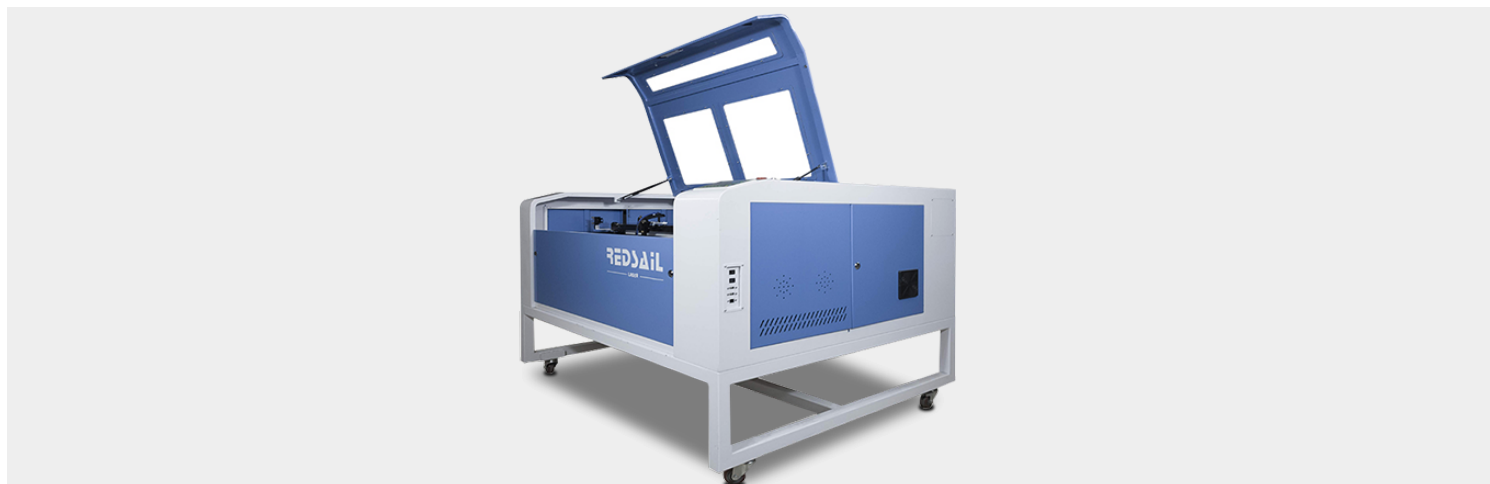


WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF CO2 LASER MARKING MACHINE?

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Category: [Laser Marker News](#)



The [Co2 laser marking machine](#) uses carbon dioxide gas to fill the discharge tube as the medium for generating laser, so that the gas molecules can release the laser, and the laser energy is amplified to form a laser beam for material processing. The optical path realizes automatic marking.

Carbon dioxide laser marking machine is also called CO2 laser marking machine. CO2 lasers are generally used, and the power of the laser tubes used today is in the small and medium power range. Originally, metals have little absorption of this medium-wavelength laser, so CO2 laser marking machines are generally not used to engrave metals.

The whole system of CO2 laser marking machine has high marking precision, fast speed and stable performance, and can work continuously for a long time, and can be directly applied to the mass production line of online processing. The resulting markers are durable and not easy to smear.

In the past, the marks made by inkjet printers were relatively shallow, and they could be wiped off only with a cotton cloth dipped in alcohol. The CO2 laser marking machine is different, because it evaporates the surface material and exposes the deep material, so these marks are persistent.

Suitable for most non-metallic materials marking, such as paper packaging, plastic products, label paper, leather cloth, glass ceramics, resin plastics, bamboo and wood products, PCB boards and other non-metallic materials engraving LOGO trademarks, patterns, characters, scales, QR code, serial number, symbol, anti-counterfeiting code, coding, barcode and other information.

Advantage:

Compared with traditional marking technology, the advantages of CO2 laser marking machine are clear laser marking, fast speed and high yield. Graphics, text and serial numbers can be edited through software, which is easy to change, and the laser is 30,000 hours maintenance-free, no consumables, low cost of use, and power saving.

Shortcoming:

1. The laser of the CO2 laser marking machine is a gas laser with a wavelength of 1064um in the

infrared frequency band. It uses a radio frequency laser and a vibrating mirror, so the price of the Co2 laser marking machine is higher than that of the semiconductor.

2. Co2 laser marking machine has limitations, it cannot mark metal products, and it is mostly used for non-metal marking such as wood, acrylic and leather.

The co2 laser marking machine exposes the deep material through the evaporation of the surface material, thereby engraving exquisite patterns, trademarks, dates, LOGO or text, with fast processing speed, uniform processing quality, long service life and high conversion efficiency.