

CO2 Fractional Laser System for skin

User's Manual



Derilla Sass
SPA - MEDICAL

ANGEL
SKIN

Chapter 1 principle

Fractional ablative CO2 resurfacing delivers 10600nm laser in fractional manner into the skin while leaving the untreated surrounding areas intact. Laser creates microscopic thermal dot on surface and performs within tissues, offering improve skin tightening, age spots, fine lines, acne scars, stretch marks removal and vulva rejuvenation. The untreated tissue helps to accelerate the healing process and rejuvenate the skin by promoting microcirculation and new cell genesis.

Chapter 2 Application

- 1.Remove all kinds of wrinkles (brow veins, glabellas veins, neck veins, pregnancy veins and so on)
- 2.Strengthen, tighten skin, face promotion, Skin rejuvenation
- 3.Age spots and blemishes, acne and speckle treatment: blain acne, scabby acne, allergic acne, papilla acne, improving the appearance of liquidic skin and acne pit.
- 4.Treat telangiectasis
- 5.Repair of sun damaged skin on the face, neck, shoulders and hands
- 6.Skin excrescence, such as wart, etc.
7. Vaginal tightening

Chapter 3 Advantages

1. RF driving tube, no need to change.
2. It emits very fine and well arranged laser which can penetrate to corium layer directly.
3. Best treatment result which can replace surgery totally. No wound, quick time convalescence.
4. Wide range of application, effective treatment.
5. 8 inch real LCD color touch screen, most humanized software control
6. 7-jointed articular light conduct, accurate treatment
7. No pain, no cut, no side-effects!
8. No rebound! Apparent long-last result
9. the best result on vaginal tightening & rejuvenation

Chapter 4 Specification

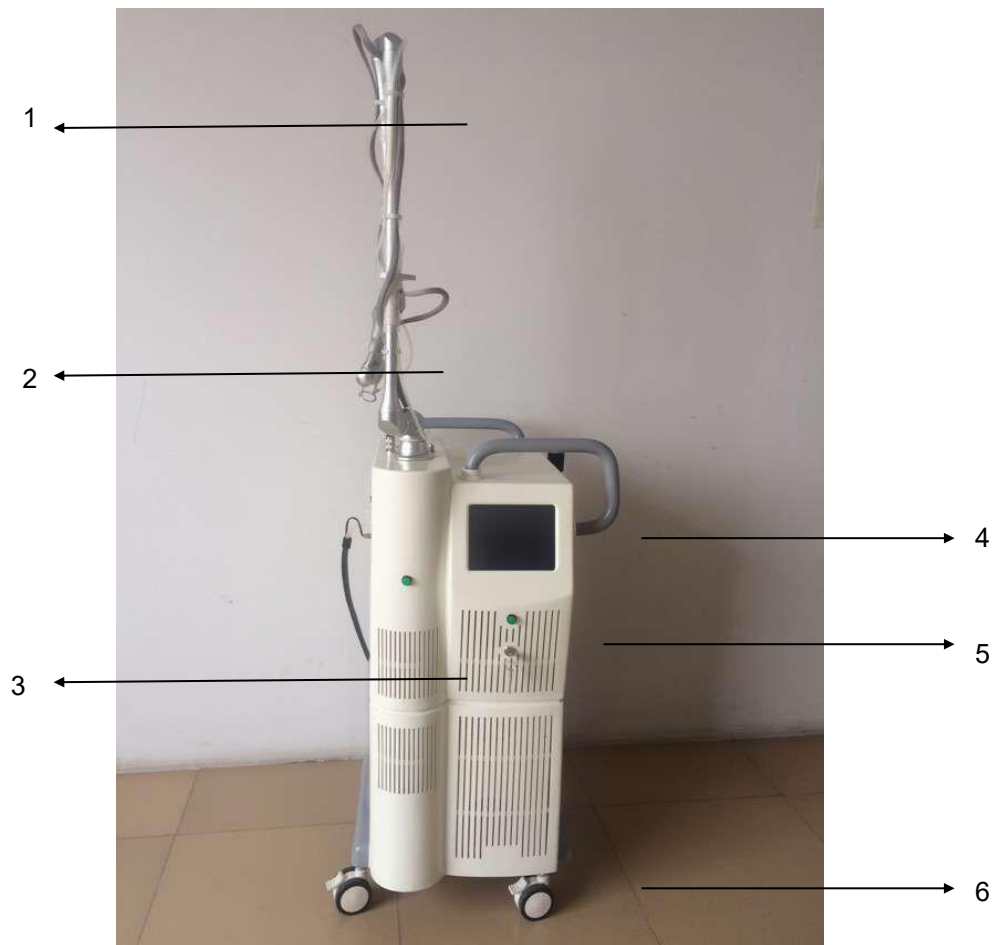
Wavelength:	10600nm
Laser apparatus:	Sealed off laser device simulated by direct current
Optical beam quality:	TEM00
Output power:	40w
Spot size:	0.02~0.05mm ²
Aiming beam:	Red semiconductor laser (635nm, less than 5mw)
Beam transport device:	Articulated arm with 7-joint and balance weight
Working mode:	Continuous operation
Output Mode:	Continuous, single pulse, interval pulse and super pulse
Scan scope:	Max 20mmx20mm
Scan graphics:	Circle, triangle, square, rectangle,hexagon, ellipse, line
Scanning Mode:	Random , Normal and Midsplit scan
Scanning speed:	More than 10m/s
Energy:	1- 40W
Distance:	0.1-2.6mm
Cooling system:	air circulation
Weight:	60kg
Dimension:	65*48*117cm
Power:	220V/11V

