How Laser Marking Machines Are Classified?

подробное описание :

The common laser marking machine on the market is mainly CO2 laser marking machine and YAG las marking machine. Later, the YAG laser marking machine was gradually replaced by a semiconductor marking machine, becoming a market share of more than one model. There is also high-end pump la marking machines, fiber laser marking machines, UV laser marking machines, etc...

How do we distinguish between them?

1. according to the principle characteristics of the model to classify.

a. According to the laser wavelength: 532nm laser marking machine, 808nm laser marking machine, 1 laser marking machine, 10.64um laser marking machine, 266nm laser marking machine. One of the r widely used is the 1064nm.

b. According to the laser divided into a: CO2 laser marking machine, semiconductor laser marking ma YAG laser marking machine, fiber laser marking machine.

c. According to the laser visibility is divided into ultraviolet laser marking machine, green laser markin machine, infrared laser marking machine

2. according to the laser wavelength classification.

Laser marking machines according to different laser wavelengths can be divided into 532nm laser ma machine, 808nm laser marking machine, 1064nm laser marking machine, 10.64nm laser marking ma 266nm laser marking machine, 322nm laser marking machine. Semiconductor DP laser marking mac small, maintenance-free, simple to use, widely used, etc. Laser marking machine is also known as "las engraving machine", in agricultural machinery manufacturing "laser engraving machine" role is also v

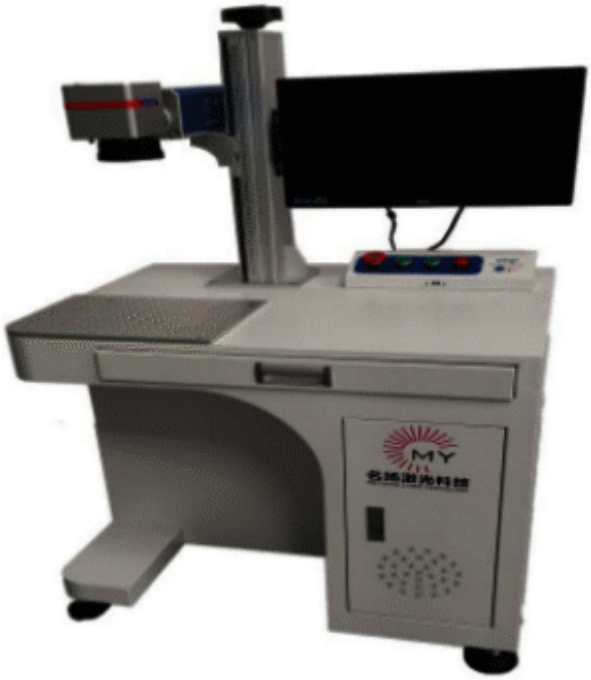
Currently, the following are the main types commonly used.

a. CO2 laser marking machine. Can engrave a variety of non-metallic materials. They are used in cloth accessories, pharmaceutical packaging, construction ceramics, beverage packaging, fabric cutting, ru products, shell nameplates, craft gifts, electronic components, leather, and other industries.

b. YAG Metal Laser Marking Machine. Application industries are particularly suitable to meet the need precision processing. They are used in electronic components, hardware products, tool accessories, integrated circuits (IC), electrical appliances, mobile phones and communications, precision instrume glasses and clocks, jewelry and ornaments, auto parts, plastic keys, building materials, PVC pipes, me equipment, and other industries.

c. Semiconductor laser marking machine (side pump laser marking machine and end pump laser mar machine) Application industries: Mould engraving, hardware products engraving, various plastic keys mechanical products, electronic original parts, hardware tools, various decorative products, and othe engravings.

d. Fiber laser marking Applicable machine materials: any metal (including rare metal), engineering pla electroplating materials, coating materials, spraying materials, plastic rubber, epoxy resin, ceramics,



3. By industry-specific models.

a. Fiber Laser Marking Machine.

It adopts fiber laser output laser and then realizes marking function by ultra-high-speed scanning vib mirror system. Fiber laser marking machine has high efficiency of electro-optical conversion, cooled b cooling, compact size, good output beam quality, high reliability, long operation life, energy-saving. It engrave metal materials and some non-metal materials. Mainly used in the field of high requirement depth, smoothness, and fineness, such as mobile phone stainless steel trim, clocks and watches, mol mobile phone keys and other industries, bitmap marking, can be marked on the metal, plastic and ot surfaces with a fine picture. The marking speed is 3 to 12 times faster than the traditional first-genera lamp pump machine, the second-generation semiconductor marking machine.

Mainly used in: plastic, electronics, metal, ceramics, tobacco, and other materials marked with the re
text, patterns, bar codes and other types of graphics, fiber laser marking machine operation is simple
convenient marking speed, clear and other advantages, making the production efficiency of enterpris
efficient. We commonly use pulse lasers 10W, 20W, 30W, 50W.

b. UV laser marking machine.

The application of the same industry and fiber laser marking machine, but the printed text, patterns,
be more fine, clear. They are mainly used in enterprises on the text, patterns, and other requirement
main products. Especially some fiber laser marking machines can not be marked out the required eff
laser marking machine. Because the UV laser marking machine is a cold light category, many product
laser marking machine The UV laser marking machine is generally able to mark out the effect of the U
marking machine is not satisfactory. The commonly used UV lasers on the market are 3W, 5W, 7W, 8W
15W.

c. Carbon dioxide laser marking machine.

CO2 laser marking machines are used to permanently mark the surface of various substances with a
beam. The effect of marking reveals the deep material through the evaporation of the surface materi
engraving a beautiful pattern, trademark, date, LOGO, or text. At present, the CO2 laser marking mac
mainly used on some occasions requiring finer and higher precision. It is used in food, medicine, wine
electronic components, integrated circuits (IC), electrical appliances, mobile phone communication, b

materials, PVC pipes, and other industries.

d. End pump laser marking machine.

The main application of the industry is also the same as the fiber laser marking machine. Performanc fiber laser marking machine is also similar, but it has a higher peak power.

e. Green laser marking machine.

They are mainly used for surface and internal marking of glass, crystal products, ceramics, metals, ele plastics, and other products. It belongs to the category of cold light, which is also suitable for some pr that are more responsive to heat and require higher precision.

f. Semiconductor Laser Marking Machines.

Semiconductor laser pumped all-solid-state laser (DPSSL) for laser marking works: by using a high-po semiconductor quantum well laser instead of a gas lamp to pump a solid-state crystal for the gain me laser resonant cavity, so that it produces a new wavelength of the laser, in the use of crystal preparat frequency mixing cross should produce SHG, THG and other wavelengths of a laser. The entire laser r process, operating procedures, and quality standards from incoming material re-inspection, partial a production, process inspection, final assembly commissioning to a full inspection of finished product established through design.

g. Flying Laser Marking Machine.

Is in the above several laser marking machines are based on the development of dynamic marking fu
Mainly used in the assembly line operations can be 360 days unlimited marking on the product, but a
automatically generate the flow number and batch number, thus greatly improving the production ef
of enterprises and saving a lot of labor.

There are many types of laser marking machines. There are also many 3D lasers marking machines fo
surface marking, handheld laser marking machines for large non-movable laser marking machines, e
two are classified according to the type of work, summarized according to the laser's working substan
divided into the fiber, CO2, and UV laser marking machines.

For the end customer generally need to understand his use, performance to be able to solve the prob
These are the most important. If you are interested in our laser marking machines, please contact us