

CO2 Fractional Laser (SKU24571)

USER MANUAL



Spa & Equipment SKIN+ACT

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USER MANUAL

This manual contains important information on the use and operation of this machine.

Please read all the information carefully for optimal performance to prevent any damage or misuse of the machine. Any change or modification not expressly approved in this manual could void the warranty for this equipment.

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- Theory
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- Accessories
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- Recommended parameters
- After operation

Other Information

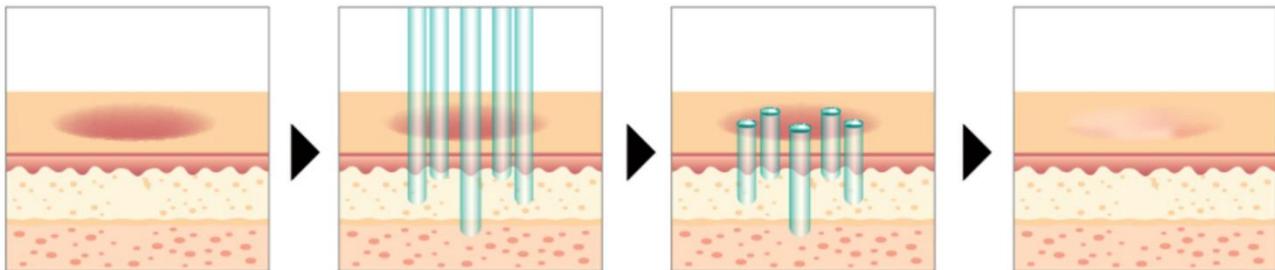
- Precautions
- Contraindications
- Warranty
- Troubleshooting

Following these instructions will help you use the equipment efficiently and safely and will prolong the machine life.

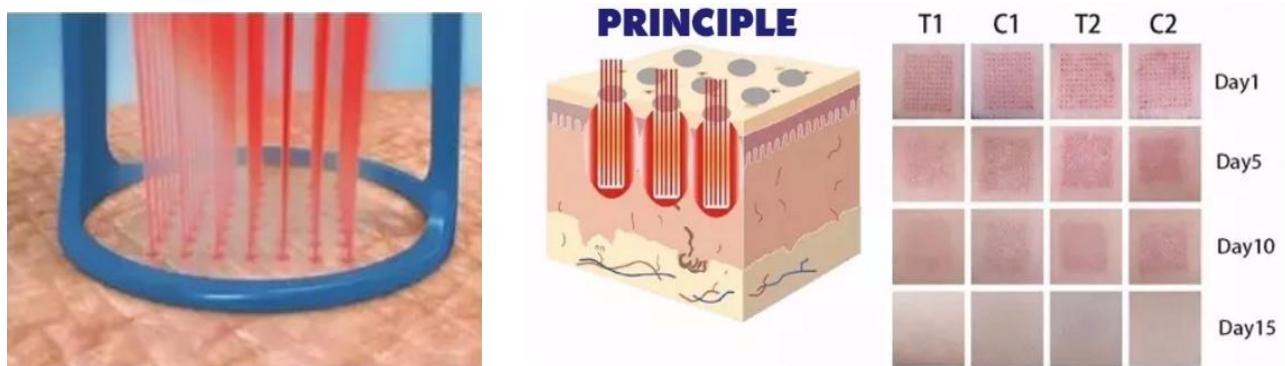
Basic Introduction

THEORY

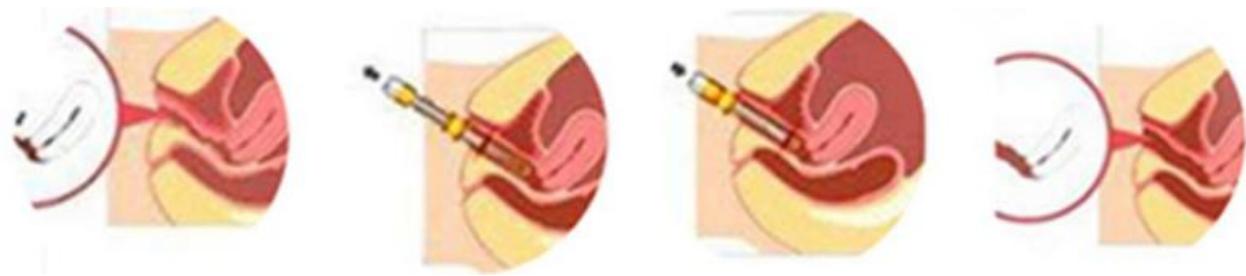
Fractional technology is a benchmark for efficiency and comfort in laser resurfacing procedures. Fractional resurfacing consists in the emission of tiny laser energy beams which penetrate into the skin in the form of thermal columns all the way to the dermis while leaving untreated tissue in-between them. Laser energy is deposited into the tissue with a pattern of random shots which alternate areas treated by laser with those of intact skin. This provides for a faster recovery and tissue regeneration and is a virtually painless treatment.



