



FE-600 AUTO LENS EDGER
USER'S MANUAL

FOREWARD:

This manual is applicable to FE-600 Auto Lens Edger's operation.

We recommend you read this manual carefully, for the proper use and enhancement of the life of your new equipment.

If there' re any problems you have met in your operation, please contact with our consumer service department or our agent.

This information contained in this manual are not contractual and can be modified without notice. On top of that, errors and omissions can occur, although all is performed to avoid them.

Supplier does not assume any reponsibilities or liabilities for damages caused by errors and omissions.

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1. Installation

Safety Precautions

Warning

1. Do not place the edger near to a heat source (such as a radiator) or in high humidity environment.
2. Make sure your voltage source corresponds to the voltage specified on edger nameplate, located on the rear of the machine.
3. If the machine is not going to be used for a long period of time, you should clean the machine, turn off the water, cut off the power supply, and keep it in the dry area.

Supplier does not assume any responsibilities or liabilities for damages caused by negligence or ignoring the safety precautions enlisted in this manual.

The operation of this machine is strictly prohibited before reading this manual.

Installation Conditions

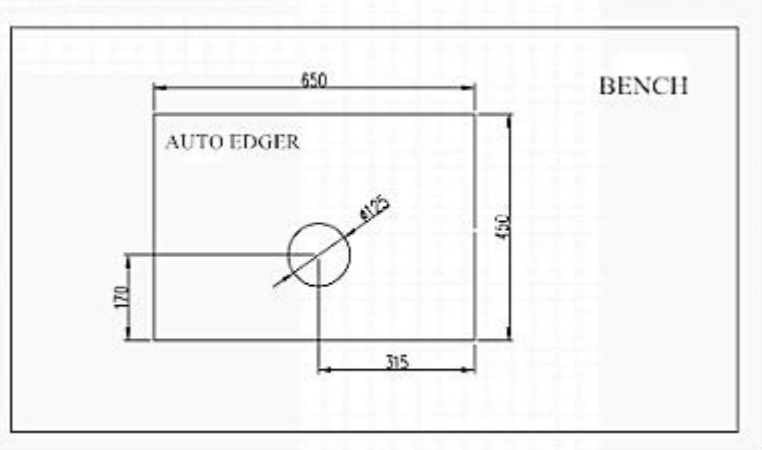
Before installing the machine, make sure the bench is made up of the following components:

1. The bench
 - The bench receiving the machine shall be stable and at the same level, and shall have free movement space of about 800*700 mm.
2. The electricity
 - Power outlet: 220V-16A; 110V-30A, is protected with differential breaker of 30A. The outlet must be connected to the EARTH.
3. The water
 - A water supply pipe can correspond to a water pump (circulation water) or magnetic valve (running water).

For a well functioning of the machine, the maximum water supply pressure must be between 4 and 7 bar.

Bench preparation




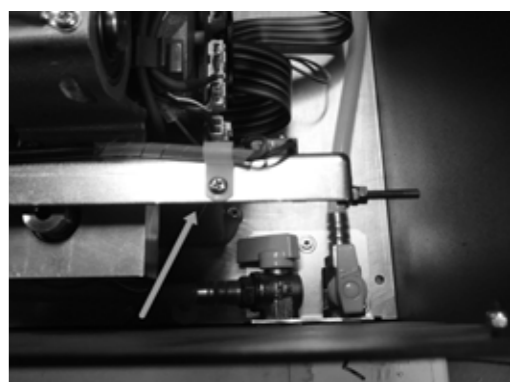
Follow the steps below to prepare the bench

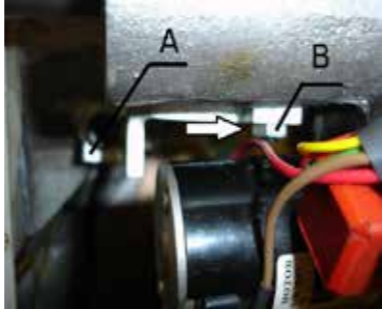
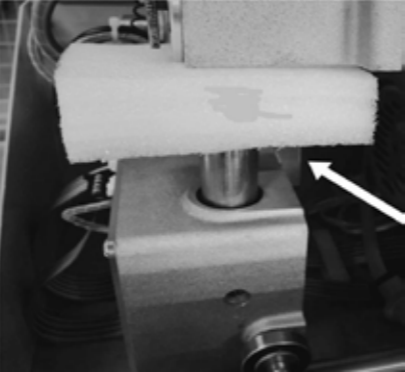
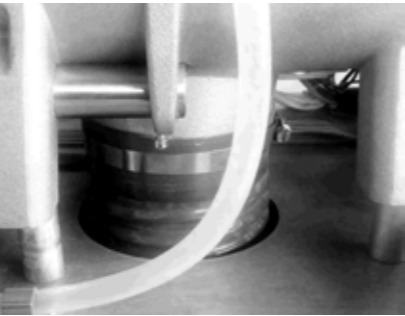


Step	Action
1	Drill the bench as follows: <div style="text-align: center;">  </div>
2	Place the edger on the bench by positioning it in relation to the drilled holes.


