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AmicoPower ARC-200

Amico ARC-200 200A Stick TIG Arc DC Inverter Welder Instruction Manual

Model: ARC-200

1. INTRODUCTION

The Amico ARC-200 is a professional Stick Arc and Lift-TIG combo welding machine designed with advanced inverter technology. This welding power source delivers a strong, concentrated, and stable arc, ensuring efficient and precise welding operations. It is compatible with a wide range of electrodes, including E6010, E6011, E6013, E7014, and E7018.

The machine features an automatic voltage selection system, allowing seamless operation with input power ranging from 100V to 250V at 50-60Hz. Its advanced IGBT inverter technology provides superior arc characteristics and stability. With an 80% duty cycle at 200 amps, the ARC-200 is suitable for extended welding tasks. Built-in functions such as hot start, anti-stick, thrust adjustment, current-intensity control, and automatic compensation for voltage fluctuations enhance its performance and user experience. It also includes comprehensive protection features against over-voltage, under-voltage, over-current, and overload conditions.

2. SAFETY INFORMATION

WARNING: Welding can be dangerous. Always follow safety precautions to prevent injury or death.

- **Electric Shock:** Welding current can cause fatal electric shock. Ensure proper grounding and insulation. Never touch live electrical parts.
- **Fumes and Gases:** Welding fumes and gases can be hazardous to your health. Work in a well-ventilated area.
- **Arc Rays:** Arc rays can injure eyes and burn skin. Wear appropriate welding helmet with proper shade lens and protective clothing.
- **Fire and Explosion:** Welding sparks can cause fire or explosion. Keep flammable materials away from the welding area.
- **Burns:** Hot metal and equipment can cause severe burns. Wear protective gloves and clothing.
- Read and understand all instructions and safety warnings before operating this equipment.

3. SETUP

3.1 Unpacking and Inspection

Carefully unpack the Amico ARC-200 welder and all accessories. Inspect the unit for any signs of damage that may have occurred during shipping. If any damage is found, contact your supplier immediately.

3.2 Package Contents

- ARC-200 Pro. Stick Arc Welding Machine
- 8-feet Power Cord & 6-50P plug (pre-installed on the machine)
- 230V to 115V Power Adapter
- 300 Amp Electrode Holder with 10 feet Cable (35-50 mm Connect)
- 300 Amp Work Clamp with 10 feet Cable (35-50 mm Connect)
- 2 Pieces Electrode of 3/32 in.
- 2 Pieces Electrode of 3/16 in.
- Owner's Manual (this document)

3.3 Power Connection

The ARC-200 features automatic voltage detection, allowing it to operate on AC 100~250V, 50~60Hz power supplies. The machine comes with an 8-foot power cord and a 6-50P plug. A 230V to 115V power adapter is included for use with standard 115V outlets.

1. Ensure the welder's power switch is in the OFF position.
2. For 230V operation, plug the machine's 6-50P plug directly into a compatible 230V outlet.
3. For 115V operation, connect the included 230V to 115V power adapter to the machine's plug, then plug the adapter into a 115V outlet.
4. Always ensure the power source meets the welder's requirements and is properly grounded.



Figure 3.3.1: The included 230V to 115V power adapter for flexible power input.

3.4 Connecting Welding Cables

Connect the electrode holder and work clamp cables to the appropriate terminals on the front panel of the welder.

1. Connect the electrode holder cable (red connector) to the positive (+) terminal.
2. Connect the work clamp cable (black connector) to the negative (-) terminal.
3. Ensure connections are tight and secure to prevent poor electrical contact and overheating.



Figure 3.4.1: Electrode holder with cable and sample electrodes.



Figure 3.4.2: Work clamp with cable.

4. OPERATING INSTRUCTIONS

4.1 Front Panel Overview



Figure 4.1.1: Front view of the Amico ARC-200 showing the digital display and control knobs.





Figure 4.1.2: Close-up of the control panel, highlighting the ARC FORCE and current adjustment knobs, and the 2-in-1 Stick Arc Lift-TIG Welding indicator.

4.2 Powering On/Off

Locate the power switch on the rear panel of the welder. Flip the switch to the 'ON' position to power on the machine. The digital display on the front panel will illuminate. To power off, flip the switch to the 'OFF' position.



