual position adjustment screen will be displayed after feeling process is finished when edging position mode is manual.



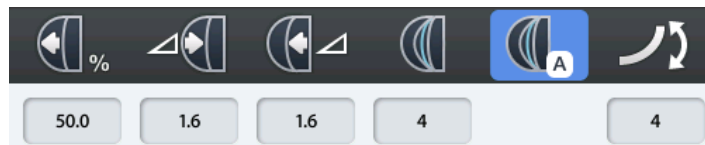
6.2.1. Base Position



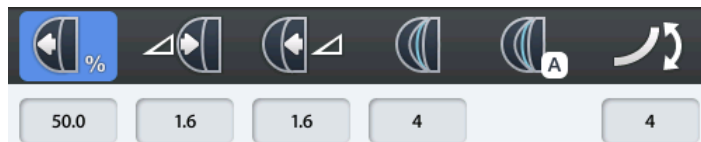
- ① Front %
- ② Front mm
- ③ Rear mm
- ④ Base Curve
- ⑤ Auto
- ⑥ Curve

NOTE

- The default base position is as follows



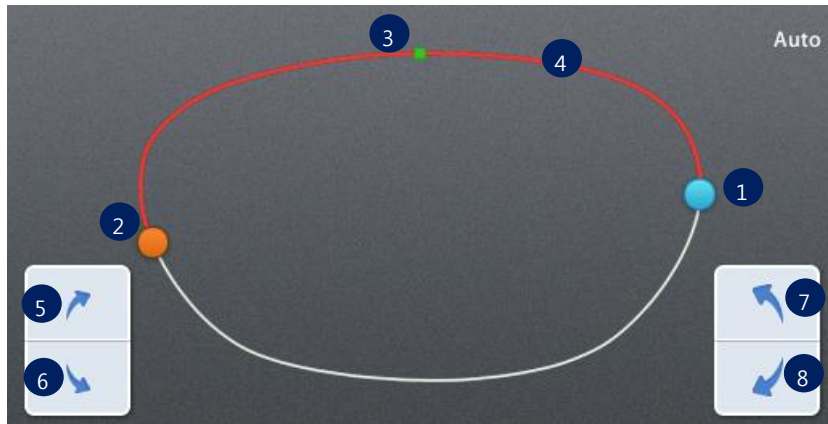
Frame (with frame curve value) – Auto



Demo lens, Pattern (without frame curve value) – 50%

- Auto mode calculates the optimal position based on the frame curve value. This mode is selected automatically when there is the frame curve value.
- You must press the reset button instead of auto mode button in order to go back to auto mode after you've moved to different base position.
- If the frame curve value is zero, for instance, in case of reading the pattern or demo lens, auto mode cannot be selected.

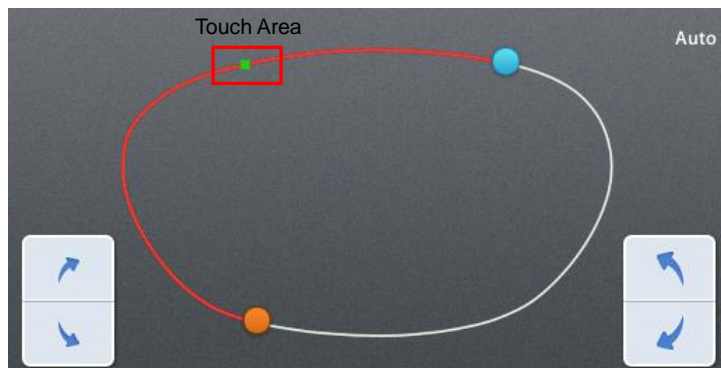
6.2.2. Region Selection



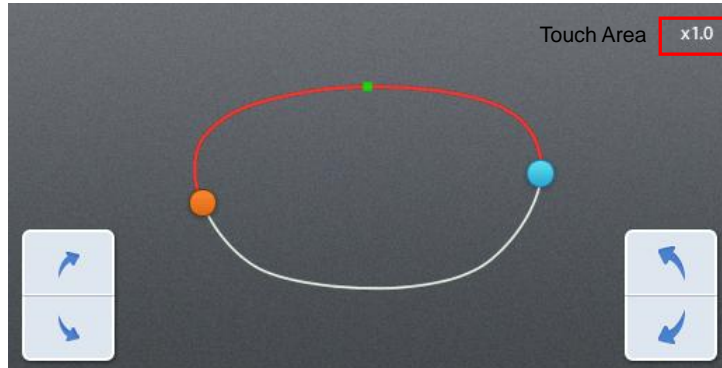
- ① Blue Circle – Start Point
- ② Orange Circle – End Point
- ③ Green Dot – Current Location
- ④ Red Line – Selected Region
- ⑤ Move region clockwise (fine adjustment)
- ⑥ Move region counterclockwise (fine adjustment)
- ⑦ Move region clockwise
- ⑧ Move region counterclockwise

NOTE

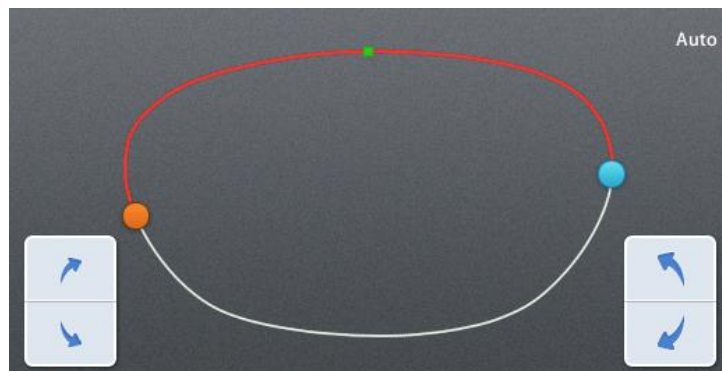
- Touch the lens shape area, then the green dot will be moved to the touched position.



- To see the shape in actual size, touch the upper right icon.

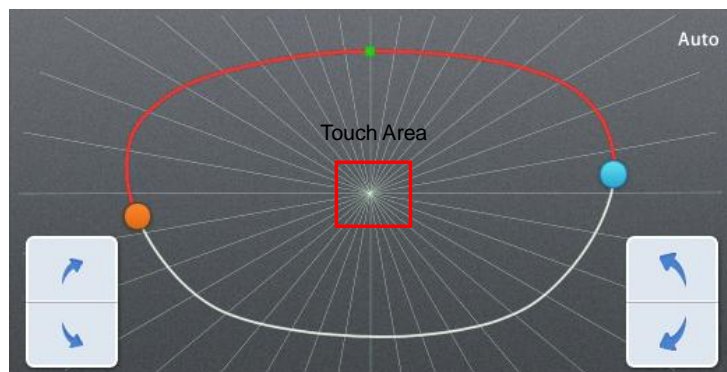


(Actual measurement)



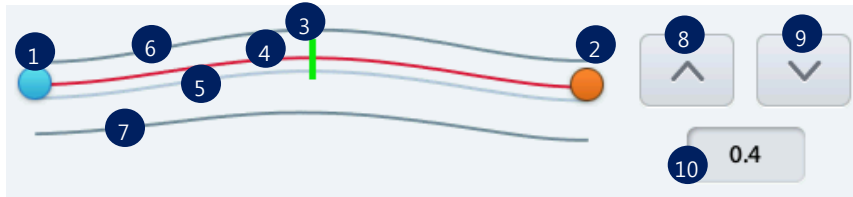
(Auto – Shape is automatically resized fitting the screen.)

- Angle guideline function is turned on or off by touching the center of the shape.



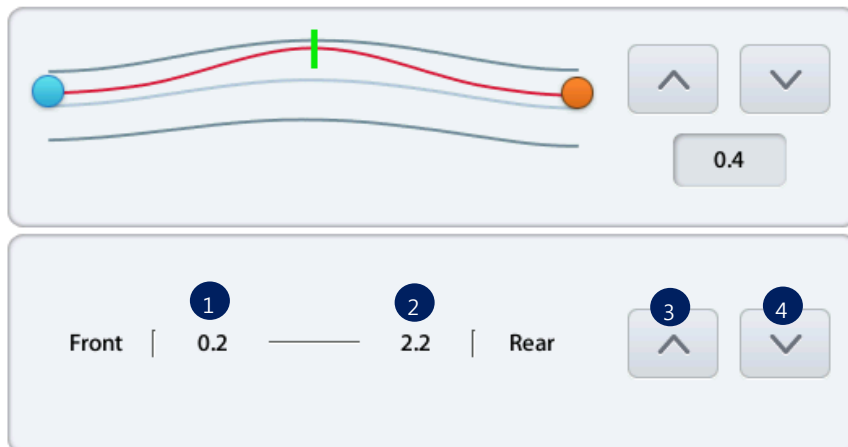
- Angle guideline spacing is 10 °.

6.2.3. Global Modification



- ① Blue Circle – Start Point
- ② Orange Circle – End Point
- ③ Green Line – Current Location
- ④ Red Line – Current Position
- ⑤ Cyan Line – Base Position
- ⑥ Front curve of the lens
- ⑦ Rear curve of the lens
- ⑧ Move position line to front surface
- ⑨ Move position line to rear surface
- ⑩ Position Shift Value – Displays shift value (movement value) from base position (+ front, - rear)

6.2.4. Partial Modification



- ① Distance between current position and front surface (mm)
- ② Distance between current position and rear surface (mm)
- ③ Move current point to front surface
- ④ Move current point to rear surface

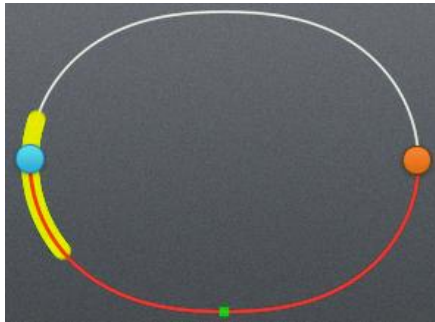
6.2.5. Reset & Apply Button



- ① Reset Button – Cancel the changes
- ② Apply button – Apply modified position and continue to processing

NOTE

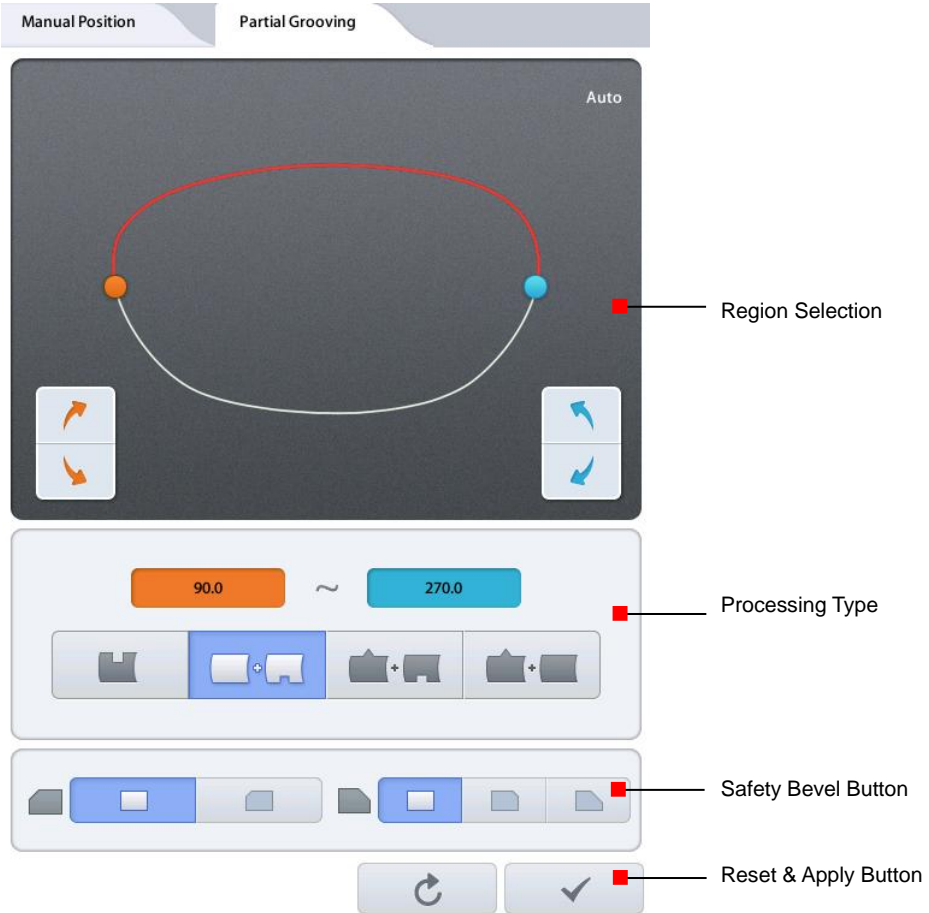
- If you press the base position button while changing base position, previously selected base position is initialized to selected base position.
- Size of the region cannot be changed.
- Warning sign pops up when the selected base position gets out of the front or rear area of the lens.



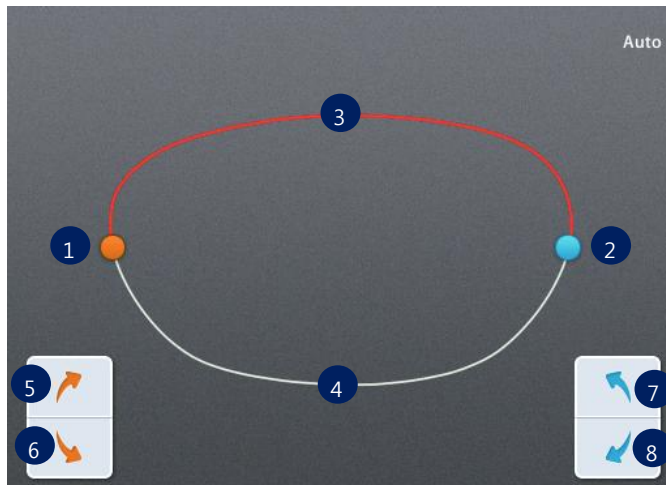
- To cancel the Manual Position Adjustment function, press the apply button and then press the [STOP] button.

6.3. Partial Grooving Screen

When you select Partial Grooving mode, partial grooving screen pops up after the feeling process.



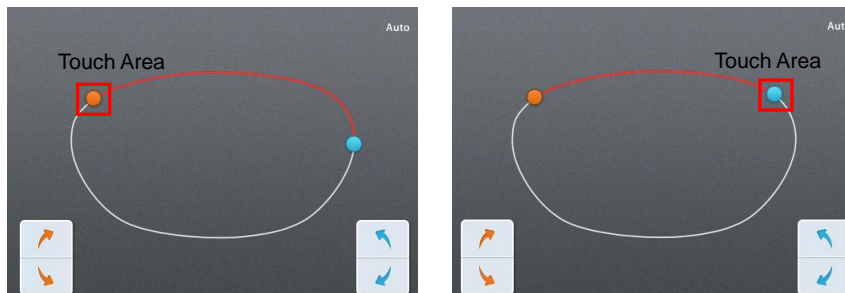
6.3.1. Region Selection



- ① Orange Circle – Start Point
- ② Blue Circle – End Point
- ③ Red Line – Bevel / Flat edging Area
- ④ White Line – Grooving Area
- ⑤ Move start point clockwise
- ⑥ Move start point counterclockwise
- ⑦ Move end point counterclockwise
- ⑧ Move end point clockwise

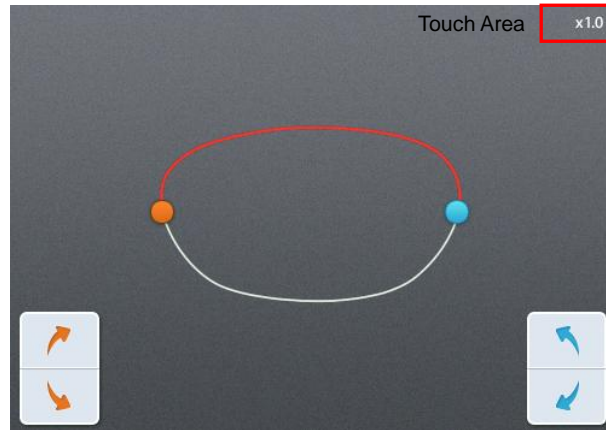
NOTE

- Touch the lens shape area, then the nearest circle moves to the touched area.

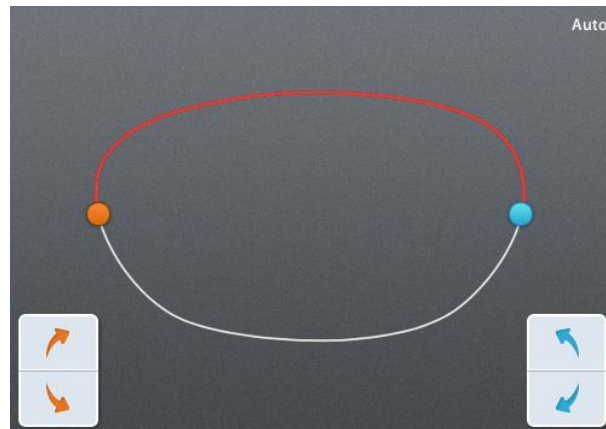


NOTE

- To see the shape in actual size, press the upper right icon.

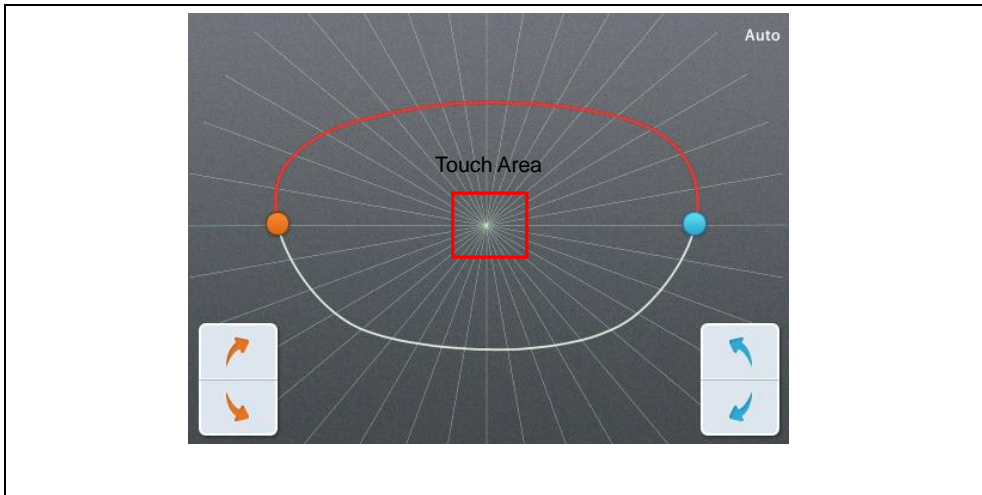


(Actual measurement)

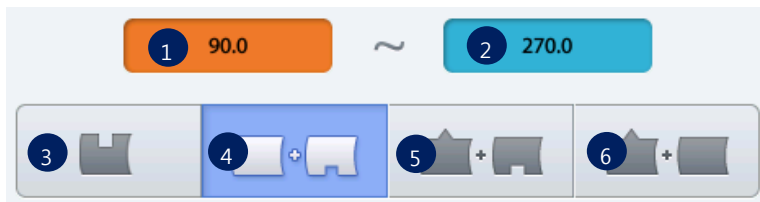


(Auto – Shape resized to fit to the screen)

- Angle guideline pops up when you touch the center of the shape. (Guideline spacing - 10 °)



6.3.2. Processing Type Selection



- ① Angle of the start point
- ② Angle of the end point
- ③ Grooving (Cancel Partial Grooving)
- ④ Flat Edging + Grooving
- ⑤ Beveling + Grooving
- ⑥ Beveling + Flat Edging

NOTE

- Start point and end point are represented by the angle. And the angle starts with the 6 o'clock position from 0 degree in a clockwise direction.
- The following table shows edging methods according to the processing types.

