

# CAUSES AND SOLUTIONS OF LASER CUTTING BURRS!

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Burrs are a common phenomenon in the [laser cutting process](#), which is manifested in irregular metal parts such as various sharp corners and burrs that appear at the transition of the workpiece surface. However, being common does not mean that the generation of burrs is acceptable. It directly affects the dimensional accuracy, shape and position accuracy and surface roughness of the processed parts, reduces product quality, and brings harm to subsequent inspection, assembly, performance and aesthetics. Many problems, so glitches should be avoided as much as possible.

Is the burr generated by laser cutting must be a quality problem of the cutting machine?

When many companies use laser cutting machines for cutting, they find that the cut workpieces have a lot of burrs and the quality is very unsatisfactory, so they suspect that there is a problem with the quality of this cutting machine. Is this really the reason? Not necessarily. In most cases, the burrs are not caused by the quality problems of the laser cutting machine itself, but by the wrong operation method of the operator or the maintenance and maintenance of the cutting machine are not in place.

In addition, there is another main cause of glitches, which is the problem of auxiliary gas. During laser cutting, the laser beam irradiates the surface of the workpiece to generate extremely high temperature, which makes the surface of the workpiece vaporize and evaporate quickly, so as to achieve the purpose of cutting metal. The role of the auxiliary gas is to blow off the residual slag on the surface of the workpiece after the workpiece is vaporized by laser beam irradiation. If this is not done, wait until the slag cools, forming a layer of attached burrs on the cut surface of the workpiece.

Below, we will summarize several common causes of burrs and their corresponding solutions to help readers stay away from the troubles of laser cutting burrs.

Common causes and solutions of laser cutting burrs:

**Reason 1:** The upper and lower positions of the focus of the laser beam produced by the laser cutting machine deviate, resulting in the energy not converging on the workpiece exactly, and the workpiece is not fully vaporized, which increases the amount of slag generated and is not easy to blow off, thus making it easier to generate burrs.

**Solution:** Adjust the position of the focus of the laser beam, and adjust it to the best state according to the offset position generated by it.

Reason 2: The output power of the laser cutting machine is not enough to effectively vaporize the metal, resulting in excessive slag and burrs. Solution: Check whether the laser cutting machine is working normally. If it is not normal, it needs to be repaired and maintained in time; if it is normal, check whether the output value is correct.

Reason three: The cutting line speed of the laser cutting machine is too slow, which destroys the surface quality of the cutting surface and produces burrs.

Solution: adjust and increase the cutting line speed in time to make it reach the normal value.

Reason 4: The purity of the auxiliary gas of the laser cutting machine cannot meet the required standards, and it will also cause burrs on the workpiece.

Solution: Replace the auxiliary gas with higher purity.

Reason five: The laser cutting machine works for too long, which makes the equipment appear in an unstable working state, which will also lead to burrs.

Solution: Turn off the laser cutting machine, and restart it after a while to give it a full rest.

The reasons and solutions for the above-mentioned several common glitches can only be effectively solved if the root cause of the problem is understood. It is hoped that readers and friends who do mechanical processing and sheet metal processing can better grasp the details of processing, improve product quality, and jointly promote the progress of China's manufacturing industry.