These thermal micro-columns treat the dermis superficially and also in depth, reaching the underlying layers of the dermis and stimulating collagen formation. In addition, this mechanism allows for individualized treatments, adapting them to the needs of each patient.



This CO2 fractional laser also applies for vaginal treatment and has a good effect.



Vaginal health:
Comprehensive improvement,
infection reduce

Vaginal sensitivity:
Cell regeneration,
enhance response

Vaginal lubrication:
Promote secretion
eliminate dryness

Vaginal tighten:
High-effective
tightening

APPLICATIONS



Smooth scars, such as surgical scars, burned scars, acne scars, etc.



Skin renewal and repaving, especially recovery from sun damage.



Eliminate wrinkles;
Skin tightening.



Eliminate pigments,
such as intractable chloasmas, age spots, etc.



Acne treatment,
Restore your beauty



Vaginal stretching;
Vaginal whitening;
Urinary incontinence

Gynae Mode

- ✓ Vaginal tighten
- ✓ Vaginal lubrication
- ✓ Vaginal sensitivity
- ✓ Uremic Treatment

Fractional Mode

- ✓ Skin rejuvenation
- ✓ Wrinkles removal
- ✓ Pigment removal
- ✓ Acne treatment

Pulse Mode

- ✓ Sarcoma removal
- ✓ Nevus removal
- ✓ Grown nails removal
- ✓ Skin tags removal

CONTRAINDICATIONS

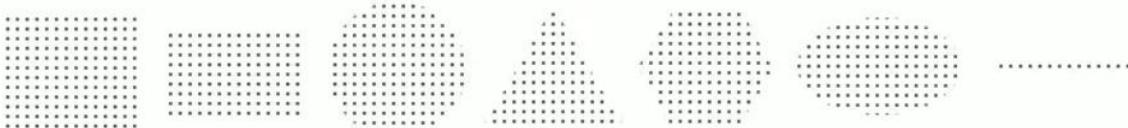
- ❖ Pregnant and lactating women;
- ❖ Women who experience severe vaginitis, cervical erosion, metroptosis;
- ❖ Women who are subjected to abortion within three months;
- ❖ Patients with acute inflammation;
- ❖ Highly sensitive to treatment intolerance;
- ❖ Isotretinoin use within the previous six months;
- ❖ Active cutaneous bacterial or viral infection in the area to be treated;
- ❖ History of keloid formation or hypertrophic scarring;
- ❖ Ongoing ultraviolet exposure, prior radiation therapy to treatment area;
- ❖ Collagen vascular disease, chemical peel and dermabrasion.
- ❖ Patients with malignant tumours, heart disease, mental illness, severe hypertension, diabetes mellitus, systemic SLE, skin cancer, etc.



FEATURES

- ❖ Fractional mode (aesthetic), pulse mode (surgery), Gynae mode (gynecology), 3 treatment modes can meet all the needs of beautician, plastic surgeon, gynecologist.
- ❖ South Korea imported 7-articulated arms with good quality lenses.
- ❖ Germany imported Mini-Stepper-Motors with the best quality makes the laser shoot faster and the energy more uniform and stable.
- ❖ High-quality constant current and constant voltage power supply, ensuring a stable and continuous power supply for the machine.
- ❖ Variety of scan graphics optional, applying for different skin types and treatment areas

variable treatment graphics



- ❖ Professional 45° and 360° vaginal tightening treatment heads.
- ❖ Only 10~15 minutes is needed for the whole treatment process, it is very fast.
- ❖ No downtime, don't worry about the postoperative impact.

SPECIFICATIONS

Wavelength	10600nm
Power	1 ~ 60W
Laser Type	UltraPulse and CW
Treatment Mode	Fractional mode, Gynae mode, Pulse mode
Articulated Arm	Seven-join Arm with rotation up to 360°
Scan Scope	20mm * 20mm (MAX)
Spot Diameter	100um ~ 2000um
Scan Mode	Order, Center or Random
Scan Graphic	Rectangle, Triangle, Round, Hexagon, Ellipse, Linear
Screen	10.4" Color Touch LCD
Electricity	220/110V, 50/60HZ
Package Size	130*66*63cm & 76*24*14cm
Package Weight	79kg & 5.4kg

