

Anrain Metal Cutting Machine

Anrain 110V 120W Metal Cutting Machine User Manual

Model: Metal Cutting Machine

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and efficient operation, setup, and maintenance of your Anrain 110V 120W Metal Cutting Machine. Please read this manual thoroughly before using the machine to ensure proper function and to prevent injury or damage.

2. SAFETY INSTRUCTIONS

Always prioritize safety when operating any machinery. Failure to follow these safety guidelines may result in serious injury or damage to the equipment.

- **Power Supply:** Ensure the machine is connected to a 110V power source. Verify the power switch is in the 'off' position before plugging in.
- **Work Area:** Maintain a clean, well-lit, and uncluttered work area. Keep children and bystanders away.
- **Personal Protective Equipment (PPE):** Always wear safety glasses or a face shield to protect against flying debris. Gloves are recommended for handling materials.
- **Machine Stability:** Ensure the machine is placed on a stable, level surface.
- **Blade Safety:** Never touch the cutting blade while the machine is powered on or in motion. Allow the blade to come to a complete stop before performing any adjustments or maintenance.
- **Electrical Safety:** Do not operate the machine with wet hands. Avoid using the machine in damp or wet conditions. Regularly inspect the power cord for damage.
- **Material Compatibility:** This machine is designed for cutting metal objects. Do not attempt to cut materials for which it is not intended.
- **Emergency Stop:** Familiarize yourself with the location of the power switch for quick shutdown in an emergency.

3. PRODUCT OVERVIEW AND COMPONENTS

Familiarize yourself with the various parts of your Anrain Metal Cutting Machine.



Figure 3.1: Main Components Diagram

This diagram illustrates the key components of the Anrain Metal Cutting Machine, including the fine-tuning guide pin, handle, full-pass movement mechanism, high-strength inserts, start switch, and the double-sided rotatable clamp.

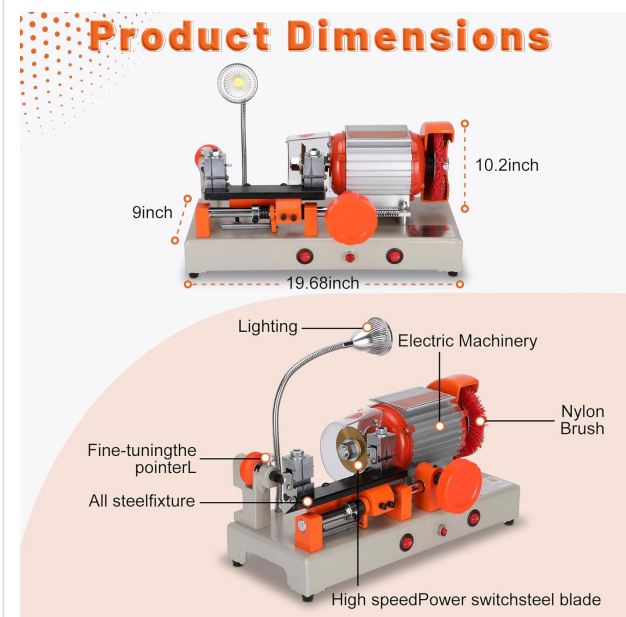


Figure 3.2: Product Dimensions and Labeled Parts

This image shows the overall dimensions of the machine (approximately 19.68 inches long, 9 inches wide, 10.2 inches high) and labels additional parts such as the lighting unit, electric machinery, nylon brush, fine-tuning pointer, all-steel fixture, and the high-speed power switch steel blade.

Key Features:

- **All-Copper Motor:** Provides powerful and smooth operation. Avoid touching with wet hands during use.
- **Fine-Tuning Guide Pin:** Allows for quick and precise adjustment of cutting depth.