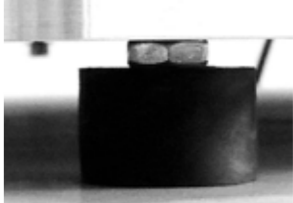

Installing the Machine

If you install your edger by yourself, please do not discard boxes or any of its packing contents.

Follow the steps below to install the machine.

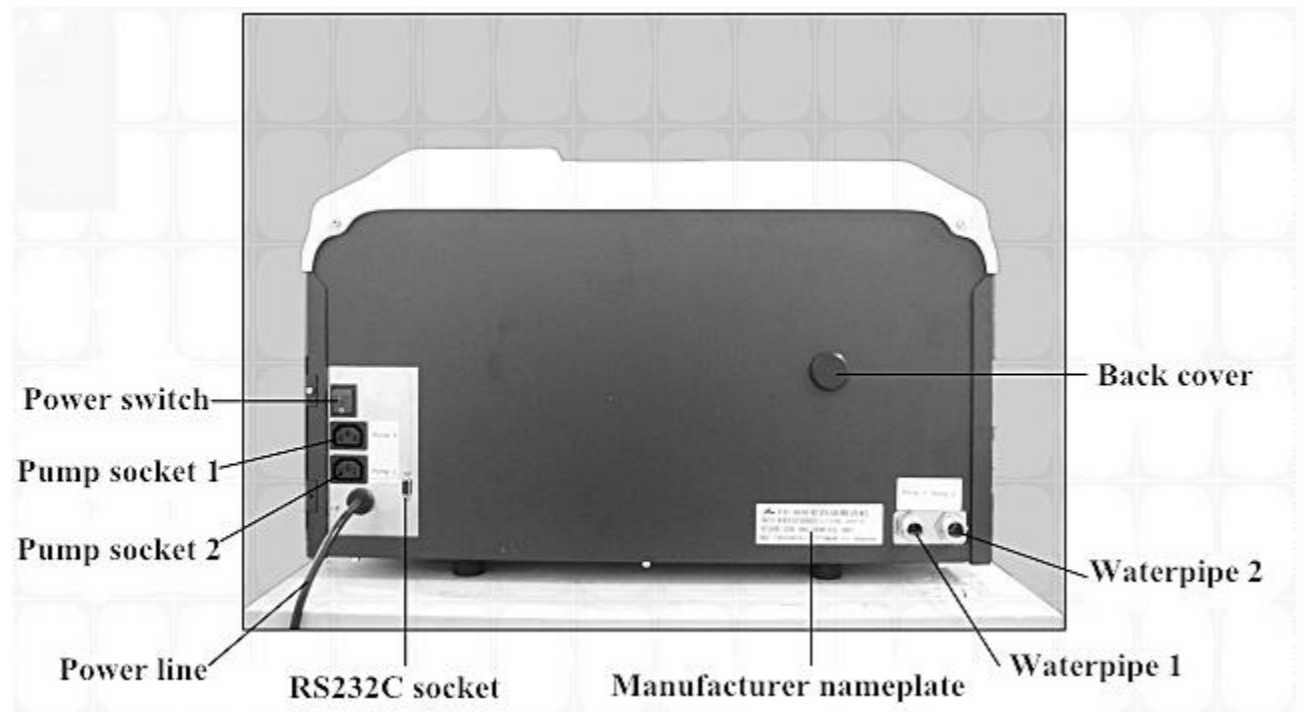
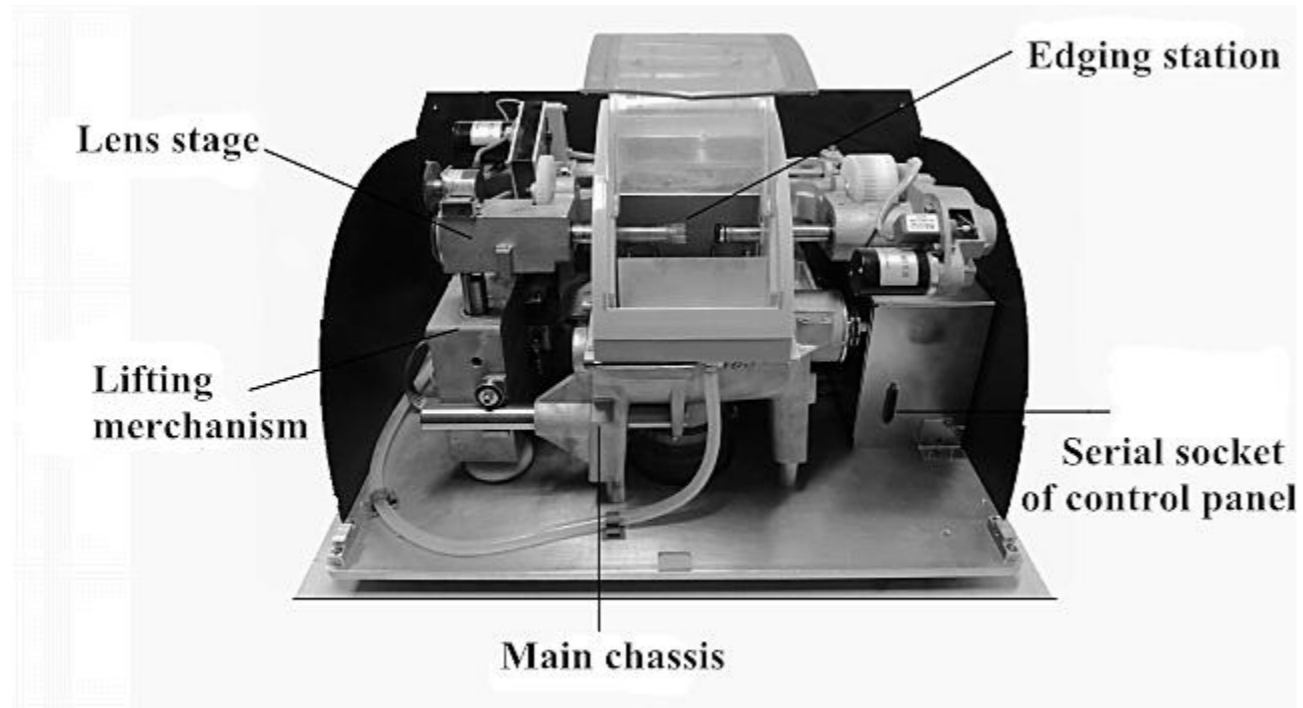
Step	Action	Diagram
1	Unscrew the two M4 screws on the back of the machine.	
2	Unscrew the two M5 screws on both sides of the machine.	
3	Lift the big shell, and unplug the data line between the LCD and the power supply box.	
4	The operator is standing at the back of the machine, to check the tightness of the translation steel wire.	

