

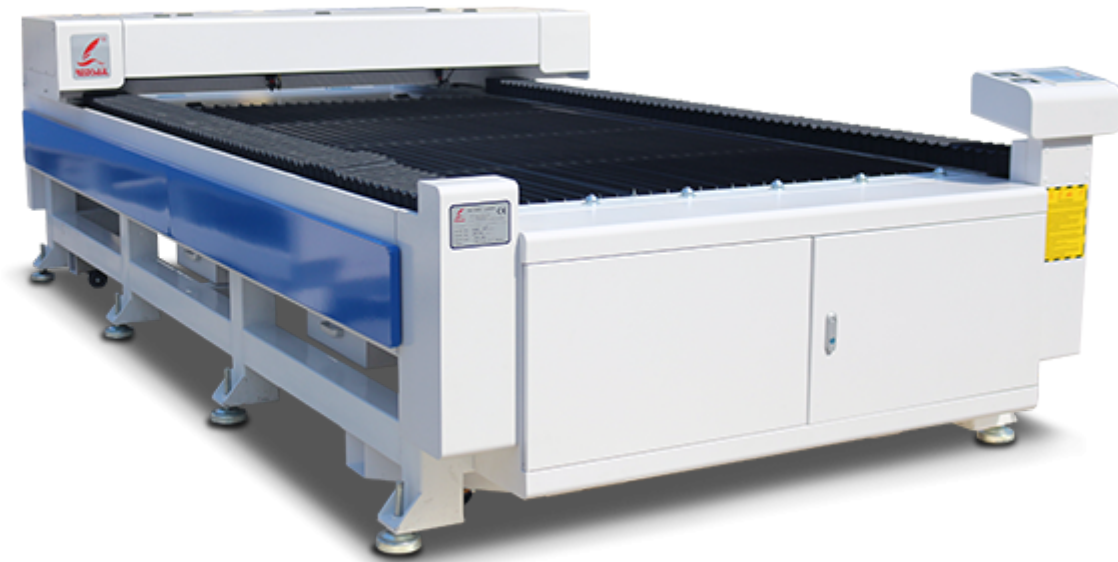
WHAT GASES ARE REQUIRED FOR LASER CUTTING?

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laser cutting machine

1. What gases are required for laser cutting?

The auxiliary gases that can be used in laser cutting machines mainly include oxygen, nitrogen, air, and argon.

If the material is ignited by oxygen or other active gases under the irradiation of a laser beam and undergoes a strong chemical reaction with oxygen, creating another heat source, it is called oxidation melting cutting. Obviously, compared to inert gases, oxygen as an auxiliary gas can achieve higher cutting speeds.

Characteristics of laser cutting:

1. What is the difference between directional light emitting fiber cutting machines and laser cutting machines.

The laser emitted by the laser naturally emits in one direction, and the divergence of the beam is very small, only 0. Radians, nearly parallel.

2. Extremely high brightness

The main reason for high laser brightness is directional luminescence. A large number of photons are concentrated in a very small spatial range, and the energy density is naturally very high.

3. Extremely pure color

The color of light is determined by its wavelength (or frequency). A certain wavelength corresponds to a certain color. The wavelength distribution of the sun ranges from approximately 0.76 microns to 0.4 microns, with corresponding colors ranging from red to purple, so the sun is not monochromatic. The light source that emits monochromatic light is called a monochromatic light source, which emits monochromatic light at a wavelength.

For example, krypton lamps, helium lamps, neon lamps, hydrogen lamps, etc. are all monochromatic light sources that emit only a certain color of light. Although the wavelength of a monochromatic light source is single, it still has a certain distribution range. For example, neon lights only emit red light, with good monochromaticity, known as monochromatic crowns, and a wavelength distribution range of 0. Nano, so if carefully identified, neon lights still contain dozens of red colors.

Extremely high energy density

Laser energy is not very high, but its energy density is high because its range of action is very small, usually only a little, accumulating a large amount of energy in a short period of time.

2. How to manage the compressed air used in laser cutting machines?

1. The sealing element of the intake valve should be checked for the condition of the sealing ring at the laser cutting machine air compressor every hour or so. If the sealing performance is poor, it needs to be replaced.

2. Check if the compressor lubricating oil is sufficient and replace it with new oil every hour.

3. The oil-water filter shall be replaced with new parts every hour.
4. The oil vapor separator should be replaced with new parts every hour.
5. Clean the minimum pressure valve every hour and check if the opening pressure is normal. Check the sensitivity of the safety valve every hour.
6. The oil drain valve should discharge water and dirt every hour.
7. Drive belt, adjust the tightness every hour, check the wear condition every hour, and decide whether to replace it based on the wear condition.
8. Regularly maintain the motor according to the instructions.