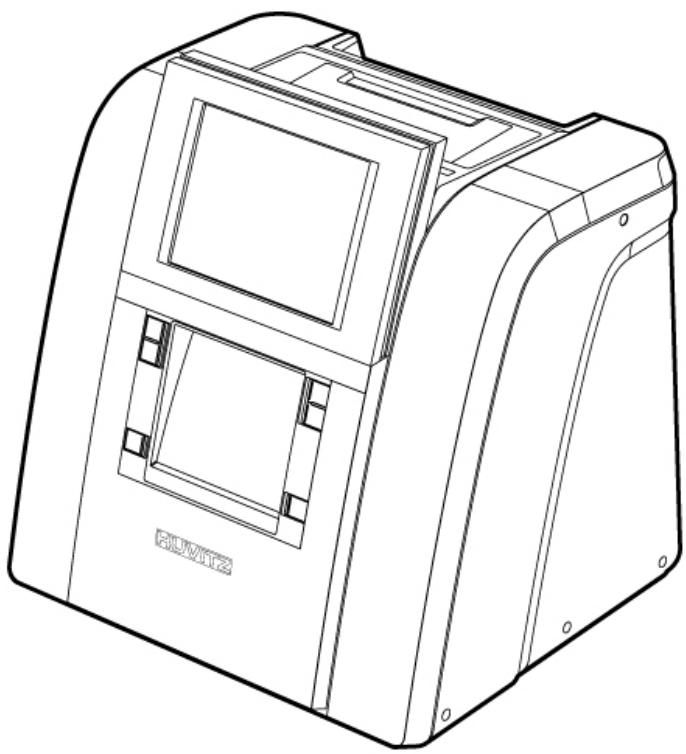
ENG

Huvitz

PATTERNLESS EDGER
HPE-910

USER MANUAL



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.

9000ENG0087-D
Ver 1.3 (Aug. 2025)

©2020 HUVITZ Co., Ltd.
38, Burim-ro 170beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14055, Republic of Korea

All rights reserved.
Under copyright laws, this manual may not be copied, in whole or in part, without the prior written consent of HUVITZ Co., Ltd.

CONTENT

1. Introduction 7
1.1. Main Functions 7
1.2. System Configuration 8
1.3. Classification 8
2. Safety Information 9
2.1. Introduction 9
2.2. Safety Symbols 10
2.3. Environmental Considerations 11
2.4. Safety Precautions 13
3. System Overview 18
3.1. Edger (HPE-910) 18
3.2. Frame Reader (HFR-8000X) 22
3.3. Blocker (HMB-8000) 23
3.4. Standard Accessory (Tool Box) 24
4. Installation Procedure 25
4.1. Edger 25
4.2. Frame Reader 27
4.3. Blocker 27
5. Operation 28
5.1. Frame Reader 28
5.1.1. Control Panel 28
5.1.2. Frame Tracing 29
5.1.3. Pattern Tracing 30
5.2. Blocker 31
5.2.1. Scale Plate 31
5.2.2. Lens Adapter Setter 31
5.2.3. Blocking Mode 32
5.2.4. Operation 34
5.3. Edger 36
5.3.1. Control Button 36
6. Edger User Interface 37
6.1. Main Screen 37
6.1.1. Side Button 37
6.1.2. Job Management 41
6.1.3. Frame Information 44
6.1.4. Layout Option 45
6.1.5. Edging Option 49
6.1.6. Detailed Edging Option 57

6.1.7. Function Button....60
6.2. Manual Bevel/Groove Position Modification....61
6.2.1. Base Position....61
6.2.2. Region Selection....62
6.2.3. Position Modification....65
6.2.4. Position Mirroring....69
6.2.5. Reset & Apply Button....71
6.3. Partial Grooving Screen....72
6.3.1. Region Selection....73
6.3.2. Processing Type Selection....76
6.3.3. Edging Option Button....77
6.3.4. Reset & Apply Button....77
6.4. Job Manager....78
6.4.1. Job selection tab....78
6.4.2. Function Button....79
6.4.3. Waiting Job....80
6.4.4. Working Job....80
6.4.5. Completed Job....81
6.4.6. Job Search....82
6.5. Digital Pattern....84
6.5.1. Enlargement/Reduction....85
6.5.2. Near Vision Area Enlargement/Reduction....86
6.5.3. Rotation....87
6.5.4. Partial Modification....89
6.5.5. Toggle R/L Sync....91
6.5.6. Reset....92
6.5.7. Exit....92
6.6. Hole Editor....93
6.6.1. Upper Side of Hole Editor....94
6.6.2. Working Area....94
6.6.3. Preview....96
6.6.4. Function Buttons....97
6.6.5. List of Hole/Slot....104
6.6.6. Property of Hole/Slot....107
6.7. Retouch Mode....108
6.7.1. Bevel....108
6.7.2. Rimless + Drill (Hole/Slot)....109
6.7.3. Step bevel + Scan & Cut....110
6.7.4. Asymmetric Bevel, Semi-U Bevel, Partial Grooving....111
6.8. Job Editor....112
6.8.1. Layout Option....112
6.8.2. Edging option....113
6.9. Step Bevel Editor....114
6.9.1. Step Bevel Processing Mode....115
6.9.2. Partial Step Bevel Editing Area....115
6.9.3. Partial Step Bevel Option....118
6.9.4. Full Step Bevel Editing Area....119
6.9.5. Full Step Bevel Option....119

6.9.6. Edging Type 120
6.9.7. Fine Tuning 121
6.9.8. Preview 124
6.9.9. Current Position Information 125
6.9.10. Safety beveling & Polishing option 126
6.9.11. Reset & Apply Button 127
6.9.12. Retouch Mode 128
6.10. Bevel Height Editor 129
6.10.1. Editing Area 130
6.10.2. Preview 132
6.10.3. Current Position Information 133
6.10.4. Edging Option 134
6.10.5. Reset & Apply Button 134
6.10.6. Retouch Mode 135
6.11. Edging Process 136
6.11.1. Edging Start 136
6.11.2. Edging Screen 137
6.11.3. Edging Stop 139
6.11.4. Edging Error 140
6.11.5. Edging Finish 141
6.12. Frame Change 142
6.12.1. Frame Change Lens Registration 142
6.12.2. Frame Change Mode 143
6.12.3. Frame Change Procedure 144
6.13. Scan & Cut Data Editor 145
7. Configuration 147
7.1. Configuration of Frame Reader 147
7.2. Configuration of Edger 148
7.2.1. Preferences 149
7.2.2. Adjustments 158
8. System Maintenance 177
8.1. Automatic Calibration of Frame Reader 177
8.1.1. Stroke Calibration 177
8.1.2. Frame Calibration 177
8.1.3. Pattern Calibration 178
8.2. Automatic Calibration of Edger 179
8.2.1. Feeler Calibration 179
8.2.2. Hall Sensor Contact Calibration 179
8.3. Test Mode 180
8.4. Wheel Dressing 189
8.5. Statistics 190
8.6. Date & Time 193
8.7. Touch Test 194
8.8. Configuration Management 195
8.9. SW Upgrade 196

8.10. Maintenance Code....197
8.11. Maintenance Tips....198
8.11.1. Wheel Replacement....198
8.11.2. Drill Bit Replacement....198
8.11.3. Regular Maintenance....200
8.11.4. Fuse Replacement....200
8.11.5. Cleaning....202
9. Troubleshooting Guide....203
10. Specifications and Accessories....205
10.1. Standard Accessories....205
10.2. Specifications....206
10.2.1. Specifications of Edger....206
10.2.2. Specifications of Frame Reader....207
10.2.3. Specifications of Blocker....207
10.3. Drawings of System....208
10.3.1. Drawings of Edger....208
10.3.2. Drawings of Frame Reader....209
10.3.3. Drawings of Blocker....209
11. SERVICE INFORMATION....210

1

Introduction

1.1. Main Functions

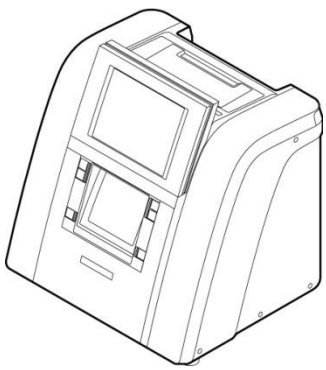
- This product is for processing lenses fit into eyeglasses frame, which automatically covers from tracing to edging.

Material \ Edging	Beveling	Flat Edging	Grooving	Polishing	Safety Beveling	Asymmetric Beveling	*Step Beveling	*Drilling
Plastic	O	O	O	O	O	O	X	O
Glass	O	O	X	X	O	O	X	X
High Index	O	O	O	O	O	O	O	O
Polycarbonate	O	O	O	O	O	O	O	O
Trivex®	O	O	O	O	O	O	O	O

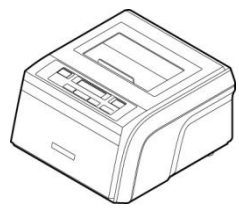
* Step Beveling function is available on XD/X option type.
* Drilling function is available on XD/D option type.

- High Resolution TFT-LCD (9.7”) 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 SD card 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-910)



Frame Reader (HFR-8000X)



Blocker (HMB-8000)

※ Features for options types

Feature \ Option type	XD	D	X	N
Step Beveling	○	X	○	X
Drilling	○	○	X	X

- This manual is based on the XD option type.

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.

("Warning" indique la présence d'un danger qui pourrait entraîner des blessures graves, la mort ou des dommages matériels importants si ignoré.)

⚠ CAUTION

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

("Caution" indique la présence d'un danger pouvant entraîner des blessures légères ou des dommages matériels en cas d'ignorance.)

⚠ NOTE

This is used to emphasize essential information.

Be sure to read this information to avoid operating the device incorrectly.

(Ceci est utilisé pour souligner les informations essentielles. Assurez-vous de lire ces informations pour éviter de mal utiliser l'appareil.)

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.
(I et O sur l'interrupteur d'alimentation représentent ON et OFF respectivement.)



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.
(Ce symbole identifie la prudence, le risque de danger. Assurez-vous de bien comprendre le fonctionnement de ce contrôle avant de l'utiliser. La fonction de contrôle est décrite dans le manuel de l'utilisateur ou de service approprié.)



Protective Earth Connection
(Connexion de protection à la terre)

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.
   (Lorsque ce symbole de poubelle à roulettes barrée est attaché à un produit, cela signifie que le produit est couvert par la directive européenne 2002/96 / CE.)

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.
   (Tous les produits électriques et électroniques doivent être éliminés séparément du flux de déchets municipaux via des centres de collecte désignés par le gouvernement ou les autorités locales.)

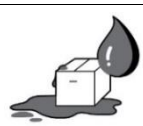
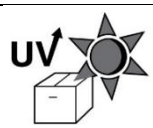
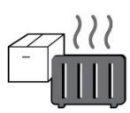
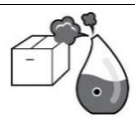
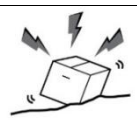
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
   (La mise au rebut correcte de votre ancien appareil aidera à éviter les conséquences négatives potentielles sur l'environnement et la santé humaine.)

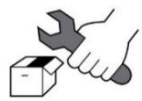
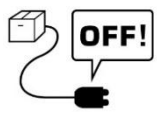
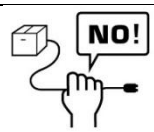
4. For more detailed information about disposal of your old appliance,

	please contact your city office, waste disposal service or the shop where you purchased the product. (Pour plus d'informations sur l'élimination de votre ancien appareil, veuillez contacter votre mairie, le service d'élimination des déchets ou le magasin où vous avez acheté le produit.)
	Alternating Current (Courant alternative)

2.3. Environmental Considerations

Avoid the following environments for operation or storage:

	Where the machine is exposed to water vapor. Don't operate the machine with wet hands. Indoor use only.
	Where the machine is exposed to direct sunlight.
	A place where the equipment can be exposed to direct ultraviolet.
	Where there are big changes in temperature.
	Where there is a hot equipment nearby.
	Where the humidity is extremely high or there is a ventilation problem.
	Where the machine is exposed to excessive shocks or vibrations.

	Where the machine is exposed to chemical material or explosive gas.
	Be cautious so that things like dust and metal do not fall inside the machine.
	Don't disassemble or open the product. HUVITZ does not take responsibility for the possible problems
	Be careful not to block the fan of the machine.
	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.
	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.

This instrument must be followed by these following conditions:

- Operation
  An ambient temperature range of 10℃ ~ 40℃
  A relative humidity range of 30% ~ 90%
  An atmospheric pressure range of 800 ~ 1060hpa
  An indoor use, Altitude up to 2000 m

- Transportation
  An ambient temperature range of -40℃ ~ 70℃
  A relative humidity range of 10% ~ 95% (with non-condensing)
  An atmospheric pressure range of 500 ~ 1060hpa

- Storage
  An ambient temperature range of -10℃ ~ 55℃
  A relative humidity range of 10% ~ 95% (with non-condensing)
  An atmospheric pressure range of 700 ~ 1060hpa

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

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

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. 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. Dispose of used batteries according to the regulations. If not, there is the possibility of an explosion.

19. To avoid the risk of electric shock, this machine must only be connected to protective earth.

20. Do not place the machine where it is difficult to operate the disconnecting device. (disconnecting device: power cord)

21. The machine may be impaired if it is used in a manner not specified by the manufacturers or manual.

22. 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.
  (Assurez-vous que votre corps ne touche pas la machine pendant que la molette de bordure fonctionne. Sinon, vous pourriez être gravement blessé.)

- 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.
  (Le couvercle de la salle de bordure doit être complètement fermé pendant le processus de finition de l'objectif. Si l'objectif est cassé pendant le processus, les morceaux cassés de l'objectif peuvent endommager la personne. Les débris peuvent également endommager les yeux humains.)

- 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.
  (Veillez à ne pas appuyer sur le bouton de serrage à moins que la roue ne s'arrête complètement. Sinon, l'objectif pourrait être tombé et cassé par la roue et provoquer des blessures graves.)

- 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.
  (Si vous trouvez des fissures sur la molette ou sur le dessous de la machine, arrêtez immédiatement l'opération et demandez le service. Si la roue de bordure est cassée pendant l'opération, les pièces cassées peuvent provoquer des blessures graves.)

- 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.
  (Veillez à ne pas affûter les matériaux autres que les verres de lunettes. Sinon, cela pourrait affaiblir les

performances de la roue et provoquer une fissure. Si la roue de bordure est cassée pendant l'opération, les pièces cassées peuvent provoquer des blessures graves.)

- Be sure not to operate the product unless the front cover of edging body is fully closed. Otherwise, it may cause a serious injury.
  (Veillez à ne pas utiliser le produit à moins que le capot avant du corps de bordure ne soit complètement fermé. Sinon, cela peut provoquer des blessures graves.)

- 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.
  (La machine doit être correctement installée et utilisée conformément aux instructions de ce manuel. Si l'appareil est mis sous tension sans déverrouiller le dispositif de verrouillage du chariot et du palpeur, cela peut endommager le produit et provoquer un dysfonctionnement du produit.)

- 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.
  (Ne démontez pas le produit sans avoir reçu une formation régulière. Cela peut provoquer un choc électrique ou des blessures graves pendant le fonctionnement ou provoquer un dysfonctionnement du produit.)

- 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.
  (Assurez-vous que le matériau de l'objectif authentique est identique à celui de l'objectif sélectionné dans le système avant de démarrer le mode de bordure. Sinon, cela pourrait endommager la roue et raccourcir la durée de vie de la roue.)

- 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.
  (Le biseautage de sécurité d'une lentille en verre doit être traité sur les côtés avant et arrière de la lentille. Sinon, cela endommagera la peau du porteur.)

- The product should be properly installed and maintained at flat and even ground. Otherwise, it may affect the normal operation of the machine.
  (Le produit doit être correctement installé et maintenu sur un sol plat et uniforme. Sinon, cela peut affecter le fonctionnement normal de la machine.)

- Be sure that your fingers are not caught during clamping.
  (Assurez-vous que vos doigts ne sont pas coincés pendant le serrage.)

- 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.
  (Lorsque vous détachez l'adaptateur d'objectif de l'objectif terminé, utilisez l'adaptateur Remover fourni comme accessoire standard. Ne retirez pas l'adaptateur d'objectif avec vos mains.)

- 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.
  (Assurez-vous que le tuyau d'alimentation en eau n'est pas plié ou gêné par d'autres objets, ce qui pourrait provoquer un problème d'approvisionnement en eau. Cela pourrait détériorer la qualité de la finition de l'objectif. Les débris de la lentille peuvent endommager les organes respiratoires de l'homme et provoquer un dysfonctionnement du produit.)

- Always check the water spray from the front water nozzle is appropriate. Otherwise, lens dust can occur abnormally and pollute the inside of the machine and the wheel is not cooling well,

which can shorten the life of the wheel. (Refer to ‘Chapter 4.1 note about water nozzle’)
(Vérifiez toujours que le jet d'eau de la buse avant est approprié. Sinon, la poussière d'objectif peut se produire anormalement et polluer l'intérieur de la machine et la roue ne refroidit pas bien, ce qui peut raccourcir la durée de vie de la roue. (Reportez-vous au ‘Chapitre 4.1 remarque sur la buse à eau’))

- The water entry should be closed every day.
(L'entrée d'eau doit être fermée tous les jours.)

⚠ CAUTION

- When moving the machine, first fix the stage and check whether the power supply is off. Then, three or more persons should lift the bottom of the product with both hands.
(Lors du déplacement de la machine, fixez d'abord la platine et vérifiez si l'alimentation est coupée. Ensuite, deux personnes ou plus doivent soulever le bas du produit avec les deux mains.)

- 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.
(Lorsque vous posez la machine, veillez à ne pas gêner les obstacles. Posez le produit lentement afin d'éviter toute blessure corporelle ou tout dommage au produit.)

- When moving the machine, make sure the locking device and the screw for the cover are properly tightened.
(Lors du déplacement de la machine, assurez-vous que le dispositif de verrouillage et la vis du couvercle sont correctement serrés.)

- When wrapping the machine, use recommended packaging and shock-absorbing materials in order to prevent damage during the transportation.
(Lors de l'emballage de la machine, utilisez l'emballage et les matériaux absorbant les chocs recommandés afin d'éviter tout dommage pendant le transport.)

- 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.
(Assurez-vous d'utiliser les accessoires ou outils standard fournis avec le produit pour l'entretien. Sinon, cela pourrait provoquer un dysfonctionnement du produit.)

- 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.
(Lors du traitement du dressage des roues, assurez-vous d'utiliser des bâtons de dressage qui s'adaptent à chaque roue. Le bâton de pansement doit être remplacé lorsque sa longueur devient si courte que vous ne pouvez pas le tenir facilement.)

- When checking or replacing the step bevel wheel, the surface of the wheel is too sharp, so protect your hands with gloves. Otherwise, it may hurt your hands.
(Lors de la vérification ou du remplacement de la roue conique à marchepieds, la surface de la roue est trop tranchante, alors protégez vos mains avec des gants. Sinon, cela pourrait vous blesser les mains.)

- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
(Les changements ou modifications non expressément approuvés par la partie responsable de la conformité peuvent annuler le droit de l'utilisateur à utiliser l'équipement.)

- 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).
(Assurez-vous que le cordon d'alimentation est du type correct requis dans votre région. Cet ! CAUTION 16 appareil possède une alimentation électrique universelle qui permet un fonctionnement dans des zones de tension de 100-120 Vca ou 200-240 Vca (aucun réglage par l'utilisateur n'est requis).)

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 mm^2
- Other end (with appliance coupler connected to unit IEC 60320 C13), 3 m long
- CEBEC, DEMKO, KEMA, NEMKO, OVE, SEMKO, VDE, UTE, FEMKO
- Conductor Colors – brown, blue, green/yellow stripe

(Exigences du cordon d'alimentation:

Pour une utilisation de 100 à 120 Vca
- Style UL SV, SVT, SJ ou SJT, 18AWG, 3 conducteurs
- Une extrémité avec NEMA 5-15P min. 10A, 125V
- Autre extrémité CEI 60320 C13 max. 3 m de long

Pour utilisation 200-240 Vca - Extrémité de la fiche
- Câble H05VV-F 3G, min. 1.0 mm^2
- Autre extrémité (avec coupleur d'appareil connecté à l'unité CEI 60320 C13), 3 m de long
- CEBEC, DEMKO, KEMA, NEMKO, OVE, SEMKO, VDE, UTE, FEMKO
- Couleurs des conducteurs - bande marron, bleue, verte / jaune)

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.

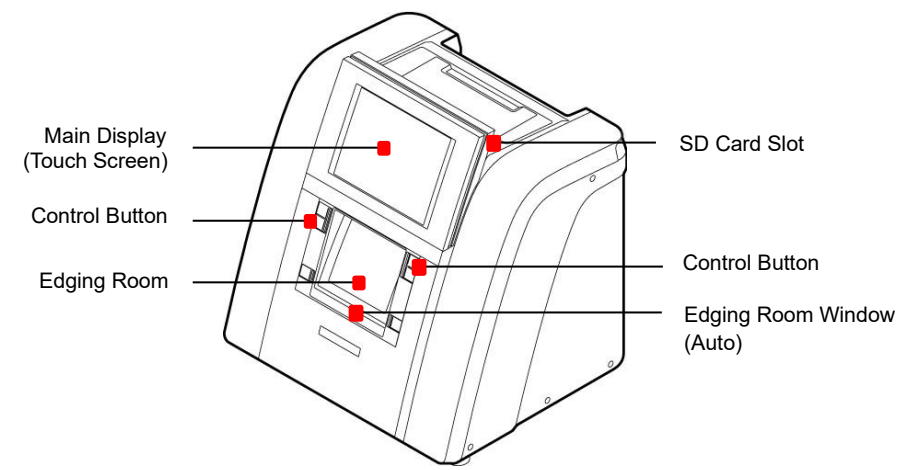
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case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

3

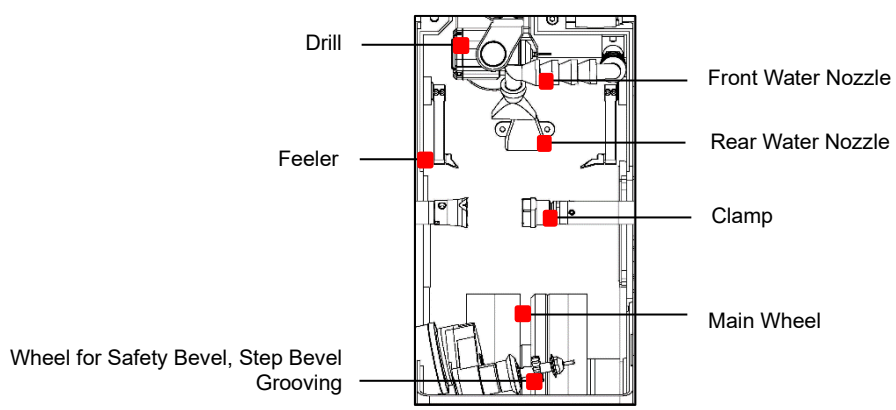
System Overview

3.1. Edger (HPE-910)

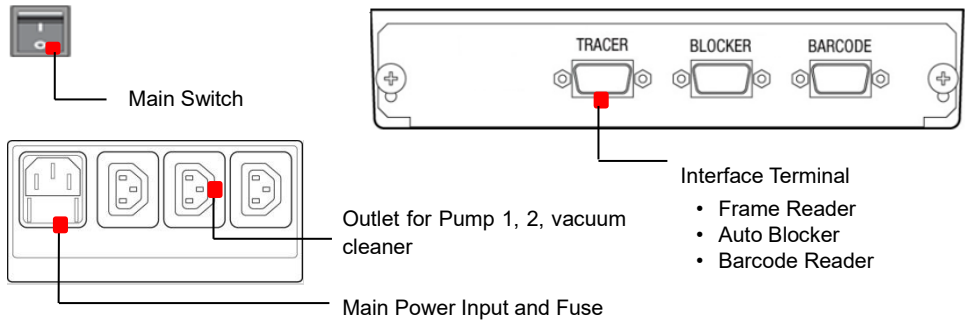
Front View



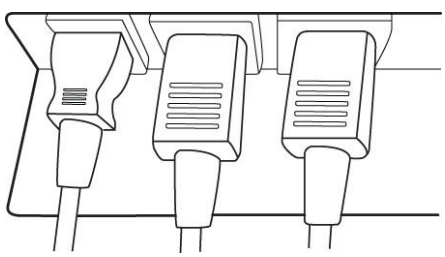
Edging Room

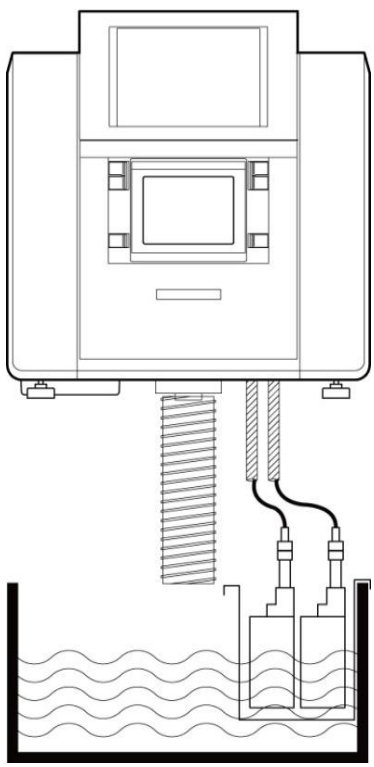


Rear View



Devices for Edging Polycarbonate





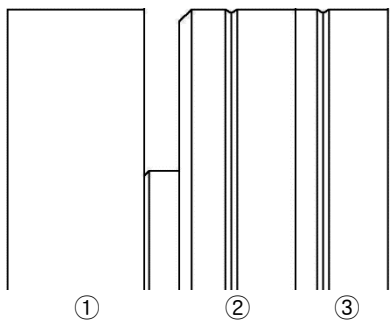
NOTE

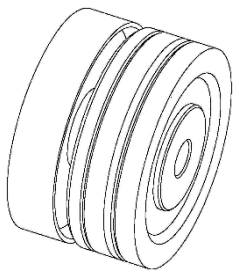
In order to process polycarbonate lens, pump 2 must be installed to supply water to the rear side of the edging room.

NOTE

- Wheel types

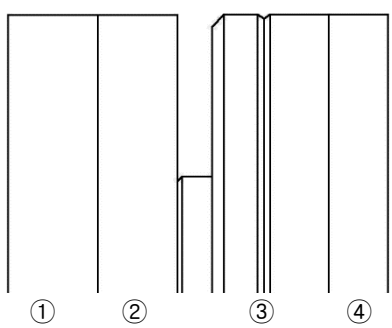
- RPA Type : Bevel, Asymmetric Bevel, Flat edging (It cannot process glass lens)

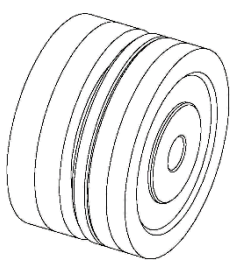




① Roughing Wheel (Super wide)
② Finishing Wheel (Hybrid – Asymmetric wheel integrated)
③ Polishing Wheel

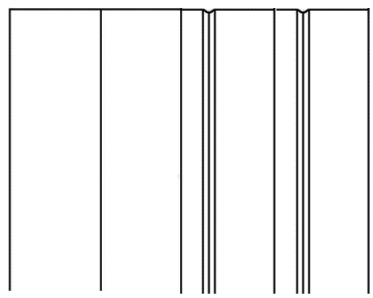
- RPGA Type : Bevel, Asymmetric Bevel, Flat edging (For all types of lenses. But it cannot process Bevel Polishing)

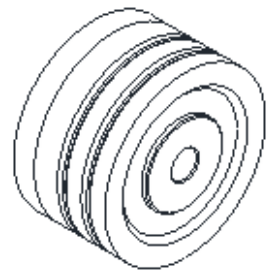




① Roughing Wheel (Standard)
② Glass Roughing Wheel
③ Finishing Wheel (Hybrid – Asymmetric wheel integrated)
④ Rimless Polishing Wheel

- RPG Type : Bevel, Flat edging (It cannot process Asymmetric Bevel)





① Roughing Wheel (Standard)

② Glass Roughing Wheel

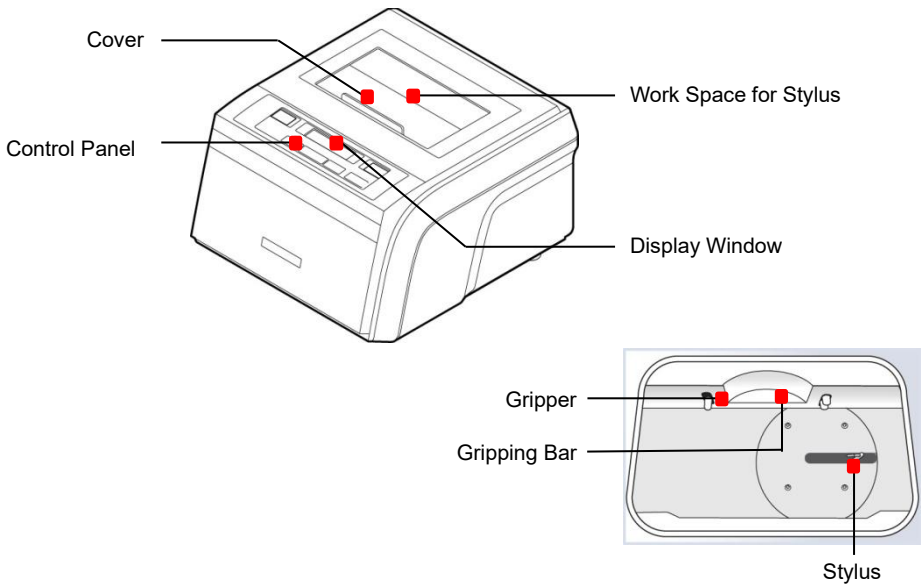
③ Finishing Wheel

④ Polishing Wheel

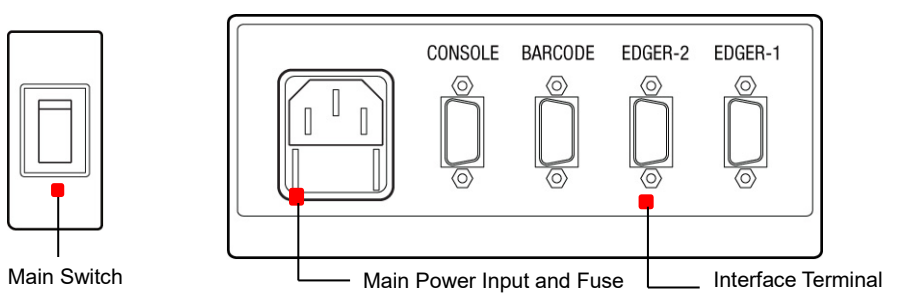
(*) RPG wheel type is only available with 220V (D) option type.

3.2. Frame Reader (HFR-8000X)

Front View



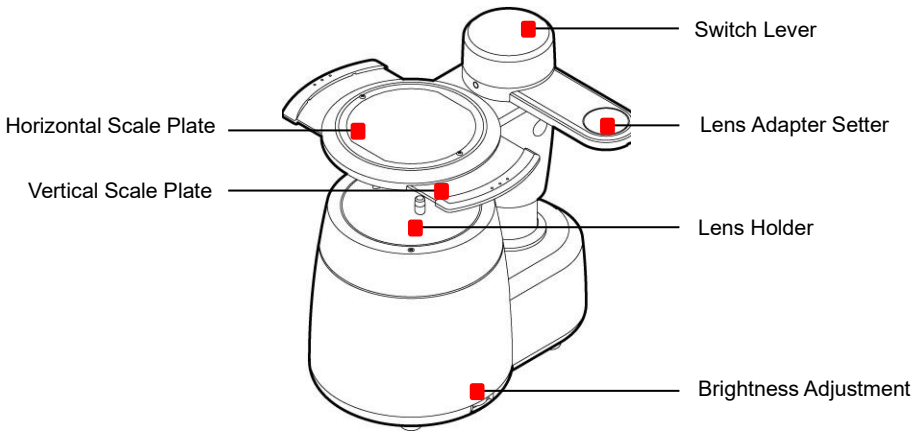
Rear View



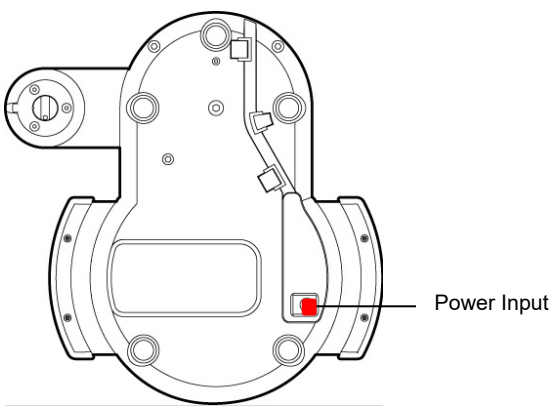
- EDGER 1
- EDGER 2
- Barcode Reader
- S/W Upgrade

3.3. Blocker (HMB-8000)

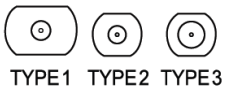
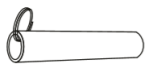
Front View



Bottom View



3.4. Standard Accessory (Tool Box)

		
Standard JIG for Edger	Lens Adaptor	Lens Adaptor Remover
		
Feeler Tips	Feeler Tip Driver	Dressing Sticks
		
Fuse(250V, 10A)	Wrench Set	Drill Bit
		
Step Bevel Fix Shaft	Spanner(10-11)	Carriage-Fixing Bracket
		
Clamp Rubber	Standard Pattern	Pattern Holder
		
Standard Frame		

NOTE

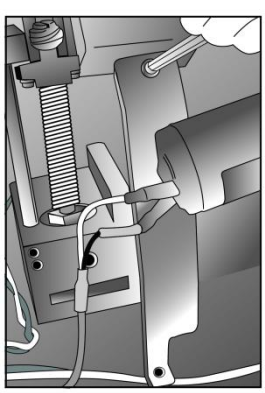
- Please use official lens adaptor tape (LEAP-III). Otherwise, the lens axis may move.
- We do not provide a sticker for Super Hydrophobic Lens, but you should use qualified ones, or the lens axis may move.

4

Installation Procedure

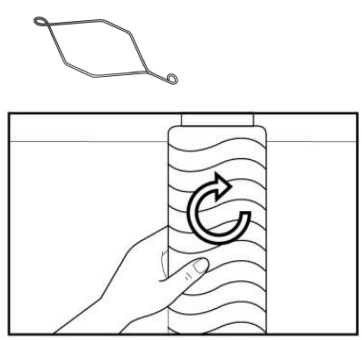
4.1. Edger

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.

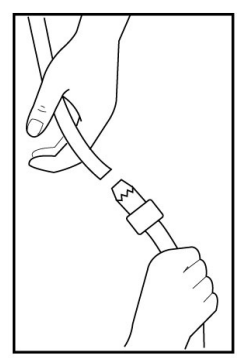


[Removing the Carriage Fixing Bracket]

[Fixing Clip for Water Drain Hose]



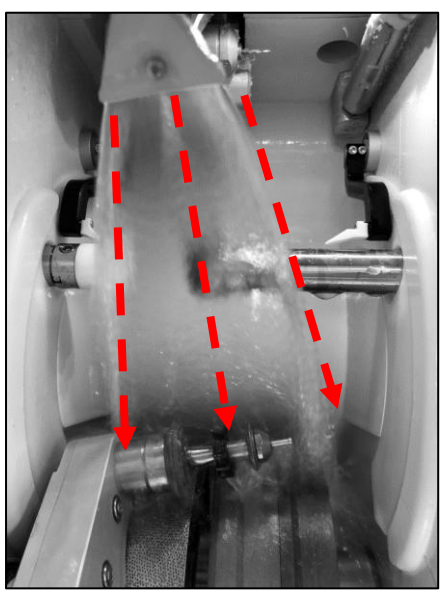
[Connecting the Water Drain Pipe]



[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.
- Check the water spray position of the front water nozzle.
  - Using the 'Water Nozzle Adjustment' mode on the test mode, adjust the water nozzle position and water valve to spray water as shown below. (Refer to 'Chapter 8.3 test mode - pump' for the 'Water Nozzle Adjustment' mode)
  - The water should be sprayed evenly over the main wheel and at the center of the SBG wheel.



[Water spray position and pressure adjustment]

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 Gently remove the fixing tapes on the movement coverts of the Stylus so that it may not five any impact on them.
④ Plug the power cable into the socket at the rear side of the machine and turn on the power to check the initial operation.
⑤ 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 LED is ON.

⚠ CAUTION

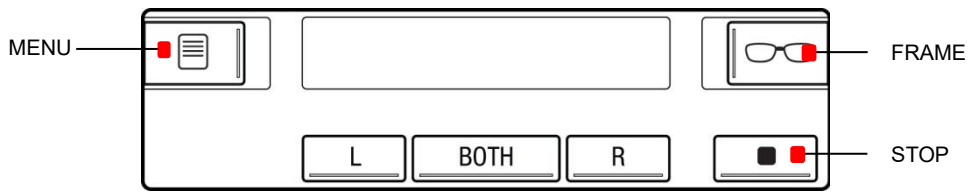
- When moving the blocker, be sure to hold the main body instead of grabbing the blocking arm.
  (Lorsque vous déplacez le bloqueur, assurez-vous de tenir le corps principal au lieu de saisir le bras de blocage.)
- When you lift the blocker by grabbing the blocking arm, if the main body rotates, the internal sensor may be damaged.
  (Lorsque vous soulevez le bloqueur en saisissant le bras de blocage, si le corps principal tourne, le capteur interne peut être endommagé.)

