

# CO2 private laser

Model: DZ-5



-----User Manual Instructions

# Content

<b>Chapter 1 Instrument introduction</b> .....	<b>-2-</b>
1.1 CO2 fractional scope of treatment .....	<b>-3-</b>
1.2 Private scope of treatment .....	<b>-3-</b>
1.3 Contraindications.....	<b>-3-</b>
1.4 CO2 fractional operating principle.....	<b>-3-</b>
<b>Chapter 2 Instrument construction</b> .....	<b>-6-</b>
2.1 Equipment list .....	<b>-6-</b>
2.2 Instrument installation .....	<b>-8-</b>
<b>Chapter 3 Technical parameters</b> .....	<b>-11-</b>
<b>Chapter 4 Operation interface description</b> .....	<b>-12-</b>
4.1 Main interface.....	<b>-12-</b>
4.2 Fractional Mode Interface.....	<b>-13-</b>
4.3 Normal Interface.....	<b>-14-</b>
4.4 Gynecological Mode Interface.....	<b>-15-</b>
4.5 Vulva mode interface.....	<b>-17-</b>
4.6 Settings Interface .....	<b>-19-</b>
4.7 Calibration Interface .....	<b>-20-</b>
4.8 Protection Interface .....	<b>-21-</b>
4.9 Switching off the instrument.....	<b>-22-</b>
<b>Chapter 5 Postoperative considerations</b> .....	<b>-23-</b>
5.1 Precautions for operation.....	<b>-23-</b>
5.2 Postoperative considerations.....	<b>-23-</b>
<b>Chapter 6 Instrument failure and maintenance</b> .....	<b>-24-</b>
6.1 Common fault problems .....	<b>-24-</b>
6.2 Daily maintenance.....	<b>-24-</b>
<b>Chapter 7 Transportation and storage</b> .....	<b>-25-</b>

## Attentions

- ✧ Before installation debugging and use it, must read the instruction, according to specifications operation.
- ✧ Instruments shall be placed in the clean room with temperature 5°C-35°C and relative humidity ≤80%, with low dust ensure inside machine cooling water not freezes, lest cause laser tube crack.
- ✧ Please choose the well-ventilated place to install instruments. Without disturbance of high magnetic fields and high indoor air quality, without corrosive particles and conductive dust etc. Do not place instruments around the heat source, such as radiators, heat emitters, heat dissipation ventilating ducts, and etc. Do not put instruments in the place with direct sunlight, disturbance of high magnetic fields and mechanical vibration. Make sure the safety ventilation distance is great than or equal to 30cm.
- ✧ There are built-in precise and fragile optical devices in treatment hand pieces.
- ✧ Take strict precautions against dropping down, falling down, hits and knocks. To avoid damage.
- ✧ During the water injection process, only purified water and medical distilled water can be used. Do not use other kinds of water. If the instrument is used for the first time, or when people exchange water, make sure to add water for the second time and let out the remaining water completely.
- ✧ There are built-in precise and fragile optical devices in treatment hand pieces.
- ✧ Take strict precautions against dropping down, falling down, hits and knocks. All the connecting lines should be inserted and connected properly. Do not misplug.
- ✧ The machine doesn't work, the machine transfers the light should be set in the safe area in order to protect the eyes.
- ✧ When the machine is working, you should protect the eye or the skin from the laser light reflex. Do not pull the light- transferring arm.
- ✧ When operating do the safety protection and the earth wire well. The person should wear the safety goggles within the high pressure insulating mat. Forbidden to change the safety device and aim to the eye and the skin.
- ✧ If you do not use it for a long time (about one month), you should let it work about 5-10 minutes to make sure it is normal. You'd better power on the machine one time at least in one month, dropt the water in the water box.
- ✧ When in the critical situation (such as the noises or peculiar smell), please stop the machine to check.
- ✧ If you want to check the machine, please wait for over 5 minutes after turning off the machine till the high pressure get to zero and then open the machine.
- ✧ To change the laser tube, you should know the negative pole and the positive pole to connect them tightly; and you should distinguish the in and out water pipes to get the best cooling effect.
- ✧ If everything is OK, you can turn the emergency stop switch in the arrow direction to let it bounced and the start to work again.

## Chapter 1 Instrument introduction

With the continuous change of people's aesthetic concept, in addition to facial and body appearance plastic surgery projects, private part plastic surgery has gradually become a new fashion, which is pursued by the majority of women and swept the world. In the past, vaginal laxity can only be solved by surgery. However, due to the high risk and side effects of surgery, many women gave up treatment, which affected their health and quality of life. With the emergence of innovative treatment schemes for microvascular reconstruction with CO2 laser, the amount of vaginal tightening treatment has increased rapidly, becoming a new growth point in the beauty and plastic surgery industry.

Private youth laser provides a revolutionary and accurate painless solution for common problems of women such as vaginal relaxation, vaginal internal environment disorder, poor sensitivity, or accompanied by urinary incontinence: no anesthesia, pain free throughout the whole process, no holidays, 15 minutes to complete the treatment, which can maintain the tightening effect for a long time. It is the most popular new body plastic surgery project for women today.

Private youth laser through the microvascular reconstruction of CO2 laser, the oxygen content of vaginal tissue will increase, the release of ATP from mitochondria will increase, and the cell function will be more active, which will enhance the secretion of vaginal mucosa, lighten the color, and enhance the lubrication. At the same time, by restoring the vaginal mucosa, the pH value and flora are normalized, the recurrence rate of infection is reduced, and the female reproductive tissue is restored to a younger level. In addition, private laser completely subverts the traditional method of birth canal repair: painless and noninvasive, solving the problems of postpartum genital tract leakage, relaxation, decreased sensitivity and lubrication, and repeated inflammation.

### 1.1 CO2 fractional scope of treatment

1. Acne scar
2. Fade and eliminate color spots and chloasma
3. Surgical scar, traumatic scar and scald scar
4. Wrinkles, loose skin, photoaging skin
5. Face rejuvenation
6. Fade stretch marks

### 1.2 Private scope of treatment

1. Shrinking Yin: fast tightening, lasting tightening, tightening degree increased by 60%
2. Beautify Yin: fade the pigment, beautify the labia, and increase the tenderness by 70%
3. Moisten Yin: improve secretion, eliminate dryness, and increase lubrication by 80%.
4. Nourishing yin: deep anti-aging, prevent aging, and increase youth by 80%.
5. Improve sensitivity.
6. Privacy and health, balance pH and improve the internal environment.