5	Loosen and remove screw B by using 14-mm wrench, remove screw A by using 6-mm Allen wrench. Remove the transport fixed angle iron (and keep it).	
6	Remove the wedge between lifting jack and glass stage.	
7	Plug the drain pipe to the chassis of the machine.	
8	<p>1. Connect the water inlet pipe with the water valve of the machine.</p> <p>2. Connect the water inlet pipe with the water pump.</p> <p>Attention:</p> <p>Water pump1 corresponds to pump1 socket.</p> <p>Water pump2 corresponds to pump2 socket.</p> <p><u>Warning:</u></p> <p>If it is the running water, you must pay attention to connect with magnetic valve according to the requirements.</p> <p>3. Fill three quarters of the tank with water.</p> <p>4. Filter is installed between the pump and downspout</p> <p>Warning: The work is strictly prohibited in the case of no water in the tank, to avoid burning the pump.</p>	 

9	<p>Check that the main switch of the machine is on OFF position.</p> <p>The pump plug corresponds to the socket.</p> <p>FE-600 is connected with FC-600 by RS232C data wire.</p>	
10	Level the machine by screwing or unscrewing the four Four feet, to make sure the machine is placed horizontal and stable.	
11	Plug the data wire between the LCD and the power supply box, then to install the big shell.	
12	Once again to confirm the above steps are correct, to connect with the power supply to turn on the machine, then the machine starts to self check.	
13	Call a graphic from the machine, or on line to download a picture, to try to edging.	
Installation End		