Installation Introduction

ACCESSORIES

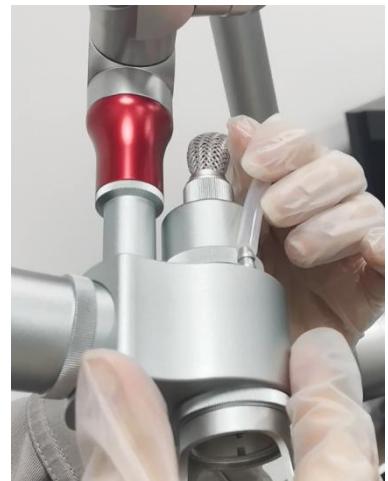
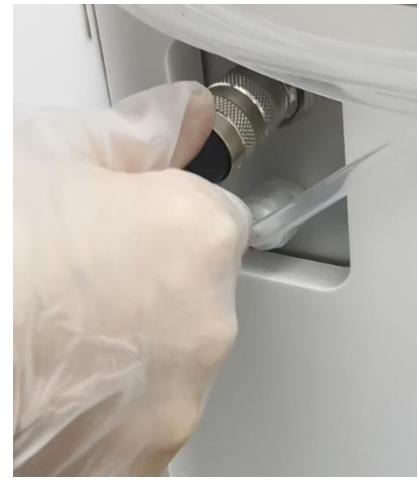
Picture	Description	Quantity
	Articulated arm	1
	Fractional head	1
	Treatment head (Gynae mode)	3
	Treatment head (Fractional mode)	1
	Treatment head (Pulse mode)	3
	Clips	5
	Foot pedal	1
	Protective glasses	1
	Protective goggles	1
	Power line	1
	Chain safeguard + Keys	3

INSTALLATION STEPS

Install articulated arm:



Install treatment head of fractional mode:



Install treatment head of pulse mode:



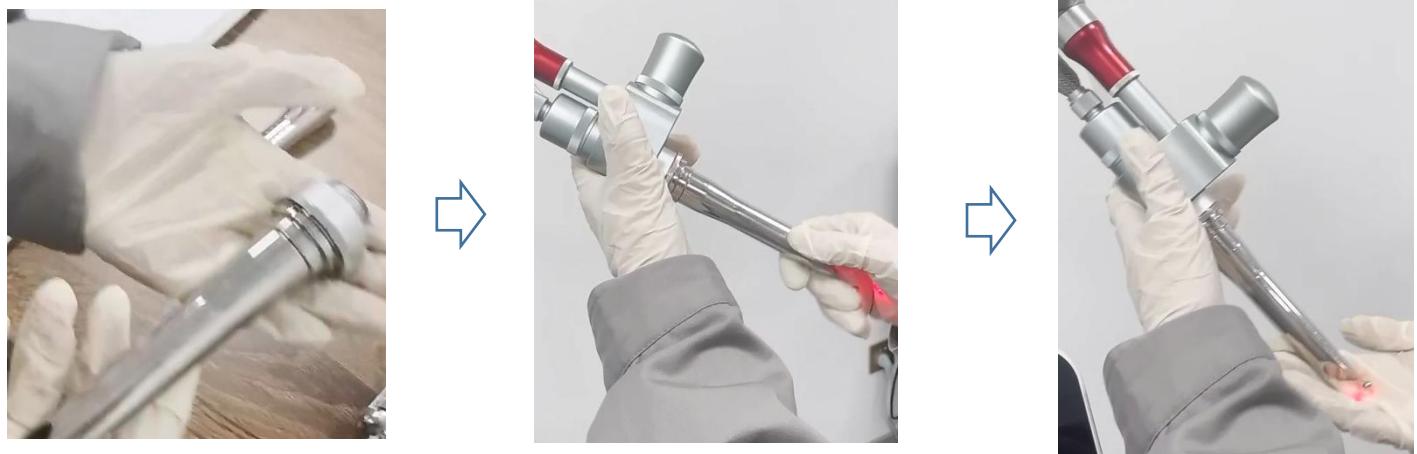
Install treatment head of gynae mode:



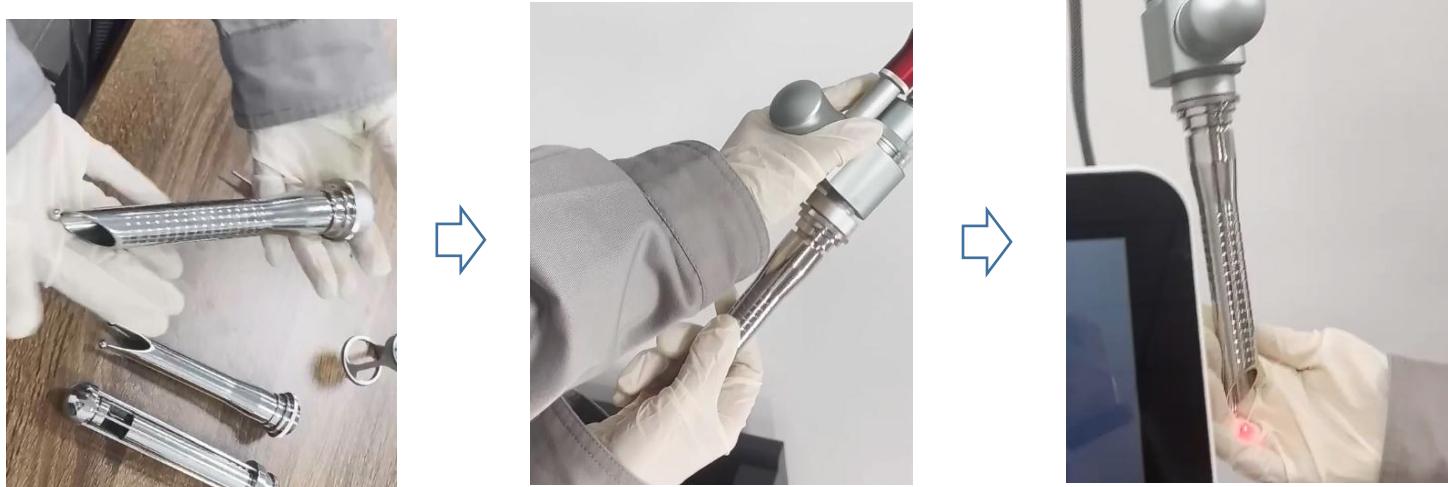
Vaginal probe 1 for inner vagina



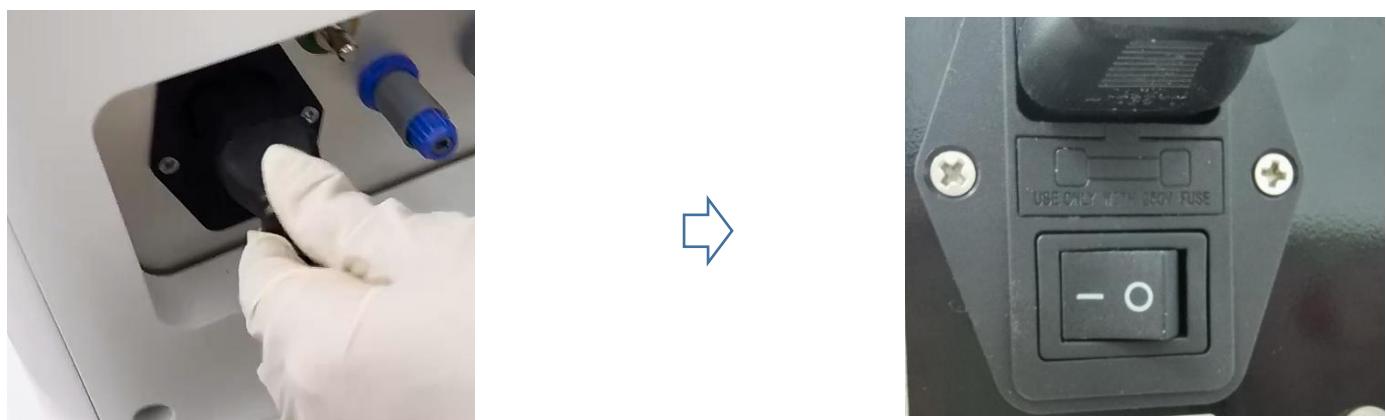
Vaginal probe 2 for uroclepsia



Vaginal probe 3 for vulva



Connect the power line:



Connect the chain safeguard:



Connect foot pedal:



Operation Introduction

BEFORE OPERATION

- ❖ It is necessary that users should read the manual carefully prior to the application of this machine.
- ❖ Consult whether the client has the above contraindications.
- ❖ Pre-operative agreement signed, photographed and filed
- ❖ It is suggested that this machine is operated in a separated room.
- ❖ Disinfect the treatment heads and other therapeutic devices.
- ❖ The treatment surface must be strictly disinfected during CO2 treatment, especially when subcutaneous infiltration anesthesia is required.
- ❖ When disinfecting the treatment area with alcohol, avoid running the alcohol into the hair and always dry it with a dry sterile gauze before performing the treatment.
- ❖ For fractional treatment, you can apply a superficial anesthetic.
- ❖ The treatment head must be positioned perpendicular to the surface of the treatment area during the entire treatment.
- ❖ When treating around the eyes, take care to protect the patient's eyes, protective goggles are required.

DURATIONAL OPERATION

1. Turn on the machine:
 - Lift the red emergency switch: If it is pressed down, the power will be shut off immediately. So, it should be released when you are trying to start the machine.
 - Turn the start key in front panel and start the machine.