### 1.3 Contraindications

1. Pregnant women
2. Inescapable (day) light exposure population for daily work
3. Photoallergic constitution or drug-induced photosensitivity, or during the period when light sensitizing drugs are being taken
4. Atypical nevi or malignant lesions in the opercular area
5. Active herpes or broken skin
6. Has a history of keloids
7. Severe diabetes, hypertension, epilepsy

### 1.4 CO2 fractional operating principle

#### 1、Scars

It produces microtubule condensation in the epidermis and reconstitutes with collagen that stimulates the dermis. Old skin will naturally metabolize through self repair and be replaced by new tissues, thus reducing scars

Energy	Duration	Distance	Interval	Repeat	Shape	Scan modes
15%	0.6-0.8	0.7-0.9	1	1	Select according to operation position	Normal

**Note:** adjust the operating parameters according to the actual situation.

## 2、Whelk

Because the thermal energy emitted by the laser can reduce the bacteria that cause inflammation on the surface of the skin. CO2 skin beautifying laser can effectively control skin problems caused by folliculitis and abnormal sebum secretion

Energy	Duration	Distance	Interval	Repeat	Shape	Scan modes
25%	0.3-0.8	0.9-2.0	1	1	Select according to operation position	Random

**Note:** adjust the operating parameters according to the actual situation.

## 3、Wrinkle

CO2 laser converts light energy into heat energy, stimulates collagen proliferation, and can operate on any skin part that loses elasticity. Wrinkles can also be extremely improved after multiple courses of treatment

Energy	Duration	Distance	Interval	Repeat	Shape	Scan modes
30%	1.2-2.0	0.7-0.8	1	1	Select according to operation position	Random

**Note:** adjust the operating parameters according to the actual situation.

## 4、Tighten skin

CO2 cosmetic skin laser stimulates the regeneration of collagen tissue in the dermis. At the same time, it makes the epidermis fine and new, and gradually replaces the damaged epidermis. Connect the epidermis with the dermis to improve the luster and luster of the skin.

Energy	Duration	Distance	Interval	Repeat	Shape	Scan modes
20%	0.3-0.8	0.8-2.0	1	1	Select according to operation position	Random

**Note:** adjust the operating parameters according to the actual situation.

## 5、Fade stain

The action point of CO2 laser is composed of hundreds of micro laser pulses, and each micro laser spot area is tens of square nanometers. Accelerate the metabolism of pigments in cells, so as to achieve the effect of reducing stains.

Energy	Duration	Distance	Interval	Repeat	Shape	Scan modes
15%	1.2-2.5	0.7-0.9	1	1	Select according to operation position	Normal/Random

**Note:** adjust the operating parameters according to the actual situation.

### 6、Improve coarse pores

Enlarged pores can lead to skin problems, including blackheads, acne, oily skin, and sagging skin. CO2 laser can improve the condition of coarse pores. Non surgical micro stimulation stimulates collagen regeneration, so as to solve the problem of large pores.

Energy	Duration	Distance	Interval	Repeat	Shape	Scan modes
30%	0.3-0.8	0.6-0.8	1	1	Select according to operation position	Random

**Note:** adjust the operating parameters according to the actual situation.

### 7、Skin proliferative problems

Using CO2 laser, it has the effect of deep skin change for the operating part, regenerating healthy collagen, restoring smooth and elastic skin, and thus reducing scars and hyperplastic wrinkles

Energy	Duration	Distance	Interval	Repeat	Shape	Scan modes
35%	1.2-3.8	0.7-0.9	1	1	Select according to operation position	Random

**Note:** adjust the operating parameters according to the actual situation.

### 8、Remove wrinkles

The production of stretch marks is due to the rapid stretching of the skin and the inability of collagen to pull, resulting in the tearing of the dermis. The laser instantly penetrates the skin to the breaking point, completely connects the broken collagen and elastin network structure, restores the prosperity, hardness and toughness of the skin, stimulates the growth of collagen in the cell tissue at the breaking point, and accelerates the recovery of the connecting point.

Energy	Duration	Distance	Interval	Repeat	Shape	Scan modes
25%	0.7-0.9	0.6-1.0	1	1	Select according to operation position	Random







**Note:** adjust the operating parameters according to the actual situation.

## Chapter 2 Instrument construction

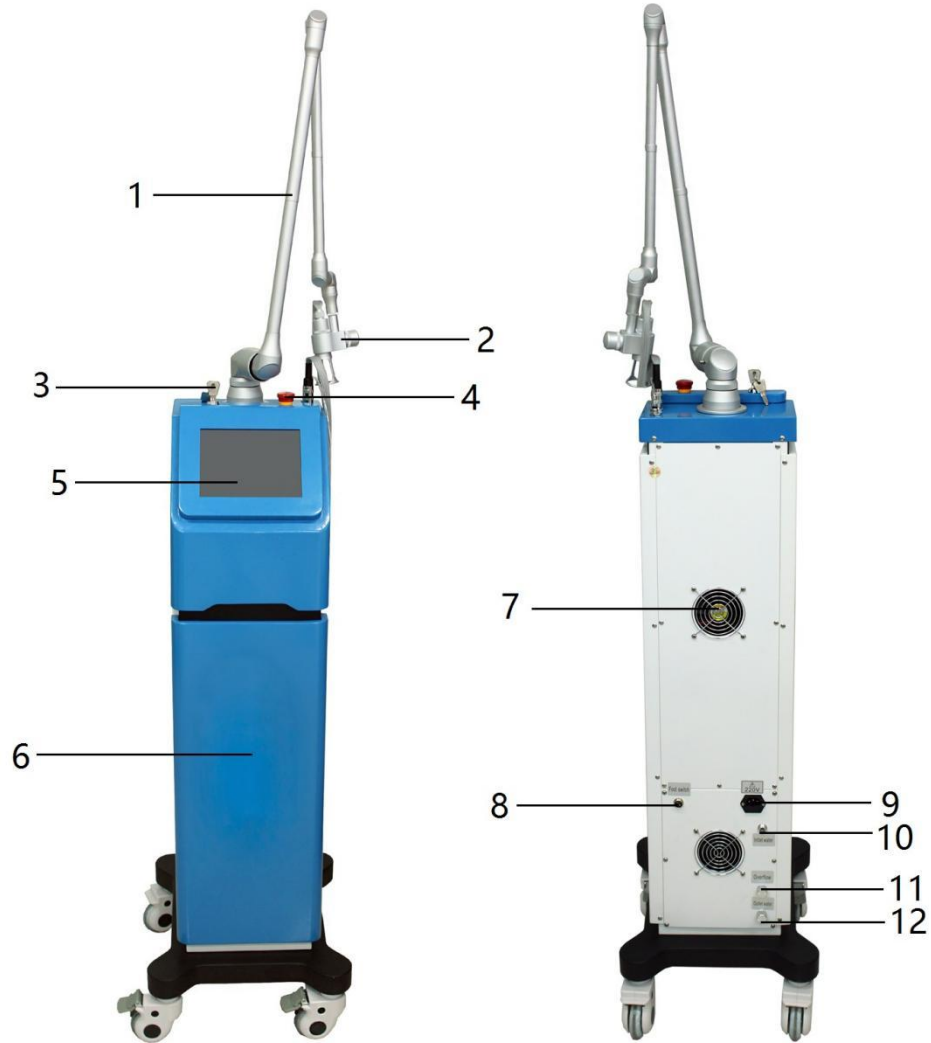
### 2.1 Equipment list

Check whether the package is well before your open. When there is no abnormal, you can open the machine box. It is prohibited banging on and collision, when you open the package, as the machine equipped with laser tubes and precision optical system.

