

Laser Cutting Tungsten-Copper (W-Cu)

V&T; Machining Company · vtmachining.com/laser-cutting-tungsten-copper-w-cu

Selecting V&T Machining for your tungsten-copper (W-Cu) laser cutting needs is choosing a partner committed to precision, quality, and cutting-edge solutions. Our unwavering dedication to excellence, coupled with advanced techniques, positions us as industry leaders in providing tailored tungsten-copper laser cutting solutions. At V&T Machining, we recognize the unique properties of tungsten-copper alloys and have honed our expertise in laser cutting to deliver results that exceed expectations.

Laser cutting has transformed material processing, and when it comes to tungsten-copper, a specialized approach is essential. V&T Machining takes pride in employing state-of-the-art tools and techniques to deliver precise tungsten-copper laser cutting solutions, customized for diverse industries, including aerospace, electronics, and high-tech applications.



Automatic cnc laser cutting machine working with sheet metal with many orange sparks at factory, plant. Metalworking, industrial, manufacturing, technology and equipment concept

V&T Machining Presents a Comprehensive Guide to Laser Cutting Tungsten-Copper (W-Cu):

Tungsten-Copper Alloy Composition	Cutting Tool	Cutting Speed (mm/min)	Laser Power (kW) (Thickness-Dependent)	Focus Lens Material	Focus Lens Life (hours)
W-Cu Alloy (Various Ratios)	CO2 or Fiber Laser	300-500	2-5 (thickness-dependent)	ZnSe or Si	300-500

Challenges in Tungsten-Copper (W-Cu) Laser Cutting:

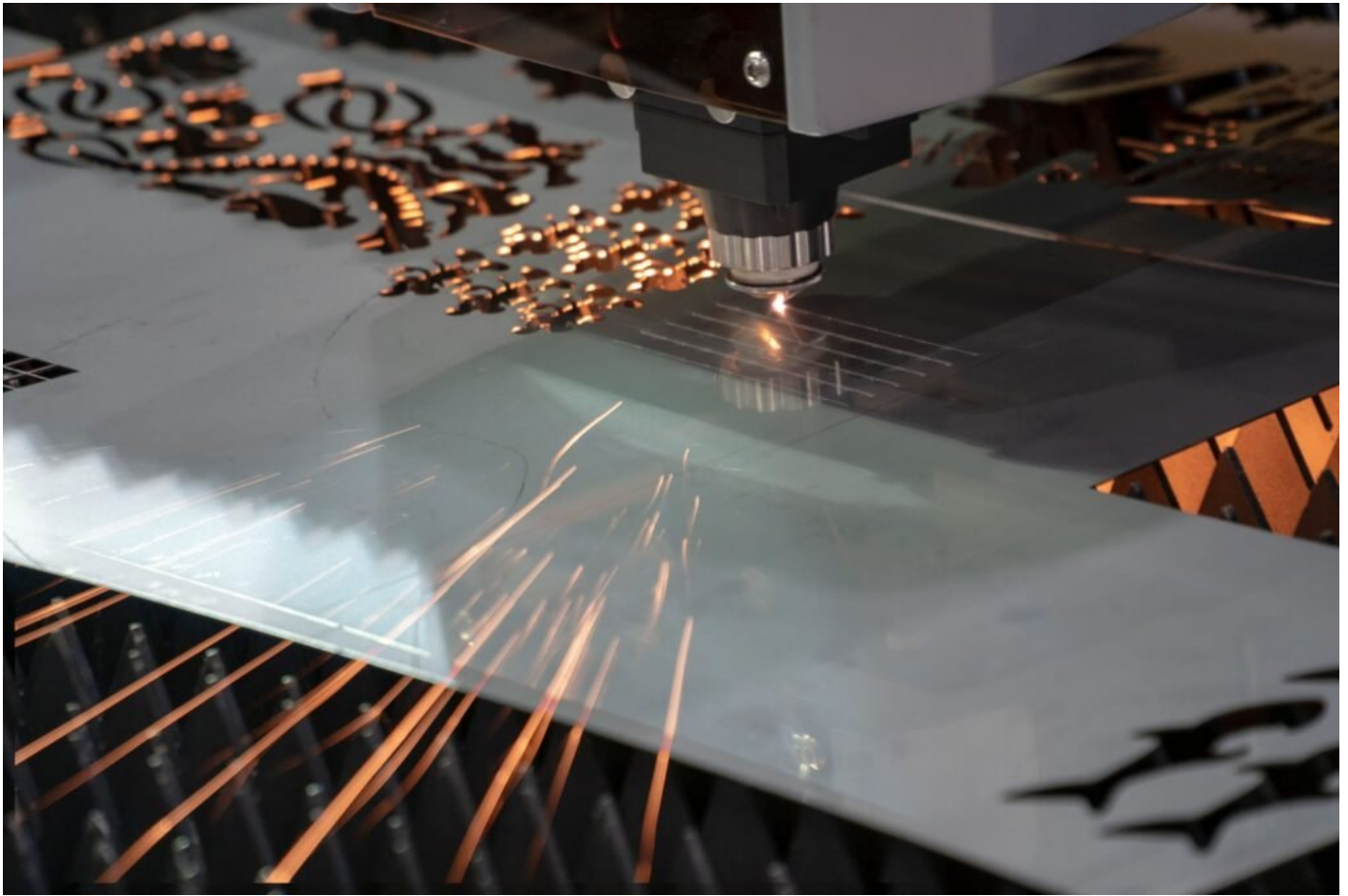
Tungsten-copper alloys pose challenges due to the combination of tungsten’s high melting point and copper’s thermal conductivity. At V&T Machining, we leverage advanced laser technologies and expertise to overcome these challenges, ensuring precise cuts and superior results. Our approach involves optimizing parameters such as laser power, cutting speed, and assist gases for tungsten-copper alloys.