Processing Type	Selected Region	The rest
Flat Edging + Grooving	Flat Edging	Grooving
Beveling + Grooving	Beveling	Grooving
Beveling + Flat Edging	Beveling	Flat Edging

- To cancel partial grooving, press the grooving button.

6.3.3. Safety Bevel Button



- ① Front Safety Bevel OFF
- ② Front Safety Bevel ON
- ③ Rear Safety Bevel OFF
- ④ Rear Safety Bevel Small
- ⑤ Rear Safety Bevel Large.

NOTE

- Safety Bevel button is only for Flat Edging + Grooving mode.
- Safety bevel is not available when the processing type is Beveling + Grooving or Beveling + Flat Edging.

6.3.4. Reset & Apply Button



- ① Reset Button – Cancel the changes and return to initial state.
- ② Apply button – Apply changes and continue to processing.

6.4. Job Manager

The Job Manager interface consists of a top navigation bar, a central data table, and a bottom function bar. The top bar includes a 'Job selection tab' and an 'Exit' button. The central table displays job details, and the bottom bar contains several function buttons.

	Job Number	Type	Reading	Frame Type	FPD	DBL	Time
<input type="radio"/>	2013040800005		Both	Pattern	62.6	15.0	2013-04-08 16:13:56
<input type="radio"/>	2013040800004		Both	Pattern	73.0	15.0	2013-04-08 16:13:51
<input type="radio"/>	2013040800003		Both	Metal	66.0	15.0	2013-04-08 16:13:46
<input type="radio"/>	2013040800002		Both	Pattern	59.0	15.0	2013-04-08 16:13:43
<input type="radio"/>	2013040800001		Both	Pattern	65.0	15.0	2013-04-08 16:13:39

The bottom function bar includes buttons for: Job list, Function button, and other operations.

6.4.1. Job selection tab



- ① Waiting Job: Newly received Job data from Frame Reader or Auto Blocker.
- ② Working Job: Edging job or Editing job.
- ③ Completed Job : Finished Job
- ④ Saved Job List : Job data saved in SD memory card
- ⑤ Internal Data : Internal job data for Edger Test

6.4.2. Function Button

- ① Open : Load the selected job
- ② Save : Save the selected job to the SD memory card
- ③ Search : Search Job number (currently not available)
- ④ Delete : Delete selected job



NOTE

- Save function is only available on Waiting/Working/Completed list.
- If the power of the system is turned off, all job data on Waiting/Working/Completed list are deleted. So if needed, be sure to save the job data to SD memory card before turning off the system.
- Internal data cannot be deleted.
- Good care must be taken not to delete Saved job in the SD memory card permanently by mistake.

6.4.3. Waiting Job

Job Manager							
1	2	3	4	5	6	7	
Job Number	Type	Reading	Frame Type	FPD	DBL	Time	
<input type="radio"/> 2013040800005		Both	Pattern	62.6	15.0	2013-04-08 16:13:56	
<input type="radio"/> 2013040800004		Both	Pattern	73.0	15.0	2013-04-08 16:13:51	
<input type="radio"/> 2013040800003		Both	Metal	66.0	15.0	2013-04-08 16:13:46	
<input type="radio"/> 2013040800002		Both	Pattern	59.0	15.0	2013-04-08 16:13:43	

- ① Job Number: Displays the Job Number.
- ② Type: Displays the Edging Type with icon.
- ③ Reading: Displays the Tracing State with icon.
- ④ Frame Type: Displays the Frame Type.
- ⑤ FPD: Displays the FPD value.
- ⑥ DBL: Displays the DBL value.
- ⑦ Time: Displays the job received time

6.4.4. Working Job

Job Manager						
Job Number	Type	Reading	Edging	Drilling	Time	
2013041800001		Both	R L		2013-04-18 17:56:18	

- ① Edging: Displays the Edging Processing state.
- ② Drilling: Displays the Drilling Processing state.
- ③ Time: Displays the job start time.

6.4.5. Completed Job

Job Manager						
Job Number	Type	Reading	Edging	Drilling	Time	
2013041800001		Both	R L		2013-04-18 18:53:33	
00003		Both	R L		2013-04-18 17:03:22	
2013041700001		Both	R L		2013-04-17 19:13:50	

- ① Time: Displays the job finish time.

NOTE

- You can check current processing state with the following icons.



① Waiting

② Processing (Flicker)

③ Complete (One side)

④ Complete (Both sides)

6.4.6. Job Search

You can search for a job on the job list.

- ① Start 'Job Search Mode' by pressing the search button.
- ② Enter the job number you want with the virtual keyboard.
- ③ Check the list.



Searched item display

	Job Number	Type	Reading	Frame Type	FPD	DBL	Time
<input type="radio"/>	2013061700004		Both	Pattern	73.0	15.0	2013-06-17 18:52:49
<input type="radio"/>	2013061700003		Both	Metal	66.0	15.0	2013-06-17 18:52:46
<input checked="" type="radio"/>	HUVITZ_123		Both	Hard Plastic	71.5	21.1	2013-06-17 18:52:29
<input type="radio"/>	2013061700002		Both	Pattern	55.0	15.0	2013-06-17 18:52:16
<input type="radio"/>	2013061700001		Both	Metal	64.1	19.0	2013-06-17 18:01:12

Keyword: HUVITZ
 Find Prev Find Next
 FPD: 71.51
 DBL: 21.10
 Hard Plastic
 Single Vision

PL

Prev/Next Search button

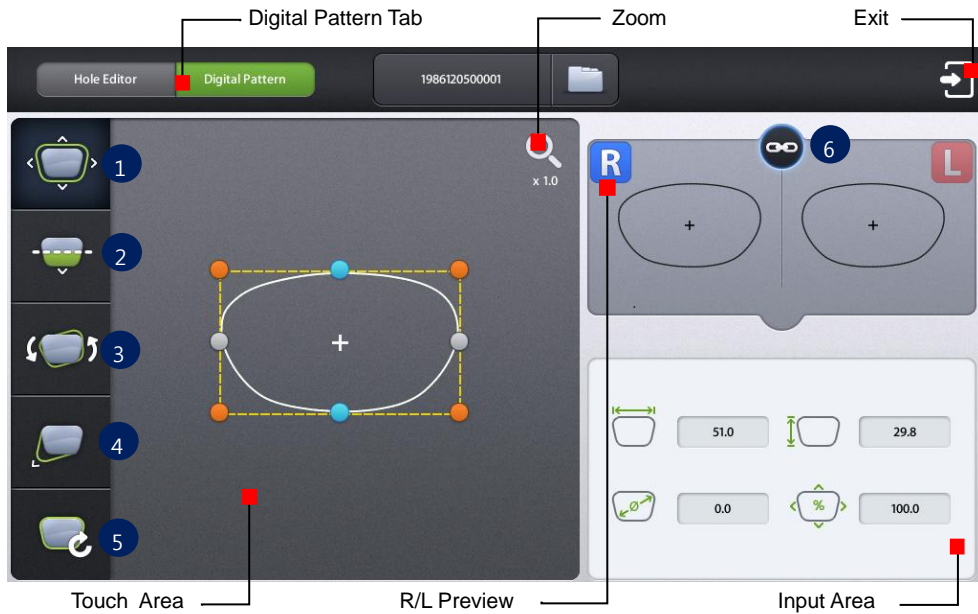
NOTE

- You can search with only few letters, not the whole words. For example, you can search the Job Number 'HUVITZ_123' only with 'HUVITZ' or '123'.
- You can look at the other research results with 'Next' and 'Prev' button
- You can finish the Job Search mode by pressing the search button one more time. The search button shows the state change of this mode.

6.5. Digital Pattern

The “Digital Pattern” modifies the lens shape in left/right, top/bottom as well as rotation and optimizes the fitting for Rimless and Semi-Rimless.

To use Digital Pattern, press the Digital Designer button on the bottom right of the main screen and then select Digital Pattern tab at top left of the screen.

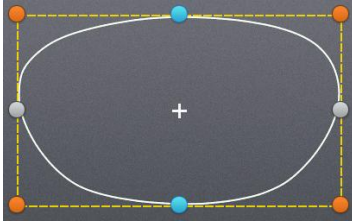


- ① Enlargement/Reduction
- ② Near Vision Area Enlargement/Reduction
- ③ Rotation
- ④ Partial Modification
- ⑤ Reset
- ⑥ R/L Sync

6.5.1. Enlargement/Reduction

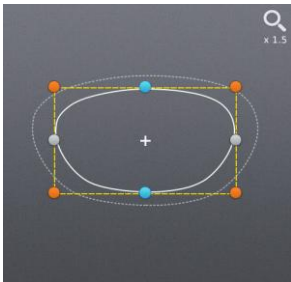
Lens shape can be modified both horizontally and vertically.

Touch Interface

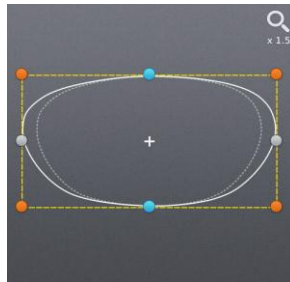


To modify lens shape, make use of the 8 touch points around the lens shape.

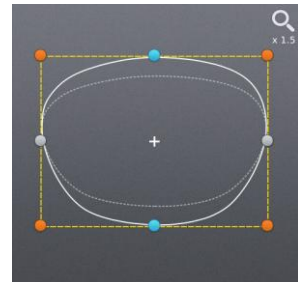
- Horizontal + Vertical
- Horizontal
- Vertical



Horizontal + Vertical

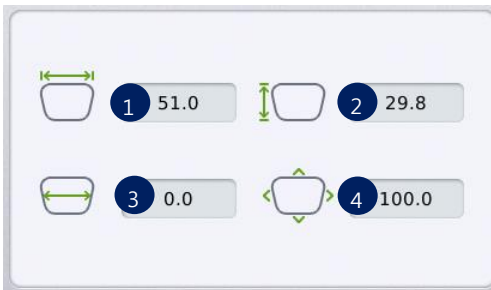


Horizontal



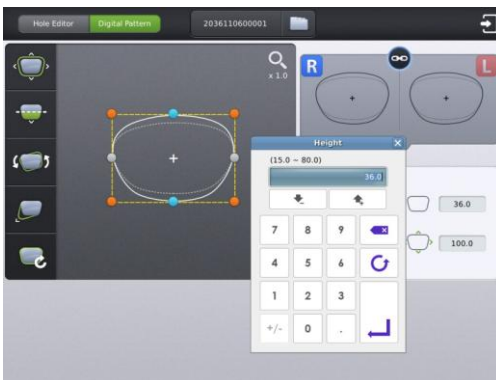
Vertical

Value Input



You can modify the lens shape by entering the values directly in the Input Area.

- ① Width
- ② Height
- ③ Size (mm)
- ④ Percent (%)

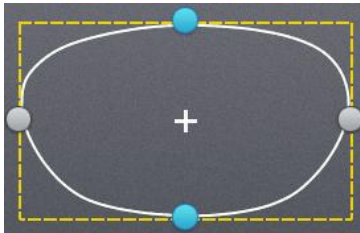


After selecting the item to change, enter the value using the numeric keypad.

6.5.2. Near Vision Area Enlargement/Reduction

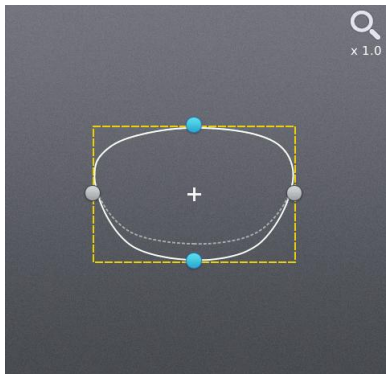
Lens shape can be changed in four directions (Bottom - Near Vision Area, Top, Left, Right).

Touch Interface

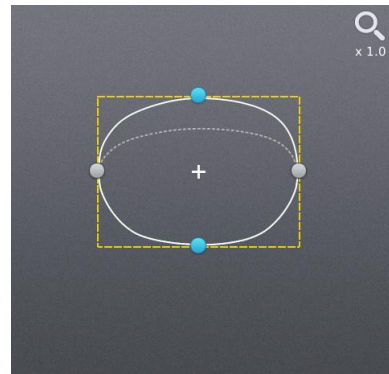


To modify lens shape, make use of 4 touch points around the lens shape.

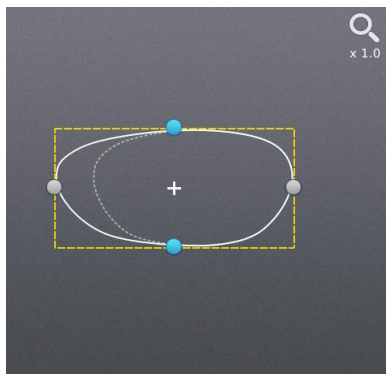
- Left or Right
- Top or Bottom



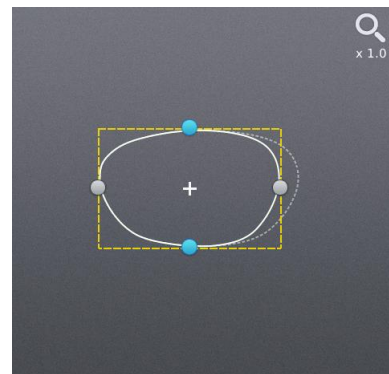
Near Vision Area (Bottom)



Top



Left



Right

Value Input



You can modify the lens shape by entering the values directly in the Input Area.

- ① Left
- ② Right
- ③ Near Vision Area (Bottom)
- ④ Top

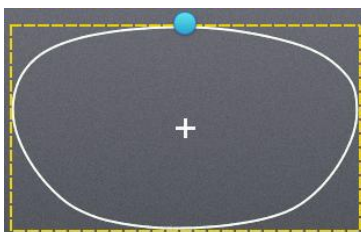


After selecting the item to change, enter the value using the numeric keypad.

6.5.3. Rotation

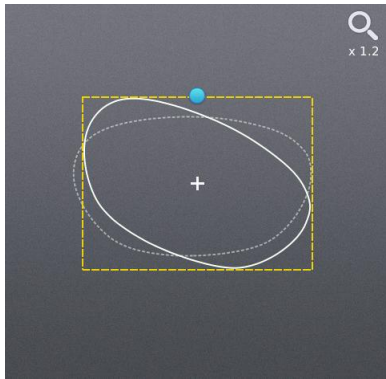
Lens shape can be rotated.

Touch Interface

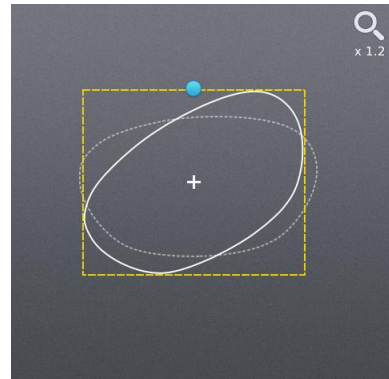


To rotate lens shape, touch and drag the touch point on top of the lens shape.

- Touch Point



Clockwise



Counterclockwise

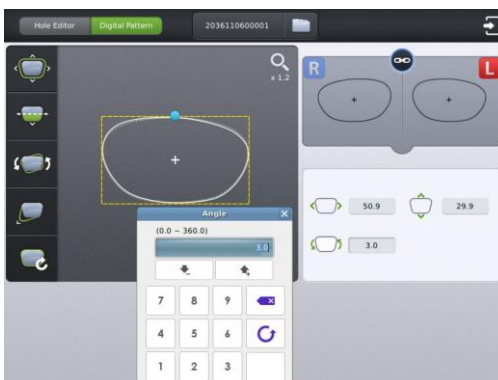
Value Input



You can modify the lens shape by entering value directly in the Input Area.

- ① Width
- ② Height
- ③ Angle (Clockwise, 0 ~ 360)

➤ Function of ① and ② are same with that of Enlargement/ Reduction mode.

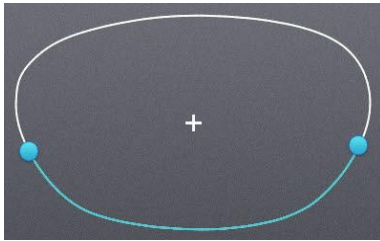


After selecting the item to change, enter the value using the numeric keypad.

6.5.4. Partial Modification

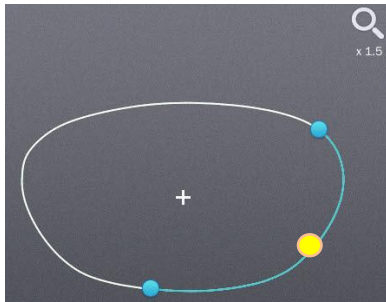
Lens shape can be modified partially.

Touch Interface

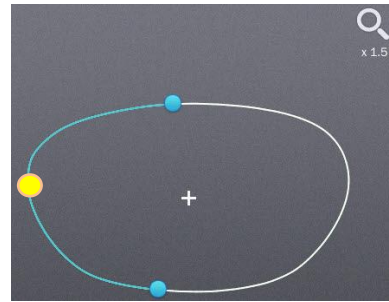


Set modification area by touching any point on lens shape. The point becomes the center of the modification area. To adjust modification range, touch and drag one of 2 touch points around the lens shape

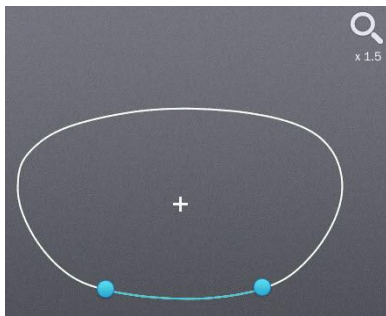
- Range adjustment touch point
- Range center touch point



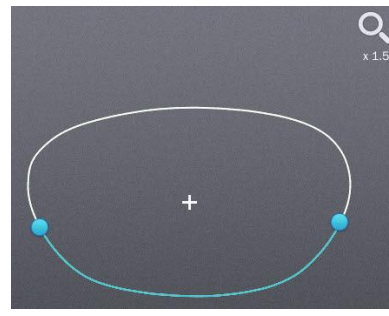
Right Bottom



Left

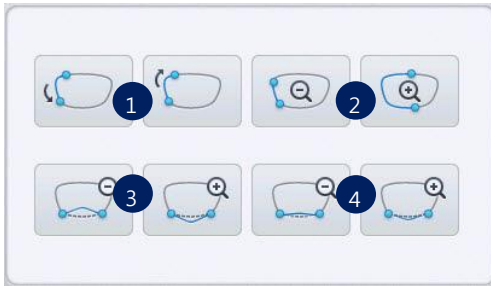


Modification area reduction



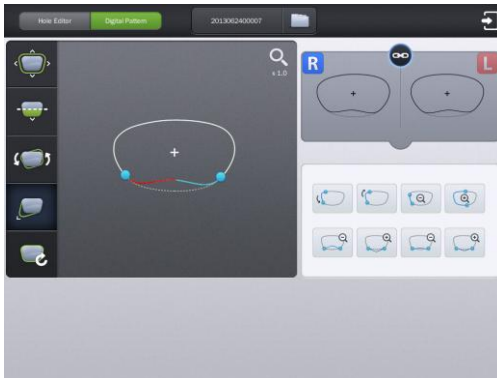
Modification area enlargement

Modification range/ Lens shape change



You can modify the lens shape with Input button.

