

# 808 Diode Laser Machine

## User Manual



### Principle of 808 Diode Laser

808 diode laser depilation is a unique 808nm wavelength of red light, which can effectively penetrate the skin and reach the depth of the target tissue(dermal papilla). According to the principle of selective photothermal action of melanin, the duration of the event pulse ensures that the target tissue absorbs enough energy, damages the target tissue in the form of heat energy through energy conversion, and maintains the

appropriate energy density. The barrier provides enough strong thermal damage to target tissue in a suitable pulse duration, while the surrounding tissue contains no pigment, no energy absorption, no thermal energy conversion, almost no thermal damage, so as to ensure the safety of treatment.

### **Treatment range and effect of 808 Diode Laser**

808 Semiconductor diode laser depilatories has always been the leader in depilation field, the treatment range is very single, namely depilation; The final effect it can achieve is the real sense of hair.

### **Advantages of 808 Diode Laser**

1. a single wavelength of 808nm, under this fixed wavelength, melanin has strong absorption on it, and this wavelength has little absorption on other pigments, and the penetration depth is just near the dermal papilla, directly targeting the target tissue; (direct performance: after 7-10 days, pluck the hair at the operation site with tweezers, it can be seen that the hair is complete, and the root of the hair follicle is atrophied without clear dermal papilla.)
2. high laser power, matching 7ms-400ms ultra wide pulse width, adjusting according to skin color and skin feeling, hair removal safety and effect are guaranteed.
3. The intelligent operating system can automatically recommend appropriate treatment parameters according to the skin color, hair hardness and hair color system, and the operation is simpler and more effective.

## Technical parameters of 808 Diode Laser

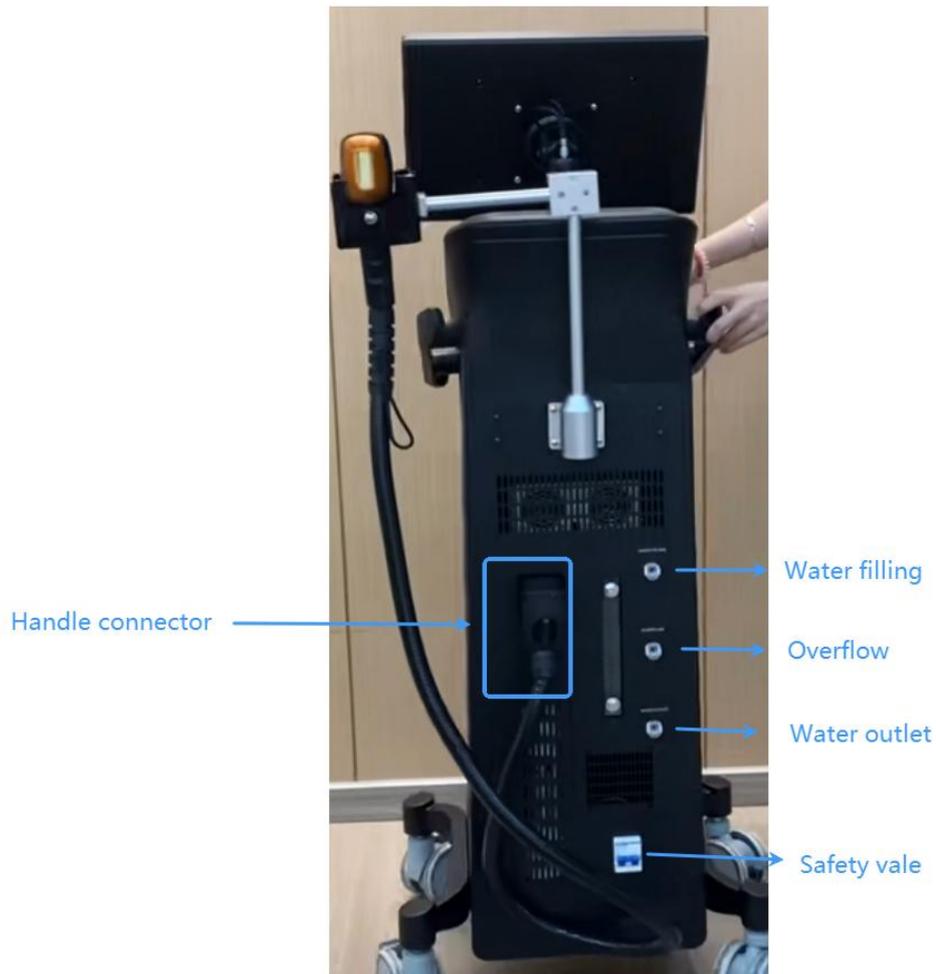
wavelength	808nm
working frequency	1~10 Hz adjustable
energy density	1~20J/cm <sup>2</sup>
Hand cooling	Tec + sapphire refrigeration
Tec refrigeration sheet	12V 6A
Laser chip	Laser imported from Germany
Pulse width	7ms ~ 400ms adjustable
Output mode	Pulse output
Operation language	Standard English + Chinese
Water pump	Dp-60 diaphragm pump 12V power supply
flow sensor	Minimum 2.0l/min flow requirements
Cooling system	400W Tec scheme can be customized
Cooling fan	2220V mute fan
Case material	ABS case / metal case
internal structure	White zinc iron frame / color zinc iron frame
Tank volume	Vertical 4.2L
ambient humidity	< 80%
ambient temperature	Air conditioning room, room temperature ≤ 28 °C
supply voltage	220V@10A