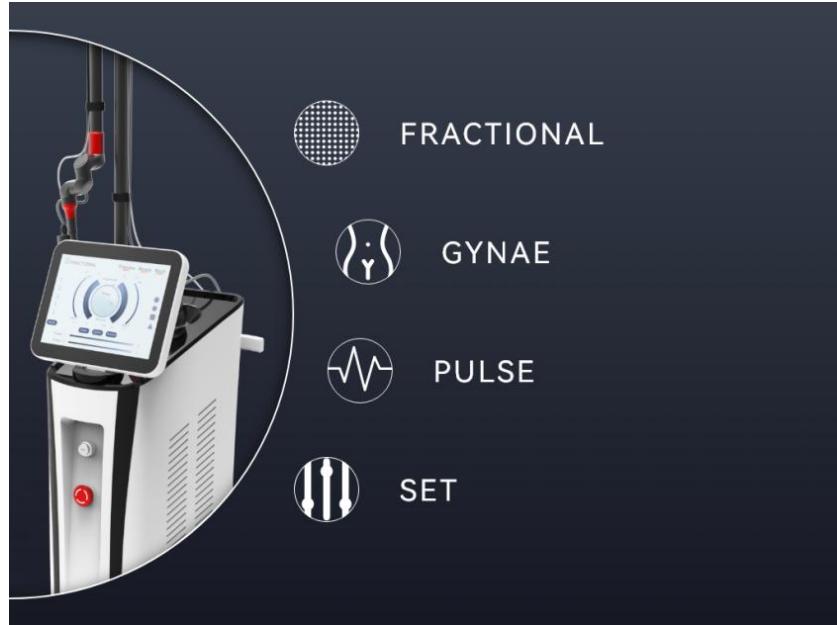


Red emergency switch



Start key

2. Then you will see the main interface on the screen. Click “Fractional mode”, “Gynae mode” or “Pulse mode” to enter into the corresponding treatment interfaces:



Main interface

3. Click “FRACTIONAL MODE” to enter into the corresponding treatment interface:

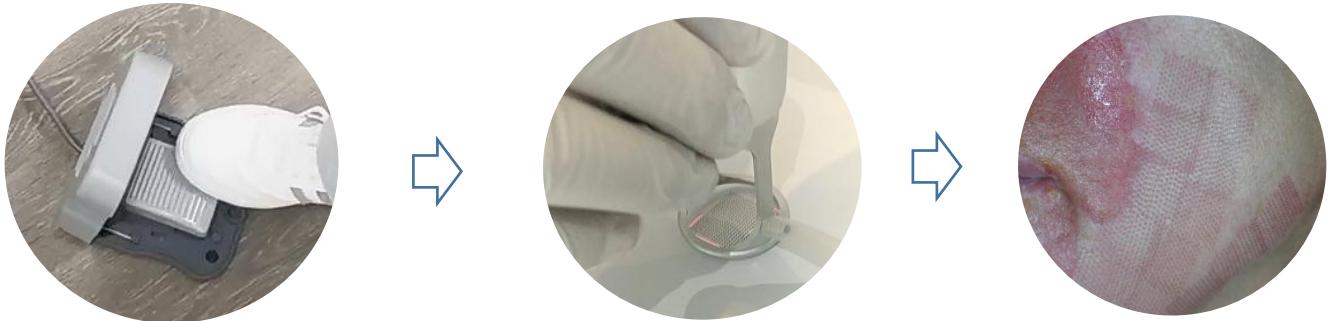


Fractional mode interface

- Choose scan graphic: “Round”, “Hexagon”, “Rectangle” or “Triangle” optional according to the shape of treatment area.
- Adjust parameters from low to high depending on the size of treatment area and the feeling of patient.
 - “Size X”: Adjust the X-axis dimension of a scanned image, recommended to 20mm max.
 - “Size Y”: Adjust the Y-axis dimension of a scanned image, recommended to 20mm max.
 - “Pulse width”: Set point dwell time
 - “Distance”: Adjust the distance between two points
 - “Power”: Set the working energy
 - “Time”: Adjust the number of scanning.

NOTE: Please refer to the next part for recommended parameters.

-  There are FIVE groups of common parameters optional, you can edit and save.
- Choose scanning mode: “Order”, “Center” or “Random”
- Click “Preview” to make this machine emit a red laser.
- Put on protective goggles for the operator and patient to protect their eyes from the laser.
- Press “Ready”, and the machine will start.
- When stepping on the pedal, place the treatment head firmly on the skin so that the laser can be successfully released. After scanning, the machine will no longer emit laser and then release the pedal. If you still need to continue scanning, do it again.



4. Click “GYNAE MODE” to enter into the corresponding treatment interface:



Gynae mode interface

- Choose a scan graphic:  “Round” or “Rectangle” optional according to the shape of the treatment area.
- Adjust parameters from low to high depending on the size of the treatment area and the personal feeling of patients.

