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Woxcker L2 MAX

Woxcker L2 MAX 10W Enclosure Laser Engraving Machine User Manual

Model: L2 MAX 10W Enclosure

1. INTRODUCTION

This manual provides essential information for the safe and effective operation of your Woxcker L2 MAX 10W Enclosure Laser Engraving Machine. Please read this manual thoroughly before assembly, operation, or maintenance to ensure proper usage and to prevent injury or damage.



Image 1.1: Woxcker L2 MAX 10W Enclosure Laser Engraving Machine with examples of engraved items.

2. SAFETY INFORMATION

Operating a laser engraving machine requires strict adherence to safety protocols. The Woxcker L2 MAX 10W Enclosure is designed with multiple safety features to minimize risks.

2.1 General Safety Enhancements

- **Fully Enclosed Design:** The machine features a 360° fully enclosed design with a protective cover and laser cover for eye protection.
- **Automatic Stop on Lid Open:** The machine automatically stops operation if the lid is opened during use, preventing accidental laser exposure.
- **Built-in Flame Sensor:** A flame sensor system detects unusual heat or flames and halts operation to prevent hazards.
- **Emergency Stop Button:** An easily accessible emergency stop button allows for immediate shutdown of the machine.
- **Safety Lock:** A key-operated safety lock prevents unauthorized access and operation.

- **15° Tilt Stop Feature:** The machine automatically pauses if it tilts beyond a safe 15-degree angle.

Comprehensive Security Protection

Safe • Reliable • Friendly



Image 2.1: Comprehensive security protection features of the Woxcker L2 MAX.

Upgraded Protection Mechanism

Smarter and more comprehensive

Equipped with intelligent sensing system. When the cover is opened, the machine will stop working to ensure safe operation.



Image 2.2: The machine automatically stops when the cover is opened for enhanced safety.

Emergency and Touch-proof protection



Emergency Stop Button

Press the emergency stop button to stop all work of the machine.

Child Safety Lock



Key lock requires twisting to open, preventing misuse by children.



Image 2.3: Emergency stop button and child safety lock for preventing unauthorized use.

2.2 Eye Protection and Fume Management

The enclosed design and integrated laser filter window protect users from direct laser exposure. Always use the provided safety goggles when operating the machine, especially if the enclosure is open or removed. The enclosure also helps contain fumes and dust, contributing to a cleaner and healthier work environment.

Laser Filter Visual Window and Goggle

Effectively filter out 97% of the laser light.

The laser cover and goggle is made with a strong and Laser-resistant material. Naked eye without pressure, observe the engraving state at any time.

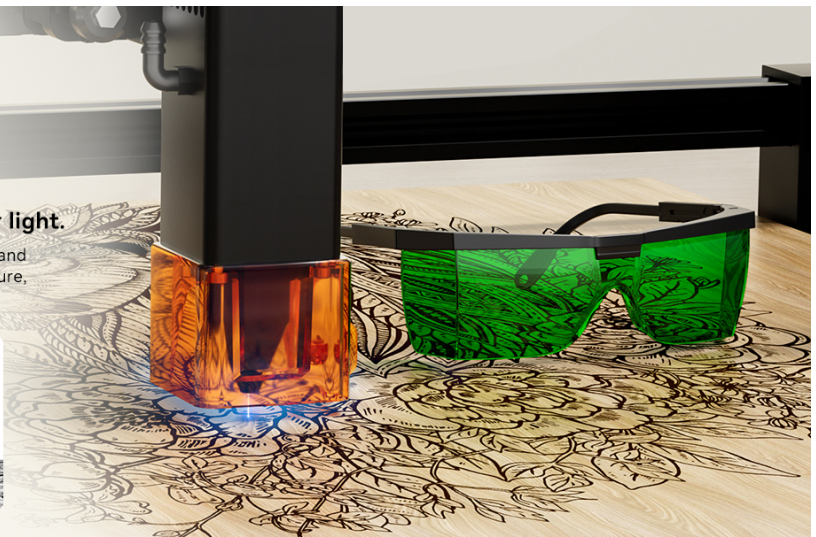


Image 2.4: Laser filter visual window and safety goggles for eye protection.

Less Smoke & Less Sound

Safer | Quieter | Cleaner

Less noise, less smoke, and fresher air, allowing you to enjoy your engraving.