- ① Position change
(counter clockwise, clockwise)
- ② Range change
(enlargement, reduction)
- ③ Wide Partial Modification
(concave, convex)
- ④ Partial Modification
(concave, convex)



During partial modification, where is not able to process physically is colored red.

6.5.5. Reset

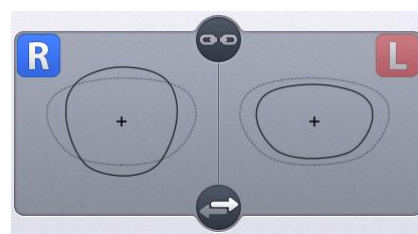
Recover original lens shape.

6.5.6. Toggle R/L Sync

Function for R/L Sync.






R/L Sync On



R/L Sync Off

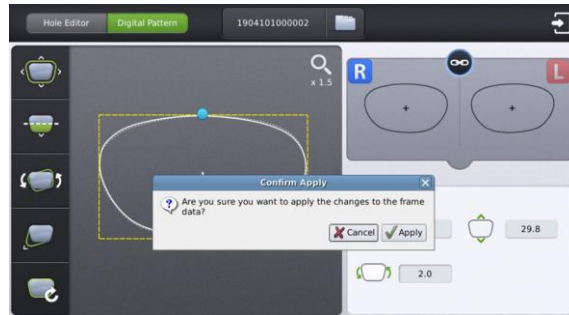
NOTE

- “Copy” button () is available when R/L sync option is turned off. Shape of the current side is copied to the other side by pressing this button.
- Press  or  button to change the side.

6.5.7. Exit

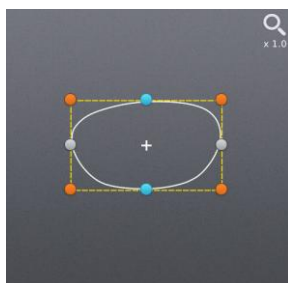
Quit digital pattern and return to the main screen.

To apply modified lens shape, Press the “Apply” button on the confirm dialog box.

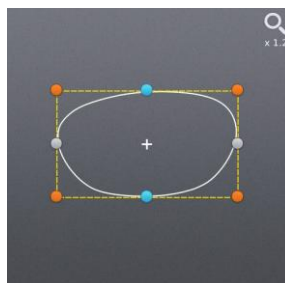


NOTE

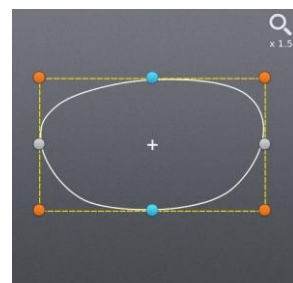
- You can modify half-framed lens or rimless lens conveniently by using the digital pattern.
- The digital pattern is useful for the bi-focal lens or the progressive. Sometime too small frame shape might cut out the near vision area. In this case, the digital pattern provides the enlargement of the frame shape.
- Be sure to check optical center position and PD/OH value after digital pattern is applied.
- After when digital pattern is applied, FPD or bridge size is recalculated according to the digital pattern applying option on Configuration menu.
 - Fix FPD – fixing FPD, re-calculate bridge size depending on modified lens shape
 - Fix Bridge Size – fixing bridge size, re-calculate FPD depending on modified lens shape
- Press the Zoom icon to change zoom ratio of the lens shape.



1.0x



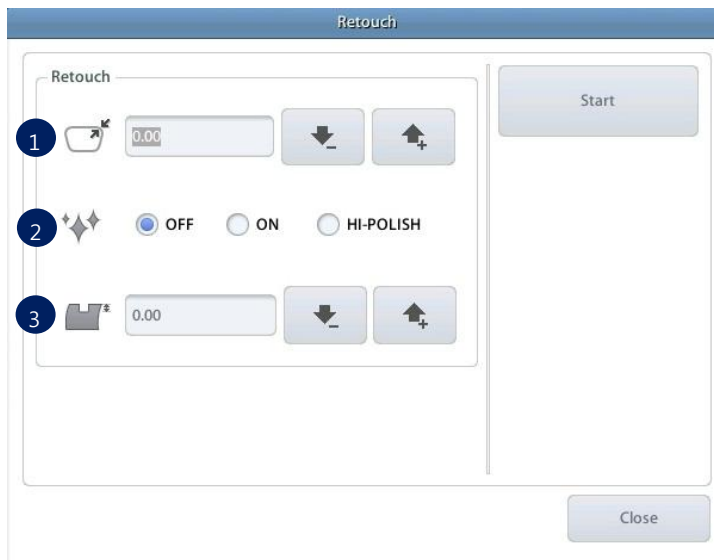
1.2x



1.5x

6.6. Retouch Mode


If the processed lens is too large to be to the frame, you can process the lens again with the Retouch Mode.

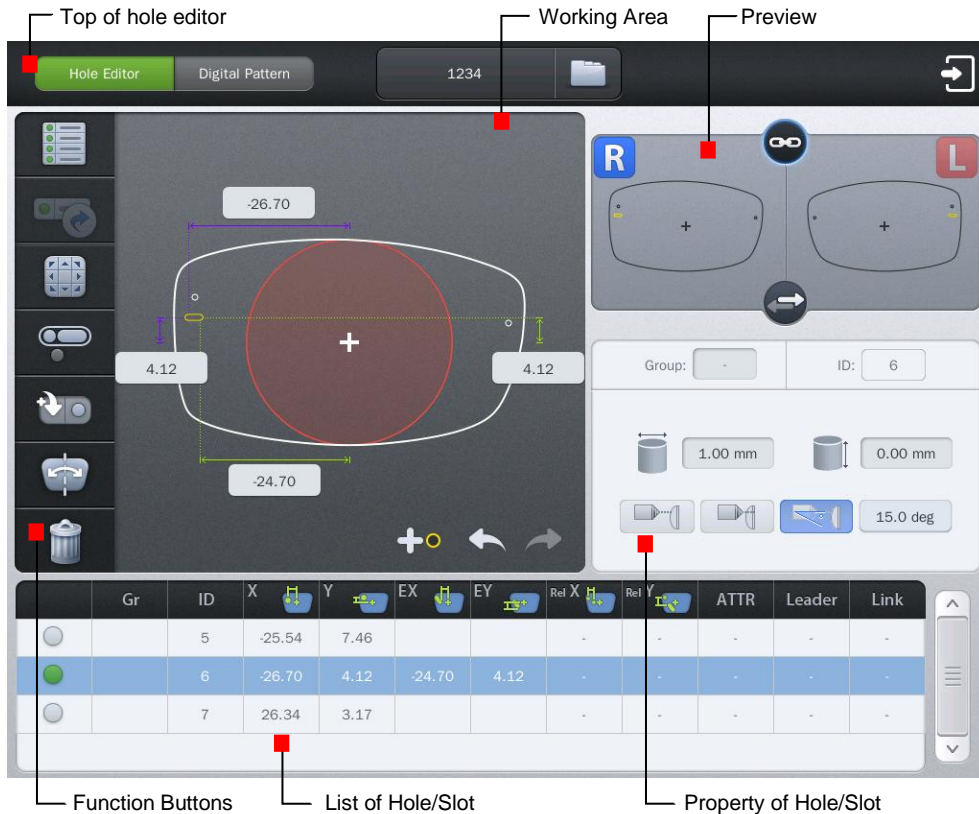


- ① Retouch Size(minus value ~ 0.0) - Input retouch size
- ② Activate/Cancel Polishing - You can activate polishing even if the lens has not been polished before.
- ③ Activate Grooving - You can activate grooving as you input the groove depth value(Grooving position and width cannot be changed).

6.7. Hole Editor

This screen is for the edition of hole position for drilling.

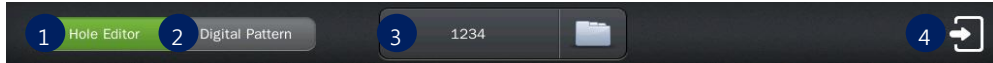
To use the hole editor, click the button  on the main screen right below, and then select the hole editor button in the upper left.



NOTE

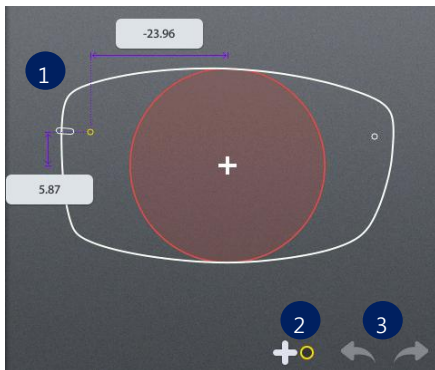
To perform a drilling, the blocking mode must be set to the center of the frame (box center). If you add a slot or hole on the hole editor, the blocking mode is changed to the center of the frame (box center), automatically. In this case, the blocking mode is fixed to the center of the frame (box center) and cannot be changed by the user. If all of the holes / slots are removed on the hole editor, the user can change the blocking mode.




6.7.1. Upper Side of Hole Editor



- ① Hole Editor: Starts the hole editor. If the button is green, hole editor is now available.
- ② Digital Pattern: Starts the digital pattern.
- ③ Job Number: Displays the job number of currently working job. You can modify the number by touching here.
- ④ Exit: Terminates the hole editor.

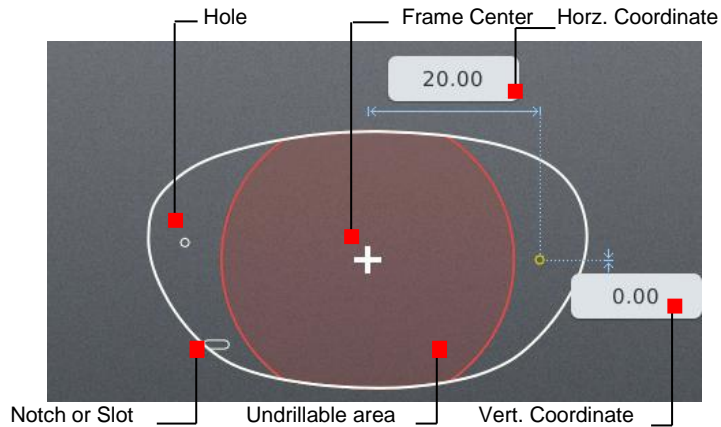
6.7.2. Working Area



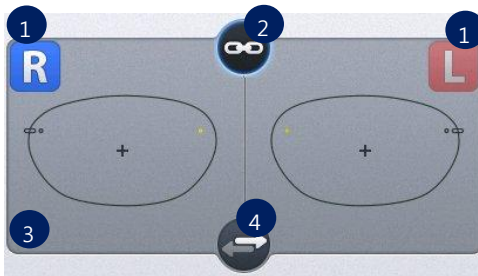
- ① Working Area: Working area displays the shape of frame and holes/slots. The hole/slot in yellow is the selected one. The orange holes/slots mean the same group with selected one. The selected hole/slot is displayed with their coordinates. The user can move the selected hole/slot by touching the LCD or inputting their coordinates directly.
- ② Add hole/slot: The user can add hole/slot by pressing **+** button or pre-defined hole/slot set by pressing preset buttons ().
- ③ Undo()/Redo(): Adding, deleting, moving and changing of hole/slot can be undo or redo.

NOTE

- Elements required for drilling are displayed on working area. The figure below describes each element.



6.7.3. Preview



- ① Select Right/Left: You can change the selection of the left/right.
- ② Right/Left synchronization: The synchronization of the right and left side can be turned on or off. Properties or changes of the selected side are identically applied to the other side, when the synchronization is on.
- ③ Preview: You can see the shape of the holes / slots on both sides at once.
- ④ Copy to the other side: You can copy the holes / slots of the selected side to the other side. The modifications which were performed without the synchronization can be applied to the other side by this function. When you execute this function, all of the holes /slots on the other side will be deleted first.

6.7.4. Function Buttons



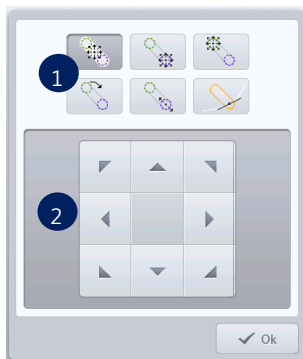
- ① Select / deselect all: You can select or deselect all of the holes/slots at once.
- ② Retouch hole / slot: You can register the selected holes/slots for retouching.
- ③ Hole / Slot Easy Moving: You can move the selected holes/slots. This function provides you precise movement.
- ④ Grouping: You can select more than a hole/slot and bind them as a group. Select holes/slots which have no group or belong to different groups, and press this button. If you want to cancel the group formation, select one or more holes/slots within the group and press this button.
- ⑤ Preset: This provides the function to manage preset configuration.
- ⑥ Mirroring: Selected hole / slot is copied to the symmetric position based on the center of frame. If the selected hole / slot belongs to a group, all holes / slots in that group are copied, and they will form a new group.
- ⑦ Delete Hole / Slot: This function deletes the selected hole / slot. If it belongs to a group, all of the holes / slots in that group are also deleted.

NOTE

- The button for retouching hole / slot is available after drilling is completed. The hole/slot selected to be retouched will be marked with '(R)' as shown.

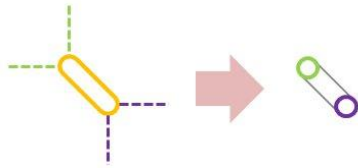
	Gr	ID	X	Y	EX	EY	Rel X	Rel Y	ATTR	Leader	Link
		1(R)	-26.65	1.27			-	-	-	-	-
		2	27.13	0.63			-	-	-	-	-

- When you press the Hole / Slot Easy Moving button, following screen will pop up. You can use this to move the hole / slot.



- ① Select moving type: You can select moving type. When the selected one is a hole, it supports just one moving type. When the selected one is a slot, it supports 6 types of moving.
- ② Move hole / slot: It provides moving buttons according to the selected moving type. How to move the selected hole / slot according to the moving type is explained below.

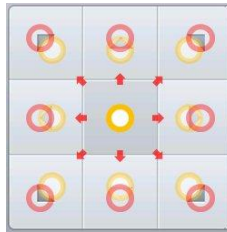
- The slot icon on the buttons of moving type represents the start() and end() position like below figure.



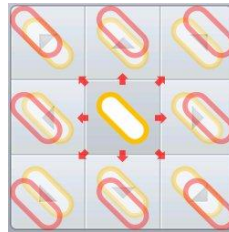
- The details of how to move the hole / slot by moving type are like below.



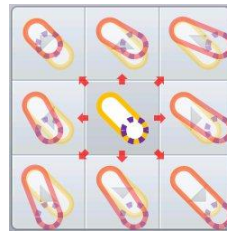
This provides the function of parallel movement. The movement of hole / slot is like below.



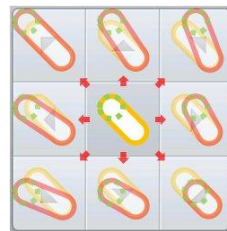
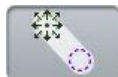
(Hole)



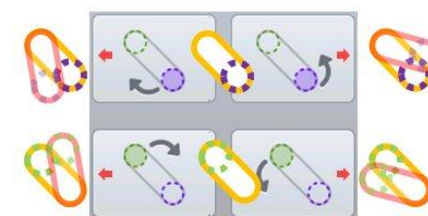
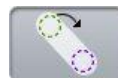
(Slot)




(Slot only) This provides the function to move the start position of a slot.




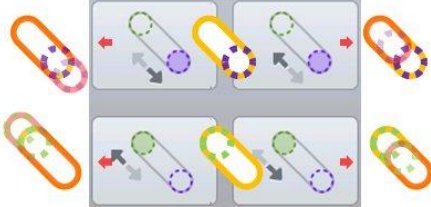
(Slot only) This provides the function to move the end position of a slot.



(Slot only) This provides the function to rotate a slot.

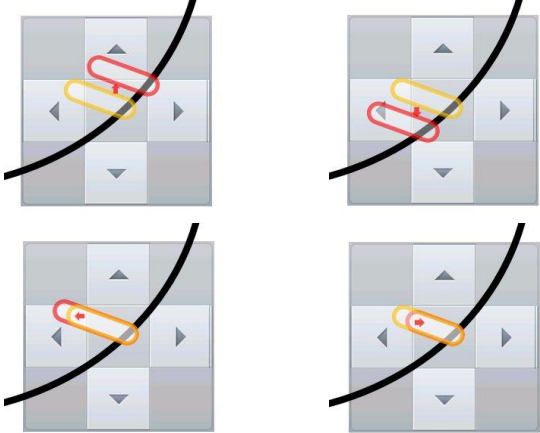






(Slot only) This provides the function to change the length of a slot.

(Slot only) This provides the function to change a slot to a notch and to move the notch. The slot will be moved to the edge of a frame close to current position, and become a notch. The slot can be moved with the notch remained by using the moving buttons. The up and down buttons are for parallel movement of the slot along with the frame. The left and right buttons are for length modification of the slot lying across the frame. The below figure is the example of the notch moving. (The thick solid black line is the frame edge.)



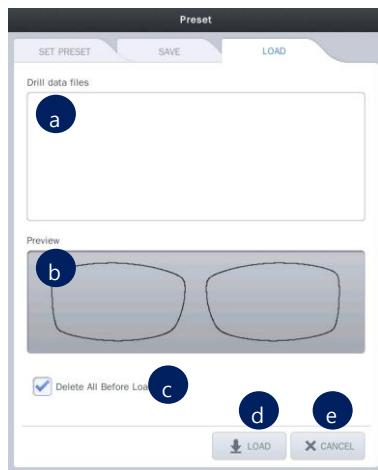
NOTE

- On the preset, there are three functions.
 - ① Save the hole / slot data: You can save the hole / slot data of the current job to the SD card.




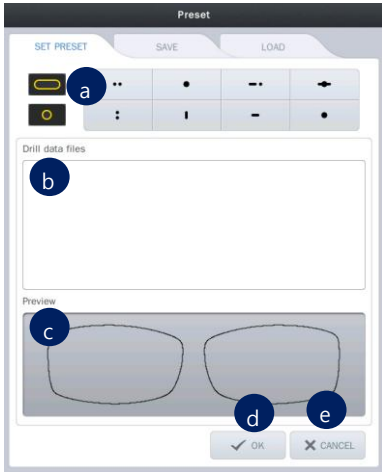
- a. List of hole / slot data: This displays a list of hole / slot data in the SD card.
- b. File name: You can set the file name of the hole / slot data to be saved.
- c. Save: You can save the hole / slot data by pressing this button.
- d. Cancel: Exit the preset configuration.