FE-600 AUTO LENS EDGER

Components Description



2. System Introduction

Keypad



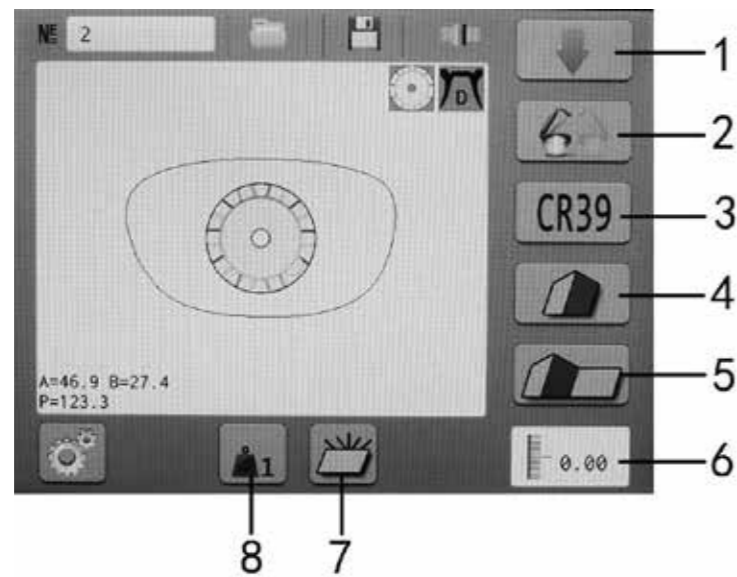
Keys: Description


Key	Function / description
	Stop key
	Clamping function / Moves the lens left during roughing
	Open function / Moves the lens right during roughing
	Start key

Touch screen interface: Description

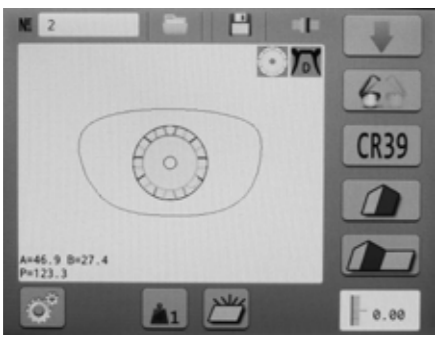
S/N	Icon	Description
1		Document Number
2		File
3		Save Key
4		Open Mode
		Clamping Mode
5		Engineer Menu Key
6		Represents the position of the current edging lens

Basic Concepts



Call a job aid of the bar code reader or Click on  to download the data sent by FC-600.

















FE-600 auto edger starts working mode.

Mode	Screen	Functions
Edging Interface		<ul style="list-style-type: none"> ● Download Datas ● Lens Side to Edge ● Lens Type to Edge ● Lens Finishing Type ● Bevel Type ● Lens Final Size ● Lens Polshing ● Edging Pressure ● Enter Engineer Interface

3. Edging




Edging Mode

Functions: Diagram

S/N	Icon	Description
1		Download Data
2		The position of the lens (Right)
		The position of the lens (Left)
3	CR39	Organic Lens
	GLASS	Glass Lens
	PC	Polycarbonate Lens
4		Bevel Finishing
		Rimless Finishing
5		Front Side Bevel: The bevel is placed on the front side of the lens.
		1/2-1/2 Bevel: The bevel is placed in the center of the lens.
		Rear Side Bevel: The bevel is placed on the rear side of the lens.
6		Size Correction
7		Lens Polishing: Only for Organic Lenses and Polycarbonate Lenses
		No Edge Polishing
8		Minimum Edging Pressure: Edging Thin Lens for example
		Medium Edging Pressure: Edging Medium Lens for example
		Maximum Edging Pressure: Edging Thick Lens for example
		Waterproof the lenses a proprietary program
		Fragile lenses a proprietary program

Edging a Lens

Follow the steps below to edge a lens.

Step	Action
1	Call a job aid of the bar code reader or Click on  to download the data sent by FC-600.
2	Place the lens to edge in the edger, already centered and blocked, as follows. <ul style="list-style-type: none"> Place the blocked lens into the left side adaptor. Press and hold the  key (or the one located at left of the edging station) to close the lens clamp.
3	Adjust the water flow by turning the knob, located under the machiner at the center. Note: <ul style="list-style-type: none"> If using direct water supply, check if the water valve is open. If using recirculating system, check if the system is correctly installed.
4	Select the side to edge (please refer to the previous Function No. 2)
5	If necessary, you can modify the edging parameters <ul style="list-style-type: none"> Lens type Finishing type Beveling position type Pressure type Polishing option
6	Risk of collision of the adapter with the wheels. <ul style="list-style-type: none"> The lens adapter should be matched with the same type of auto edger. Two types of “small” adapters are used on the machine (19mm and 17mm height). The use of the 19mm adapters when the 17mm ones required will make a collision of the adapter with the wheel. <p>Close the visor, Press the OK key to start the edging cycle.</p> <ol style="list-style-type: none"> Roughing Do not open cover during edging operation. Do not touch moving parts inside. Tracing <u>Result:</u> If the uncut lens is too small for the shape, a message appears on the screen.
7	If you select the beveling function Then enter to the beveling process
8	2. Finishing 3. Polishing (optional)
9	Hold the edged lens and press the  key of the keypad (or the located at left of the edging station) to open the right side chunk.
10	Remove the lens from the left side adaptor. Do not remove the block from the lens until the lens size has been confirmed with the optical frame.