Take out the packing list after your open-package and then the host and accessories in turn. Check whether inventory and inside machine parts is good, whether the attachment is fixed or loose firm. You can install after it is confirmed no abnormal or trouble-shooting. If there are any complications, please promptly contact with manufacturer for timely negotiation processing.

			
<p>Machine host</p>	<p>Light guide arm &amp; fractional laser probe</p>	<p>CO2 laser probe</p>	<p>Private applicator</p>
			
<p>Water injection funnel</p>	<p>Foot switch</p>	<p>Power lead</p>	<p>Key</p>





1. Light guide arm
2. Scanner
3. Key switch
4. Emergency stop switch
5. Intelligent touch screen display panel
6. Instrument host
7. Radiator
8. Foot connection socket
9. Power input socket
10. Water injection hole
11. Overflow hole
12. Outlet hole

## 2.2 Instrument installation

### Step 1: install the light guide arm

Rotate the B end in (Figure 1) to the direction indicated by the C end, lock the a end circlip in the figure to the direction indicated in the figure automatically (if it is necessary to restore to the original position, turn the a end circlip to the direction indicated in the figure), insert the B end into the main base, and finally lock the lock nut D of the light guide arm as shown in (Figure 2)

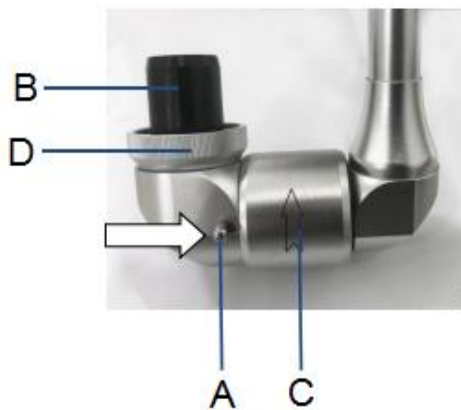


Figure 1



Figure 2

### Step 2: install the signal output line as shown in Figure 3

1. first remove the pulse mode hand tool from the light guide arm, as shown in (Figure 4)
  2. align the protruding point (Figure 5) with the recessed hole (Figure 6) and press it vertically
- As shown in Figure 7, lock the nut finally



Figure 3



Figure 4



Figure 5



Figure 6

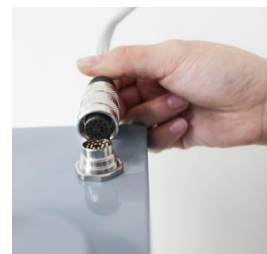


Figure 7

**Step 3: install the fractional mode hand tool**

1. Install a dot matrix mode tool such as (Figure 8), adjust parameters for dot opening mode, and operate by stepping on the foot



Figure 8

**Step 4: Install Private Mode Tools**

1. Firstly, install the crystal (Figure 9) as shown in (Figure 10), Install the retractable hand tool (Figure 11)  
2. Note: Private three-piece handsets such as (Figure 12) share a single crystal, in other words, they all need to be installed before they can be used.



Figure 9



Figure 10



Figure 11



Figure 12

### Step 5: Install the laser foot pedal

1. Align the recessed points (Figure 13) to the projected points (Figure 14), press them vertically (Figure 15), and lock the lock mother at last.

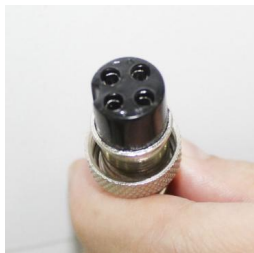


Figure 13



Figure 14



Figure 15

### Step 6: Instrument Add Water

1. Install the filling funnel on the filling hole (Figure 16)
2. Fill distilled/purified water from the filling funnel until water flows out of the overflow hole, proving that the water tank is full



Figure 16

### Reminder:

1. Change water once every 15 days when the instrument is used frequently; Change the water once a month if the instrument is not used frequently.
- (2) When changing water: unscrew the drainage hole, release all water, screw on the nut, repeat steps 6“1,2” above to add water

### Step 7: Turn on the instrument

1. Plug in the power cord (Figure 17)
2. Insert the key, turn the key switch (Figure 18) and the emergency stop switch (closed state) (Figure 19) to the right, (the emergency stop switch is in the pop-up state at this time) and start the machine.