- ② Load the hole / slot data: You can load the hole / slot data from the SD card and include them to the current job.



- a. List of hole / slot data: This displays the list of hole / slot data in SD card.
- b. Preview: This displays the shape of the selected hole / slot data.
- c. Load option: You can choose whether to keep or to delete the existing hole / slot data before adding the loaded data. The default value for this option can be specified on the preference.
- d. Load: You can load the hole / slot data by pressing this button.
- e. Cancel: Exit the preset configuration.

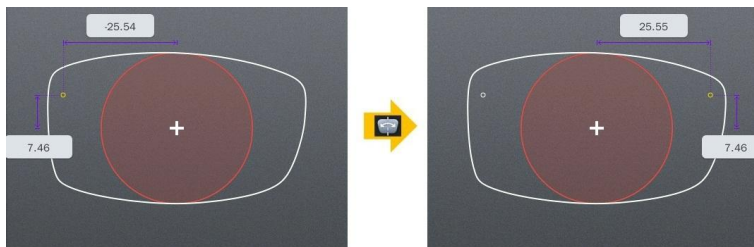
- ③ Set preset: You can set the 8 preset buttons. (). You can put hole/slot saved in SD card to each button. These 8 presets can be used to add the favorite set of the hole / slot data to the current job, easily.



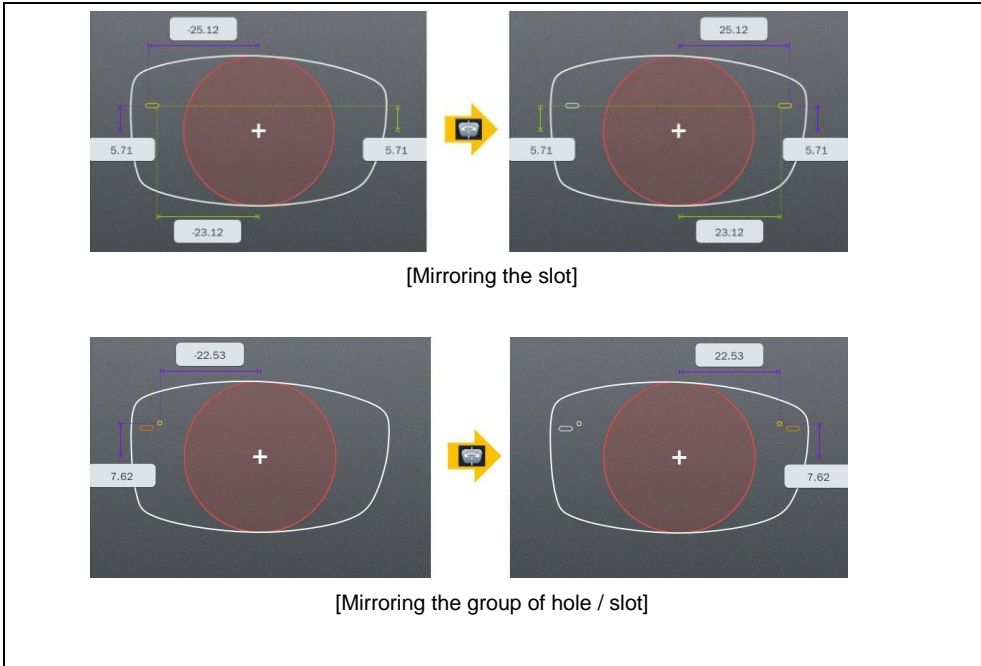
- Select the preset button: Select the preset button to apply the hole / slot data. And then choose hole / slot data you want.
- List of hole / slot data: This displays the list of hole / slot data in SD card.
- Preview: This displays the shape of the saved hole / slot data.
- OK: Applies all of the changings.
- Cancel: Exit the preset configuration.

NOTE

The mirroring is a function that copies the selected hole / slot to the opposite side. The distance between mirrored hole/slot and the frame edge is same with the distance between original one and the frame edge. In case of slot, the distance between the start point of a side (closest point to the frame) and the frame must be identical with the distance between the end point of the other side (closest point to the frame) and the frame (The two points must be symmetric). If the selected hole / slot belong to a group, all holes / slots are also mirrored, and they will form a new group.



[Mirroring the hole]



6.7.5. List of Hole/Slot

It displays the hole / slot list of the current job. You can change the position of the hole / slot by pressing the coordinates displayed on the list.

	Gr	ID	X	Y	EX	EY	Rel X	Rel Y	ATTR	Leader	Link
		2	21.26	5.39			-	-	-	-	-
	1	3	-26.12	5.39	-24.12	5.39	-	-	-	-	-
	1	4	-22.12	5.39			-	-	-	-	-

- ① Select the hole / slot: You can select the holes / slots to make a group by pressing here. The green circle is the selected one.
- ② Group ID: It displays the group id that the hole / slot belongs to. But if the hole / slot does not belong to a group, nothing will be displayed here.
- ③ Hole / slot ID: It displays the hole / slot ID for classifying each other.
- ④ Change how to display the X coordinate: You can change the way X coordinate is displayed. Followings are the three options.



Based on the center of frame (distance from the center of frame)



Based on the box (distance from the box which is surrounding the frame)



Based on the frame edge (distance from the edge of frame)

- ⑤ Change how to display the Y coordinate: You can change the way Y coordinate is displayed. Followings are the two options.



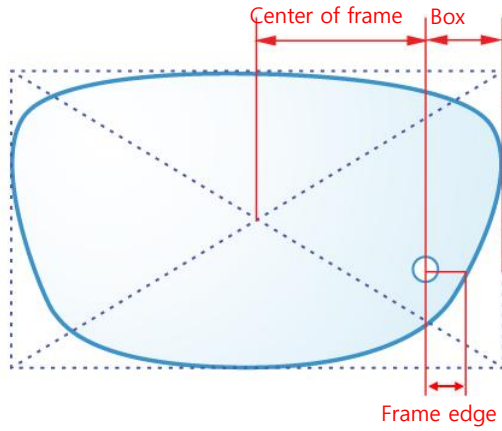
Based on the center of frame (distance from the center of frame)



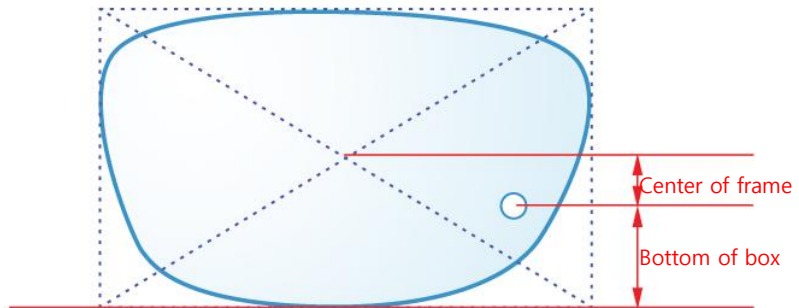
Based on the bottom of box (distance from the bottom of box)

NOTE

- Display options for X coordinate

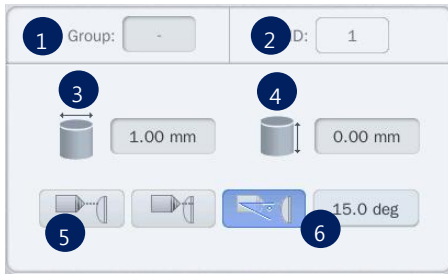





- Display options for Y coordinate



6.7.6. Property of Hole/Slot

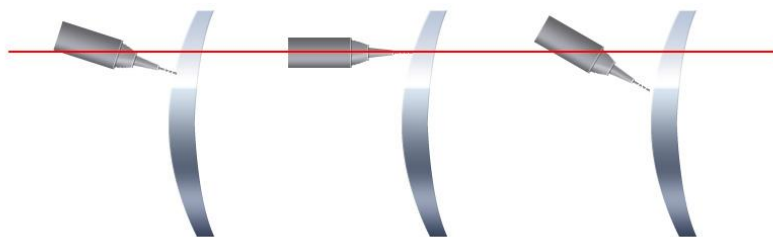
It displays the properties of the selected hole / slot.



- ① Group: If selected hole / slot belongs to a group, it displays the group id. If selected hole / slot does not belong to a group, it displays with the '-'.
- ② ID: It displays the serial number of the hole / slot that is automatically granted.
- ③ Diameter: It displays the diameter of the selected hole / slot. (0.8 ~ 5.0 mm)
- ④ Depth: It displays the depth of the selected hole / slot. (0.0 ~ 6.0 mm) Depth 0.0 mm indicates the hole/slot that penetrates a lens.
- ⑤ Angle mode: You can choose the angle mode.
 -  Auto (front): drill with the angle of perpendicular to the lens front
 -  Auto (rear): drill with the angle of perpendicular to the lens rear
 -  Manual: drill with the angle of user-specified
- ⑥ Drilling angle: If you choose 'manual', you can set the drilling angle. (0° ~ 30°)

NOTE

- Drilling angle



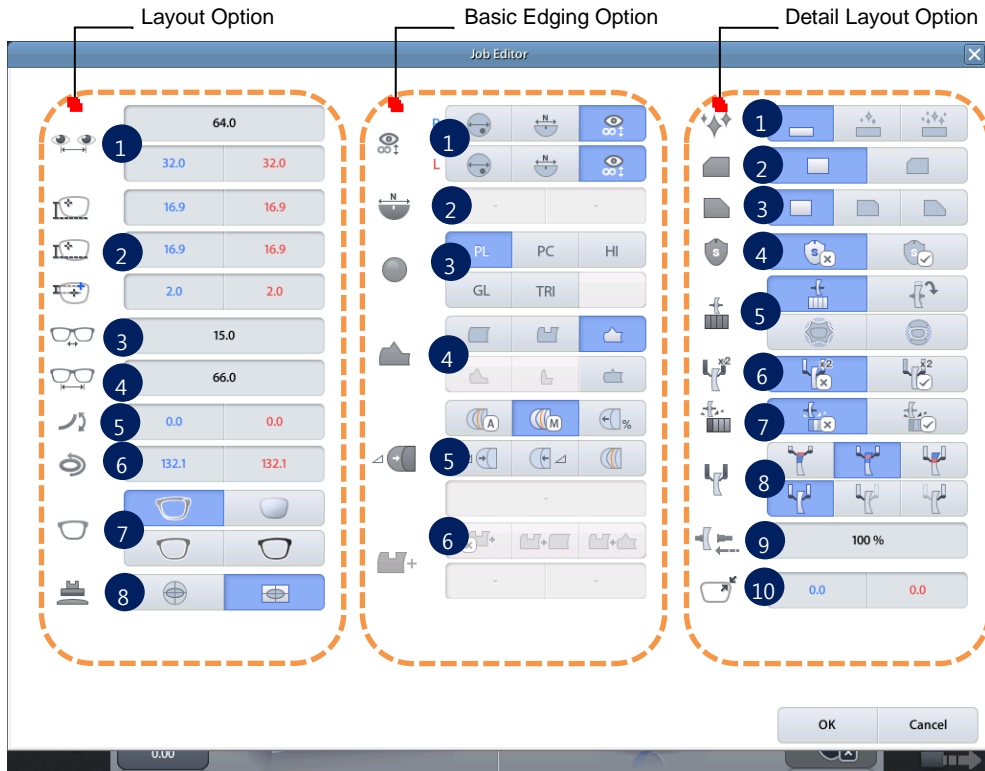
Auto-front (perp. to the lens front)

Manual 0°

Manual 30°

6.8. Job Editor

Job editor provides the whole edging options at once, so it is useful for the skillful users.



6.8.1. Layout Option

- ① PD (Binocular PD, R/L Monocular PD)
- ② OH (ΔY , Box, Mix)
- ③ Bridge size (DBL)
- ④ FPD
- ⑤ Frame curve
- ⑥ Circumference
- ⑦ Frame Type
- ⑧ Blocking mode

6.8.2. Basic Edging option

- ① Lens type (Bi-focal Round, Bi-focal flat, Normal)
- ② Near vision area diameter
- ③ Lens type
- ④ Edging type
- ⑤ Bevel/Grooving position
- ⑥ Partial grooving

6.8.3. Detail Edging Option

- ① Polishing
- ② Front safety beveling
- ③ Rear safety beveling
- ④ Safety mode
- ⑤ Roughing type
- ⑥ Feeling after roughing
- ⑦ Pre-roughing
- ⑧ Feeling position & Feeling mode
- ⑨ Clamp pressure
- ⑩ Size

NOTE

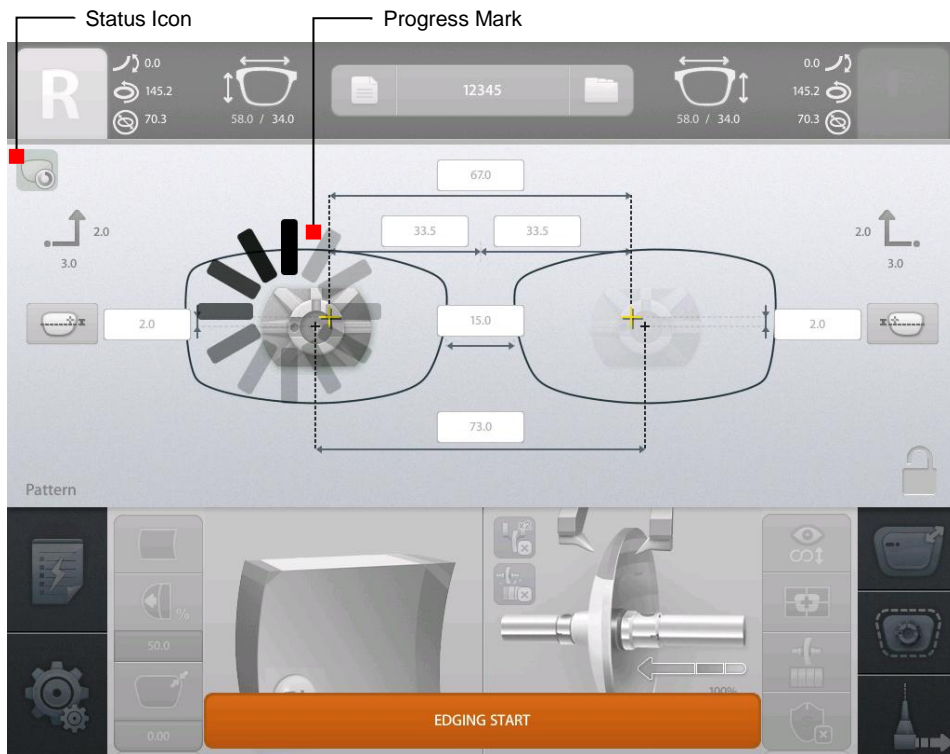
- The job editor options are applied to right/left both side concurrently. But if the options distinguish the two sides, those are applied only to the selected side.
- Job editor is only available before edging. Job Editor is not available once the edging of a side is completed.

6.9. Edging Process

6.9.1. Edging Start

Start process with following procedures after all edging option settings are completed.

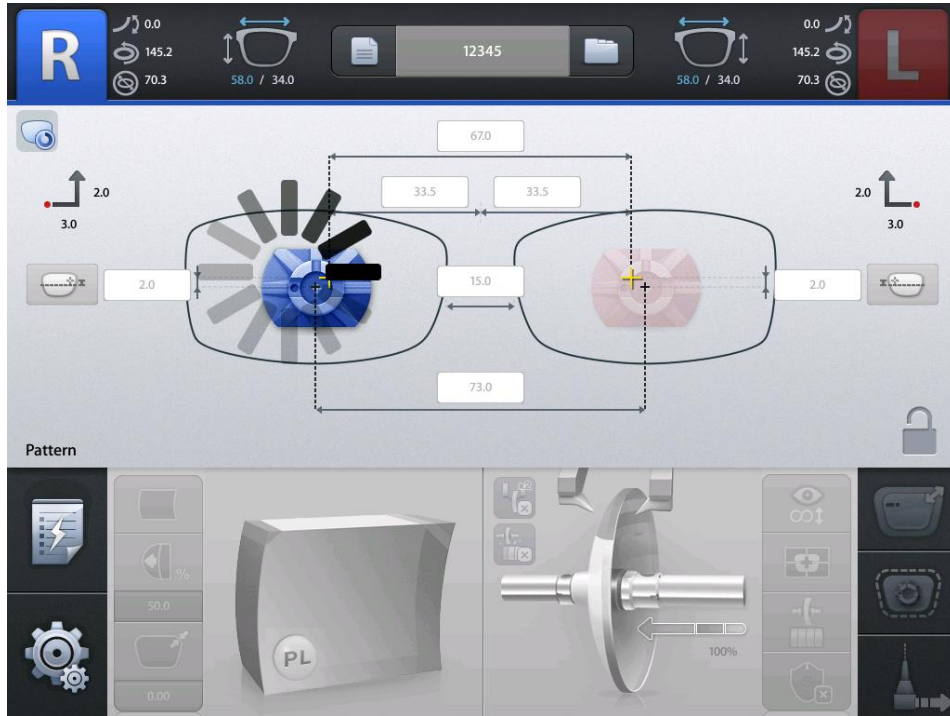
- ① Open the edging room window by pressing 'WINDOW' button.
- ② Release the clamp by pressing 'CLAMP' button, and then set blocked lens.
- ③ Hold the lens by pressing 'CLAMP' button.
- ④ Start process the selected side by pressing 'START' button.



NOTE

- All processing are executed automatically. So please check the edging options before the start.
- All buttons are locked for a while for the safe edging.
- Progress mark shows the state that there is no problem..

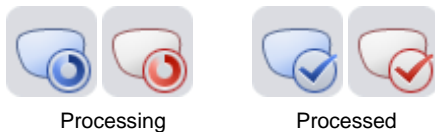
6.9.2. Edging Screen



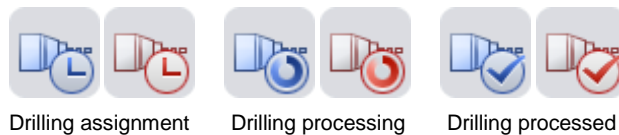
NOTE

- Some buttons are unlocked after a while. Then, you can handle multi-tasking with 'Job Manager'.
- According to edging state, following icons are displayed on screen.

