

ATOMSTACK AE85

ATOMSTACK AE85 Engraving Area Extension Kit User Manual

Model: AE85 | Brand: ATOMSTACK

1. INTRODUCTION

The ATOMSTACK AE85 Engraving Area Extension Kit is designed to significantly expand the working area of your compatible ATOMSTACK laser engraver. This kit allows you to increase your engraving and cutting space to an impressive 850 x 800 mm, providing greater flexibility for larger projects and batch processing. This manual provides essential information regarding the installation, operation, maintenance, and specifications of the AE85 Extension Kit to ensure optimal performance and longevity.



Figure 1.1: The ATOMSTACK AE85 Extension Kit, showcasing its expanded engraving capabilities with various sample projects.

2. PRODUCT FEATURES

The AE85 Extension Kit offers several key features designed to enhance your laser engraving experience:

- **Expanded Engraving Area:** Easily extends the engraving size to 850 x 800 mm, a 315% increase from standard 410 x 400 mm areas, without requiring additional accessories.
- **High-Precision Original Profile:** Utilizes original metal profiles matching the color and quality of ATOMSTACK X-series engraving machines, ensuring stability and precision.
- **Z-Axis Rotary Focus:** Features a new rotary focusing mechanism for faster and more accurate height adjustment, incorporating a double optical axis and a four-slider precision structure.
- **Stable All-Aluminum Construction:** Designed with a robust all-aluminum profile, rigorously tested to maintain the same precision and stability as the original machine during engraving and cutting.
- **Versatile Application:** The large working area allows for simultaneous engraving and cutting of various materials, significantly improving work efficiency and expanding creative possibilities.



Figure 2.1: Overview of key features of the AE85 Extension Kit.

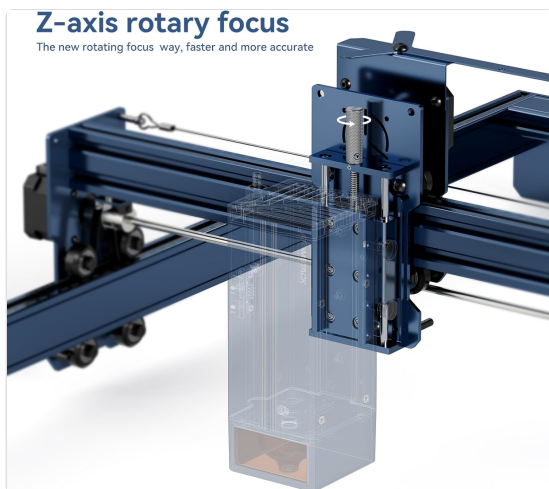


Figure 2.2: Detailed view of the Z-axis rotary focus system.

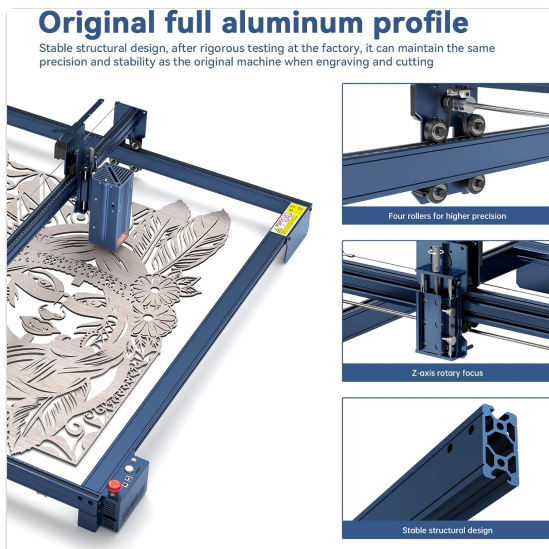


Figure 2.3: Illustration of the stable full aluminum profile and precision rollers.

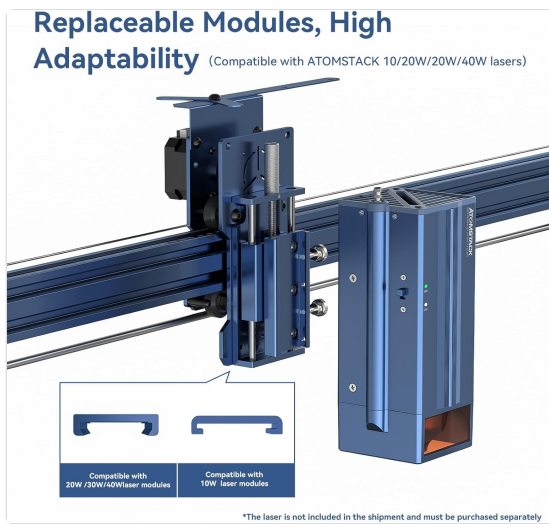


Figure 2.4: Replaceable modules and high adaptability with various laser modules.