Image 2.5: The enclosure reduces smoke, noise, and odor for a safer and cleaner engraving experience.

3. PRODUCT OVERVIEW AND FEATURES

The Woxcker L2 MAX 10W Enclosure Laser Engraving Machine is designed for high-precision engraving and cutting across a wide range of materials.

3.1 Key Features

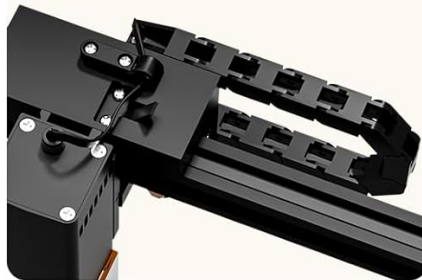
- **0.01mm Ultra-Fine Compression Fixed Focus:** Advanced point compression technology delivers a precise 0.01mm square laser spot for smoother, faster, and more accurate results.
- **High-Speed Engraving:** Achieves speeds of up to 20,000mm/min, significantly reducing project completion times.
- **Large Engraving Area:** A spacious 300 x 300 mm (11.8" x 11.8") work area accommodates larger designs or multiple smaller items simultaneously.
- **Modular Assembly Design:** Simplifies setup for beginners, reducing installation time.
- **Durable Construction:** Features an enhanced optical axis rails belt drive system and dual Y-axis step motors for stable and precise motion, ensuring a service life of over 10,000 hours.
- **Replaceable Laser Protection Lens:** Effectively protects the laser module and prolongs its lifespan.

Upgraded Structure • Exquisite Craftsmanship • Impeccable

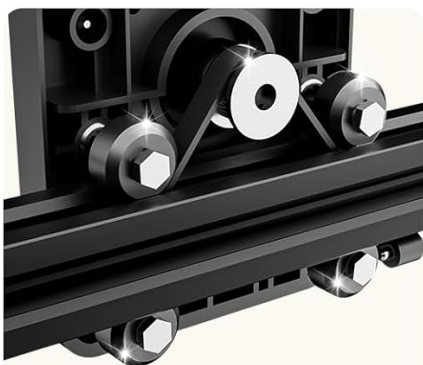


Class 1 Laser Certification

Cable Guide



Built-in Focus Knob



Precision Motor & Smooth Roller

360°

360° all-round laser filter, protect eyesight

10000H

Up To 10000H Life



Hard Acrylic Enclosure

Efficient Smoke Exhaust Fan

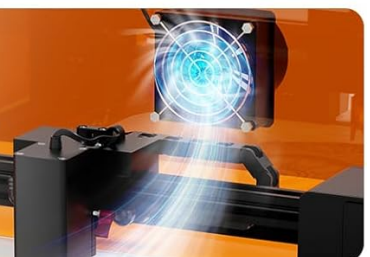


Image 3.1: Upgraded structure and craftsmanship details.

