

Diode Laser Hair Removal Machine

**Filter Water before starting the machine.
Replace the filter every 3 months**



Working Principle

The instrument is used for any skin and parts for professional hair removal. The 755 + 808 + 1064 wavelength can stimulate the body for the skin layer, subcutaneous hair all outside the organization, in order to achieve a one-time removal of the skin, not newborn.

In the working state, the laser head cooling capacity per second is about 300W, which the strongest hot laser cannot feel.

Install the machine

- 1) Connect the handle to the machine and insert it firmly into the machine
 - 2) Add pure water. Use a funnel to add water from the trough, about 5 to 7 liters, until the water flows out of the overflow hole.
 - 3) Install the power cable and the foot switch, turn on the machine with Main switch behind the machine
 - 4) Turn on the red button first, then turn on the key
 - 5) After turning on the machine, listen for water sound inside the manipulation to confirm if the water cycle works well.
 - 6) Press on the screen to reach the maximum, wait 2 minutes, and confirm if there is cooling in the head, if everything is correct, so you can do session now.
 - 7) Apply cold gel on the patient's body, paste the treatment head on the skin to make session. It is recommended to shave the hair before treatment and keep the hair root approximately 1 mm.
- After the treatment, return to the main system interface, then turn off the machine with the key.

System illustration

About the machine

Control system: 8 chromatic touch screen, power switch, microcomputer control system, etc. to control the operation of the entire system;

Laser system: 755 + 808 + 1064nm semi-conductor laser technique;



Technical specifications

LCD	Display: 8 "TFT color display
Working mode	Pulse Pulse rate: 1Hz ~ 10Hz (adjustable);
The total laser power	1200W
Laser wavelength	755 + 808 + 1064
Conduction glass	Sapphire
Energy density	Max: 120J / cm ³
Security controls	Real time online
Rated input power	2500W (max)
Cooling system	Water cooling
Treatment area	28mmx15mm (standard)
Manage cooling power	300W (four pieces 4908tec)

Working conditions

- 1) Operating ambient temperature : 10°C — 25°C;
- 2) The ambient temperature to keep in the store: 5—30°C;
- 3) Relative humidity : ≤70% (Laser without working condition, must be kept dry);
- 4) Air pressure : 860hPa ~ 1060hPa;

Notes:

- 1.If the room temperature is too low or too high, or the instrument has many days (10 days) to not use, before starting the instrument, the temperature of the entire system should recover at 10 °C - 30 °C!
- 2.If the instrument has many days (10 days) to not use, after recovering the temperature instrument, please change the water, the water should be deionized

water!

Security

- This chapter describes the safety measures that must be taken into account. When using the diode laser. Operators and maintenance personnel should be familiar with the safety requirements and procedures used.

Security optics

- Do not look directly at the laser output delivery!
- Make sure that the nominal input voltage written on the label matches the offer at the location;
- In the repair process, the power must be cut, the wires must be removed, otherwise, it will cause danger, whether human or other mechanical components;
- It is not dangerous of high - tension in the machine, so nobody is allowed to disassemble the parts of the machine, except the technical personnel designated by our company;

Operation

1. HR



Cooling: select the maximum.

Energy: Select the Energy according to the patient's feeling, The client can feel a slight heat on the skin and a slight tingling, which is the best.

Ready: Start the work Standby: Stop the treatment Sessions

Thick and deep hair 4-6 sessions, every 3-4 week a session. Fine and light hair 4-8 sessions, every 3-4 week a session.

: Back to the main interface 

Have save button also

Shots counter

And pulse width option



Operation steps

After machine is installed, different treatment parameters can be set according to the different constitution and skin color of the patient. The specific steps is as follow:

1, A: Cut the hair

B: Clean the hair removal area with alcohol C: Apply gel 0.1mm to prevent skin burns.

D: Turn on machine and enter for work

2, suggested parameters

The following recommendations are for reference only and should be adjusted by customers in different regions.

Method 1: Point Treatment(HR)

Set low frequency 1 Hz while setting a higher energy. The machine have setted the factory parameters, doctor could adjusts according to different situations, but do not adjust the frequency, just adjust the energy, in this mode, the pulse width will be automatically adjusted when you adjust the energy.