- **Multi-functional Steel Fixture:** Capable of holding various shapes including hollow, wave, and cylindrical objects.
- **Polishing Brush (Nylon Brush):** Located on the right side, used for cleaning metal chips and ensuring a smooth cutting surface.
- **Dust Cover:** Newly designed to protect precision components from sand and dust, extending the machine's service life.
- **Switching Device:** A dedicated switch for initiating the automatic cutting process.

4. SETUP INSTRUCTIONS

Follow these steps to set up your Anrain Metal Cutting Machine before initial use.

1. **Unpacking:** Carefully remove all components from the packaging. Verify that all parts listed in the packing list are present.
2. **Placement:** Position the machine on a sturdy, level, and horizontal workbench. Ensure it is stable both laterally and longitudinally.
3. **Power Connection:** Connect the power cord to a standard 110V electrical outlet. Ensure the main power switch on the machine is in the 'OFF' position before plugging in.
4. **Power Mode Selection:** To switch between power modes (manual/automatic), pull out the spindle when the machine is plugged in.

5. OPERATING INSTRUCTIONS

This section details the procedures for operating your metal cutting machine in both manual and automatic modes.

5.1. Preparing for Cutting

1. **Secure Material:** Place the metal object to be cut into the multi-functional steel fixture. Ensure it is firmly clamped to prevent movement during cutting. The fixture can accommodate various shapes, including hollow, wave, and cylindrical types.
2. **Adjust Cutting Depth:** Use the stepping fine needle guide device to precisely adjust the desired cutting depth. This allows for quick and accurate adjustments for different depths.
3. **Blade Inspection:** Before starting, visually inspect the cutting blade for any damage or wear. Ensure the blade is clean.

5.2. Manual Operation

For precise control over the cutting process:

1. Turn on the main power switch.
2. Use the hand wheel feed to manually guide the cutting blade into the material. Apply uniform pressure for a clean cut.
3. The machine supports single-sided, two-sided, and four-sided slotting for various professional applications.

5.3. Automatic Operation

For repetitive or longer cuts:

1. Ensure the machine is in automatic mode (refer to Setup Instructions for power mode selection).
2. Turn on the main power switch.
3. Press and hold the dedicated switching device (start switch) for 4-5 seconds. The device will then automatically initiate the cutting process, moving the knife along the material.

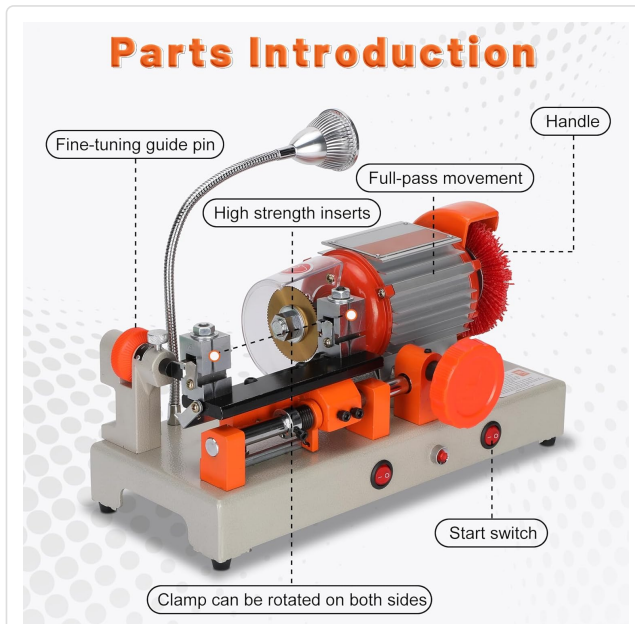


Figure 5.1: Operational Details

This image highlights the all-copper motor, the switching device (start switch) for automatic operation, and the blade cleaning brush, which is essential for maintaining the fixture and blade.



Figure 5.2: Needle Guide Fine-Tuning Device

A detailed view of the needle guide fine-tuning device, which enables fast, accurate, and efficient adjustments for various cutting depths.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Anrain Metal Cutting Machine.