Figure 17

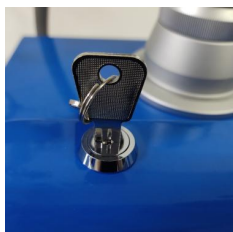


Figure 18



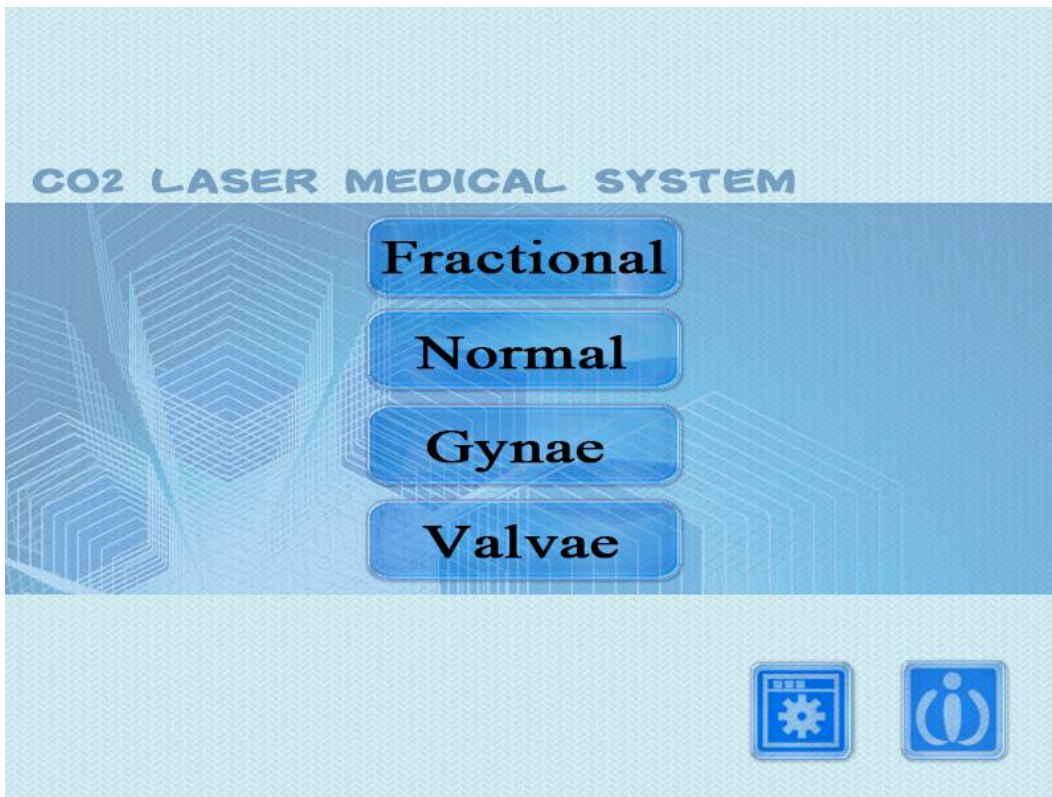
Figure 19

## Chapter 3 Technical parameters

<b>Laser type</b>	CO2 laser
<b>Wavelength</b>	10600nm
<b>Power</b>	60W
<b>Duration</b>	0.1-10ms
<b>Interval</b>	0-5.0s
<b>Distance</b>	0.2-2.6mm
<b>Scan modes</b>	Normal、Random、Equidistance
<b>Scan graphics</b>	Circle、Triangle、Square、Rectangle、Hexagon、Straight line
<b>Scan scope</b>	0.1mm-20mm
<b>Output mode</b>	Continuous、Single、Pulse、Super Pulse
<b>Optical transmission</b>	6-joint arm
<b>Cooling system</b>	Closed Internal Circulating Water Cooling
<b>Packaging</b>	125*47*50cm
<b>Gross weight</b>	51kg

## Chapter 4 Operation interface description

### 4.1 Main interface



**Fractional**

It is fractional mode button, click it to enter fractional mode interface.

**Normal**

It is pulse mode button, click it to enter pulse mode interface.

**Gynae**

It is gynecological mode button, click it to enter gynecological mode interface.

**Valvae**

It is the vulva mode button. Click to enter the vulva mode interface



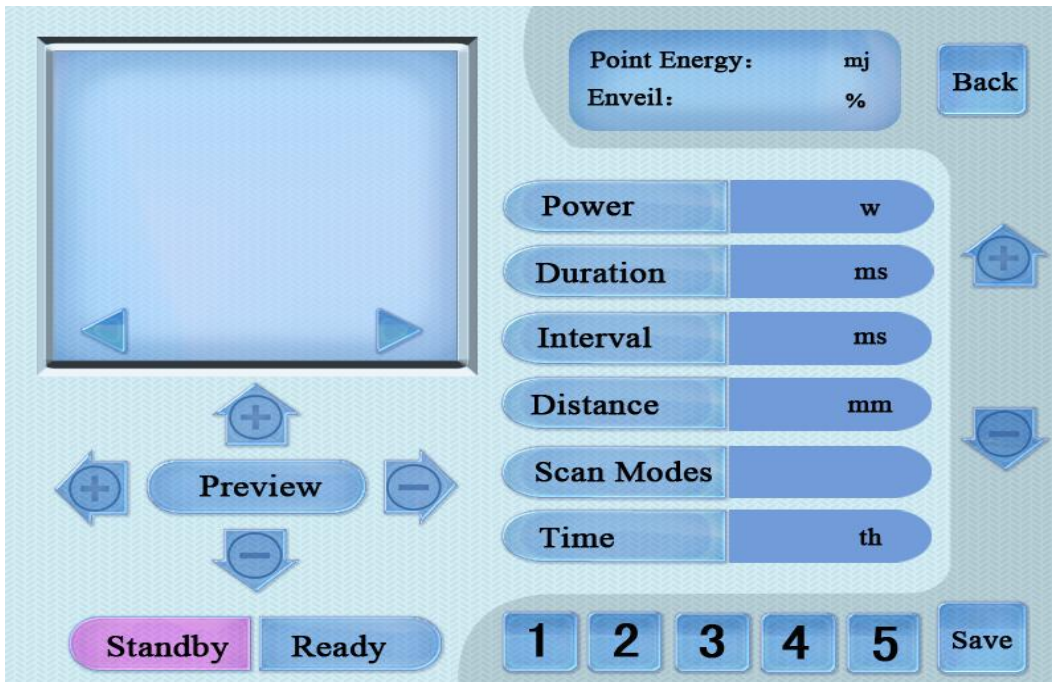
It is settings button, click it to enter settings interface.



It is system information button, click it to enter system information interface.



## 4.2 Fractional Mode Interface



### Power

Using parameters button adjustment, to control laser output power 1-60W.

### Duration

Using parameters button adjustment, to control each laser spot action time from 0.1ms to 10ms during scanning process.

### Interval

Using parameters button adjustment, to control the time gap from 1ms to 5000ms between two spots during scanning process.

### Distance

Using parameters button adjustment, to control the distance from 0.1 to 2.6 mm between two spots and the spots density during scanning process.

### Scan Modes

Using parameters button adjustment, to control the fractional scan mode of three types:

**Normal mode:** scanning spots from one side to another side in turn;

**Random mode:** scanning spots without order, random;

**Midsplit mode:** the horizontal spacing always keeps half distance of the scanning shape between each spot and next spot during scanning process.

### Time

Using parameters button adjustment, to control the scan times from 1-20th.



Click the number 1-5, to choose the storage space for saving the current parameter settings and click the number buttons when using.



Using up and down buttons for changing the fractional shapes up and down direction size 0-20mm;

Using left and right buttons for changing the fractional shapes left and right direction size 0-20mm;

Click "Preview" button, the scanner will show the indicating light of different shaps for options.



It is for choosing the scanning shapes.

