WHAT IS A LASER ENGRAVER AND HOW DOES IT WORK?

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Category: Laser Engraver News

LASER is the abbreviation of Light Amplification by Stimulated Emission of Radiation. Laser engraving is a subtractive manufacturing process that uses a laser beam to alter the surface of a material. It is a non-contact process in which the laser machine generates high heat and the energy of the laser light will melt and vaporize the area the laser beam is aimed at and affected.

Finally, it leaves a permanent mark on the surface, often used to create an image of the material. With graphics software and parameters, laser engraving can produce amazing effects like photos or 3D engravings.

How does a laser engraver work?

CO2 lasers work by electrically stimulating the molecules of a carbon dioxide gas mixture. When focused through a lens, this invisible, dense beam can vaporize many materials. Depending on the speed and intensity of the beam, CO2 lasers can be used to engrave a wide variety of materials.

For customers, engraving and cutting with a laser system is fairly simple, similar to how paper printers print. Many types of graphics software can be installed in the Windows system, such as CorelDraw, to design the graphics you need. Set the page size to be the same as the plaque, trophy, or other item you want to engrave, then print to the laser. The speed setting is adjustable from 0.1% to 100%, the power setting is adjustable from 1% to 100%, the dpi setting can be up to 1000, you can set the printing depth and details of the engraving machine according to your own needs.

There are two working modes of the laser engraving machine, one is raster and the other is vector. The grid is like high-resolution grid printing. The laser head scans from left to right, engraves a series of dots at a time, and then moves back and forth to engrave many lines to form a whole page of pictures or characters. Vector, unlike raster, works on the outline of the symbol. We usually use this pattern to cut various materials such as wood, acrylic, paper, etc., or to mark on their surface.