Chapter 5 Accessories list

		
CO2 main unit	Guide light arm	Power cord
		
Key	Foot switch	Fractional laser head
		
Vaginal tightening head	pulse head	

Chapter 6 Direction for Use

6-1 Every parts name



1. Joints of seven light guide arm

By seven joint light guide arm to complete the laser beam transmission. The light guide arm is the role of the laser transmission to patients to operation site (target).

2. Scanner

Graphics scanner can scan output, rectangular, round, hexagonal, triangular and other graphics, the largest area of about 20 * 20mm² scanning;

3. Main unit

It includes a high voltage power supply, a low-voltage power supply, control system, cooling system, laser system and blowing system.

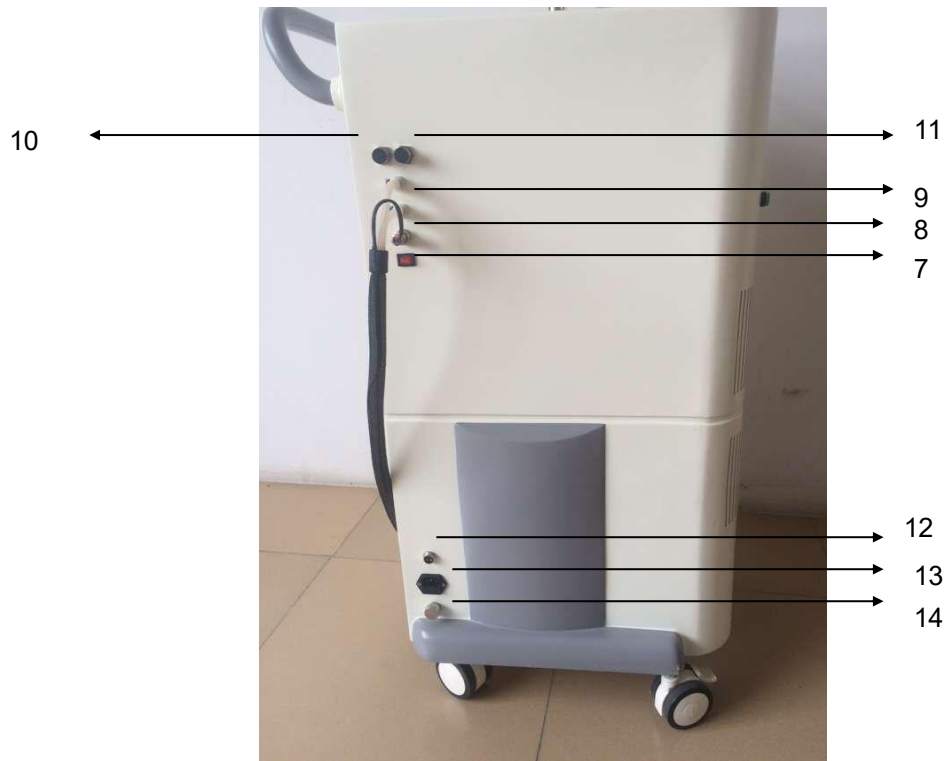
4. touch display panel

Mainly used for parameter setting

5.key switch

A key into the key switch, go to the "open" position, the instrument power on, go to the "off" position to cut the power, turn off the instrument.