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)
- ULTEM

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 traccing.
- R For right eye tracing.
- L For left eye tracing.

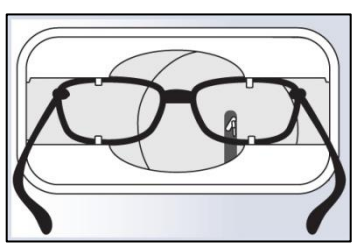
STOP Button

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

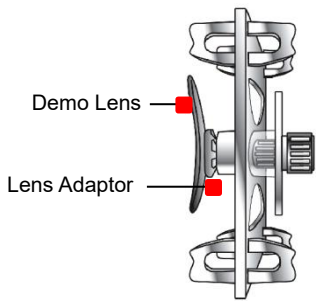
① Make a marked spot on the optical center of the demo lens by using Lensmeter.

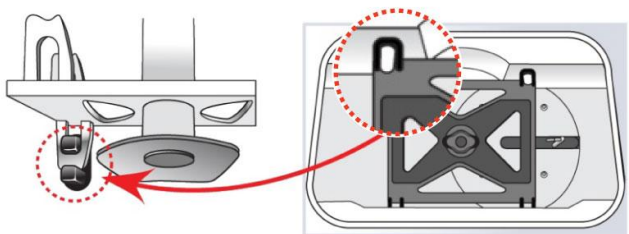
② Block the Lens Adaptor at the center of the marked spot by using Blocker.

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).





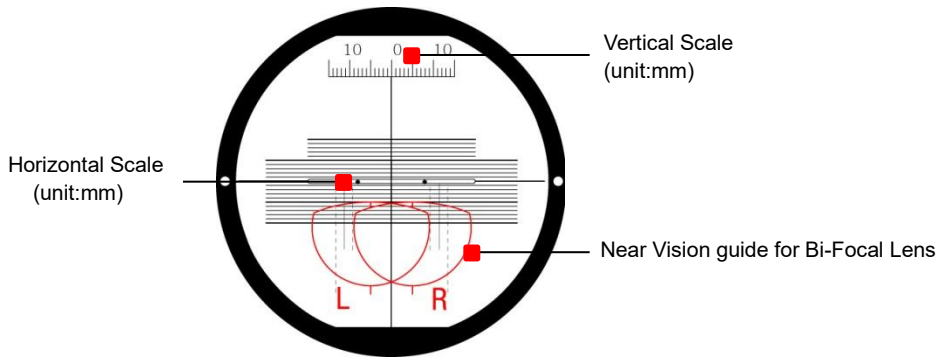
[How to place the Pattern Holder on the Gripper]

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 is useful for tracing the frame with the lopsided groove.
- It is recommended more to use binocular tracing than monocular tracing for guaranteeing the accuracy of PD. Otherwise, edger will force to input the tilting angle of frame manually before starting edging process.

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).

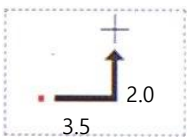


(a)

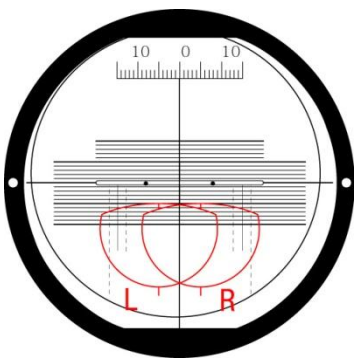
5.2.3. Blocking Mode

Active Blocking vs Passive Blocking

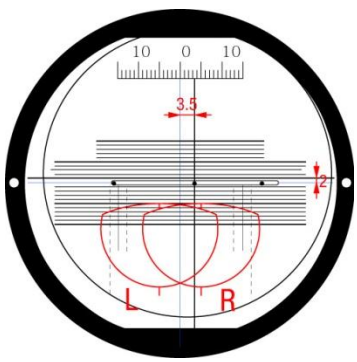
There are two kinds of blockings, Active blocking and Passive blocking. Active blocking is a way that the Lens Adaptor is fixed at the optical center. Passive blocking is a way that the Lens Adaptor is fixed at 'Boxing Center' of the frame. The examples of active blocking and passive blocking are as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



Hints for boxing center on Edger GUI



[Active Blocking]

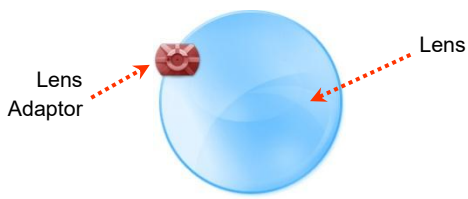
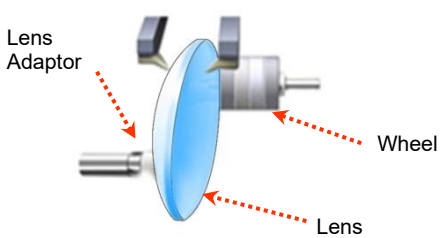
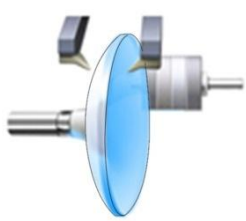


[Passive Blocking]

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, please choose the appropriate blocking method.

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 Put the Lens Adapter into the Lens Adapter Setter (Pay attention to the direction).

② Place the marked Lens on the Lens Holder.

③ 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.

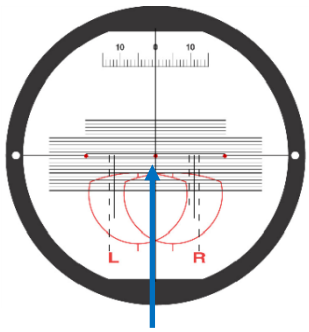
④ Turn the Switch Lever so that the Lens Adaptor Setter is located over the lens and push down the Switch Lever to finish the blocking.

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.

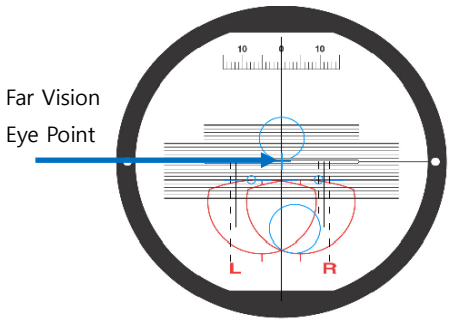
Blockings according to the lens types

[Single Vision]



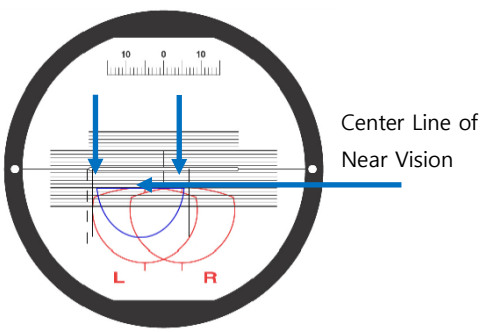
Adjust the marking point of the lens to the center of scale plate.

[Progressive Lens]



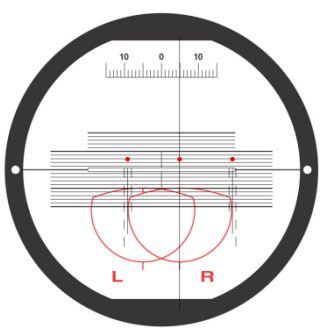
Adjust the Far Vision Eye Point of the progressive lens to the center of scale plate.

[Bi-Focal Lens]



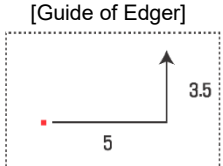
Place the Center Line of Near Vision 5mm below the center of the scale plate. Move vertical center line 5mm toward the sign L, R and fit the semicircle of Near Vision into the guideline of Left/Right.

[Boxing Center]



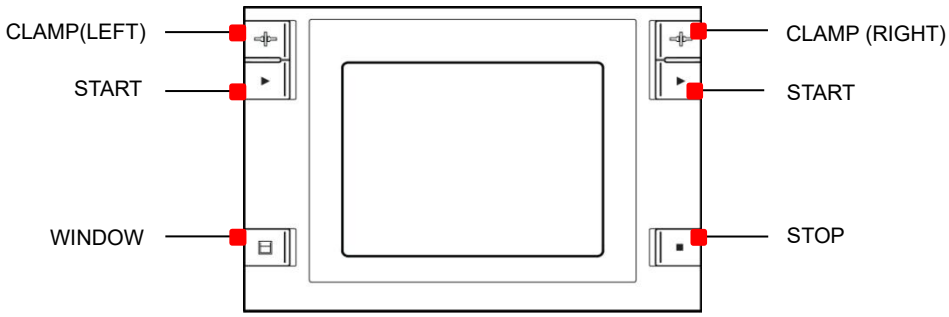
Move the marking point toward where the Edger Display guides.

[Guide of Edger]



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)

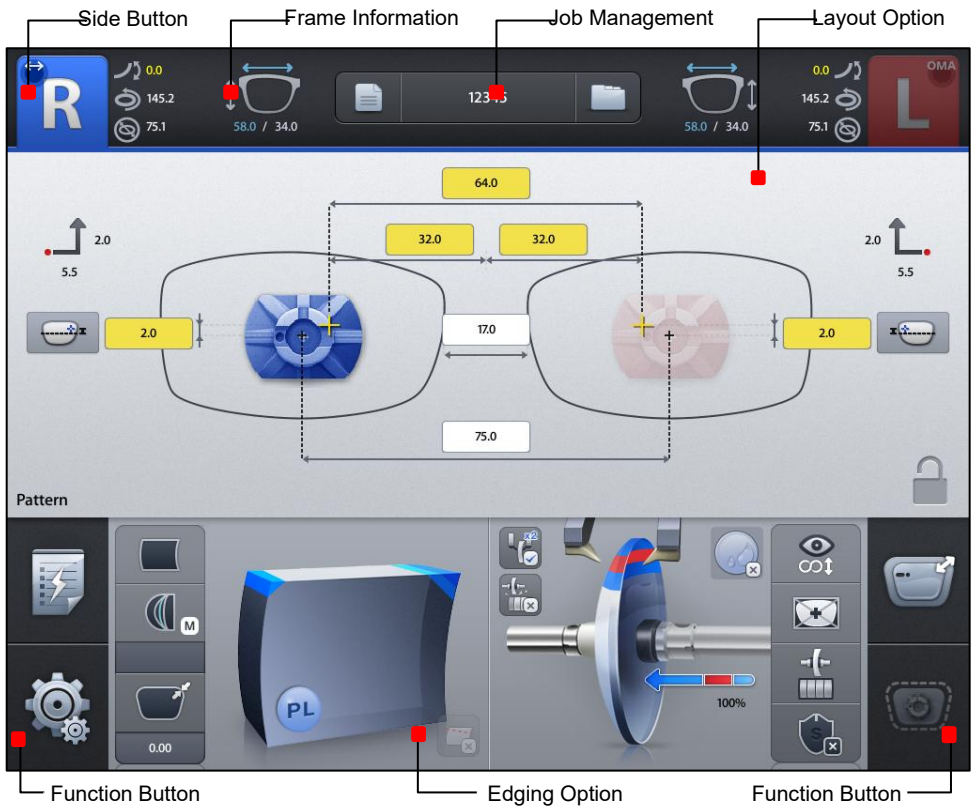
NOTE

- 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.

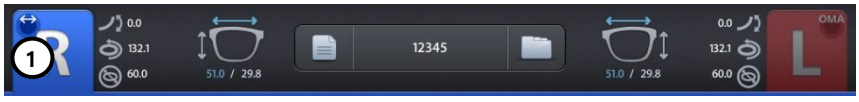
6

Edger User Interface

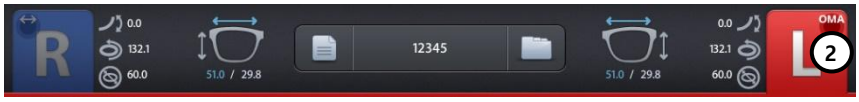
6.1. Main Screen



6.1.1. Side Button



① Press the R button to select right side.



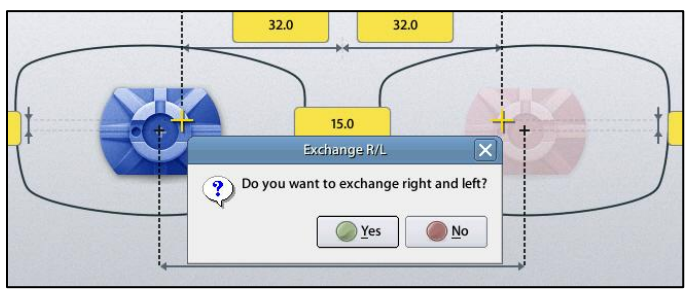
② Press the L button to select left side.

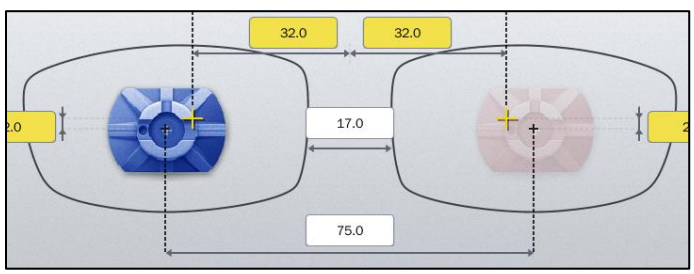
NOTE

- ‘R/L Exchange’ and ‘Shape Mirroring’ function can be used by pressing the R button for a while.

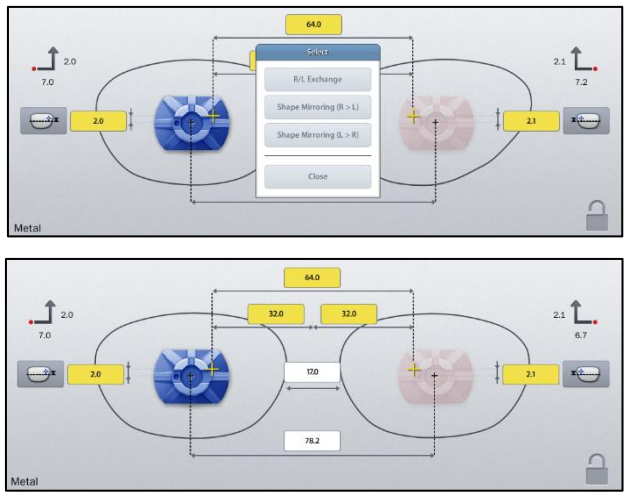


- When you selected wrong side while reading demo lens or patterns, you can exchange shape easily with the 'R/L Exchange' function.



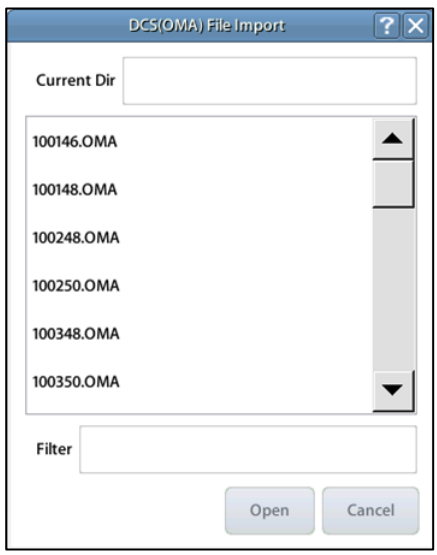


- When there is a shape problem in one side after reading the both sides of the frame, you can copy the shape of the other side with preserving the size by using the ‘Shape Mirroring” function.



NOTE

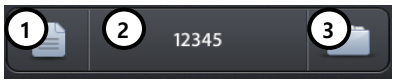
- OMA compatible job data file can be imported by pressing the L button for a while.



- How to import OMA file
  ① Create an ‘oma’ folder in the SD card on your PC.
  ② Copy OMA files to the ‘oma’ folder in the SD card.
  ③ The OMA file extension should be ‘.oma’.
  ④ Insert the SD card to the machine.
  ⑤ Press the L side button for a while.
  ⑥ Select the file and press the open button.

- Some OMA files may not be fully compatible with HUVITZ system. So please note that it may not be able to process normally.

6.1.2. Job Management



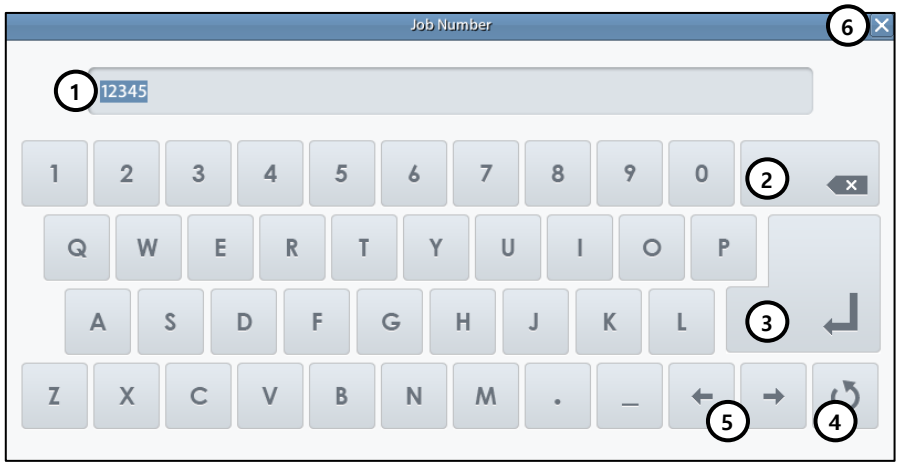
① New : Clear current job screen and wait new job.

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

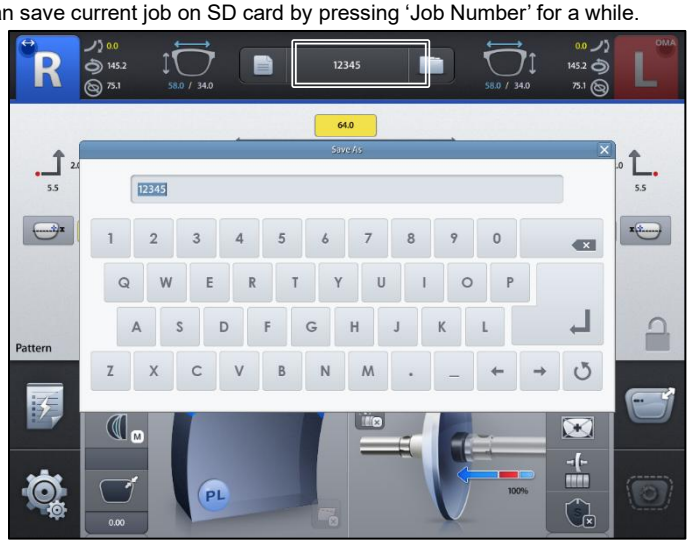
⑥ Cancel (Close) – Close the virtual keyboard without saving changes.

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 immediately.



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



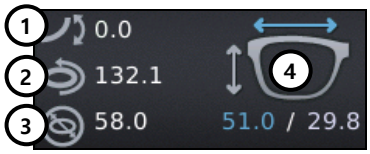
- If you append file extension such as “.OMA” or “.DXF” at the end of “Job Number”, you can export a job to OMA file or CAD file in the “oma/export” or “dxf/export” folder of the SD card (eg. 12345.oma).

- You can request job from the remote edging host pc by pressing the ‘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 (In case of pattern, input demo lens curve)

② Circumference

③ Minimum Lens Diameter

④ Width/Height

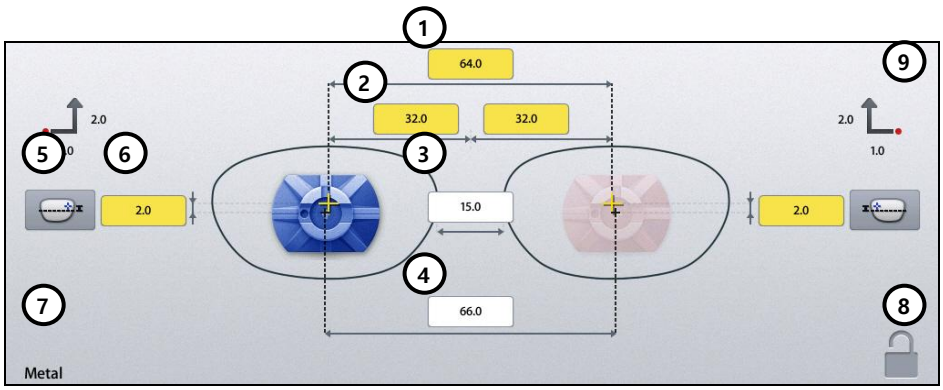
NOTE

- Press the minimum lens diameter icon to enter lens diameter.



- Input the maximum diameter of a blank lens before edging for safer roughing by the spiral or axial mode without extra feeling process. However, It's not necessary to input the diameter when the lens is blocked from Huvitz auto blocker as it measures the diameter and offset automatically while blocking. (It is displayed in yellow when measured automatically.)
- Maximum diameter means just the diameter for normal circle lenses. But for eccentric or frame-change lenses care should be taken because it means two times of the longest distance from its optical center to the edge.

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.

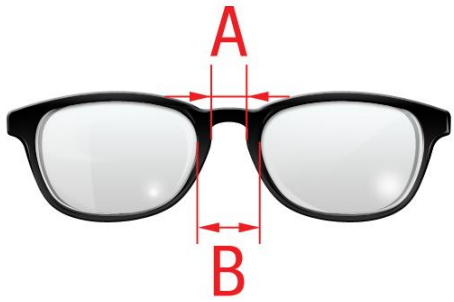
⑦ Frame Material : Display frame material.

⑧ Touch Screen Lock On/Off.

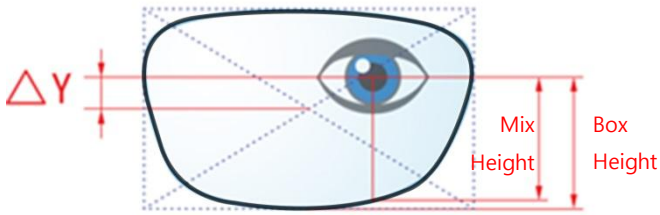
⑨ Blocking Offset: Display movement amount of the lens to perform Boxing center blocking.

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.



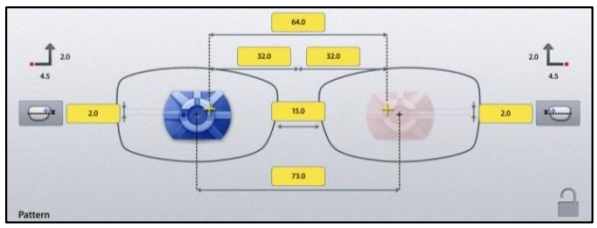
- OH value is recalculated when you change OH type.
- The exact meaning of the mix height and the box height is as following.



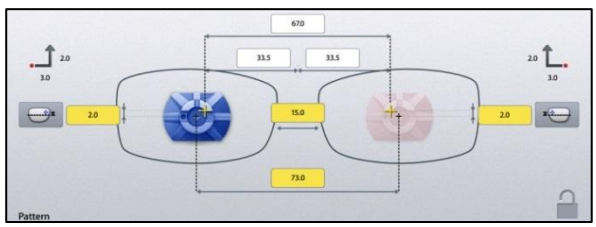
- To enter OH value R/L differently, long press the OH input area.
- It is important to measure the optical height of the patient precisely when edging a progressive lens. Sometimes, too short optical height might cut out the near vision area.

NOTE

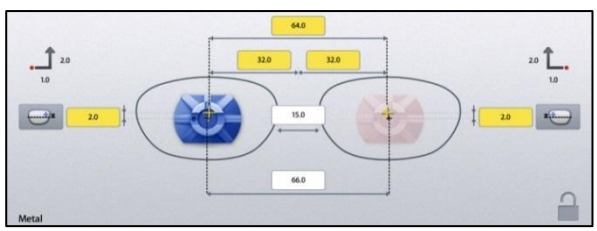
- In layout information, PD, OH, Bridge Size, FPD are mandatory value. The color of input box of these values is changed when you input value.



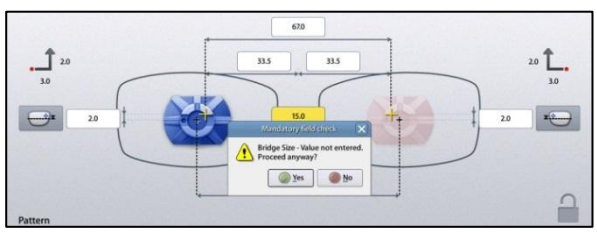
- The box which is not changed from default value is colored yellow. It changes into white when you input value.



- 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 blocking with the yellow box remained.

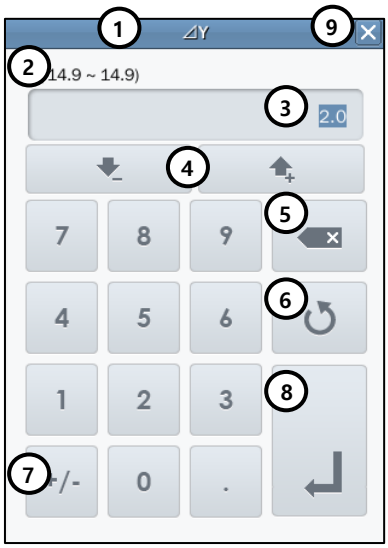


- But, this warning message pops up only when the warning option is turned on in the Preferences menu. (Refer to ‘Chapter 7.2.1 Preferences – Layout)

NOTE

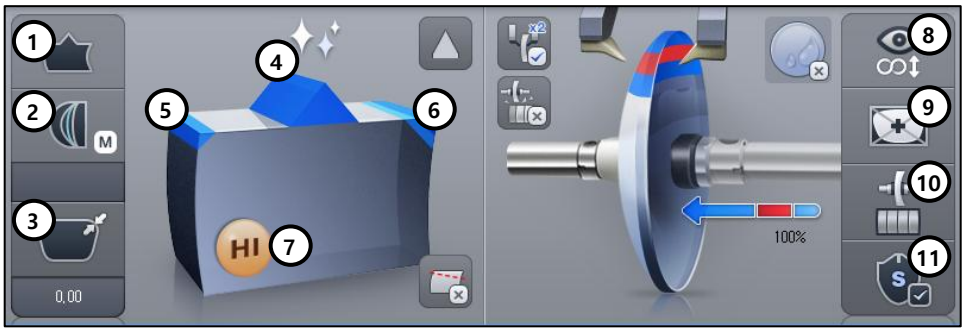
- Numeric Keypad

  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

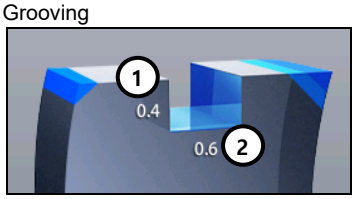

Asymmetric Bevel


Semi-U Bevel


Step Bevel

NOTE

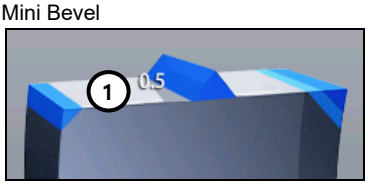
- You can input additional parameters according to the selected edging type.
- Grooving



① Groove Depth

② Groove Width

- Mini Bevel

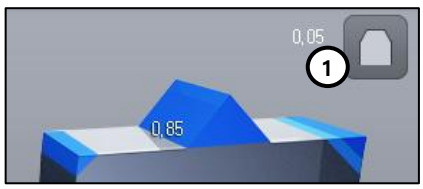


① Bevel Height

- For the bevel, you can set the blunt bevel to cut the top of the bevel shape by wheel.

  ➢ In case of the metal frame, the fitting can be made stable with the blunt top of the bevel rather than the edge and the size becomes smaller as blunt bevel height.

  ➢ Except for the metal frame, you can adjust the blunt bevel to small or large to fit the groove shape of the rim and the size remains the same. The height of bevel and blunt bevel are displayed. The quantities of blunt bevel can be set in the menu.



① Blunt Bevel



Off Small Large

- After you've selected grooving as the edging type, you can go to the partial grooving editor by pressing 'Edging type' button for a while. The further will be explained in Ch. 6.3.



- There are four ways of partial grooving.



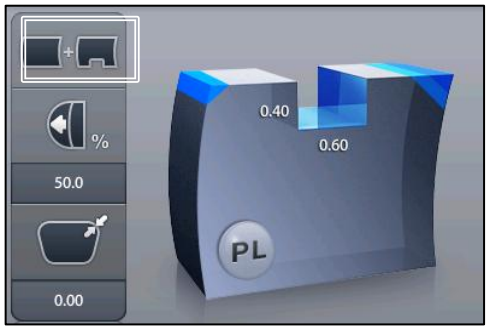
Partial Grooving (Flat+Grooving)

Hybrid Grooving (Bevel+Grooving)

Partial Bevel (Bevel + Flat)

Dual Grooving

- 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.
- In order to modify the partial grooving, press the selected partial grooving button for a while.

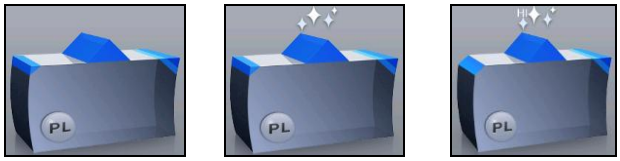
② Bevel/Groove Position



Front % | Front mm | Rear mm | Base Curve | Auto | Manual

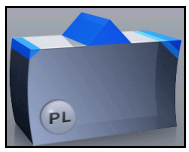
③ Size Adjustment (-2.0 ~ 2.0mm)

④ Polishing

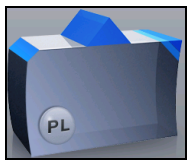


Polishing Off | Polishing On | High Polishing

⑤ Front Safety Beveling

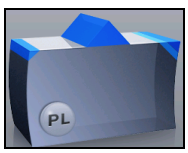


Safety Beveling Off

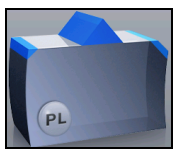


Safety Beveling On

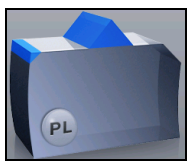
⑥ Rear Safety Beveling



Safety Beveling Off



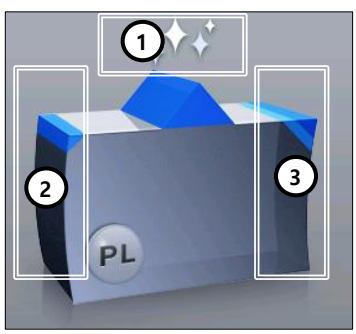
Safety Beveling Small



Safety Beveling Large

NOTE

- Polishing / Safety Beveling touch screen area



① Polishing On/Off

② Front Safety Beveling On / Off

③ Rear Safety Beveling Off / Small / Large

- When you selected 'Asymmetric Bevel' or 'Semi-U Bevel', rear safety beveling is not available.
- Safety Beveling option is disabled in Hybrid Grooving (Bevel+Grooving) and Partial Bevel (Bevel + Flat).

⑦ Lens Material



Plastic



Polycarbonate



Hi-Index



Glass



Trivex®

NOTE

- If the wheel type of the edger is RPA, Glass lens cannot be selected.
- Glass lens cannot be processed in the following edging process :
  Polishing, Grooving, Step Beveling, Drilling

⑧ Lens Type


Single Vision



Bi-focal (Flat)


Bi-focal (Round)


EX Lens

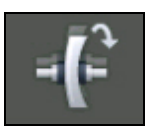
⑨ Blocking Mode

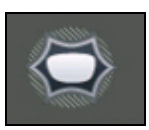

Optical Center


Boxing(Frame) Center

⑩ Roughing Mode


Normal


Spiral


Axial

NOTE

- Normal roughing is a mode where a lens contacts the wheel directly while processing.
- Spiral roughing is a mode where a lens contacts the wheel gradually with spiral rotation.
- Axial roughing is a mode where a lens horizontally contacts the wheel while processing. In rotating, the les is detached from the wheel while processing.

⑪ Safety Mode



Safety Mode Off



Safety Mode On

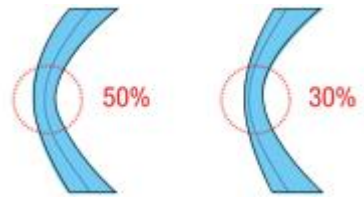
NOTE

- 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.

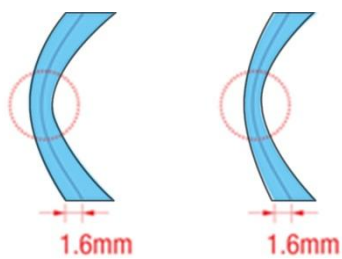
- According to the Edging Options, you can control the Beveling and Grooving position.
  -  Ratio(%) from the front side of the lens
  -  Distance(mm) from the front side of the lens
  -  Distance(mm) from the rear side of the lens
  -  Adjust the position according to the lens base curve
  -  Auto mode
  -  Adjust the position manually

- Final outputs according to the edging options are different just like the following pictures.



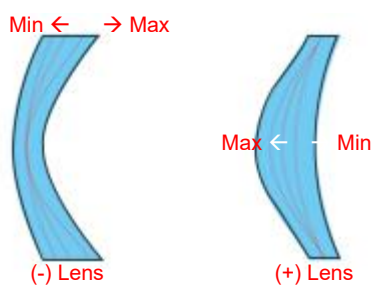

[Ratio(%) mode from the front side]

- 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 maximum curve.

- The auto mode calculates the most natural fitting position automatically using the lens front/rear curve and the shape of the eyeglasses.

- 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. Refer to the ‘Hydrophobic Mode’ in the next chapter for easier and quicker settings for safer edging.
  (Assurez-vous d'effectuer le processus de bordure en mode de sécurité lorsque l'objectif est fragile ou que l'axe se déplace facilement.)

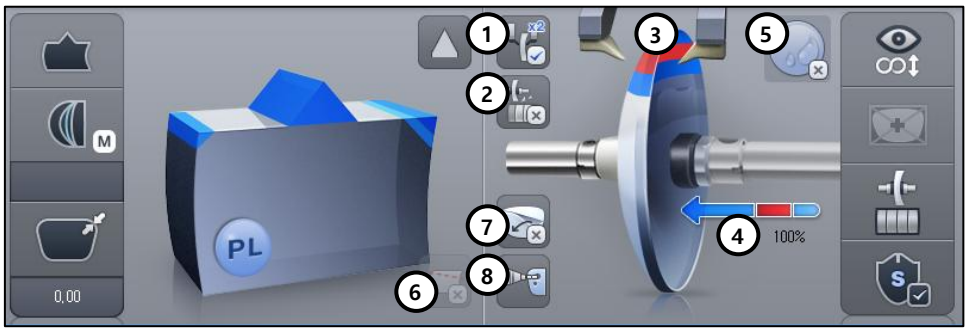
- Grooving and Polishing is not available for the Glass Lens. Be sure the material of lens is matched with the job options selected in the display before starting the edging process.
  (Le rainurage et le polissage ne sont pas disponibles pour la lentille en verre. Assurez-vous que le matériau de l'objectif correspond aux options de travail sélectionnées sur l'écran avant de commencer le processus de bordure.)

- Always be sure to use a new Tape or Sticker and remove moisture on the Lens surface.
  (Veillez toujours à utiliser un nouveau ruban ou autocollant et à éliminer l'humidité sur la surface de l'objectif.)

- 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.
  (Le biseautage de sécurité des lentilles en verre doit être effectué à l'avant et à l'arrière. Sinon, cela endommagera la peau ou les yeux.)

- To prevent axis shift, you must use stickers provided by lens manufacturers for blocking of hydrophobic lenses. But we do not guarantee the quality of the stickers.
  (Pour éviter le décalage d'axe, vous devez utiliser des autocollants fournis par les fabricants de lentilles pour bloquer les lentilles hydrophobes. Nous ne garantissons pas la qualité des autocollants.)

6.1.6. Detailed Edging Option



①Feeling after roughing


Off

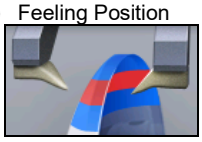

On

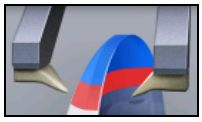
② Pre-Roughing

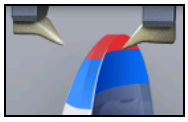

Off


On

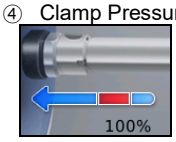
③ Feeling Position


Normal

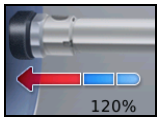

Frame Change


Outside of Bevel

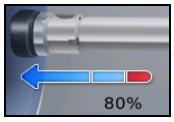
④ Clamp Pressure



Normal



Strong



Weak

⑤ Hydrophobic Mode


Off


On

⑥ Inclined Cut


Off


On

⑦ Wrap Removal (For drilling)


Off


On

⑧ Drilling Quality


Normal


High

NOTE

- If you use the feeling after roughing function, 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 by pressing the feeler icon for a while.
  - Long press to front feeler: front feeling.
  - Long press to rear feeler: rear feeling.