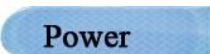
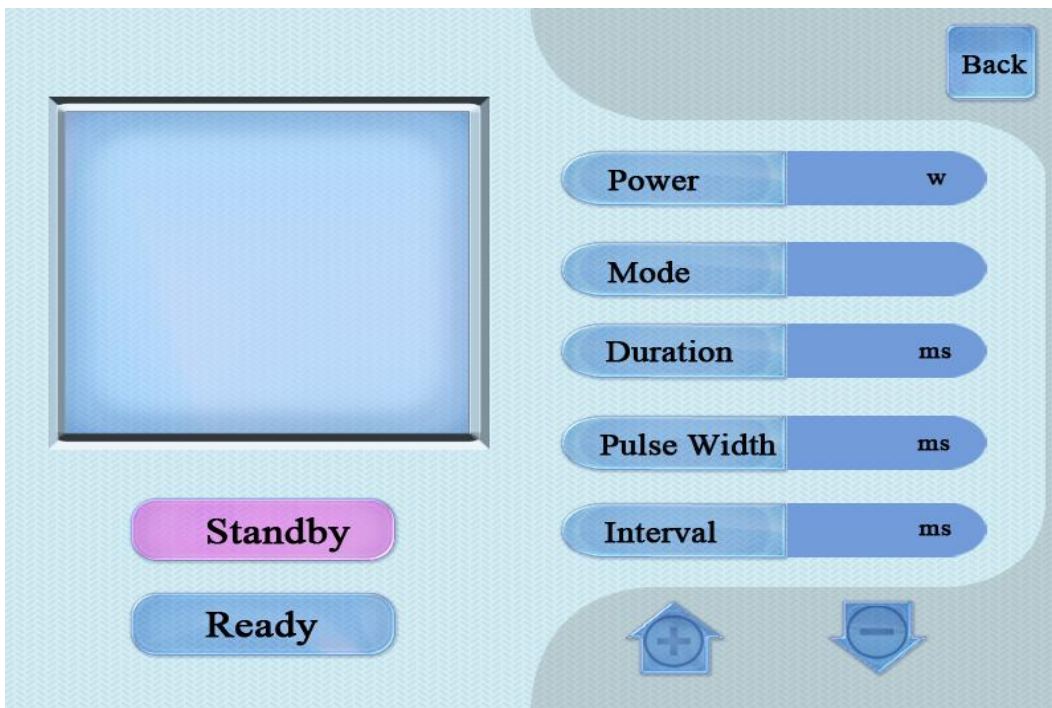


After finishing the parameter settings, click this button, scanner aim at operating position, and step the foot switch for starting laser scanning.

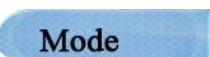


Click it back to the main interface.

#### 4.3 Normal Interface



Using parameters button adjustment, to control laser output power 1-60W.



Using parameters button adjustment, to control the scan mode of three types:



**Single mode:** Step the foot switch one time, only launch one laser beam, working time was controlled by **Duration** from 1ms to 100ms.

**Continuous mode:** Step the foot switch one time, the laser beam will be launched continuously, and laser beam stops when left the foot switch.

**Impulse mode:** Step the foot switch one time, the super pulse laser will be launched continuously, the pulse width and interval time was controlled through **Pulse Width** & **Interval**. When the laser pulse width and interval time is smaller, it becomes super pulse, and laser beam stops when left the foot switch.

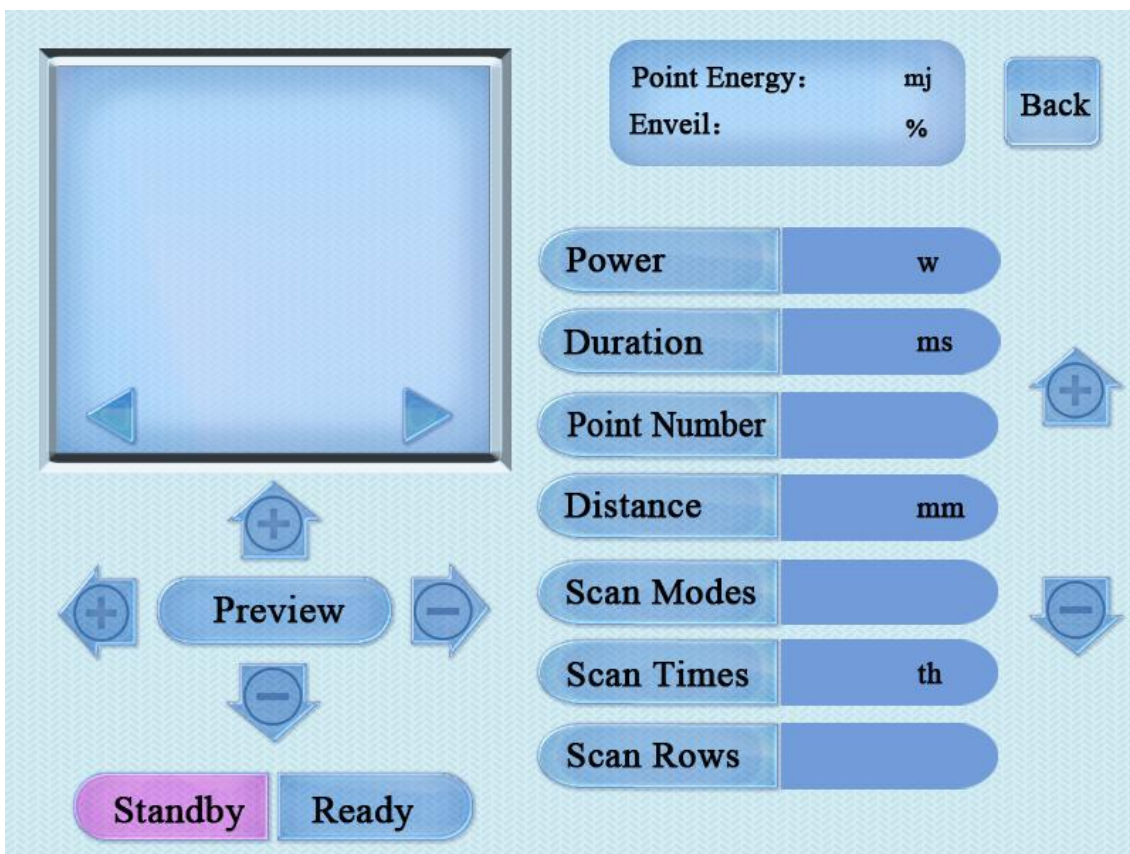
**Ready**

After finishing the parameter settings, click this button, scanner aim at operating position, and step the foot switch for starting laser scanning.

**Back**

Click it back to the main interface.

#### 4.4 Gynecological Mode Interface



**Power**

Using parameters button adjustment, to control laser output power 1-60W.

**Duration**

Using parameters button adjustment, to control each laser spot action time from 0.1ms to 10ms during scanning process.

**Point Number**

Using parameters button adjustment, to control the scanning points of each line during scanning process from 4-100.

**Distance**

Only available when using conical treatment head(Scanning pattern is round), to control the vertical distance of each row from 2 to 40mm, to control the spots density during scanning process.

**Scan Modes**

Scanning mode has three types: Normal, Random, Midsplit, same as what in fractional mode.

**Scan Times**

Using parameters button adjustment, to control the scan times from 1-20th.

**Scan Rows**

Only available when using conical treatment head(Scanning pattern is round), to control the number of scanning rows from 1 to 10 during scanning process.



Using up & down, left & right buttons for adjusting the center point's location of scanning shapes.

Click "Preview" button, the scanner will show the indicating light of different shapes for options.



It is for choosing the scanning shapes, only square and circle for options. The square scanning is only for Cant treatment head; and the circle scanning is only for Conical gynecological treatment head.

**Ready**

After finishing the parameter settings, click this button, scanner aim at operating position, and step the foot switch for starting laser scanning.