6. wheels



7. refrigeration head control switch

8. refrigeration head power supply plug

9. refrigeration water circulation joint

10. Affusion hole

11. Overflow hole

12. Foot switch

13. the power input socket

14. Drainage hole

6-2 Installation

1) Checking

1. Check the packing box before open, if no abnormal, you can open it. Because the

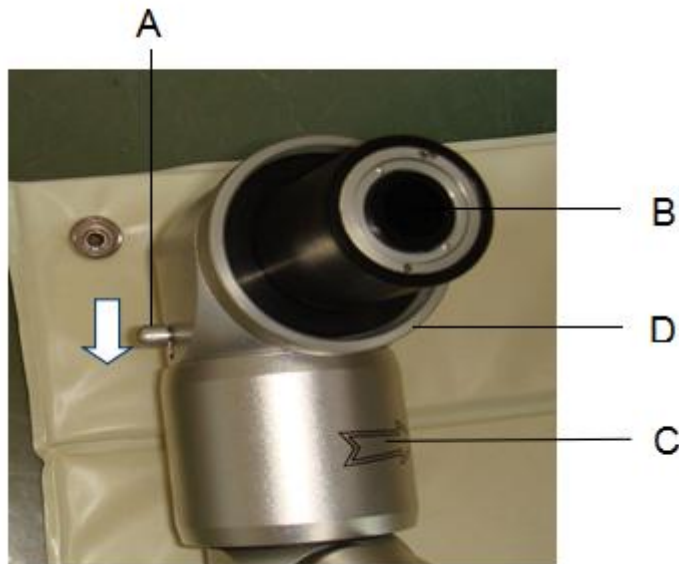
machine is equipped with laser tube and precision optical system, forbid pound and collision when open the box.

2. Take out the packing list after opening the box, then take out the host and spare parts according to the packing list, check every spare parts, wire connections, confirmed no abnormal or troubleshooting before installation, if have any problem, please contact manufacturer timely, so that resolve the problem Quickly.

2) Installation of guide light arm

Guide light system was made up of guide light arm and connection seat .connection seat has fixed into the top of the shell. After check the guide light arm, connect it to connection seat, then fix the screws firmly.

Attention: guide light arm only can move to the arrow direction.



Move B 180 degree according to C, then press A according to the Arrow. Then insert B to the hole on main unit, then screw D, fix the guide light arm firmly.

