

3.1.3 Preparation for tools

There is already a tool box with this machine. Besides, multimeter and screwdriver and other detection tools are needed.

3.1.4 Other preparation

The users need to prepare relevant material, including purified water or distilled water for water chiller, power strip, computer, pipe for discharge smoke, sample material, etc.

Attention: The users need to work together with engineer all the time when installing the equipment. The users is requested to grasp the skills of installation and commissioning which are the part of training.

3.2 Installation procedure

3.2.1 Package of laser tube

Laer tube package:

In case of damage during transportation or outside force, the tube is packed with sponge. And laser outlet of tube is sealed with zip lock bag to prevent the mirror from pollution or scratch. Finally, the tube is built up with sponge supports to prevent tube have direct contact with surrounding.

Laser tube unpack:

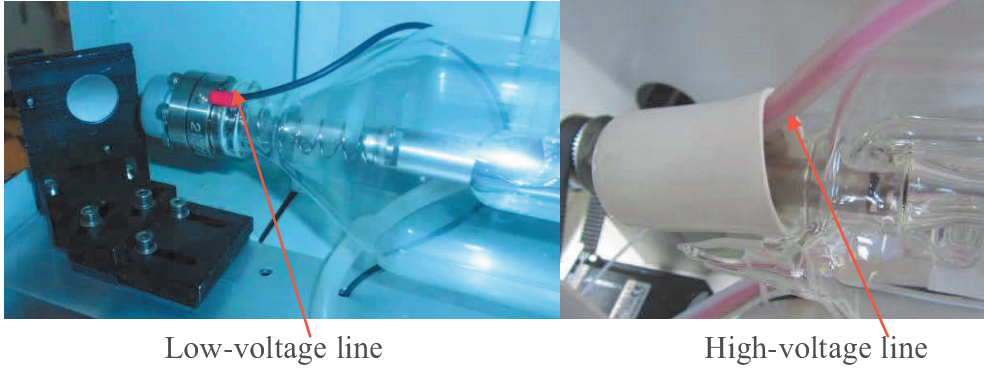
Open the box, take out the laser tube. Both hands hold the middle of the tube; take off the sponge supports; take off the packing sponge; take off the zip lock bag. Then inspect whether the tube is intact.

Attention: It needs as least two persons when unpacking. Handle the tube with care.

3.2.2 Installation of Laser tube

Move the equipment to the back place, so as to install the laser tube easily.

The laser tube is installed in the back of gantry. Open the laser tube protective cover. You can see two laser supports, two water pipes, a black color low-tension line and a red color high-tension line.



Laser tube installation:

1. Take off the screw from the two laser supports which are used for fitting the laser tube.
2. Make the outlet (low-tension part) of the laser tube on the base facing to the first reflected mirror.
3. Fix the upper part of the laser tube support, tighten the screw, connect the high-tension & low-tension line and outlet & inlet water tube.
4. Fix the laser tube.

Attention:

- *Keep the laser tube outlet clear in case of outlet mirror breakdown. The broken damage caused by improper operation, will not be in range of protection.*
- *Fix the laser tube with proper strength. Larger strength will break the laser tube.*
- *Keep the water inlet of the laser tube in the lower place, and the water outlet in the higher place (in the upper section of laser tube). Water comes in from the bottom to the top of the laser tube as shown in the above picture.*
- *Water tube joints must be connected well avoiding water leaking. Water tube must be straightened.*
- *Handle laser tube carefully when installing. High-tension wire and cathode rays should be fastened enough. Water inlet should be in the bottom and water outlet in the top. Make sure there is no air bubble in the laser tube. You can eliminate the bubble by pressing water pipe or raising or rotating the laser tube.*
- *When fix the laser tube. Do not use too much force avoiding the damage of laser tube.*

3.2.3 Installation of Water Chiller

- ▲ First take down the cover of water inlet on the top of the chiller. Pour purified water or distilled water into the water tank until it is full.
- ▲ Then outlet of the water chiller connects with the inlet of the machine, inlet of the water chiller connects with the outlet of the machine.
- ▲ Finally water chiller signal line of the machine should connect with the “alarm outlet” of the water chiller.