Technical Approach:

V&T Machining approaches intricate tungsten-copper (W-Cu) laser cutting projects with precision and meticulous care. Our experienced team ensures that temperature control, beam alignment, and gas utilization are finely tuned to meet the specific demands of tungsten-copper laser cutting. This expertise allows us to achieve superior edge quality, minimal thermal distortion, and reduced material waste.

Optimizing Tungsten-Copper (W-Cu) Cutting Speeds and Laser Positioning:

Our focus on cut speed and laser positioning is crucial for achieving optimal results with tungsten-copper (W-Cu) alloys. Identifying the correct initial piercing point on the sheet maximizes beam efficiency, while adjusting power settings and aligning the sheet grain minimize distortion. The use of high-pressure nitrogen or argon during tungsten-copper (W-Cu) laser cutting enhances the cutting process and achieves a clean, burr-free edge.



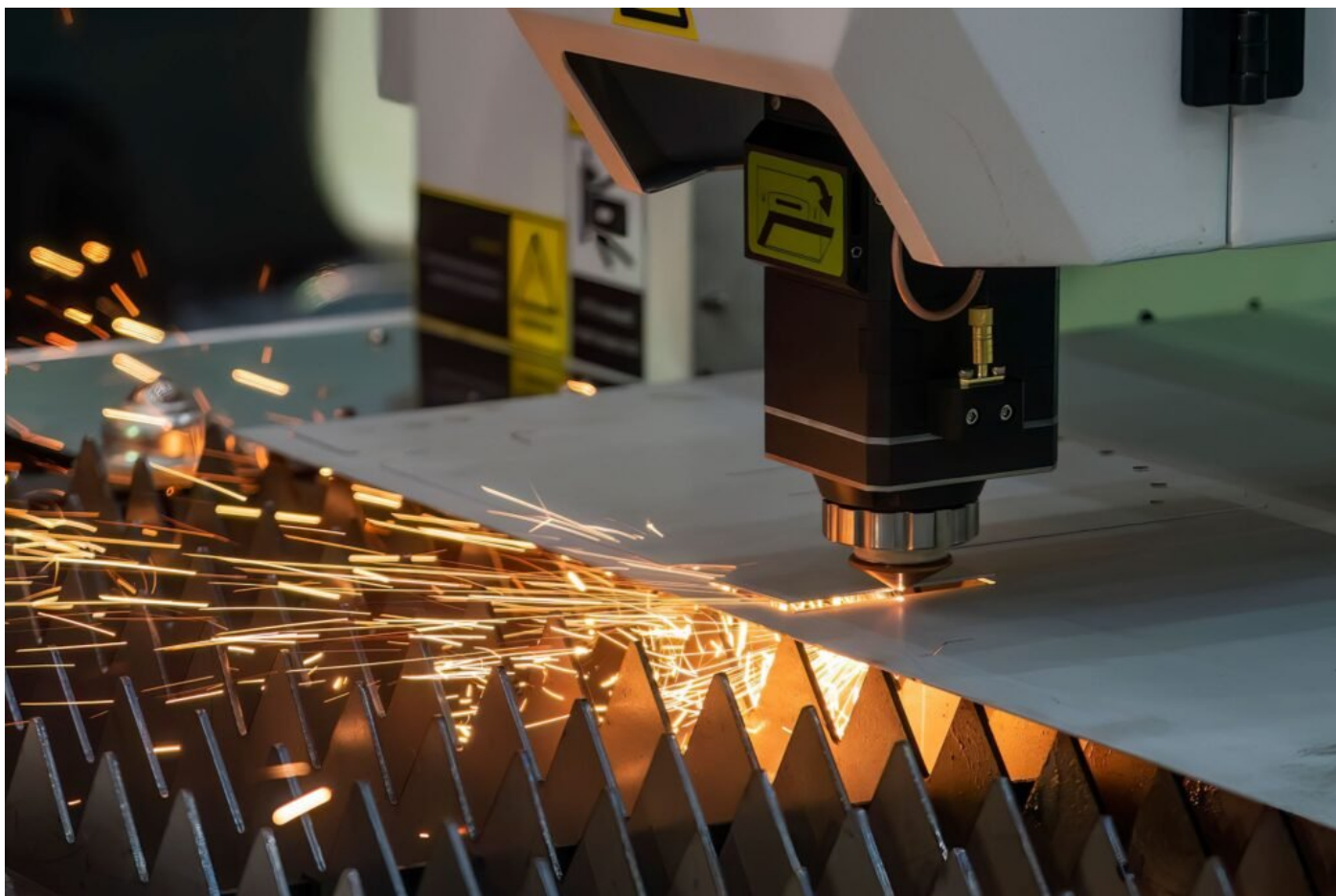
The CNC fiber laser cutting machine cutting the sheet metal plate with the sparking light. Modern sheet metal manufacturing process.

Benefits of Tungsten-Copper (W-Cu) Laser Cutting:

1. **High Thermal Conductivity:** Tungsten-copper (W-Cu) laser cutting at V&T Machining is ideal for applications requiring high thermal conductivity, such as heat sinks in electronic devices.
2. **Precision in High-Tech Applications:** Our advanced laser cutting techniques cater to the unique properties of tungsten-copper (W-Cu) alloys, providing precision for high-tech applications in aerospace and electronics.
3. **Reduced Material Waste:** V&T Machining's optimized processes result in efficient tungsten-copper (W-Cu) laser cutting, minimizing material waste and reducing overall production costs.

In choosing V&T Machining for your tungsten-copper (W-Cu) laser cutting needs, you're partnering with experts dedicated to overcoming challenges, delivering exceptional precision, and providing tailored solutions for your specific industry requirements. Trust us to elevate your projects and exceed your expectations in the dynamic fields of aerospace, electronics, and high-tech applications.

Our Laser cutting Tungsten-Copper (W-Cu) equipment



Close-up scene the fiber laser cutting machine cutting machine cut the metal plate. The hi-technology sheet metal manufacturing process by laser cutting machine.



