FIVE ELEMENTS OF LASER ENGRAVING MACHINE SELECTION

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Selection of format size

Customers should choose the model and power of the laser engraving machine that suits them according to their business needs and financial status. Generally, small-format engraving machines are 600mm×600mm and 600mm×900mm, and the feeding width is 700mm. Engraving two-color plates is the most basic application of small-format engraving machines, and it is very receptive. The price of a smaller engraving machine is almost the same, but when engraving a two-color board, it needs to be cut, which is troublesome and causes unnecessary waste. Large-format engraving machines include 1200mm×1200mm, 2000mm×1500mm, 1300mm×2500mm, 2000mm×3000mm, and the cutting width of the engraving machines of the above models is more than 1350mm. The size of the plexiglass and PVC boards on the market is 1220mm× 2440mm, so these models are more suitable for customers who need large format engraving machines.

Spindle motor

The spindle motor is an important component of the computer engraving machine, and its performance has a crucial impact on the performance of the computer engraving machine. Machining spindles are generally divided into two categories: precision machining spindles and high-power cut-off spindles.

1. The fine processing spindle is characterized by low noise, high speed, and high height, which is suitable for processing particularly fine workpieces, such as seals, nameplates, badges, gifts, etc. This type of motor is usually a high-speed variable frequency motor with low power, generally below 250W. The disadvantage is that the ability to cut thick materials is poor, and it is not suitable for cutting thicker materials.

2. The high-power cutting spindle is mainly used for cutting and high-power engraving. It is characterized by high power and strong cutting ability. It is especially suitable for cutting space and three-dimensional characters. Of course, it can also make nameplates, nameplates, and seals. Such high-power spindles can generally be divided into brushless frequency high-speed AC motors and brushed AC motors according to the characteristics of the motor. The maximum speed of the brushed AC motor does not exceed 24,000 rpm: B. The brushless frequency conversion motor has high rotation accuracy, less wear, and low noise, and the operating noise is much lower than that of the brushed AC motor; C. The brushless frequency

conversion motor has good stall characteristics. There is a special current-limiting circuit on the inverter, and a short-term stall will not burn the motor, while the brushed AC will quickly smoke and burn when it is overloaded or stalled, and it cannot be repaired; D. Brushless variable frequency motor It adopts frequency conversion control technology to adjust the speed. It is a professional product with long service life. The manufacturer provides free replacement for one year. In the future, the motor can be maintained by replacing the high-speed bearing. The life of the brushed AC motor is about 300 hours due to the use of electric wires. The motor or motor carbon brushes have to be replaced, so carbon brushed AC motors are usually not warranted for a day.

Selection of control mode and speed: the control mode can be divided into three types:

A. All calculation work is completed by computer control. When the engraving machine is working, the computer is in working condition and cannot perform other typesetting work. This may cause waste products due to wrong operation of the computer.
B. Adopt the control of single-chip microcomputer. This kind of controller can carry out typesetting while the engraving machine is working, but the computer cannot be turned off. This is actually equivalent to saving 7 computers and reducing waste products caused by computer misoperation.
C. Using the USB port to transmit data, the system has a memory capacity of more than 32M. As soon as you save the file, you can immediately leave the computer completely, turn off the computer, or do other typesetting. This method greatly improves the working efficiency of the engraving machine.

Guide rail

Large-format engraving machines must adopt widened imported square guide rails, whose load capacity and precision retention capacity are more than 30 times that of circular guide rails, ensuring the high quality and high speed of the engraving machine.

Accuracy

A small-format engraving machine engraving 1mm Chinese characters, or a large-format engraving machine engraving 1.5mm small characters can be seen very clearly under a magnifying glass.