Excellent Laser Compression Technology

Faster • Finer • Stronger

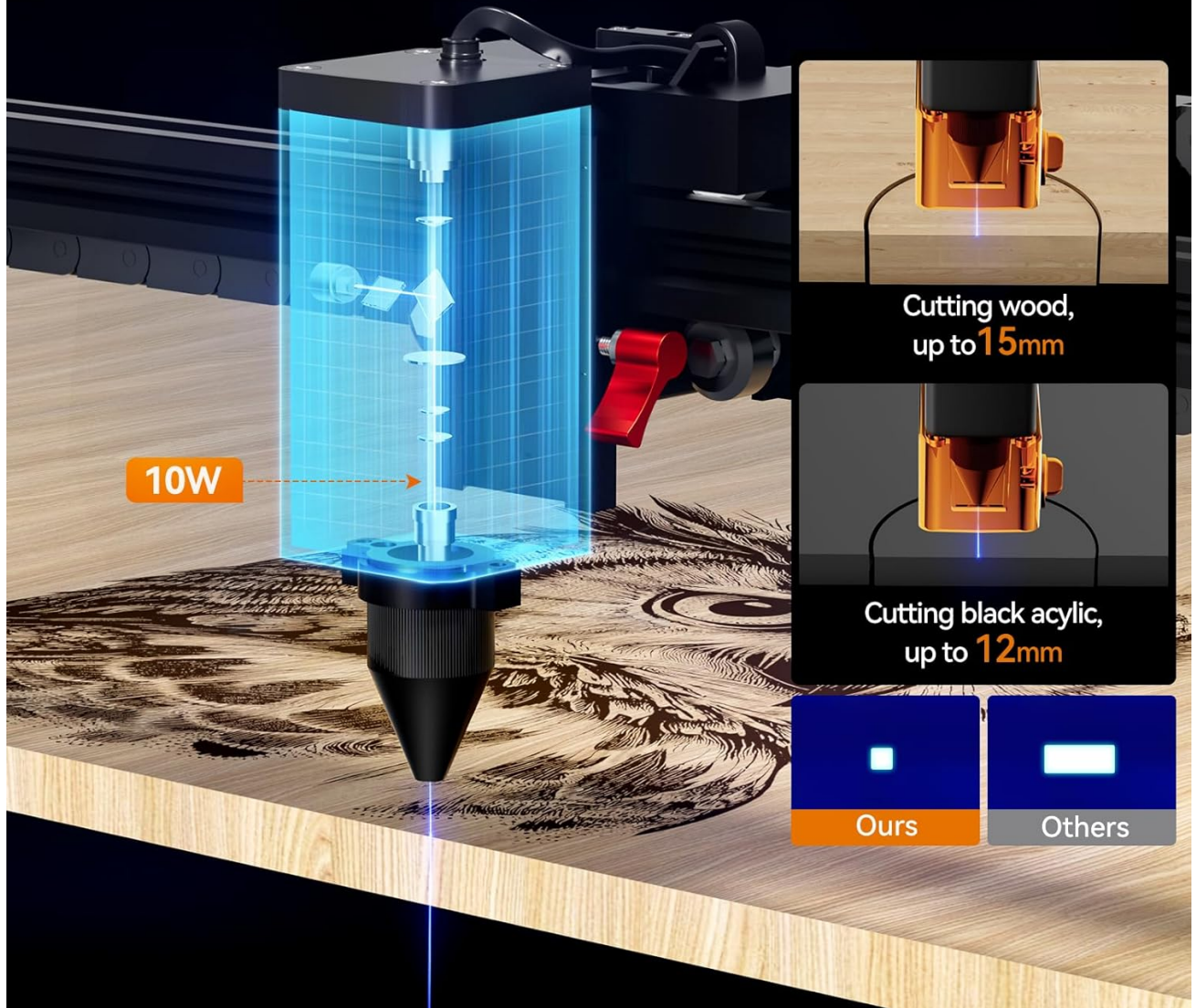


Image 3.2: Excellent laser compression technology for faster, finer, and stronger results.

2X High-Speed, Super Fast

100% increase in engraving efficiency. Achieve high productivity.

20000 mm/min

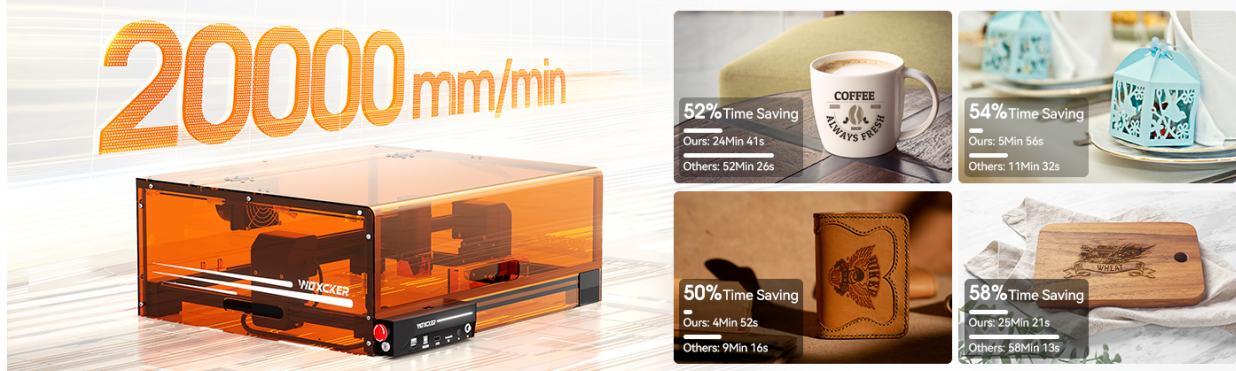


Image 3.3: High-speed engraving capabilities.

