

COMPONENTS AND ROUTINE MAINTENANCE OF LASER CUTTING MACHINE

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Laser cutting machine can be seen in many places. What parts are it made of? Next, listen to the detailed answers from the laser cutting machine manufacturer.

1 Laser generator

A device that generates a laser light source. As for the use of laser cutting, except for a few places where YAG solid state lasers are used, most of them use CO2 gas lasers and fiber lasers with high electric-optical conversion efficiency and high power output. Because laser cutting requires high beam quality, not all lasers can be used for cutting.

2 External optical path

Refractive mirror, used to guide the laser in the desired direction. In order to prevent the beam path from breaking down, all reflectors should be maintained with a maintenance cover, and clean positive pressure maintenance gas should be introduced to maintain the lenses from pollution. A set of lenses with good performance will focus a beam without divergence angle into an infinitely small spot.

3 CNC system

Control the machine tool to complete the movement of X, Y and Z axes, and also control the output power of the laser. Stabilized power supply: connected between laser, CNC machine tool and power supply system. It mainly plays the role of avoiding external power grid interference.

4 Cutting head

It mainly includes cavity, focusing lens base, focusing mirror, capacitive sensor, auxiliary gas nozzle and other parts. The cutting head drive installation is used to drive the cutting head to move along the Z-axis direction according to the program, and is composed of servo motor, screw rod or gear and other transmission parts.

5 Machine tool host part

The machine part of the laser cutting machine is the mechanical part that completes the movement of the X, Y and Z axes, including the cutting work platform. It is used to place the workpiece to be cut, and can stop moving correctly and accurately according to the control program, usually driven by servo motor.

Routine maintenance is essential for the laser cutting machine, because it can keep the laser cutting machine in good condition during operation. In order to better use and maintain the laser cutting machine, let's follow the laser cutting machine manufacturer to understand what needs to be paid attention to when maintaining the laser cutting machine.

1 Check the straightness of the track and the perpendicularity of the machine every six months, and timely maintain and debug in case of any abnormality. Otherwise, the cutting effect may be affected, the error will increase, and the cutting quality will decline.

2 Always check the steel belt and make sure it is tight. Otherwise, if there is a problem in the operation, people may be injured. The steel belt looks unimpressive, but it can't be underestimated if there is a problem.

3 Use a vacuum cleaner to remove dust and dirt from the machine once a week, and all electrical

cabinets should be closed tightly to prevent dust.

4 Each guide rail should be cleaned regularly to remove dust and other debris to ensure the normal operation of the equipment. The rack shall be regularly wiped and lubricated to ensure lubrication without sundries. The guide rail and motor should be cleaned and lubricated frequently, so that the machine can move better and cut more accurately in the process, and the quality of the cut products will be improved.

5 The dual-focus laser cutting head is a vulnerable item on the laser cutting machine, and it is easy to damage the laser cutting head if it is used for a long time.