SISHUINIANHUA ZX7 250

SISHUINIANHUA Portable Mini Welding Machine Inverter Welder ZX7 250 User Manual

Model: ZX7 250

1. Introduction

Thank you for choosing the SISHUINIANHUA Portable Mini Welding Machine Inverter Welder ZX7 250. This manual provides essential information for the safe and efficient operation, setup, maintenance, and troubleshooting of your new welding machine. Please read this manual thoroughly before using the product and retain it for future reference.

2. Safety Instructions

Welding can be dangerous. Always follow safety precautions to prevent injury or damage. This section outlines general safety guidelines; consult local regulations and standards for comprehensive safety practices.

- **Electric Shock:** Welding equipment uses high voltage. Ensure proper grounding. Never touch live electrical parts. Wear dry welding gloves and protective clothing.
- **Fumes and Gases:** Welding fumes and gases can be hazardous to your health. Work in a well-ventilated area. Use fume extractors if necessary.
- **Arc Rays:** Arc rays can burn eyes and skin. Always wear a welding helmet with appropriate shade lenses and protective clothing.
- **Fire and Explosion:** Welding sparks and hot metal can cause fires. Keep flammable materials away from the welding area. Have a fire extinguisher readily available.
- **Burns:** Hot metal and electrodes can cause severe burns. Use insulated gloves and tongs to handle hot materials.
- **Maintenance:** Disconnect power before performing any maintenance or service.

3. Package Contents

Verify that all items are present in your package:

- ZX7 250 Arc Welder Unit (1)

- Quick Connector (2)
- Allen Wrench (1)
- Welding Wire (2 meters) (1)
- Ground Clamp Wire (2 meters) (1)

4. Product Overview

The SISHUINIANHUA ZX7 250 is a portable mini inverter welder designed for various welding tasks. It features advanced IGBT inverter technology and digital PWM control for efficient and stable performance.

Figure 4.1: Front view of the ZX7 250 welding machine, showing the LCD display, current adjustment knob, and quick connectors for welding cables.

Figure 4.2: Side view of the ZX7 250 welding machine, illustrating its compact dimensions of 200mm length, 85mm width, and 120mm height.

Figure 4.3: Internal view of the ZX7 250, highlighting key components such as capacitance, amorphous transformer, and

power radiator, which contribute to its efficient operation.

Figure 4.4: The ZX7 250 welding machine held in a hand, demonstrating its compact and portable design for easy transport and use.

Figure 4.5: The included 2-meter welding wire (electrode holder cable) and 2-meter ground clamp wire, essential accessories for operation.

5. Setup

Proper setup is crucial for safe and effective welding.

1. **Power Connection:** Connect the welding machine to a 220V power supply. Ensure the power outlet is properly grounded and can handle the required current.
2. **Ground Clamp Connection:** Attach the ground clamp wire to the negative (-) quick connector on the front panel of the welder. Secure the ground clamp to the workpiece or a sturdy metal workbench that is electrically connected to the workpiece. Ensure a clean, bare metal contact for optimal conductivity.
3. **Electrode Holder Connection:** Attach the welding wire (with electrode holder) to the positive (+) quick connector on the front panel.
4. **Electrode Insertion:** Insert the appropriate electrode (1.6-2.5mm diameter) into the electrode holder. Ensure it is securely clamped.

6. Operating Instructions

Follow these steps for welding operations:

1. **Power On:** Turn on the welding machine using the power switch. The LCD display will illuminate, showing the current setting.
2. **Adjust Current:** Use the current adjustment knob on the front panel to set the desired welding current between 20A and 250A. The optimal current depends on the electrode type, diameter, and material thickness (2-6mm for this machine).

3. **Prepare Workpiece:** Ensure the workpiece is clean, dry, and free of rust, paint, or grease.
4. **Strike an Arc:** With the welding helmet on, gently tap or scratch the electrode against the workpiece to initiate the arc. The built-in thermal arc starting function assists in this process.
5. **Maintain Arc:** Once the arc is struck, maintain a consistent arc length and travel speed. The machine's built-in thrust and anti-sticking functions help maintain a stable arc and prevent the electrode from sticking.
6. **VRD Function:** The Voltage Reduction Device (VRD) function enhances safety by reducing the open-circuit voltage when the machine is idle, minimizing the risk of electric shock.
7. **Welding Materials:** This machine is suitable for welding stainless steel, carbon steel, and low alloy steel.
8. **Power Off:** After welding, turn off the machine and allow it to cool before storing.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your welding machine.

- **Cleaning:** Periodically clean the internal components using compressed air to remove dust and metal particles. Ensure the machine is disconnected from power before cleaning.
- **Cable Inspection:** Regularly inspect welding cables, electrode holder, and ground clamp for damage, fraying, or loose connections. Replace damaged components immediately.
- **Storage:** Store the welding machine in a dry, clean environment, away from moisture and extreme temperatures.
- **Ventilation:** Ensure the ventilation openings on the machine are clear and unobstructed during operation to prevent overheating.

8. Troubleshooting

If you encounter issues, refer to the table below for common problems and solutions.

Problem	Possible Cause	Solution
No power when switched on	Power cord not connected; Power outlet fault; Internal fuse blown	Check power cord connection; Test power outlet; Contact qualified service personnel
Poor or unstable arc	Improper current setting; Poor ground connection; Damp electrode; Incorrect electrode type	Adjust current; Ensure clean, secure ground; Use dry electrodes; Select appropriate electrode
Electrode sticks frequently	Low current setting; Incorrect arc length; Anti-sticking function not engaging	Increase current; Adjust arc length; Ensure machine is functioning correctly
Machine overheats (O.C. indicator)	Exceeded duty cycle; Blocked ventilation; High ambient temperature	Allow machine to cool down; Clear ventilation openings; Work in a cooler environment

If the problem persists after attempting these solutions, please contact customer support.

9. Specifications

- **Input Current:** 220V
- **Adjusting Current Range:** 20-250A
- **Applicable Electrode:** 1.6-2.5mm

- **Welding Thickness:** 2-6mm
- **Auxiliary Functions:** Built-in thrust, anti-sticking function, thermal arc starting, VRD function
- **Product Size:** 200mm x 85mm x 120mm
- **Package Weight:** 1.85kg
- **Suitable Materials:** Stainless steel, carbon steel, low alloy steel
- **Technology:** Advanced single-tube IGBT inverter technology, full digital PWM control

10. Warranty and Support

For warranty information or technical support, please refer to the documentation provided at the time of purchase or contact your retailer. Keep your purchase receipt as proof of purchase.