3. COMPATIBLE MODELS AND MODULES

The ATOMSTACK AE85 Extension Kit is compatible with a wide range of ATOMSTACK laser engravers and modules:

Applicable Engraver Models:

- ATOMSTACK A40 PRO, X40 PRO, S40 PRO
- ATOMSTACK A30 PRO, X30 PRO, S30 PRO
- ATOMSTACK A20 PRO, X20 PRO, S20 PRO, A20
- ATOMSTACK A10 PRO, S10 PRO, A10
- ATOMSTACK A5 M30, A5 M40, A5 Pro+, A5 M50 Pro, A5 M50
- ATOMSTACK X7 Pro, X7
- ATOMSTACK P7 M30, P7 M40, P9 M50

Applicable Laser Modules:

- Module M40
- Module M50
- Module M100
- Module M150

4. SETUP AND INSTALLATION

The AE85 Extension Kit features a modular design for easy installation. Follow these general steps to assemble and integrate the extension kit with your existing ATOMSTACK laser engraver. Refer to the included installation tool and user manual for detailed, step-by-step instructions specific to your engraver model.

4.1. Package Contents:

Before beginning installation, ensure all components are present:

1. 2 x Y-axis Extension Shafts

2. 3 x X-axis Extension Shafts
3. 1 x 2.8m Synchronous Belt
4. 1 x Z-axis Regulator
5. 1 x Bracket
6. 3 x Foot Supports
7. 1 x Control Box (with extension cable)
8. 2 x Laser Backplane Slides
9. 1 x Connection Wire Fixing Bracket
10. 1 x Motherboard Connection Cable
11. 10 x Cable Ties
12. 1 x User Manual
13. 1 x Installation Tool Kit

4.2. Assembly Steps (General):

1. **Disassembly:** Carefully disassemble the original frame of your ATOMSTACK laser engraver according to its specific user manual.
2. **Frame Extension:** Replace the original X and Y axis profiles with the longer extension shafts provided in the kit. Ensure all connections are secure and aligned.
3. **Belt Installation:** Install the new 2.8m synchronous belt, ensuring it is properly tensioned and routed through the pulleys.
4. **Z-axis Regulator & Bracket:** Attach the Z-axis regulator and bracket to the laser module carriage as per the detailed instructions.
5. **Control Box & Cabling:** Connect the extended control box and motherboard connection cable. Use the provided cable ties and fixing bracket to manage cables neatly.
6. **Foot Supports:** Attach the foot supports to ensure the extended frame is stable and level.
7. **Final Checks:** Before powering on, double-check all connections, belt tension, and ensure the laser module moves freely along both axes.