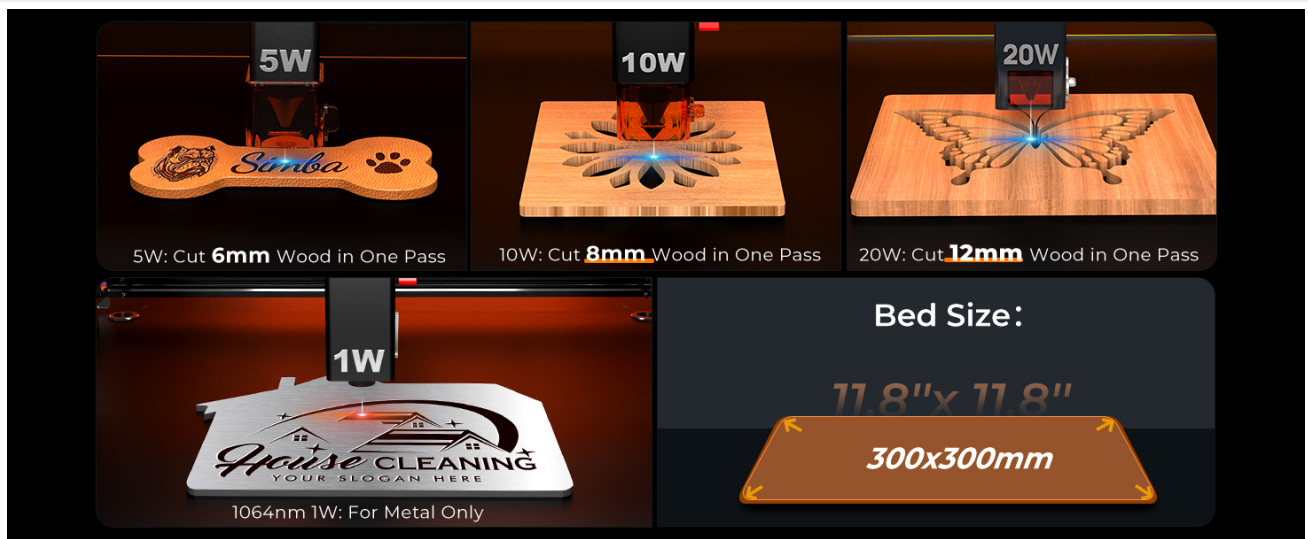


Image 3.4: Cutting capabilities and large engraving area.