3) Installation of the scan head

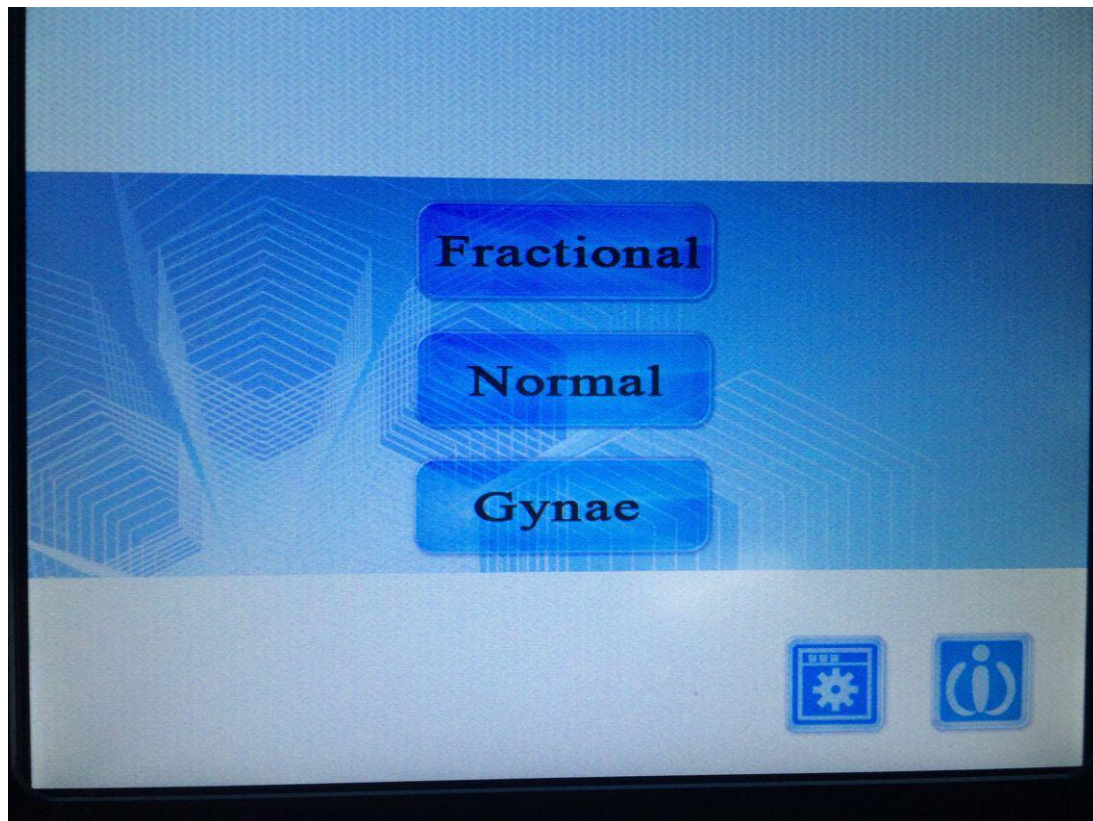
1. Whirl the scan head to clockwise direction.
2. Installation of control wire on the scan head, insert the control wire, then fix the screws firmly.

4) Installation of power cord and foot switch

1. Insert the power cord to the connector on the back of the machine, then check if firmly.
2. Connect the foot switch, aim at the gap, whirl to the clockwise direction, check if firmly.

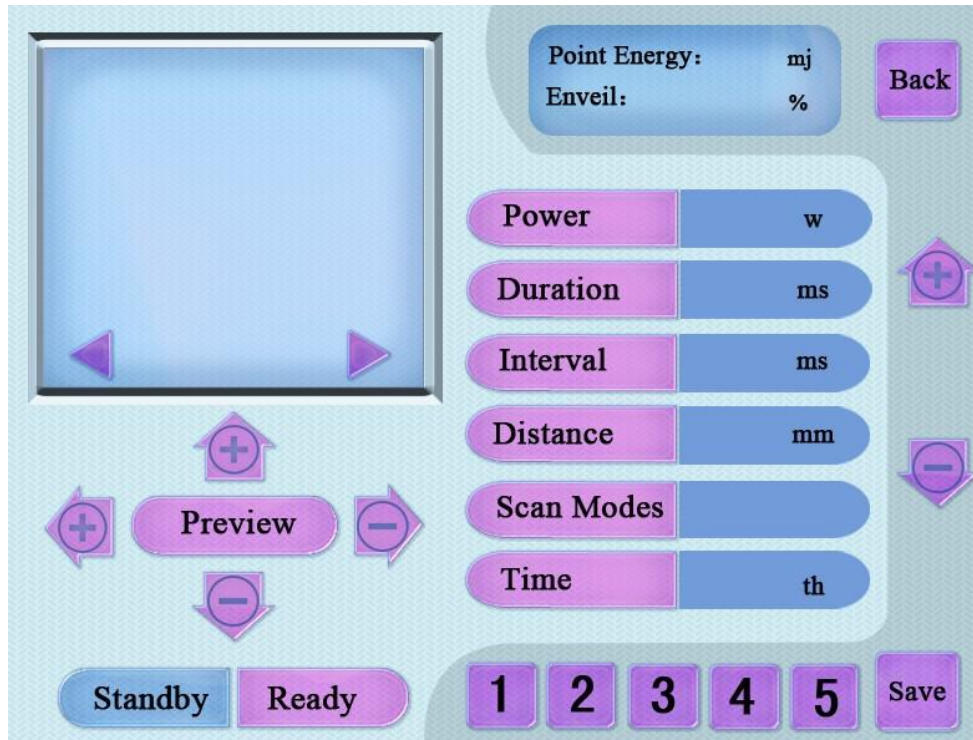
6-3 Direction for use and Operating procedure