Easy installation, modular all-aluminum material

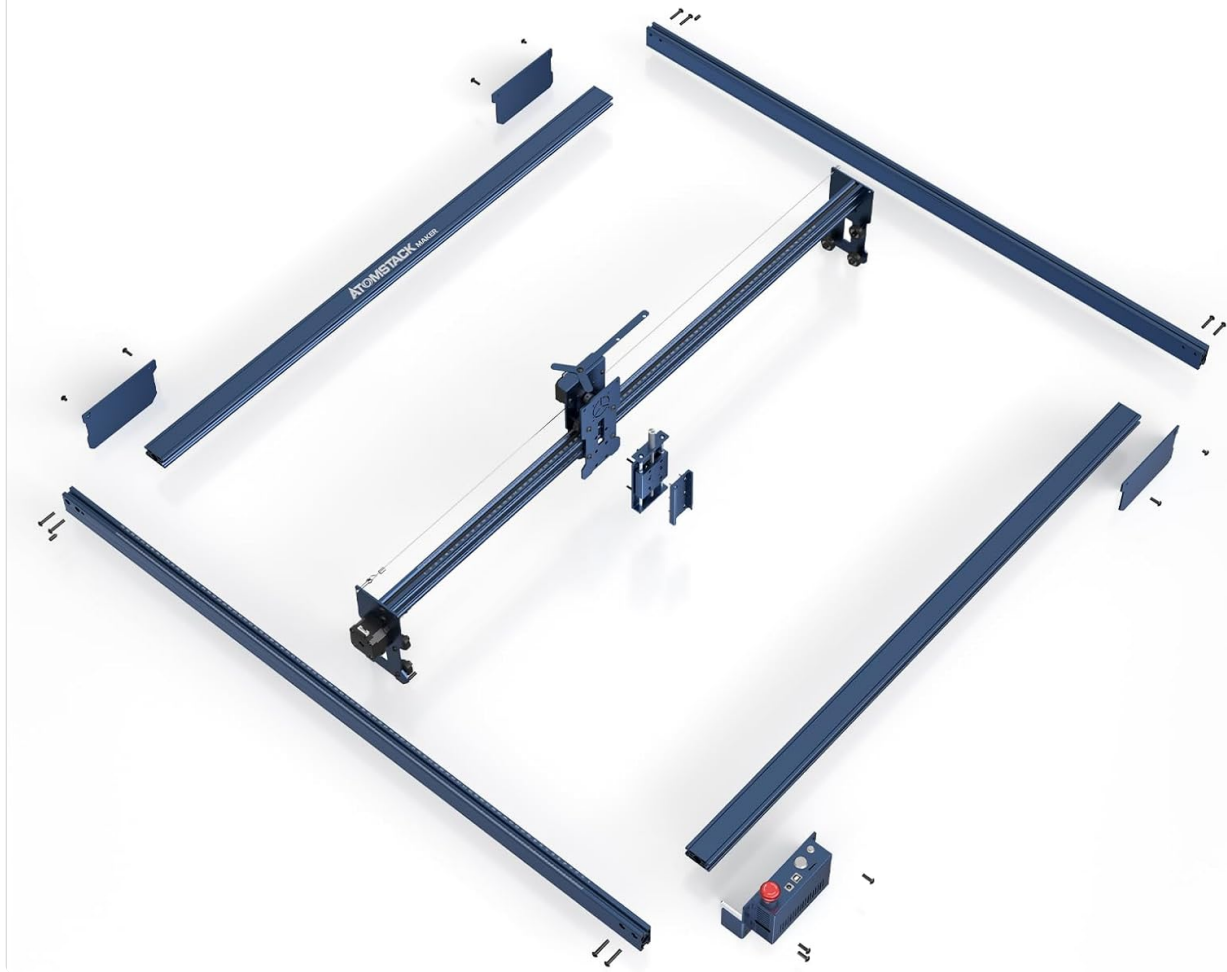


Figure 4.1: Modular components for easy installation.

5. OPERATING THE EXTENDED ENGRAVER

Once the AE85 Extension Kit is successfully installed, your ATOMSTACK laser engraver will have a significantly larger working area. This section provides general guidance on operating your extended machine.

5.1. Utilizing the Expanded Area:

- **Software Configuration:** Ensure your engraving software (e.g., LightBurn, LaserGRBL) is configured to recognize the new, larger working dimensions (850 x 800 mm). This is crucial for accurate project scaling and positioning.
- **Material Placement:** Take advantage of the increased space to engrave or cut larger materials, or to process multiple smaller items in a single batch. Secure your materials properly to prevent movement during operation.
- **Z-Axis Adjustment:** Use the Z-axis rotary focus for precise height adjustment of the laser module, especially when working with materials of varying thicknesses.

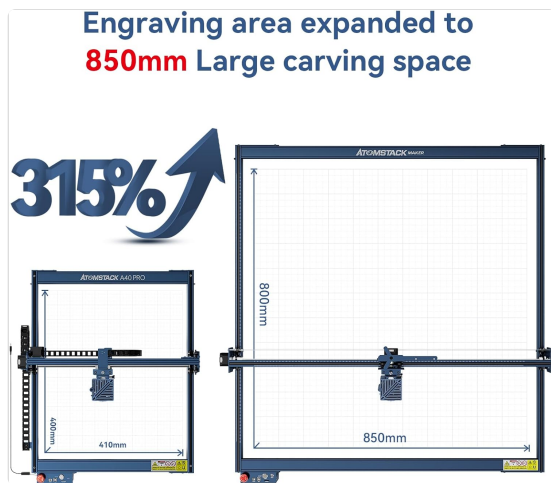


Figure 5.1: Visual comparison of engraving area expansion.



Figure 5.2: Example of a large engraving project enabled by the expanded area.

