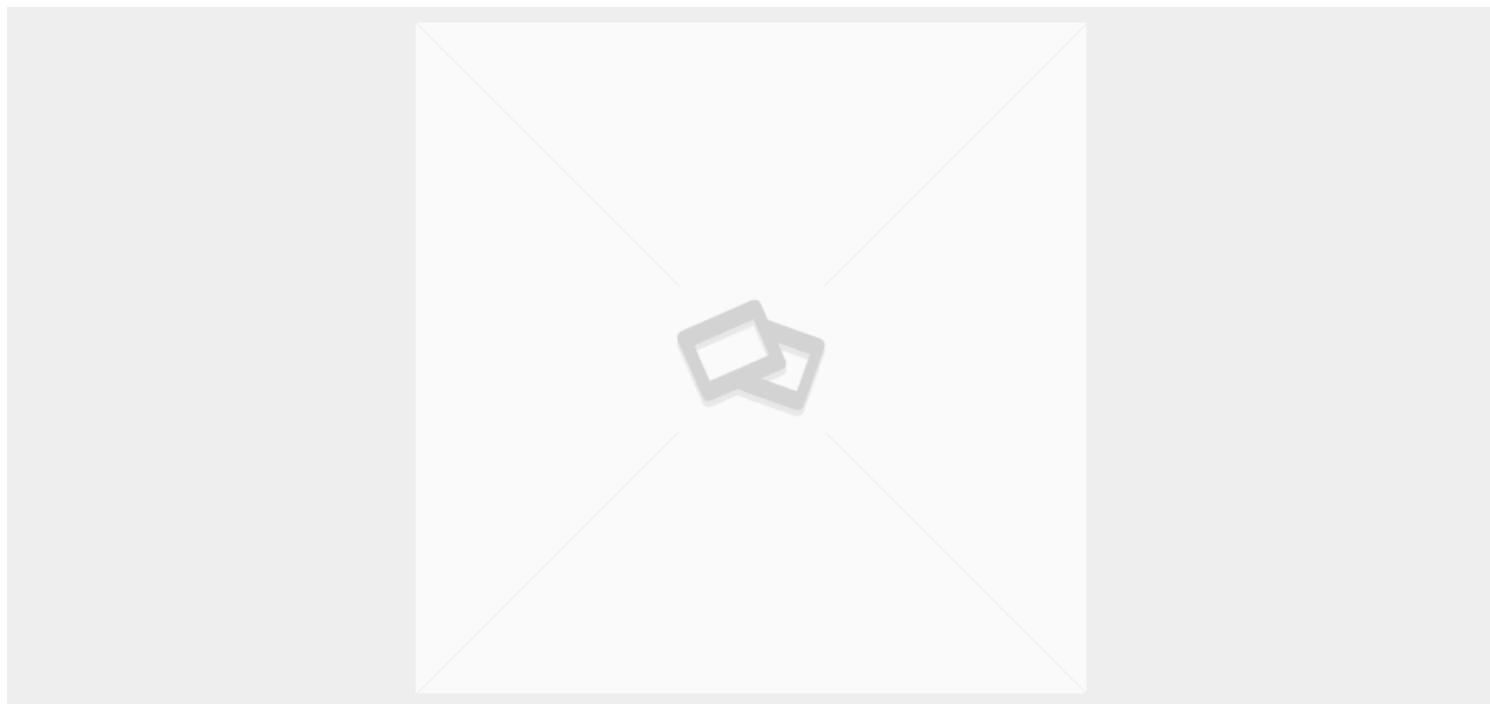


# WHAT ARE THE FACTORS THAT AFFECT THE CUTTING QUALITY OF LASER CUTTING MACHINE?

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Fully understanding the various factors in the cutting process of the laser cutting machine can find a way to improve the surface quality and surface quality of the processed material.

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Laser cutting machine

1. Beam characteristics: The incision width of laser cutting has a great relationship with the spot diameter after focusing. Since the power density and energy density of laser irradiation are related to the laser spot diameter, in order to obtain greater power density and energy scale, the spot diameter must be as small as possible in laser cutting.
2. Laser power: The size of the laser power directly affects the thickness of the steel plate that can be cut. The higher the power, the thicker the material that can be cut. In addition, it also affects the dimensional accuracy of the workpiece, the width of the joint, the roughness of the cut surface and the width of the heat-affected zone.
3. Cutting speed: Cutting speed has a great influence on cutting quality. Proper cutting speed will make the cutting surface smooth and the lower part free of slag. If the cutting speed is too fast, the material will not be cut, causing sparks to fly, slag will be generated in the lower part, and even the lens will be burned. If the cutting speed is too slow, it is easy to cause the material to melt, the

cutting seam to widen, the heat-affected zone to increase, and even the workpiece to be over-melted.

4. Nozzle: The nozzle aperture, the distance between the nozzle outlet and the material surface, etc. will affect the cutting effect.

5. Focus position: The focus position directly affects the width of the incision, the roughness of the section and the adhesion of waste residue. At different focal positions, the beam diameter and focal depth on the surface of the processed material are different, resulting in changes in the shape of the cutting seam and affecting the flow of processing gas and molten metal. What brand of fiber laser cutting machine is good.

6. Auxiliary gas: Material cutting requires auxiliary gas, mainly gas pressure and gas type, both of which will affect the roughness of the cutting section and the generation of dross.

There are many factors that affect the cutting quality of laser cutting machines. Fully understanding the various factors in the cutting process of the laser cutting machine can find a way to improve the surface quality and surface quality of the processed material.