



Fiber Flatbed Laser Cutting Parameter List



| Material Name | Thickness (mm) | Assist Gas | Cutting Speed(m/min) | | | | | | | | Notes: | | | | | | | | | | |
|----------------------------|----------------|------------|----------------------|------------------|------------------|-------------------|-------------------|-------------------|------------------|------------------|------------|------------------|------------------|--|--|--|--|--|--|--|--|
| | | | Single-mode 500W | Single-mode 800W | Single-mode 100W | Single-mode 1200W | Single-mode 1500W | Single-mode 2000W | Multi-mode 2200W | Multi-mode 3000W | | Multi-mode 4000W | Multi-mode 6000W | | | | | | | | |
| Carbon Steel Q235 | 2 | O2 | 3 - 4 | 3.5 - 4 | 4 - 5 | 4.5 - 6 | 5 - 7 | | | | | | | | | | | | | | |
| | 6 | | 0.7 - 0.9 | 1.1 - 1.3 | 1.2 - 1.4 | 1.3 - 1.5 | 1.5 - 1.8 | 2.1 - 2.3 | 2.5 - 2.65 | 2.5 - 2.8 | 2.8 - 3.3 | 2.9 - 3.3 | | | | | | | | | |
| | 8 | | | 0.8 - 1 | 0.9 - 1.1 | 1 - 1.2 | 1.2 - 1.4 | 1.8 - 1.9 | 1.8 - 2 | 2.2 - 2.4 | 2.4 - 2.6 | 2.4 - 2.6 | | | | | | | | | |
| | 10 | | | 0.6 - 0.8 | 0.75 - 0.9 | 0.8 - 1 | 0.75 - 1 | 1.2 - 1.35 | 1.3 - 1.4 | 1.1 - 1.3 | 1.4 - 1.8 | 1.5 - 2 | | | | | | | | | |
| | 12 | | | | 0.6 - 0.75 | 0.65 - 0.8 | 0.65 - 0.8 | 0.9 - 1.05 | 0.9 - 0.95 | 0.9 - 1 | 0.95 - 1.1 | 0.95 - 1.1 | | | | | | | | | |
| | 14 | | | | | 0.5 - 0.7 | 0.6 - 0.7 | 0.85 - 0.9 | 0.8 - 0.85 | 0.8 - 0.9 | 0.8 - 0.95 | 0.8 - 0.95 | | | | | | | | | |
| | 16 | | | | | | | 0.45 - 0.6 | 0.75 - 0.8 | 0.65 - 0.7 | 0.7 - 0.8 | 0.7 - 0.85 | | | | | | | | | |
| | 18 | | | | | | | | 0.7 - 0.75 | 0.6 - 0.66 | 0.6 - 0.75 | 0.65 - 0.7 | | | | | | | | | |
| | 20 | | | | | | | | 0.6 - 0.65 | 0.55 - 0.6 | 0.5 - 0.65 | 0.6 - 0.65 | | | | | | | | | |
| | 22 | | | | | | | | 0.53 - 0.6 | 0.45 - 0.5 | 0.4 - 0.55 | 0.5 - 0.55 | | | | | | | | | |
| 25 | | | | | | | | 0.4 - 0.55 | | | 0.4 - 0.52 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 1. Carbon steel uses oxygen as an auxiliary gas. 2. Thin carbon steel can use nitrogen or air as an auxiliary gas, and the cutting speed can be faster. |
| Stainless Steel 304 | 1 | N2 | 10 - 12 | 16 - 19 | 20 - 22 | 21 - 24 | | | | | | | | | | | | | | | |
| | 2 | | 1.8 - 2.5 | 3.5 - 4.7 | 4.5 - 6.5 | 6 - 7.5 | 7 - 10 | 11.5 - 13 | 11 - 13 | 18 - 23 | 23 - 26 | | | | | | | | | | |
| | 3 | | 0.7 - 0.9 | 1.5 - 2 | 1.8 - 2.5 | 2.5 - 3 | 4.5 - 6 | 5 - 6.5 | 6.5 - 7.5 | 7 - 9 | 8 - 10 | 16 - 18 | | | | | | | | | |
| | 4 | | | 0.45 - 0.6 | 1 - 1.7 | 1.5 - 2 | 1.7 - 2 | 2 - 3.5 | 3 - 3.5 | 4.5 - 6 | 5 - 7 | 10 - 12 | | | | | | | | | |
| | 5 | | | | 0.45 - 0.7 | 0.7 - 1.1 | 1 - 1.3 | 1.8 - 2.2 | 2 - 2.3 | 2.5 - 3 | 3.5 - 4 | 6.5 - 7.5 | | | | | | | | | |
| | 6 | | | | | 0.5 - 0.7 | 0.8 - 1 | 1.5 - 1.8 | 1.8 - 2 | 1.5 - 1.9 | 1.8 - 2.2 | 3.5 - 4.5 | | | | | | | | | |
| | 8 | | | | | | | 0.6 - 0.7 | 0.75 - 0.9 | 1 - 1.3 | 1.3 - 2.5 | | | | | | | | | | |
| | 10 | | | | | | | | | 0.3 - 0.5 | 0.8 - 1.1 | | | | | | | | | | |
| | 12 | | | | | | | | | | 0.6 - 0.75 | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 0.6 - 0.75 0.5 - 0.65 0.4 - 0.55 |
| | | | | | | | | | | | | | | | | | | | | | Cutting stainless steel, aluminum, and brass can use liquid nitrogen or air as an auxiliary gas. The air pressure required for different thickness materials is also different, and the air pressure should be adjusted appropriately. |