- Edging Icons



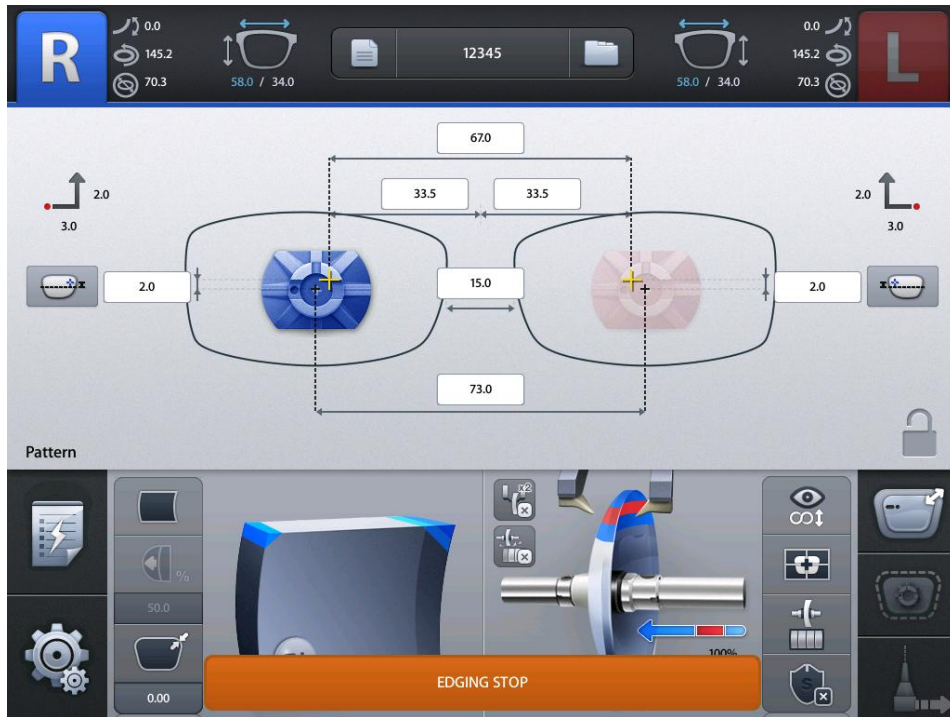
- Drilling Icons



- Drilling icons button is displayed only when the edger has connection with drill machine(HDM-8000).

6.9.3. Edging Stop

Edging process stops by pressing 'STOP' button at any time. Edging process stops when an unexpected situation happens.

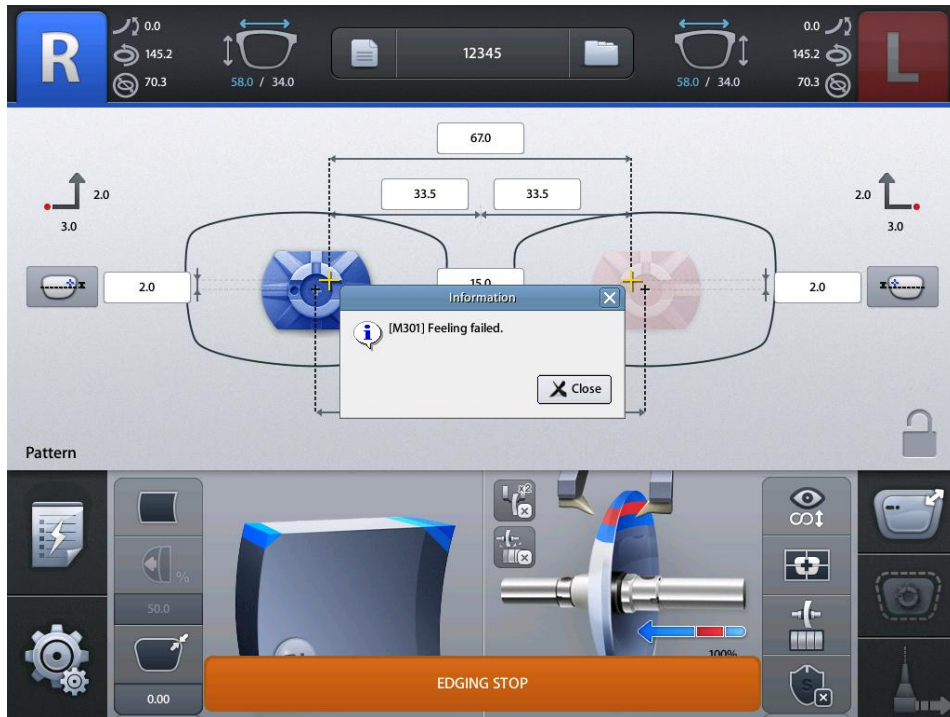


CAUTION

- In case of emergency, stop the machine immediately by pressing the 'STOP' button.
- Motor needs some time to stop its working when you stop the machine while processing.
- If the machine does not stop, press the button one more time.

6.9.4. Edging Error

In case of an unexpected situation, error message will pop up and the process will stop immediately.

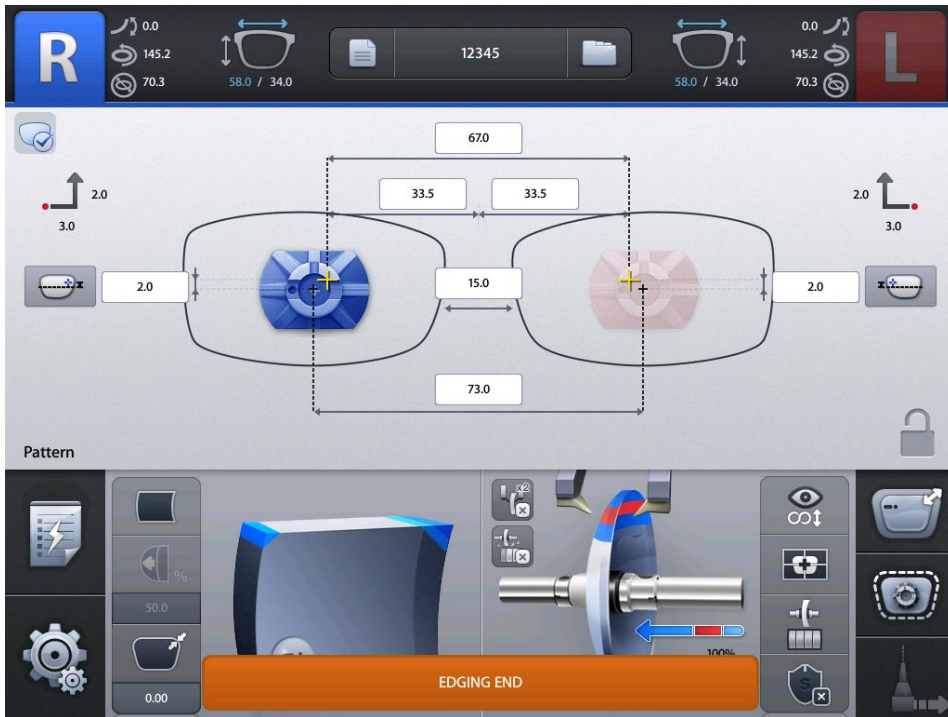


NOTE

Please check the error message and take a proper step. And then, restart the process.

6.9.5. Edging Finish

After edging process is finished, beep sound and finish message will be provided with activated main screen.



Follow these steps to take out the processed lens.

- ① After edging finishes, window is open automatically.
- ② Press the 'CLAMP' button. Take out the processed lens from edging room
- ③ Close the edging room window by pressing 'WINDOW' button for safety.
- ④ Move on to next job.

NOTE

You can make the processed lens retouched with 'Retouch' button.

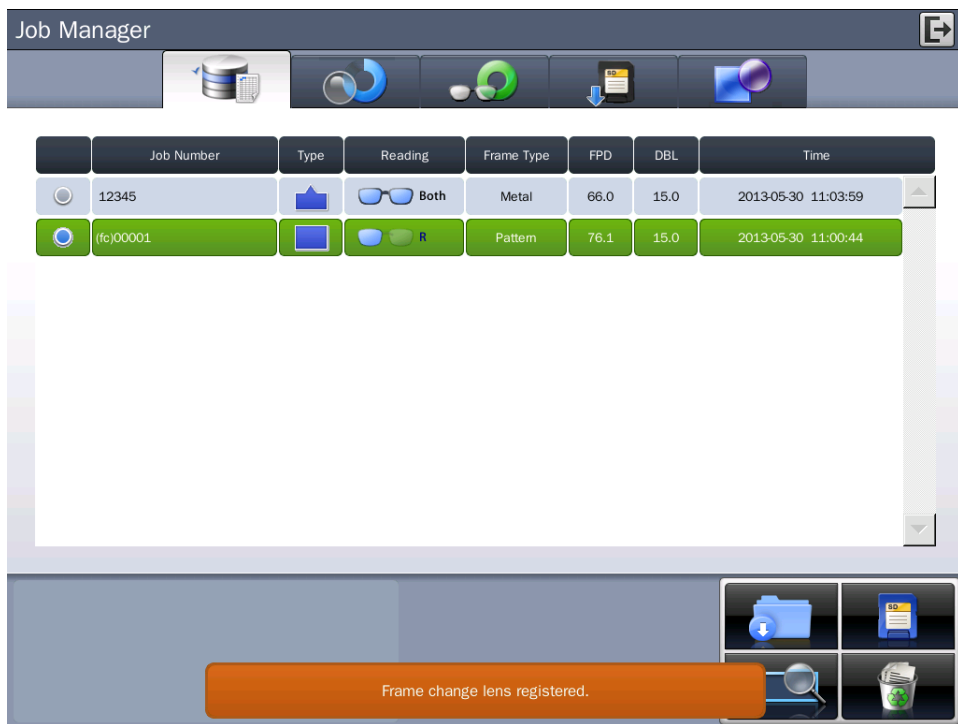
6.10. Frame Change

6.10.1. Frame Change Lens Registration

This function is for registration of the frame change lens for frame change processing.

To register the frame change lens, double-click the job number area after selecting the frame change lens on waiting tab.

'(fc)' mark will be prefixed to the job number after the frame change lens has been registered successfully, which will be used as a guideline of frame change afterward.



Job Manager

	Job Number	Type	Reading	Frame Type	FPD	DBL	Time
<input type="radio"/>	12345		Both	Metal	66.0	15.0	2013-05-30 11:03:59
<input checked="" type="radio"/>	(fc)00001		R	Pattern	76.1	15.0	2013-05-30 11:00:44

Frame change lens registered.

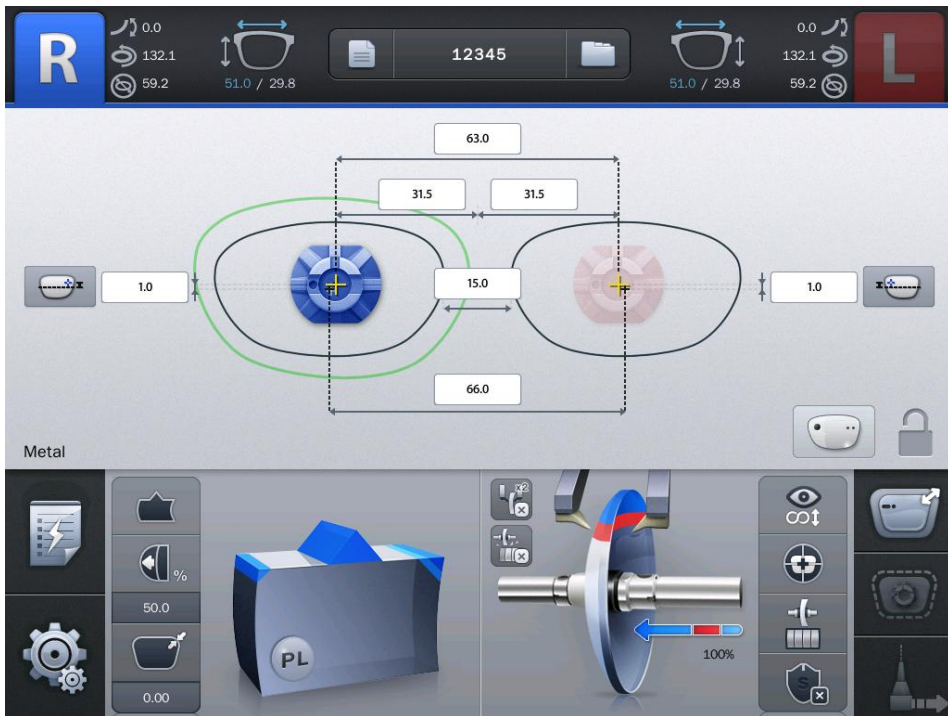
NOTE

- Only one frame change lens can be registered.
- If you try to register another job, the previously registered job will be canceled.
- To cancel the registration of the frame change lens, double-click the job number area of the registered job.

6.10.2. Frame Change Mode

You can activate the frame change mode by touching the feeler icon on detail edging options at the right bottom of main screen. In this mode, feeler reads the lens 1mm inner than its actual size. So even when the size of the frame change lens and the edging size are similar, it helps to process without problems.

If the frame change mode is activated after the frame change lens has been registered, frame change guideline will be displayed so that you can compare edging shape with frame change lens shape. In this situation, if edging shape has interference with frame change lens shape, you cannot proceed the edging.



NOTE

Bevel/Groove position may not be accurate due to the information of lens thickness 1mm inside of its actual measurement.

6.10.3. Frame Change Procedure

- ① Frame reader reads the lens which will be used in frame change. (when you hold the lens at pattern holder, you must block the lens adaptor at optical center of lens)
- ② The data will be transmitted to the edger after the reading process is completed.
- ③ Start the job manager at edger, select the frame change lens data transmitted. And then register it as the frame change lens.
- ④ Frame reader reads the pattern or frame.
- ⑤ Start the job manager at edger, load the edging job and input the edging information.
- ⑥ In detail edging option, choose the frame change mode by touching the feeler icon.
- ⑦ Look at the frame change guideline displayed, and check if the edging shape can be processed.
- ⑧ Rest procedures are same with normal edging procedures.

NOTE

In edger + auto-blocker environment, frame change lens is already blocked by auto blocker. So you don't have to use frame change lens register function, just activate the frame change mode, and then you can start edging.

7. Configuration

7.1. Configuration of Frame Reader

How to start the configuration

- ① Press these buttons sequentially : 'MENU' >> 'BOTH'
- ② Press 'FRAME' button, then you can navigate all setting options.
- ③ Press the 'BOTH' button to execute a specific option.
- ④ Press the 'L' or 'R' button to change the value of the selected option.

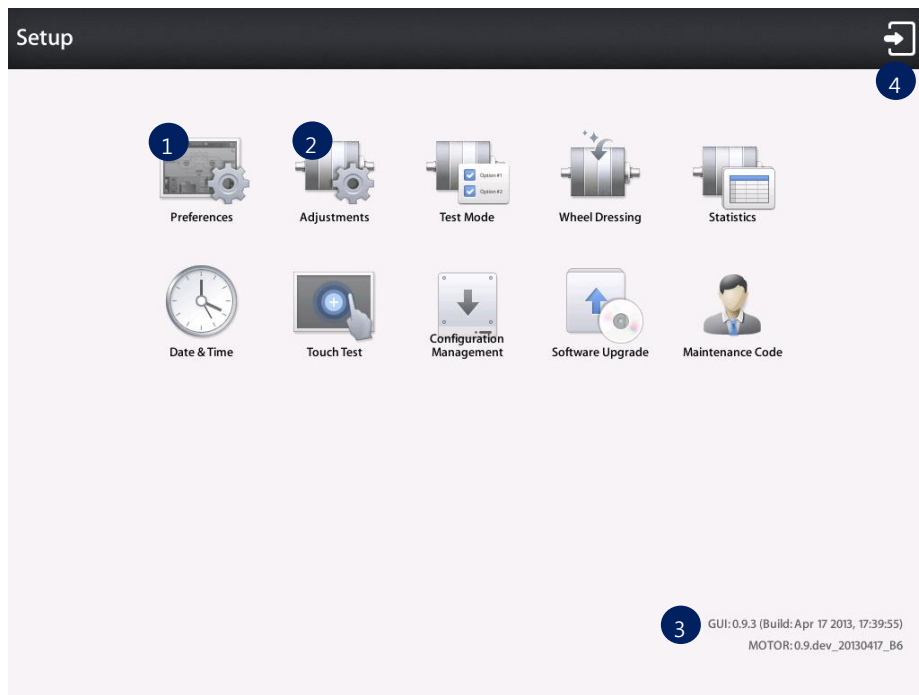
List of user options

- ID INFO : Shows System ID
- Beep : Turns on/off beep sound
- EDGER-1 : Enables or disables the data transmission through EDGER-1 port
- EDGER-2 : Enables or disables the data transmission through EDGER-2 port.

7.2. Configuration of Edger

Press the MENU button at the bottom left of the Main screen.

MENU Screen



- ① Preferences
- ② Adjustments
- ③ Software Version
- ④ Exit

NOTE

Refer to 'Chapter 8. System Maintenance' for the other functions.

7.2.1. Preferences

User Interface can be customized to the user's preference.

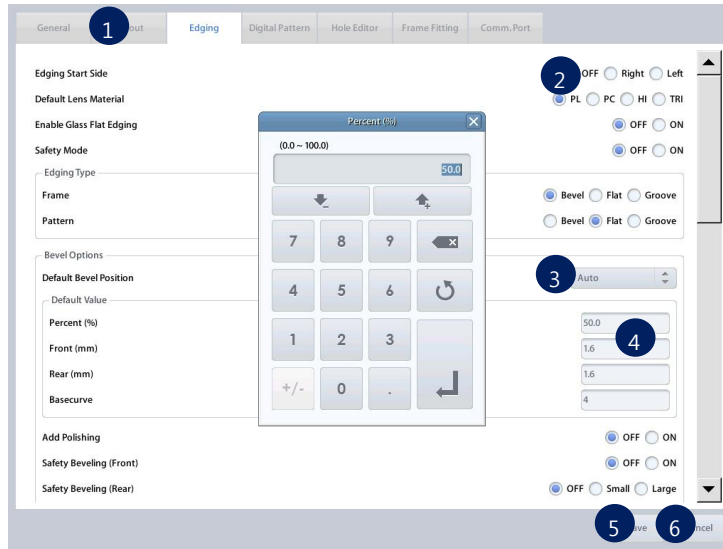
General

Default settings for user interface

- Language – Sets default language
- Beep Sound – Turns on or off the beep sound
- Frame Fitting Mode – Applies frame fitting values R/L separately or R/L equally
- Sleep Mode – Inputs sleep mode waiting time (minutes)
- Edit Processed Job – Allows or prohibits editing processed job
- Show Tip Message
- Digital Designer Mode – Sets digital designer startup screen
- Grid – Shows or hides gridlines of main screen
- Safety Check – Checks whether edging can be done without mechanical interference
- Eccentricity Check – Displays warning message if blocking position is too eccentric.
- Config DB History – Displays configuration data backup/restore date

NOTE

- Setting Screen



- ① Tab Menu
- ② Radio Button – Choose only one of a predefined sets of options
- ③ List Box – Choose a list from existing options
- ④ Input Box – Input value to be used by the program
- ⑤ OK Button – Save the changes
- ⑥ Cancel Button – Cancel the changes

Layout

Default settings for main screen layout option

The screenshot shows the 'Layout' settings dialog box. The 'Layout' tab is selected. The settings are as follows:

- Default Side: Right Left
- Lens Type: Single Vision Bifocal (Flat Top) Bifocal (Round)
- Blocking Mode: Boxing Center Optical Center
- OH Sync: OFF ON
- OH Type: Delta Y Boxed Height Mixed Height
- Default Value:
 - PD: 64.0
 - Bridge Size: 15.0
 - Delta Y: 2.0
 - Boxed Height: 18.0
 - Mixed Height: 18.0
 - Bifocal Offset (Horizontal): 5.0
 - Bifocal Offset (Vertical): 5.0
 - Near Segment Diameter: 18.0
- Mandatory Field Warning:
 - PD: OFF ON
 - OH: OFF ON

Buttons: Save, Cancel

- Default Side – Set default editing side
- Lens Type – Set default layout mode of main screen
- Blocking Mode – Set default blocking method
- OH Type – Set default OH display method
- Default Value – Set default value of PD, Bridge Size, Delta Y, Boxed Height, Mixed Height, Bifocal Offset (Horizontal), Bifocal Offset (Vertical), Near Segment Diameter
- Mandatory Field Warning – Check if mandatory values are entered or not
 - PD – Warning message pops up if PD value is not entered
 - OH – Warning message pops up if OH(Delta Y, Boxed Height or Mixed Height) value is not entered
 - Bridge Size – Warning message pops up if Bridge size or FPD value is not entered

NOTE

Keep the factory default value (5mm) of Bifocal Offset.

