## WHAT ARE THE TYPES OF LASER CUTTING MACHINES

Posted on 2023-06-09 by redsail



**Category:** <u>Laser Cutter News</u>



# Laser cutting machine

According to different lasers, it can be divided into: <u>CO2 laser cutting machine</u>, YAG laser cutting machine

According to the structure, it can be divided into: gantry type, cantilever type, manipulator type laser cutting machine, etc.;

According to the power, it can be divided into: high, medium and low power fiber laser cutting machines:

According to cutting materials, it can be divided into: metal and non-metal laser cutting machines;

According to the processing size, it can be divided into: two-dimensional and three-dimensional laser cutting machines;

#### 1. Fiber laser cutting machine

Because it can be transmitted through optical fiber, the flexibility of fiber laser cutting machine is unprecedentedly improved, there are few failure points, it is easy to use and maintain, and the speed is extremely fast. Therefore, fiber optic cutting machines have great advantages when cutting thin plates within 4mm, but when cutting thick plates, the quality is poor due to the wavelength of the solid-state laser.

#### 2. YAG laser cutting machine

YAG solid-state laser cutting machine has the characteristics of low price and good stability, but the energy efficiency is generally lower than 3%. At present, the output power of the products is mostly below. Mainly used for punching and spot welding and sheet cutting.

### 3. CO2 laser cutting machine

The CO2 laser cutting machine can stably cut carbon steel, stainless steel and aluminum alloy within

#### 8mm.

There are many ways to divide laser cutting machines, the most important ones are as follows:

Divided according to the light source of the laser, there are the following distinctions, such as laser cutting machines, laser marking machines and other generally time-sealed CO2 laser tubes, laser marking machines and laser engraving machines also use CO2, but it is called For radio frequency (RF) tubes. The leader in the laser accessories market has a certain reputation in the industry. Laser accessories also have a series of product structures such as laser welding and laser cutting.

According to the different processing types, it is best divided into metal CNC laser cutting machine and non-metal CNC laser cutting machine. Laser accessories use high-energy-density laser beams to heat the workpiece, so that the temperature rises rapidly, reaching the boiling point of the material in a very short time, and the material begins to vaporize to form steam. Laser accessories also have a series of product structures such as laser welding and laser cutting.

If according to the cutting material, it can be divided into more professional points, such as stainless steel (stainless acid-resistant steel) laser cutting machine, carbon (C) plain steel laser cutting machine, aluminum (Al) laser cutting machine, copper laser cutting machine, alloy (alloy) steel laser cutting machine, etc.