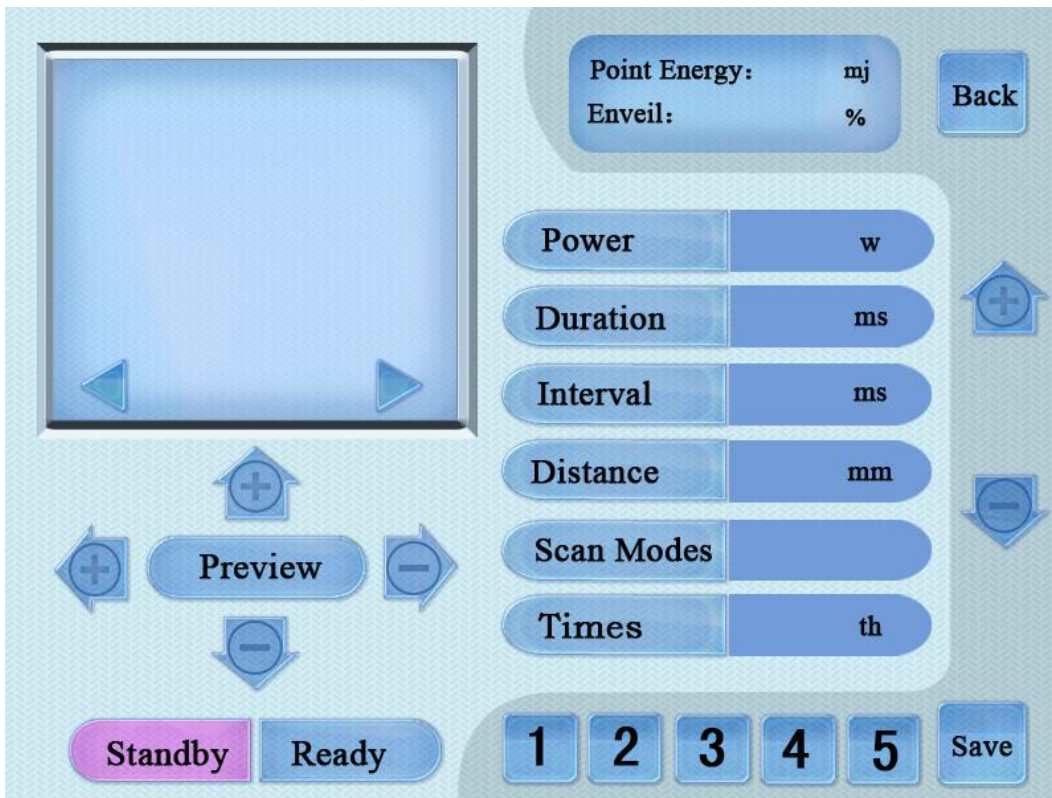
**Back**

Click it back to the main interface.

**Note:** after treatment, the inner Yin is tightened and the cervix is elevated.

The power is between 6-12w, the residence time is 0.1-0.2, and other parameters remain the same. The operation test of the light outlet of the paper wrapping hand tool is hit on A4 paper, and it is safe not to penetrate one sheet. Repeat walking three sides according to the scale.

#### 4.5 Vulva mode interface



#### Power

Using parameters button adjustment, to control laser output power 1-60W.

#### Duration

Using parameters button adjustment, to control each laser spot action time from 0.1ms to 10ms during scanning process.

#### Interval

Using parameters button adjustment, to control the time gap from 1ms to 5000ms between two spots during scanning process.

#### Distance

Using parameters button adjustment, to control the distance from 0.1 to 2.6 mm between two spots and the spots density during scanning process.

#### Scan Modes

Using parameters button adjustment, to control the fractional scan mode of three types:

**Normal mode:** scanning spots from one side to another side in turn;

**Random mode:** scanning spots without order, random;

**Midsplit mode:** the horizontal spacing always keeps half distance of the scanning shape between each spot and next spot during scanning process.

#### Time

Using parameters button adjustment, to control the scan times from 1-20th.



Click the number 1-5, to choose the storage space for saving the current parameter settings and click the number buttons when using.



Using up and down buttons for changing the fractional shapes up and down direction size 0-20mm;

Using left and right buttons for changing the fractional shapes left and right direction size 0-20mm;

Click "Preview" button, the scanner will show the indicating light of different shapes for options.



It is for choosing the scanning shapes.



After finishing the parameter settings, click this button, scanner aim at operating position, and step the foot switch for starting laser scanning.



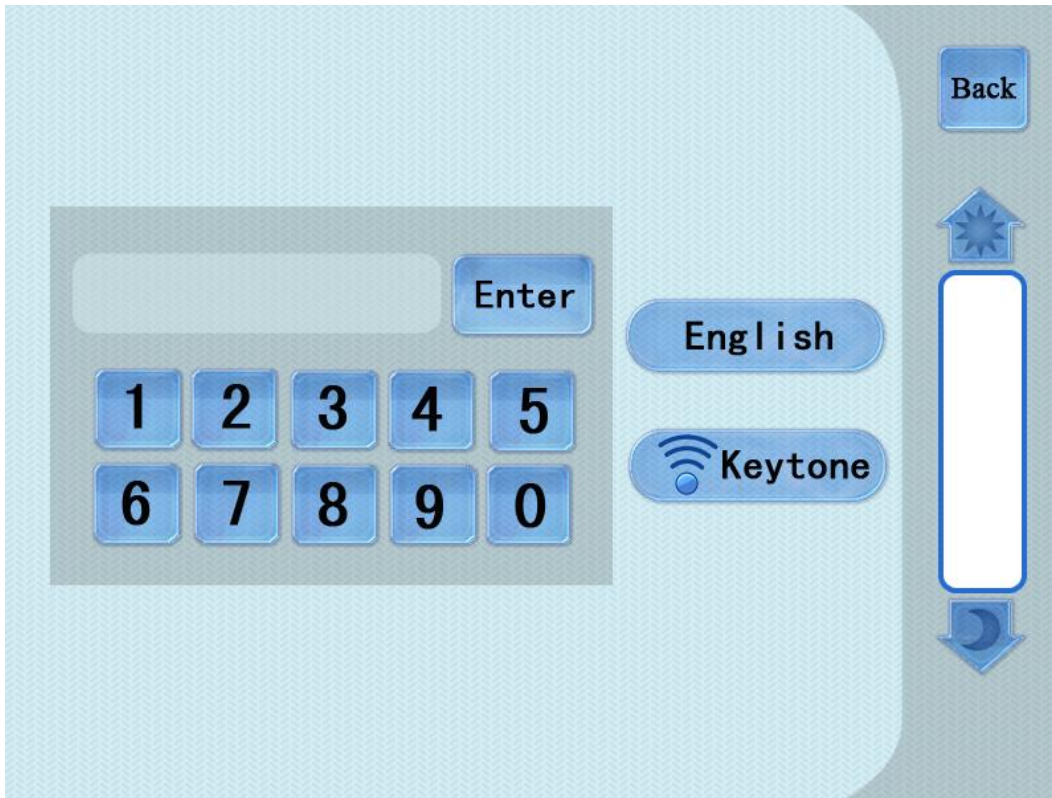
Click it back to the main interface.