Safety Mode

For the operator’s safety, some controls and actions have been implemented

Wheel rotation:


- The main motor starts only if the visor is closed
- Opening manually the visor stops the wheel motor and switches the machine in error “visor function”

Clamping:

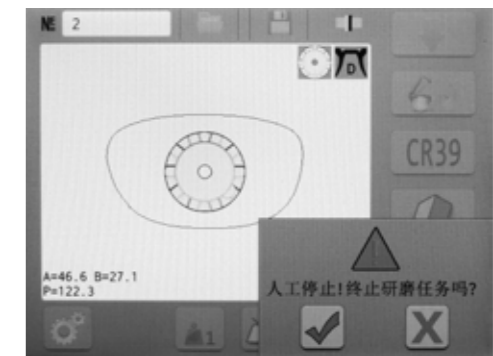
- To clamp the lens you have to hold the  key
- Starting the cycle with the clamp open will generate the warning message “Clamp the lens before start”

Cycle Interruption

The edging cycle can be interrupted at any time

So you can press the  key

Result: The edging cycle stops immediately




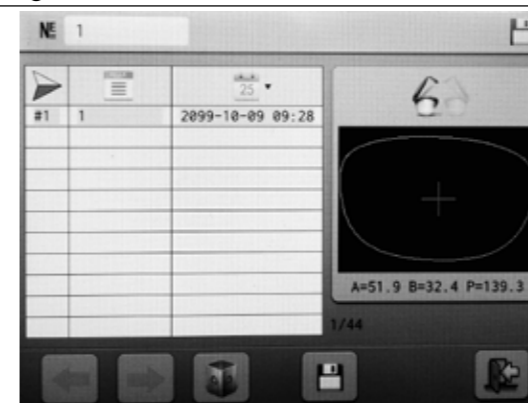
Edging a 1/2Eye Lens


To edging a 1/2eye lens you must replace the standard chucks by the small chucks (Ø 17mm) located in the accessory box.

Note: Please stick on anti slip stickers when edging easy sliding lens.

File Management Capabilities

To click on the  save key of main interface for saving the current datas.



To click on the  file of main interface can open the saved documents.



Retouching a Lens





Prerequisites

Before retouching a lens, make sure of the following:

- The lens block has not been removed from its original lens placement
- The edging parameters have not been altered