[Both Feeling]

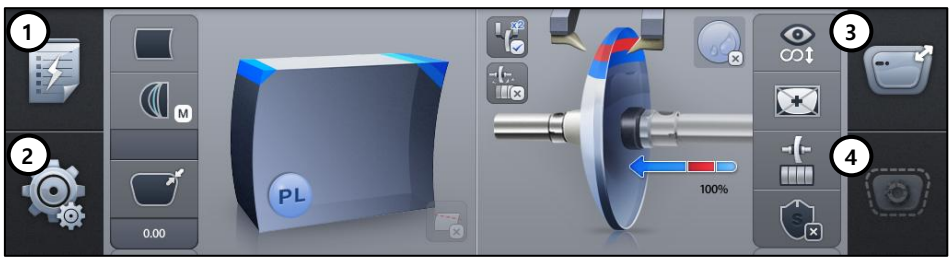

[Front Feeling]


[Rear Feeling]

- When the lens surface or curve is different from normal lens, one side feeling mode is used to read only one side of the lens.
- One side feeling mode generates following constraints because it gets information from one side of the lens.
  - Cannot select Axial roughing mode.
  - Safety beveling is possible conditionally (Front feeling - only front safety beveling, Rear feeling - only rear safety beveling).
  - Bevel/Grooving position is possible conditionally (Front feeling - only front distance, Rear feeling - only rear distance).
  - 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 again.
- For the EX-lens, select the EX-lens type instead of the one side feeling mode to achieve optimized feeling.
- You can input clamp pressure value manually by pressing the clamp pressure icon for a while. (50%~150%)
- Hydrophobic mode set options for preventing axis problem at a time. (Rotation speed, Safety mode, Roughing mode, Clamp pressure)
- In case of fragile lenses with high index and curve, it is even safer to process to set the Hydrophobic Mode with 'Low' clamp pressure and to use with a lens adaptor that matches lens curve.
- The inclined cut is a function that processing 12 degree slope on the flat surface of the lens with the step bevel wheel and the fitting is possible without resizing when the rear part of the frame is deep and interferes with lens.
- When the wrap removal mode is turned on, the edging process paused before drilling step to allow user to manually remove the wrap scraps on the lens.

6.1.7. Function Button



① Expert Job Editor

② Menu

③ Digital Designer (Digital Pattern + Hole Editor)

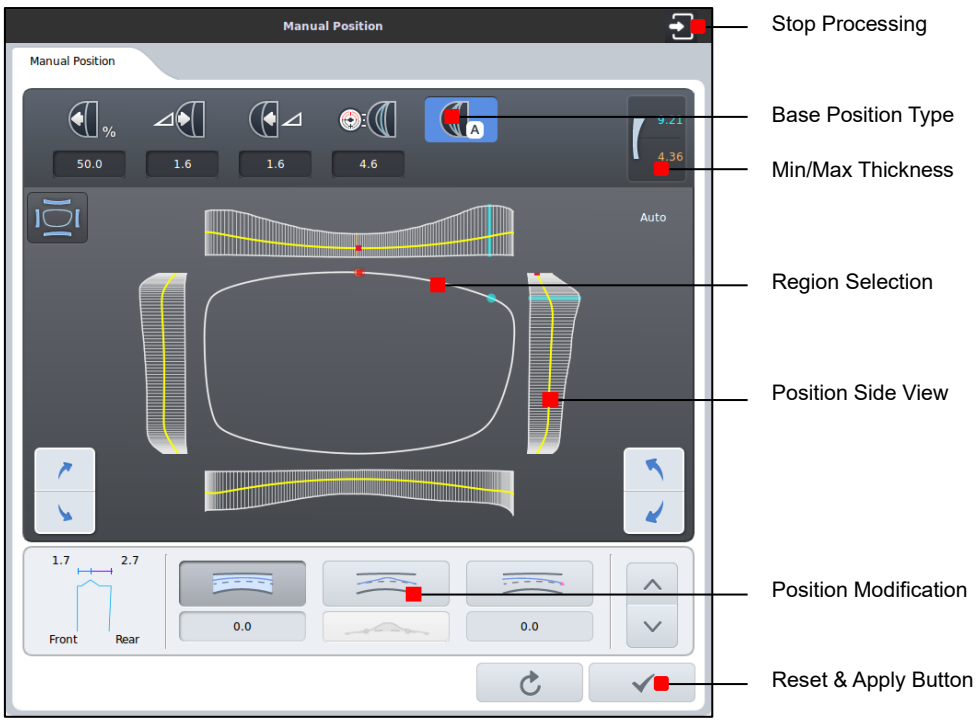
④ Retouch Mode

NOTE

- The expert user can work more quickly by using ‘Expert Job Editor’.
- The retouch button is enabled after completing finish process of main wheel.

6.2. Manual Bevel/Groove Position Modification

The manual position adjustment screen will be displayed after feeling process is finished once user set the manual position mode in the edging option.

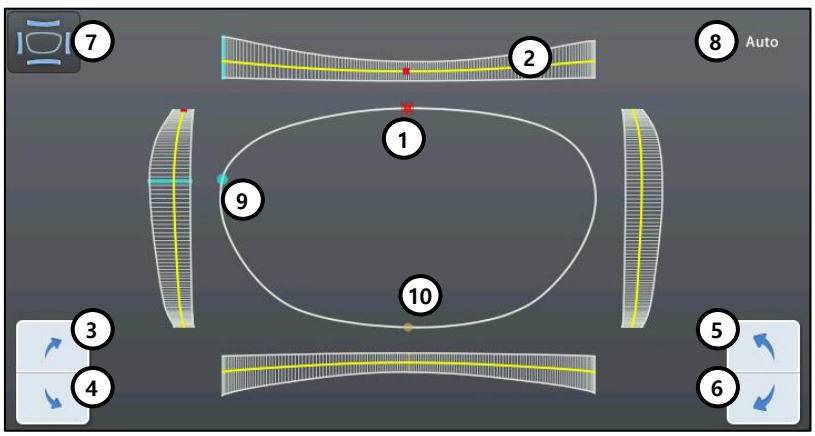


6.2.1. Base Position



① Front %
② Front mm
③ Rear mm
④ Base Curve
⑤ Auto
⑥ Position Mirroring (Refer to ‘Chapter 6.4.2’)

6.2.2. Region Selection



① Red Dot – Current Location

② Yellow Line – Manual Position

③ Move region clockwise (fine adjustment)

④ Move region counterclockwise (fine adjustment)

⑤ Move region clockwise

⑥ Move region counterclockwise

⑦ Preview Mode (2D, 3D)

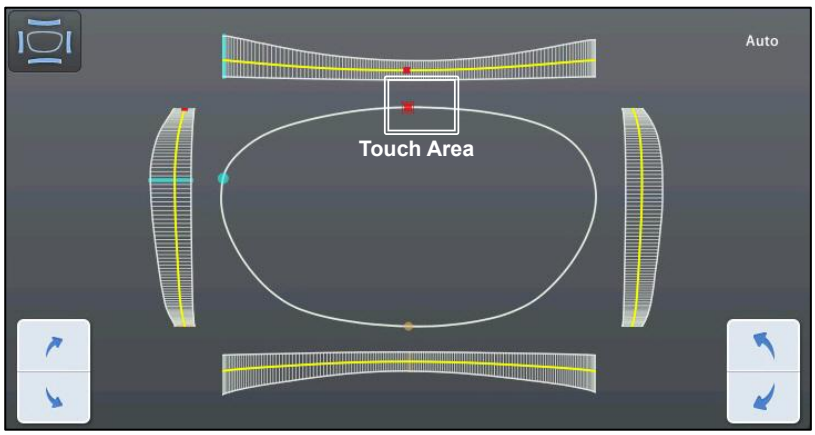
⑧ Preview Scale (Auto, x1.0)

⑨ Mint Dot/Line - Max thickness point

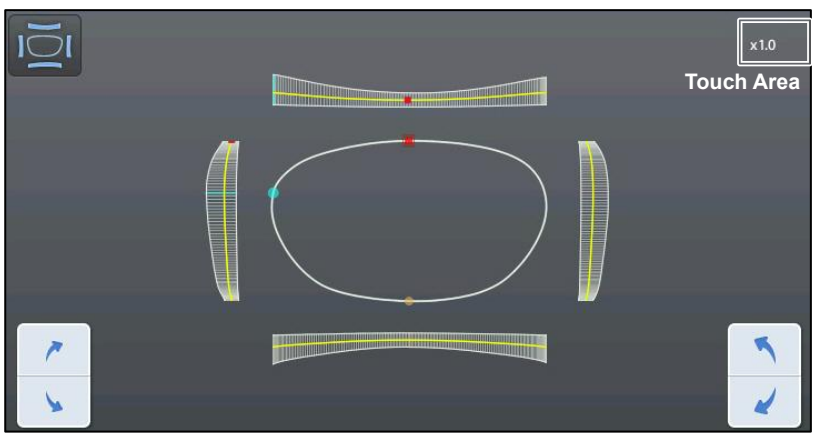
⑩ Orange Dot/Line - Min thickness point

NOTE

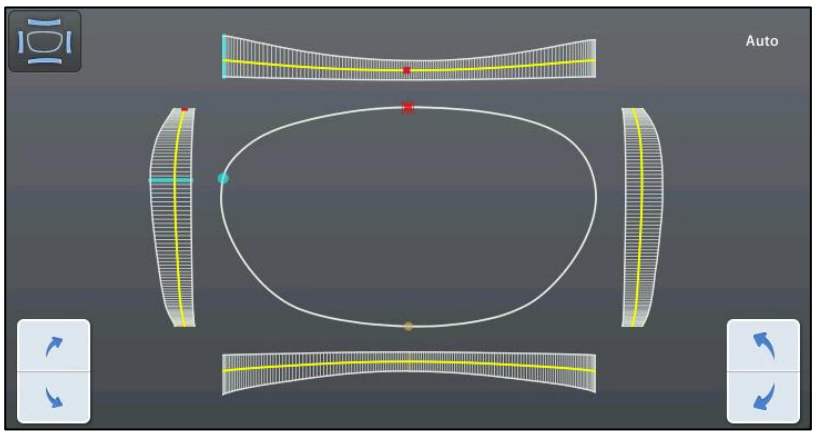
- Touch the lens shape area, then the red dot will be moved to the touched position.



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

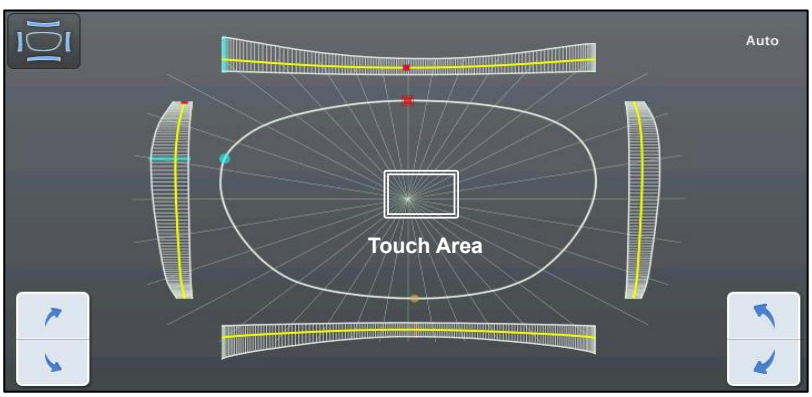


[Actual measurement]

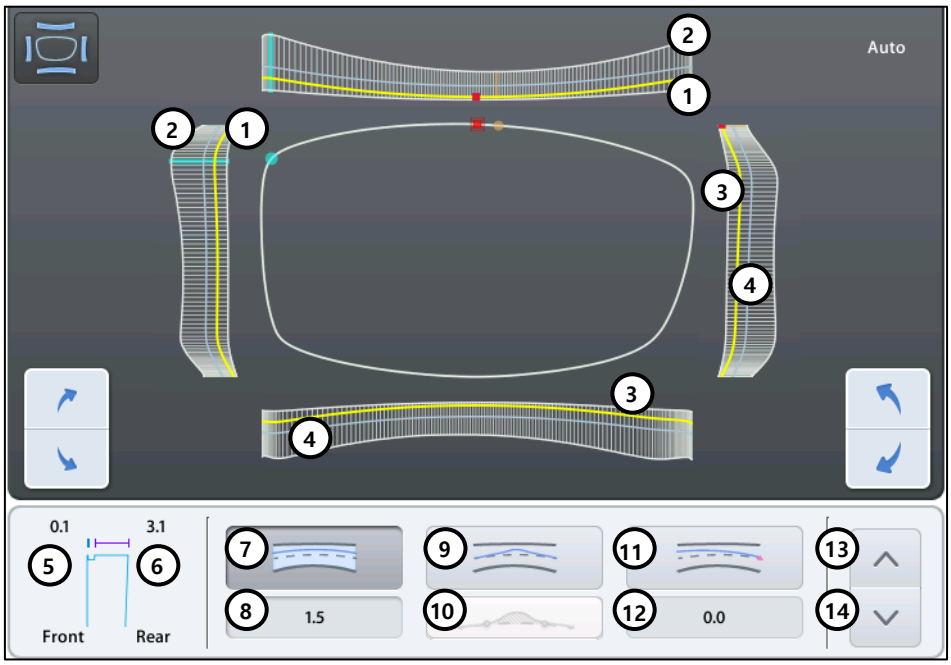


[Auto – Shape is automatically resized fitting the screen.]

- Angle guideline function is turned on or off by touching the center of the shape.
  (Guideline spacing : 10 °)



6.2.3. Position Modification



① Front curve of the lens

② Rear curve of the lens

③ Yellow Line – Manual Position

④ Gray Line – Initial Position

⑤ Bevel/Groove Preview – Distance between current position and front surface (mm)

⑥ Bevel/Groove Preview – Distance between current position and rear surface (mm)

⑦ Global Modification

⑧ Position Shift Value – Displays shift value (movement value) from base position (+ front, - rear)

⑨ Partial Modification

⑩ Partial Modification Area – Narrow / Normal / Wide

⑪ Tilting

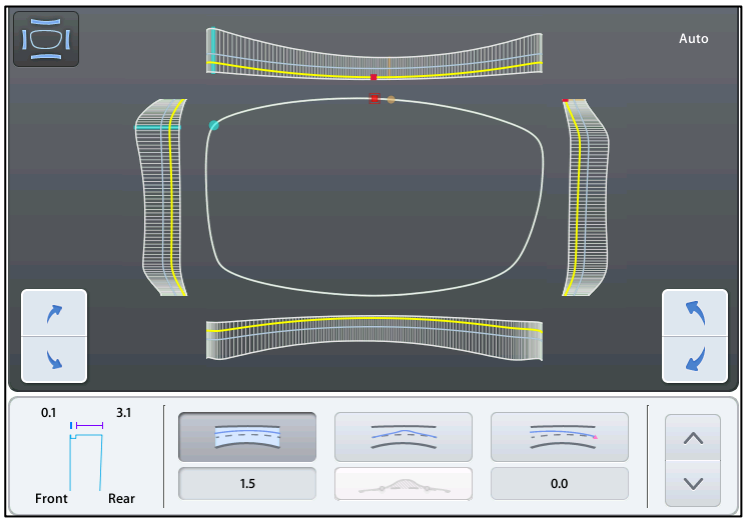
⑫ Tilting Value (+ front, - rear)

⑬ Move position line to front surface

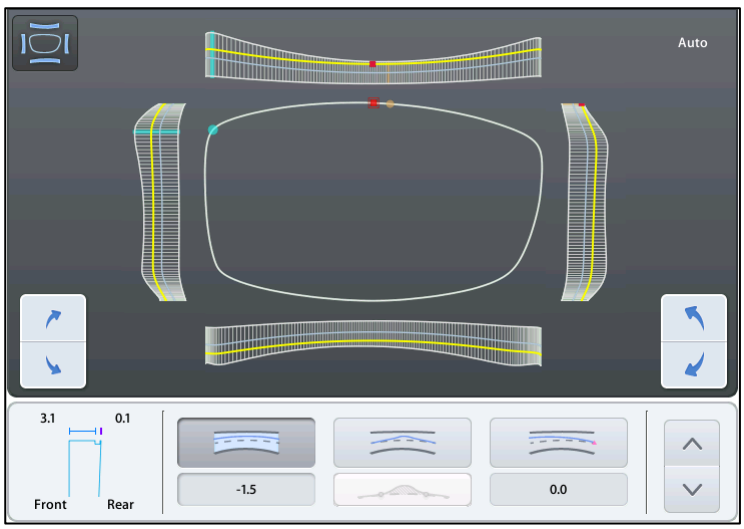
⑭ Move position line to rear surface

NOTE

- Global modification function is to move the entire edging position to the lens front surface or rear.



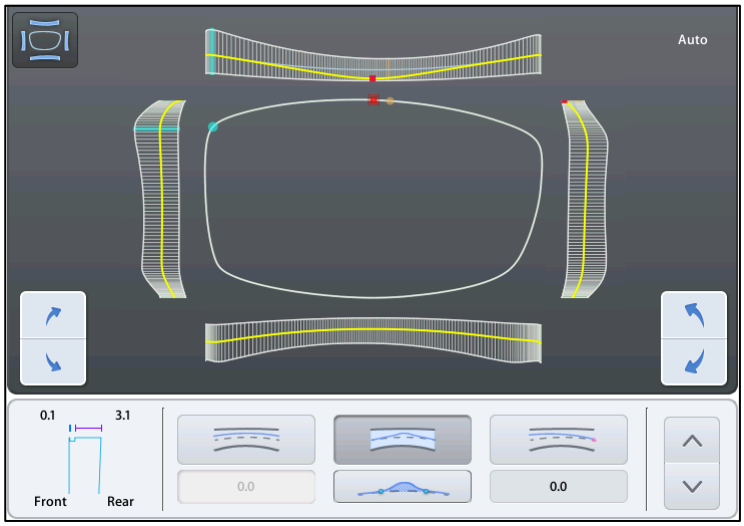
[Move Front]



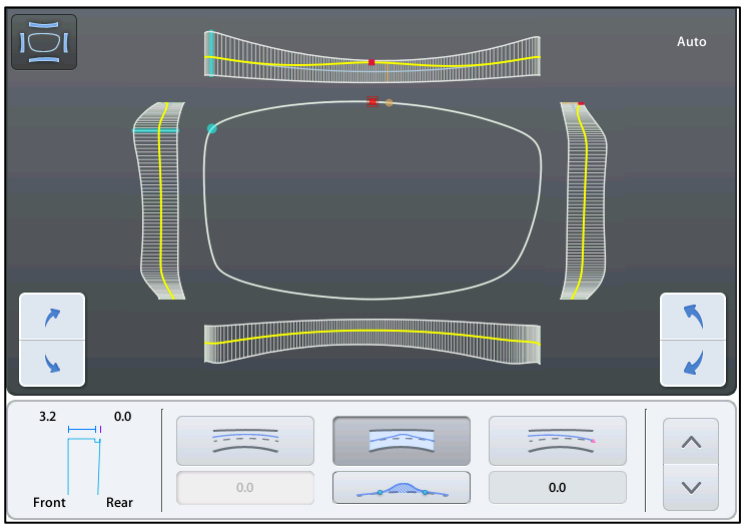
[Move Rear]

NOTE

- Partial modification function is to move the current edging position to the front surface or rear.



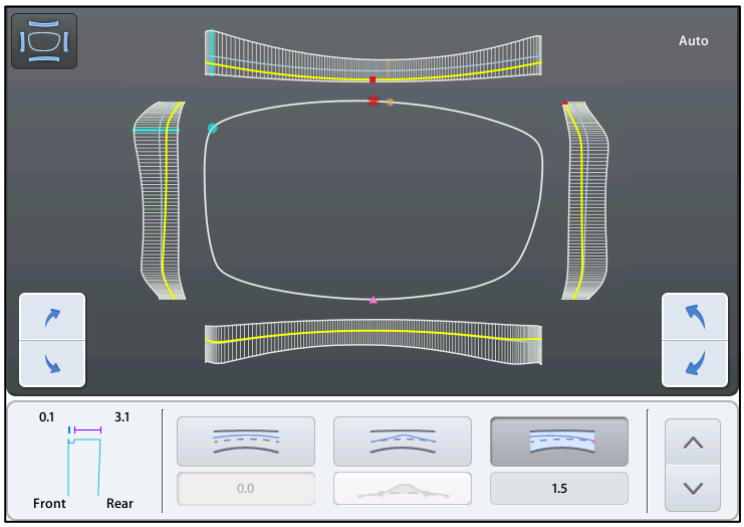
[Move Front]



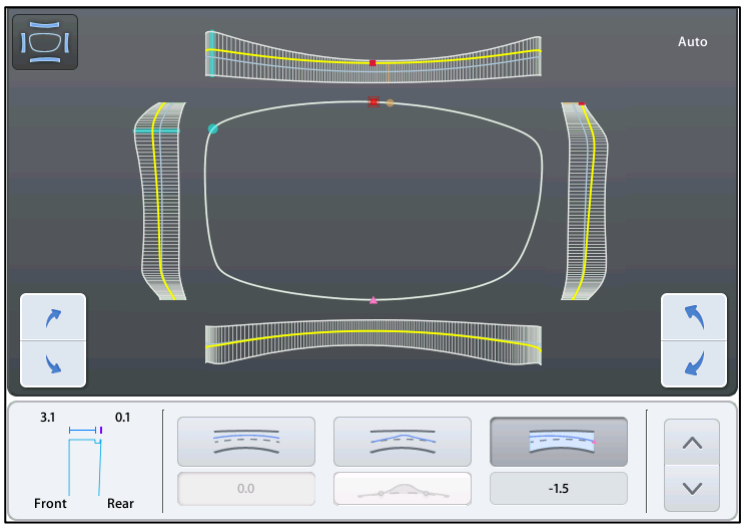
[Move Rear]

NOTE

- Tilting function is to fix a reference point and tilt the edging position to the lens front surface or rear.



[Move Front]



[Move Rear]

6.2.4. Position Mirroring

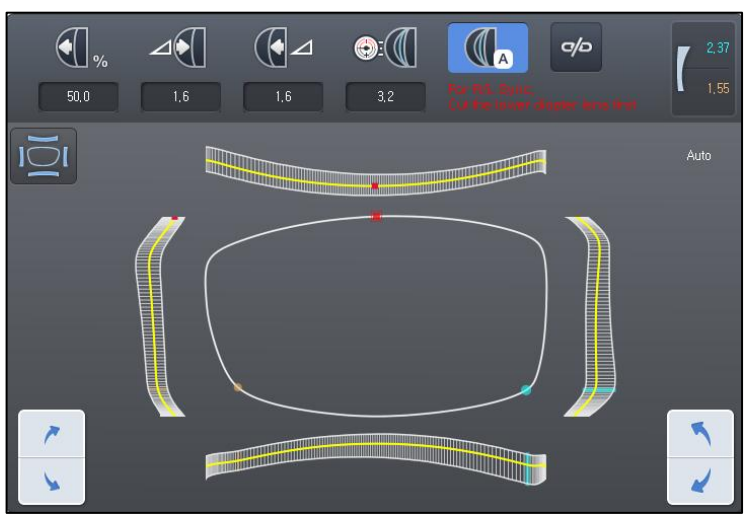


① Sync/Unsync – Displayed after the opposite side edging is done and position is mirrored.

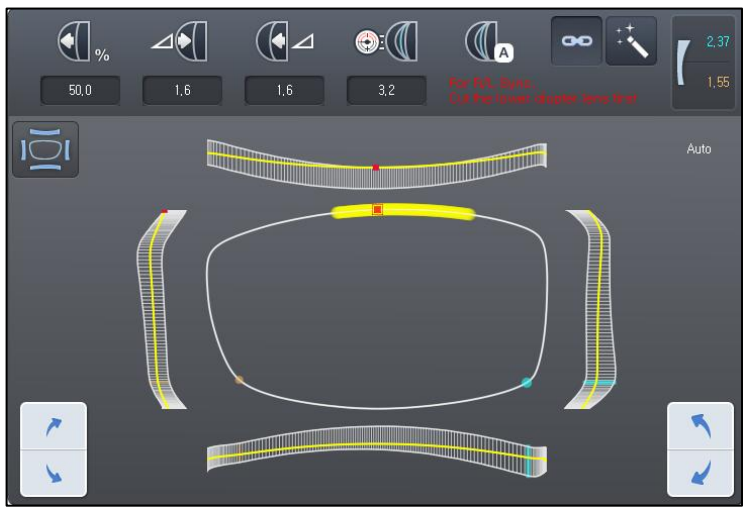
② Magic – Modify mirrored position to fit the lens.

NOTE

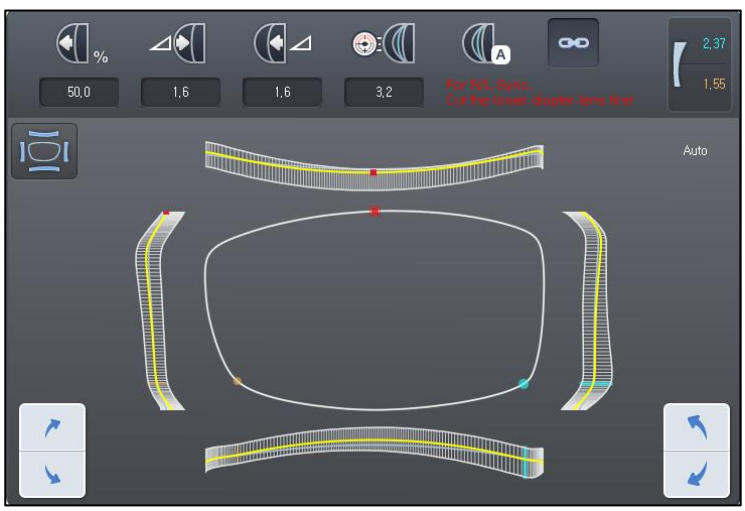
- After one side edging is completed, when edging opposite side, but the mirrored position is not fit to the opposite side because the thickness is too thin or the curve is different, the default position is Auto position not mirrored position and the unsync button will be displayed. In this case we recommend cut lower diopter lens first.



- You can mirror the position forcefully by touching the unsync button, and the magic button will be displayed and the position is out of the lens in yellow warning color.



- The magic button modified the position so that the modified position is fit the lens and you can modify the position by manual.



6.2.5. Reset & Apply Button

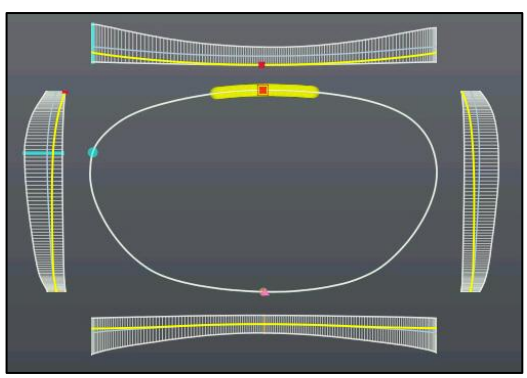


① Reset Button – Cancel the changes

② Apply button – Apply modified position and continue to processing

NOTE

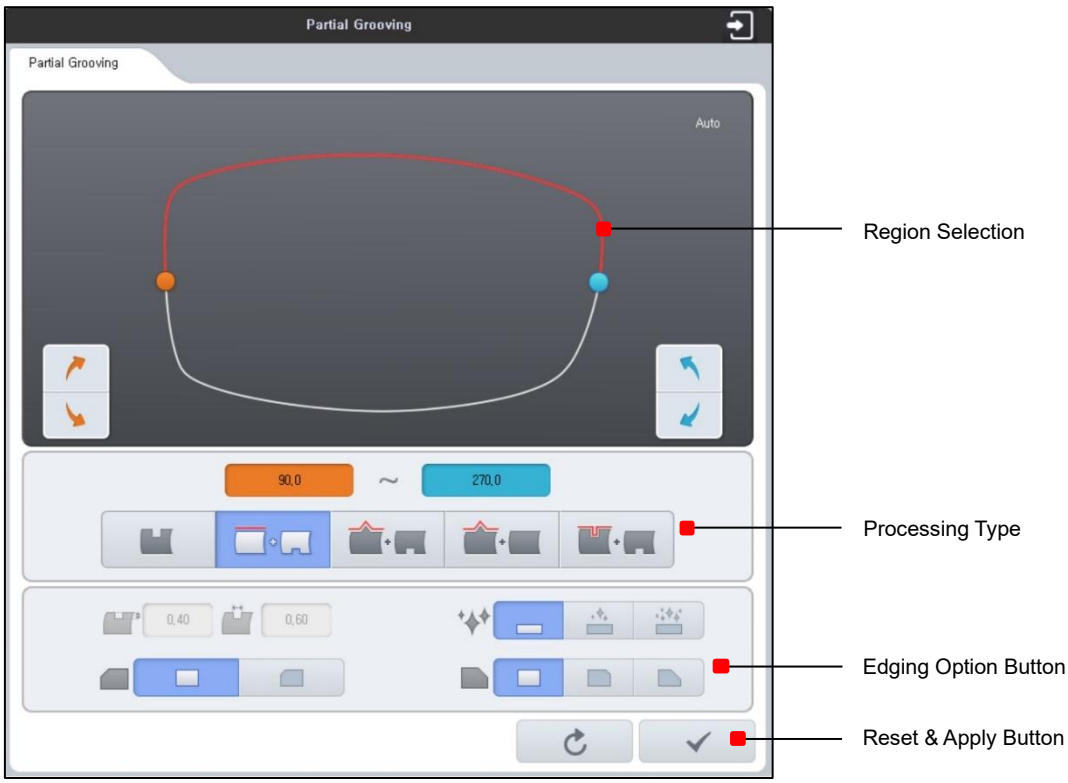
- If you press the base position button while changing base position, previously selected base position is initialized to selected base position.
- Size of the region cannot be changed.
- Warning sign pops up when the selected base position gets out of the front or rear area of the lens.



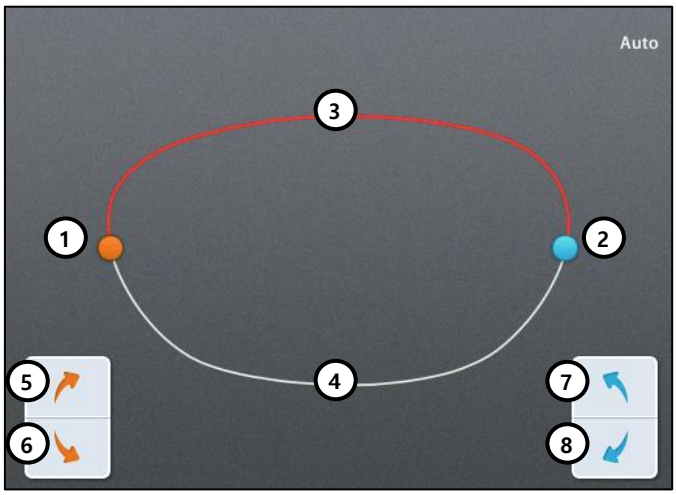
- To cancel the Manual Position Adjustment and stop edging process, press the exit button () on the right top of the dialog box.

6.3. Partial Grooving Screen

When you press and hold the grooving option button( ) on main screen, partial grooving screen pops up.



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

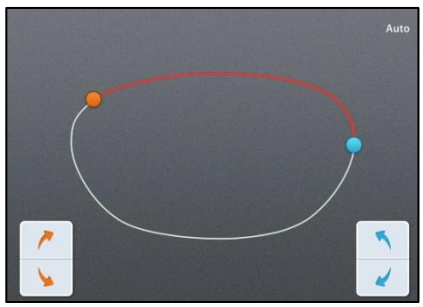
⑥ Move start point counterclockwise

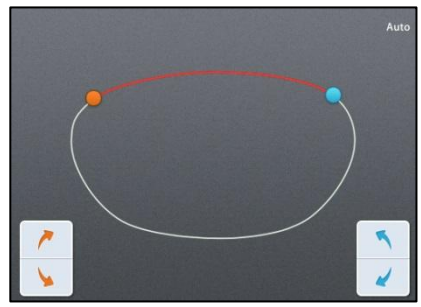
⑦ Move end point counterclockwise

⑧ Move end point clockwise

NOTE

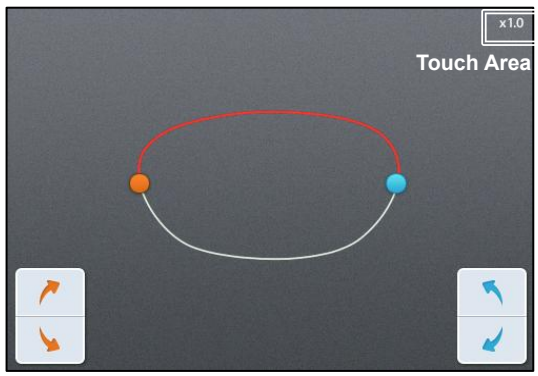
- Touch the lens shape area, then the nearest circle moves to the touched area.



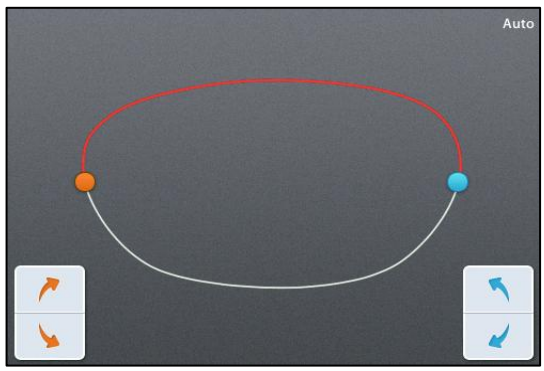

Auto

NOTE

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

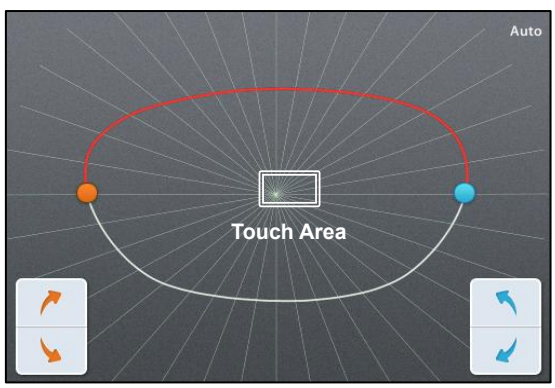


[Actual measurement]

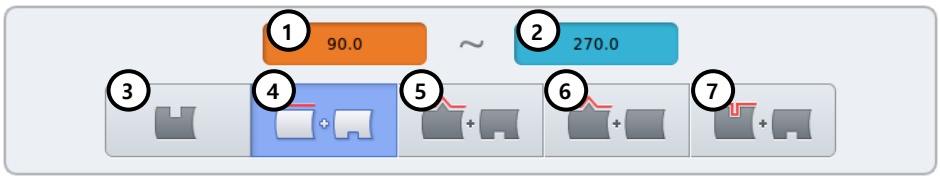


[Auto – Shape resized to fit to the screen]

- 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

⑦ Grooving + Grooving (Dual)

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
Grooving + Grooving	Grooving (Dual Grooving Depth/Width)	Grooving

- The red line marked on the processing type button indicates selected region.
- To cancel partial grooving, press the grooving button.

6.3.3. Edging Option Button



① Dual-Grooving Depth / Width

② Polishing

③ Front Safety Beveling

④ Rear Safety Beveling

NOTE

Safety bevel is not available when the processing type is Beveling + Grooving or Beveling + Flat Edging.

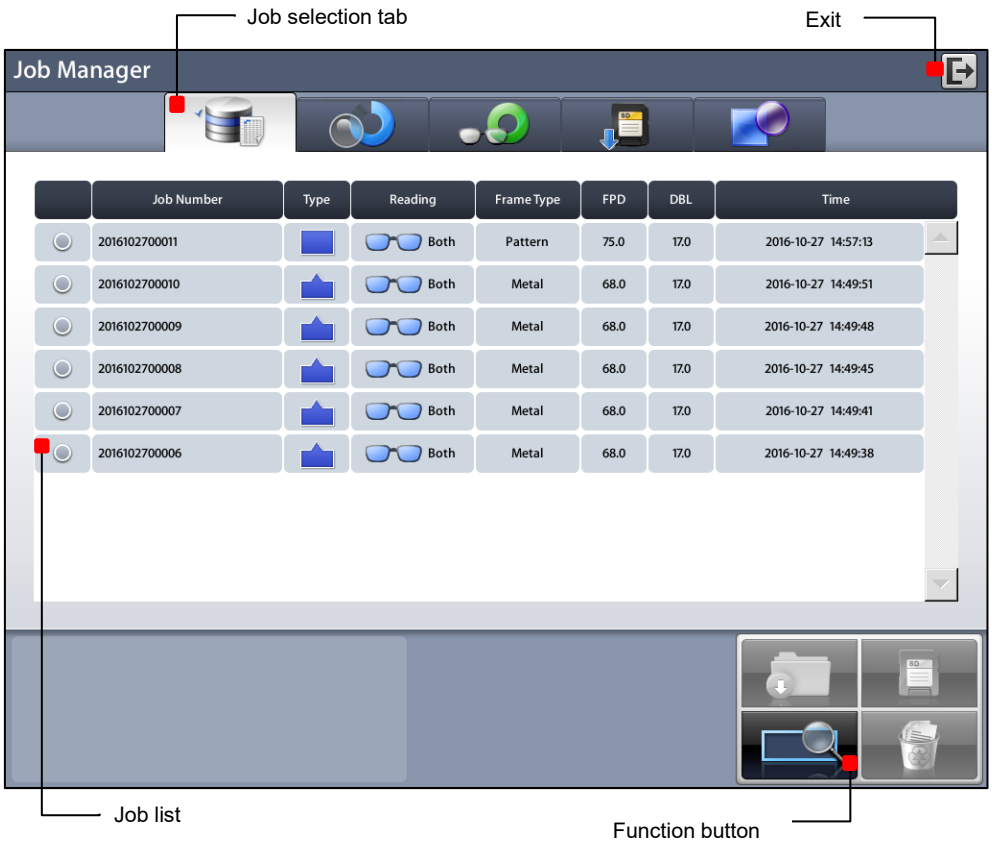
6.3.4. Reset & Apply Button



① Reset Button – Cancel the changes and return to initial state.