## Installation of the machine

1. Please check the list of random accessories before installation, and check whether the components and random accessories are complete or damaged according to the list. If the user and the manufacturer have special agreements, please call the manufacturer's customer service number before installing the treatment machine to obtain good technical support.
2. Carefully open the package, place the instrument in the pre-selected position, and choose a good place to install the equipment. Take out other supporting components and place the components in the installation room until the temperature is consistent to avoid water mist on the mirror due to too large a temperature difference.
3. Add water, inject distilled water or purified water into the water tank. Tap water or mineral water is prohibited. Distilled water must be used for circulating water, because distilled water has no impurities. First, it can minimize the rust and corrosion of the radiator, thereby affecting the life of the water circulation system. Connect the quick connector at the water inlet position on the rear side of the machine to fill the water. When filling the water, unscrew the overflow plug at the lower back of the machine until the water is filled to the overflow outlet.
4. After completing the above installation, please check the installation steps again. If there is no error, you can start the machine for testing.

Start up operation and page introduction of 808 Diode Laser





operation-diode laser system

-You can choose according to the customer's skin color, hair color and thickness



Adjust the energy according to the customer's feelings , and the maximum energy that the customer can accept is the best energy

## Treatment steps of 808 Diode Laser

### 1. Preoperative consultation

Fully communicate with customers before treatment to understand the growth of customer hair, whether they have received such treatment before, the reaction of treatment, the feedback of effect after treatment, whether they have a history of light allergy and the expected effect of treatment. According to the customer's answers to the above questions, master the customer's skin state and psychology, so as to ensure that the treatment can achieve the best effect and the customer's psychological needs, and meet the prohibition of the description of the taboo population.

### 2. Preoperative analysis

Analyze the customer's hair status at the moment, understand the color depth, thickness, density and skin color grading of the treatment area.

### 3. Take photos and keep a record

Upon completion of the above work, the detailed information of the client and the effect commitment of the communication shall be filled in the treatment file form.. After confirming and approving the 808 laser hair removal treatment project, the operator shall elaborate the treatment principle for the customer, and ask the customer to fully understand all the reactions before and after the laser hair removal treatment and the matters to be noticed after the treatment, so as to get the full cooperation of the customer. Take photos of the treatment area to keep the bottom, and

confirm the hair condition of the treatment area with the customer before treatment.

#### 4. Prepare skin and clean treatment area

After completing the above steps, you can start to use the shaver to clean the hair in the treatment area without burr. Clean and disinfect the skin in the treatment area with cotton or sterile gauze dipped in normal saline (remove the dirt, grease and necrotic horniness on the surface of the skin in the treatment area).

#### 5. Cleaning and preheating before treatment

Before operation, clean and disinfect the bare head before instrument treatment to ensure sterility during operation.

Start the instrument, preheat the instrument for at least 1-3 minutes, and do not operate it during preheating (Objective: to make the water in the water pipe of the main engine fully circulate, so as to avoid the failure of the treatment head caused by multiple poor circulation).

#### 6. Use cold gel

In the process of preheating the instrument, special cold gel can be applied to the parts requiring treatment. It is better to apply 1-2mm thick cold gel (function: it belongs to photoconductive coupling agent in the process of cold gel operation, which has the function of calming, cooling and light conducting. Do not reuse the cold gel. Discard it after use. Taboo: avoid eyes, eyebrows and lips when applying cold gel. These are

forbidden areas.)

#### 7. Eye protection

Before entering the treatment, customers need to wear special black hard plastic protective goggles, and operators need to wear special glasses for shading.(808nm laser is red light, which has certain influence on the retina and cannot be viewed directly)

#### 8. Parameter adjustment

The operator must adjust the appropriate treatment parameters according to the skin condition of the customer.

#### 9. Photosensitive test

After the parameters are adjusted, make two or three light spots at the ear root or chin of the customer first, observe for three to five minutes, and continue to operate in case of light allergy. The best test result is slight tingling and no obvious redness.

#### 10. Enter treatment

In the process of treatment, it is necessary to communicate with customers continuously, so that any feeling of customers should be informed to the operators in time and in detail. The normal response should be: the treatment area is slightly red, and the customer feels slight pricking pain.