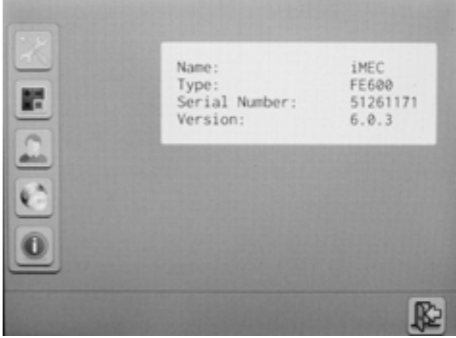



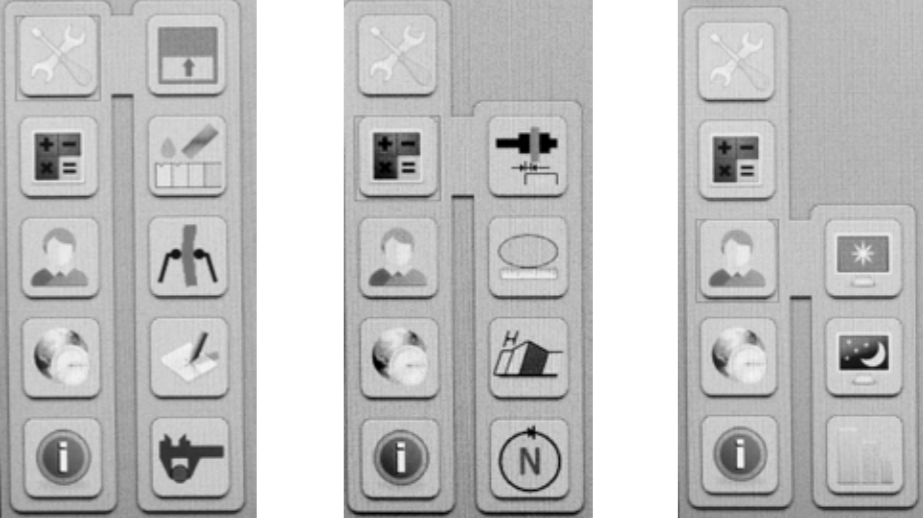
Procedure

Follow the steps below to retouch a lens after edging













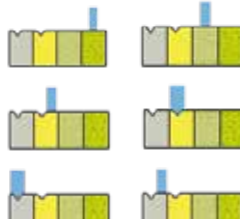
Step	Action
1	Place the lens in the edger again
2	Press the  key to select one side of the lens to be retouched
3	Click on  size correction key, then appear a input box.
5	Enter the value to revise the size Note: The correction value is always in a negative form.
6	Then press the  key Result: Start the retouching process
Note: If you press the “OK” key after entering the correction value, but it restarts roughing, which is failed to be retouched.	
7	Hold the edged lens while pressing and holding the  key of the keypad (or the one located at left of the edging station) to open the right side shaft.

Kindly reminder: Under retouching mode, it will appear this  icon at the right bottom of the screen.




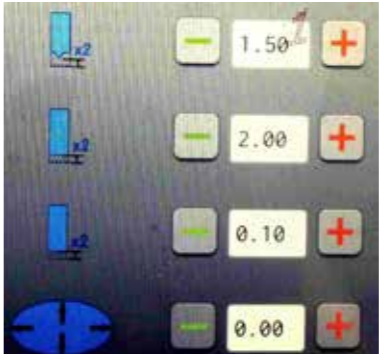
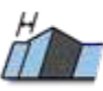



4. System Configuration/ Engineer Menu Interface








Step	Action
1	When the machine is under the condition of Stop, please click on the  Engineer Menu key.
2	<u>Result:</u> it will display below screen 
3	Respectively, press the  ,  ,  keys to appear the below submenu 
4	The following are the detailed introductions for the main contents of Engineer Menu.



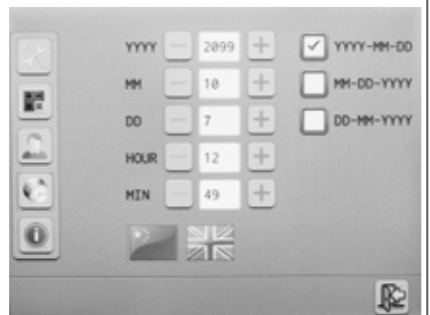
 **Submenu Introduction**

Icon	Paraphrase	Interface Display	Function Introduction
	Cabin Door Switch of Edging Station		 shows the door switch is closed.
	Manual Wheel Dressing		Select  to start; Select  to stop.
	Bending Calibration		To operate or exit according to system prompt
	Touch-screen Calibration		To operate according to system prompt
	Edging calibration adjusts the wheel size.		Adjust the external diameter of the wheel according to system prompt