► Watch video: <https://www.youtube.com/watch?v=t2E1fkVhhJ0>



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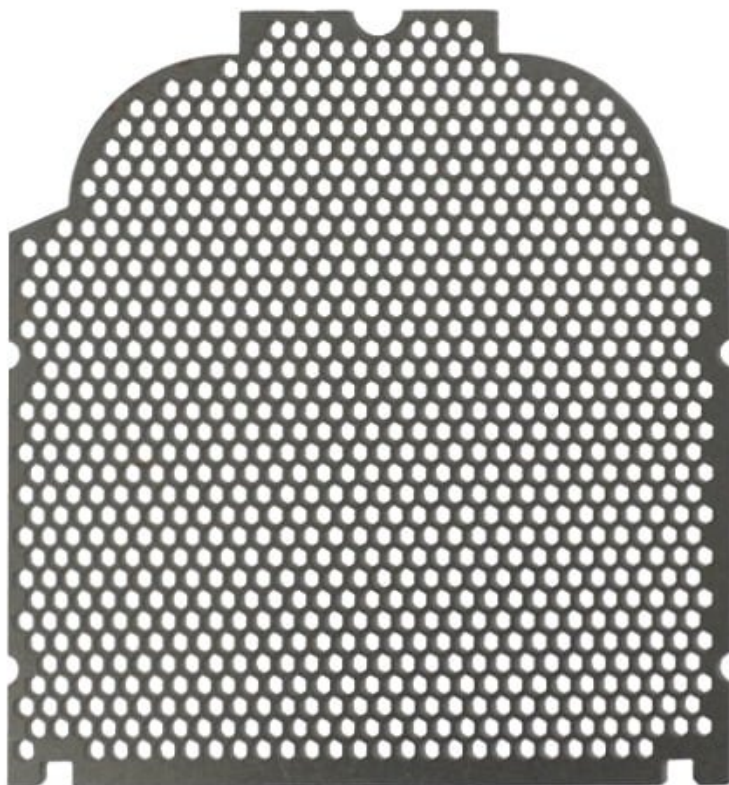
Working Area	1510×3050mm
Max Linkage Speed	140m/min
Max Acceleration	1.5G
Positional Accuracy	±0.03mm
Re-positional Accuracy	±0.02mm
Pipe Section Shape	Round/Square Tube/Rectangular
Tube Size Range (Dual Pneumatic)	T160: Round □ $\Phi 16-\Phi 155\text{mm}$ Square □ $\square 16-\square 155\text{mm}$ Rectangular □ Long Side $\leq 155\text{mm}$ T220: Round □ $\Phi 20-\Phi 220\text{mm}$ Square □ $\square 20-\square 220\text{m}$ Rectangular □ Long Side $\leq 220\text{mm}$