② Apply button – Apply changes and continue to processing.

6.4. Job Manager



6.4.1. Job selection tab



① Waiting Job : Newly received Job data from the frame reader or Digital Scan.

② Working Job : Blocking job or Editing job

③ Completed Job : Blocked Job

④ Saved Job List : Job data saved in SD card.

⑤ Internal Data : Internal job data for testing

6.4.2. Function Button



① Open : Load the selected job

② Save : Save the selected job to SD card

③ Search : Search Job number

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 card before turning off the system.
- Internal data cannot be deleted.
- If you delete a job in the saved job list, it will be permanently deleted from the SD card, so be careful.

6.4.3. Waiting Job



① Job Number: Displays the Job Number.

② Type: Displays the Edging Type with icon.

③ Reading: Displays the Tracing State with icon.

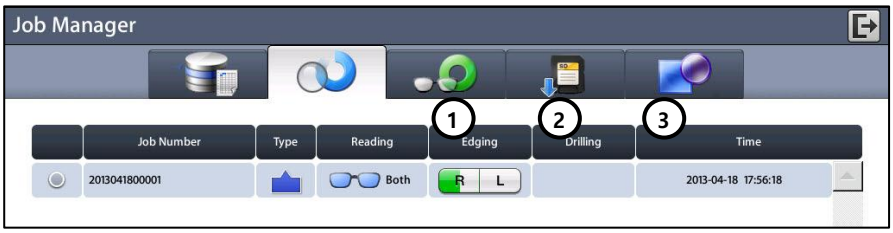
④ Frame Type: Displays the Frame Type.

⑤ FPD: Displays the FPD(Frame PD) value.

⑥ DBL: Displays the DBL(Bridge Size) value.

⑦ Time: Displays the job received time.

6.4.4. Working Job

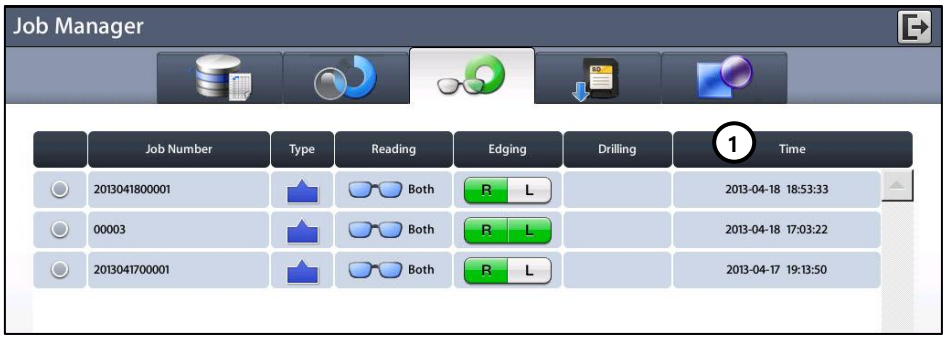


① Edging: Displays the Edging Processing state.

② Drilling: Displays the Drilling Processing state.

③ Time: Displays the job start time.

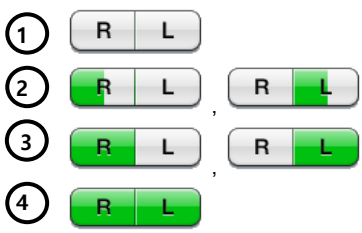
6.4.5. Completed Job



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

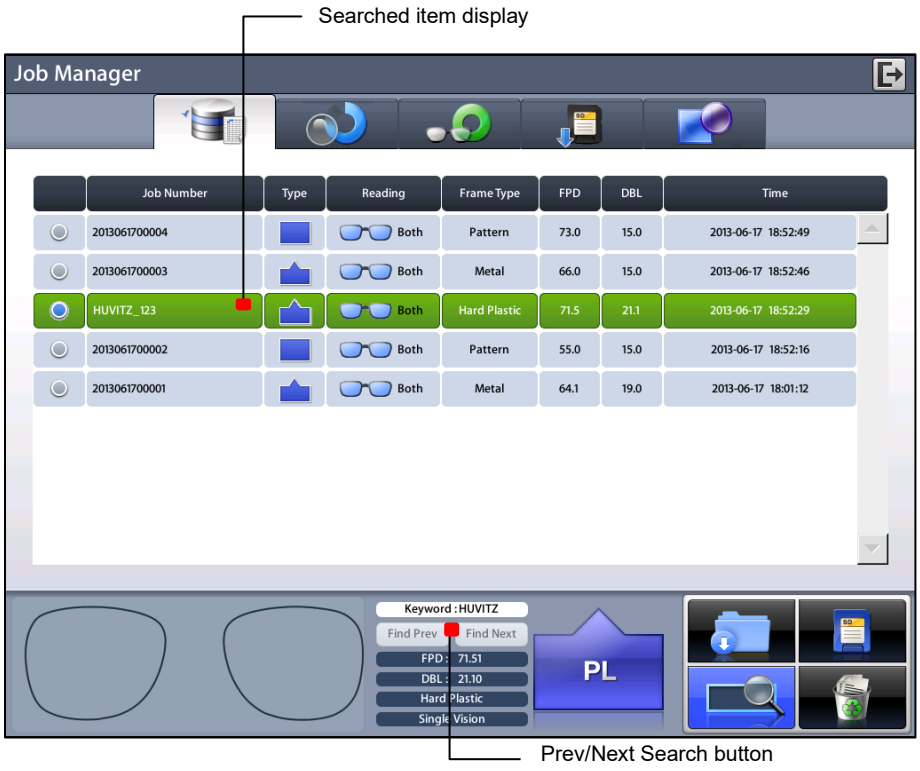
You can search for a job on the job list.

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.



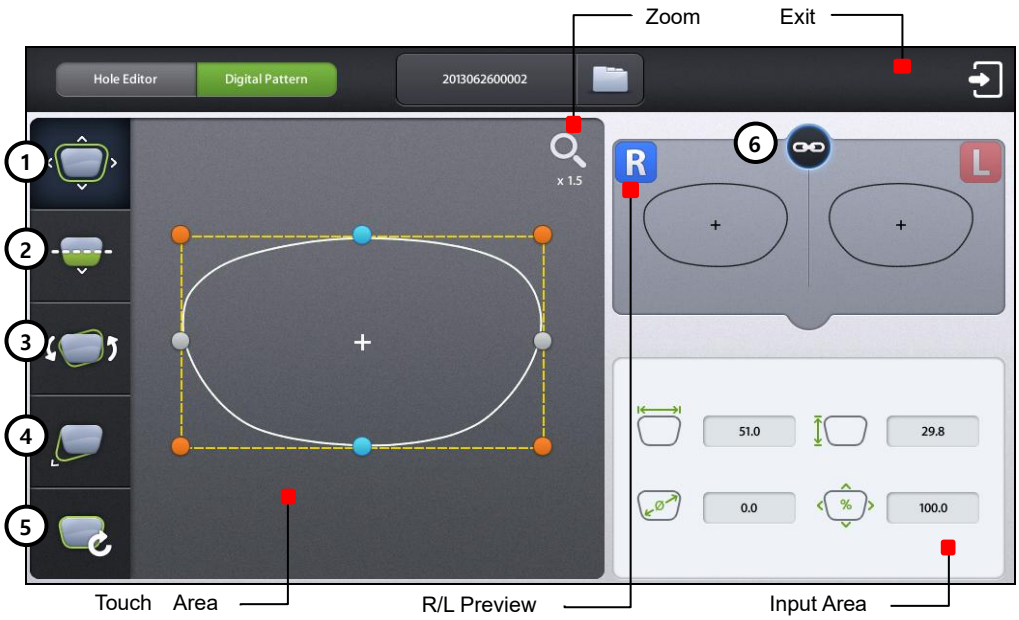


NOTE

- 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 browse the search 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  button on the bottom right of the main screen and then select the Digital Pattern tab at top left of the screen.



① Enlargement/Reduction

② Near Vision Area Enlargement/Reduction

③ Rotation

④ Partial Modification

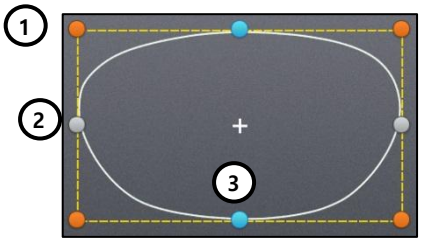
⑤ Reset

⑥ R/L Sync

6.5.1. Enlargement/Reduction

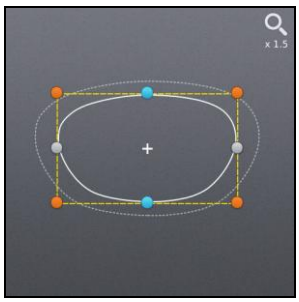
Lens shape can be modified both horizontally and vertically.

Touch Interface

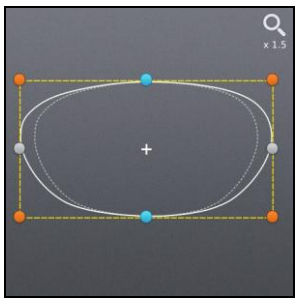


To modify lens shape, make use of the 8 touch points around the lens shape.

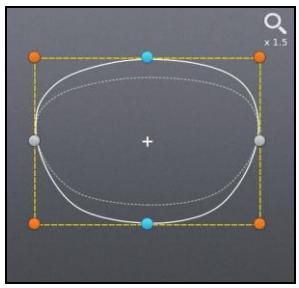
① Horizontal + Vertical
② Horizontal
③ Vertical



[Horizontal + Vertical]

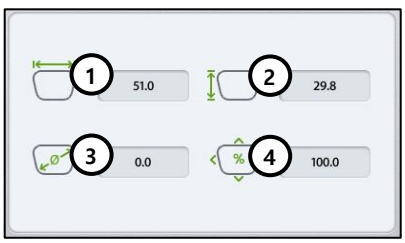


[Horizontal]



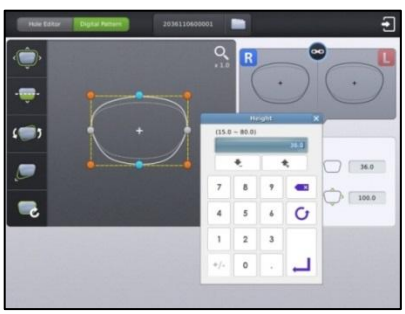
[Vertical]

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 (%)

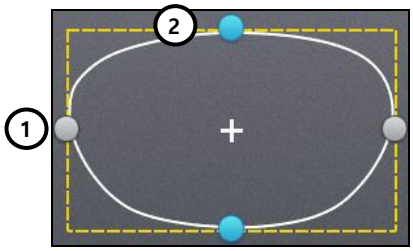


After selecting the item to change, enter the value using the numeric keypad.

6.5.2. Near Vision Area Enlargement/Reduction

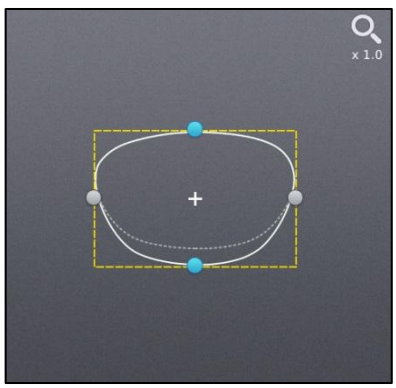
Lens shape can be changed in four directions (Bottom - Near Vision Area, Top, Left, Right).

Touch Interface

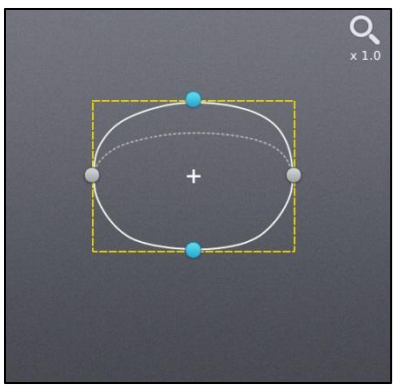


To modify lens shape, make use of 4 touch points around the lens shape.

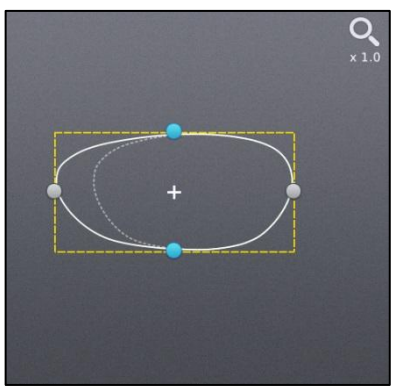
① Left or Right
② Top or Bottom



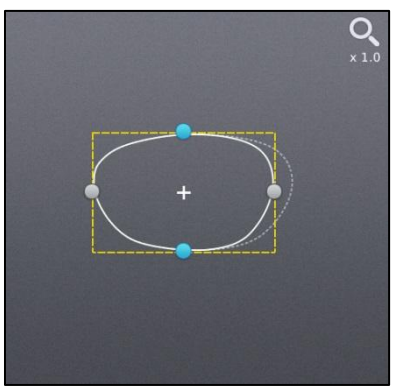
[Near Vision Area (Bottom)]



[Top]

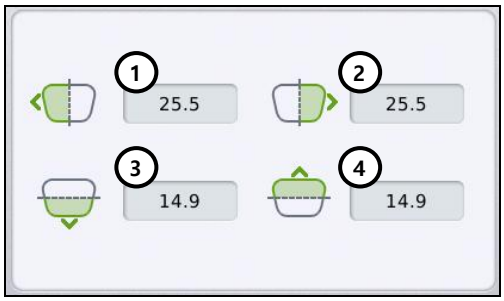


[Left]



[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

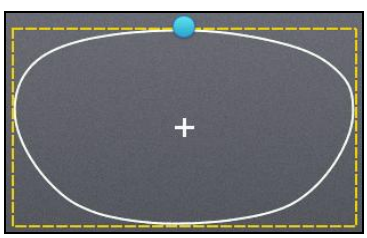


After selecting the item to change, enter the value using the numeric keypad.

6.5.3. Rotation

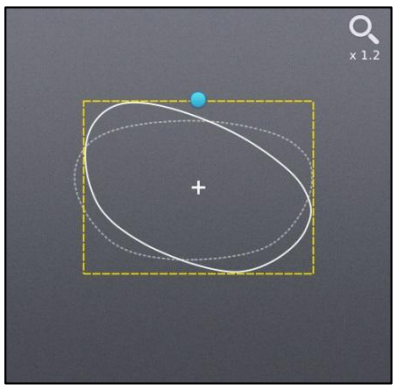
Lens shape can be rotated.

Touch Interface

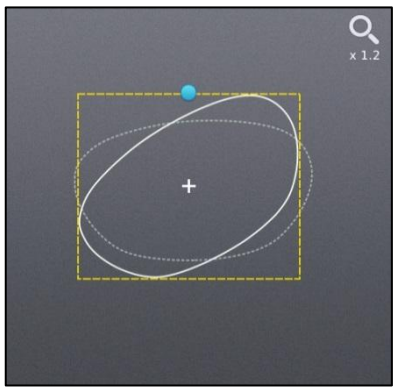


To rotate lens shape, touch and drag the touch point on top of the lens shape.

Touch Point

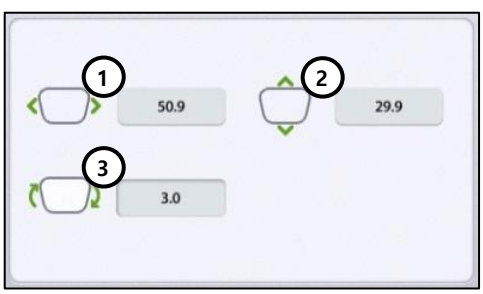


[Clockwise]



[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.

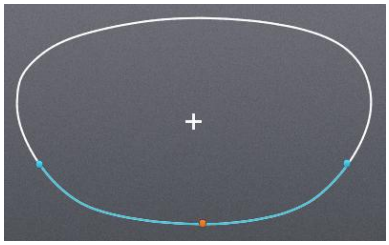


After selecting the item to change, enter the value using the numeric keypad.

6.5.4. Partial Modification

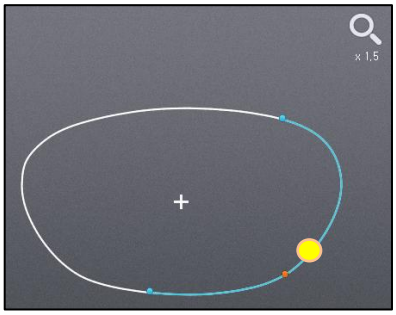
Lens shape can be modified partially.

Touch Interface

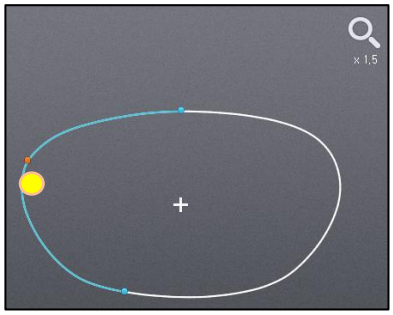


Change modification area by touching any point on lens shape. The point becomes the center of the modification area.
To adjust modification range, touch and drag one of 2 touch points around the selected lens shape (blue).

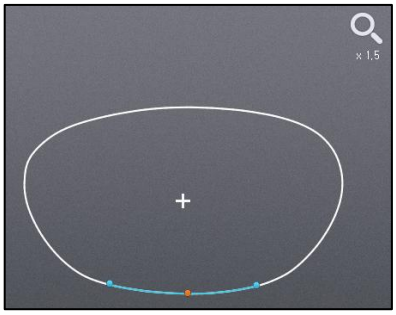
- Range adjustment point
- Edit Position (Most changing position)
- User touch location



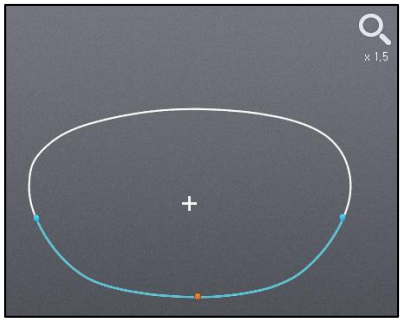
[Bottom Right]



[Left]

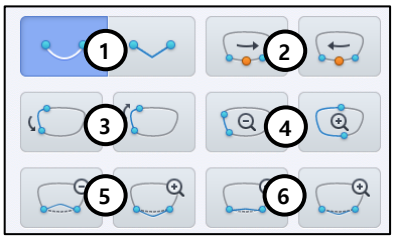


[Modification area reduction]



[Modification area enlargement]

Lens Shape Modification



You can modify the lens shape with Input button.

① Edit mode (Curved or Linear)

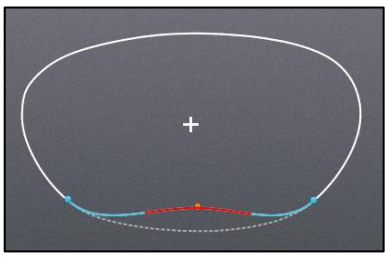
② Edit Position Change

③ Position change (counter clockwise, clockwise)

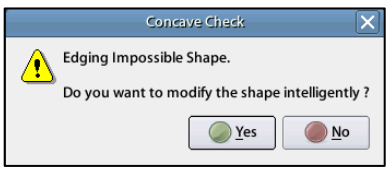
④ Range change (enlargement, reduction)

⑤ Wide Partial Modification (concave, convex)

⑥ Partial Modification (concave, convex)



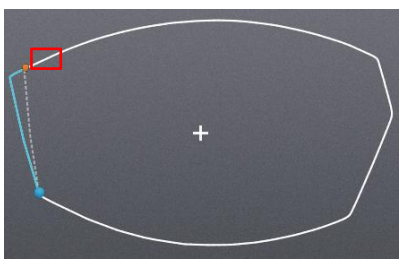
During partial modification, the modified part where is not able to process physically is colored red. And when closing the digital pattern, the shape can be modified to edging enabled shape intelligently.

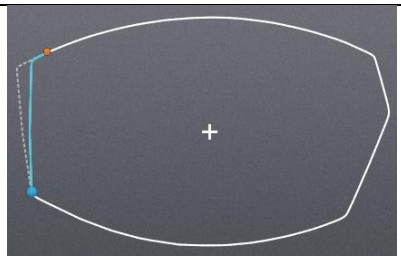


NOTE

- The icon of end point changes to be enlarged when end point is positioned on the corner of the lens shape and as the end point close to the corner, the point snapped to the corner automatically.

- In the linear edit mode, the follow editing is possible by moving the edit position to one of ends point and moving the other end point to the corner of the lens shape. The enlarged part follows the out part of the edit position (red box).



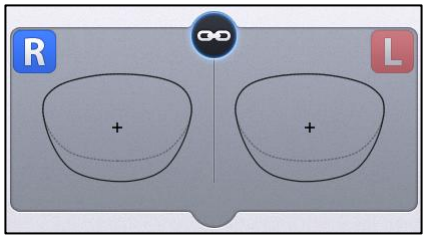


[Convex Edit] [Concave Edit]

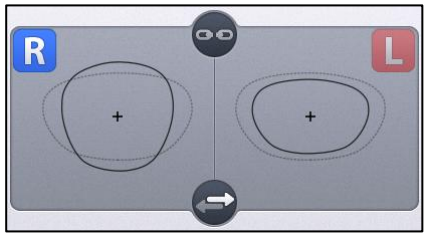
- The Edit position can be switched to the center or the other end point quickly by holding edit position change button ( ).

6.5.5. Toggle R/L Sync

Function for R/L Sync.



[R/L Sync On]



[R/L Sync Off]

NOTE

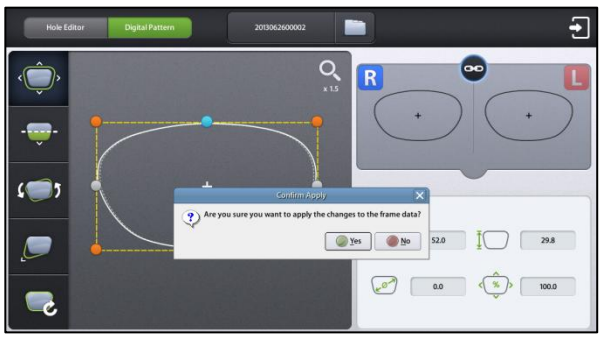
- “Copy” button ( ) is available when R/L sync option is turned off. Shape of the current side is copied to the other side by pressing this button.
- Press R or L button to change the side.

6.5.6. Reset

Recover original lens shape.

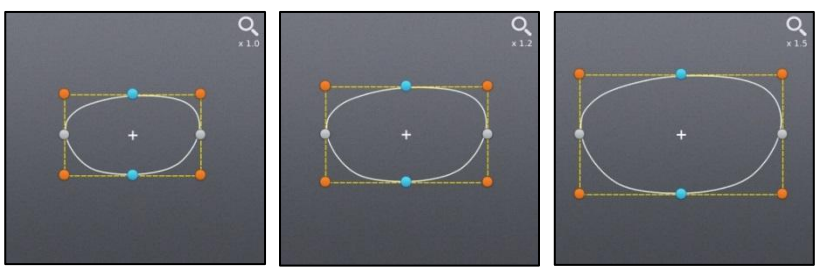
6.5.7. Exit

Quit digital pattern and return to the main screen. To apply modified lens shape, Press the “Apply” button on the confirm dialog box.



NOTE

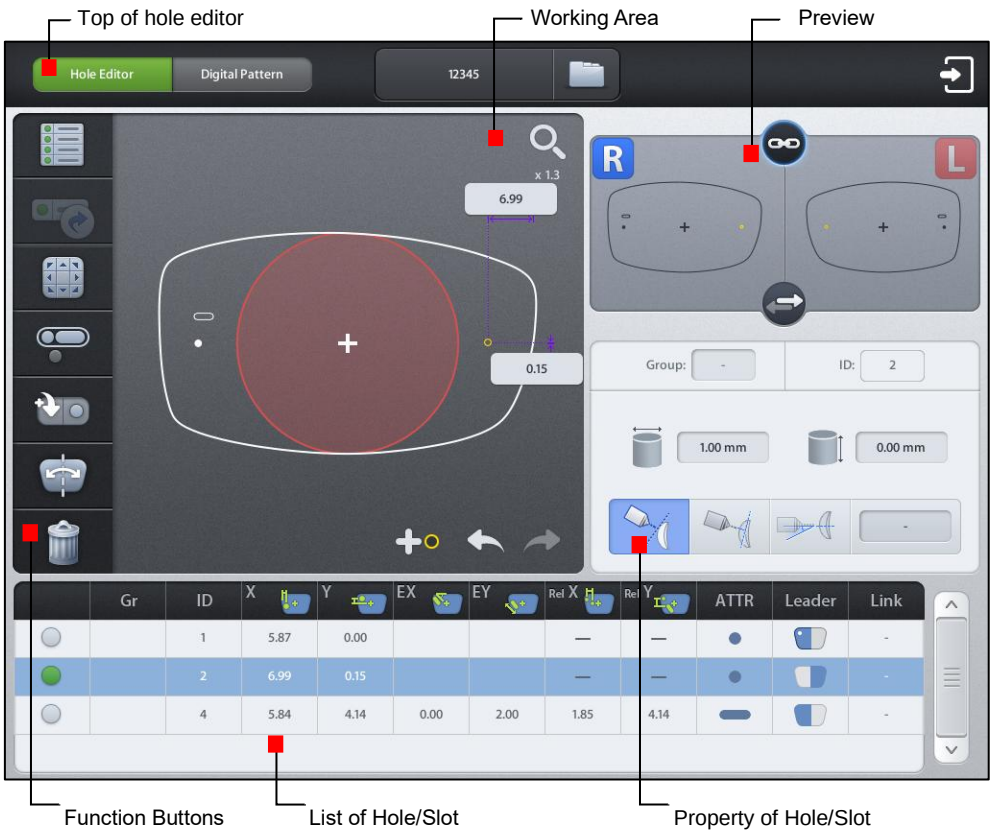
- You can modify half-framed lens or rimless lens conveniently by using the digital pattern.
- The digital pattern is useful for the bi-focal lens or the progressive. Sometimes too small frame shape might cut out the near vision area. In this case, the digital pattern provides the enlargement of the frame shape.
- 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
- Be sure to check optical center position and PD/OH value after digital pattern is applied.
- Press the Zoom icon to change zoom ratio of the lens shape.



[1.0x] [1.2x] [1.5x]

6.6. 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.

6.6.1. Upper Side of Hole Editor



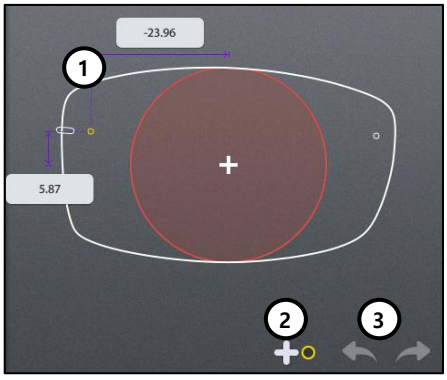
① Hole Editor :
Starts the hole editor. If the button is green, hole editor is now available.

② Digital Pattern :
Starts the digital pattern.

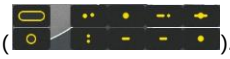
③ Job Number :
Displays the job number of currently working job. You can modify the number by touching here.

④ Exit : Terminates the hole editor.

6.6.2. Working Area



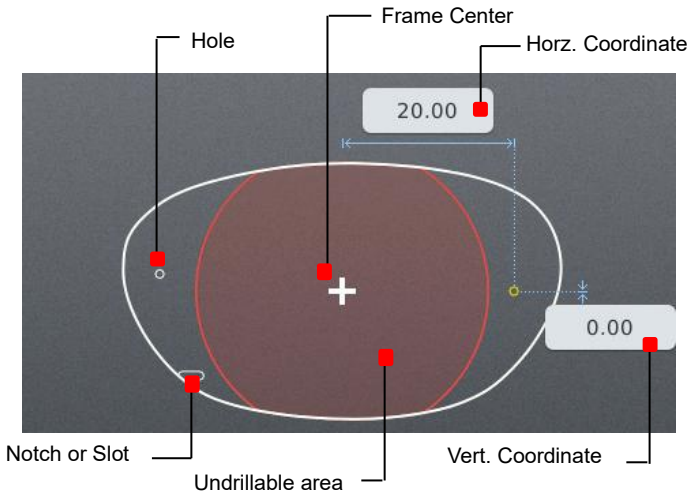
① Working Area: Working area displays the shape of frame and holes/slots. The hole/slot in yellow is the selected one. The orange holes/slots mean the same group with selected one. The selected hole/slot is displayed with their coordinates. The user can move the selected hole/slot by touching the LCD 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 ().

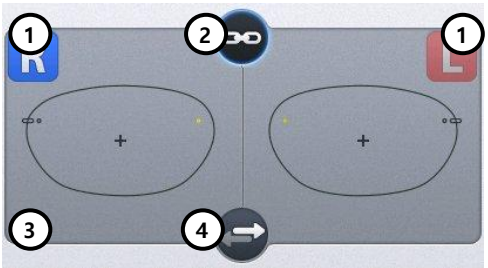
③ Undo()/Redo(): Adding, deleting, moving and changing of hole/slot

NOTE

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



6.6.3. 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 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.

6.6.4. 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.

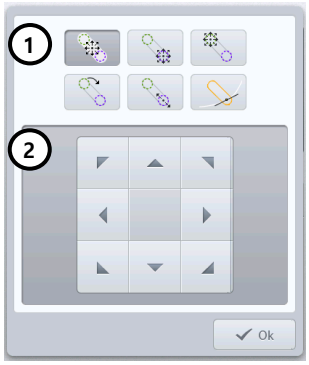
⑦ Delete Hole / Slot :
This function deletes the selected hole / slot. If it belongs to a group, all of the holes / slots in that group are also deleted.

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.



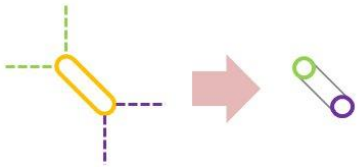
- When you press the Hole / Slot Easy Moving button, following screen will pop up. You can use this to move the hole / slot.



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.

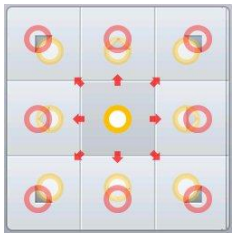
② Move hole / slot: It provides moving buttons according to the selected moving type. How to move the selected hole / slot according to the moving type is explained below.

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

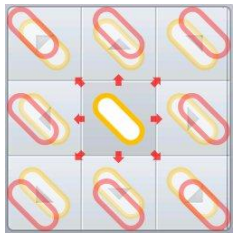


- The details of how to move the hole / slot by moving type are like below.

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

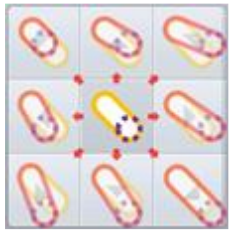


[Hole]

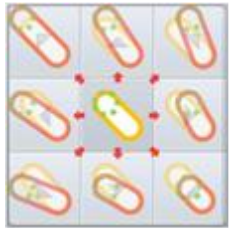


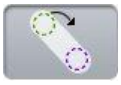
[Slot]

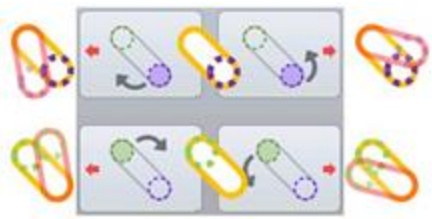
: (Slot only) This provides the function to move the start position of a slot.



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

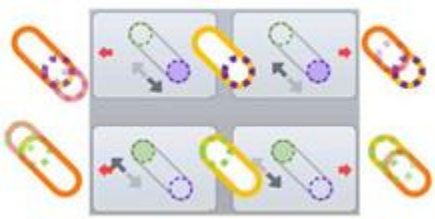


: (Slot only) This provides the function to rotate a slot.



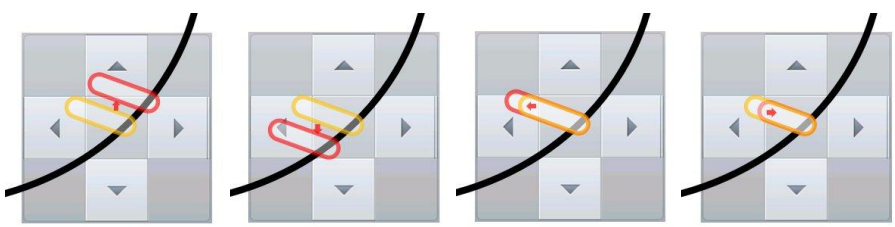


: (Slot only) This provides the function to change the length of a slot.





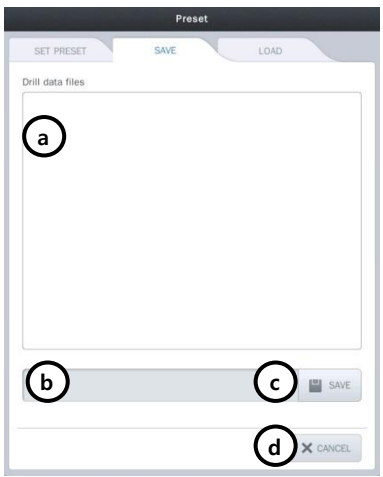
: (Slot only) This provides the function to change a slot to a notch and to move the notch. The slot will be moved to the edge of a frame close to current position, and become a notch. The slot can be moved with the notch remained by using the moving buttons. The up and down buttons are for parallel 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

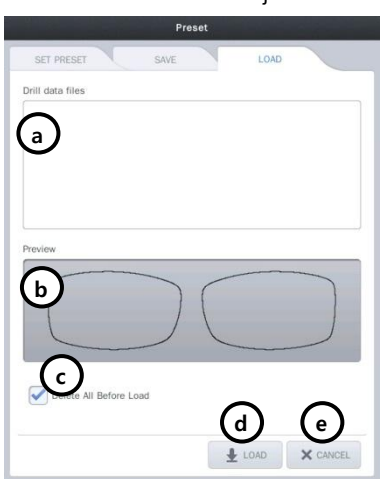
- On the preset, there are three functions.

① Save the hole / slot data: You can save the hole / slot data of the current job to the SD card.

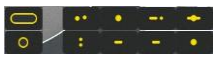


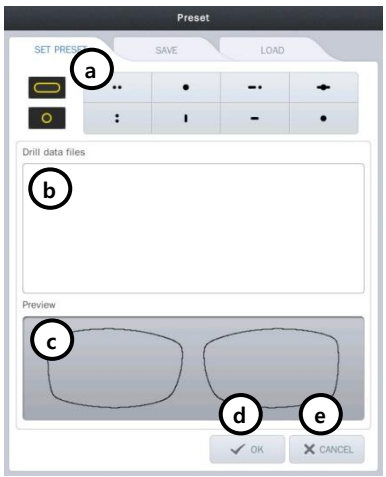
a. List of hole / slot data :
This displays a list of hole / slot data in the SD card.
b. File name :
You can set the file name of the hole / slot data to be saved.
c. Save :
You can save the hole / slot data by pressing this button.
d. Cancel :
Exit the preset configuration.

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.

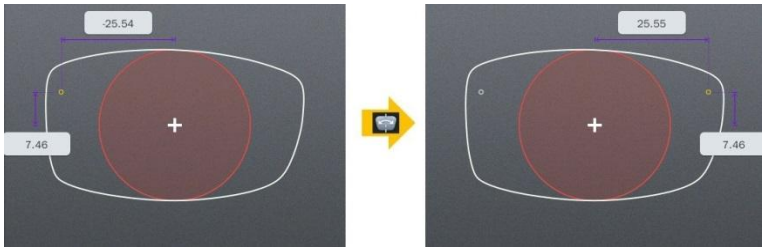
③ Set preset: You can set the 8 preset buttons. (). You can put hole/slot saved in SD card to each button. These 8 presets can be used to add the favorite set of the hole / slot data to the current job, easily.



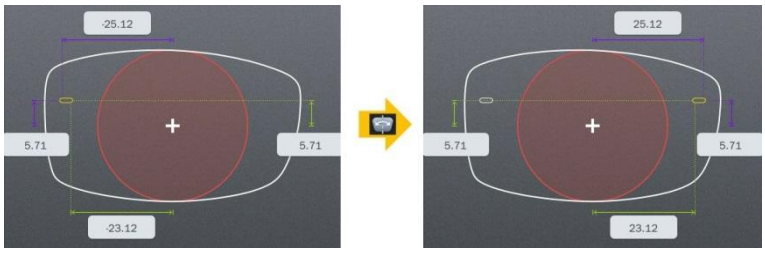
a. Select the preset button :
   Select the preset button to apply the hole / slot data. And then choose hole / slot data you want.
b. List of hole / slot data :
   This displays the list of hole / slot data in SD card.
c. Preview :
   This displays the shape of the saved hole / slot data.
d. OK :
 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

NOTE

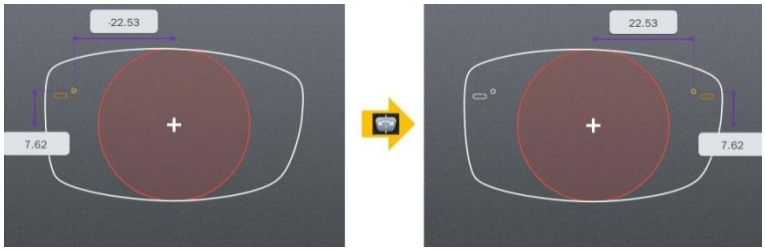
The mirroring is a function that copies the selected hole / slot to the opposite side. The distance between mirrored hole/slot and the frame edge is same with the distance between original one and the frame edge. In case of slot, the distance between the start point of a side (closest point to the frame) 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]



[Mirroring the slot]



[Mirroring the group of hole / slot]

6.6.5. 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.



