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› [SCULPFUN](#) /

› SCULPFUN Rotary Roller (Model SLRR-01) Instruction Manual

SCULPFUN SLRR-01

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For Laser Engraver Cutter Engraving Cylindrical Objects

1. INTRODUCTION

The SCULPFUN Rotary Roller (Model SLRR-01) is an essential accessory designed to expand the capabilities of your laser engraver or cutter. This device enables precise 360-degree engraving on cylindrical objects and cans, offering a versatile solution for various creative and industrial applications. Its robust design and user-friendly features ensure stable and accurate results.



Image 1.1: SCULPFUN Rotary Roller integrated with a laser engraver, showcasing its application for engraving cylindrical items.

2. PRODUCT FEATURES

- **Huge Engraving Space:** Suitable for engraving cylindrical objects with diameters ranging from 6mm to 150mm and lengths less than 230mm. The lower and stable base design, along with 4 solid metal feet, allows for easy

height adjustment of the engraving machine, ensuring stability during operation.

- **Easily Sliding Adjustment:** Features a sliding adjustment design for the space between the two shafts. This allows for quick and simple adjustment to fit your engraving item, secured by turning a knob, which is faster than traditional multi-stage fixing hole adjustments.
- **High-precision Engraving:** Equipped with a high-friction 70A rubber shaft to prevent slipping. The linear speed of the rotating surface is precisely matched to the original Y-axis speed, ensuring 100% proportional engraving without image enlargement or reduction when directly connected to the laser cutter.
- **Plug and Play:** The rotary roller is 100% pre-installed and includes an adapter cable, eliminating complex installation. Simply connect the Y-axis wiring of your laser engraver to the rotary roller to begin engraving various cylindrical objects.
- **Extensive Compatibility:** Compatible with multiple engraving software such as LightBurn and LaserGRBL. It can be used with approximately 95% of laser engraving machines on the market, including ATOMSTACK and SCULPFUN models, provided they use 42 stepper motors. No additional parameter settings are typically required.



Image 2.1: Overview of the SCULPFUN Rotary Roller's main features.

3. SETUP INSTRUCTIONS

1. **Unboxing and Initial Inspection:** Carefully remove the SCULPFUN Rotary Roller from its packaging. Verify all components are present and undamaged. The unit comes pre-assembled.
2. **Connecting to the Laser Engraver:**
 - Locate the Y-axis wiring on your laser engraver.
 - Disconnect the original Y-axis cable from the engraver's stepper motor.
 - Connect the provided adapter cable to the Y-axis wiring of your laser engraver.
 - Plug the other end of the adapter cable into the corresponding port on the SCULPFUN Rotary Roller.

Video 3.1: Demonstrates the plug-and-play connection of the SCULPFUN Rotary Roller to a laser engraver's Y-axis cable.

3. **Positioning the Rotary Roller:** Place the rotary roller securely under your laser engraver. Ensure it is stable and level.
4. **Adjusting for Object Height (Optional):** If engraving taller objects, use the included solid raising feet. Attach the anti-slip rubber pads to the bottom of these feet. Then, secure the feet to your laser engraver's frame using the provided screws and nuts. This elevates the engraver to accommodate larger items and ensures stability.