“Pulse width”: Set point dwell time

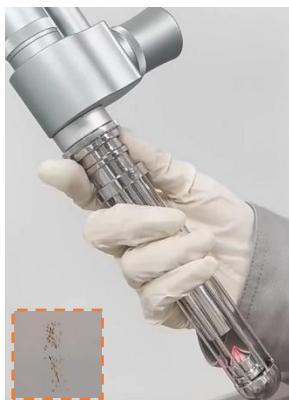
“Distance”: Adjust the distance between two points

“Power”: Set the working energy

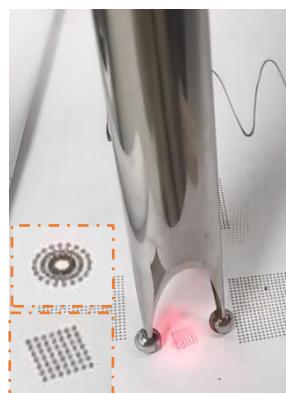
“Time”: Adjust the number of scanning

NOTE: Please refer to the next part for recommended parameters.

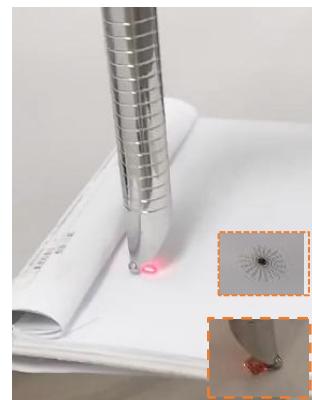
-  There are FIVE groups of common parameters optional, you can edit and save.
- Put on protective goggles for the operator and patient to protect their eyes from the laser.
- Press “READY”, and the machine will start.
- Place the treatment head firmly on the private parts and then trample the foot pedal. After scanning, release the pedals at that time and end treatment. If you still need to continue scanning, do it again.



Probe 1 for inner vagina



Probe 2 for external vagina (labia)



Probe 3 for external vagina

5. Click “PULSE MODE” to enter into the corresponding treatment interface:



Treatment interface of pulse mode

- Choose Pulse:  “Continuous pulse”, “Single pulse”, “Double pulses” or “Super pulses” optional.
- Adjust parameters from low to high depending on size and shape of treatment area and the personal feeling of patient.

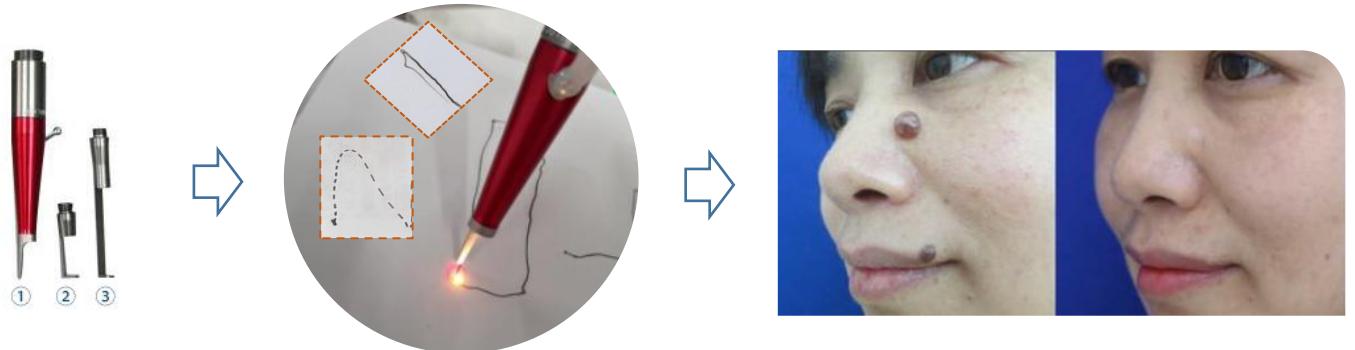
“Pulse width”: Set point dwell time

“Pulse Interval”: Adjust the interval between systolic peaks of consecutive beats

“Power”: Set the working energy

NOTE: Please refer to the next part for recommended parameters.

- Put on goggles for the operator and patient to protect their eyes from the laser.
- Press “READY”, and the machine will start.
- Hold the treatment head close to the skin tissue needed to be cut, trample the foot pedal and move along the organization. After cutting, release the foot pedal.



NOTE: Probe 1: Surface treatment; Probe 2 & 3: Cut at the base of the flap.

6. During the treatment, the client will feel heat and a little pain.
7. Click “Back” to return to the previous interface after the treatment.
8. Turn off the power, clean probe and working area, etc.

NOTE: Any abnormal phenomenon during operation, please press the urgent stop button down.

AFTER OPERATION

1. Depressed scars, pigmented nevi, granulomas, scars:

- ❖ The wound will show varying degrees of redness, blistering, oozing, bleeding and crusting for 1 to 2 days after surgery. The scab will fall off naturally in about 1 to 2 weeks and should not be removed early to avoid unevenness or scarring of the skin after healing.
- ❖ If there is a delay in the removal of the scab (more than 3 weeks), contact the treating doctor promptly. Apply antibiotic ointment to the wound once or twice on the same day after surgery, or take oral antibiotics for 5-7 days as prescribed by the doctor.
- ❖ Avoid skincare, make-up, rubbing, strenuous activities, alcohol, spicy and irritating food, photosensitive drugs and sunlight to prevent infection or hyperpigmentation after the scab has fallen off.