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)

⑥ Change how to display the X coordinate of a slot

You can change the way X coordinate of a slot is displayed



Based on the option by ④



the length of a slot in X direction



the slope of a slot

⑦ Change how to display the Y coordinate of a slot

You can change the way Y coordinate of a slot is displayed



Based on the option by ⑤



the length of a slot in Y direction



the length of a slot

⑧ Relative distance in X direction

Distance in X direction from the reference hole/slot. Displays – value in the left side or + value in the right side based on the reference position. In case of the reference hole/slot, displays –.

The reference positions are separated in the left side and right side based on box center and the relative distances are displayed when the number of hole/slot is large than 2 in one side.

⑨ Relative distance in Y direction

Distance in Y direction from the reference hole/slot. Displays – value in the down side or + value in the upper side based on the reference position. In case of the reference hole/slot, displays –.

⑩ Hole/Slot


Hole


Slot/Notch

⑪ Display the side of hole/slot and change the reference

Displays whether the hole/slot is position in left or right side base on the box center.

When there are more than 2 Holes/Slots in one side, the closest Hole/Slot to lens shape becomes the reference. When you touch the other hole/slot icon, the hole/slot becomes the reference.

Touch the button Leader, the list of hole/slot will be sorted by the side


Reference hole/slot in the left side based on the box center

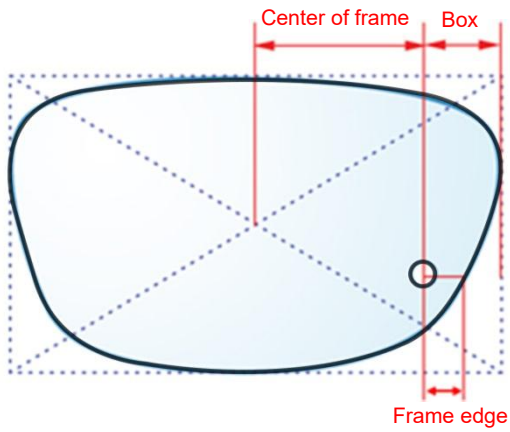

Hole/Slot in the left side based on the box center


Reference hole/slot in the right side based on the box center

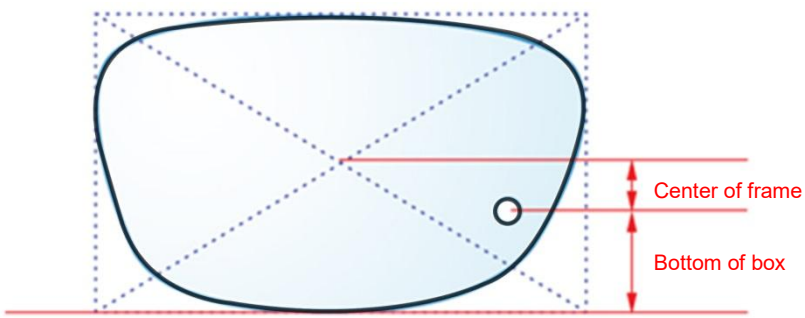

Hole/Slot in the right side based on the box center

NOTE

- Display options for X coordinate

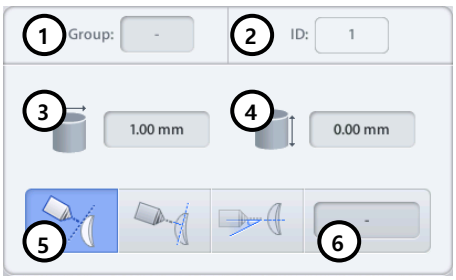


- Display options for Y coordinate



6.6.6. 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 selectedn hole / slot does not belongs 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

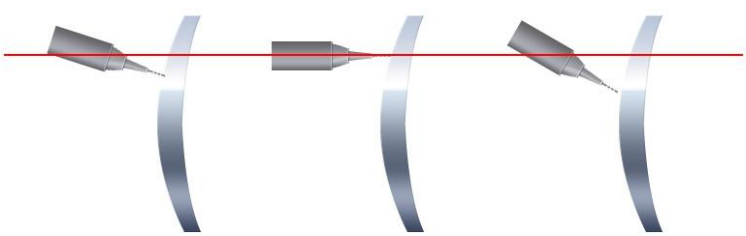

Auto (rear): drill with the angle of perpendicular to the lens rear


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

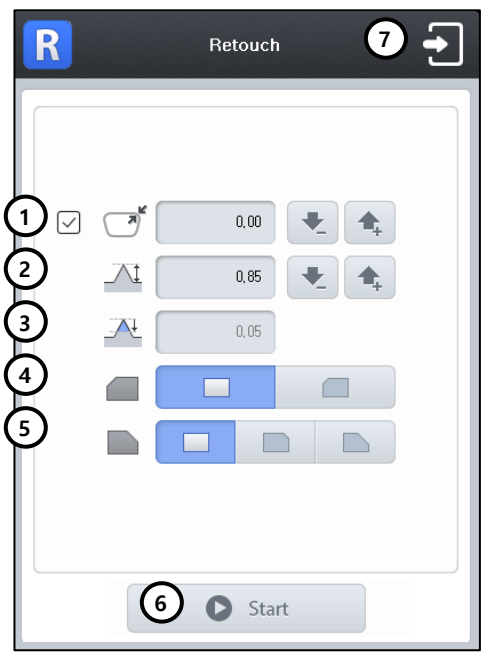


[Auto-front (perp. to the lens front)] [Manual 0°] [Manual 30°]

6.7. Retouch Mode

If the processed lens is too large to be to the frame, you can process the lens again with the Retouch Mode. The menu will be changed by the edging option.

6.7.1. Bevel



① Retouch Size(-2.0 ~ 0.0mm) - Input retouch size
(You can skip finishing and polishing by unchecking the check box)

② If the groove of frame is shallow, you can decrease the height of the bevel, the size will be reduced too. You can modify only one option of the size or the bevel height in one cycle.

③ Blunt bevel height

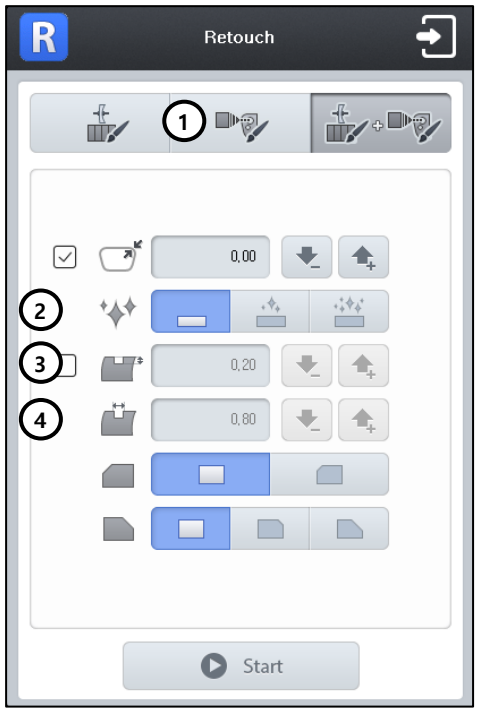
④ Front Safety Bevel

⑤ Rear Safety Bevel

⑥ Start retouch process

⑦ Cancel retouch mode

6.7.2. Rimless + Drill (Hole/Slot)



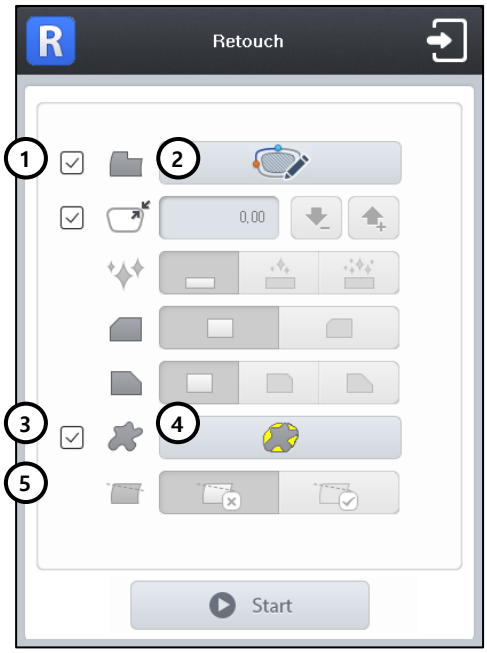
① Retouch mode seleciton – Shape Retouch, Drill Retouch, Shape and Drill Retouch

② Activate/Cancel Polishing - You can activate polishing even if the lens has not been polished before.

③ Grooving Depth - You can activate grooving as you input the groove depth value after selecting the check box.

④ Grooving Width – Increase width of grooving, Warning will be displayed when the lens is thin compared to grooving width.

6.7.3. Step bevel + Scan & Cut



① Add step bevel process to the retouch process by checking the check box button.

② Start step bevel editor. You can modify polish, safety bevel and inclined cut option in the editor and the buttons of these option are disabled in the retouch screen.

③ Add scan & cut process to the retouch process by checking the check box button.

④ Select drilling area for retouch in the scan & cut editor.

⑤ Add inclined cut.

6.7.4. Asymmetric Bevel, Semi-U Bevel, Partial Grooving



[Asymmetric, Semi–U]



[Partial Grooving]

① Start asymmetric or semi-u bevel retouch editor.

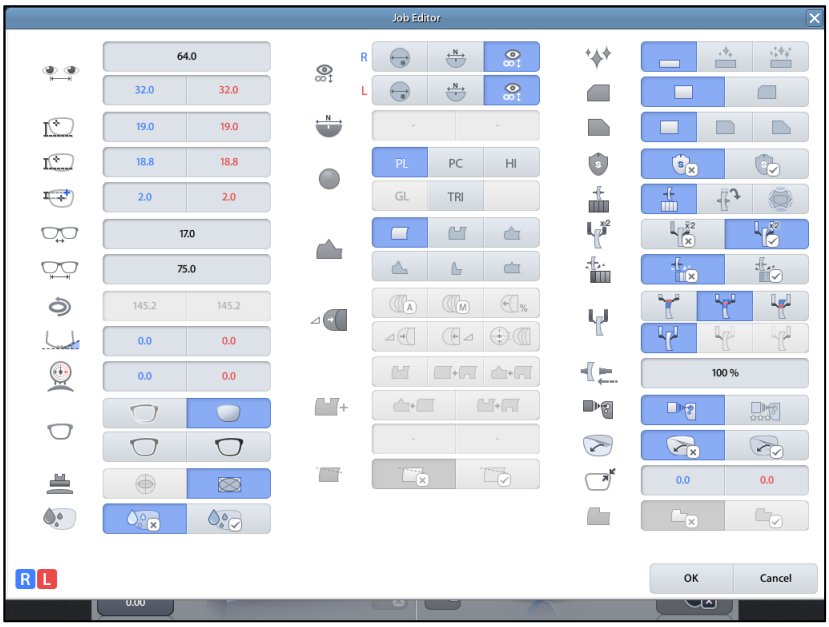
② Start partial grooving retouch editor.

NOTE

- Retouch process is enabled after completing finish process of main wheel
- When step bevel or scan & cut process is include but not completed in main process, you cannot uncheck the check box button for step bevel or scan & cut in retouch screen

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

	PD (Binocular PD, R/L Monocular PD)		Box Height
	ΔY		Mix Height
	Bridge size (DBL)		FPD
	Circumference		Frame Tilting Angle
	Frame curve		Demo lens curve
	Frame Type		Blocking mode
	Lens type		Near vision area diameter

6.8.2. Edging option

	Edging type		Lens material
	Bevel/Grooving position		Partial grooving
	Polishing		Safety mode
	Front safety beveling		Rear safety beveling
	Roughing type		Feeling after roughing
	Pre-roughing		Feeling mode & position
	Clamp pressure		Hydrophobic mode
	Size		Drilling Quality
	Step Bevel		Wrap removal
	Inclined Cut		

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. Step Bevel Editor

Step bevel editor provides professional editing function for step bevel edging. The editor screen will be displayed when you select edging type to step bevel or press the editor button ( ) on the bottom of the main screen.



6.9.1. Step Bevel Processing Mode

You can select the step bevel processing mode by option buttons.

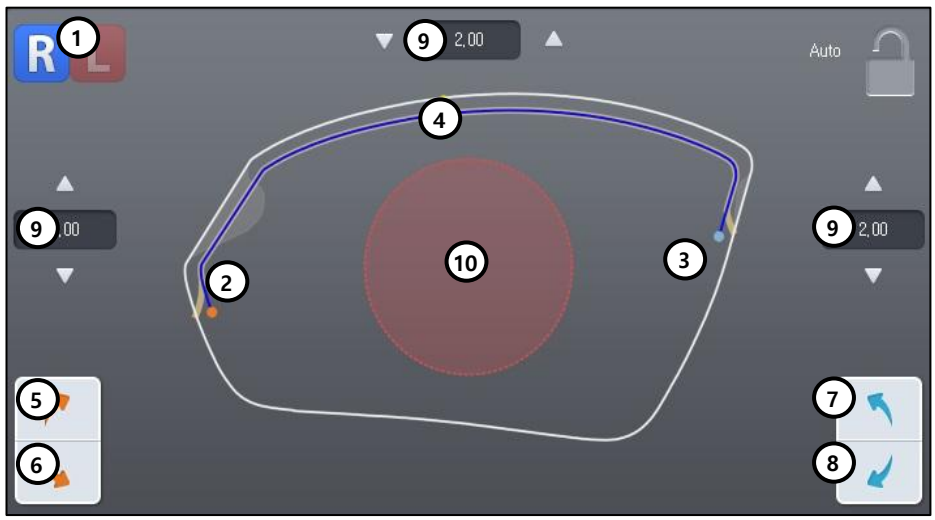


Partial Step Bevel : Process user selected region (For half frame goggle)



Full Step Bevel : Process whole region (For full frame goggle)

6.9.2. Partial Step Bevel Editing Area



① Side selection

② The start point of step bevel region (Orange circle)

③ The end point of step bevel region (Blue circle)

④ Current editing position (White rectangle)

⑤ Move start point clockwise

⑥ Move start point counterclockwise

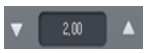
⑦ Move end point counterclockwise

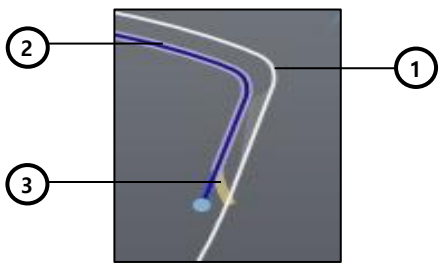
⑧ Move end point clockwise

⑨ Step bevel depth input

⑩ Edging impossible area

NOTE

- In case of partial step bevel mode, you can enter depth value into three (top/left/right) reference direction. (unit: mm)
- Use the step button() to fine-tune the depth value. (1 step = 0.05mm)
- Display color means as follows:



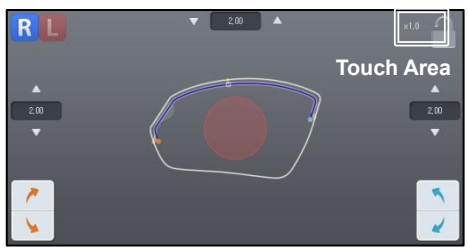
① White – Edging shape by main wheel

② Blue – Step bevel region selected by user

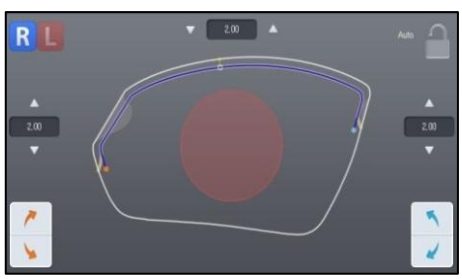
③ Yellow – Final result of step bevel edging

NOTE

- Touch the lens shape area, then the editing position moves to the touched area.
- To see the shape in actual size, press the upper right icon.

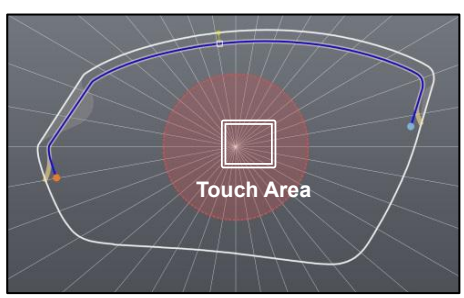


[Actual measurement]

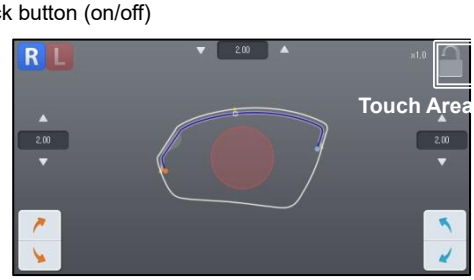


[Auto – Shape resized to fit to the screen)

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



- Touch screen lock button (on/off)



6.9.3. Partial Step Bevel Option



① Angle of the start/end point

② Step bevel finishing mode (Auto/Safety)

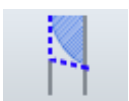
③ Inclined cut mode on/off

NOTE

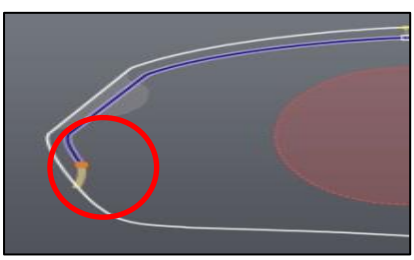
- Start point and end point are represented by the angle. And the angle starts with the 6 o'clock position from 0 degree in a clockwise direction.
- Step bevel finishing mode



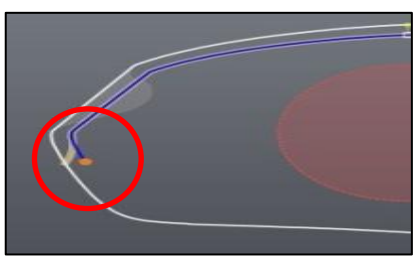
[Auto mode]



[Safety mode]



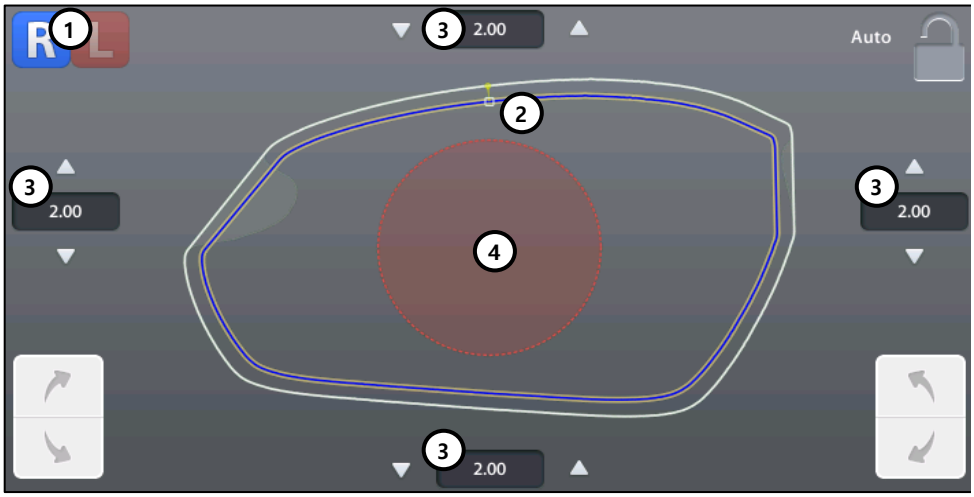
[Auto mode edging result]



[Safety mode edging result]

- In case of auto mode, both end points of lens will be cut for fitting to frame without any additional user finishing work.
- In case of safety mode, both end points of lens will be cut as minimum amount. Additional finishing work by user is necessary.
- If the inclined cut mode turned on, flat surface of lens will be processed with 12 degree of slope.

6.9.4. Full Step Bevel Editing Area



① Side selection

② Current editing position (White rectangle)

③ Step bevel depth input

④ Edging impossible area

6.9.5. Full Step Bevel Option



① Step bevel depth batch input

② Inclined cut mode on/off

NOTE

- In case of full step bevel mode, you can enter depth value into four (top/left/right/bottom) reference direction. (unit: mm)
- With the batch input button you can enter all reference depth values at a time.

6.9.6. Edging Type

You can select the type of edging.



① Flat

② Grooving

③ Bevel

NOTE

- The grooving type has additional option for width & depth.



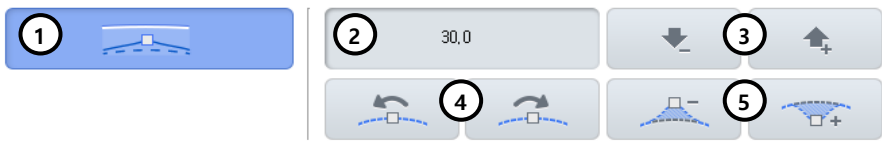
- Press the grooving button again to set partial grooving.

- The bevel type has additional option for Blunt bevel.



6.9.7. Fine Tuning

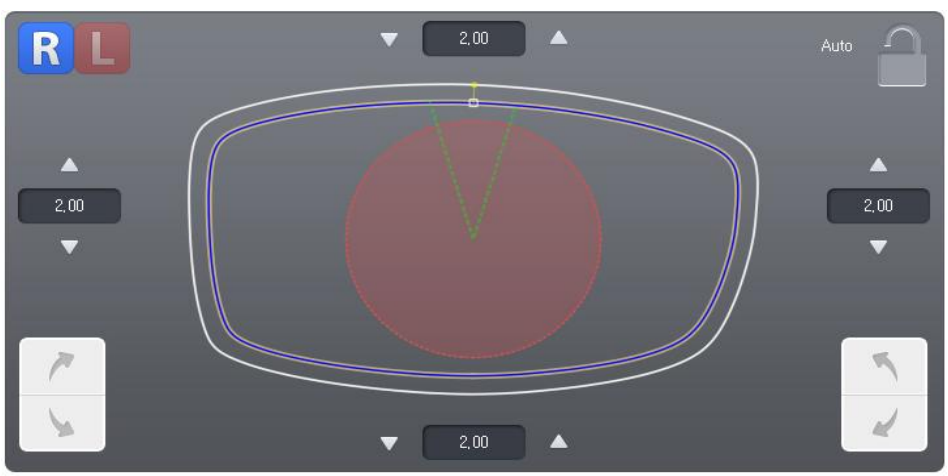
Fine tuning function is used for modifying step bevel shape more delicately.



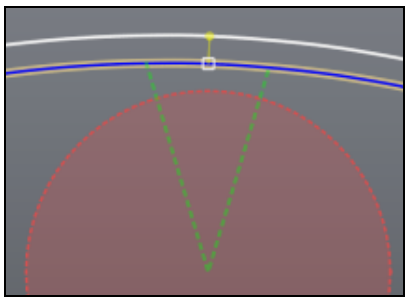
① Fine tuning function on/off
② Editing scope
③ Increase/decrease editing scope
④ Move editing position (Counterclockwise/Clockwise)
⑤ Shape modification (Convex/Concave)

NOTE

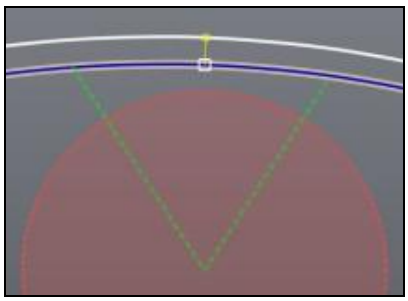
- Editing area with fine tuning function activated



- Editing scope value is represented by the angle and the scope can be changed by increase/decrease buttons ().

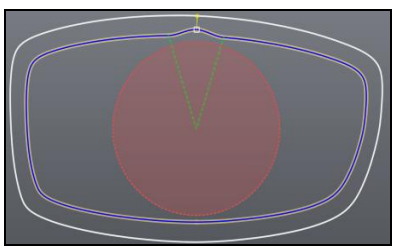


[30° scope]

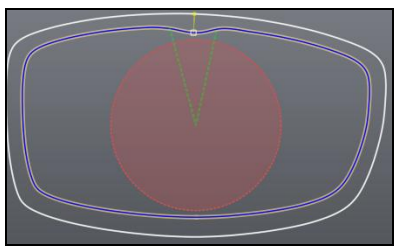


[60° scope]

- Move editing position to target and confirm scope. Then modify step bevel shape by the modification() buttons.

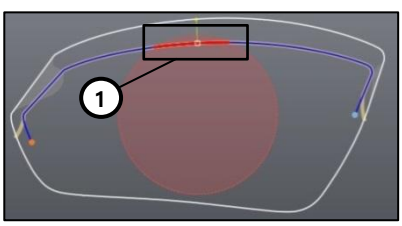


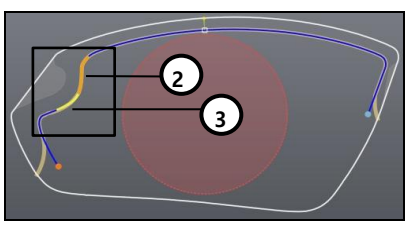
[Convex editing result]



[Concave editing result]

- The color of the step bevel shape can be changed according to the editing result and the meaning of the color is as follows:





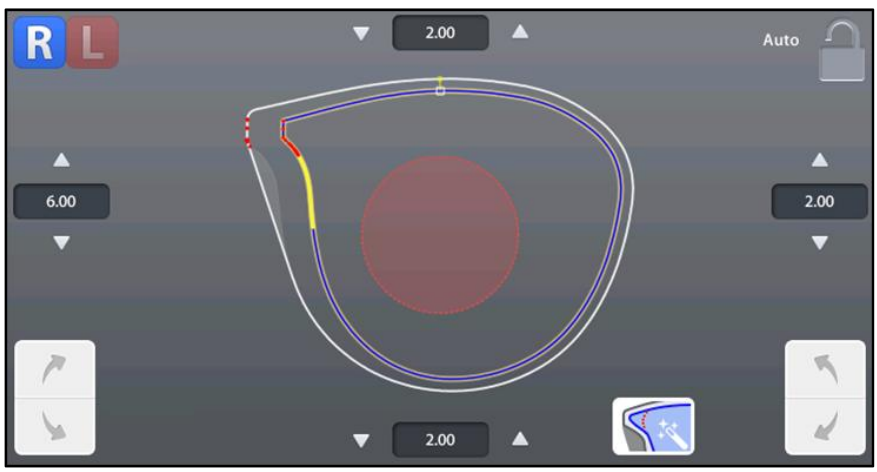
① Red : Step bevel shape invades edging impossible area or exceeds depth limit. In this situation, edging is impossible.

② Orange : Because of wheel interference the step bevel shape is modified properly. Edging is possible.

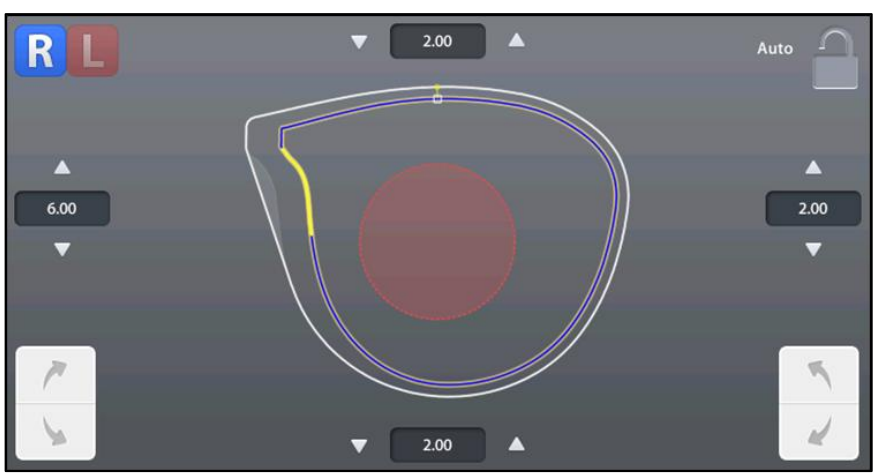
③ Yellow : This area will be cut during retouch process. (This occurs usually when editing scan & cut job)

NOTE

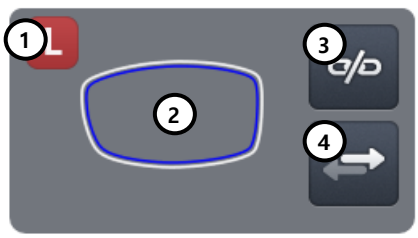
- When there is red line in the editor, button will be shown in the right bottom and you can edit manually using the edit button or modify the red line automatically by touching the button.



- After touching button, the red line and the button will be disappeared



6.9.8. Preview



① Opposite side display

② Edging shape of opposite side

③ R/L sync on/off

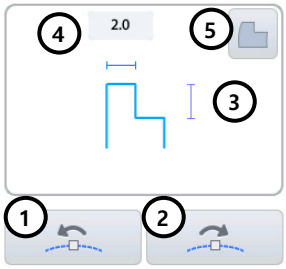
④ Copy to opposite side

NOTE

- Preview screen always shows opposite side data.
- When R/L sync is turned on, editing result will be applied to both side.
- 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.
- R/L sync button will be disabled after edging process is done.

6.9.9. Current Position Information

It displays the information of current position. You can input additional information for step bevel shape.



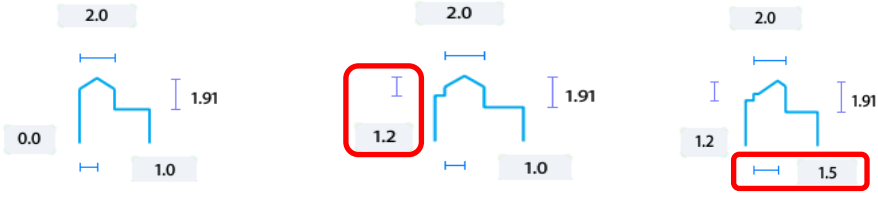
① Move editing position counterclockwise
② Move editing position clockwise
③ Step bevel depth
④ Step bevel front width input
⑤ Step bevel shape (Rear, Front, Both)

NOTE

- Current position information shows lens processing position with the assumption that the lens has sufficient thickness. The actual processing results may vary depending on the lens thickness.
- If the edging type is flat in the full step bevel mode, you can set additional front height.

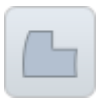


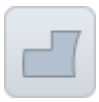
- If the edging type is bevel in the full step bevel mode, you can set additional front height and bevel position. (The bevel position can be set within front width range)



- If you set the front height value, you can adjust bevel position in the manual position modification screen displayed during the edging process.
- In case of partial step bevel mode, main wheel edging type is always flat.
- All the input values of the preview area are applied to the entire region rather than the current position.

- The step bevel depth value shown in the preview area is calculated perpendicular to the edging surface.
- Shape of step bevel can be selected according to the type of the frame and the lens to be processed.


Rear step bevel


Front step bevel


T-bevel (Both)

- In case of 'Front step bevel' and 'T-Bevel (Both)', you can adjust bevel position in the manual position modification screen displayed during the edging process.

6.9.10. Safety beveling & Polishing option



① Front safety beveling
② Rear safety beveling
③ Polishing

NOTE

- Safety beveling & polishing may not be available because of the step bevel settings so these options are must be set in the step bevel editor instead of the main screen.

		Front Safety Beveling	Rear Safety Beveling	Polishing
Partial Step Bevel		O	O	O
Full Step Bevel	Flat	O	X	O
	Bevel	O	X	X

- Safety beveling & polishing will be applied on the edging area which processed by main wheel.

6.9.11. Reset & Apply Button



① Reset Button – Cancel the changes and return to initial state

② Apply button – Apply changes and close the editor

NOTE

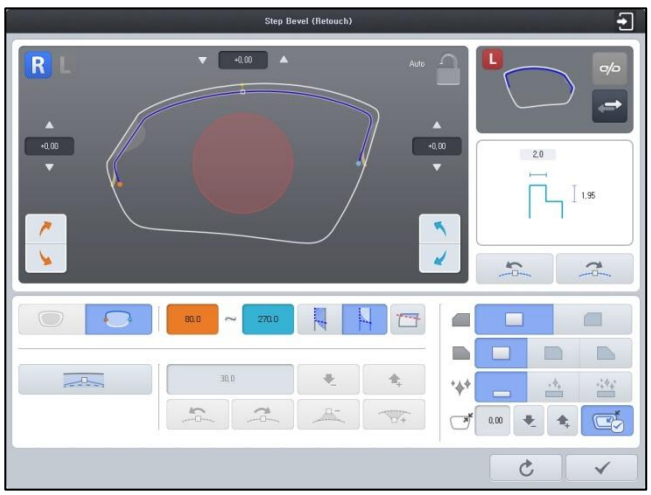
- When you apply the changes if the result shape is not possible to edging or expected to be modified during the processing, a warning message will be displayed.
- If you want to cancel editing, press the exit button( ) on the right top of the screen.

CAUTION

The maximum depth of step bevel is 6mm and when the curve of a lens is larger than 6 curve, the maximum depth is 2.5mm.
(La profondeur maximale du biseau d'étape est de 6 mm et lorsque la courbe d'une lentille est supérieure à 6 courbes, la profondeur maximale est de 2,5 mm.)

6.9.12. Retouch Mode

You can set up the retouch options by running the step bevel editor in the retouch mode.



Retouch Option



① Retouch size input

② Decrease retouch size

③ Increase retouch size

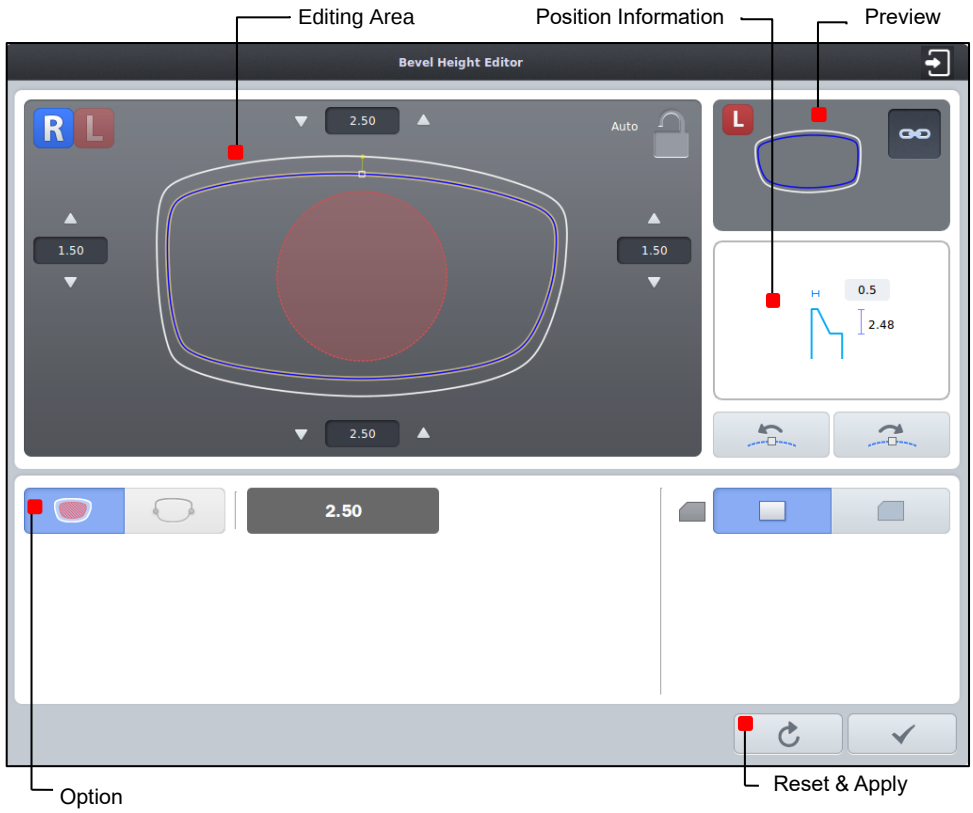
④ Retouch Sync on/off (Apply retouch size to step bevel shape)

NOTE

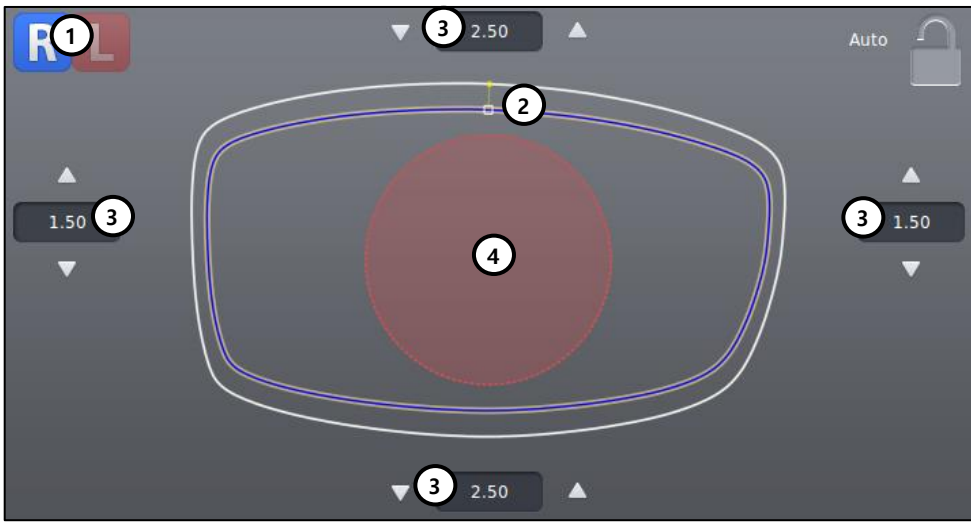
- In the retouch mode, the editing function is limited to the range that can retouch the lens.
- If the retouch sync is turned on, retouch size value applied to the step bevel shape for size compensation.
- If the retouch sync is turned off, step bevel shape will be preserved what it edited.

