

xTool RA2 Pro

xTool RA2 Pro 4-in-1 Rotary Attachment Instruction Manual

Model: RA2 Pro

1. INTRODUCTION

The xTool RA2 Pro is a versatile 4-in-1 rotary attachment designed to expand the capabilities of your xTool laser engraver. This device allows for precise 360-degree engraving on a wide variety of cylindrical and spherical objects, offering unparalleled flexibility for your creative projects. This manual provides essential information for the setup, operation, maintenance, and troubleshooting of your RA2 Pro.

2. PRODUCT OVERVIEW

The xTool RA2 Pro is the world's first 4-in-1 laser rotary device, integrating four distinct functionalities:

- **Roller Rotary:** Ideal for long, regular cylindrical objects.
- **Chuck Rotary:** Perfect for irregular cylinders, including mugs with handles, and objects that require a secure grip.
- **Sphere Engraving Module:** Enables engraving on spherical items.
- **Ring Engraving Button:** Specifically designed for engraving rings and other small, circular objects.

This attachment significantly enhances engraving speed and precision. It securely holds objects with soft pads on the chuck jaws, ensuring smooth and efficient operation. The maximum vector engraving speed can reach 360°/s, and its precision stepper motor with a minimum angle of 0.45° ensures detailed and accurate results.

World's First 4-in-1 Rotary



Roller Rotary



Chuck Rotary



Sphere Rotary



Ring Rotary

Image: The xTool RA2 Pro demonstrating its four versatile rotary modes for different object shapes.

High Speed and High Accuracy



Image: A detailed engraving on a tumbler, illustrating the high speed (360°/s) and precise control (0.45°) of the RA2 Pro.

3. COMPATIBILITY

The xTool RA2 Pro is designed for seamless integration with a wide range of xTool laser engravers. It is compatible with the following models:

- xTool S1
- xTool M1 Ultra
- xTool F1 Ultra
- xTool F1
- xTool P2
- xTool D1 Pro

For optimal use with certain models, a riser base may be required. The RA2 Pro also supports various software platforms, including Laserbox Basic, LaserGRBL, and LightBurn.

Compatible with xTool D1 Pro/S1/P2/F1

Note: Required for use with riser base

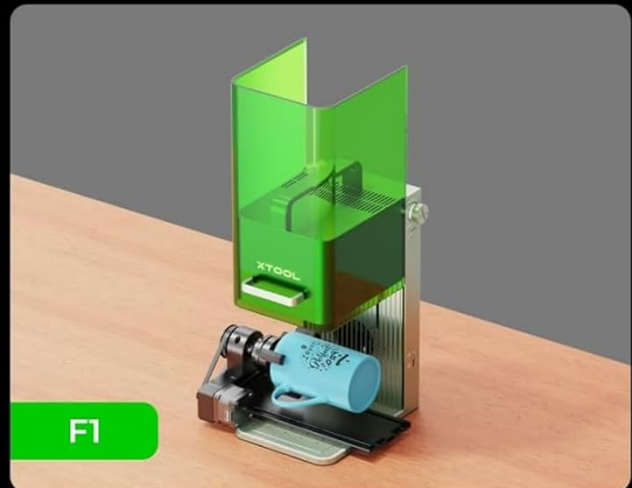
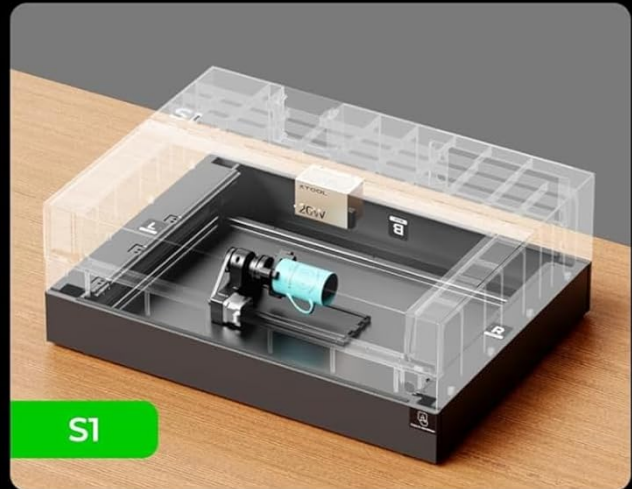


Image: Visual representation of the RA2 Pro's compatibility with various xTool laser engraver models, including D1 Pro, S1, P2, and F1.

