

# WHAT ARE THE REASONS THAT AFFECT THE CUTTING QUALITY OF LASER CUTTING MACHINES

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1. The size of the laser coagulation of the laser generator. If the light spot is small after clustering, the cutting accuracy is high, and the gap after cutting is also small. The laser cutting machine has high accuracy and quality. But the beam emitted by the laser is conical, so the cutting gap is also conical. In this case, the thicker the workpiece, the lower the accuracy, so the cutting gap is larger.
2. The accuracy of the workbench. If the accuracy of the workbench is high, the cutting accuracy will also be improved. Therefore, the accuracy of the workbench is also a very important factor in measuring the accuracy of the laser generator.
3. The laser beam condenses into a cone. When cutting, the laser beam is tapered downwards. At this point, if the thickness of the cutting workpiece is large, the cutting accuracy will decrease and the cutting gap will be large.
4. Different cutting materials can also affect the accuracy of laser cutting machines. In the same situation, the accuracy of cutting stainless steel and aluminum will be very different. The cutting accuracy of stainless steel will be higher, and the cutting surface will be smoother.

Generally speaking, the quality of laser cutting can be measured by the following six standards.

1. Cutting surface roughness Rz.
2. Cut slag size.
3. The perpendicularity and slope  $u$  of the cut edge.
4. Cutting edge fillet size  $r$ .
5. Drag  $n$  after the stripes.
6. Flatness  $F$ .