6.10. Bevel Height Editor

Bevel height editor provides professional editing function for asymmetric/semi-u bevel. The editor screen will be displayed when you select edging type to asymmetric/semi-u or press the editor button () on the bottom of the main screen.



6.10.1. Editing Area



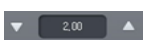
① Side selection

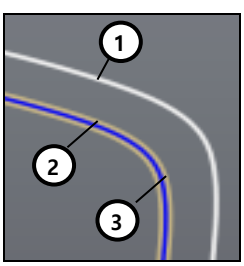
② Current editing position (White rectangle)

③ Bevel rear height input

④ Edging impossible area

NOTE

- You can enter bevel rear height value into four (top/left/right/bottom) reference direction. (unit: mm)
- Use the step button() to fine-tune the depth value. (1 step = 0.05mm)
- Display color means as follows:



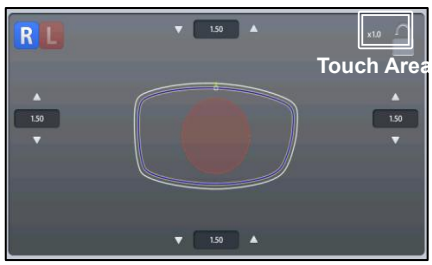
① White – Edging shape

② Blue – Bevel rear height position

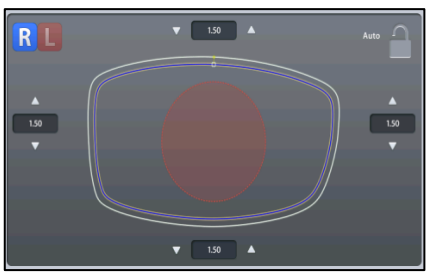
③ Yellow – Final result of bevel rear height

NOTE

- Touch the lens shape area, then the editing position moves to the touched area.
- To see the shape in actual size, press the upper right icon.

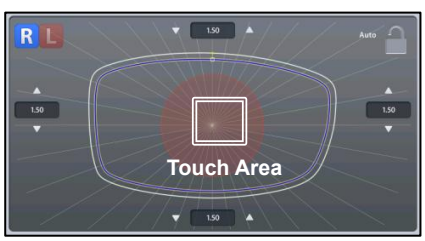


[Actual measurement]

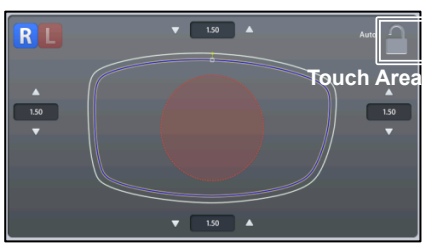


[Auto – Shape resized to fit to the screen)

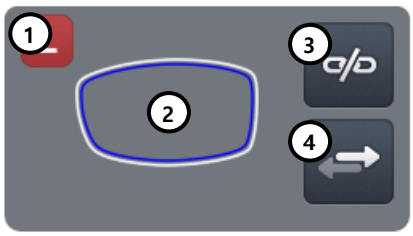
- Angle guideline pops up when you touch the center of the shape. (Guideline spacing - 10 °)



- Touch screen lock button (on/off)



6.10.2. Preview



① Opposite side display

② Edging shape of opposite side

③ R/L sync on/off

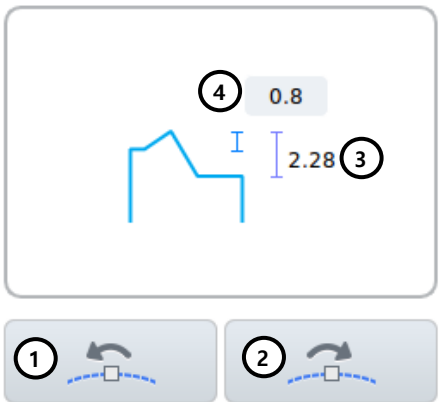
④ Copy to opposite side

NOTE

- Preview screen always shows opposite side data.
- When R/L sync is turned on, editing result will be applied to both side.
- 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.
- R/L sync button will be disabled after edging process is done.

6.10.3. Current Position Information

It displays the information of current position. You can input additional information for bevel shape.



① Move editing position counterclockwise

② Move editing position clockwise

③ Bevel rear height

④ Asymmetric bevel front height input (Semi-U bevel front width input)

NOTE

- Current position information shows lens processing position with the assumption that the lens has sufficient thickness. The actual processing results may vary depending on the lens thickness.
- In case of semi-u bevel, you can set front width.





- Front input value of the preview area is applied to the entire region rather than the current position.

6.10.4. Edging Option



① Editing mode

② Bevel rear height batch input

③ Front safety beveling

NOTE

- Currently the editor supports only full region editing mode.
- With the batch input button you can enter all reference height values at a time.

6.10.5. Reset & Apply Button



① Reset Button – Cancel the changes and return to initial state

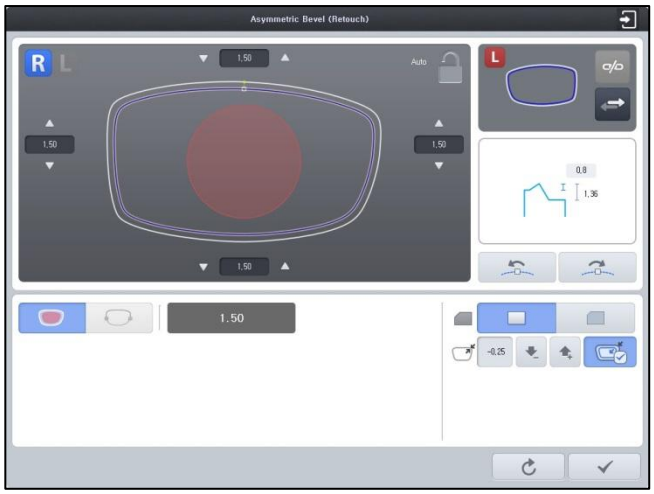
② Apply button – Apply changes and close the editor

NOTE

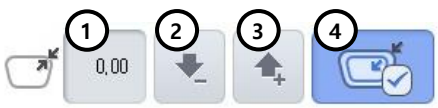
If you want to cancel editing, press the exit button( ) on the right top of the screen.

6.10.6. Retouch Mode

You can set up the retouch options by running the bevel height editor in the retouch mode.



Retouch Option



① Retouch size input
② Decrease retouch size
③ Increase retouch size
④ Retouch Sync on/off (Apply retouch size to bevel shape)

NOTE

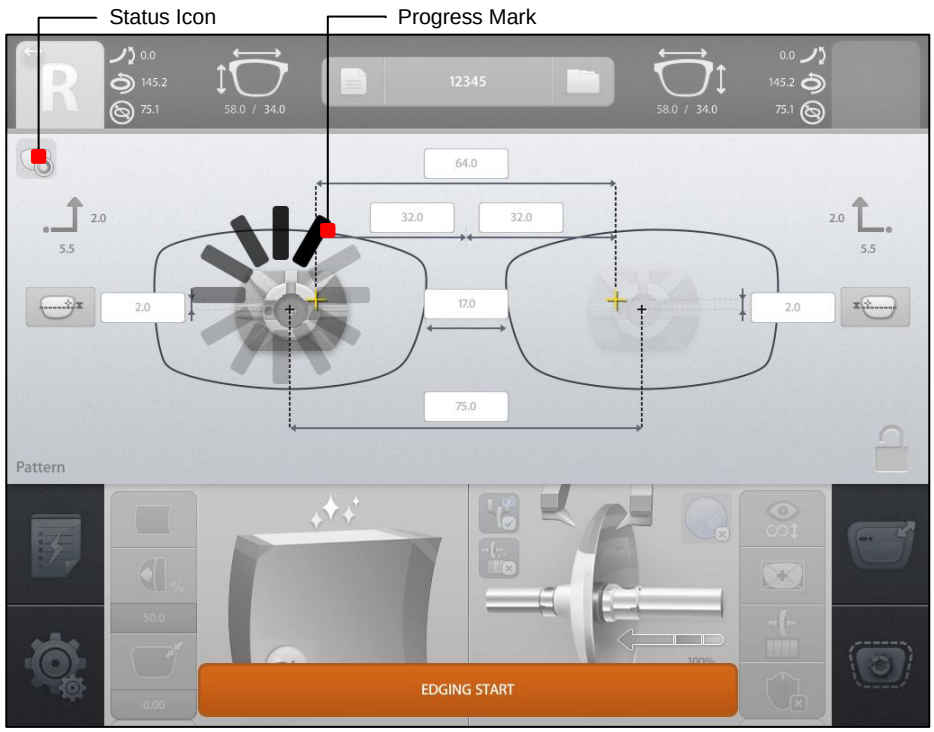
- In the retouch mode, the editing function is limited to the range that can retouch the lens.
- If the retouch sync is turned on, retouch size value applied to the bevel shape for size compensation.
- If the retouch sync is turned off, bevel shape will be preserved what it edited.

6.11. Edging Process

6.11.1. Edging Start

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

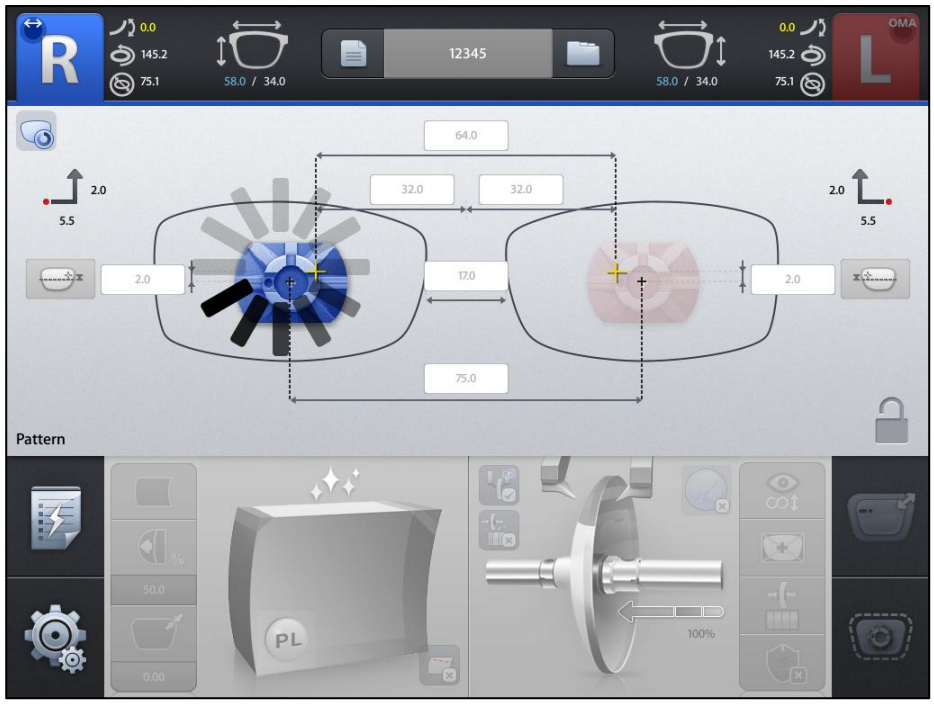
① Open the edging room window by pressing ‘WINDOW’ button.
② Release the clamp by pressing ‘CLAMP’ button, and then set blocked lens.
③ Hold the lens by pressing ‘CLAMP’ button.
④ Start process the selected side by pressing ‘START’ button.



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.

6.11.2. Edging Screen

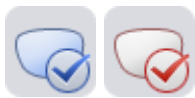


NOTE

- Some buttons are unlocked after a while. Then, you can handle another job with the 'Job Manager'.
- According to edging state, following icons are displayed on the screen.
  - ➢ Edging Icons



[Processing]



[Processed]

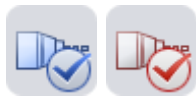
  - ➢ Drilling Icons



[Drilling assignment]



[Drilling processing]



[Drilling Processed]

6.11.3. Edging Stop

Edging process stops by pressing the ‘STOP’ button at any time.

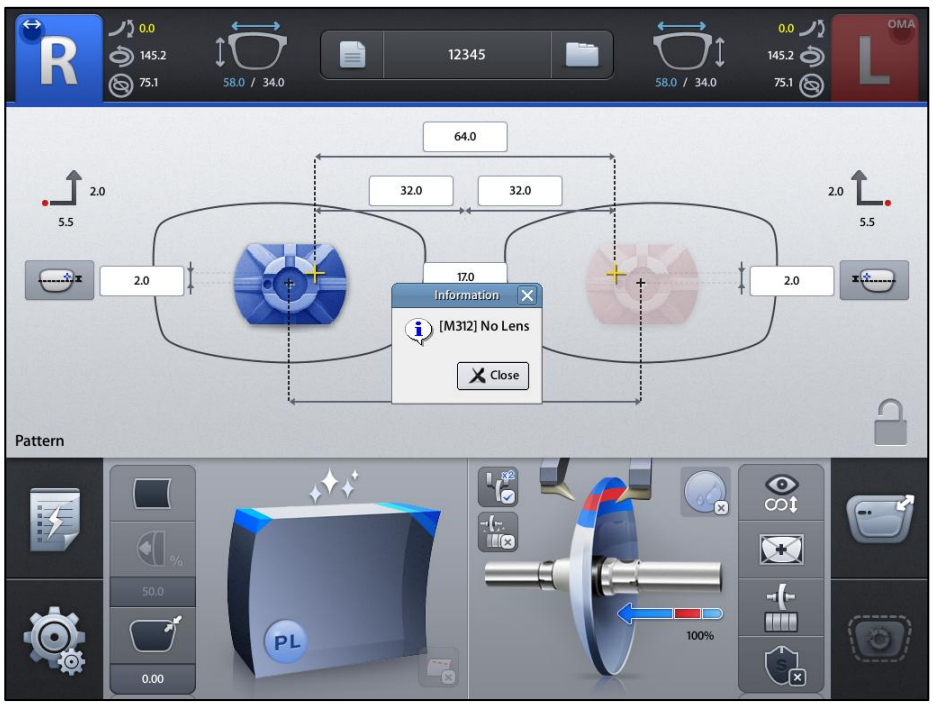


NOTE

- In case of emergency, stop the machine immediately by pressing the ‘STOP’ button.
- It needs some time to stop its working when you stop the machine while processing.
- If the machine does not stop, press the ‘STOP’ button again.

6.11.4. Edging Error

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

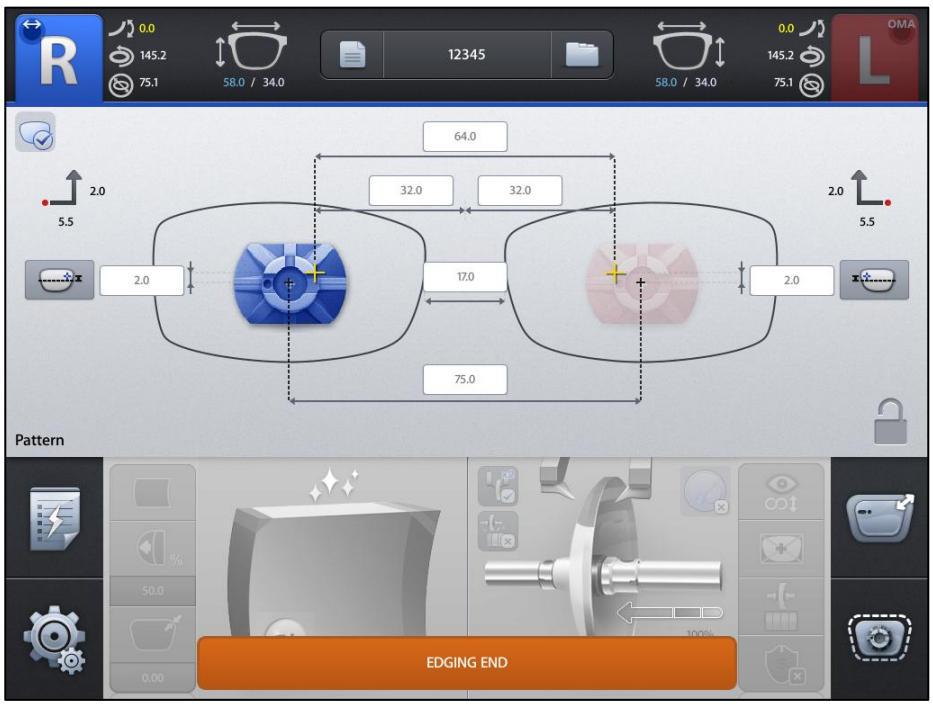


NOTE

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

6.11.5. 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 the edging room
③ Close the edging room window by pressing the ‘WINDOW’ button for safety.
④ Move on to next job.

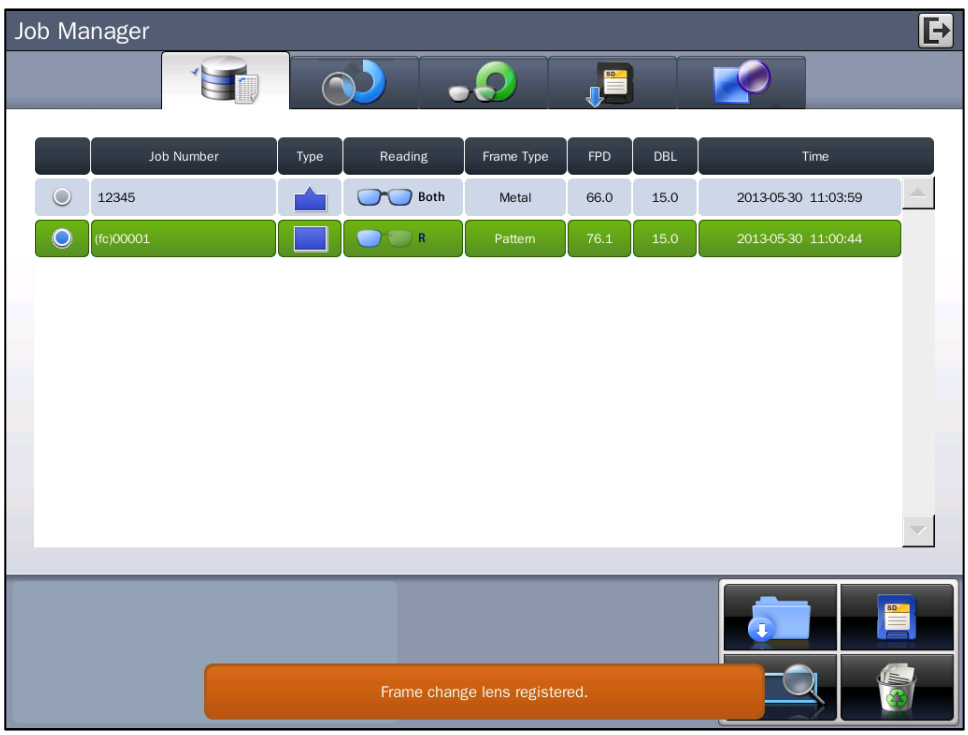
NOTE

You can make the processed lens retouched with ‘Retouch’ button.

6.12. Frame Change

6.12.1. 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 (or long 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.



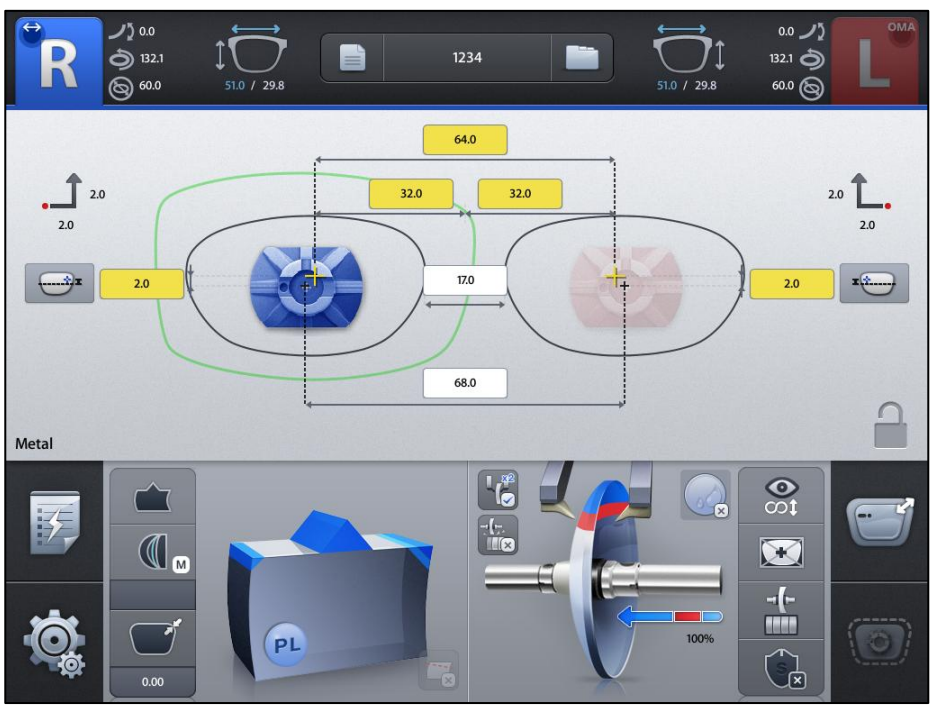
NOTE

- 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 (or long click) the job number area of the registered job.

6.12.2. 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.

6.12.3. Frame Change Procedure

① Frame reader reads the lens which will be used in frame change. (When you hold the lens at the pattern holder, you must block the lens adaptor at optical center of the lens)

② The data will be transmitted to the edger after the reading process is completed.

③ Start the job manager at the edger, select the frame change lens data transmitted in the waiting tab. And then register it as the frame change lens.

④ Frame reader reads the pattern or frame.

⑤ Start the job manager, 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.

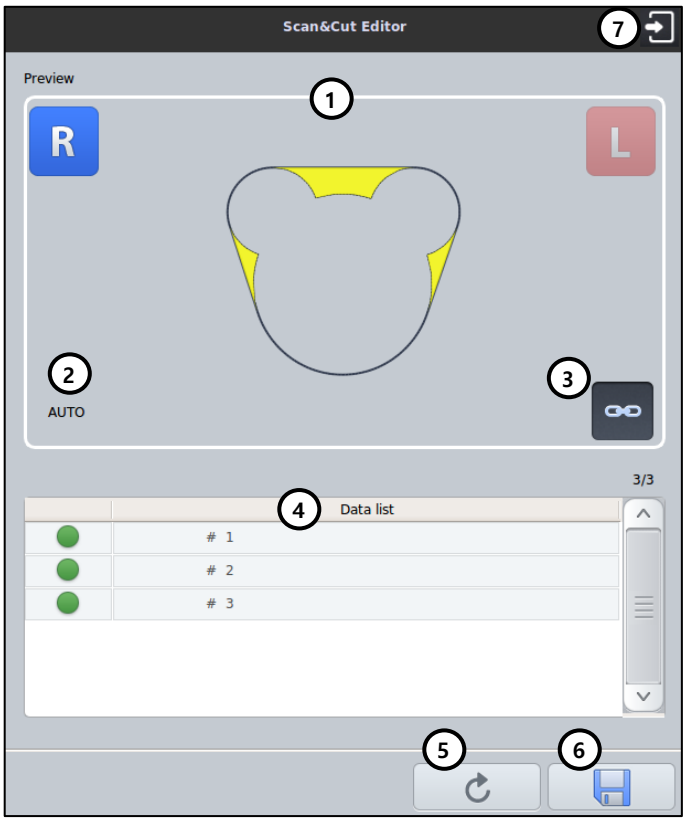
⑧ Rest procedures are same with normal edging procedures.

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.

6.13. Scan & Cut Data Editor

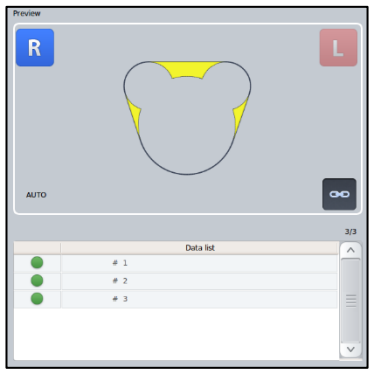
Scan & Cut data editor provides editing to drilling area by selection of user. The editor screen will be displayed when you press the digital designer button () for a while on the main screen.



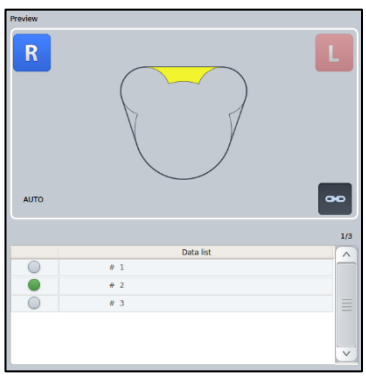
① Preview
② View ratio (auto / x1.0)
③ R/L Sync
④ Data list
⑤ Reset – Recover to original data
⑥ Save
⑦ Close

How to use Scan & Cut editor

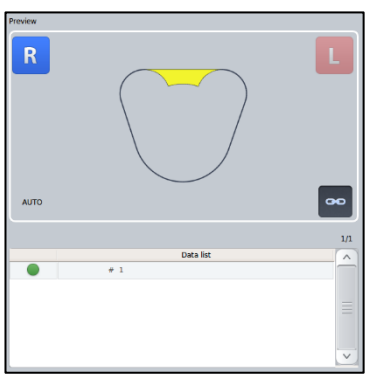
① Press the digital designer button for a while. Scan & Cut editor will be displayed.



② Select the drilling area in the data list.



③ If you want to remove the data with the exception of selected data, press the save button. It will update current data. (Reset to original data is possible before the completion of editing.)



④ Press the close button to finish editing.

7
Configuration

7.1. Configuration of Frame Reader

How to start the configuration

① Press these buttons sequentially : ‘MENU’ >> ‘BOTH’

② Use the ‘MENU’ and ‘FRAME’ button to navigate all setting options. (‘MENU’: main-items / ‘FRAME’: sub-items)

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.

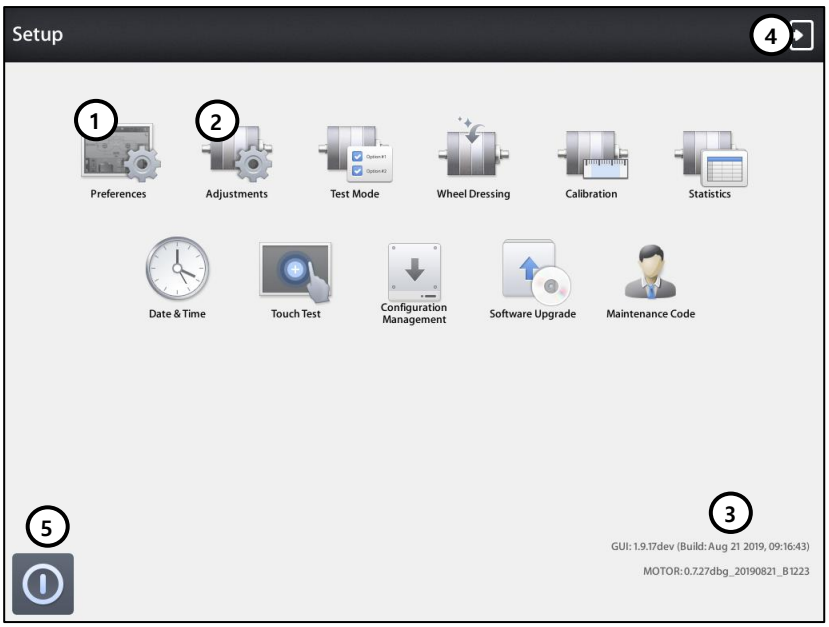
List of user options

- 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
⑤ Shutdown

NOTE

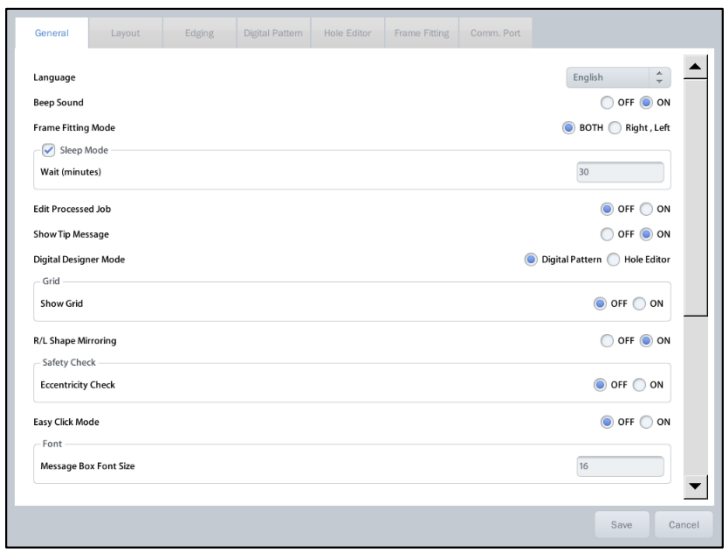
- Refer to ‘Chapter 8. System Maintenance’ for the other functions.
- Please be careful not to suddenly turn off the power while using the device.
- Unexpected shutdowns can cause internal configuration data corruption.
- Please press the shutdown button on the menu screen before turning off the power switch.

7.2.1. Preferences

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

General

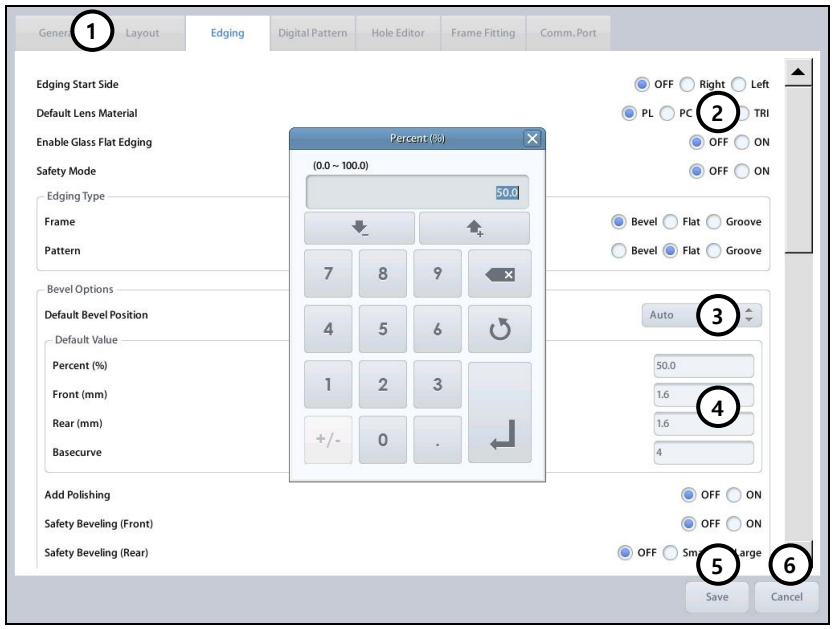
Default settings for user interface



- 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 – Turn on tip message.
- Digital Designer Mode – Sets digital designer startup screen.
- Grid – Shows or hides gridlines of main screen.
- R/L Shape Mirroring – Mirroring the shape (not the size).
- Safety Check – Checks whether edging can be done without mechanical interference.
- Eccentricity Check – Displays warning message if blocking position is too eccentric.
- Easy Click Mode - Enable Easy Click hole editing mode.
- Message Box Font Size - Set message dialog box font size.
- Config DB History – Displays configuration data backup/restore date.
- Export Options - Set default job file format and options.

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

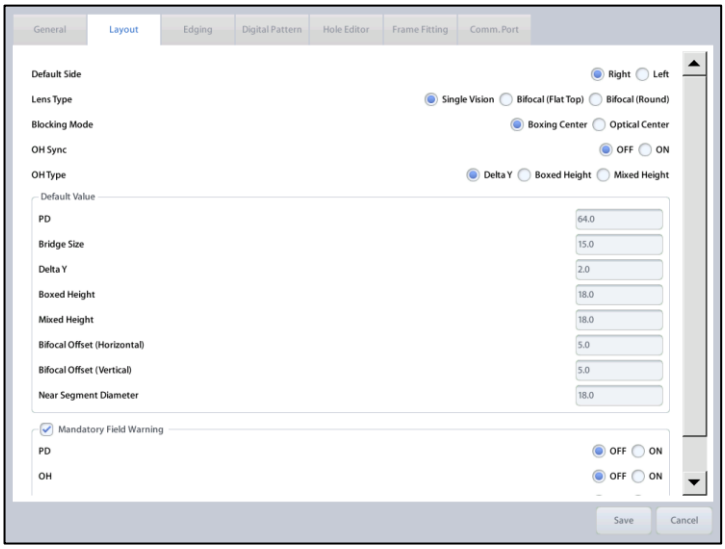
④ Input Box – Input value to be used by the program

⑤ OK Button – Save the changes

⑥ Cancel Button – Cancel the changes

Layout

Default settings for main screen layout option



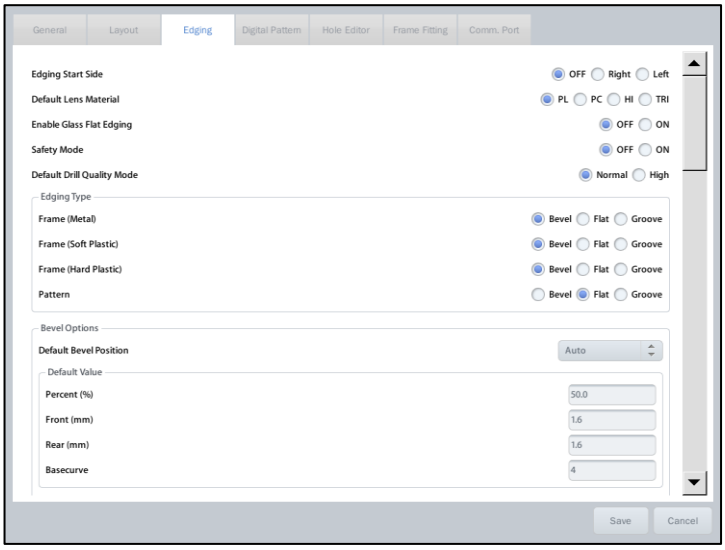
- Default Side – Set default editing side. (For tracing data or internal data)
- Lens Type – Set default layout mode of main screen.
- Blocking Mode – Set default blocking method.
- OH Sync – Apply OH value R/L simultaneously.
- OH Type – Set default OH display method.
- Default Value – Set default value 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

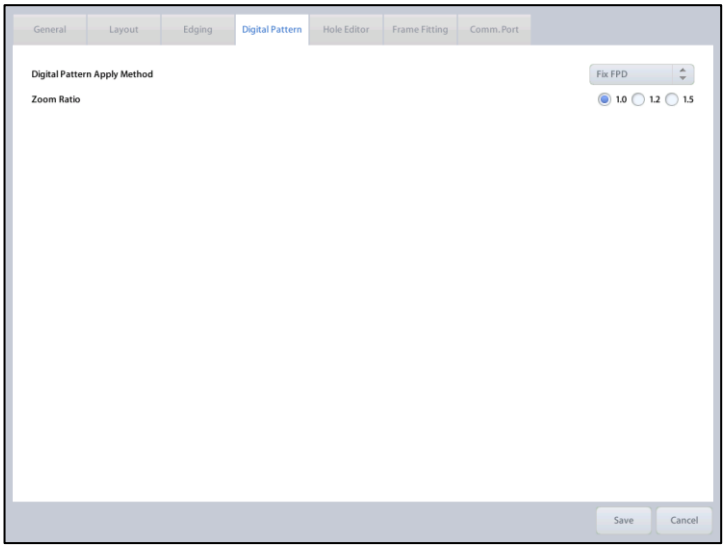
Default settings for main screen edging option



- 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.
- Default Drill Quality Mode - Set default drill quality.
- Edging Type – Set default edging type of each frame material (Frame, Pattern).
- Bevel Options – Set default values for bevel edging.
- Rimless Options – Set default values for rimless edging.
- Safety Bevel Amount – Set default safety bevel amount.
- Asymmetric Bevel Default Value – Set default values for Asymmetric bevel.
- Mini Bevel Default Value – Set default values for Mini bevel.
- Semi-U Bevel Default Value – Set default values for Semi-U bevel.
- Step Bevel Default Value – Set default values for Step bevel editor.
- Feeling Outside of Bevel – Turns on feeling cycle for bevel end.
- Feeling After Roughing – Adds additional feeling cycle when roughing is finished.
- Pre-roughing (PC/TRI) - Adds a special roughing cycle to reduce the blank lens size to avoid interfering with the lens.
- Manual Position UI – Set default values for Manual Position UI.
- Default Roughing Mode – Set default roughing mode for each lens material.
- Hydrophobic Mode – Set default values for hydrophobic mode.