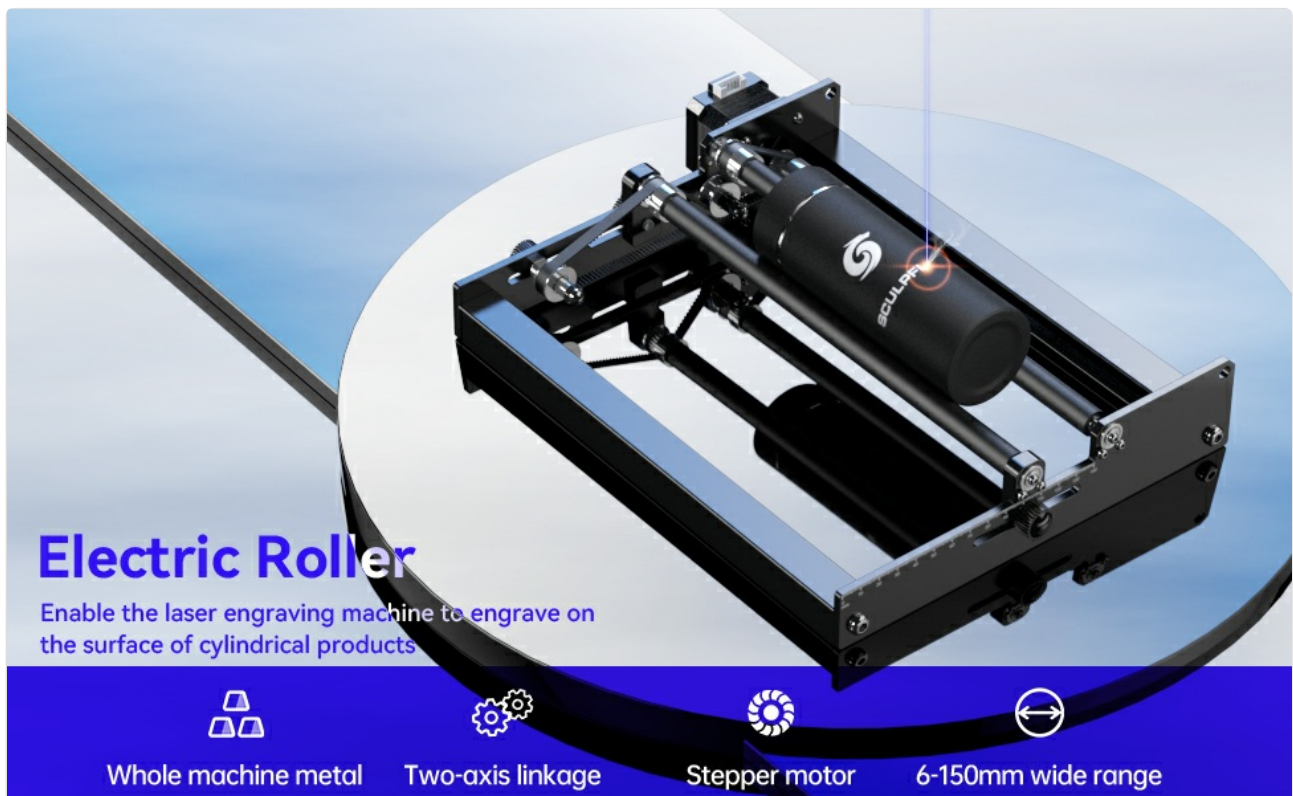
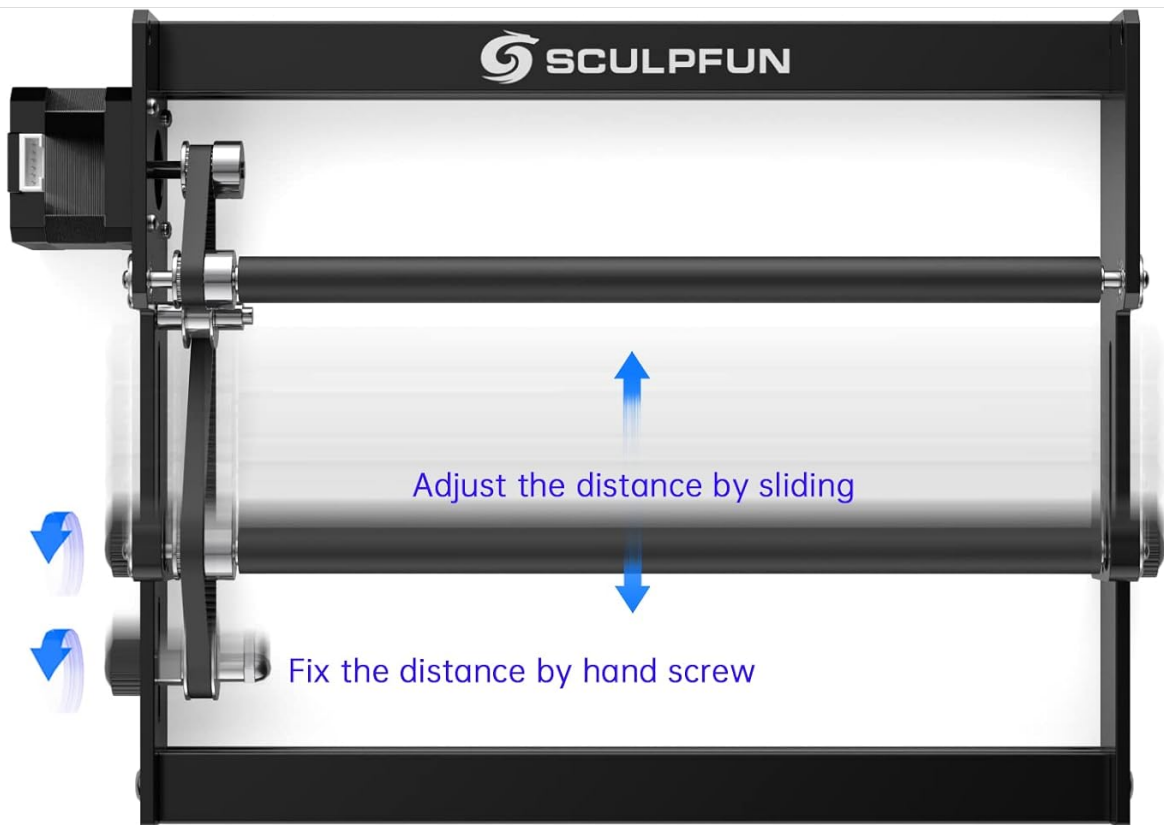
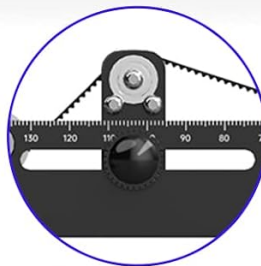