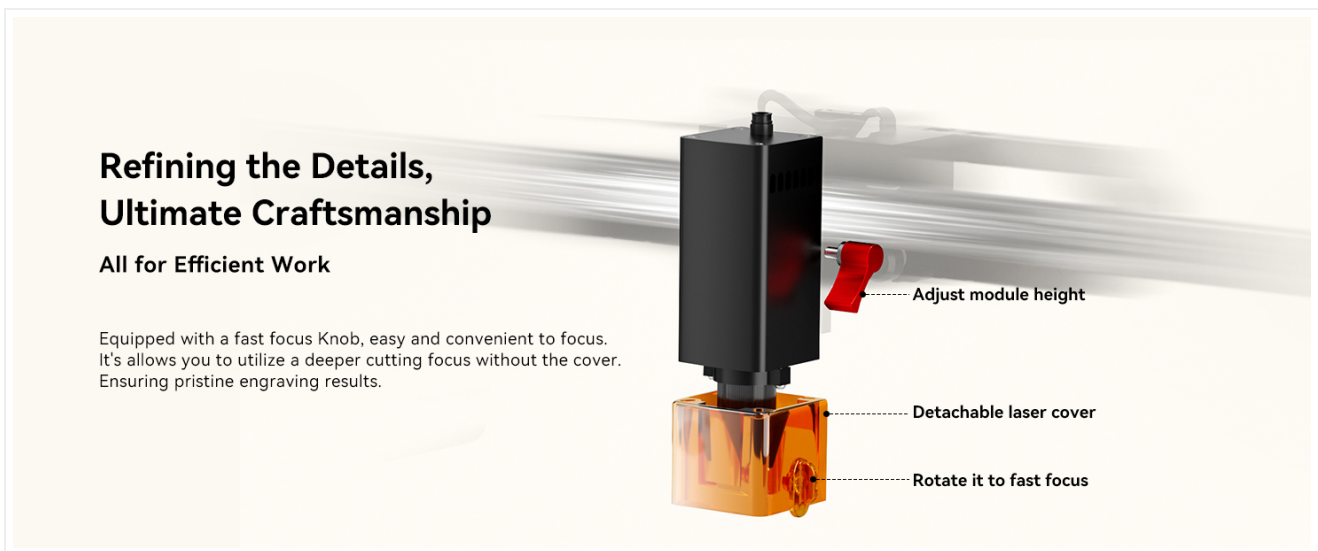


Image 3.5: Fast focus knob and detachable laser cover for precise adjustments.

4. SETUP AND ASSEMBLY

The Woxcker L2 MAX features a modular assembly design for straightforward setup.

4.1 Assembly Process

The machine is divided into five main components, making assembly easy for beginners. Follow the detailed instructions provided in the included assembly guide. No complex belt adjustments or intricate tasks are required, saving approximately 30 to 40 minutes during installation.

Modular assembly, easy to complete

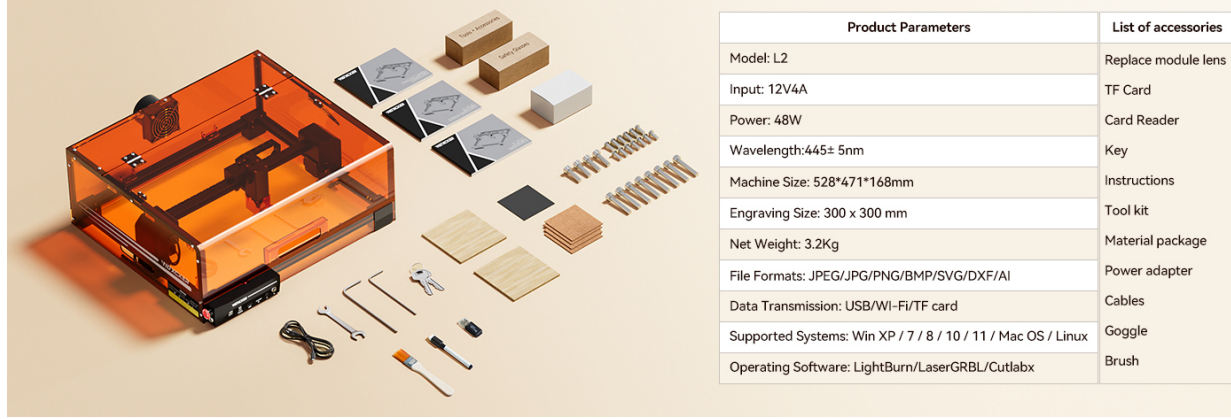


Image 4.1: Modular assembly components and included accessories.

5. OPERATING INSTRUCTIONS

The Woxcker L2 MAX offers extensive compatibility and versatility for various engraving and cutting projects.

5.1 Software and Connectivity

The machine supports popular software such as LightBurn, LaserGRBL, and Cutlabx. Multiple connection methods are available:

- Wi-Fi
- USB cable
- Mobile APP
- Offline via TF card

It is compatible with Windows (XP, 7, 8, 10, 11), Mac OS, and Linux operating systems.

Variety of Connection & Compatibility System for Window, Mac OS, Linux



Operating Software & System Supported:



For Windows XP, 7, 8, 10, 11



For Windows, Mac OS and Linux



Wi-Fi



USB Cable



APP



TF Card

File Formats: JPEG/JPG/PNG/BMP/SVG/DXF/AI
Compatible with Air Assist and Rotary Roller

Image 5.1: Variety of connection and compatibility systems.

Wide Compatibility

Lightburn & LaserGrlb & cutlabx supported

Connection methods	
System	W/indows 7+ Mac os LinuX
Software	LightBurn CutLabX LaserGRBL

Image 5.2: Wide software and system compatibility.

5.2 Supported Materials and File Formats

The versatile semiconductor laser can engrave on a wide range of materials, including:

- Metal
- Wood
- Leather
- Plastic
- Glass
- Stainless Steel
- Paper
- Cardboard
- Fabric
- Stone
- Food
- Acrylic

Supported file formats include JPEG, JPG, PNG, BMP, SVG, DXF, and AI. Users can load photos, use built-in graphics, and edit text directly within the software.

