GZ GUOZHI CUT-50LED

GZ GUOZHI Plasma Cutter CUT-50LED Instruction Manual

Model: CUT-50LED

1. Introduction

The GZ GUOZHI Plasma Cutter CUT-50LED is a high-performance 50-amp plasma cutting machine designed for precision metal cutting. It incorporates advanced IGBT inverter technology and features a large LED display for intuitive operation. This unit supports dual voltage input (110V/220V) with automatic conversion, making it versatile for various power environments. It is capable of clean cuts up to 1/2 inch and severance cuts up to 3/4 inch on a variety of metallic materials.

2. Safety Information

Operating a plasma cutter involves inherent risks. Adhere to all safety precautions to prevent injury or damage to equipment.

- **Eye and Face Protection:** Always wear a welding helmet with appropriate shade settings to protect your eyes and face from intense light and sparks.
- **Body Protection:** Wear flame-resistant clothing, heavy-duty gloves, and protective footwear. Avoid loose clothing.
- **Ventilation:** Ensure adequate ventilation to remove fumes and gases produced during cutting. Work in a well-ventilated area or use a fume extractor.
- **Electrical Safety:** Connect the machine to a properly grounded power source. Do not operate in wet conditions. Inspect all cables and connections for damage before use.
- **Fire Hazards:** Keep flammable materials away from the cutting area. Have a fire extinguisher readily available. Sparks and molten metal can travel significant distances.
- **Air Supply:** Use clean, dry compressed air. Moisture in the air line can negatively affect cutting performance and damage internal components.
- **Workpiece Grounding:** Ensure the workpiece is properly grounded to prevent electrical shock.

3. Setup

The GZ GUOZHI CUT-50LED plasma cutter is designed for quick and easy setup, often achievable within one minute.

1. **Air Compressor Connection:** The unit features a pre-installed 1/4 inch NPT plug and an air filter regulator. Connect your air compressor to this quick connector. Ensure your air compressor can provide sufficient, clean, and dry air pressure (typically 50-65 PSI during operation).
2. **Power Connection:** Connect the plasma cutter to a suitable power outlet. The machine automatically detects and converts between 110V and 220V power sources. Use the provided 220V-100V adapter if necessary.

3. **Ground Clamp Connection:** Attach the ground clamp securely to the workpiece. A strong, clean connection is crucial for effective cutting and safety.
4. **Cutting Torch Connection:** Connect the upgraded cutting torch to the designated port on the front panel of the plasma cutter. Ensure all connections are tight and secure.



Image: The plasma cutter's rear panel showing the built-in air filter and quick connector for air compressor attachment.



Image: Front panel of the plasma cutter highlighting the upgraded cutting torch connection and the 300A ground clamp.



Image: Overview of included accessories: Earth Clamp (500A), Plasma Cutter Gun, 220V-110V Adapter, and Gun Accessories.

4. Operating Instructions

The CUT-50LED plasma cutter offers precise control and an enhanced LED display for ease of use.

1. **Power On:** Turn on the main power switch, usually located on the rear of the unit.
2. **LED Display:** The large LED screen provides accurate data visualization, allowing you to easily monitor current settings and air pressure without removing your helmet.
3. **Current Adjustment:** Use the control knob to set the desired cutting current, ranging from 20A to 50A. The optimal current depends on the material type and thickness.
4. **Air Pressure Adjustment:** Adjust the air pressure regulator to the recommended setting for your cutting task, typically between 50-65 PSI. The display can show pressure in PSI or MPa.
5. **Mode Selection (2T/4T/TEST):**
    - **2T (Two-Touch):** Press and hold the torch trigger to cut; release to stop. Suitable for short cuts.
    - **4T (Four-Touch):** Press and release the trigger to start cutting; press and release again to stop. Ideal for continuous,

long-term cutting, reducing operator fatigue.

- **TEST:** Activates air flow without plasma arc, useful for checking air connections and pressure.