2. Skin tightening and rejuvenation, wrinkle reduction, pore reduction:

- ❖ After the procedure, there may be transient burning pain, erythema or small blisters on the treated area. This usually subsides within a few hours to 24 hours. If the blisters are large, contact your surgeon for prompt management.
- ❖ A small number of patients may experience mild facial swelling the day after surgery.
- ❖ Avoid hot baths, saunas, touching, rubbing, strenuous activity, alcohol and spicy food until the blisters or swelling have subsided.
- ❖ For dry skin in the treated area after surgery, topical moisturising skin care products can be used as appropriate.
- ❖ The treatment interval is approximately 3 to 4 weeks and delays in treatment may affect the effectiveness of the treatment.
- ❖ After satisfactory results have been achieved, maintenance treatment is recommended at intervals of 3 to 6 months to consolidate the results.

3. Sweat duct tumours, lid xanthomas, warts:

- ❖ When treating xanthomas of the upper eyelid area, it is important to protect the eye with a lid plate or inner eye shield before continuing treatment. Large lid xanthomas or sweat duct tumours are best removed surgically for aesthetic reasons and for quick recovery.
- ❖ Warts caused by viral infections are treated externally with lasers in conjunction with a combination of medication.
- ❖ Since sweat tumours, lid tumours and warts have a risk of recurrence. They all require local infiltration of lidocaine under the skin.
- ❖ Given that the majority of sweat duct tumours and lid xanthomas are around the eyes, it is important to advise the patient that the oedema in the eyes is high after treatment, and that the more swelling there is, the slower the swelling will be and the slower the recovery will be.

4. Post-operative care

- ❖ Growth factors or antibiotic ointment may be used until the crust falls off.
- ❖ Avoid contact with water in the treated area and shower on the third day after treatment.
- ❖ Do not rub or forcefully remove the crusts, they should be allowed to fall off naturally.
- ❖ Apply sunscreen (at least SPF 30) to the treated area as soon as the scabs fall off and at least 1 hour before going out.

RECOMMENDED PARAMETERS

Fractional mode							
Applications	Power (W)	Pulse width (ms)	Distance (mm)	Energy (mj)	Times (th)	Interval (month)	Sessions (th)
Acne Scars	7-10	2.5	1.0	17.5	2	1-2	2-3
Skin Rejuvenation	5-8	2.5	1.0	12.5	1	2-3	5-6
Wrinkle Removal	7-10	2.5	1.0	17.5	1	2-3	5-6
Pore expansion	5-8	2.5	1.0	12.5	1	2-3	5-6
Scar Removal	10-15	2.5	1.0	17.5	2	1-2	2-3
Hormonal Dermatitis	4-8	2.5	1.0	12.5	1	1-2	5-6

Gynae mode					
Applications	Power (w)	Pulse width (ms)	Distance (mm)	Sessions (th)	Interval (week)
Vaginal tightening	5-10	1	0.6-0.8	1-4	4
Vaginal opening tightening, pink vulva, pink areola	3-5	1	1.2-1.4	1-4	4

Pulse mode					
Mode	Applications	Power (w)	Energy (mj)	Pulse width (ms)	Pulse interval (us)
Continuous pulse	Pigmented nevi, various redundancies	3-5	NA	NA	NA
Single pulse	Depressed/proliferative scarring, pockmarks	5-10	100-200	20	NA
Double pulses	Pigmented nevi, Condyloma acnes	5-7	12.5-17.5	25	25
Super pulses	Moles (smaller), flat warts, condyloma acuminata, cystic acne	5-15	5.0-15.0	1.0	25

NOTE: These parameters and pictures above are **ONLY FOR REFERENCE!** Those applied in practical operation should be adjusted according to personal feeling and actual physical conditions.

Other Information

SECURITY

To protect personal safety of operator and patient, this machine adopts an excellent design and production plan, despite of which the energy output of laser may also cause serious harm like burn, blindness, fire and explosion if the operation is carried out by inexpert persons. Thus, read this chapter as well as other relevant information carefully.

Anti-fire regulations

Inflammable and explosive objects have fire hazards, so operators need to take protective measures in advance:

- ❖ Keep all the inflammables like narcotic, desiccant factice and synthetic resins away from the operation room.
- ❖ It is forbidden to place liquid like alcohol and gas like oxygen near the machine.
- ❖ Paper and plastic are banned to be placed near the work area of this machine.