Ideal DIY Laser Engraver for Home and Business

Available for 400+ Materials, Creating Amazing Projects



Image 5.3: Examples of materials suitable for engraving.

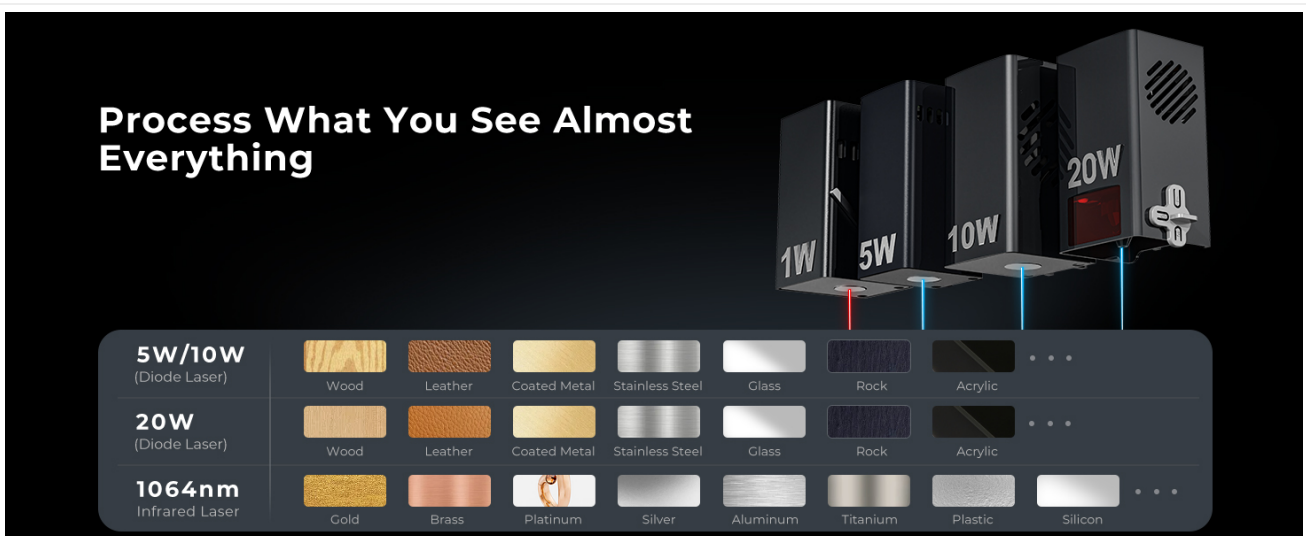


Image 5.4: Material processing capabilities for different laser modules.

5.3 Accessories and Expansion

The machine is compatible with accessories like Air Assist and a Rotary Roller for enhanced functionality. These accessories are sold separately unless part of a bundle.

- **Air Assist:** Improves cutting performance and reduces smoke and charring.
- **Honeycomb Worktable:** Prevents damage to your work surface and aids in heat dissipation during cutting.
- **Rotary Roller:** Enables engraving on cylindrical objects.
- **Heightening Brackets:** Allows for engraving taller objects.



Image 5.5: Expandable with accessories to boost creativity.



Image 5.6: Benefits of using a honeycomb worktable and air assist.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Woxcker L2 MAX.

- **Laser Lens Protection:** The built-in replaceable laser protection lens helps maintain the laser's service life. Inspect and clean the lens regularly according to the detailed instructions in the full product manual.
- **Enclosure Cleaning:** Keep the enclosure clean to ensure clear visibility and effective fume containment.
- **Smoke Exhaust Fan:** The efficient smoke exhaust fan should be checked periodically for obstructions and cleaned to maintain proper ventilation.
- **Cable Guides:** The protective cable guides prevent wear and tear on cables. Ensure they are free from debris and allow smooth movement.