Image 3.1: The rotary roller showing its large engraving space and examples of compatible objects.

5. **Adjusting Roller Spacing:** Slide the shafts of the rotary roller to adjust the distance between them, fitting the diameter of your cylindrical object. Once positioned, tighten the knob to fix the distance. The parallel assist scale lines can aid in precise alignment.



SCULPFUN:
Sliding Adjustment



OTHER:
Fixed Hole Adjustment



Sliding Distance Adjustment Design

SCULPFUN Rotary Roller adopts sliding distance adjustment design, which is faster and simpler than traditional fixed hole adjustment, you can adjust and fix the distance in a few seconds

Image 3.2: Detail of the sliding adjustment design for roller spacing.

4. OPERATING INSTRUCTIONS

1. **Placing the Object:** Carefully place the cylindrical object onto the rotary roller. Ensure it is centered and stable on the rollers to prevent movement during engraving. The roller supports objects from 6mm to 150mm in diameter.

6mm minimum engraving diameter

The minimum engraving diameter is 6mm, so you can easily engrave small cylinders like pencils, pens, chopsticks, etc.

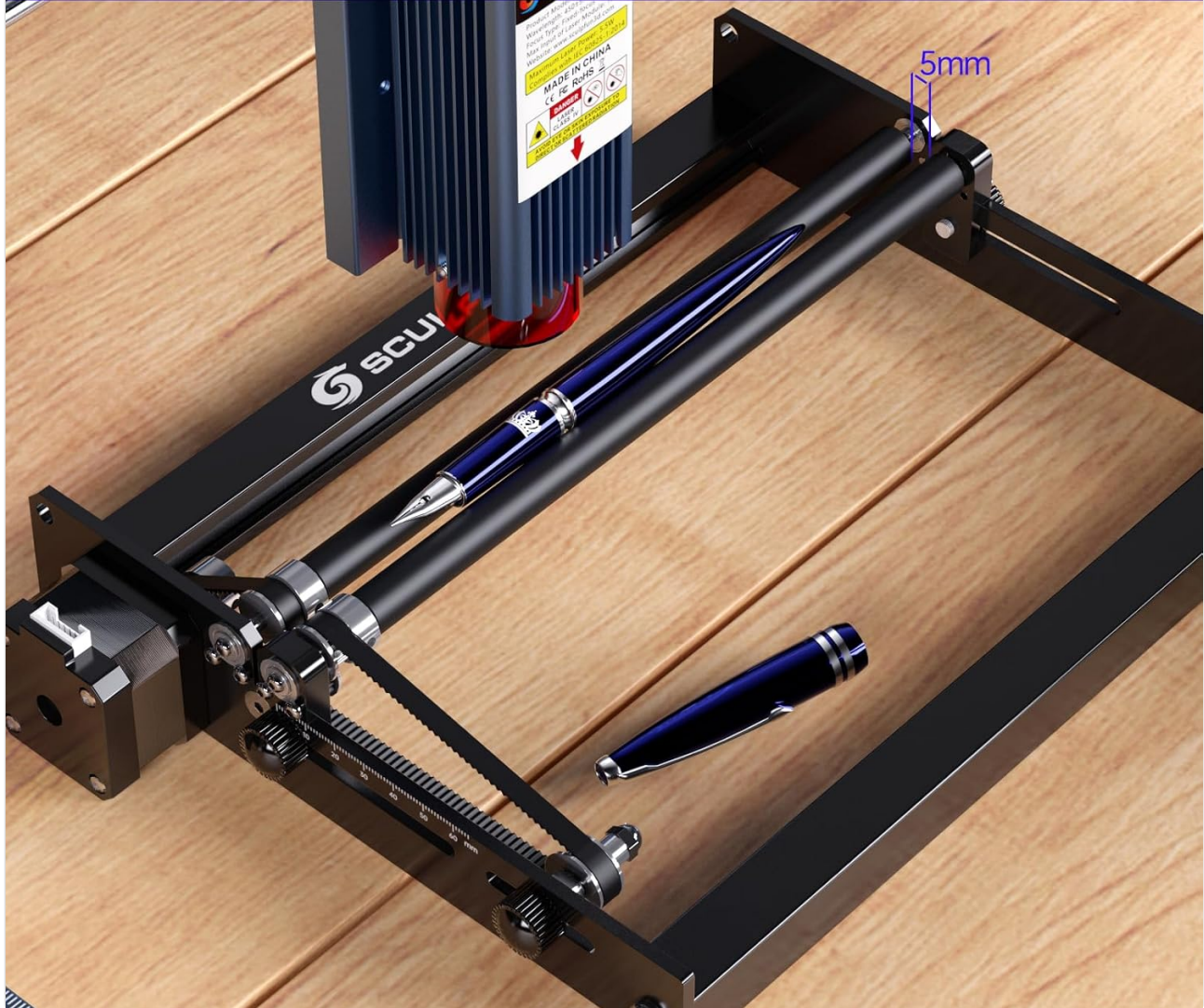


Image 4.1: Engraving a small pen, illustrating the minimum diameter capability.

150mm Maximum Engraving Diameter

The maximum engraving diameter is 150mm, so you can easily carve huge cylinders like vases, water bottles, wine bottles, logs, bamboo tubes, etc.



Image 4.2: Engraving a large flowerpot, illustrating the maximum diameter capability.

2. Software Configuration:

- Measure the circumference of your cylindrical object accurately.
- In your laser engraving software (e.g., LightBurn, LaserGRBL), set the image height to match the measured circumference of the object. This ensures that the engraved image wraps perfectly around the object in a 1:1 original size ratio without distortion.
- No additional software settings for the rotary function are typically needed, as the roller's surface speed is designed to match the Y-axis speed of the engraver.

No Need Software Settings

SCULPFUN Rotary Roller does not require additional software settings, just unplug the original Y cable and connect it to the SCULPFUN Roller to start engraving

**Wide
Compatibility**

LaserGRBL

LightBurn



Compatible with 99% of diode laser engraving machine brands, as long as they use 42 stepper motors, such as ORTUR, Neje, etc.



Image 4.3: Software setup for 1:1 engraving, matching image height to object circumference.