500W, 300W energy plus + 80% pulse width

Man	White Skin	Yellow Skin	Brown Skin	Black Skin
Beard	Energy: 30J/cm2 Pulse Width: 92ms Frequency: 1Hz	Energ: 28J/cm2 Pulse Width: 86ms Frequency: 1Hz	Energ: 27J/cm2 PulseWidth: 85ms Frequency: 1Hz	Energy: 25J/cm2 Pulse Width: 80ms Frequency: 1Hz
Armpit	Energy: 34J/cm2 Pulse Width: 100ms Frequency: 1Hz	Energy: 31J/cm2 Pulse Width: 88ms Frequency: 1Hz	Energy: 30J/cm2 PulseWidth: 95ms Frequency: 1Hz	Energy: 28J/cm2 Pulse Width: 86ms Frequency: 1Hz
Hairline	Energy: 25J/cm2 Pulse Width: 80ms Frequency: 1Hz	Energy: 23J/cm2 Pulse Width: 70ms Frequency: 1Hz	Energy: 22J/cm2 PulseWidth: 68ms Frequency: 1Hz	Energy: 20J/cm2 Pulse Width: 48ms Frequency: 1Hz
Bikini	Energy: 27J/cm2 Pulse Width: 76ms Frequency: 1Hz	Energy: 25J/cm2 Pulse Width: 80ms Frequency: 1Hz	Energy: 24J/cm2 PulseWidth: 70ms Frequency: 1Hz	Energy: 23J/cm2 Pulse Width: 70ms Frequency: 1Hz
Thigh	Energy: 35J/cm2 Pulse Width: 100ms Frequency: 1Hz	Energy: 32J/cm2 Pulse Width: 95ms Frequency: 1Hz	Energy : 31J/cm2 Pulse Width : 90ms Frequency: 1Hz	Energy: 30J/cm2 Pulse Width: 90ms Frequency: 1Hz
Calf	Energy: 30J/cm2 Pulse Width: 90ms Frequency: 1Hz	Energy: 28J/cm2 Pulse Width: 86ms Frequency: 1Hz	Energy: 27J/cm2 PulseWidth: 90ms Frequency: 1Hz	Energy: 25J/cm2 Pulse Width: 80ms Frequency: 1Hz

Woman	White Skin	Yellow Skin	Brown Skin	Black Skin
Beard	Energy: 32J/cm2 Pulse Width: 110ms Frequency: 1Hz	Energy: 30J/cm2 PulseWidth: 100ms Frequency: 1Hz	Energy: 28J/cm2 Pulse Width: 95ms Frequency: 1Hz	Energy: 26J/cm2 Pulse Width: 90ms Frequency: 1Hz
Armpit	Energy: 25J/cm2 Pulse Width: 110ms Frequency: 1Hz	Energy: 33J/cm2 Pulse Width: 100ms Frequency: 1Hz	Energy: 32J/cm2 Pulse Width: 90ms Frequency: 1Hz	Energy: 30J/cm2 Pulse Width: 90ms Frequency: 1Hz
Hairline	Energy: 26J/cm2 Pulse Width: 85ms Frequency: 1Hz	Energy: 25J/cm2 Pulse Width: 80ms Frequency: 1Hz	Energy: 23J/cm2 Pulse Width: 70ms Frequency: 1Hz	Energy: 20J/cm2 Pulse Width: 48ms Frequency: 1Hz
Bikini	Energy: 28J/cm2 Pulse Width: 80ms Frequency: 1Hz	Energy: 26J/cm2 Pulse Width: 90ms Frequency: 1Hz	Energy: 25J/cm2 Pulse Width: 80ms Frequency: 1Hz	Energy: 23J/cm2 Pulse Width: 70ms Frequency: 1Hz

Thigh	Energy: 35J/cm2 Pulse Width: 100ms Frequency: 1Hz	Energy: 33J/cm2 Pulse Width: 100ms Frequency: 1Hz	Energy: 22J/cm2 Pulse Width: 90ms Frequency: 1Hz	Energy: 30J/cm2 Pulse Width: 90ms Frequency: 1Hz
Calf	Energy: 32J/cm2 Pulse Width: 95ms Frequency: 1Hz	Energy: 30J/cm2 Pulse Width: 90ms Frequency: 1Hz	Energy: 28J/cm2 Pulse Width: 90ms Frequency: 1Hz	Energy: 26J/cm2 Pulse Width: 85ms Frequency: 1Hz

Method 2: Sliding treatment

Set frequency 6HZ with lower energy. When using this treatment, the therapist does not need to adjust the parameters, just choose the number of treatments and time, depending on the patient's feelings.

500W, 300W energy plus + 80% pulse width

Man /Woman	White Skin	Yellow Skin	Brown Skin	Black Skin
Parameter	Energy: 20J/cm2	Frequency: 6Hz		Pulse Width: 50ms
Beard	Sliding Speed : 3cm/s Treatment time : 0.5min/5cm2	Sliding Speed : 3cm/s Treatment time : 0.5min/5cm2	Sliding Speed : 5cm/s Treatment time : 0.5min/5cm2	Sliding Speed : 5cm/s Treatment time : 0.5min/5cm2
Armpit	Sliding Speed : 3cm/s Treatment time : 0.5min/5cm2	Sliding Speed : 3cm/s Treatment time : 0.5min/5cm2	Sliding Speed : 5cm/s Treatment time : 0.5min/5cm2	Sliding Speed : 5cm/s Treatment time : 0.5min/5cm2
Hairline	Sliding Speed : 2cm/s Treatment time : 0.5min/5cm2	Sliding Speed : 2cm/s Treatment time : 0.5min/5cm2	Sliding Speed : 1cm/s Treatment time : 0.5min/5cm2	Sliding Speed : 1cm/s Treatment time : 0.5min/5cm2
Bikini	Sliding Speed : 2cm/s Treatment time : 1min/5cm2	Sliding Speed : 2cm/s Treatment time : 1min/5cm2	Sliding Speed : 1cm/s Treatment time : 1min/5cm2	Sliding Speed : 1cm/s Treatment time : 1min/5cm2
Thigh	Sliding Speed : 3cm/s Treatment time : 1min/5cm2	Sliding Speed : 3cm/s Treatment time : 1min/5cm2	Sliding Speed : 5cm/s Treatment time : 1min/5cm2	Sliding Speed : 5cm/s Treatment time : 1min/5cm2
Calf	Sliding Speed : 3cm/s Treatment time : 1min/5cm2	Sliding Speed : 3cm/s Treatment time : 1min/5cm2	Sliding Speed : 5cm/s Treatment time : 1min/5cm2	Sliding Speed : 5cm/s Treatment time : 1min/5cm2