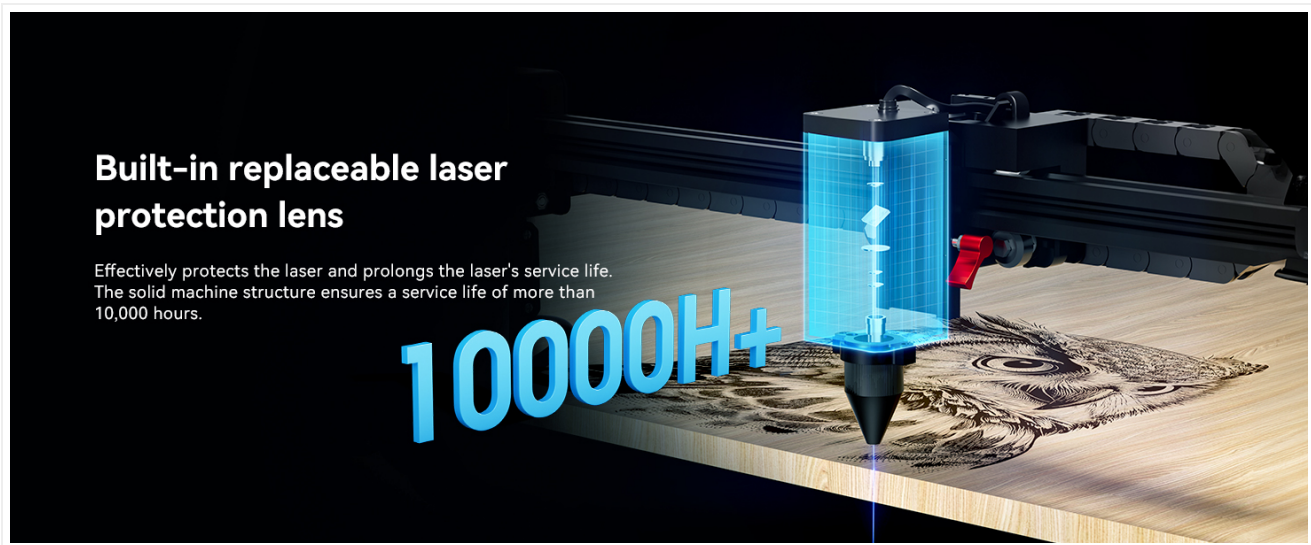


Image 6.1: Built-in replaceable laser protection lens for extended lifespan.



Image 6.2: Protective guides for unfragile and corrosion-resistant cables.

7. TROUBLESHOOTING

This section provides general guidance for common issues. For detailed troubleshooting, refer to the comprehensive product manual or contact customer support.

7.1 Common Issues and Solutions

- **Machine Not Powering On:** Ensure the power adapter is securely connected and the power outlet is functional. Check the emergency stop button to ensure it is not engaged.
- **Laser Not Firing/Engraving:** Verify that the laser module is correctly installed and focused. Check software settings for laser power and speed. Ensure the safety lock is disengaged and the enclosure lid is properly closed.
- **Poor Engraving Quality:** Adjust focus settings. Ensure material parameters (power, speed, passes) in the software are appropriate for the material type and thickness. Clean the laser lens if necessary.
- **Machine Stops Unexpectedly:** Check for flame sensor activation (if applicable). Ensure the machine is on a stable, level surface to prevent tilt sensor activation. Verify no objects are obstructing the laser path or moving parts.
- **Connectivity Issues:** For Wi-Fi, ensure the machine is within range of your router. For USB, try a different cable or port. For APP/TF card, ensure files are correctly formatted and transferred.

8. SPECIFICATIONS

Specification	Detail
Brand	Woxcker
Model	L2 MAX
Style	10W Enclosure
Wattage	10 watts
Light Source Type	Semiconductor Laser
Engraving Area	300 x 300 mm (11.8 x 11.8 inches)
Material	Aluminum
Item Weight	20 pounds
Package Dimensions	23 x 16 x 10 inches
Supported Operating Systems	Windows XP/7/8/10/11, Mac OS, Linux
Supported Software	LightBurn, LaserGRBL, Cutlabx
Connection Methods	Wi-Fi, USB, APP, TF Card
Supported File Formats	JPEG, JPG, PNG, BMP, SVG, DXF, AI
Safety Features	Enclosed design, auto-stop on lid open, flame sensor, emergency stop, safety lock, 15° tilt stop

9. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation included with your product or visit the official Woxcker website. Contact details for technical assistance are typically provided in the product packaging or on the manufacturer's support page.