 **Submenu Introduction**



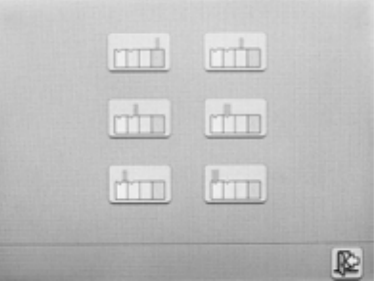

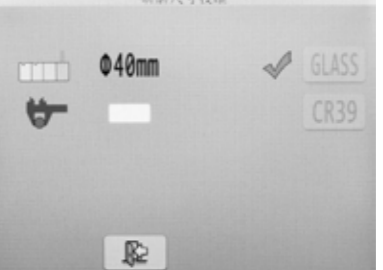


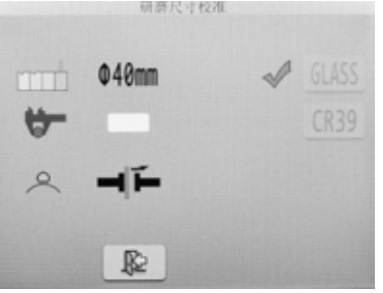




Icon	Paraphrase	Interface Display	Function Introduction
	Roughing Wheel Beginning Position Setting		<ul style="list-style-type: none"> ● Glass beginning position setting ● PC beginning position setting (Non professionalas do not change the data)
	Edging Differential Correction		<ul style="list-style-type: none"> ● Edging differential before Bevel ● Edging differential before Rimless ● Edging differential before Polish ● Lens global size correction (Non professionalas do not change the data)
	Bevel Margin Correction		<ul style="list-style-type: none"> ● Bevel margin initial value setting ● Bevel margin value correction (Non professionalas do not change the data)
	Edging Cycles Setting		<ul style="list-style-type: none"> ● CR39 Rimless polish cycles setting ● CR39 Bevel polish cycles setting ● PC Rimless polish cycles setting ● PC Bevel polish cycles setting ● Grinding polish cycles setting (Non professionalas do not change the data)


 Submenu Introduction			
Icon	Paraphrase	Interface Display	Function Introduction
	Touch-screen Brightness Setting		<ul style="list-style-type: none"> ● Adjust the brightness by "+" or "-"
	Screensaver Setting		<ul style="list-style-type: none"> ● Set up the opening or closing ● Set up the time
	Edging Statistics		<ul style="list-style-type: none"> ● Roughing Statistics ● Bevel & Rimless Grinding Statistics ● Bevel & Rimless Polishing Statistics <p>(Users can only clear the last column of data)</p>

 Submenu Introduction			
Icon	Paraphrase	Interface Display	Function Introduction
	Clock and Language settings		<ul style="list-style-type: none"> ● Set up date format ● Set up date ● Language Choice: Chinese/English

Edged Lens Size Adjustment (reset sizes)











Follow the steps below to adjust the sizes.

Step	Action	
1	When you are in Engineer Menu, click on  to enter into Submenu  .	
	<u>Result:</u> The following screen comes up.	
2	Select  to display the screen in the picture.	
3	Insert a lens with a diameter ≥ 60 mm, and press  Clamp Key, then click on  Start Key to edging.	
	Adjustment	Lens Type
	1. Mineral roughing	Mineral
	2. Plastic roughing	Plastic
	3. Finishing Rimless	Mineral
	4. Finishing Bevel	Mineral
	5. Polishing Rimless	Plastic
	6. Polishing Bevel	Plastic
4	When the edging is completed, according to system prompt  , press  Open Key to take out the lens.	
5	 	

	Measure the diameter of the edged lens with a calliper, and enter the measured value with the keyboard, then press the Enter Key to confirm the size adjustment.
6	When the size adjustment is completed, the system will save your adjustment automatically
7	 Return to Edging Calibration Interface, to select other adjustments by repeating the above operation.
8	Edging size adjustment is finished.

Lens Feelers Adjustment

Follow the steps below to adjust the measurement.

Step	Action
1	When the machine is stopped, click on  Engineer Menu Key. Enter into Engineer Menu Interface to select  .
2	Press  to start
3	According to system prompt, assemble 01# tool 
4	Take off the clamping adaptor, and change for the  tool, then press the  key to confirm.
5	According to system prompt, press the  key to close lens clamping.
6	Press the  key. Result: The adjustment is automatically performing.
7	The clamping will open automatically after finish the adjustment, take off the  tool, and press the  key. So the datas are saved, then come back to Engineer Menu.

Note: This calibration influences the bevel tracking. A calibration performed poorly can induce a bad work quality of the edger.

5. Maintenance

Caution

Do not use any type of spray hose to clean your system. Avoid any heavy splashing or spraying that may cause electrical damage to the system.

Never use chemical solvents, agents or derivatives of such products as:

- Acetone
- Trichlorethylene
- Benzene
- Kerozene
- Lighter Fluid or

Any product that claims “Do not use on plastic or painted surfaces”

Or any product that contains CHLORINE, AMMONIA, SODA.

These products directly or even by their simple vapors:

Might alter the structure and appearance of your system.

Note: Never manipulate the lens feeler pliers located in the edging station.

Supplier does not assume any responsibilities or liabilities for damages caused by errors or omissions.

Cleaning

The dust produced by edging will reduce the sensitivity of electronic devices, so it needs to do cleaning work.

When the screen indicates 0109, the dust on the lifting mechanism shaft needs to be cleaned.



- 1) Open the big shell, take down the key column
Prepare a clean lens cleaner
- 2) Rotate the lifting gear, lower the lifter properly.

- 3) Circumgyrate up the lens stage, clean the parts which are between the bottom of the lens stage and the lifter with a clean cleaner. Make sure it is out of dust or oil stain.