Anti-electric regulations

The power source which the machine uses should match the tagged value well. Otherwise, it will not work, and even burn out. Therefore, operators must be cautious in the using process:

- ❖ Since the high voltage will be generated in host machine after the power is shut down about five minutes, opening the machine at will is prohibited to prevent electric shock.
- ❖ It is banned to radiate non-treatment area.
- ❖ When installing or operating the machine, keep it away from water and wet hands to prevent splashing with liquid .
- ❖ The operators shall operate this machine in accordance with this manual.
- ❖ During operation, a warning sign should be hung on the door to prevent irrelevant people from accessing the treatment room.
- ❖ When this machine is not in use, power it off and disconnect the power line out of safety concerns.

Laser instruction

This machine emits visible red semiconductor laser and invisible CO₂ laser both of which are harmful to human body:

- ❖ It is banned to observe the laser beam because it will reflect or scatter after radiation. Otherwise, the damage to retina may be caused.
- ❖ Ornaments that can reflect light should be taken off to prevent the harm caused by laser-bounce.
- ❖ Operators and patients must wear protective goggles in working area.

Other cautions

- ❖ Do not shoot the light beam directly on the machine.
- ❖ If any abnormal phenomenon occurs, stop the treatment and cut off the power immediately.
- ❖ Only the specialized persons empowered by our company are entitled to do the maintenance work.
- ❖ Disassembling our machine and not operating it in accordance with the manual are not allowed.
- ❖ Please pay continuous attention to the environment temperature.

PRECAUTIONS

- ❖ Put the machine on the flat and stable surface.
- ❖ Check the main machine, accessory and the power cable are intact well before use.
- ❖ The machine is fragile. Do not drop it.
- ❖ Clean the equipment with a wet cloth but make sure no liquid penetrates.
- ❖ Do not operate the machine with wet hands.
- ❖ Do not bend or turn the power cable and the wires.
- ❖ Before you clean or transport the machine, make sure that it is switched off and the power cable is unplugged.
- ❖ Put the equipment in a ventilated area. Do not cover the fan or the machine nor put any objects on it.
- ❖ Do not use the machine in the toilet or near a microwave or oven.
- ❖ Make sure that the power cable is not worn or broken before you plug it.
- ❖ The operator must be trained to be familiar with the structure and performance of the equipment and master the knowledge of the operating system.
- ❖ Users under 18 cannot use the equipment.
- ❖ The machine cannot be used on animals.
- ❖ Do not use the machine for other purposes than those described in this manual.
- ❖ Switch on and off the machine for two minutes respectively. Then repeat this cycle 3 times to normalize the inside water circulation.
- ❖ The operating temperature should be in good control.
- ❖ The treatment button should always be pressed by hand.
- ❖ When there is an error, the system will show a message to the operator, at which time please stop any operation.
- ❖ Turn off the power after the operation. When not in use, be sure to unplug the power line from the power outlet.
- ❖ Please take good care of the equipment. The power cord and accessories should be carefully inspected before operation. If there are any traces of damage, stop using them and replace them with a new one.

WARRANTY

All products are strictly tested before sale. The guarantee of free repair is provided starting from the purchasing day, during which time the maintenance for any breakdown due to non-artificial factors will be performed free of charge. Accessories are not included in the warranty, so please contact us if they are needed.

The standard of the operation process and the environment should be in accordance with all the instructions above.

Malfunctions caused by the following factors are out of the warranty:

- ❖ Malfunctions caused by artificial factors like improper movement, collision, etc.
- ❖ Malfunctions caused by uncontrollable natural force.
- ❖ Abuse operation that is against the manual, like connecting wrong VAC input or using the machine for other purposes.
- ❖ Energy diminishing caused by wet environment or dust.

TROUBLESHOOTING

Problem	Possible cause	Solution
The machine does not start	<ul style="list-style-type: none"> 1. It is not plugged correctly 2. The power cable is not well connected 3. The power button is off 4. The fuse is damaged 5. The electrical circuit is damaged 6. The power cable is broken 	<ul style="list-style-type: none"> 1. Check the plug 2. Check the power cable 3. Press the power button 4. Change the fuse 5. Contact the technical service 6. Change the cable/ contact the technical service
The buttons do not work	Defective buttons or circuit damaged	Contact the technical service
The machine does not start and does not emit heat	<ul style="list-style-type: none"> 1. Defective connections 2. Handle cable defective or badly connected 3. Breakdown of electrical circuit 	<ul style="list-style-type: none"> 1. Check the connection 2. Connect the cable correctly 3. Contact the technical service
The machine works, but the effectiveness has diminished	<ul style="list-style-type: none"> 1. Bad connection of handle 2. Piezoelectrical transducer damaged 3. Mechanical damages in handle or machine 	<ul style="list-style-type: none"> 1. Connect the handle correctly 2/3. Contact the technical service