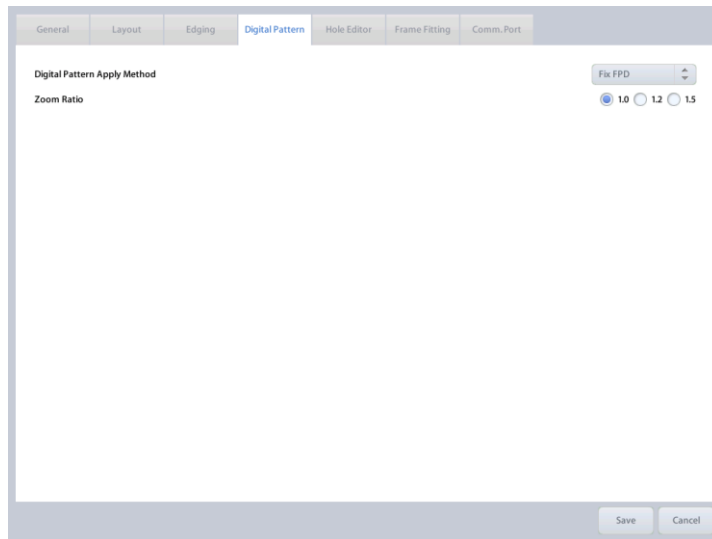
Edging

Default settings for main screen edging option

- Edging Start Side – Select left or right to start edging. Warning message will pop up if the processing is not started from the selected side.
- Default Lens Material – Set default lens material
- Enable Glass Flat Edging – Allow flat edging for glass lens
- Safety Mode – Set default safety mode
- Edging Type – Set default edging type of each frame material (Frame, Pattern)
- Bevel Options – Set default values of bevel
- Rimless Options – Set default values of rimless
- Safety Bevel Amount – Set default values of safety bevel
- Asymmetric Bevel Default Value
- Mini Bevel Default Value
- Semi-U Bevel Default Value
- Feeling Outside of Bevel – Turns on feeling cycle for bevel end
- Feeling After Roughing – Adds additional feeling cycle when roughing is finished
- Show Milling Possible Lens Guideline
- Manual Position UI Default Region (Clock position)

Digital Pattern

Default settings for digital pattern screen



- Digital Pattern Apply Method
 - Fix FPD – Calculates bridge size value based on FPD
 - Fix Bridge Size – Calculates FPD value based on bridge size
- Zoom Ratio – Set default zoom ratio of touch input area

Hole Editor

Default settings for hole editor screen

The screenshot shows the 'Hole Editor' dialog box with the following settings:

- General: General, Layout, Edging, Digital Pattern, **Hole Editor**, Frame Fitting, Comm.Port
- Hole Depth (0=Through Hole): 0.0
- Hole Diameter: 1.0
- Angle Default Options:
 - Tilting Mode: Auto User defined
 - Auto Tilting Reference Surface: Front Rear
 - User Defined Tilting Angle: 0.0
- X Pos Reference: Frame Center
- Y Pos Reference: Frame Center
- Preset Hole Data Load: Keep Existing Hole/Slots Delete All Hole/Slots Before Load
- Buttons: Save, Cancel

- Hole Depth – Set default hole/slot depth value
- Hole Diameter – Set default hole/slot diameter value
- Angle Default Options – Set default tilting angle mode and manual tilting value
- X Pos Reference – Set default horizontal coordinate reference
- Y Pos Reference – Set default vertical coordinate reference
- Preset Hole Data Load – Set default behavior of preset loading

Frame Fitting

Frame Fitting values are used to adjust the size variation caused by frame material difference.

The screenshot shows the 'Frame Fitting' dialog box with the following structure:

- Master Size:** 0.00
- Metal:**
 - Horizontal: 0.00
 - Vertical: 0.00
- Hard Plastic:**
 - Horizontal: 0.00
 - Vertical: 0.00
- Soft Plastic:**
 - Horizontal: 0.00
 - Vertical: 0.00
- Pattern:**
 - Horizontal: 0.00
 - Vertical: 0.00

Buttons: Save, Cancel

- Master Size – Input size adjustment value for all frame material
- Metal – Input size adjustment value for metal frame
- Hard Plastic – Input size adjustment value for hard plastic frame
- Soft Plastic – Input size adjustment value for soft plastic frame
- Pattern – Input size adjustment value for pattern or demo lens

NOTE

- How to setup frame fitting values
 - ① Trace the metal frame with the frame reader.
 - ② Execute edging process with Mid-index lens (low diopter lens is preferred) and carry out the fitting with the edged lens.
 - ③ In case the edged lens is bigger than the frame, decrease the value, in case the edged lens is smaller than the frame, increase the value.
 - ④ Repeat ①~③ steps for all frame material.
- Input horizontal and vertical value separately if horizontal and vertical deviation occurs
- Frame fitting values are applied in diameter (unit : mm)
- Use “Master Size” value for all frame material.
- To input right and left frame fitting values separately, change the “Frame Fitting Mode” option in the General tab.

Comm. Port

Set the communication options

- Barcode Reader - Use the barcode reader
 - Baud Rate – Set communication speed
- Tracer Port – Use tracer(frame reader) port
 - Protocol – Set communication protocol
 - Baud Rate – Set communication speed
- Blocker Port – Use blocker port
 - Protocol – Set communication protocol
 - Baud Rate – Set communication speed
- Job Request Port – Set communication port for job downloading
- DCS / VCA options – Set communication options for LMS
 - Machine ID – Set machine ID
 - The Number of Radii – Set the number of radii
 - Radius Mode – Set angle type
 - Format – Set data format
 - Packet Timeout – Set packet timeout
 - Confirm Timeout – Set confirmation timeout

7.2.2. Adjustments

You can adjust the options related to edging process.



CAUTION

- Adjustment settings are closely related to the edging quality, so keep the system default values as much as possible.
- If you want to change adjustment values, ask to the service technician of HUVITZ or the technician authorized by HUVITZ.
- Please backup the configuration data to your SD card before you change adjustment values.
- If the edging does not process well because of the wrong adjustment value, you can return to the previous state.

General

Set basic edging options.

- Edging Room Window Open Warning – The processing stops if you open the window by force while processing.
- Edging Room Window Safety Mode – You cannot open the window until the wheel stops completely after finishing edging.
- PC/TRI Edging Order – The order of polishing and grooving for PC/TRI lens is set.
- Swap Pump1, 2 – When Pump 1 is out of order, you can substitute Pump 2 for it.
 - OFF – Use as it is
 - ON – Substitute Pump 2 for Pump 1.

- Change GL Roughing Rotation – Each time the glass lens rotates, direction of rotation is changed.
- Frame Change Mode : Feeler Offset – Set the feeling offset for the frame change mode
- Lens Adaptor – You can choose the type of lens adaptor. The size of it can be set, of needed.

Rotation

You can set the number and the speed of rotation.

- Rotation Limit – Number of rotation is set according to the processing steps and lens materials.
- Rotation Speed –Speed of rotation is set according to the processing steps and lens materials.
- Roughing Y Speed – Falling speed of the lens in roughing process is set.

NOTE

- Be careful not to input too high rotation speed value. Fast rotation may cause axis shift problem.
- To slow down the falling speed, input lower value on Roughing Y Speed.
- Safe Mode value in the Roughing Y Speed is only available when Safety Mode is turned on.

Clamp

You can set default clamping pressure value.

Pressure Mode	PL	PC	HI	GL	TRI
Normal Pressure	100	100	100	100	100
High Pressure	120	120	120	120	120
Low Pressure	80	80	80	80	80

- Normal – value for Normal Pressure Mode
- High – value for High Pressure Mode
- Low – value for Low Pressure Mode

NOTE

You can input the value from 50% to 150%. 100% means 55kgf±3

Size

You can adjust the edging size.

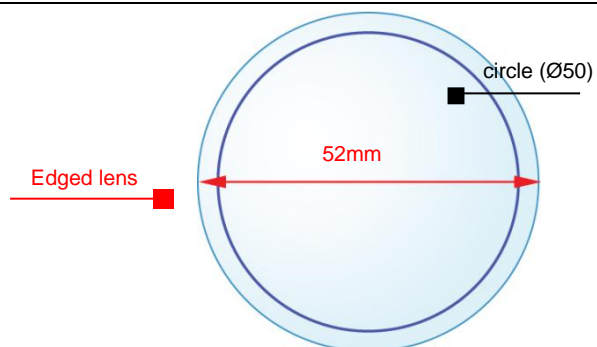
- Finishing Size – Size adjustment value for finishing step.
- Polishing Size – Size adjustment value for polishing step

NOTE

- How to adjust finishing size
 - ① Load internal square pattern(40mm x 40mm) or circle pattern(\varnothing 50).
 - ② Execute the beveled process and the rimless process for all types of lenses.
 - ③ Check the size of processed lenses and input the adjustment value.
- How to adjust polishing size

Add polishing option and proceed with the same step for adjusting finishing size.
- How to input adjustment value (Flat edging without polishing, PL lens)

If the size of internal circle (\varnothing 50) data is 52mm, input -1.0 for Finishing Size → Rimless → PL value.



- Remember that the adjustment value is based on radius. (Do not confuse with the Frame Fitting value. Frame Fitting value is based on diameter)
- Adjust the value within the tolerance $\pm 0.1\text{mm}$.

Margin

You can set margin for the following edging steps.

The screenshot shows a software interface for setting margin values. The 'Margin' tab is selected, and the following settings are visible:

- Roughing Margin**
 - Bevel**
 - PL: 0.00
 - PC: 0.00
 - HI: 0.00
 - GL: 0.00
 - TRI: 0.00
 - Rimless**
 - PL: 0.00
 - PC: 0.00
 - HI: 0.00
 - GL: 0.00
 - TRI: 0.00
- Milling Margin**: 0.00
- Polishing Margin**
 - Bevel**
 - PL: 0.00

Buttons for 'Save' and 'Cancel' are located at the bottom right of the dialog.

- Roughing Margin – Margin value for roughing
- Milling Margin – Margin value for milling
- Polishing Margin – Margin value for polishing



CAUTION

Margin values have influence on the lens material or edging quality. So it is recommended not to change the factory default settings as much as possible.

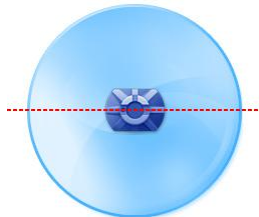
Axis

You can adjust the distortion of axis.

- Main – Compensation value for main axis
- Polishing – Compensation value for polishing axis
- Grooving – Compensation value for grooving axis
- Safety Beveling – Compensation value for safety beveling
- Milling – Compensation value for milling

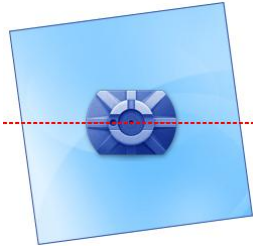
NOTE

- How to adjust axis
 - ① Load internal square pattern (40mm x 40mm).
 - ② Draw a horizontal line on the lens and locate the lens adaptor at the center and parallel to the line.

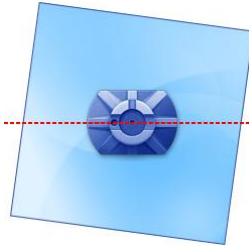


- ③ Execute flat edging, check the main axis, and input the adjustment value.
- ④ Execute all types of edgings for all types of lens materials, check the axis, and input the adjustment value.

- The adjustment unit is degree($^{\circ}$).
- Add (-) value to shift axis clockwise.
- How to adjust main axis value

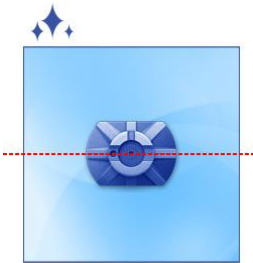


Add (-) value

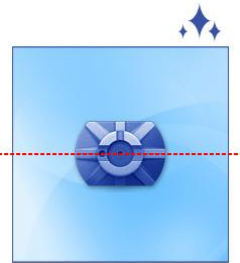


Add (+) value

- How to adjust polishing axis value

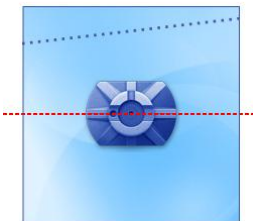


Add (-) value

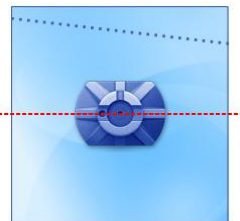


Add (+) value

- How to adjust grooving axis value

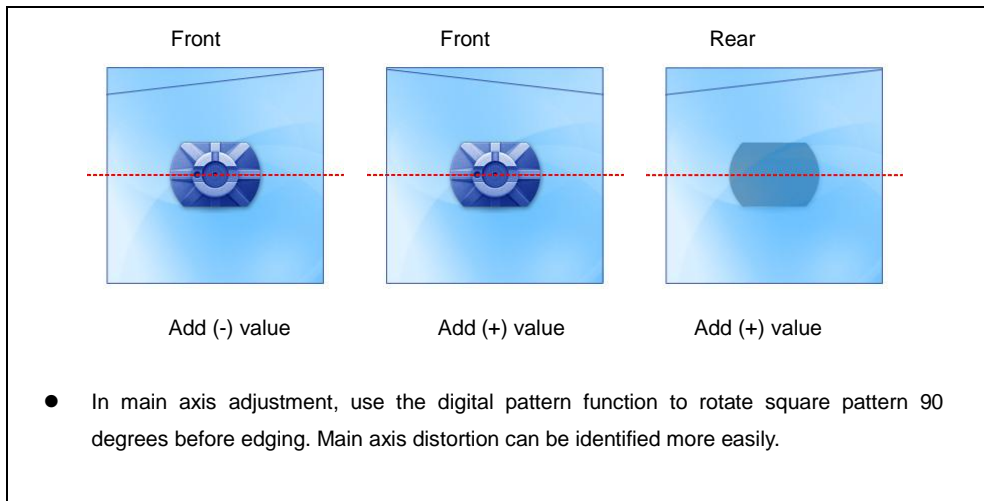


Add (-) value



Add (+) value

- How to adjust safety beveling axis value



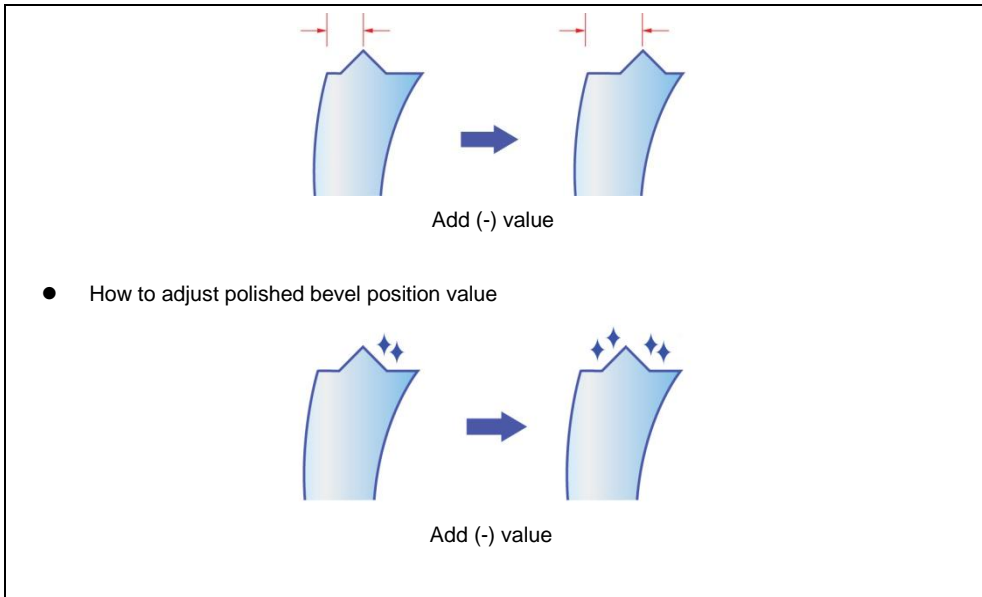
Bevel / Groove

You can adjust bevel / groove position

- Bevel – Set adjustment value for bevel position.
- Groove – Set adjustment value for groove position and depth.
- Mini Bevel – Set adjustment value for mini bevel position
- Asymmetric Bevel - Set adjustment value for asymmetric bevel position
- Semi-U Bevel – Set adjustment value for semi u bevel position

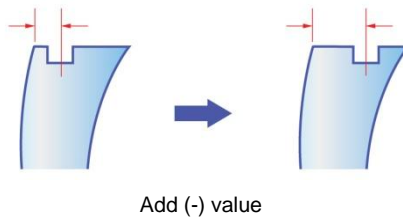
NOTE

- How to adjust bevel
 - ① Load internal circle pattern ($\varnothing 50$).
 - ② Set bevel position 50% and execute bevel edging for the circle with polishing and the circle without polishing respectively.
 - ③ Check the bevel position and adjust the value.
 - ④ The tolerance must be within ± 0.1 mm.
- How to adjust bevel position value

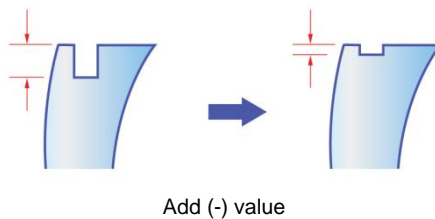


NOTE

- How to adjust groove
 - ① Load internal circle pattern ($\varnothing 50$).
 - ② Set groove position 50% and execute grooving.
 - ③ Check the groove position and depth.
 - ④ The tolerance must be within $\pm 0.1\text{mm}$.
- How to adjust groove position value