Note: Excessive energy transfer can cause thermal damage to skin, which can lead to skin hypertrophy, atrophy or abnormal pigmentation.

Not recommended to treat hair that is lighter than the surrounding skin.

Treatment course:

1, according to the hair growth cycle and treatment of the difference, it is recommended to take 28 days as a course of treatment, do 4-6 courses. The patient can report the treatment effect to the clinic after one month of treatment.

Pay Attention:

Strictly protect the patient's eyes during treatment

We do not recommend a one-time treatment of areas larger than 40cm². If the area to be treated is too large, please treat the area multiple times.

The treatment site should be lightly attached to the treatment site, but the treatment site should not be stressed.

Wipe the light guide crystal clean with soft cotton dipped in alcohol

Trouble Maintenance and Diagnosis

Warning: After turning off the device for two minutes, you can end the power line.

otherwise, it can harm humans or the machine itself.

Protection maintenance

The preventive service must be taken by our authorized personnel.

To clean Laser part

After each treatment, the laser handpiece will be cleaned by the dry towel

Chapter 5 Clinical Management

Principle and Functions Treatment

The instrument is used for any skin and parts for professional hair removal

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Contraindications:

- 1) Pacemaker and defibrillator in the body;
- 2) With skin diseases or cancer history;
- 3) With another serious illness, such as heart disease or diabetes;
- 4) The gestation period and the chest;
- 5) With thermal stimulus history;
- 6) The opening of the wound;
- 7) Light hypersensitivity;
- 8) Skin tanner due to solarization;

Notes

Preparation stuff:

Camera, facial treatment cleanser, essential oil for conditioning and alcohol swab

Preparation before treatment:

To illustrate the function of the equipment and the feeling during the treatment

for the client; Do not use hormonal medications two weeks prior to treatment

Do not put metal;

Take the photo to keep the record; Pay attention to the backlight;

Take photos from three angles: left, right and front

Treatment procedures:

- 1: The curator must wear laser goggles.
- 2: Participants must wear the laser protection cap.
- 3: Place essential oil for the conditioning of the skin to be treated;

4: Start-up of equipment and adjust parameters;

5: Treatment

Treatment skills:

During the treatment, usually ask the customers' feeling, strength, heat received and comfort;

To see if the skin turns red and adjust the parameters and energy according to the response of the customers; You can reduce parameters when you try ribs and other thin skin.

Precautions in the operation

1) Tighten hair that is too long before hair removal (the best hair removal effect is 2 ~ 3 mm), avoiding the hair removal process, because the hair absorbs too much energy and burns the skin.

2) Forehead --- The skin is very thin, near the bone below, use as little energy as possible, there will be pain when removing hair;

3) cheeks, nasal folds --- facial soft tissues, easy to attach, can withstand more energy;

4) Upper lip: sensitive to pain;

5) Chin --- incomplete soft tissue with high curvature, hair removal energy should not be too high;

6) For safety reasons, the upper part of the bone always uses less energy (for example, the forehead);

7) Keep the handle operating head close to the skin surface to ensure that the skin can fully absorb light and heat;

HR mode When repeating the same area, at least 30 seconds or more between every two operations.

Effective operational characteristic

a) Deep rough hair: there are red papules around the rough hair follicles (usually disappear in 12 hours). Use the tweezers to gently pull the hair. When the hair is removed, the client has no pain. In general, some new hair will grow in a week. After 3 weeks, it was discovered that freshly grown hair was significantly smaller and thinner than before.

b) Shallow hair: there is a sensation of heat around the hair follicles (usually disappears in 1 hour, or you can use the cold method to cool down). In general, the hair will obviously be reduced in 3 days after completion, and a new part will be found within 1 week. Hair, after 3 weeks, the amount of hair is significantly less than before hair removal, and freshly grown hair is thin and short.

When a laser pulse is emitted, some clients have varying degrees of discomfort: some people feel like being bitten, others are like an elastic band or a burning sensation for an hour after hair removal.

Precautions after operation.

1) If blisters or ulcers form on the skin after using the machine, apply it with an antibiotic ointment or an ointment for burns.

2) Customers should use double-fold sunscreen and moisturizing skin care products for care within a month after using the machine.

The treatment area and the surrounding skin may become fragile. Do not apply makeup and rubbing when this occurs (may cause skin damage)