## Precautions in operation of 808 Diode Laser

### 1. Precautions before surgery

(1) In the process of light-emitting, the light window for hair treatment can not leave the skin, it needs to be close to the skin, but can not be pressed heavily, and keep the light head perpendicular to the skin surface.

The operator shall apply gel to prevent light leakage. In the treatment of alar, cheekbones, forehead to find the right fit angle.

(2) In the course of treatment, the regulation principle of energy and other parameters is from low to high, and the maximum single regulation is 2J.

(3) After each adjustment of parameters, the optical head should be aligned with the ground to empty three spots, so as to avoid remaining energy.

(4) The operation principle is from bottom to top, from outside to inside. Try to overlap each spot by one fifth of the previous spot. All the light spots must be evenly arranged, and the relatively heavy lesions can be treated repeatedly.

(5) In case of water flow alarm during treatment, it means that the water flow in the water pipe is not smooth, the operation shall be stopped immediately, and the bare head shall be placed lower than the main machine body, so that the water in the water pipe can be fully recycled, or the machine shall be turned on and off again to try to restore the normal circulating water flow.

(6) In the treatment of the upper and lower lips, hairline, nose and other

edges and bulges, pay attention to the sliding speed of the probe, which is too slow and easy to frostbite the skin.

## 2. Precautions after surgery

(1) It is strictly prohibited to expose to the sun after treatment. For example, it is recommended to wear long sleeved trousers on the arms and legs.

(2) It is forbidden to steam sauna, take a bath or take a bath in one week after operation [the treatment site is sensitive, high temperature stimulation is avoided, and thermal energy superposition is avoided], it is recommended to wash with 30-37 °C water temperature [the treatment site cannot be washed with bath and protective articles within 24 hours]. For example, 3 days after the depilation of the whole face, do not use facial cleanser or soap to clean it, just use water to wash it, do not press it vigorously and rub the skin];

(3) eat less or no seafood, spicy and stimulating food, no smoking and drinking, and no sensitive food [leek, celery, coriander, lemon] within one week after operation;

(4) After operation, it is not necessary to use functional products for skin care. It is only recommended to use skin care products with mild water replenishment;

(5) Keep a normal working and rest time [8 hours sleep] every day, eat more fruits and vegetables, and keep a happy mood.

## **FAQ of 808 Diode Laser**

### **1. Does depilation hurt?**

Answer: Hello, the refrigeration system of our 808 semiconductor diode laser hair remover adopts Tec + sapphire refrigeration, which has micro prick and micro heat when hair is removed. Belong to freezing point painless depilation.

### **2. How many times can it be removed?**

Answer: different parts, different growth cycles, and different times of hair removal. Generally, it takes 3-4 times to achieve permanent depilation, because the growth of hair needs to go through the growth period, retrograde period and rest period. Different hair has different periods. The depilation of 808nm laser technology is effective for 75% of the hair in the growth period, 25% of the hair in the retrograde period, and the rest period is almost invalid, while the growth period accounts for 1 / 2-2 / 3 of the hair in general, so it usually takes 3-4 times to achieve permanent depilation.

### **3. Will it grow after taking off?**

Answer: It will not grow again unless there is a change in the body's hormones. It is not ruled out that the hair will grow again if the androgens of individual groups are too high, but it can be sure that the hair will grow again are light, thin and light.

### **4. As long as the hair is removed, is it permanent?**

Answer: Yes, 808 laser hair removal can achieve real (medical) hair removal.

## **5. Will the hair grow coarser in the future?**

Answer: No. Laser energy can inhibit the secretion of sebaceous glands and the growth promoting effect of hair growth cells and hair follicle matrix, so the hair will only grow longer and thinner.

## **6. Does hair removal affect perspiration?**

Answer: will not affect perspiration, the body perspiration mainly through the sweat gland, the opening of the sweat gland is not in the hair follicle. 808 laser unhairing is to use the melanin in the hair follicle in the growth cycle to select and absorb the light, so as to achieve the effect of hair unhairing. The sweat gland itself does not contain pigment, and is not affected by energy. The energy only acts on the hair follicle, so it will not affect the sweat gland.

## **7. Is depilation harmful or side effect to the body?**

Answer: there will be no side effects under normal operation. We will tell you some basic precautions after depilation.

### **Daily maintenance of 808 Diode Laser**

1. Regular maintenance:

- 1) It is recommended to change the purified water or distilled water every 10 days;
- 2) Replace the filter once a quarter, maintain it and observe whether the O-ring of the water nozzle on the quick plug handle is damaged. If it is damaged, replace it in time;
- 3) Internal inspection and cleaning every 3 months;
- 4) Test the output energy of the machine every month.

Note: internal maintenance of the system can only be completed by technicians authorized by the company.

## 2. Routine maintenance

- 1) After each use of the product, wipe the treatment head of the handle with 75% alcohol to avoid cross infection;
- 2) Clean the cold gel on the operating handle after the operation of each operating part is completed.