| Aluminum Sheet 1060 / 6061 | 1 | N2 | 2.5 - 4 | 12 - 18 | 15 - 20 | 20 - 26 | | | | | | | | | | | | | | | |
| | 2 | | | 2 - 3.5 | 2.5 - 4.5 | 4.5 - 5.5 | 6 - 8 | 12 - 13.5 | 11 - 12.5 | 14 - 17 | 18 - 21 | | | | | | | | | | |
| | 3 | | | 0.3 - 0.5 | 0.8 - 1.5 | 1.6 - 2 | 2.5 - 4 | 5 - 6.5 | 5 - 5.5 | 6.5 - 8 | 7 - 8.5 | | | | | | | | | | |
| | 4 | | | | | 0.4 - 0.6 | 0.8 - 1.3 | 2.5 - 3.2 | 2.3 - 2.5 | 3 - 4 | 4 - 5 | | | | | | | | | | |
| | 5 | | | | | | | 0.2 - 0.35 | 1.5 - 1.65 | 1.5 - 1.6 | 1.6 - 2 | 2 - 2.7 | | | | | | | | | |
| | 6 | | | | | | | | 1 - 1.5 | 0.93 - 1 | 1.3 - 1.6 | 1.6 - 2 | | | | | | | | | |
| | 8 | | | | | | | 0.4 - 0.45 | 0.4 - 0.45 | 0.65 - 0.8 | 0.8 - 1 | | | | | | | | | | |
| | 10 | | | | | | | | | 0.3 - 0.45 | 0.5 - 0.65 | | | | | | | | | | |
| | 12 | | | | | | | | | | 0.3 - 0.45 | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 1.4 - 1.55 0.9 - 1.1 0.4 - 0.55 |
| | | | | | | | | | | | | | | | | | | | | | Cutting stainless steel, aluminum, and brass can use liquid nitrogen or air as an auxiliary gas. The required air pressure is different for materials with different thicknesses, and the air pressure should be adjusted appropriately. |
| Brass H62 | 1 | N2 | 2.5 - 3.5 | 15 - 18 | 15 - 20 | 20 - 25 | | | | | | | | | | | | | | | |
| | 2 | | | 2.5 - 3.5 | 2.5 - 4 | 4 - 5 | 6 - 8 | 12 - 13 | 9 - 10.5 | 12 - 16 | 18 - 21 | | | | | | | | | | |
| | 3 | | | 0.5 | 0.8 - 1.4 | 1.5 - 2 | 2.5 - 3 | 5.5 - 6 | 4.5 - 5.5 | 6 - 7.5 | 8 - 10 | | | | | | | | | | |
| | 4 | | | | | 0.4 - 0.6 | 0.8 - 1.2 | 2.6 - 3 | 2 - 2.5 | 2.5 - 3.6 | 4.5 - 6 | | | | | | | | | | |
| | 5 | | | | | | 0.2 - 0.3 | 1.5 - 1.65 | 1.3 - 1.45 | 1.5 - 1.8 | 3 - 3.8 | | | | | | | | | | |
| | 6 | | | | | | | 1 - 1.15 | 0.8 - 0.95 | 1.2 - 1.6 | 1.8 - 2 | | | | | | | | | | |
| | 8 | | | | | | | 0.35 - 0.4 | 0.35 - 0.4 | 0.65 - 0.8 | 0.9 - 1.1 | | | | | | | | | | |
| | 10 | | | | | | | | | 0.3 - 0.45 | 0.5 - 0.65 | | | | | | | | | | |
| 12 | | | | | | | | | | 0.35 - 0.4 | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 0.6 - 0.75 0.4 - 0.45 |
| | | | | | | | | | | | | | | | | | | | | | Cutting stainless steel, aluminum, and brass can use liquid nitrogen or air as an auxiliary gas. The required air pressure is different for materials with different thicknesses, and the air pressure should be adjusted appropriately. |
| Red Copper T2 | 1 | O2 | 1.5 - 1.8 | 4 - 6 | 5 - 8 | 9 - 11 | 12 - 14 | | 20 | | | | | | | | | | | | |
| | 2 | | | 0.4 - 0.6 | 0.6 - 0.8 | 0.8 - 1 | 2 - 2.6 | 5 - 6 | 4.5 - 5.5 | 6 - 7.5 | 10 - 12 | | | | | | | | | | |
| | 3 | | | | 0.3 - 0.5 | 0.4 - 0.6 | 1.2 - 1.6 | 1.65 - 1.8 | 1.82 - 2 | 3 - 3.8 | 5 - 6 | 7 - 8.5 | | | | | | | | | |
| | 4 | | | | | | 0.4 - 0.8 | 0.7 - 0.85 | 1 - 1.25 | 1.4 - 1.6 | 1.8 - 2.1 | | | | | | | | | | |
| | 5 | | | | | | | 0.4 - 0.45 | 0.5 - 0.65 | 0.65 - 0.8 | 0.9 - 1.1 | 1.1 - 1.25 | | | | | | | | | |
| | 6 | | | | | | | | | 0.3 - 0.45 | 0.4 - 0.6 | 0.8 - 1.1 | | | | | | | | | |
| 8 | | | | | | | | | | | 0.75 - 0.8 | | | | | | | | | | |
| 10 | | | | | | | | | | | 0.6 - 0.65 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 0.6 - 0.65 |
| | | | | | | | | | | | | | | | | | | | | | Cutting red copper can use oxygen or liquid oxygen as an auxiliary gas. |