**Note:** vulva treatment is pink and tender. Tighten the vaginal orifice and urethral orifice to improve inflammation.

The power is adjusted by 6-8W, and the residence time is 0.1-0.3. Other things remain the same. It is safe to stick the treatment head close to A4 paper without penetration.



## 4.6 Settings Interface

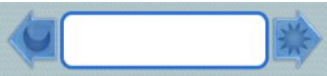


English

Click it for changing languages between English and Chinese.

Keytone

Click for turning on or turning off the voice.



Click for adjusting the indicator light's intensity.

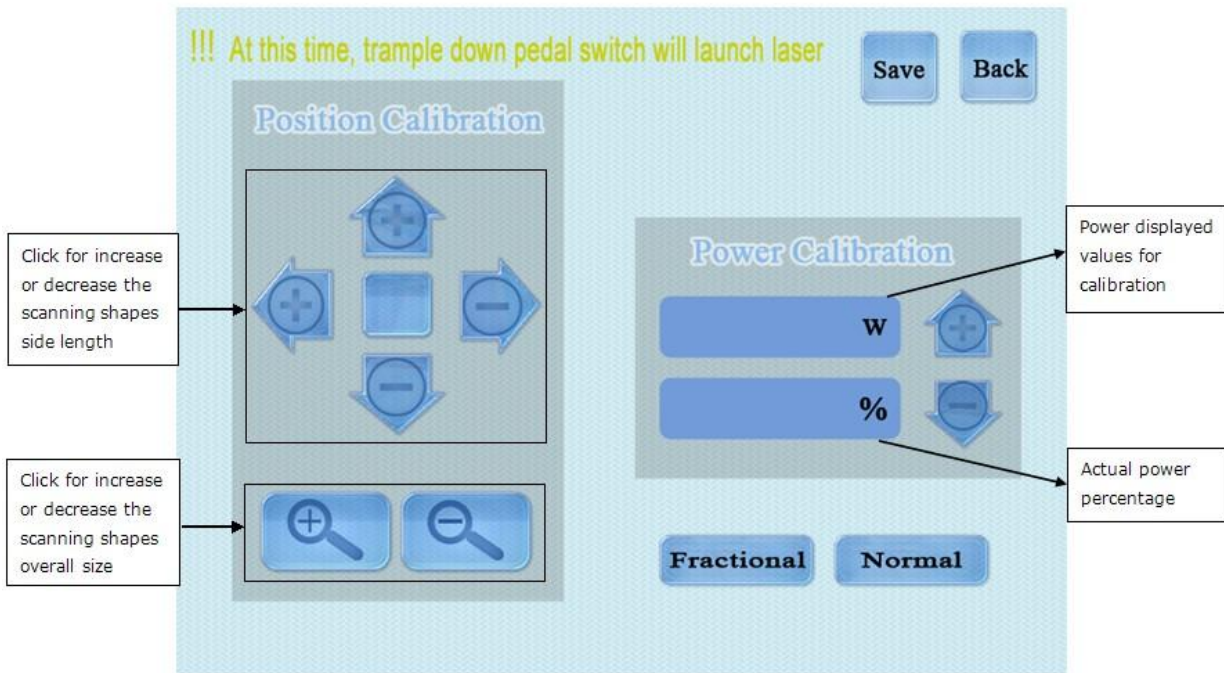
Enter

Enter the password 123456 into the calibration interface

Back

Click it back to the main interface

## 4.7 Calibration Interface

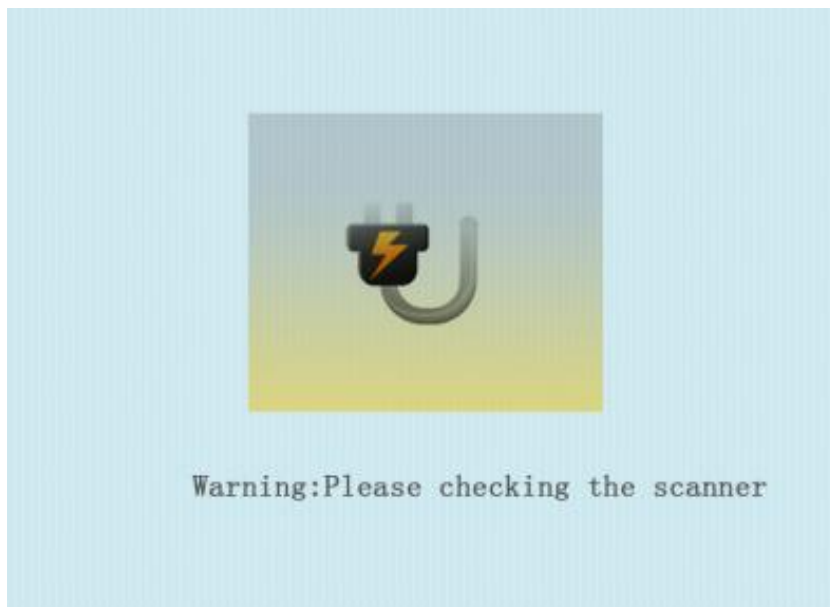


Power calibration: Selected button  , choose power values for calibration, and then choose  , adjust the power value and use the Laser Power Meter to measure the actual power, make sure the "Power displayed values for calibration" = "Laser maximum power" × "Actual power percentage for calibration", then to save it before exit.

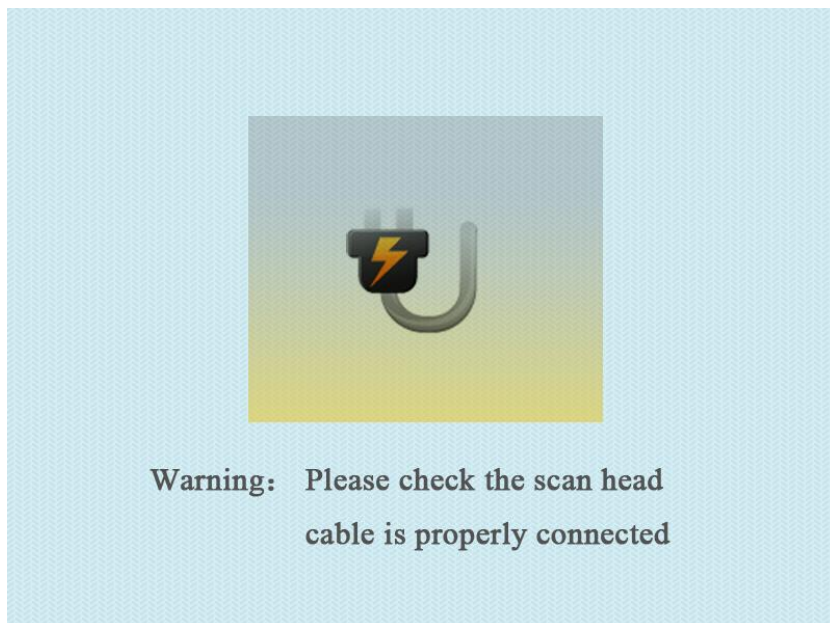
**Note:** Under the power calibration interface, step the foot switch to launch laser. After finishing the calibration adjustment, click the save button, then click the back button to the main interface.