6. **Cutting Process:** Position the torch tip approximately 1/16 inch from the workpiece. Press the trigger to initiate the arc and begin cutting. Maintain a steady travel speed for a clean cut.
7. **Material Compatibility:** This plasma cutter is suitable for cutting stainless steel, alloy steel, mild steel, copper, aluminum, and other metallic materials.



Image: Close-up of the plasma cutter's large LED screen displaying current (050A) and air pressure (070 PSI/MPa), along with mode selection buttons.



Image: The GZ GUOZHI CUT-50LED plasma cutter in use, showing a clean cut of 1/2 inch and a maximum severance cut of 3/4 inch.



Image: The plasma cutter's control panel, emphasizing the 2T/4T/TEST function buttons, dual voltage capability, and IGBT inverter technology.

5. Maintenance

Regular maintenance ensures optimal performance and extends the lifespan of your plasma cutter.

- **Inspect Consumables:** Regularly check the torch tip, electrode, shield cup, and gas ring for wear. Replace worn consumables promptly to maintain cut quality and prevent damage to the torch. The package includes a spare tip and shroud.
- **Clean Air Filter:** Periodically inspect and clean the air filter regulator to ensure a supply of clean, dry air to the machine. A clogged filter can reduce performance.
- **Cable Inspection:** Examine all power and torch cables for cuts, abrasions, or loose connections. Repair or replace damaged cables immediately.
- **General Cleaning:** Keep the machine clean and free from dust and metal particles. Use compressed air to blow out internal components if necessary, ensuring the machine is unplugged.