Laser cutting machine Parameters

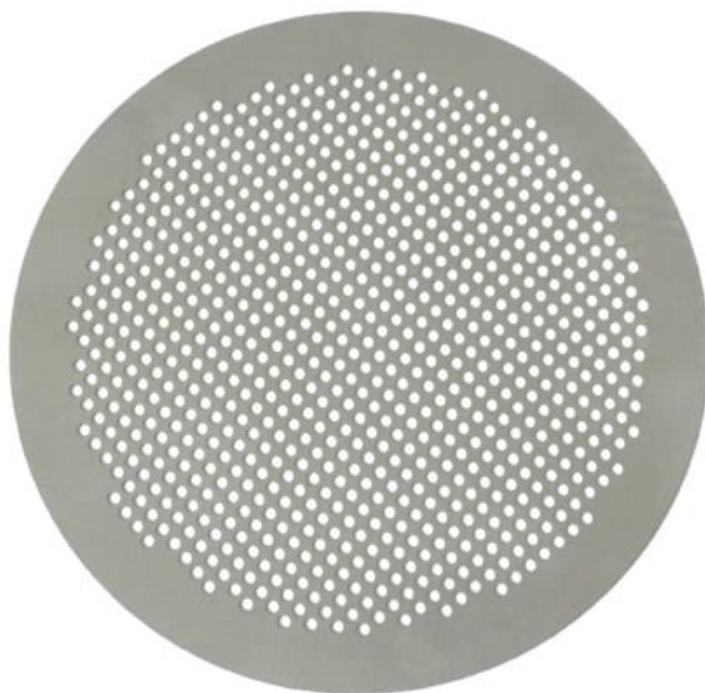
Laser Cutting Samples



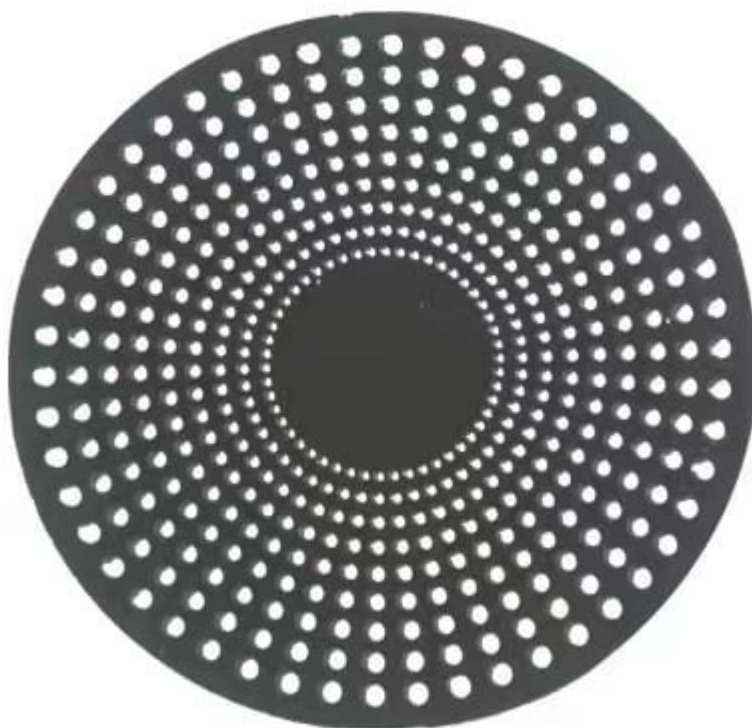
Precision machining samples



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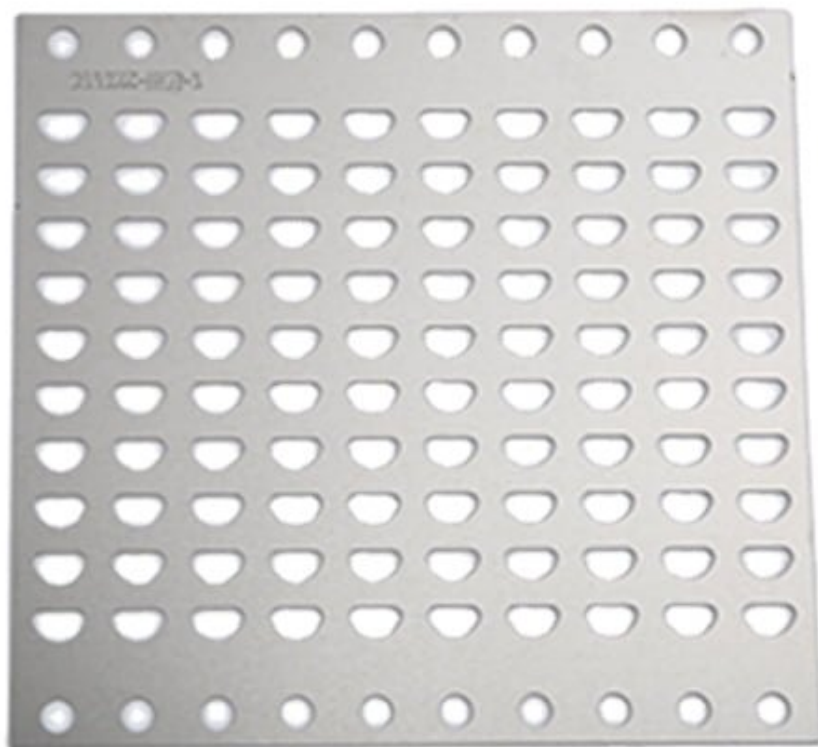
Precision machining samples