- 4) When the inspection is over, restart the machine, the error is excluded.

Fuse Replacement

<p>1. Turn off the power supply and make sure that the hands are dry and pull out the power plug.</p> <p>2. Unscrew the two M3 screws on the right side of the plate.</p>	
<p>3. After taking off the small cover plate on the right side, you can easily see the status of the power supply board.</p> <p>4. Check the fuse status, if any damage please replace the appropriate specifications.</p>	
<ul style="list-style-type: none"> ● Fuses to be used for 220V edger: 15A , 3A , 8A ● Fuses to be used for 110V edger: 30A , 3A , 8A 	

Edger Fault Code (Edging)

Error code	Cause
0103	Edging pressure sensor has no change
0104	Camber coder has regulation resistance's testing trouble
0105	Clamping electric motor has tighten trouble
0106	Clamping electric motor has loosen trouble
0107	Bending mechanism cannot test closing
0108	Bending mechanism cannot test opening
0109	Raise and down to the destinated position is in trouble
0110	Raise and down's switch fault or motor in trouble
Error code	Cause
0112	Translational to the destinated position is in trouble
0113	Translational switch fault
0114	Whril reached pointe position is timeout
0201	Downward shift is torn off when it is in initialization
0202	Upward shift is blocking when it is in initialization
0203	Raise and down's switch fault or motor in trouble
0204	Translational switch fault

Specifications

Specifications: FE-600

Edging

<ul style="list-style-type: none"> ● Automatic Initialization ● Lens front and rear face tracing: 3D ● Equipment <ul style="list-style-type: none"> * Roughing Glass Edging * All Plastic Edging (CR39, High Index, Polycarbonate) * Bevel/Rimless Finishing Edging * Bevel/Rimless Polishing Edging ● Automatic Clamping Pressure ● Edging pressure controlled according to lens material ● Graphics storage 	<ul style="list-style-type: none"> ● Convenient Water Connection ● Lens Edging Diameter: <ul style="list-style-type: none"> * ≤ to 80mm * Rimless: 17.75mm * Bevel: 19.50mm ● Drain Size: Ø 100mm ● Water Supply Pressure: from 4 to 7 bars ● Network Connection
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FE-600 Specifications

<ul style="list-style-type: none"> ● Dimensions: <ul style="list-style-type: none"> * Width: 650mm * Depth: 450mm * Height (visor close): 470mm ● Weight: 59kg ● Power Supply: 220V/50HZ 110V/60HZ ● Power Consumption: 800 W ● Pollution Degree: 2 ● Installation Category: II ● Ambient Temperature: 13°C to 35°C ● Relative Humidity: 10% to 80% ● Maximum Water Pressure: 7 Bar ● Maximum Water Pressure (with pump): 7 Bar ● Output of Pump Outlet: <ul style="list-style-type: none"> * 220V: Supply Voltage * 60 W & 55 W : Power available (for the pump) ● Fuses to be used for 220V edger: 15A , 3A , 8A ● Fuses to be used for 110V edger: 30A , 3A , 8A
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List of Accessories and Consumables

Accessories

S/N	Accessories name	Specs.	Quantity
1	Tool box	Box	1
2	Adhesive pads	Box	1
3	FE-600 User manual	Book	1
4	FE-600 Operation flowchart	Pcs	1

List of tool box accessories

S/N	Accessories name	Specs.	Quantity
1	Lens clamping adaptor ϕ 19mm	Mediums mode	4
2	Lens clamping adaptor ϕ 17mm	Small mode	4
3	Lens clamping cushion ϕ 19mm	Mediums mode	1
4	Lens clamping cushion ϕ 17mm	Small mode	1
5	Acetabula	Mediums mode	6
6	Acetabula	Small mode	4
7	Fixing cover set	Mediums mode	1
8	Lens clamper		1
9	Fuse 15A	ϕ 6*30mm	2
10	Fuse 8A	ϕ 5*20mm	2
11	Fuse 5A	ϕ 5*20mm	2
12	Fuse 3A	ϕ 5*20mm	2
13	Burnishing stick		1
14	Key 6 facets	1.5---6mm (set)	1
15	Flat glass lens (used in wheel blocking)	Thickness 2.5mm	10
16	Downpipe hoop		1
17	Machine rack adjustment tool	01# tool	1
18	Resistance pen		1

List of water tank accessories

S/N	Accessories name	Specs.	Quantity
1	Plastic water case		1
2	Pump		2
3	Rainspout	ϕ 100*800mm	1
4	Filter		1
5	Water inlet		2
6	Lens		10pcs