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> ACMER C4 Air Assist Pump Kit Instruction Manual

ACMER C4

ACMER C4 Air Assist Pump Kit Instruction Manual

Model: C4

1. INTRODUCTION

The ACMER C4 Air Assist Pump Kit is designed to enhance the performance of laser cutters and engravers by providing a continuous, adjustable airflow to the work area. This system helps to prevent overheating, reduce fire hazards, and ensure cleaner, more precise cutting and engraving results. It effectively minimizes smoke and dust buildup, leading to smoother edges and improved clarity on various materials.



An image showing the ACMER C4 Air Assist Pump Kit, highlighting its 30L/min airflow capability, set against a minimalist landscape.

2. PACKAGE CONTENTS

Before beginning installation, please verify that all components listed below are present in your package:

- ACMER C4 Air Purifier (Air Pump) x1
- Power Cable x1
- Air Pipe x1
- Reducer Fitting x1
- Pre-filter x2
- Spring Hose Clamp x2



A visual representation of the ACMER C4 Air Assist Pump Kit's package contents, including the air purifier, power cable, air pipe, reducer fitting, pre-filters, and spring hose clamps.

3. SETUP AND INSTALLATION

The ACMER C4 Air Assist is designed for straightforward installation. It supports two primary assembly methods to ensure compatibility with a wide range of laser modules.

3.1 Assembly Methods

The kit includes components for two different installation types:

- **U-clip Method:** Suitable for laser modules with dimensions of 40mm x 40mm.
- **Nozzle Method:** Designed for laser modules with lenses having an outer diameter of 16mm.

Supports 2 Assembly Methods

It offers support for two different installation methods, making it compatible with a wide range of laser modules.

The U-clip method is suitable for laser modules with dimensions of 40mm*40mm, while the nozzle supports laser modules with lenses having an outer diameter of 16mm.



Diagram illustrating two assembly methods for the ACMER C4 Air Assist: the U-clip method for 40x40mm laser modules and the nozzle method for 16mm outer diameter lenses.

3.2 General Installation Steps

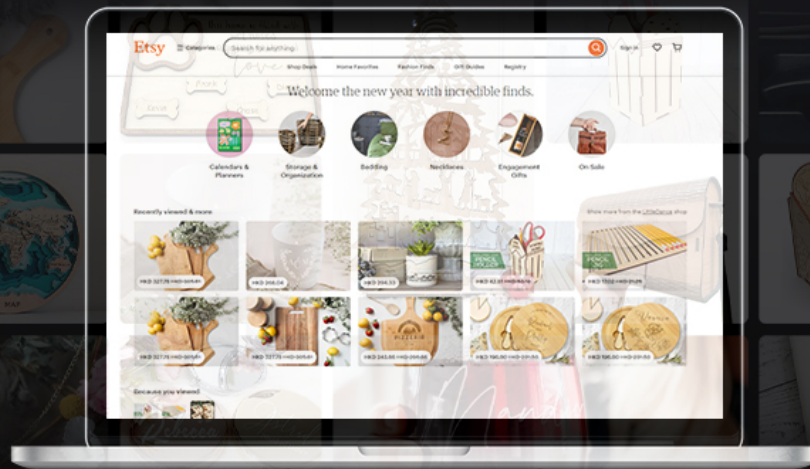
1. Select the appropriate assembly method (U-clip or nozzle) based on your laser module's specifications.
2. Attach the chosen air assist component to your laser module securely.
3. Connect one end of the air pipe to the air assist component on the laser module.
4. Connect the other end of the air pipe to the ACMER C4 Air Purifier. Ensure a tight fit to prevent air leaks.
5. Connect the power cable to the air purifier and then to a suitable power outlet.
6. Ensure all connections are secure before operating the laser engraver.

3.3 Compatibility

The ACMER C4 Air Assist Pump Kit is compatible with a wide range of laser engravers, including ACMER P1 and ACMER P2 models, as well as many other brands. No additional modifications are typically needed for integration.

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An image demonstrating the ACMER C4 Air Assist Pump Kit's compatibility with various laser engravers, including ACMER P1, ACMER P2, and other brands.

4. OPERATING INSTRUCTIONS

The ACMER C4 Air Assist features an adjustable airflow to suit different cutting and engraving needs.

4.1 Powering On/Off

To power on the air assist, plug the power cable into an electrical outlet. The unit will begin operating. To power off, unplug the unit from the outlet.

4.2 Adjusting Airflow

The air assist pump features a control dial to adjust the airflow volume. Rotate the dial to increase or decrease the air output, up to a maximum of 30L/min. Adjust the airflow based on the material being processed and the desired cutting or engraving effect. Higher airflow is generally beneficial for thicker materials or to minimize charring.

Freely Control AirFlow

The air volume is large and stable, with a maximum adjustable output of **30L/min**, effectively removing smoke and ensuring stable laser energy.



30L/min

An illustration showing the adjustable airflow feature of the ACMER C4 Air Assist Pump Kit, with a dial indicating control over the 30L/min air volume.

5. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your ACMER C4 Air Assist Pump Kit.

5.1 General Cleaning

The air assist significantly reduces smoke and dust buildup during laser operations, which helps keep your workspace and materials cleaner. Periodically inspect the air pipe and nozzle for any obstructions or debris. Clean them gently with a soft cloth or compressed air if necessary.

The pre-filters included in the package help maintain air quality. Replace them as needed to ensure efficient operation and prevent dust from entering the pump.

Ensuring a Clean Surface

It utilizes air to rapidly cool down the surface of the material being cut, preventing distortion and discoloration caused by high temperatures. It guarantees smooth lines, complete patterns, and keeps the material surface clean.



No air assist



With air assist

A side-by-side comparison image showing the difference in laser engraving quality: one with charring and residue (no air assist) and one with clean, smooth edges (with air assist).

6. TROUBLESHOOTING

If you encounter issues with your ACMER C4 Air Assist Pump Kit, please refer to the following common troubleshooting steps:

- **No Airflow:** Ensure the power cable is securely plugged in and the unit is receiving power. Check the air pipe for any kinks or blockages. Verify that the airflow control dial is not set to minimum.
- **Weak Airflow:** Check for any leaks in the air pipe connections. Ensure the pre-filters are clean and not clogged. Increase the airflow using the control dial.
- **Unusual Noise:** While the unit operates quietly (less than 40dB), excessive or unusual noise may indicate an issue. Ensure the unit is placed on a stable, flat surface. Check for any loose components or foreign objects.
- **Poor Cutting/Engraving Quality:** Ensure the air assist nozzle is properly aligned with the laser's focal point. Adjust the airflow as needed for the specific material and laser settings.

If problems persist after attempting these steps, please contact customer support.

7. SPECIFICATIONS

Product Dimensions	11 x 7.1 x 5.1 inches
Item Model Number	ACMER-C4-Air-Pump
Item Weight	4.41 pounds
Manufacturer	ACMER

Maximum Airflow	30 L/min
Noise Level	Less than 40dB
Date First Available	January 22, 2025

8. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the documentation included with your purchase or contact ACMER customer service directly. Ensure you have your product model number (C4) and purchase details available when seeking support.

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