3. **Starting Engraving:** Initiate the engraving process through your laser engraver's software. The rotary roller will automatically rotate the object as the laser engraves, creating a continuous design around the surface.
4. **Monitoring and Completion:** Monitor the engraving process. Once complete, carefully remove the engraved object from the rotary roller.

5. MAINTENANCE

- **Cleaning:** Regularly clean the rubber shafts and other components of the rotary roller to remove dust, debris, or engraving residue. Use a soft, dry cloth. Avoid abrasive cleaners.
- **Belt Inspection:** Periodically inspect the drive belt for any signs of wear, stretching, or damage. A worn belt can affect engraving accuracy. Replace if necessary.
- **Tightness Check:** Ensure all screws, nuts, and connections are securely tightened. Loose components can lead to instability and inaccurate engraving.
- **Storage:** When not in use, store the rotary roller in a clean, dry environment, away from direct sunlight and extreme temperatures.

6. TROUBLESHOOTING

- **Engraving Distortion or Slipping:**
 - Check if the cylindrical object is securely placed and centered on the rollers.
 - Ensure the rubber shafts are clean and free of debris to maintain optimal friction.
 - Verify the drive belt tension is appropriate; adjust if too loose.
 - Confirm that the image height setting in your software accurately matches the object's circumference.
- **Rotary Roller Not Functioning:**
 - Check all cable connections between the laser engraver and the rotary roller. Ensure they are firmly seated.
 - Verify that your laser engraver's Y-axis is enabled and functioning correctly.
 - Ensure your engraving software is configured to use the rotary axis.
- **Inconsistent Engraving Depth:**
 - Ensure the laser engraver's focus is correctly set for the object's surface.
 - Check for any wobbling or instability of the object or the rotary roller during operation.

7. SPECIFICATIONS

Specification	Value
Product Dimensions	10.63 x 8.66 x 1.97 inches
Item Model Number	SLRR-01
Item Weight	3.99 pounds
Manufacturer	SCULPFUN
Supported Engraving Diameter	6mm - 150mm
Supported Engraving Length	Less than 230mm
Compatibility	LightBurn, LaserGRBL, 95% of engravers using 42 stepper motors

8. WARRANTY AND SUPPORT

For detailed warranty information, technical assistance, or customer support regarding your SCULPFUN Rotary Roller (Model SLRR-01), please visit the official SCULPFUN website or contact their customer service department directly. Ensure you have your product model number (SLRR-01) and purchase details available when seeking support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question