- 1) Turn on the power of device
- 2) Appear to be the stand-by screen as below when key switch is ON.
- 3) Select a mode (Fractional/Normal) and range of adjustment when the stand-by screen comes up.
- 4) Operate it by stepping FOOT SWITCH after completing every procedure
- 5) Detail instructions of each mode are as follows



6-3-1 Instruction of Fractional mode

The main screen of CO2 FRACTIONAL mode appears when selecting FRACTIONAL box at the standby Screen



1) Touch “Power “ box, the background color will become purple, then press”+” or “-” at the right side, it will increase or decrease.

* Range of Adjustment: 1-30W.

2) Touch “ Duration” box, press “+” or “-” to adjust.

* Range of Adjustment: 0.1-10.0ms

3) Touch “Interval” box, press “+” or”-” to adjust.

* Range of Adjustment: 1-5000ms

4) Touch “distance” box, press”+” or “-” to adjust.

* Range of Adjustment: 0.1mm ~ 2.6mm

5)Touch “Scan Modes” box, press “+” or “-” to adjust.

* Range of Adjustment:

Sequential mode: scan point from side to side in turn

Shuffle modes: scanning point no order, randomly

Carve modes: the next scan point scanning point and peers to keep half the distance matrix were.

6)Touch “Time” box, press “+” or “-” to adjust.

* Range of Adjustment: 1-20th.

7) , you can save the parameter you have

set, and use in future



8) you can change the shape size when press “+”, “-”,

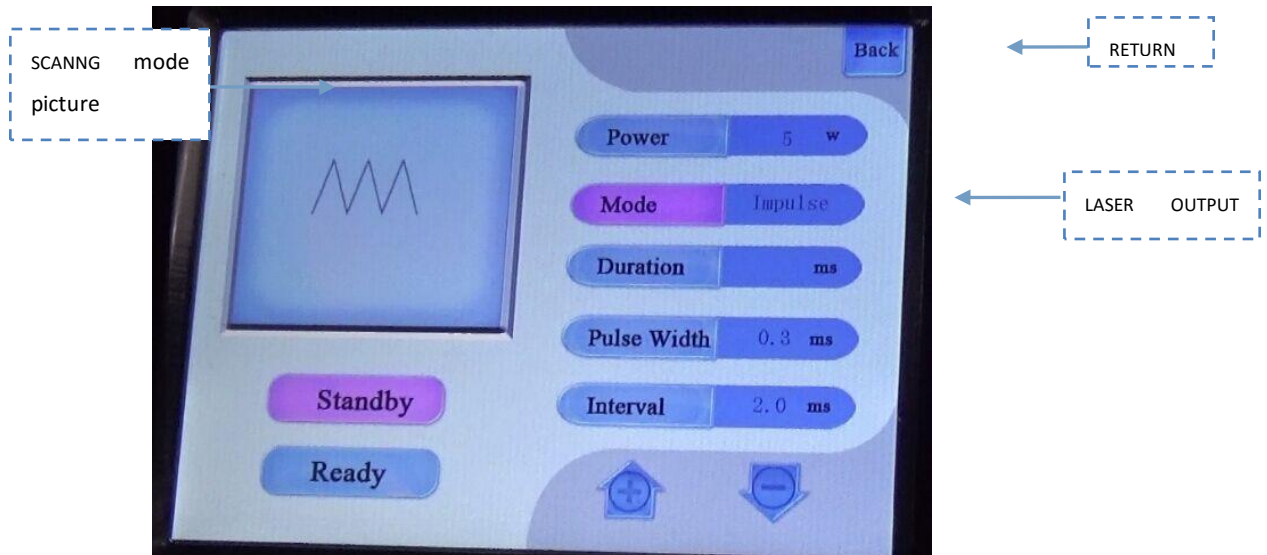
And preview if the size and shape is suitable when press “preview”.



9) pres s this two button, you can change different Shape, like Square, round, triangular, hexagonal, straight.