1. **Blade Cleaning:** After each use, utilize the integrated polishing brush on the right side of the machine to clean metal chips and debris from the cutting blade and fixture. This helps maintain a smooth cutting surface and extends the service life of the fixture.
2. **Dust Cover:** Ensure the newly designed dust cover is properly in place to protect internal precision components from sand and dust.
3. **General Cleaning:** Keep the entire machine clean and free from accumulated dust and debris. Use a dry cloth for cleaning.
4. **Lubrication:** Periodically apply a small amount of machine oil to moving parts as recommended by general machinery maintenance practices to ensure smooth operation.
5. **Storage:** When not in use, store the machine in a dry, clean environment, away from direct sunlight and moisture.

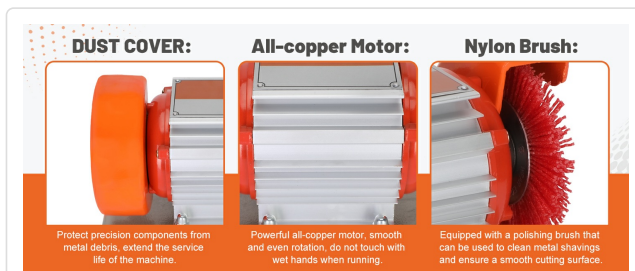


Figure 6.1: Maintenance Features

This image details the dust cover, which protects precision components; the all-copper motor, emphasizing smooth rotation; and the nylon brush, used for cleaning metal shavings to ensure a smooth cutting surface.

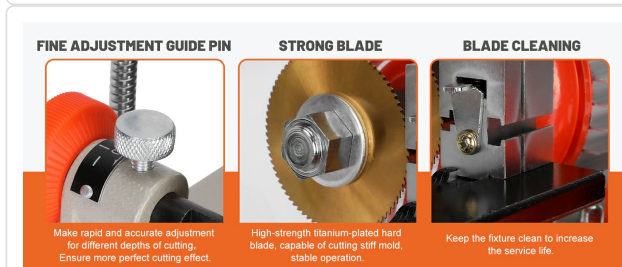


Figure 6.2: Precision and Cleaning

A close-up view showing the fine adjustment guide pin for accurate depth setting, the strong blade for effective cutting, and the blade cleaning mechanism to maintain optimal performance and increase service life.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your Anrain Metal Cutting Machine.

- **Machine Does Not Power On:**

- Check if the power cord is securely plugged into a working 110V outlet.
- Ensure the main power switch is in the 'ON' position.
- Inspect the power cord for any visible damage.

- **Blade Not Cutting Effectively:**

- Verify that the cutting depth is correctly adjusted using the fine-tuning guide pin.
- Check if the blade is dull or damaged. A worn blade may need replacement.

- Ensure the material is securely clamped and not shifting during the cut.

- **Excessive Vibration or Noise:**

- Ensure the machine is placed on a stable and level surface.
- Check if all fasteners are tight.
- Inspect the blade for any imbalance or damage.

- **Automatic Mode Not Engaging:**

- Confirm that the power mode is correctly set for automatic operation (spindle pulled out).
- Ensure you are pressing and holding the switching device for the required 4-5 seconds.

If you encounter issues not covered here or require further assistance, please contact customer support.

8. SPECIFICATIONS

| Specification | Detail |
|--------------------|-------------------------------|
| Model Number | Metal Cutting Machine |
| Power Input | 110V, 120W |
| Material | Alloy Steel |
| Item Weight | 9.01 Kilograms (19.86 Pounds) |
| Package Dimensions | 17.76 x 9.41 x 9.37 inches |
| Specific Uses | Cutting Metal Objects |
| Grip Type | Ergonomic |

9. WARRANTY AND SUPPORT

Your Anrain Metal Cutting Machine is designed for reliable performance. If you encounter any problems or have questions regarding its operation, maintenance, or troubleshooting, please do not hesitate to contact us via email. We are committed to providing prompt assistance and resolving any issues you may have.