4. SETUP

The xTool RA2 Pro features a pre-assembled and modular design, allowing for a plug-and-play experience with your compatible xTool laser cutter. Follow these general steps for setup:

1. **Unpack Components:** Carefully remove all components from the packaging. Verify that all parts listed in the product manual are present.
2. **Connect to Laser Engraver:** Connect the RA2 Pro to your xTool laser engraver using the provided cables. Ensure a secure connection.
3. **Install Desired Module:** Depending on your engraving task, attach the appropriate module (Roller, Chuck, Sphere, or Ring) to the main unit.
4. **Adjust Height and Diameter:** Utilize the adjustable Z-axis and chuck diameter settings to properly position your object for engraving.
5. **Software Configuration:** Launch your preferred software (Laserbox Basic, LaserGRBL, or LightBurn) and configure the settings for rotary engraving according to the software's instructions.

Refer to the detailed setup guide included with your RA2 Pro for specific instructions and safety precautions.



Image: The individual components of the RA2 Pro, including the main unit, roller attachments, and other accessories, ready for assembly.

5. OPERATING MODES

The RA2 Pro offers four distinct operating modes to accommodate a wide array of objects:

5.1 Roller Rotary Mode

This mode is best suited for engraving on long, regular cylindrical objects such as bottles, tumblers, and pens. The object rests on two rollers, which rotate it smoothly during the engraving process.

5.2 Chuck Rotary Mode

The chuck rotary mode provides a secure grip for irregular cylindrical objects, including mugs with handles, wine glasses, and objects with varying diameters. The chuck jaws can be adjusted to firmly hold the item in place.

Meet Most of Daily Use Needs

Engraving on wine glass, yeti tumbler, baseball bat, ring, ball, or mug with handle



Image: Examples of everyday items such as wine glasses, tumblers, and a baseball bat, suitable for engraving with the RA2 Pro.

Personalizzate Le Vostre Tazze

Montate la base rotante sull'altro lato per avere più spazio per lavorare oggetti grandi come le tazze.



Image: A mug with a handle being engraved, showcasing the RA2 Pro's ability to handle objects with irregular shapes.

5.3 Sphere Engraving Module

Attach the sphere engraving module to engrave on spherical objects like baseballs, ornaments, or other round items. Ensure the object is securely mounted and balanced for consistent results.

5.4 Ring Engraving Button

This specialized attachment allows for precise engraving on the interior or exterior of rings. It provides a stable platform for small, delicate items, ensuring high-quality results.



Image: A ring undergoing laser engraving, demonstrating the precision of the RA2 Pro's ring engraving functionality.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your xTool RA2 Pro. Always disconnect the device from power before performing any maintenance.

- **Cleaning:** Periodically clean the chuck jaws, rollers, and other moving parts to remove dust, debris, and engraving residue. Use a soft, dry cloth. For stubborn residue, a slightly damp cloth can be used, ensuring no moisture enters electronic components.
- **Lubrication:** Check the manufacturer's recommendations for any lubrication requirements for moving parts.

- **Inspection:** Regularly inspect cables for wear or damage. Ensure all screws and fasteners are tight.
- **Storage:** When not in use, store the RA2 Pro in a clean, dry environment, away from direct sunlight and extreme temperatures.

7. TROUBLESHOOTING

If you encounter issues with your xTool RA2 Pro, refer to the following common troubleshooting tips:

Problem	Possible Cause	Solution
Rotary not moving	Loose cable connection, incorrect software settings, power issue.	Check all cable connections. Verify rotary settings in your engraving software. Ensure the device is powered on.
Engraving is distorted or misaligned	Object not securely mounted, incorrect object diameter/length settings, slippage.	Ensure the object is firmly secured in the chuck or on the rollers. Double-check the object's dimensions in the software. Clean rollers/jaws if slippage occurs.
Device not recognized by software	Driver issue, software version incompatibility.	Reinstall drivers. Update engraving software to the latest version. Consult xTool support for specific software compatibility.

For more complex issues, please contact xTool customer support.

8. SPECIFICATIONS

Key technical specifications for the xTool RA2 Pro rotary attachment:

- **Manufacturer:** xTool
- **Item Model Number:** RA2 Pro
- **Product Dimensions:** 1 x 1 x 1 cm (0.39 x 0.39 x 0.39 inches)
- **Item Weight:** 2.41 Kilograms (5.31 lbs)
- **Power Source Type:** Corded Electric
- **Batteries Included:** No
- **Batteries Required:** No
- **Included Components:** No (This likely refers to additional items beyond the core RA2 Pro unit and its standard accessories)

9. WARRANTY AND SUPPORT

xTool is committed to providing excellent customer service and professional technical support for the RA2 Pro. For any inquiries, technical assistance, or warranty claims, please refer to the official xTool website or contact their customer support channels.

Please retain your proof of purchase for warranty purposes.