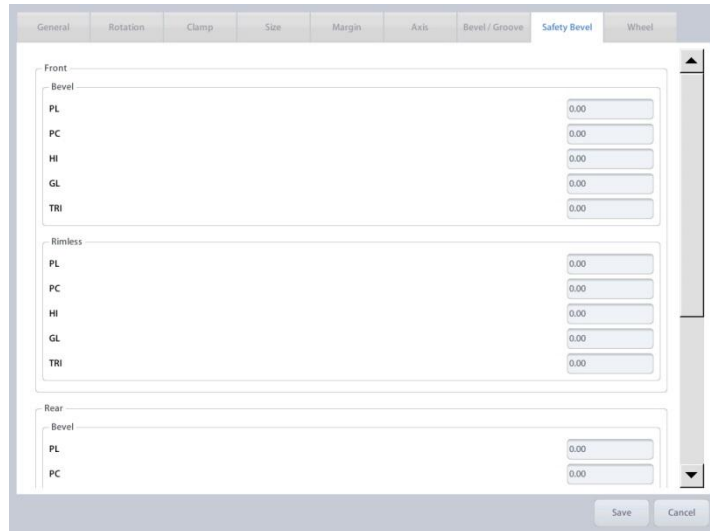


- How to adjust groove depth value



Safety Bevel

You can adjust safety bevel position

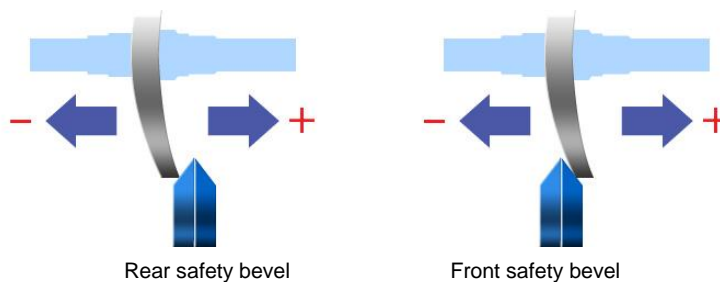


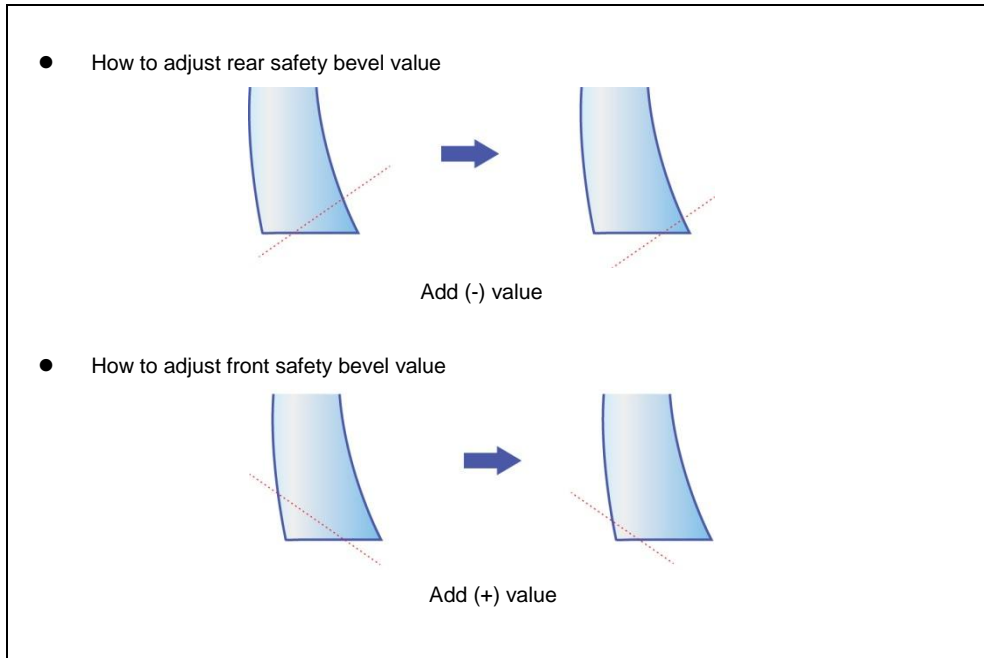
- Front – Adjust front safety bevel position
- Rear – Adjust rear safety bevel position

NOTE

- How to adjust safety bevel
 - ① Load internal circle pattern ($\varnothing 50$).
 - ② Turn on front and rear safety bevel options and execute bevel edging(50% position) for all types of lens materials.
 - ③ Turn on front and rear safety bevel options and execute flat edging for all types of lens materials
 - ④ Adjust the value with the tolerance within $\pm 0.1\text{mm}$.

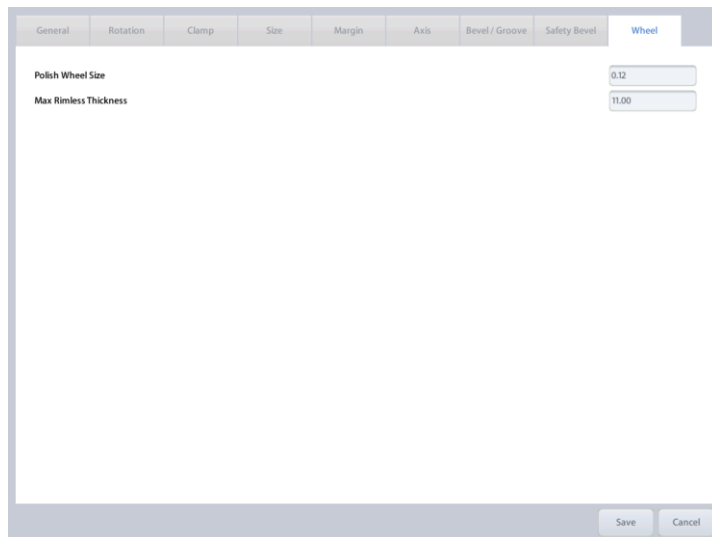
- The direction of movement according to the adjustment value





Wheel

You can set the options related to edging wheels.



- Polishing Wheel Size – Set size compensation value for polishing wheel
- Max Rimless Thickness – Set maximum width of lens for flat edging

NOTE

- If the polishing wheel is worn out, you can improve polishing quality by adjusting the Polish Wheel Size value but if you adjust the value inappropriately, it may cause size problem or poor polishing quality.
- If the lens is thicker than Max Rimless Thickness value, it can be processed but the quality of the lens is not guaranteed because the lens may get out of the wheel.

8. System Maintenance

8.1. Automatic Calibration of Frame Reader

Automatic Calibration of Frame Reader is required with the following cases,

- When the Size or Axis value of the traced data seems to have a problem,
- When the Frame Reader seems to have a problem in operating normally.

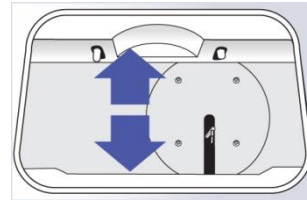
Automatic calibration of frame reader consists of three parts: Stroke, Frame, Pattern. If any changes in Stylus occur, Stroke calibration must be executed at first. The order of calibration is like this: Stroke -> Frame -> Pattern.

8.1.1. Stroke Calibration

Procedures for stroke calibration

- ① Press MENU button and select CALIB.
- ② Press FRAME button and select STROKE.
- ③ Press BOTH button.
- ④ Pull the Gripping bars to the maximum.
- ⑤ Press BOTH button to start calibration.

Next, follow the instructions displayed.

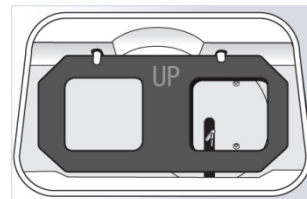


8.1.2. Frame Calibration

Procedures for frame calibration

- ① Press MENU button and select CALIB.
- ② Press FRAME button and select FRAME.
- ③ Press BOTH button.
- ④ Load the Standard Frame.
- ⑤ Press BOTH button to start calibration.

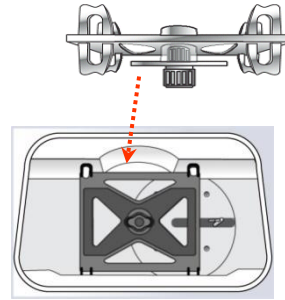
Next, follow the instructions displayed.



8.1.3. Pattern Calibration

Procedures for pattern calibration

- ① Press MENU button and select CALIB.
- ② Press FRAME button and select PATTERN.
- ③ Press BOTH button.
- ④ Load the Standard Pattern.
- ⑤ Press BOTH button to start calibration.



Next, follow the instructions on displayed.

NOTE

- The result of Automatic Calibration will be automatically saved.
- Be sure to check the related information before executing the calibration work because you cannot return to the previous state.
- Press STOP button to stop the calibration.

8.2. Automatic Calibration of Edger

You can execute size calibration and feeler calibration with standard edging Jig.



CAUTION

Calibration function has influence on the edging quality so ask advice of the service technician of HUVITZ or the technician authorized by HUVITZ if necessary.

8.2.1. Size Calibration

- ① Select the 'Size' item.
- ② Remove the lens adaptor holder and replace it with the standard edging jig.
- ③ Press the [Start] button to start calibration.
- ④ You must save the calibration data after finishing the calibration successfully

8.2.2. Feeler Calibration

- ① Select the 'Feeler' item.
- ② Rest steps are same with Size Calibration steps.

NOTE

- The size calibration data is prerequisite in every type of processing, so size calibration must be executed above all.
- It is recommended to execute one calibration at a time.

8.3. Test Mode

Test Mode is efficient to find out whether the machine works properly or not.

8.3.1. Sensor

It displays all sensor values of the edger.

- ① All sensor information
- ② Refresh sensor status
- ③ Initialize edger
- ④ Exit Test Mode

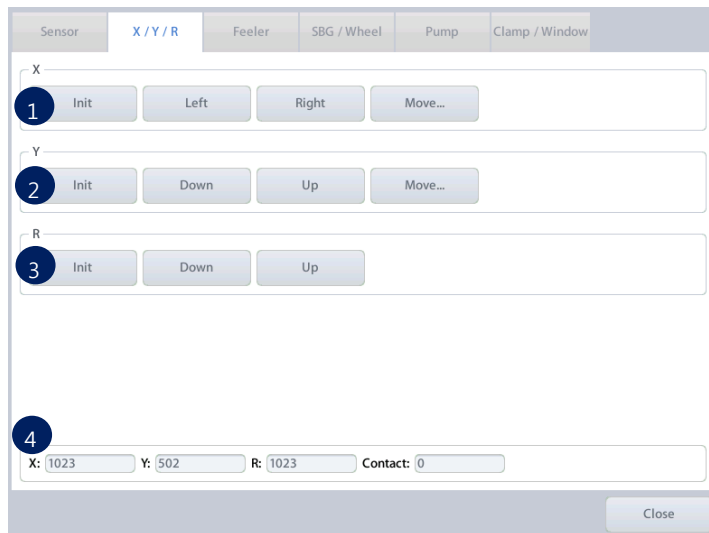
NOTE

- Sensor List
 - X – X axis PI sensor value
 - Y – Y axis PI sensor value
 - R – R axis PI sensor value
 - Contact – Main contact switch status (0 – close, 1 – open)
 - Feeler Right – Right feeler encoder value & switch state
 - Feeler Left – Left feeler encoder value & switch state
 - SBG – SBG ass'y PI sensor value

- SBG Contact – SBG calibration JIG contact state
 - SBG Motor – SBG motor status (0 – Off, 1 – On)
 - SBG Current – SBG motor current value
 - Wheel Motor – Main wheel motor status (0 – Off, 1 – On)
 - Wheel Freq – Inverter frequency value
 - Pump 1 – Pump 1 status (0 – Off, 1 – On)
 - Pump 2 – Pump 2 status (0 – Off, 1 – On)
 - Clamp – Clamp switch status (0 – Open, 1 – Close)
 - Window – Edging room window sensor value
 - Window Current – Window motor current value
- Vacuum – Vacuum cleaner status (0 – Off, 1- On)

8.3.2. X / Y / R

You can check X / Y / R axis.



- ① X axis test
- ② Y axis test
- ③ R axis test
- ④ X / Y / R sensor state

8.3.3. Feeler

You can check the Feeler.

The screenshot shows a software interface for controlling a 'Feeler' sensor. At the top, there is a navigation bar with tabs for 'Sensor', 'X / Y / R', 'Feeler', 'SBG / Wheel', 'Pump', and 'Clamp / Window'. The 'Feeler' tab is selected. Below the navigation bar, the interface is divided into sections for different actions:

- Feeler**: A section containing an 'Init' button, marked with a circled '1'.
- Pull**: A section containing three buttons: 'Pull Both', 'Pull Left', and 'Pull Right', marked with a circled '2'.
- Push**: A section containing three buttons: 'Push Both', 'Push Left', and 'Push Right', marked with a circled '3'.
- Status**: A section at the bottom containing two input fields: 'Feeler Left: 9 (1)' and 'Feeler Right: 14 (1)', marked with a circled '4'. A 'Close' button is located at the bottom right of the interface.

- ① Initialize feeler
- ② Pull test
- ③ Push test
- ④ Feeler sensor and switch state

8.3.4. SBG / Wheel

You can check SBG ass'y and wheel.

The screenshot shows a control panel for the SBG / Wheel system. It features a top navigation bar with tabs for 'Sensor', 'X / Y / R', 'Feeler', 'SBG / Wheel' (the active tab), 'Pump', and 'Clamp / Window'. The main interface is divided into four sections, each marked with a circled number:

- 1 SBG**: Contains three buttons: 'Init', 'Lift', and 'Lower'.
- 2 Motor**: Contains four buttons: 'SBG Motor On', 'SBG Motor Off', 'Milling Motor On', and 'Milling Motor Off'.
- 3 Wheel**: Contains six buttons: 'Stop', 'Hi', 'Lo', 'Milling', 'Inv...', and 'Reset'.
- 4 SBG and wheel sensor status**: Contains several input fields: 'SBG: 245', 'Contact: 0', 'Motor: 0', 'Current: 0', 'Wheel Motor: 0', and 'Freq.: 0'.

A 'Close' button is located at the bottom right of the interface.

- ① SBG ass'y test
- ② SBG motor test
- ③ Wheel test
- ④ SBG and wheel sensor status

8.3.5. Pump

You can check pump and vacuum cleaner.

The screenshot shows a control panel for the 'Pump' system. At the top, there are tabs for 'Sensor', 'X / Y / R', 'Feeler', 'SBG / Wheel', 'Pump', and 'Clamp / Window'. The 'Pump' tab is active. Below the tabs, there are several sections:

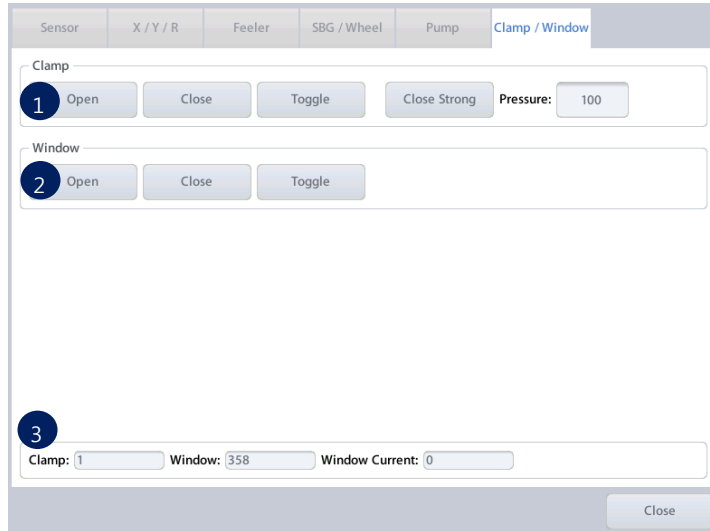
- Pump:** A 'Stop' button, marked with a circled '1'.
- Pump 1:** 'On' and 'Off' buttons, with 'On' marked by a circled '2'.
- Pump 2:** 'On' and 'Off' buttons, with 'On' marked by a circled '3'.
- Vacuum:** 'On' and 'Off' buttons, with 'On' marked by a circled '4'.
- Status:** A row of three input fields labeled 'Pump 1: 0', 'Pump 2: 0', and 'Vacuum: 0', with the entire row marked by a circled '5'.

A 'Close' button is located at the bottom right of the panel.

- ① Stop all pumps
- ② Pump 1 test
- ③ Pump 2 test
- ④ Vacuum test
- ⑤ Pump and vacuum state

8.3.6. Clamp / Window

You can check clamp and window.



- ① Clamp test
- ② Window test
- ③ Clamp and window sensor state

8.4. Wheel Dressing

Wheel dressing is useful to maintain the wheel performance because it removes the lens debris in the wheel.

- Glass Roughing – Glass roughing wheel automatic dressing mode
- Finishing – Finishing wheel automatic dressing mode
- Asymmetric Beveling – Asymmetric wheel automatic dressing mode
- Polishing – Polishing wheel manual dressing mode
- Safety Bevel – Safety beveling wheel manual dressing mode

NOTE

- Glass Roughing item is displayed only in RPG, RPGA types.
- Asymmetric Beveling item is displayed only in RPA, RPGA types.
- You can input Dressing Time value in seconds on Dressing Time item.
- It is recommended to execute Wheel Dressing after 1,500 ~ 2,000 edging Jobs in order to maintain the Wheel performance. (It may vary depending on the edging condition)
- Be sure not to execute Wheel Dressing to Grooving wheel.



WARNING

Be cautious not to touch the edging wheel during the Wheel Dressing. Otherwise, it may cause severe injury.

8.5. Statistics

It shows statistic information of the processed lens.

8.5.1. Current Statistics

It shows the number of lenses that have been processed since the reset point.

The screenshot shows a software window titled 'Statistics' with three tabs: 'Current Statistics', 'Wheel Statistics', and 'Total Statistics'. The 'Current Statistics' tab is active and displays two sections: 'Edging' and 'Retouching'. Each section has input fields for 'Total', 'Right', and 'Left' counts, all currently set to 0. Below these are tables listing lens types and their counts across different wheel positions (PL, PC, HI, GL, TR) and a 'Sum' column.

Type	PL	PC	HI	GL	TR	Sum
Bevel	0	0	0	0	0	0
Flat	0	0	0	0	0	0
Groove	0	0	0	0	0	0
Mini Bevel	0	0	0	0	0	0
Groove + Flat	0	0	0	0	0	0
Groove + Bevel	0	0	0	0	0	0
Sub Total	0	0	0	0	0	0
Milling	0	0	0	0	0	0
Polishing	0	0	0	0	0	0
Safety Bevel (Front)	0	0	0	0	0	0
Safety Bevel (Rear)	0	0	0	0	0	0

Type	PL	PC	HI	GL	TR	Sum
Bevel	0	0	0	0	0	0
Rimless	0	0	0	0	0	0

At the bottom right of the window are 'Reset All' and 'Close' buttons.

NOTE

- The edging is counted only after the edging completes successfully.
- Detailed information varies depending on the type of wheel.
RPG, RPW type – Asymmetric / Semi U Bevel information will not be displayed.
RPA type – Glass lens information will not be displayed.
- You can reset current statistics values whenever you need.

8.5.2. Wheel Statistics

It shows wheel usage

The screenshot displays a software window titled "Statistics" with three tabs: "Current Statistics", "Wheel Statistics", and "Total Statistics". The "Wheel Statistics" tab is active, showing a list of wheel usage categories, each with a numerical input field set to "0" and a "Reset" button. The categories are: Roughing PL, Roughing GL, Finishing, Polishing, Grooving, Safety Beveling (Front), Safety Beveling (Rear), and Milling. At the bottom of the window, there are "Reset All" and "Close" buttons.