10) After shooting laser beam, turn to Main screen when touch BACK box at the bottom of screen.

6-3-2. Instruction of pulse mode



1) choose “power”, then press  ,  , 1-30W, you can adjust different power.

2) choose “pulse width”, then press  ,  , 1-10ms, the pulse frequency (at the bottom of the screen) will change.

3) choose “interval time”, then press “ ”、“ ”, 1-10ms, the pulse frequency will change.

4) When choose “pulse” mode, decrease “pulse width” or “interval time”, the frequency is more than 100hz/s, ultra pulse will change to “ultra pulse” mode automatically.

- 5) when choose “ultra pulse”, increase “decrease “pulse width” or “interval time”, the frequency is less than 100hz/s, ultra pulse will change to “pulse” mode automatically.
- 6) when choose “single” mode, adjust suitable power, and pulse width, press the foot switch, the Head will scan one point.
- 7) when choose “CW” mode, adjust power and pulse width, you can scan a straight line.

WARNING!

- Do not put the handpiece to people’s eyes directly to prevent from eye damage
- Be careful not to directly look at the light and lest it be reflected on the reflective surface
- In order to prevent the emitted or reflected light from being exposed accidentally, all persons in charge who are using this system should be sure to wear the protective glasses.
- Be careful lest the light face eyes. Even in case that the output is low, you may suffer a fatal eye injury.
- Do not pull the power cord using force or touch the power plug with a wet hand. (There may be a risk of electrical shock or fire).
- Do not operate the device in a place where there are volatile substances like ductile anesthetics, alcohol, gasoline or solvents
- Always keep a fire extinguisher near the device

6-4 Clinical Operations Guide

1 Clinical Operating procedures

Consulting → Observing → Establish treatment → files → Cleaning
 Preserved
 skin → Starting-up → Wipe disinfection → Wear protective glasses and
 eyeshades → Observe and try → Treatment operation → Postoperative
 treatment → Record shutdown → Booking visit

- 1) Consulting: First, the therapists should communicate with the patients to get full understanding of their skins, their present circumstances, and their tolerance of pains, whether they will have important social activities recently, their expectant effects of the treatment, and etc. The therapists need to know the skins and psychology of the patients well, judge the intended effect, inquire whether they have contraindications.
- 2) Observing: According to what patients have said, the therapists should observe

the skin natures, the characteristics, the distribution, and the degree of skin lesions carefully. Then the therapists communicate with patients to determine a therapeutic schedule combining a facial three-dimensional structure analysis.

- 3) Establish treatment files: After relevant consultation, therapists should fill in patient registration forms and invite patients to confirm and sign. At the same time, therapists should establish treatment files and take photos as record files for the convenience of tracking treatment and further adjustments.
- 4) Cleaning: Use warm water and facial cleanser to wash the therapeutic part.
- 5) Preserved skin: Before the treatment, hair around the therapeutic part should be completely removed with the length of 1-3mm as the best.
- 6) Starting-up: Staring up and select mode, set parameters.
- 7) Wipe disinfection: Use proper iodine to disinfect, and then use cotton cloth with immersed disinfectant to disinfect for the second time.
- 8) Wear protective glasses and eyeshades: Operators wear protective glasses, Put on the protective eyeshades for the patients.
- 9) Observe and try: Check the scars on skin and then decide the therapeutic energy and scanning density. Make sure of the types and spot size of graphics according to the area of therapeutic skin. Try to scan the therapeutic skin first, if the energy is inappropriate, turn down or turn up the energy according to practical situations. When the shallow bleeding or redness appears on large-area scanning, there will be curative effects.
- 10) Treatment operation: Adjust the scan area to scan again according to the first scanning situation and the scar features. Don't repeat scanning and avoid inflammation of the skin. Fractional laser can be combined with resurfacing in scar removal. The first step can either be fractional laser treatment or resurfacing treatment.
- 11) Postoperative treatment: After the completion of treatment, the therapists should disinfect a second time with disinfectant (non alcohol) and check up whether there is remaining skin without treatment. If the patients feel scorching hot, icing can ease pains. Smear anti-inflammatory medicine and burn creams
- 12) Record shutdown: Keep clear records of the operating parameters and post-operation reactions. Return to standby mode. Rotate the key in counter clockwise to cut off the power supply. Clean the residues on the treatment head and lay the equipment to its place..
- 13) Booking visit: Ask the patients to pay attention to postoperative cares and arrange treatments for the next time. Pay return visits and make the followings.

