What are the main accessories and consumables of laser cutting machines? How to choose suitable consumables?

Laser cutting machines need to be equipped with suitable accessories and consumables, because this directly affects the operating efficiency, processing effect and service life of the equipment. So, what are the main accessories and consumables of laser cutting machines? How to choose suitable consumables? Let's discuss it together today:

1. Protective lens

When the laser cutting machine cuts metal materials, a large amount of gas, slag and spatter will be released on the working surface, and the protective lens is used to protect the focusing lens from damage during the cutting process. However, the prices of protective lenses on the market are different and the quality is also uneven. According to the REZES Laser, it was found in the process of repairing laser cutting machines for many users that inferior protective lenses will not only affect the beam, burn the protective lens drawer, and even burn the focusing lens, but also cause the staff to inhale the cavity dust emitted by the lens. Therefore, it is very important for processing companies, especially metal processing companies, to choose protective lenses with good quality and low laser loss.

So, how to choose suitable protective lens? In addition to matching the external dimensions, it is also necessary to select the material of the protective lens that suits you and the technical parameters of the laser anti-reflection film according to the actual cutting environment and the power of the laser cutting. Laser cutting machine manufacturer Jinan REZES Laser warm reminder: poor transmittance, heat resistance, and easy to break are all inferior protective lenses. Please try to avoid them when purchasing!

2. Nozzles

Different laser cutting equipment models require nozzles of specific specifications. Because if the nozzle is not matched properly, the first problem is that it cannot be installed due to inconsistent. Even if it can be installed, the thickness of the nozzle is different, which will cause a lot of problems-the current parameters of the equipment cannot be matched, causing confusion in operation and unable to cut normally. But it should be noted that it is not the same as the name of the nozzle! The quality of the nozzle workmanship will directly affect the cutting effect of the equipment. For example: the mouth hole of the non-original inferior nozzle is not round, resulting in broken slag during cutting, etc.

So, what should you pay attention to when replacing and purchasing the nozzle?

(1) The concentricity of the nozzle should be high (high-quality nozzle has "three concentric holes")

(2) The thickness of the nozzle should be consistent with the original

(3) The size of the nozzle should be consistent with the original

(4) Using high-quality copper nozzles， ensuring the consistency of the cutting effect

3. Ceramic rings

The ceramic ring is an important component of the cutting head of the fiber laser cutting machine. It is mainly used to transmit the electrical signal collected by the laser head nozzle and plays a vital role in the normal and stable operation of the fiber laser cutting machine. Many customers often encounter equipment shutdowns for no reason, laser head collisions with the working surface and other faults. In fact, they are caused by unstable or lost electrical signals due to poor-quality laser ceramic rings. Poor-quality ceramic rings not only cause the cutting head to follow the signal transmission unstably, but also fail to accurately sense the distance between the cutting head and the sheet metal during the cutting process, resulting in the risk of the cutting head colliding with the workpiece. It will also cause ceramic have a short life, easy to crack and high procurement costs for frequent replacement. Therefore, it is very important to choose a high-quality ceramic ring for the fiber laser cutting machine. Based on years of experience, Jinan REZES Laser tells you: When purchasing ceramic rings, choose high-sensitivity ones, because the signal transmission is relatively stable; in addition, choose ones with heat-resistant, high-temperature-resistant and stable adhesives. These ceramic rings are of higher quality.

4. Filters

The filter contains ion filter elements and wire-wound filter elements. The main function is to filter impurities and ion content in the water tank to ensure the stable use of the laser. High-quality filter can reduce the light attenuation of the laser and increase the life of the laser. Therefore, you should also be careful when purchasing filter elements!