Digital Pattern

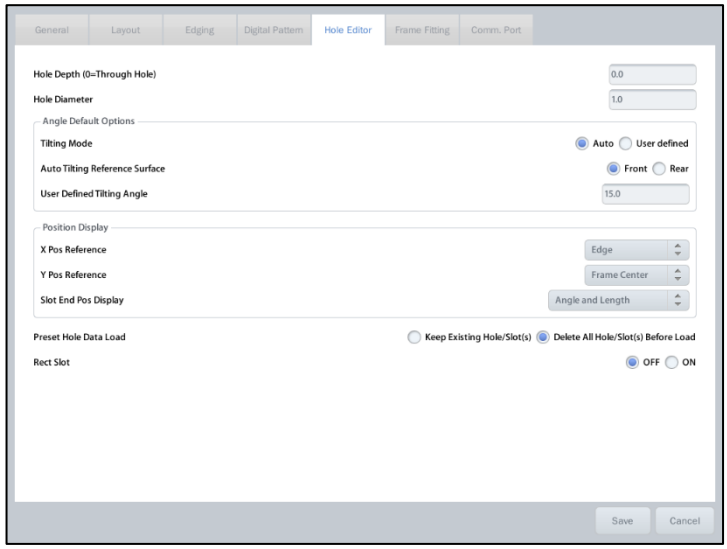
Default settings for digital pattern screen



- 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

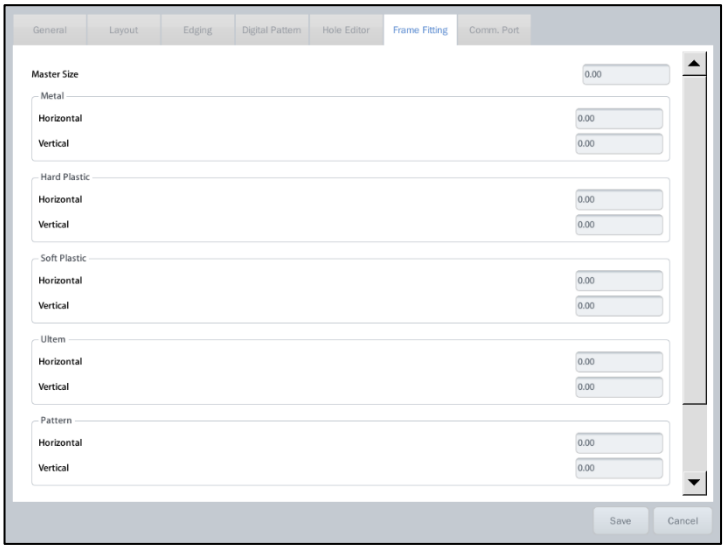
Default settings for hole editor screen



- 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.
- Slot End Pos Display - Set default slot end position display method.
- Preset Hole Data Load – Set default behavior of preset loading.
- Rect Slot – Activate rectangular shape slot.

Frame Fitting

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



- 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.
- Ultem – Input size adjustment value for ultem frame.
- Pattern – Input size adjustment value for pattern or demo lens.
- Step Bevel – Input size adjustment value for step bevel.

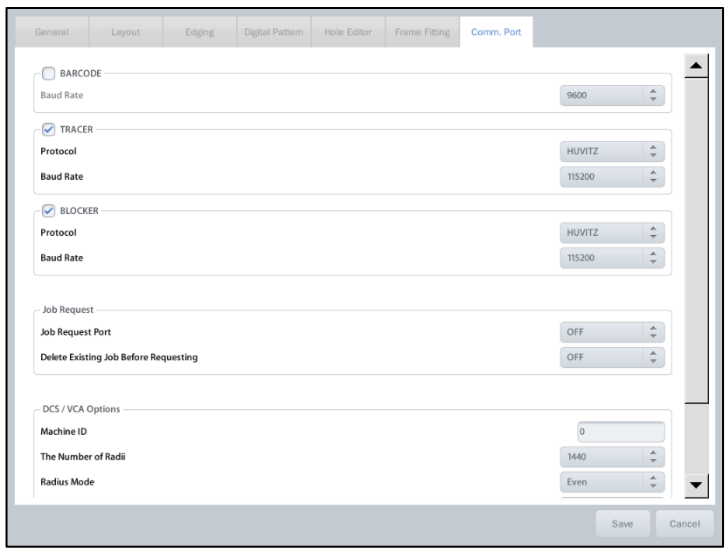
NOTE

- 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 – Use the barcode reader.
  - Baud Rate – Set communication speed.
- TRACER – Use tracer port.
  - Protocol – Set communication protocol.
  - Baud Rate – Set communication speed.
- BLOCKER – 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

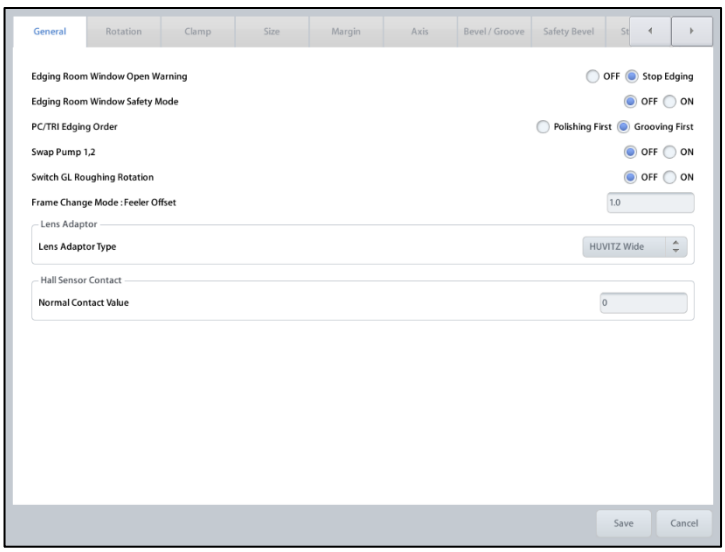
You can adjust the options related to edging process.

⚠ CAUTION

- Adjustment settings are closely related to the edging quality, so keep the system default values as much as possible.
  (Les paramètres de réglage sont étroitement liés à la qualité de la bordure, donc conservez autant que possible les valeurs par défaut du système.)
- If you want to change adjustment values, ask to the service technician of HUVITZ or the technician authorized by HUVITZ.
  (Si vous souhaitez modifier les valeurs de réglage, adressez-vous au technicien de service HUVITZ ou au technicien agréé par HUVITZ.)
- Please backup the configuration data to your SD card before you change adjustment values.
  (Veuillez sauvegarder les données de configuration sur votre carte SD avant de modifier les valeurs de réglage.)
- If the edging does not process well because of the wrong adjustment value, you can return to the previous state.
  (Si la bordure ne fonctionne pas correctement en raison d'une valeur de réglage incorrecte, vous pouvez revenir à l'état précédent.)

General

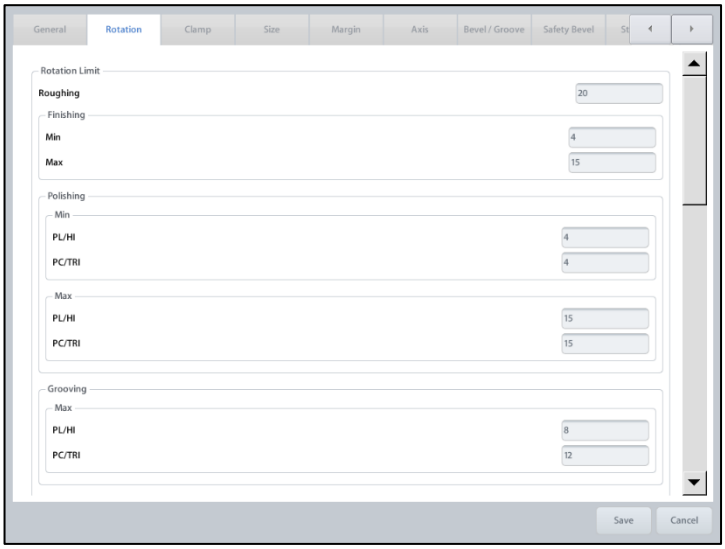
Set basic edging options.



- 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.
- Switch 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 Type – You can choose the type of lens adaptor. (Size can be entered manually if necessary.)
- Hall Sensor Contact : Normal Contact Value – Set default value of hall sensor contact.

Rotation

You can set the number and the speed of rotation.



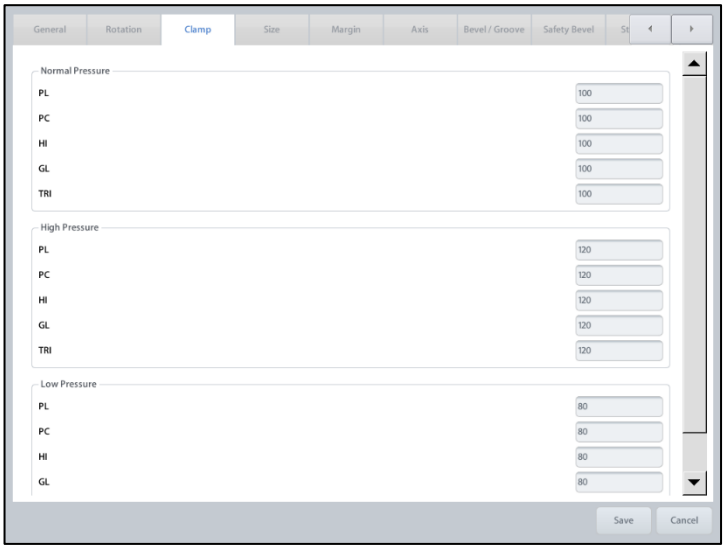
- Rotation Limit – Number of rotation is set according to the processing steps and lens materials.
- Rotation Speed – Speed of rotation is set according to the processing steps and lens materials.

NOTE

Be careful not to input too high rotation speed value. Fast rotation may cause axis shift problem.

Clamp

You can set default clamping pressure value.



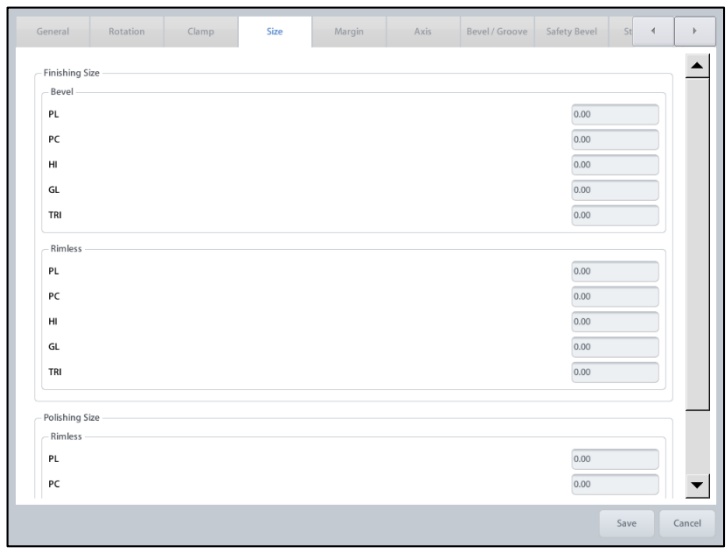
- Normal – Value for Normal Pressure Mode.
- High – Value for High Pressure Mode.
- Low – Value for Low Pressure Mode.

NOTE

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

Size

You can adjust the edging size.



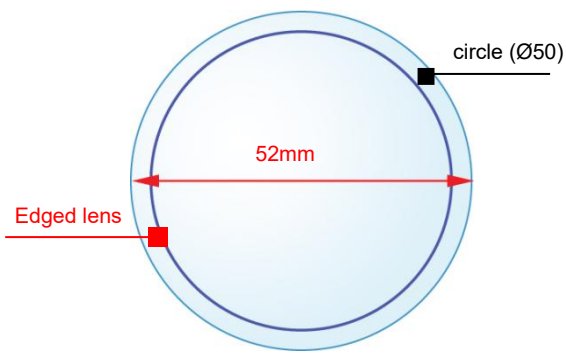
- Finishing Size – Size adjustment value for finishing step.
- Polishing Size – Size adjustment value for polishing step.

NOTE

- How to adjust finishing size
  ① Load internal circle pattern(Ø 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.

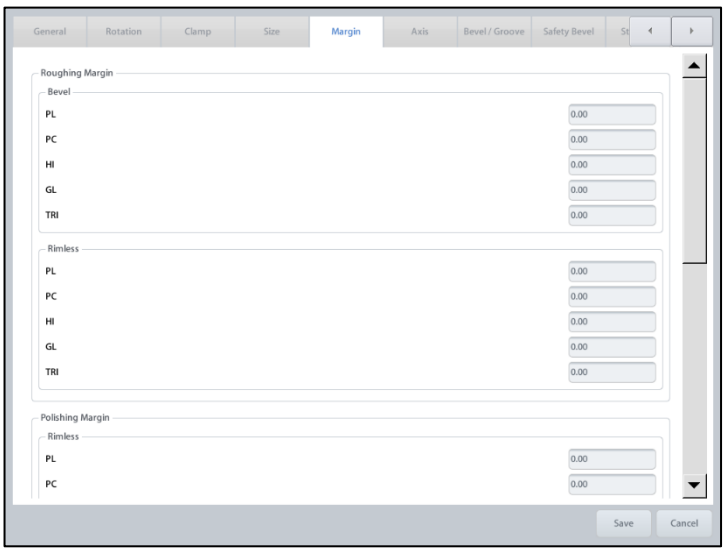
- How to input adjustment value (Flat edging without polishing, PL lens).
  If the size of internal circle (Ø50) data is 52mm, input -1.0 for Finishing Size → Rimless → PL value.



- 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 ±0.1mm.

Margin

You can set margin for the following edging steps.



- Roughing Margin – Margin value for roughing.
- Polishing Margin – Margin value for polishing.

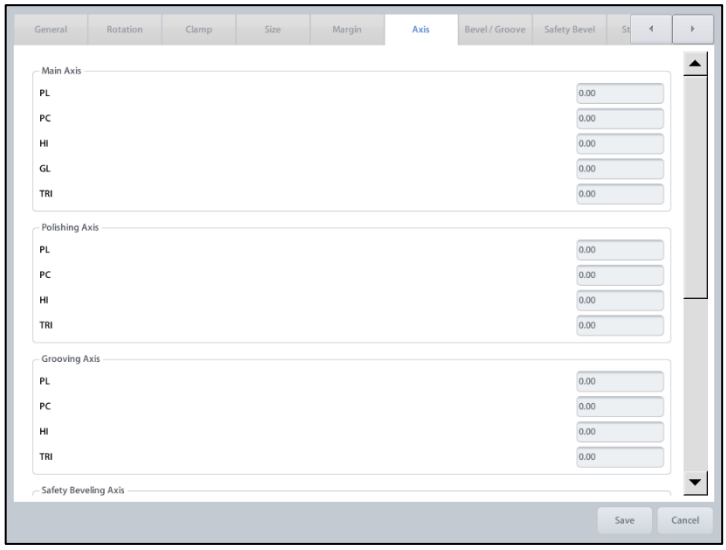
CAUTION

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.

(Les valeurs de marge ont une influence sur le matériau de la lentille ou la qualité des bords. Il est donc recommandé de ne pas modifier autant que possible les paramètres par défaut.)

Axis

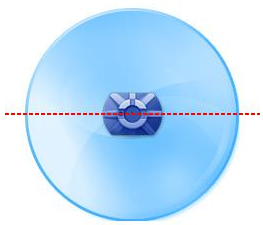
You can adjust axis shift.



- 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 axis.

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.

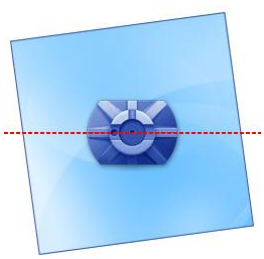


  ③ Execute flat edging, check the main axis, and input the adjustment value.
  ④ Execute all types of edgings for all types of lens materials, check the axis, and input the adjustment value.

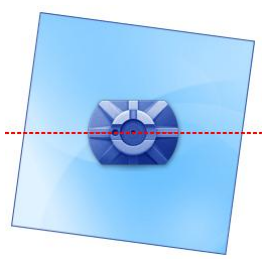
- The adjustment unit is degree(°).

- Add (–) value to shift axis clockwise.

- How to adjust main axis value.

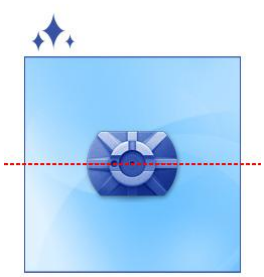


[Add (-) value]

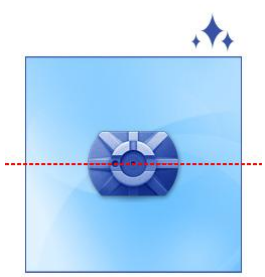


[Add (+) value]

- How to adjust polishing axis value

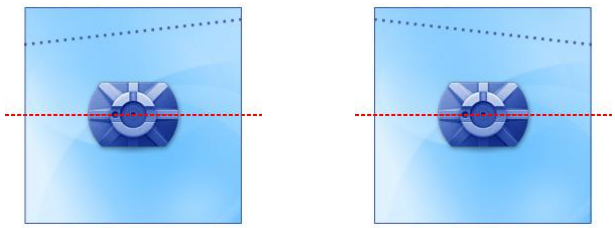


[Add (-) value]



[Add (+) value]

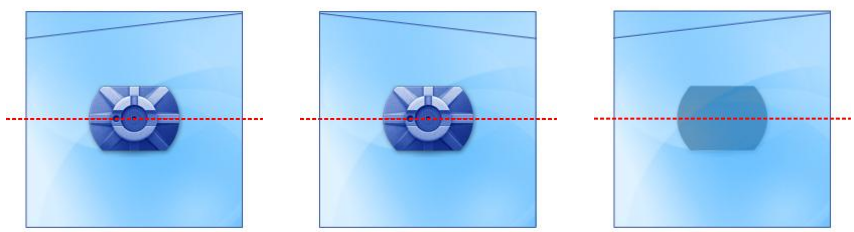
- How to adjust grooving axis value



[Add (-) value] [Add (+) value]

- How to adjust safety beveling axis value

[Front] [Rear] [Front]

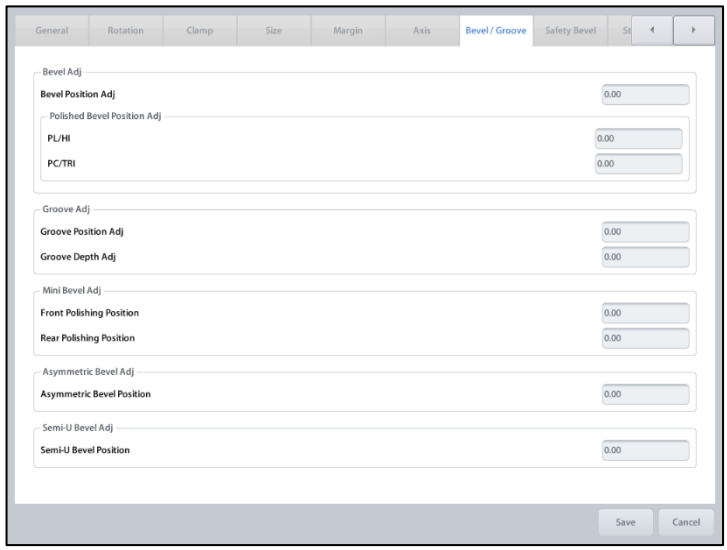


[Add (-) value] [Add (+) value] [Add (+) value]

- In main axis adjustment, use the digital pattern function to rotate square pattern 45 degrees before edging. Main axis shift can be identified more easily.

Bevel / Groove

You can adjust bevel / groove position

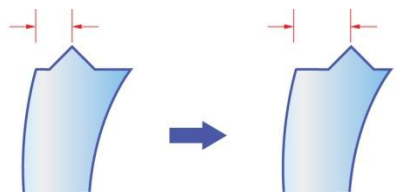


- Bevel – Set adjustment value for bevel position.
- Groove – Set adjustment value for groove position and depth.
- Mini Bevel – Set adjustment value for mini bevel polishing position.
- Asymmetric Bevel – Set adjustment value for asymmetric bevel position.
- Semi-U Bevel – Set adjustment value for Semi-U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

NOTE

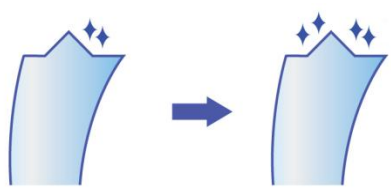
- How to adjust bevel
  ① Load internal circle pattern (Ø 50).
  ② Set bevel position 50% and execute bevel edging for the circle with polishing and the circle without polishing respectively.
  ③ Check the bevel position and adjust the value.
  ④ The tolerance must be within ±0.1mm.

- How to adjust bevel position value



[Add (-) value]

- How to adjust polished bevel position value

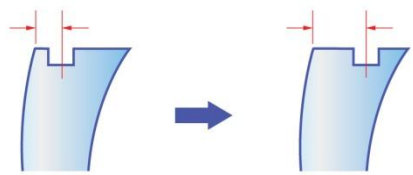


[Add (-) value]

NOTE

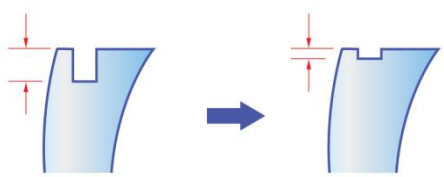
- How to adjust groove
  - ① Load internal circle pattern (Ø 50).
  - ② Set groove position 50% and execute grooving.
  - ③ Check the groove position and depth.
  - ④ The tolerance must be within ±0.1mm.

- How to adjust groove position value



[Add (-) value]

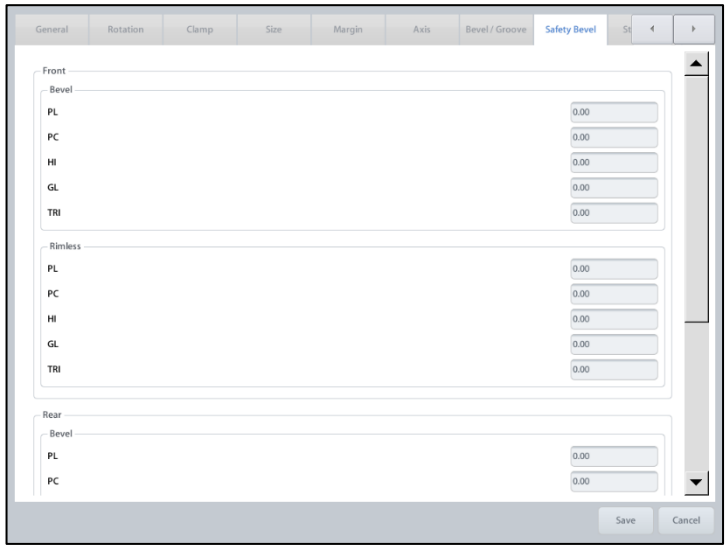
- How to adjust groove depth value



[Add (-) value]

Safety Bevel

You can adjust safety bevel position.

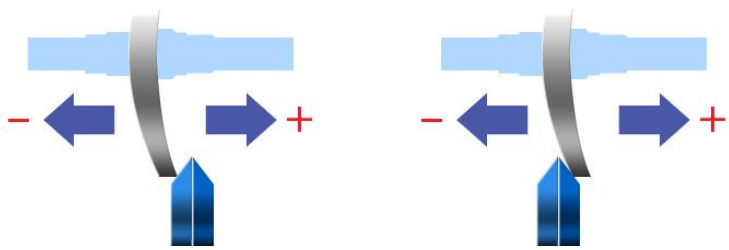


- Front – Adjust front safety bevel position.
- Rear – Adjust rear safety bevel position.

NOTE

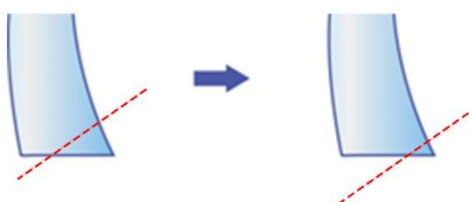
- How to adjust safety bevel
  ① Load internal circle pattern (Ø 50).
  ② Turn on front and rear safety bevel options and execute bevel edging(50% position) for all types of lens materials.
  ③ Turn on front and rear safety bevel options and execute flat edging for all types of lens materials
  ④ Adjust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

- The direction of movement according to the adjustment value



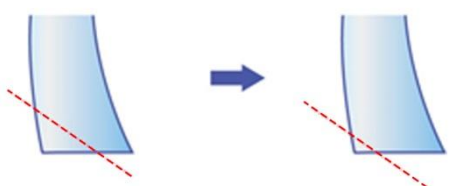
[Rear safety bevel] [Front safety bevel]

- How to adjust rear safety bevel value



[Add (-) value]

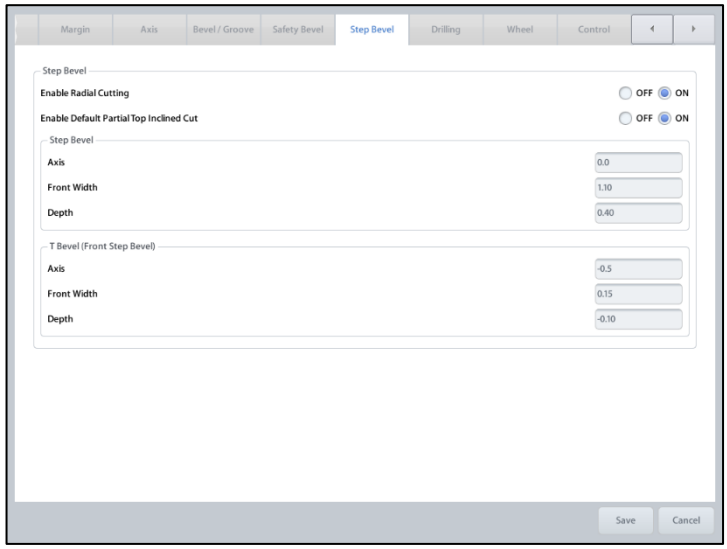
- How to adjust front safety bevel value



[Add (+) value]

Step Bevel

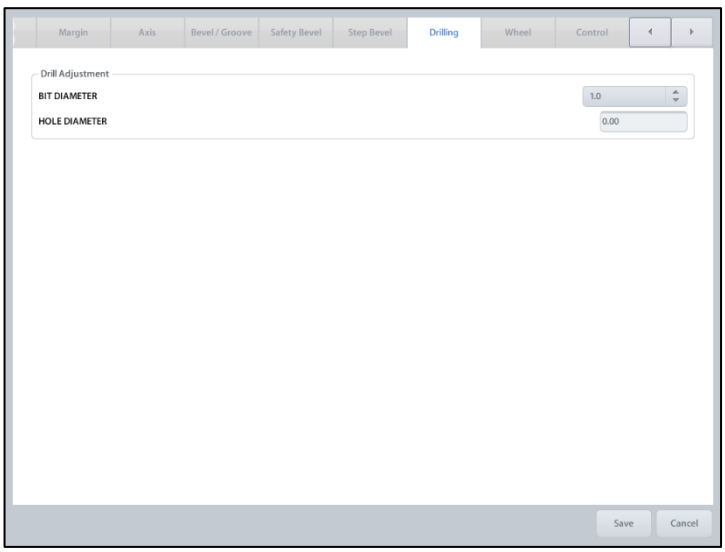
You can set the options related to step bevel.



- Enable Radial Cutting – Turn on radial cutting. (Radial cutting helps improve the quality of step bevel especially in high curve lenses but the edge width of step bevel can be thinner on the frame shape.)
- Enable Default Partial Top Inclined Cut – Turn on inclined cut.
- Step Bevel – Set adjustment value for Step Bevel Axis, Front Width, Depth.
- T Bevel (Front Step Bevel) - Set adjustment value for T Bevel (Front Step Bevel) Axis, Front Width, Depth.

Drilling

You can set the options related to drilling.



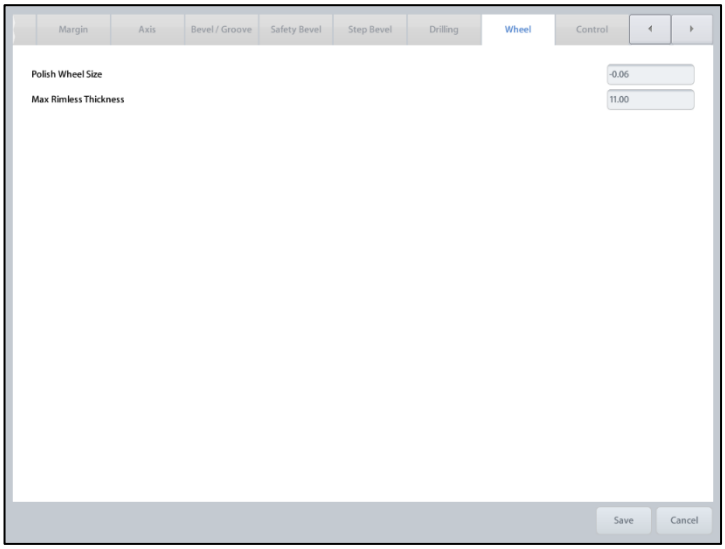
- BIT DIAMETER – Set drill bit diameter.
- HOLE DIAMETER – Set the hole diameter adjustment value.

NOTE

Drill adjustment settings have influence on the drilling quality. If you want to change adjustment values, ask advice of the service technician of HUVITZ or the technician authorized by HUVITZ.

Wheel

You can set the options related to edging wheels.



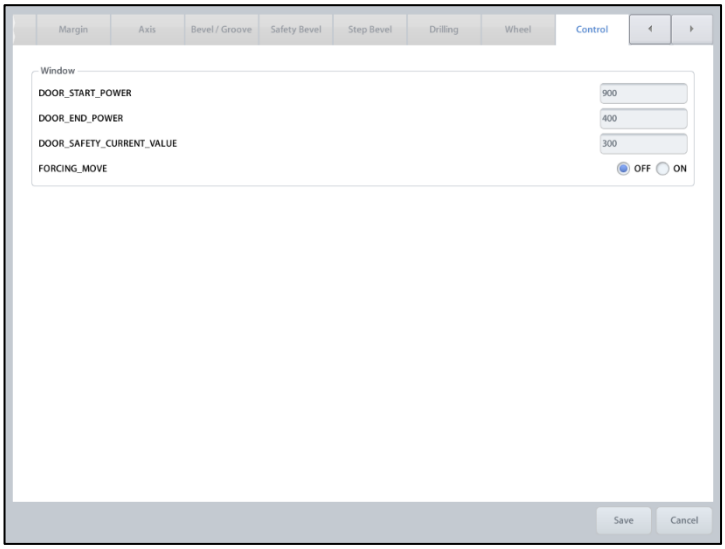
- Polishing Wheel Size – Set size compensation value for polishing wheel.
- Max Rimless Thickness – Set maximum width of lens for flat edging.

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.

Control

You can set the options related to motor.



NOTE

If there is a problem with the edging room window movement, window motor can be adjusted with these values. But it is recommended not to change the default values as much as possible. If you need to change, ask advice of the service technician of HUVITZ or the technician authorized by HUVITZ.

8

System Maintenance

8.1. Automatic Calibration of Frame Reader

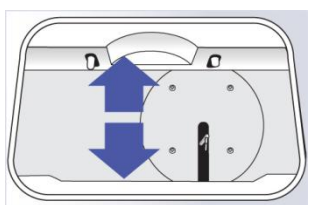
Automatic Calibration of Frame Reader is required with the following cases,

- 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 before the others.
The order of calibration is like this: Stroke → Frame → Pattern.

8.1.1. Stroke Calibration

Procedures for stroke calibration.



① Press the MENU button and select ‘CALIB’.

② Press the FRAME button and select ‘STROKE’.

③ Press the BOTH button.

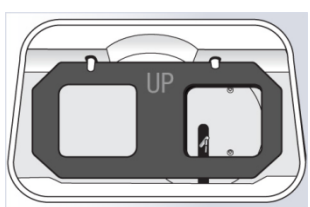
④ Pull the Gripping bars (Do not pull to maximum, it makes tracer generate error, ‘remove pattern jig’).

⑤ Press the BOTH button to start calibration.

Next, follow the instructions displayed.

8.1.2. Frame Calibration

Procedures for frame calibration.



① Press the MENU button and select ‘CALIB’.

② Press the FRAME button and select ‘FRAME’.

③ Press the BOTH button.

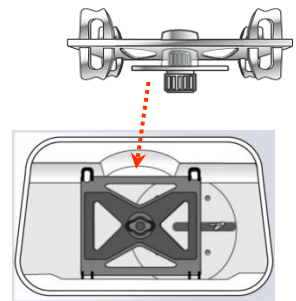
④ Load the Standard Frame.

⑤ Press the BOTH button to start calibration.

Next, follow the instructions displayed.

8.1.3. Pattern Calibration

Procedures for pattern calibration.



① Press the MENU button and select ‘CALIB’.

② Press the FRAME button and select ‘PATTERN’.

③ Press the BOTH button.

④ Load the Standard Pattern.

⑤ Press the BOTH button to start calibration.

Next, follow the instructions 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 the STOP button to stop the calibration.

8.2. Automatic Calibration of Edger

You can execute calibration with standard edging Jig.



8.2.1. Feeler Calibration

① Select the 'Feeler' 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. Hall Sensor Contact Calibration

If the "Check the hall sensor contact" message is displayed while using the edger, you can calibrate the sensor value with the 'Hall Sensor Contact Calibration' function.

① Remove the lens or the standard edging jig in the edging room.
② Press the [Hall Sensor Contact Calibration] button to start calibration.
③ You must save the calibration data after finishing the calibration successfully

NOTE

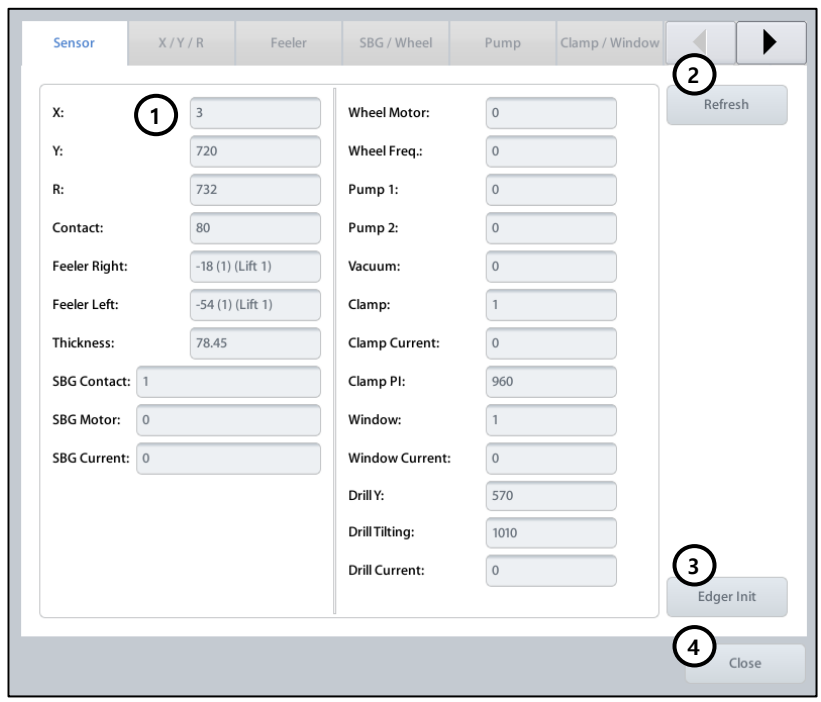
- Calibration function has influence on the edging quality so ask advice of the service technician of HUVITZ or the technician authorized by HUVITZ if necessary.
- After feeler calibration, it must perform related adjustments such as Bevel / Mini-Bevel / Groove / Safety Bevel position.

8.3. Test Mode

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

Sensor

It displays all sensor values of the edger.



① All sensor information

② Refresh sensor status

③ Initialize edger

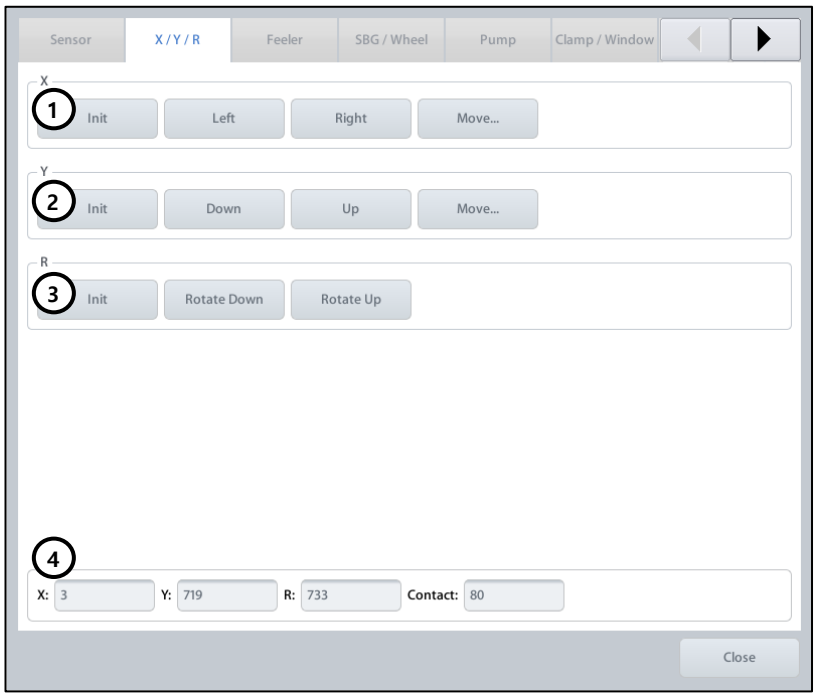
④ Exit Test Mode

NOTE

- Sensor List
  - X – X axis sensor value
  - Y – Y axis sensor value
  - R – R axis sensor value
  - Contact – Main contact switch status (0 – close, 1 – open)
  - Feeler Right – Right feeler encoder value, switch, lift state
  - Feeler Left – Left feeler encoder value, switch, lift state
  - Thickness – Lens thickness value calculated from the feeler encoders
  - SBG Contact – SBG contact sensor value
  - 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)
  - Vacuum – Vacuum cleaner status (0 – Off, 1- On)
  - Clamp – Clamp switch status (0 – Open, 1 – Close)
  - Clamp Current – Clamp motor current value
  - Clamp PI – Clamp PI sensor value
  - Window – Edging room window sensor value
  - Window Current – Window motor current value
  - Drill Y – Drill Y axis sensor value
  - Drill Tilting – Drill tilting sensor value
  - Drill Current – Drill motor current value

X / Y / R

You can check X / Y / R axis.