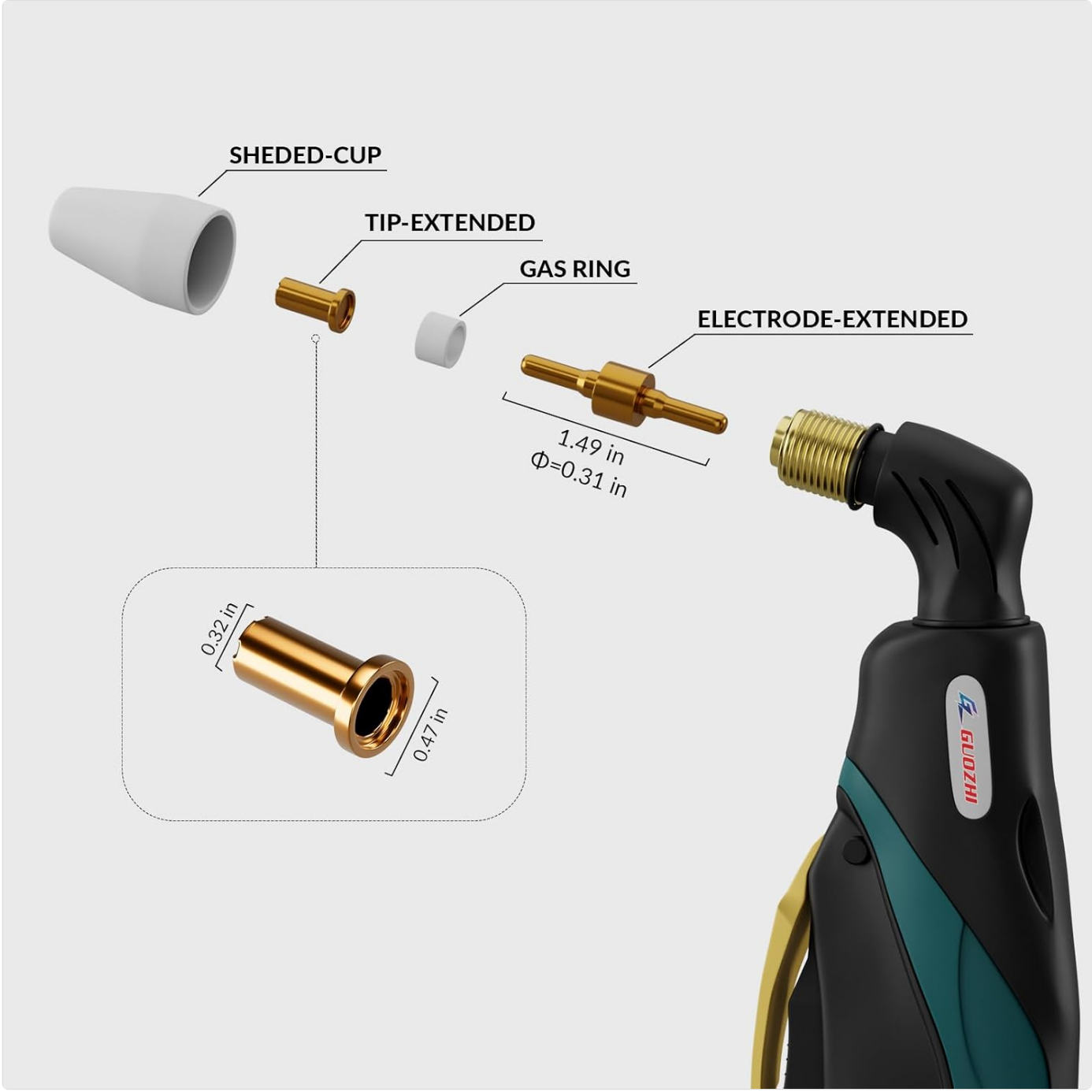


Image: Exploded view diagram of the plasma torch components, including the shield cup, extended tip, gas ring, and extended electrode, with dimensions.

6. Troubleshooting

If you encounter issues with your plasma cutter, consider the following common troubleshooting steps:

- **No Power:** Check the power cord connection, wall outlet, and circuit breaker. Ensure the machine's power switch is in the 'ON' position.
- **No Arc:** Verify that the ground clamp is securely attached to the workpiece and that the torch consumables (tip, electrode) are correctly installed and not excessively worn. Check air pressure.
- **Poor Cut Quality:** This can be caused by incorrect current settings, insufficient air pressure, worn consumables, or improper torch distance/travel speed. Adjust settings and replace consumables as needed.
- **Air Flow Issues:** Ensure the air compressor is functioning correctly and providing adequate pressure. Check the air filter for clogs and the air lines for leaks.
- **Overheat Protection:** If the 'O.C.' (Over Current/Overheat) indicator illuminates, the machine may have overheated. Allow it to cool down before resuming operation. Ensure proper ventilation.

7. Specifications

Feature	Specification
Model Number	CUT-50LED
Input Voltage	110V/220V Dual Voltage (Automatic Conversion)
Current Adjustment Range	20A - 50A
Max Cutting Thickness	3/4 inch
Ideal Clean Cut Thickness	1/2 inch
Power Source	DC
Technology	IGBT Inverter
Dimensions (L x W x H)	38.99 x 16.79 x 27.51 cm (15.35 x 6.61 x 10.83 inches)
Weight	15.5 lbs (7.03 kg)
Included Components	Plasma Cutter, Ground Clamp, 220V-100V Adapter, Gun Accessories, User Manual



Image: The GZ GUOZHI CUT-50LED plasma cutter, highlighting its portable and lightweight design (15.5 lbs) and compact dimensions (15.4" L x 6.6" W x 10.8" H).

8. Warranty and Support

GZ GUOZHI is committed to providing reliable products and customer service.

- **12-Month Warranty:** Any machine purchased from the GZ GUOZHI store is covered by a 12-month warranty (excluding accessories).
- **Warranty Claim:** If the machine is damaged by non-human factors within 12 months of purchase, please contact GZ GUOZHI customer service through the Amazon channel or email.
- **Customer Support:** The GZ GUOZHI after-sales team is available to assist with any issues and will resolve your problem as quickly as possible.

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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

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