Category	Value	Action
Roughing PL	0	Reset
Roughing GL	0	Reset
Finishing	0	Reset
Polishing	0	Reset
Grooving	0	Reset
Safety Beveling (Front)	0	Reset
Safety Beveling (Rear)	0	Reset
Milling	0	Reset

NOTE

- Wheel statistics value is counted immediately after the lens has been processed on the appropriate wheel.
- You can reset wheel statistics values whenever you need.
- The wheel statistics values are for reference to determine replacement time, so it is not relevant to the actual lifetime of the wheel.
- Please refer to Wheel statistics values to execute wheel dressing or replace the wheel.

8.5.3. Total Statistics

It shows the total number of lenses that have been processed since the very first time of the installment.

The screenshot shows a software window titled 'Statistics' with three tabs: 'Current Statistics', 'Wheel Statistics', and 'Total Statistics'. The 'Total Statistics' tab is active. It is divided into two sections: 'Edging' and 'Retouching'. Each section has input fields for 'Total', 'Right', and 'Left', all showing '0'. Below these are tables listing various lens types and their counts across different processing stages.

Type	PL	PC	HI	GL	TR	Sum
Bevel	0	0	0	0	0	0
Flat	0	0	0	0	0	0
Groove	0	0	0	0	0	0
Mini Bevel	0	0	0	0	0	0
Groove + Flat	0	0	0	0	0	0
Groove + Bevel	0	0	0	0	0	0
Sub Total	0	0	0	0	0	0
Milling	0	0	0	0	0	0
Polishing	0	0	0	0	0	0
Safety Bevel (Front)	0	0	0	0	0	0
Safety Bevel (Rear)	0	0	0	0	0	0

Type	PL	PC	HI	GL	TR	Sum
Bevel	0	0	0	0	0	0
Rimless	0	0	0	0	0	0

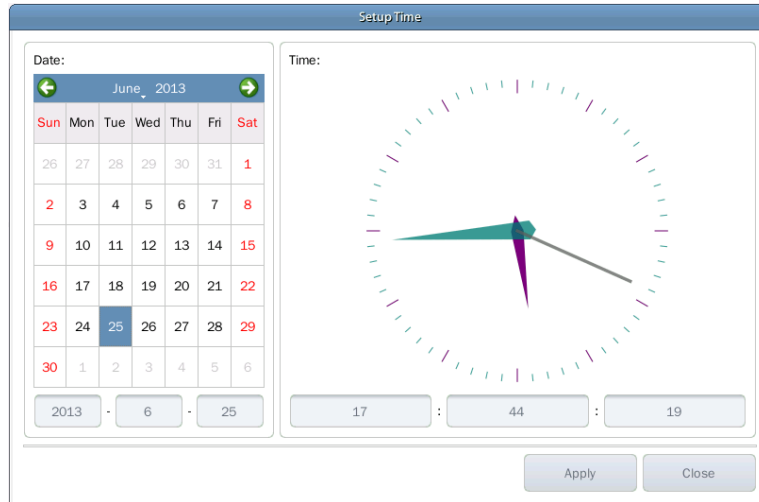
At the bottom right of the window are 'Reset All' and 'Close' buttons.

NOTE

- The edging is counted only after the edging completes successfully.
- Total statistics values cannot be initialized.

8.6. Date & Time

You can change the system time. Please set the date and time first after you install this machine.



8.7. Touch Test

You can check the normal operation of the touch screen

NOTE

You must use the emergency touch screen test function of the touch test is not possible.

- ① Turn off the power of edger and back on. When a pin wheel appears on the black screen, press the start button for more than 3 seconds. Then, beep sound will ring for 3 times.
- ② Stop pressing the button and wait until initialization finishes. Then touch screen test function will be executed.

8.8. Configuration Management

You can backup or restore system configuration data.



- ① Backup – Backup configuration data to SD card.
- ② Restore – Restore configuration data from SD card
- ③ Factory Reset – Reset to factory default setting

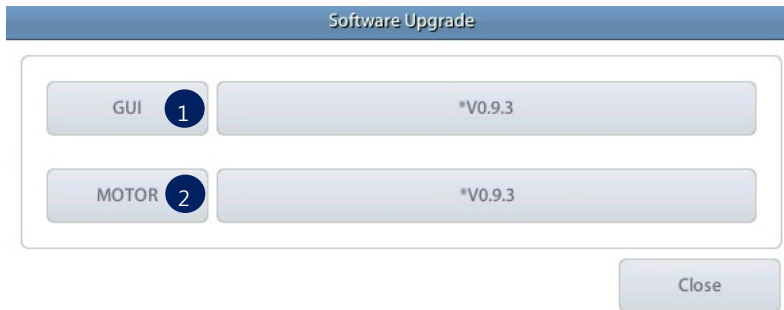
NOTE

- Configuration Management function is available when SD card is inserted.
- You can backup the configuration data whenever you need, because you can name the files.
- Be sure to backup configuration data first before changing adjustment values. If the system doesn't work properly because of inappropriate modification, restore configuration data from previously saved backup file.

8.9. SW Upgrade

You can upgrade software.

HPE-8000 consists of two kinds of software. GUI software handles user input and MOTOR software controls mechanical parts of the system.



- ① GUI – Upgrade GUI software
- ② MOTOR – Upgrade MOTOR software

NOTE

- It is highly recommended to use latest software.
- In most cases, upgrade both GUI and MOTOR software.
- Software version is displayed on the menu screen.
- How to upgrade GUI software
 - ① Copy upgrade file to SD card and insert SD card into the system.
 - ② Check the SW version displayed on the upgrade dialog box
 - ③ Press the GUI button to start upgrade.
 - ④ GUI upgrading process takes about 10 ~ 20 seconds.
 - ⑤ After upgrading process finishes, restart the system.
 - ⑥ If the system rebooted, new software will be launched.
- How to upgrade MOTOR software
 - ① Copy upgrade file to SD card and insert SD card into the system.
 - ② Check the SW version displayed on the upgrade dialog box.
 - ③ Press the MOTOR button to start upgrade.
 - ④ MOTOR upgrading process takes about 2 minutes.
 - ⑤ After upgrading process finishes, motor program restarts automatically.

8.10. Maintenance Code

Maintenance code is used for the engineer to diagnose the system.



8.11. Maintenance Tips

8.11.1. Wheel Replacement

It is recommended to keep the replacement cycle of Wheel in order to maintain the Edging Performance.

- Replacement Cycle : 7,000 ~ 8,000 pieces of Lens edged

NOTE

Be sure to replace the Finishing Wheel and Polishing Wheel together.

8.11.2. Regular Maintenance

It is recommended to keep the regular maintenance cycle in order to maintain the Edging Performance. Be sure to carry out the regular maintenance by the service technician of HUVITZ or the technician authorized by HUVITZ.

- Regular Maintenance Cycle : 1,500 ~ 2,000 pieces of Lens edged

8.11.3. Fuse Replacement

Be sure to check the Fuse Specification for the replacement job.

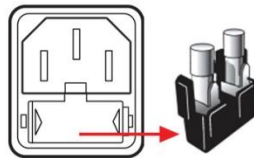
- Edger 250V 10A
- Frame Reader 250V 3.15A



WARNING

Be sure to use the appropriate Fuse. Otherwise it may damage the product or cause fire

Fuse Replacement in Edger and Frame Reader



8.11.4. Cleaning

- ① Sweep the outer surface and LCD panel with soft fabric material.
- ② When you do not use this device, wrap it with dust cover.

9. Troubleshooting Guide

If problems occur, Please review the following list and take remedial action as needed. If you cannot solve the problem after checking the entire list, please contact HUVITZ

Problem	Cause	Solution
Tracing size changed	Tip abrasion, gap occurrence.	Frame/pattern calibration.
LCD touch is abnormal	Touch screen is squashed by LCD cover.	Confirm the squashing following edge of LCD by touch test.
Edged lens size is large	<ul style="list-style-type: none"> ① Bevel cannot mounted in groove because groove is too narrow. ② Bevel cannot mounted in groove because the rear part of groove is higher than front. ③ The height of mini bevel is lower than groove. ④ Frame curve < Lens curve. ⑤ The bevel/groove position is not fitted for frame curve. ⑥ Grooving depth/width is too low/narrow. 	<ul style="list-style-type: none"> ① Mini bevel edging. ② Asymmetric/Semi-U bevel edging. ③ Edging well fitted mini-bevel height with groove height. ④ Auto mode edging or select the lens fitted frame curve. ⑤ Auto mode edging or manual adjustment bevel/groove position for fitting with frame curve. ⑥ Re-adjustment the groove depth/width for fitting with wire.
Edged lens size is small	<ul style="list-style-type: none"> ① Frame curve > Lens curve. ② The bevel/groove position is not fitted for frame curve. ③ Grooving depth is too deep. 	<ul style="list-style-type: none"> ① Auto mode edging or select the lens fitted frame curve. ② Auto mode edging or manual adjustment bevel/groove position for fitting with frame curve. ③ Re-adjustment the groove depth for fitting with wire.
R/L lens size is different.	<ul style="list-style-type: none"> ① The difference of diopter between R/L lens is too large. ② The frame is moved while frame reader reading the frame. 	<ul style="list-style-type: none"> ① Edging after concerned the thickness of R/L lens. ② Locate the frame at the center maximally, and then tracing.
Bevel/grooving position is biased, Non-uniform safety beveling	<ul style="list-style-type: none"> ① Feeler tip abrasion. ② Modify the lens by clamping(after roughing). 	<ul style="list-style-type: none"> ① Check the feeler tip, and replace if need be. (after replace, operate the feeler calibration) ② Apply the feeling after roughing.

Milling mode is impossible.	The lens is interference with wheel or feeler when edging.	Apply Axial/Spiral mode.
Cannot select the auto bevel position	Do not have the information of frame curve.	Enter the R/L frame curve values at job editor.
Bevel/groove position is break.	If the lens has big diameter and high curve, it can be interference with instruments. so it cause error when calculate the position.	Apply the pre-roughing mode if occurred interference when feeling.
The lens stops on the rouging wheel.	The Contact switch get the foreign substance.	Clean the contact switch, and then check the status at test mode.

10. Specifications and Accessories

10.1. Standard Accessories

User's Manual	1
Lens Adapter	26
LEAP-III Tape (500 Pads)	1
Lens Adapter Remover	1
Standard Frame (for Frame Reader Calibration)	1
Standard Pattern (for Frame Reader Calibration)	1
Pattern Holder	1
Dressing Stick (Polishing Wheel)	1
Dressing Stick (Finishing Wheel)	1
Dressing Stick (Glass Roughing Wheel)	1
Feeler Tip	2
Edger Calibration Jig	1
Fuse(10A, Edger)	2
Fuse(3.15A, Frame Reader)	2
Wrench Set	1
Spanner(10-11)	2
Carriage Fixing Bracket	1
Water Drain Hose	1
Water Supply Hose	1
Water Drain Hose Fixing Clip	1
Power Cable (Edger)	1
Power Cable (Frame Reader)	1
AC Adapter (Blocker)	1
9-pin Dsub Serial Cable (Crossed)	1

Option

Water Supply System

Water Tank	1
Water Tank Carrier	1
Strainer	1
Pump 1	1
Pump 2	1
Edger Table	1

10.2. Specifications

10.2.1. Specifications of Edger

Edging Mode	Beveling – Normal, Asymmetric, Mini, Auto, Manual Mode
	Flat Edging
	Grooving – Normal, Partial, Manual Mode
	Safety Beveling
	Polishing
	Milling
Lens Material	Plastic, Glass, High Index, Polycarbonate, Trivex
Edging Size	Max : 90mm Min : Rimless 18.5mm (without safety bevel) Bevel 20.0mm (without safety bevel)
Dimensions	540(W) x 472(D) x 580(H)
Weight	51Kg
Power Supply	AC 100~120V / AC 200~240V 50/60Hz
Power Consumption	1200W (110V), 1500W(220V)
Outlet	Max 430W (100-120 Vac, 200-240 Vac)

10.2.2. Specifications of Frame Reader

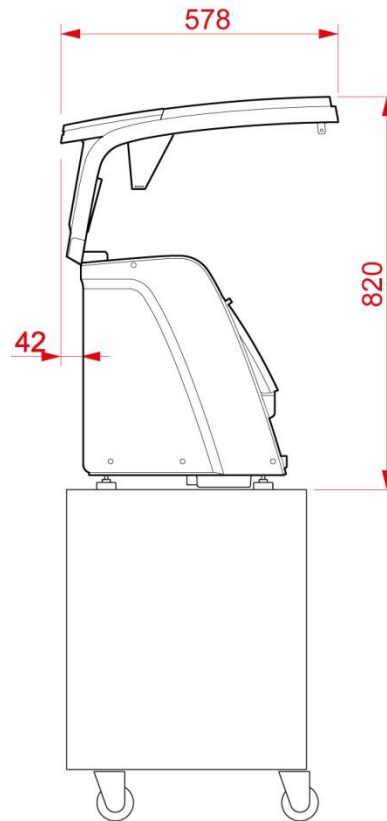
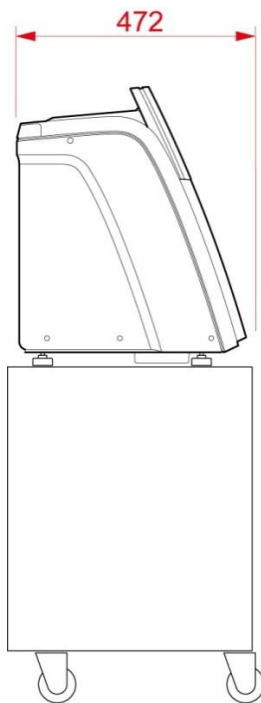
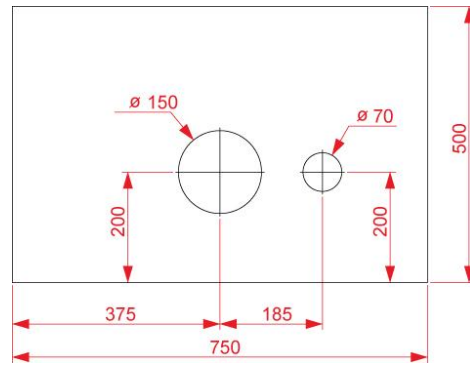
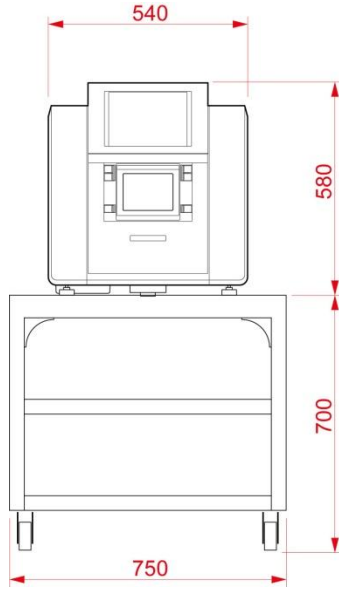
Tracing Type	Automatic 3D Binocular Tracing
Tracing Mode	Auto, Semi-Auto
Tracing Size	Frame Ø16.0 ~ 92.0mm, Pattern Ø 16.0 ~ 84.0mm
Frame Material	Metal, Hard Plastic, Soft Plastic
Data Processing	FPD, Frame Curve, Circumference, 3D Angle, Concave Shape
Dimensions	284(W) x 320(D) x 190(H)
Weight	8Kg
Power Supply	AC 100~240V 50/60Hz
Power Consumption	32W

10.2.3. Specifications of Blocker

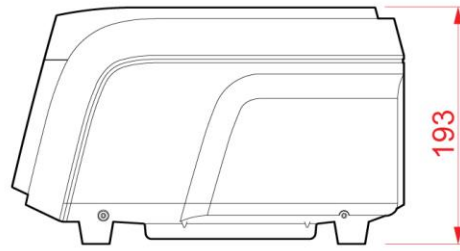
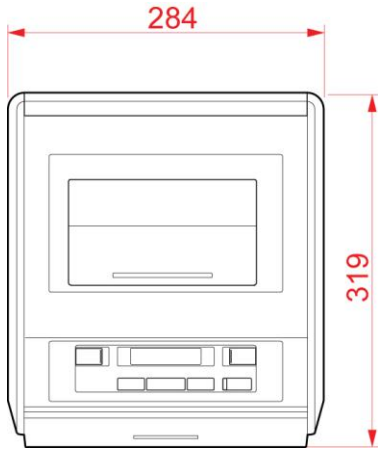
Illumination	White LED Source
	Light Intensity Adjustment
	Automatic Power-Saving Mode
Dimensions	177(W) x 184(D) x 206(H)
Weight	2Kg
Power Supply	DC 5V 3.5A
Power Consumption	2.5W

10.3. Drawings of System

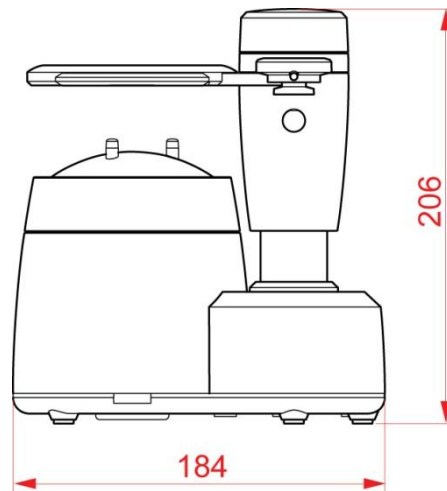
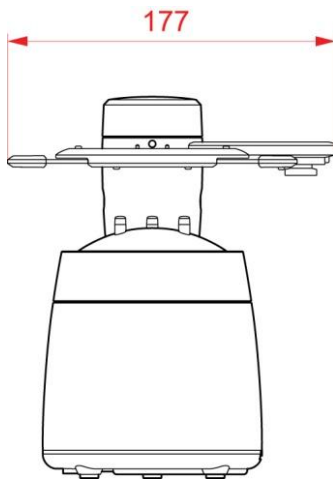
10.3.1. Drawings of Edger



10.3.2. Drawings of Frame Reader



10.3.3. Drawings of Blocker



11. SERVICE INFORMATION

If the instrument appears malfunctioning, it is highly recommended to check the instrument according to the troubleshooting procedure in chapter 9 of this manual.

If any problem persists or the instrument is damaged or malfunctioning, please follow the steps below.

- Please contact the local distributor in your province or country at first.
- Before calling to the local distributor, please be sure to check Model and Serial Numbers.
- The serial number is unique to this unit and printed on the rear side of the unit. It is recommended to fill up the following table as soon as you purchase our product.
- Please keep this manual as a permanent record of your purchase and keep your purchase receipt as your proof of purchase.

Date of Purchase: _____

Dealer's Name: _____

Dealer Address: _____

Dealer Phone No. : _____

Model No.: _____

Serial No.: _____

- If you can't contact with your local distributor, you can directly get in touch with the service department of the HUVITZ using the phone number and the address written in the below table.

How to Contact HUVITZ Co., Ltd

HUVITZ Co., Ltd.(Headquarter)

298-29 Gongdan-ro
Gunpo-si Gyeonggi-do,
(435-862), Republic of Korea

Tel: +82-31-428-9100
Fax: +82-31-477-9022(C/S)
e-mail: svc@huvitz.com
<http://www.huvitz.com>

(Factory)

16-17, LS-ro 91beon-gil, Dongan-gu,
Anyang-si, Gyeonggi-do
(431-848), Republic of Korea

Tel: 031-428-9100
Fax: 031-477-8618