① X axis test

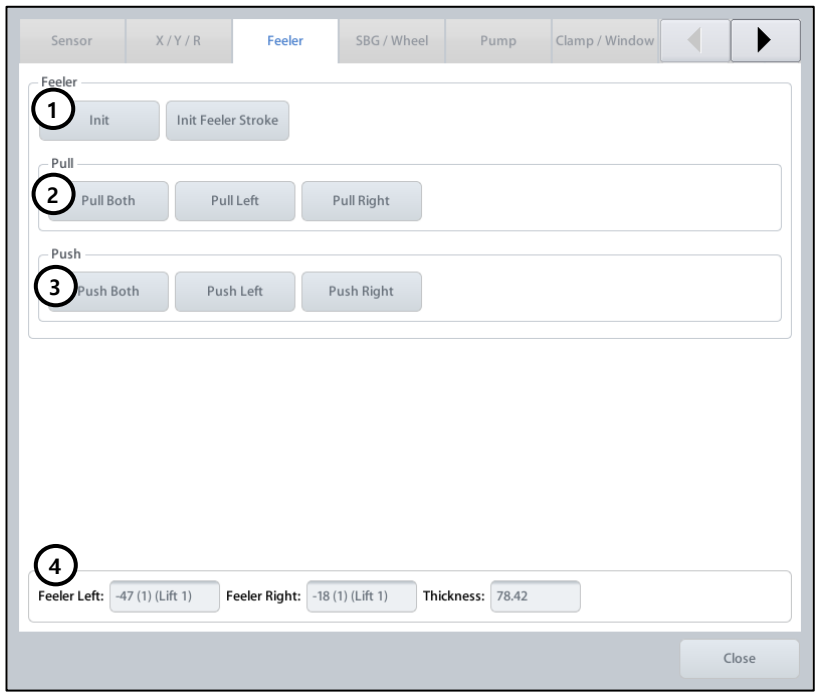
② Y axis test

③ R axis test

④ X / Y / R sensor state

Feeler

You can check the feeler.



① Initialize feeler

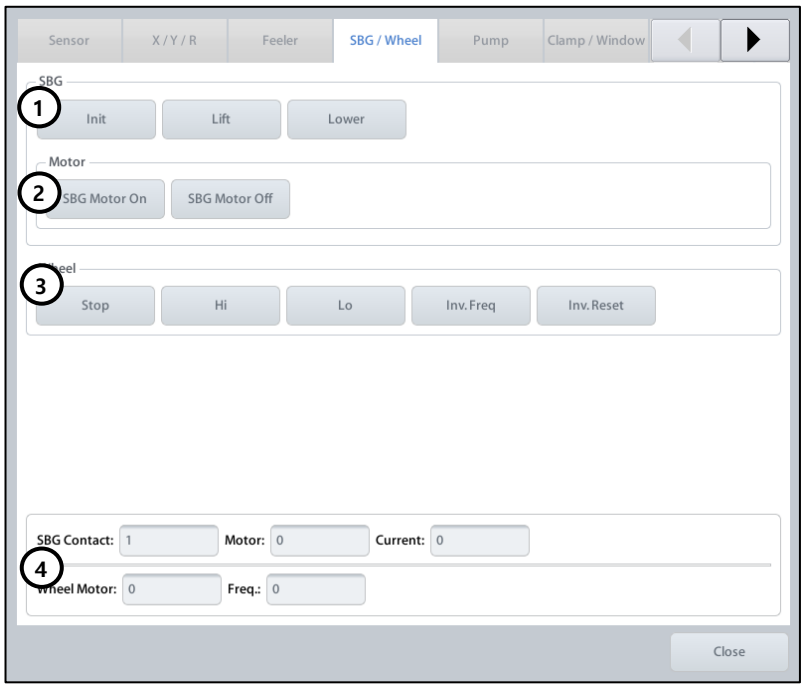
② Pull test

③ Push test

④ Feeler sensor, switch and lift state

SBG / Wheel

You can check SBG ass'y and wheel.



① SBG ass'y test

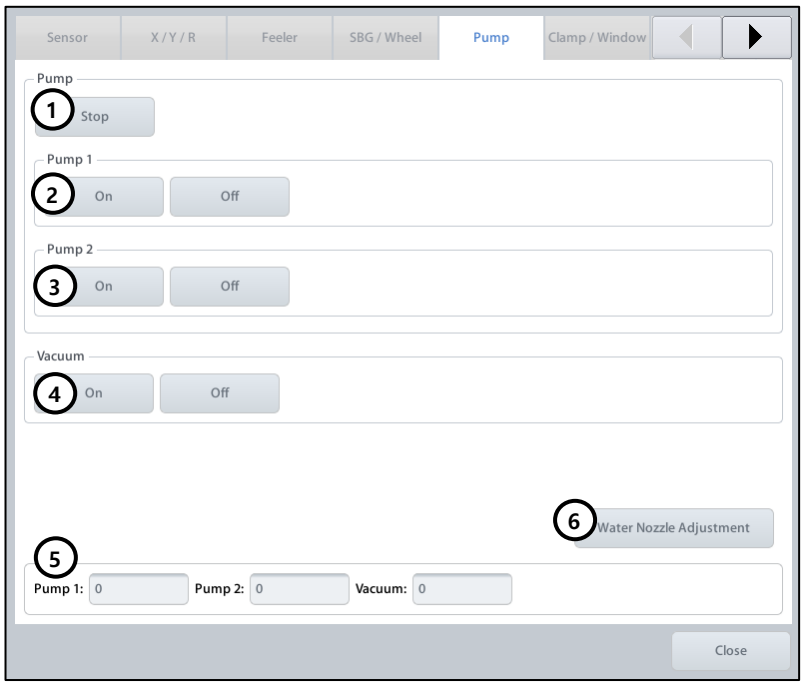
② SBG motor test

③ Wheel test

④ SBG and wheel sensor status

Pump

You can check pump and vacuum cleaner.



① Stop all pumps

② Pump 1 test

③ Pump 2 test

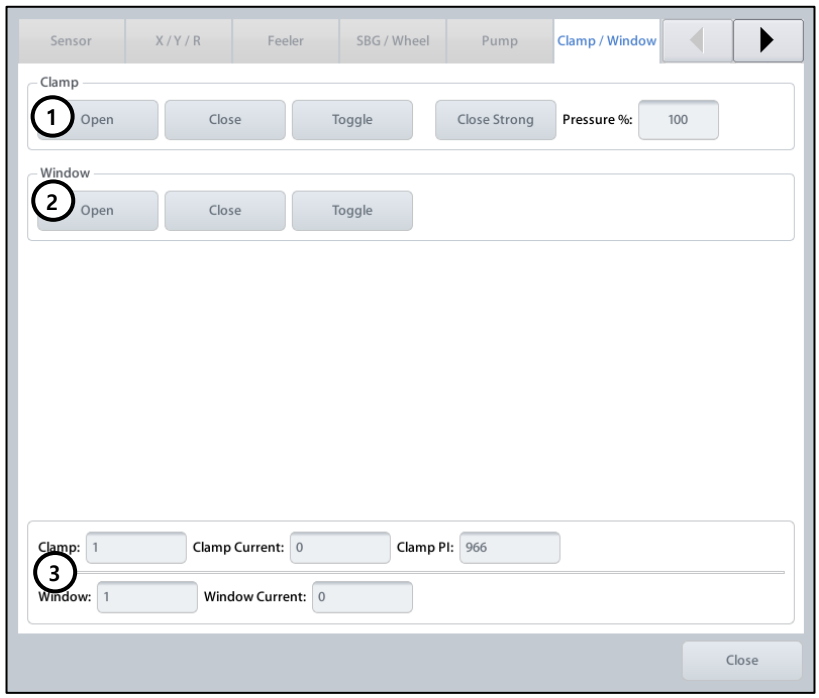
④ Vacuum test

⑤ Pump and vacuum state

⑥ Water Nozzle Adjustment – Move the motor to easily adjust water nozzle position and water valve.

Clamp / Window

You can check clamp and window.



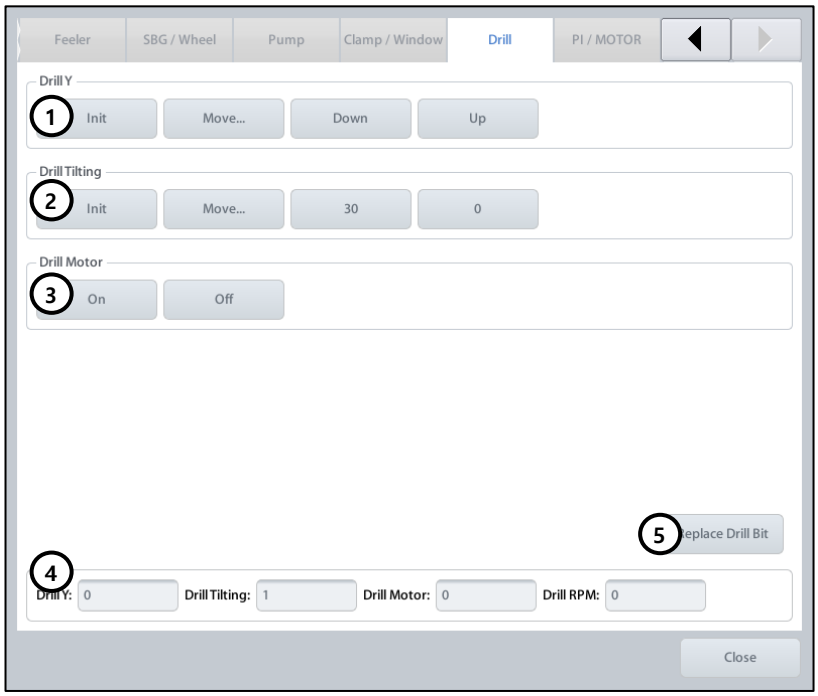
① Clamp test

② Window test

③ Clamp and window sensor state

Drill

You can check drilling module.



① Drill Y test

② Drill tilting test

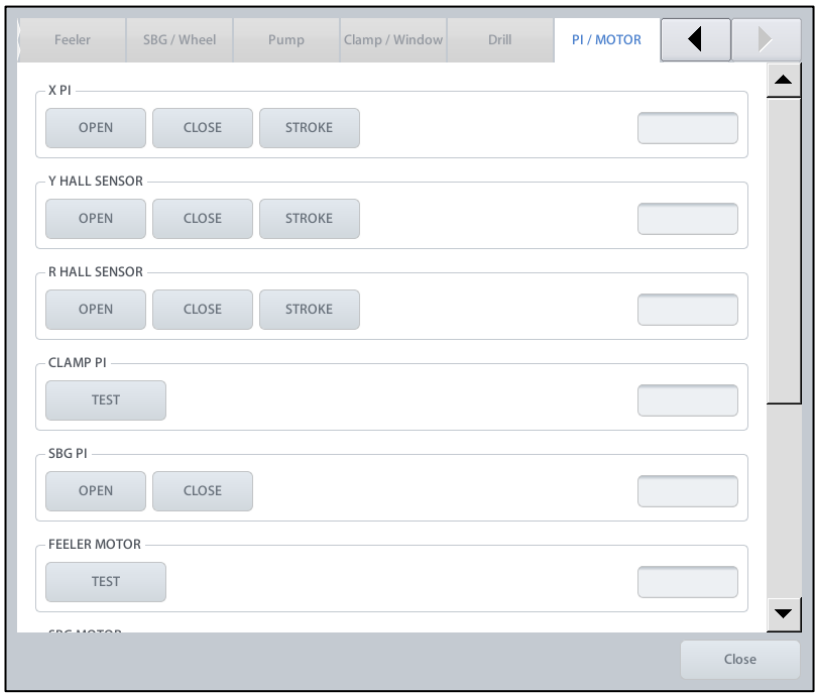
③ Drill motor test

④ Drill sensor state

⑤ Drill bit replacement

PI / Motor

You can check all the sensors and motors. If the test fails, ask advice of the service technician of HUVITZ or the technician authorized by HUVITZ.

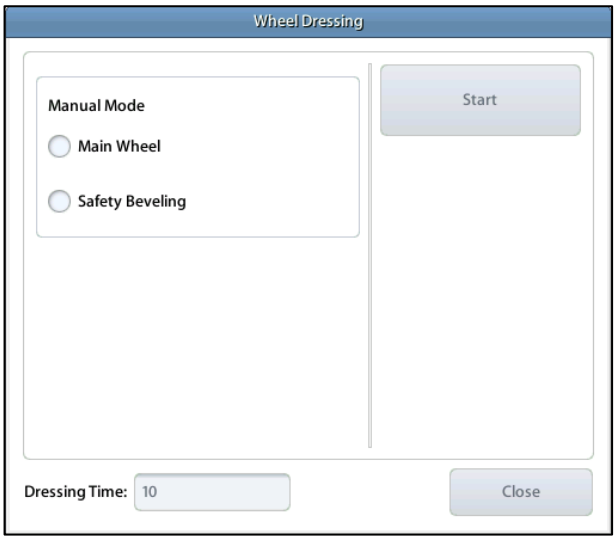


NOTE

If the test result shows ‘Fail’, it may be the result of a temporary foreign substance or partial sensitivity falling and does not always indicate a fault condition. If there is no problem with the lens processing, the product can be used for a short time and it is recommended to check for the best condition.

8.4. Wheel Dressing

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



- Main Wheel – Glass Roughing, finishing and polishing wheel manual dressing mode
- Safety Bevel – Safety beveling wheel manual dressing mode

NOTE

- 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.

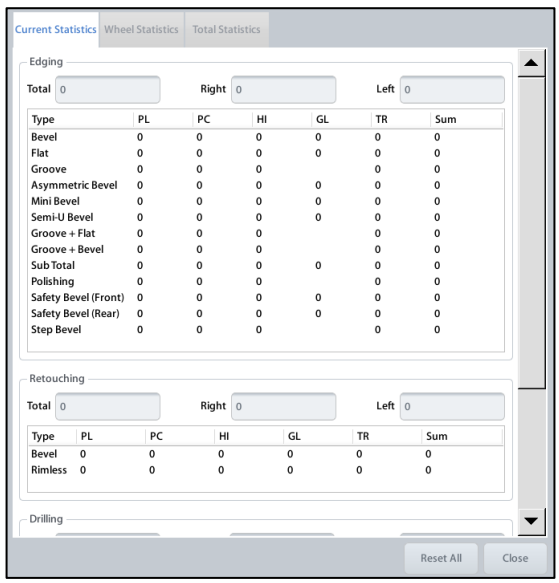
(Faites attention de ne pas toucher la roue de bordure pendant le dressage des roues. Sinon, cela peut provoquer des blessures graves.)

8.5. Statistics

It shows statistic information of the processed lens.

Current Statistics

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

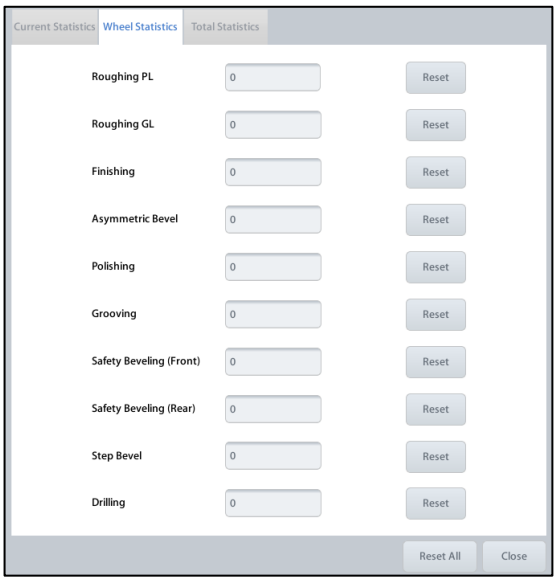


NOTE

- The edging is counted only after the edging completes successfully.
- Detailed information varies depending on the type of wheel.
- You can reset current statistics values whenever you need.

Wheel Statistics

It shows wheel usage.

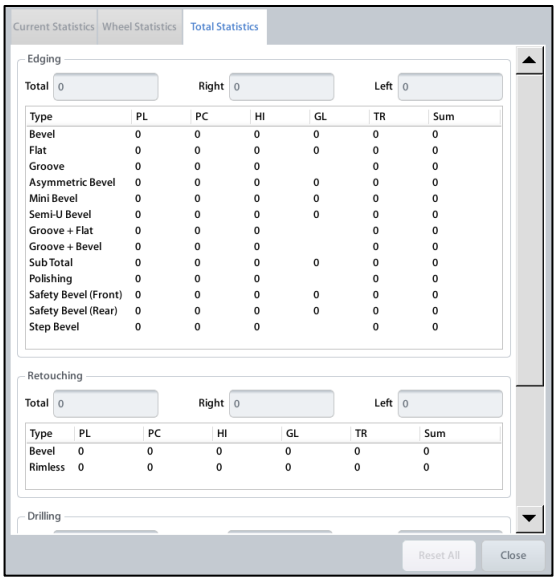


NOTE

- 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.
- The items displayed depend on the wheel type and device option.

Total Statistics

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

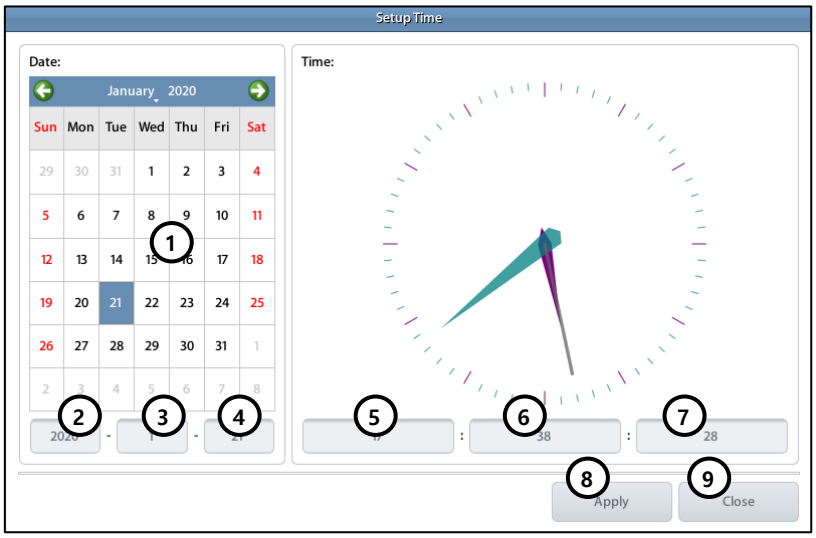


NOTE

- 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.



① Date selection calendar

② Year

③ Month

④ Day

⑤ Hour

⑥ Minute

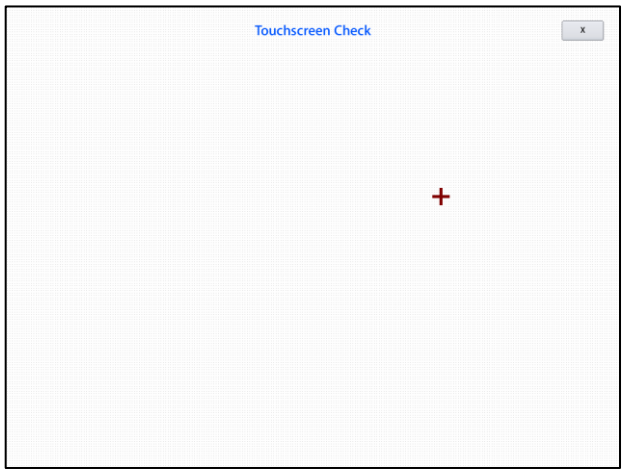
⑦ Second

⑧ Apply modified data & time

⑨ Exit the menu without saving the changes

8.7. Touch Test

You can check the normal operation of the touch screen



NOTE

- You can use the emergency touch screen test function if the touch test is not possible.
  ① Turn off the power and 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.



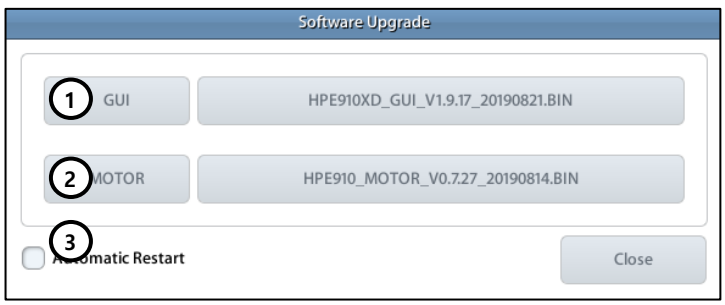
① Backup – Backup configuration data to SD card.
② Restore – Restore configuration data from SD card
③ Factory Reset – Reset to factory default setting

NOTE

- Configuration Management function is available when SD card is inserted.
- You can backup the configuration data as many times as you need, because you can specify file name.
- 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. The system 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

③ Automatic Restart – Automatically restarts the system after GUI SW update

NOTE

- It is highly recommended to use latest software.
- In most cases, upgrade both GUI and MOTOR software.
- If you have multiple versions of SW in the SD card, you can select the version by pressing the version button.
- How to upgrade GUI software
  - ① Copy upgrade file to a SD card and insert the 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.
- How to upgrade MOTOR software
  - ① Copy upgrade file to a SD card and insert the 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 ~ 5 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.

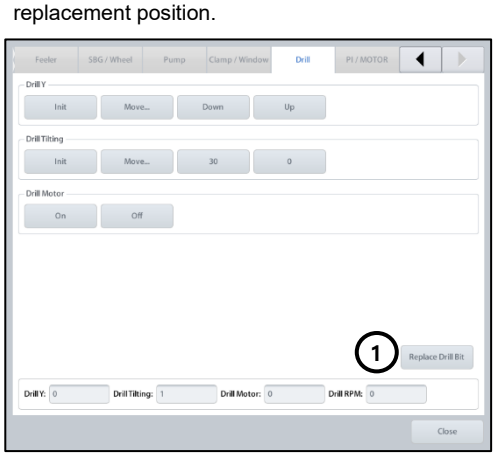
8.11.2. Drill Bit Replacement

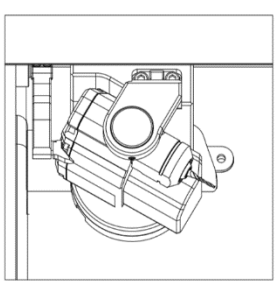
- Replacement Cycle : 500 holes (Ø 2mm) of Plastic lens

NOTE

- Drill bit replacement procedure

① Press the 'Replace Drill Bit' button on the test mode to move the drill ass'y to the replacement position.

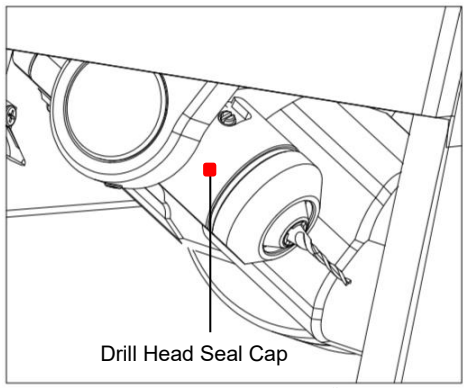


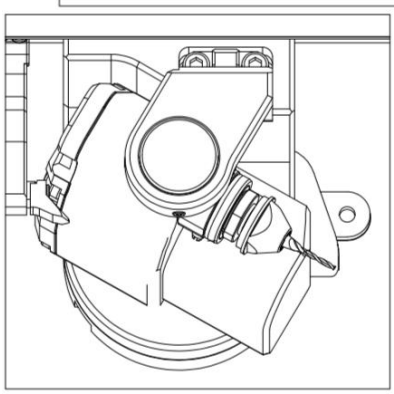


[Replacement Position]

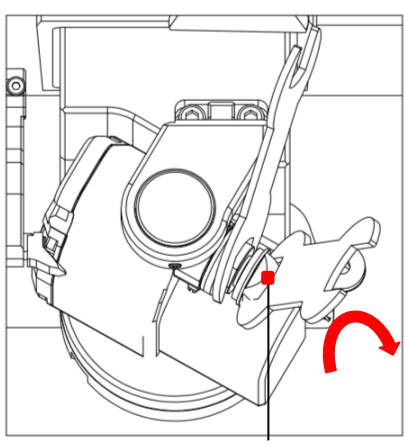
② Turn off the power.

③ Remove the ‘Drill Head Seal Cap’ by turning it counterclockwise while pressing the cap.

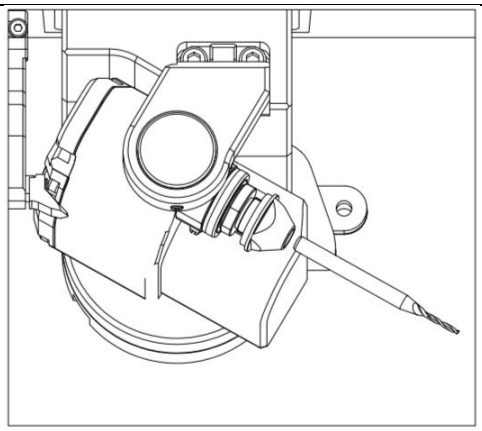




④ Using the 2 spanners in the tool box, hold the spindle and turn the ‘Drill Jaw Cap’ clockwise.



⑤ If the ‘Drill Jaw Cap’ loosened, remove the drill bit carefully.



⑥ Install a new drill bit and assemble the drill module in reverse order.

⑦ Turn on the power and check all the movement of the drill module in the test mode.

⚠ WARNING

- Be sure to turn off the power.
  (Assurez-vous de couper l'alimentation avant de remplacer la mèche.)
- Be sure to wear protective gloves when replacing the drill bit.
  (Assurez-vous de porter des gants de protection lors du remplacement de la mèche.)

8.11.3. 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

8.11.4. Fuse Replacement

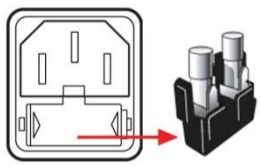
Be sure to check the Fuse Specification for the replacement job.

- 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.
(Assurez-vous d'utiliser le fusible approprié. Sinon, cela pourrait endommager le produit ou provoquer un incendie.)

Fuse Replacement in Edger and Frame Reader



8.11.5. 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.

⚠ CAUTION

- Before cleaning your product, disconnect the power cord.
  (Avant de nettoyer votre produit, débranchez le cordon d'alimentation.)
- Since the exterior of the product is easily scratched, be sure to use soft cleaning cloth.
  (Étant donné que l'extérieur du produit se raye facilement, assurez-vous d'utiliser un chiffon doux.)
- When cleaning the product, avoid spraying cleansing agent directly onto the product. This may result in the exterior being deformed or the print being removed.
  (Lors du nettoyage du produit, évitez de vaporiser l'agent nettoyant directement sur le produit. Cela peut entraîner une déformation de l'extérieur ou la suppression de l'impression.)
- Since using a strong chemicals, may result in the discoloration or cracking of the product exterior, be sure to use the clean water only.
  (Étant donné que l'utilisation de produits chimiques puissants peut entraîner la décoloration ou la fissuration de l'extérieur du produit, assurez-vous d'utiliser uniquement de l'eau propre.)

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. Check after removing LCD protective film.
Edged lens size is large	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.	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	① Frame curve > Lens curve. ② The bevel/groove position is not fitted for frame curve. ③ Grooving depth is too deep.	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.

Problem	Cause	Solution
R/L lens size is different.	① The difference of diopter between R/L lens is too large. ② The frame is moved while frame reader reading the frame.	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	① Feeler tip abrasion. ② Modify the lens by clamping(after roughing).	① Check the feeler tip, and replace if need be. (after replace, operate the feeler calibration) ② Apply the feeling after roughing.
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 main contact sensor get the foreign substance.	Clean the contact switch, and then check the status at test mode.
Incorrect system time	Reached end of battery life. (Life time : 5 years. May be reduced depending on the usage environment)	Replace the GUI board battery. Type : CR1210

10

Specifications and Accessories

10.1. Standard Accessories

User's Manual ····· 1
Lens Adapter ····· 26
LEAP-III Tape ····· 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, PWD-A) ····· 1
Dressing Stick (Finishing Wheel, WA #400) ····· 1
Dressing Stick (Glass Roughing Wheel, WA #80) ····· 1
Feeler Tip (R, L) ····· 1 each
Feeler Tip Driver ····· 1
Edger Calibration Jig ····· 1
Fuse (10A, Edger) ····· 2
Fuse (3.15A, Frame Reader) ····· 2
Wrench Set ····· 1
Spanner (10-11) ····· 2
Clamp Rubber ····· 1
Step Bevel Fix Shaft (Ø2) ····· 1
Drill Bit (Ø1) ····· 9
Carriage Fixing Bracket ····· 1
Water Drain 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
Water Supply Hose ····· 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, Mini, Partial, Blunt
	Flat Edging
	Grooving – Normal, Partial, Hybrid, Dual
	Asymmetric Beveling, Semi-U Beveling
	Step Beveling, Inclined Cut
	Drilling
Edging Position	Front %, Front mm, Rear mm, Base curve, Auto, Manual
Edging Options	Polishing, Safety Beveling, Safety mode
Lens Material	Plastic, Glass, High Index, Polycarbonate, Trivex®
Edging Size	Max : 90mm Min : Rimless 18.5mm (without safety bevel), 23.0mm (with safety bevel) Bevel 20.0mm (without safety bevel), 24.7mm (with safety bevel)
Dimensions	540(W) x 472(D) x 580(H)
Weight	51.2kg (110V), 50.2Kg (220V)
Power Supply	AC 100~120V / AC 200~230V 50/60Hz
Power Consumption	1400VA
Outlet	Max 430W (100-120 Vac, 200-230 Vac)

10.2.2. Specifications of Frame Reader

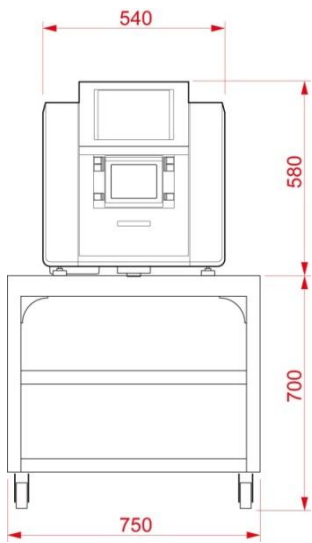
Tracing Type	Automatic 3D Binocular Tracing
Tracing Mode	Auto, Semi-Auto
Tracing Size	Frame Ø16.0 ~ 92.0mm, Pattern Ø 16.0 ~ 84.0mm
Frame Material	Metal, Hard Plastic, Soft Plastic
Data Processing	FPD, Frame Curve, Circumference, 3D Angle, Concave Shape
Dimensions	284(W) x 319(D) x 193(H)
Weight	8Kg
Power Supply	AC 100~240V 50/60Hz
Power Consumption	32W

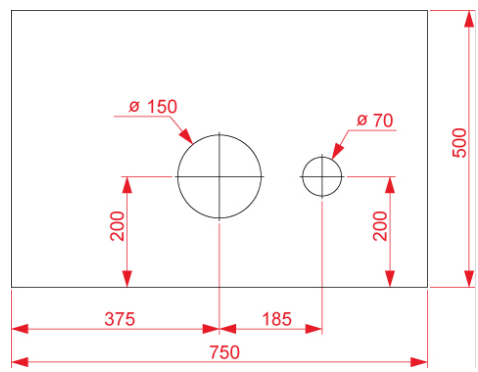
10.2.3. Specifications of Blocker

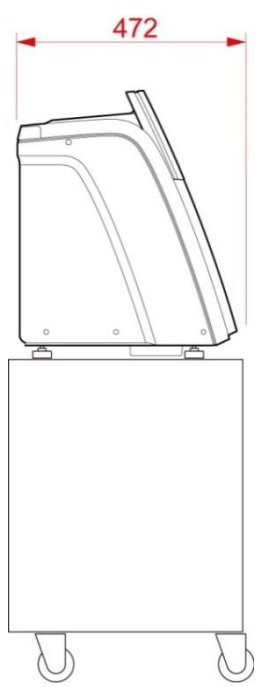
Illumination	White LED Source Light Intensity Adjustment Automatic Power-Saving Mode
Dimensions	177(W) x 184(D) x 206(H)
Weight	2Kg
Power Supply	DC 5V 3.5A
Power Consumption	2.5W

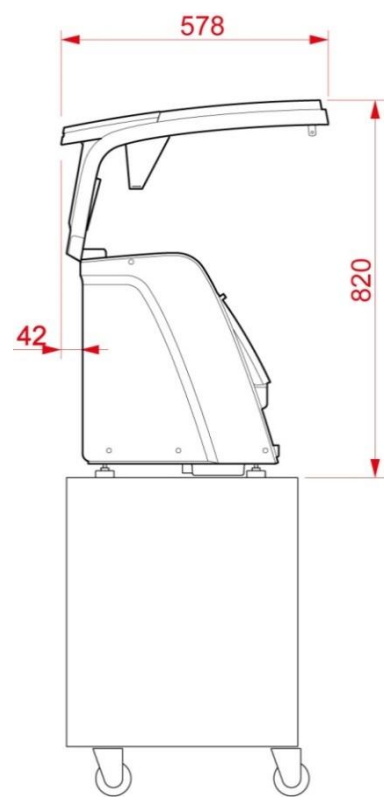
10.3. Drawings of System

10.3.1. Drawings of Edger

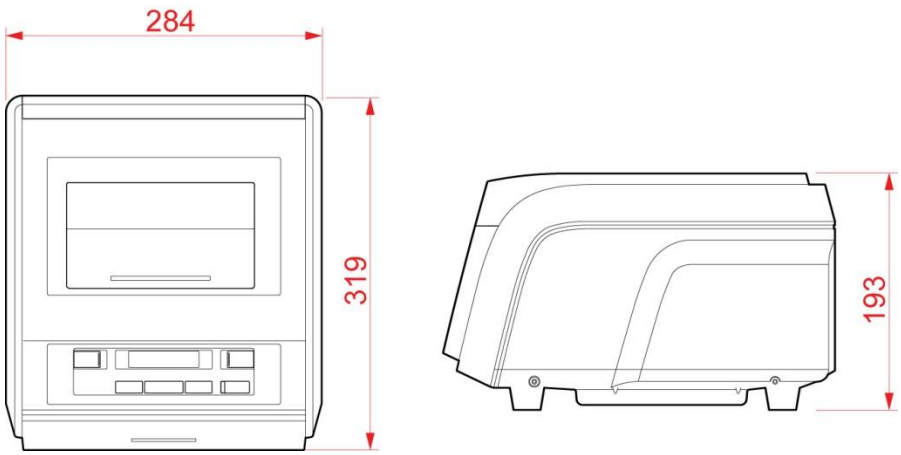




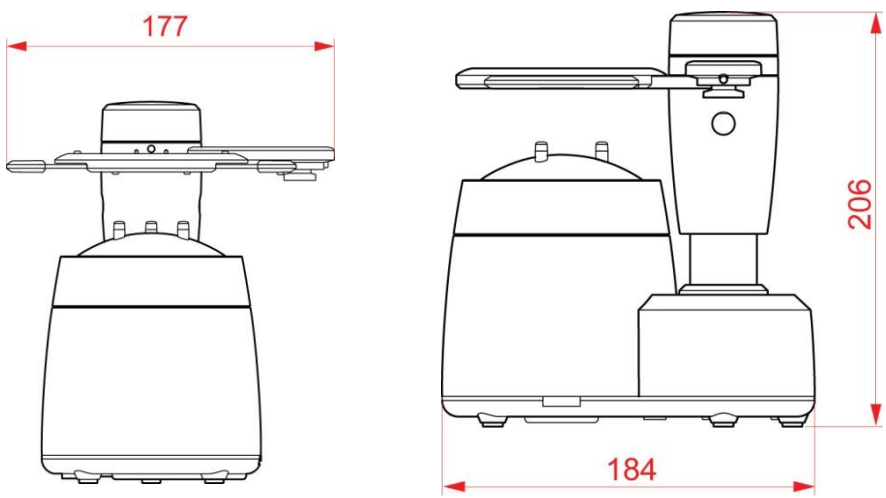




10.3.2. Drawings of Frame Reader



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.
38, Burim-ro 170beon-gil, Dongan-gu,
Anyang-si, Gyeonggi-do, 14055,
Republic of Korea

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