5.2. Safety Precautions:

Always adhere to the safety guidelines provided with your original laser engraver. When operating with the extended kit:

- Wear appropriate laser safety glasses.
- Ensure proper ventilation in your workspace.
- Never leave the machine unattended during operation.
- Keep flammable materials away from the engraving area.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your ATOMSTACK AE85 Extension Kit and laser engraver. Perform these checks periodically:

- **Clean Rails and Wheels:** Regularly clean the guide rails and wheels to remove dust and debris, which can affect smooth movement and precision. Use a soft, dry cloth.
- **Belt Tension:** Check the synchronous belt tension. It should be taut but not overly tight. Adjust if necessary to prevent skipping or excessive wear.

- **Component Fasteners:** Periodically inspect all screws and fasteners on the frame and moving parts. Tighten any loose connections to maintain structural integrity and precision.
- **Cable Management:** Ensure all cables are securely routed and not interfering with moving parts. Replace any worn or damaged cable ties.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with the AE85 Extension Kit. For more detailed troubleshooting related to the laser module or software, refer to your original engraver's manual.

7.1. Common Issues and Solutions:

- **Uneven Engraving/Cutting:**
 - Check if the frame is level and stable. Adjust foot supports if needed.
 - Verify that all frame connections are securely tightened.
 - Inspect the synchronous belt for proper tension and ensure it's not slipping.
- **Movement Stuttering/Resistance:**
 - Clean the guide rails and wheels to remove any obstructions or debris.
 - Ensure the Z-axis mechanism moves smoothly without binding.
- **Software Not Recognizing New Area:**
 - Manually update the working area dimensions in your engraving software settings (e.g., LightBurn, LaserGRBL) to 850 x 800 mm.
 - Restart the software and the engraver.

8. SPECIFICATIONS

Key technical specifications for the ATOMSTACK AE85 Engraving Area Extension Kit:

Specification	Value
Brand	ATOMSTACK
Enlarged Engraving Size	800 x 850 mm
Product Net Weight	8 kg
Package Weight	8.5 kg
Independent Package Dimensions	1195 x 385 x 13 mm

9. WARRANTY AND SUPPORT





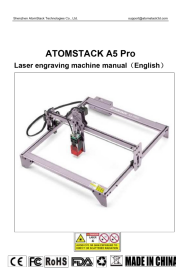
For information regarding warranty coverage and technical support for your ATOMSTACK AE85 Extension Kit, please refer to the documentation provided with your original purchase or contact the seller directly. As per the product information, a return policy of 30 days for refund/replacement is available.

For further assistance, you may also visit the official ATOMSTACK website or contact their customer

service channels.

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Related Documents - AE85

	<p>ATOMSTACK R30 V2 Laser Module Installation Guide</p> <p>Install the ATOMSTACK R30 V2 Laser Module with this comprehensive guide. Learn about safety, components, step-by-step installation for various ATOMSTACK models, and operational tips.</p>
	<p>ATOMSTACK Air Assist Kit User Manual</p> <p>User manual for the ATOMSTACK Air Assist Kit, providing installation, usage, and precautions for ATOMSTACK laser engraving machines.</p>
	<p>ATOMSTACK MAKER R1 Rotary Chuck User Manual and Installation Guide</p> <p>This comprehensive guide details the installation, connection, and operation of the ATOMSTACK MAKER R1 Rotary Chuck for laser engraving machines. It covers packing contents, setup procedures, software configuration with LightBurn, and essential notes for engraving cylindrical, spherical, and other shaped objects.</p>
	<p>ATOMSTACK X40 MAX, A40 MAX, S40 MAX Laser Engraver User Manual</p> <p>This user manual provides essential safety, installation, and operation guidance for the ATOMSTACK X40 MAX, A40 MAX, and S40 MAX laser engraving and cutting machines. It details critical precautions for safe use and optimal performance.</p>
	<p>ATOMSTACK ACE A5/A10/A20 PRO V2 Laser Engraver User Manual</p> <p>Comprehensive user manual for the ATOMSTACK ACE A5/A10/A20 PRO V2 Laser Engraver, detailing safety, installation, operation, maintenance, and troubleshooting. Includes multilingual content and accessory information.</p>
	<p>ATOMSTACK A5 Pro Laser Engraving Machine Manual</p> <p>Comprehensive user manual for the ATOMSTACK A5 Pro laser engraving machine, covering safety, software installation (LaserGRBL and LightBurn), operation, and troubleshooting.</p>