#### 4.8 Protection Interface

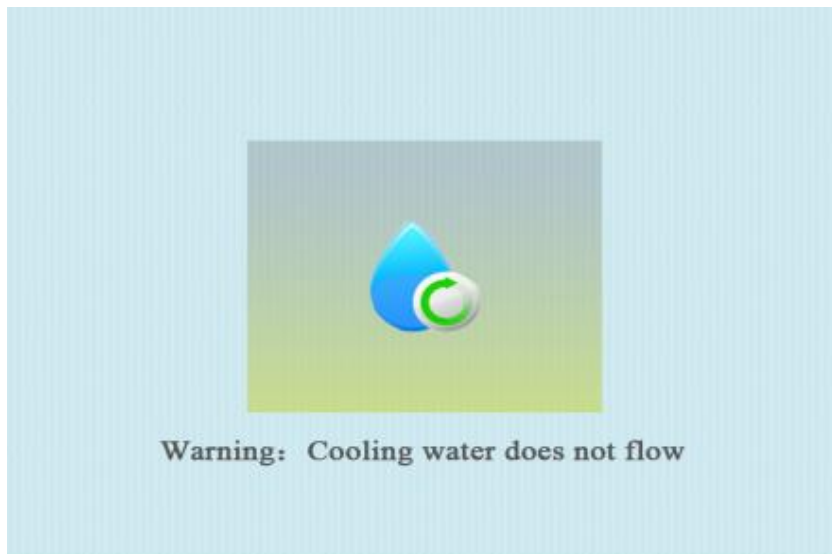
The warning interface will appear when the galvo scanner failure occurs :




When no hand tool is detected, the galvanometer connection fault protection interface will be displayed:



The water warning interface will appear when the water pump does not work or cooling water dose not flow caused by some reasons:



**Note:**  the setting button in the interface is the factory debugging button, and the parameters have been set at the factory, so there is no need to set them.

#### 4.9 Switching off the instrument

1. After using the instrument, it is recommended to return to the standby state before turning off the instrument, and then turn the key switch to the "off" position to turn off the instrument.
2. The light guide arm is replayed to a natural position without force to maintain a good optical path.
3. Remove the cutter head and other tools for cleaning and disinfection.
4. When the instrument is not in use, unplug the key and keep it safe to prevent unauthorized personnel from using or operating the instrument.



## Chapter 5 Postoperative considerations

### 5.1 Precautions for operation

- A. The energy must be increased gradually from small to large, otherwise it may burn the skin
- B. The time interval of each operation shall not be less than 3 weeks
- C. Do not wet water within 24 hours after operation
- D. Do not expose the operation area to the sun for 7 days after operation
- E. If there is no professional doctor, it is recommended to prohibit the use of separate CO2 mode

### 5.2 Postoperative considerations

#### Fractional

1. After treatment, the scab peels off previously treated areas do not touch water, do not rub, avoid spicy, smoke and alcohol, fast for a recent period of time deep color food such as: coffee, cola, etc., to let the scab peel fall off itself, not forcibly flaking.
2. Scab sloughing not previously engaged in intense exercise so as not to cause infection after sweating.
3. Take care postoperatively to protect from direct sunlight, wear out sun caps, sun umbrella, and external sunscreen products. To choose products that have a high safety profile and have an optimal sun protection profile: UVB sun protection index (SPF) > 30; UVA sun protection factor (PFA) > + +; Physical sunscreens with a large R-index.

#### Private

1. Don't recommend wearing tight pants after you do, preferably wearing pure cotton underpants, gowns.
2. Prevent infection by avoiding profuse sweating as much as possible.
3. Can't be in same room in fifteen days, can't pelvic bath.
4. Keep coveralls clean to prevent bacterial infection.
5. Do not urinate for 3 hours after operation, 12 hours do not touch water
6. Prohibition of sauna steaming for one week
7. Sex forbidden for at least 15 days
8. Abstain from spicy stimuli, seafood stuff, heavily pigmented foods, and tobacco or alcohol within a week

#### Rest more and keep vulva clean

9. There is a small amount of yellow water or blood stains after treatment, which is a normal reaction and disappears after one week. Had abdominal distension was also normal.
10. It is normal for some people to have slight redness of the vulva, which resolves by 3 to 7 days
12. Slight itchy genera during meristematic crusting of vulva is normal and cannot be grasped by hand

## Chapter 6 Instrument failure and maintenance

### 6.1 Common fault problems

1、 The whole machine is not powered on

**Resolve:**

- A. Check whether the emergency stop switch pops up. When it pops up, it is on, and when it is pressed, it is off
- B. Check whether the air switch is on. The top is on and the bottom is off
- C. Check whether the fuse tube at the power input place behind the machine is damaged
- D. Check the power line for damage and short circuit
- E. Check whether there is power output at the power socket

2、 Crash occurs

**Resolve:**

- A. High voltage interference, check whether there are high-power appliances in the surrounding power grid
- B. Software out of control, replace the controller

3、 The energy of the pattern is uneven or deviates from the position

**Resolve:**

- A. Readjust the light path
- B. The lens of the light hole is too dirty. Clean it with alcohol cotton. Pay attention to dry it before using it, otherwise it will cause the lens to burn out with alcohol

4、 No infrared light indication

**Resolve:**

- A. Check whether the infrared power supply has a voltage output of 3V DC
- B. Replace the infrared sight

5、 The blowing device has no gas output

**Resolve:**

- A. Check whether the air pump works normally
- B. Check the air pipe for leakage

### 6.2 Daily maintenance

- a. The machine must not be exposed to the sun,
- b. After use, cover the bare head of the machine with a cloth bag and the whole machine to prevent dust from entering (very important)
- c. The machine operating head must be handled with care (very important)

## Chapter 7 Transportation and storage

- Thoroughly drained before transport.
- Instrument maintenance and transportation require the environmental temperature of
- - 20 ° C---55 ° C, relative humidity of less than 75% and good air quality.
- This machine is precision instruments should avoid vibration and impact during the mobile and transport, forbidden and prevent damage to the inversion of the system in the machine and electronic devices
- Do not move or transport in the dust without dustproof packaging.
- If this instrument do not use long-term, cut off the electricity supply and remove the treatment tool to keep independently.
- When come into reuse, you should reinstall as the first time.