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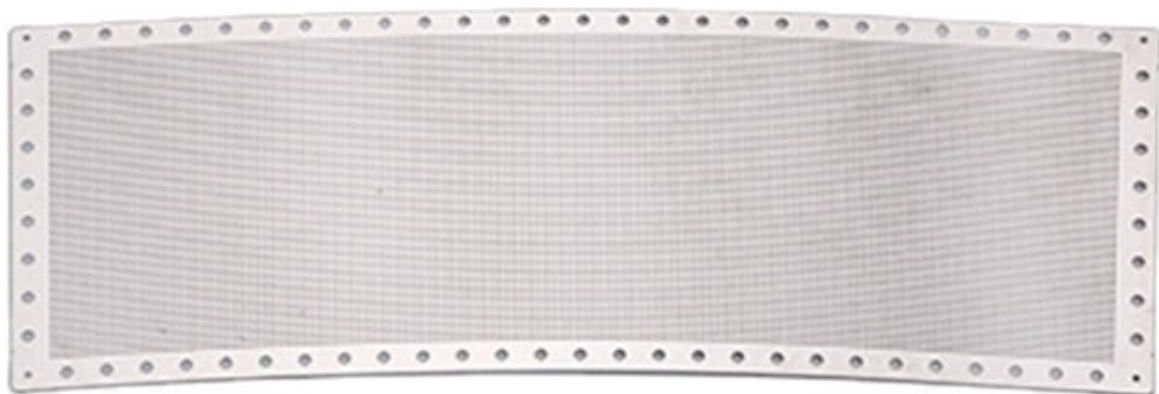
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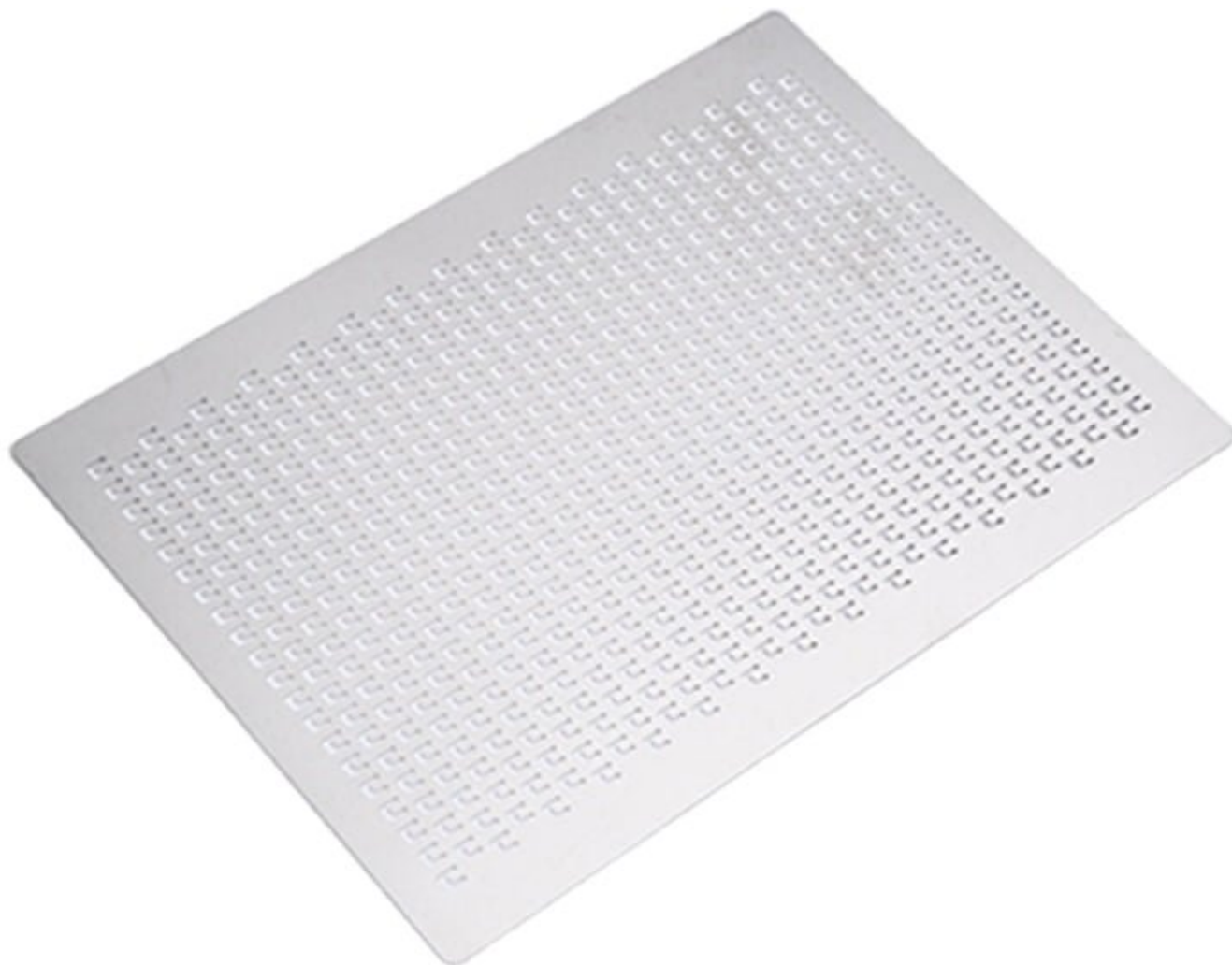
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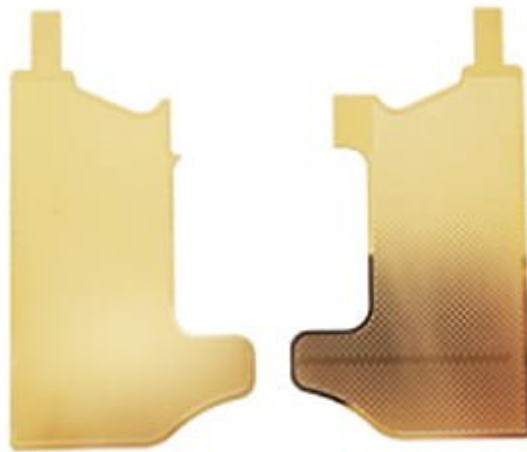
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FAQ

[FAQS]

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If you need custom metal fabrication, please don't hesitate to [contact us](#) immediately. We will provide you with the appropriate processing price within 2 days of receiving your material.

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Frequently Asked Questions

What tolerances does laser cutting hold for Laser Cutting Tungsten-Copper (W-Cu)?

Laser cutting holds tight contour tolerances on Laser Cutting Tungsten-Copper (W-Cu), with accuracy governed by material thickness, thermal behaviour and part size. We confirm against your spec.

What thickness can you laser cut for Laser Cutting Tungsten-Copper (W-Cu)?

Laser Cutting Tungsten-Copper (W-Cu) is cut on fiber laser systems; achievable thickness depends on the alloy and its reflectivity. Reflective metals (copper, brass) need fiber sources and parameter tuning, which we handle in-house.

How clean is the cut edge for Laser Cutting Tungsten-Copper (W-Cu)?

Laser Cutting Tungsten-Copper (W-Cu) produces a narrow kerf and a clean, near burr-free edge with a small heat-affected zone, so most parts need little or no secondary finishing.