Inquiry: Ask about the feelings of patients at all times during the treatment course. Adjust the parameters timely according to patients' responses.

Observation: Observe if there is redness or swollen area in facial treatment area during the treatment.

2 Clinical operation and Matters need attention

- 1) The operation environment of the instrument should be without disturbance of

high-intensity magnetic fields and far away from heat sources and with appropriate temperature.

- 2) Select the corresponding graphics according to treatment needs.
- 3) Parameters and energy should be adjusted from low to high with small span range within 2 energy units. Observe while operating and adjust according to patients' feelings.
- 4) Wipe disinfection whenever necessary according to treatment needs and don't reuse it.
- 5) Don't repeat treatments on the lesions.
- 6) Adjust the parameters to a lower state according to patients' pain tolerance while treating the parts of obvious bone tissues (forehead, nose, eyes).
- 7) The circle ring on the treatment scanning head should press on skin tightly to make sure of full contact. Keep the treatment handpiece press on skin perpendicularly.
- 8) Turn off the treatment switch before taking away the scanning head from skin.
- 9) If the long-time operation makes the treatment handpiece getting hot, the operation must be stopped under the standby mode.
- 10) Pay attention to the use of the emergency stop switch. When the emergency occurs, you can press the stop switch directly.
- 11) People must use three-core electrical socket outlet with ground connection wire to supply power. Electric supply installation should fit the rated output requirements of the instrument.

3 The nursing care and notes after the operation

- 1) Avoid exposure in the blazing sun 2 weeks before the treatment.
- 2) The immediate reaction is the infected part getting white or gray. There will be scorching hot pains after the operation. The skin will be red and swollen or have mild blisters. The scorching hot pains will disappear several hours after the operation. After 2-3 days, the scabs appear. After 1-2 weeks, the scabs fall off naturally.
- 3) Don't scratch the therapeutic parts during the healing process. Let the scabs fall off naturally.
- 4) Pay attention to avoiding sunshine.
- 5) Two weeks after treatment, the patients are prohibited to eat spicy excitant foods and beef, mutton, seafood etc.
- 6) If patients feel any discomfort after the treatment, they need to consult the instrument operator. Don't make self-assertions or act on your own

Chapter 7 MALFUNCTION EXCLUDING AND DAILY MAINTAINING

7-1 Maintenance of instrument

▲ The machine will be kept by professional trained personnel. The keeper must make sure that the machine should be in good condition and clear. (we can use non-corrosive detergent to clean the shell of the machine)

▲ Avoiding the mechanical damage and the damage of CO₂ tube, when we remove the machine

▲ We must keep the 7 joint torsion spring articulated arm with scanner and foot switch in the safe place orderly and cover with dustproof cover after the treatment.

▲ The keeper must check the machine after treatment. He must confirm the machines is in good condition and then he can keep the machine. He will keep the keys of the machine separated with the machine.

7-2 Guide for Malfunction examination and repair

7-2-1 The checking of CO₂ tube periodically

The periodical time: once a year

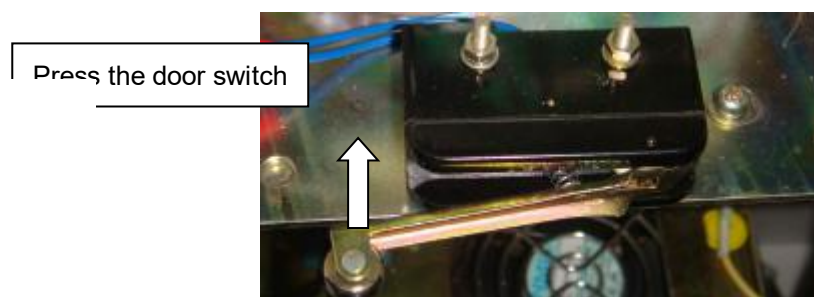
The checking must be made by a qualified person.

