Laser Lens Maintenance

Any laser machine cannot work well without the laser lens, and the lens in the laser cutting machine optical system is a consumable product, in order to minimize the cost of use, the lens should be cleaned and replaced in a timely manner. In the process of cleaning, replacing, and protecting the lens placed, tested, and installed should be careful to try to avoid contamination or damage to the lens. After the installation of new lenses, they should also be checked regularly and the lenses should be cleaned in time.

Keeping the laser lens clean is of utmost importance and should be carefully cleaned with good cleaning habits to reduce or eliminate contamination from human causes, such as fingerprints or spit flowers. When operating the optical system manually, wear fingerprints or medical gloves or cleaning gloves during the cleaning, disassembly and installation process, be sure to follow the requirements and precautions for cleaning the lenses, and do not use any tools such as tweezers to operate the laser lenses.

After making sure that the lens is contaminated, blow the lens with a rubber suction bulb until its surface is free of dust. Be careful not to blow directly with your mouth, because most of the air blown out contains oil, water, etc., which will further contaminate the lens. If there is still dirt on the surface of the lens after the rubber suction, we must gently wipe it with a special cotton swab dipped in a mixture of acetone and ether, which will remove most of the

contaminants.

For protection, always place the optics on the wiping paper. During the cleaning, use only prescribed materials such as optical wiping paper, cotton swabs, reagent grade ethanol, etc.

Irregular cleaning, disassembly, and installation of the laser lens will result in shortened or even permanent damage to its life. In addition, contamination of the laser lens in the equipment will seriously affect the laser output power and even damage the laser tube. If we can keep the lens clean regularly, it will undoubtedly extend the life of the machine.

Cleaning Steps

1. Blow off the surface of the lens with a ball first, if you do need to clean the lens, only use a laboratory-grade paper soft cotton ball dipped in an appropriate amount of acetone or high storage alcohol, and wipe gently in a clockwise direction rotating from the center to the edge of the lens. If necessary, both sides of the lens need to be cleaned and scrubbed with care.

2. If the focusing lens is too contaminated or not effectively cleaned for a long time and cannot be cleaned, or if the lens falls off, the focusing lens needs to be replaced.

3. If the equipment will not use for a long time, the lens must be cleaned first, and then the surface is sealed with advanced lens paper and adhesive paper to reduce the chance of direct contact between the lens and the air.

Cleaning Supplies

1. General cleaning agent: acetone or high concentration of alcohol, the user can configure their own.

2. Special cleaning agent: camera lens cleaner, ether (analytical grade), alcohol (analytical grade).

3. Cleaning soft cotton ball: laboratory-grade paper soft cotton ball or medical cotton swab.