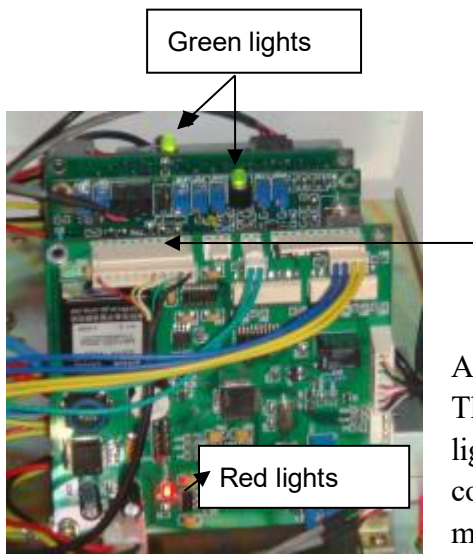
7-2-2 Replacing fuse

Using screwdriver to unscrew the fuse. Putting new fuse into the plug. Then screwing it tightly.

7-2-3 Warning sound checking

When we set up the machine, we may hear a warning sound "du-du-du". There must be a problem with the machine. If the back door of the machine is closed well. Please open the back door of the machine, and press the back door switch to let it to be at the door closed condition.





And we will see there are three lights are lighting. There are two green lights and one red light. If the lights are flashing, it must be a problem with the corresponding integrate circuit board. So the machine makes warning sound.

If the problem is caused by the integrate circuit board, we can disassemble it and fix a new one.

If the three lights work in good condition, and back door locked well, but the machine is still making warning sound, you can contact us immediately.

Chapter 8 Transportation and storage

- ✧ 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.

Chapter 9 Common breakdown maintenance

Serial number	Fault phenomena	malfunction analysis	Solution	Remarks
---------------	-----------------	----------------------	----------	---------

1	Machine without electricity	Whether the power plug insert or damage	Reconnect or exchange the power line.	Over length continuous working period and high humidity tank.
2		The emergency stop switch, key switch or the leakage protector are not open.	Open the appropriate switch, make it is in closed state.	
3		The emergency stop switch or the key switch break down	Change the emergency stop switch or the key switch	
4		The fuse burnout.	Change the fuse	
5	foot switch malfunction	Attachment unit interface connecting with host is not inserted	For checking with the matters need attention or contacting connector again	
6		Foot switch or part of power control components are damaged	Contact the company for service	
7	Significantly reduced the output energy	Treatment head has been polluted.	Cleaning the treatment head	

Chapter 10 Technical support and After-sales Service

☺ If you meet problems and cannot settle by yourself in the process of operation, please contact with us immediately. Our professional technical supervisor will give you the perfect reply to solve your worries.

1.After-sales Service Promise

Our company guarantees the equipment can express its advantages under the situation of normal usage and maintenance and we offer free maintenance for one year and life-long maintenance services

2.Free warranty scope and requirements

- 1) After the company confirms that the faults caused by the technology or material indication under the normal service condition in one year, they can get free warranty services.
- 2) The user must hold "warranty card" or effective shopping vouchers.
- 3) The warranty card must be attached with OUR sales invoice or receipt of the same effective.

- 4) The accessories maintained or exchanged can be offered 3- month free warranty service from the day on.(Special regulations strictly according to contract)

3.Non warranty

- 1) During free warranty period, the damage caused by installation, use, maintenance or improper safekeeping, such as, severe impact and vibration, drop, wrong operation and etc.
- 2) The damage caused by the maintenance department without authorized or the consumers disassemble themselves.
- 3) No warranty card or effective shopping certificate and cannot prove it belongs to free repair.
- 4) The warranty card of incomplete or altered.
- 5) Due to irresistible factors (such as fire, earthquake damage of natural disasters).
- 6) Over warranty period.
- 7) Special machine, promotional products or gifts.

4.After-sales Service and Contact information

- ☺ When the instrument cannot operate normally, you can make some simple process as "Instrument Troubleshooting Guide". If it still cannot work normally, please promptly contact with the company customer operations.
- ☺ If you need to repair, please return the parts (instrument) according to the following way



55 2390 7756



ventas@derillasass.com
gamuroli@gmail.com



www.derillasass.com



AngelSkin



ANGELSKIN