Figure 4.2.1: Rear view of the Amico ARC-200, showing the power input and ON/OFF switch.

4.3 Mode Selection

The ARC-200 supports both Stick Arc and Lift-TIG welding. The machine automatically detects the welding mode based on the connected accessories and operation. Ensure you have the correct torch/holder for your desired process.

4.4 Current Adjustment

Use the 'MIN' to 'MAX' knob on the front panel to adjust the welding current. The digital display will show the selected amperage. The current range is 5-200 Amp for 230V input and 5-145 Amp for 115V input.

4.5 Arc Force Adjustment

The 'ARC FORCE' knob allows you to adjust the arc characteristics. Increasing the arc force can help prevent the electrode from sticking and improve penetration, especially with certain types of electrodes or in specific welding positions. Adjust this setting based on your welding application and electrode type.

4.6 Welding Process (General)

- 1. Prepare Workpiece:** Clean the workpiece thoroughly to remove rust, paint, oil, or other contaminants.
- 2. Connect Work Clamp:** Securely attach the work clamp to the workpiece, ensuring good electrical contact.
- 3. Insert Electrode:** For Stick welding, insert the appropriate electrode into the electrode holder.
- 4. Set Parameters:** Adjust the welding current and arc force according to the electrode type, material

thickness, and desired weld.

5. **Initiate Arc:** For Stick welding, strike the electrode against the workpiece to initiate the arc. For Lift-TIG, touch the tungsten to the workpiece and then lift slightly to initiate a stable arc.
6. **Weld:** Maintain a consistent arc length and travel speed to create a uniform weld bead.
7. **Inspect Weld:** After welding, allow the workpiece to cool and inspect the weld for quality.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Amico ARC-200 welder.

- **Cleaning:** Periodically clean the internal components of the welder using dry, compressed air to remove dust and debris. Ensure the power is disconnected before cleaning.
- **Cable Inspection:** Regularly inspect all welding cables, connections, and the power cord for cuts, abrasions, or loose connections. Replace damaged cables immediately.
- **Ventilation:** Ensure the ventilation openings on the welder are clear and unobstructed to prevent overheating.
- **Storage:** Store the welder in a clean, dry environment, away from excessive dust, moisture, and corrosive materials.

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your ARC-200 welder.

Problem	Possible Cause	Solution
Welder does not power on	No power supply; Power switch off; Faulty power cord/outlet	Check power connection and outlet; Ensure power switch is ON; Inspect power cord.
No welding output	Loose cable connections; Incorrect settings; Overload protection activated	Tighten welding cable connections; Verify current settings; Allow machine to cool if overload light is on.
Poor arc stability / Electrode sticking	Incorrect current/arc force; Improper electrode; Poor workpiece grounding	Adjust current and arc force; Use appropriate electrode; Ensure good work clamp connection.
Overheating / Protection light on	Exceeded duty cycle; Blocked ventilation; High ambient temperature	Allow machine to cool down; Clear ventilation openings; Operate in a cooler environment.

The ARC-200 includes built-in protection features for over-voltage, under-voltage, over-current, and overload. If a protection circuit is activated, the machine may temporarily stop welding or display an error code. Allow the machine to reset or cool down before resuming operation.

7. SPECIFICATIONS

Specification	Value
Model	ARC-200

Specification	Value
Rated Input Voltage	AC 100~250V
Frequency	50~60Hz
Rated Input Power (230V)	8.2KVA / 35.7A
Rated Input Power (115V)	5.8KVA / 50A
Current Range (230V)	5~200 Amp
Current Range (115V)	5~145 Amp
Force Current	0~50 Amp (230V) / 0~10 Amp (115V)
Rated Duty Cycle (230V)	80% @ 200 Amp
Rated Duty Cycle (115V)	80% @ 145 Amp
Nominal DC Open Circuit Voltage	83V
Usable Electrode (230V)	1/16~1/4 in.
Usable Electrode (115V)	1/16~5/32 in.
Power Factor	0.93
Dimensions (L x W x H)	15.75 x 6.2 x 11.3 in.
Net Weight	17.0 lbs.
Manufacturer	Amico Power
Part Number	ARC2002039
Material	Metal
Color	Grey
Certification	ETL Listed

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official AmicoPower website or contact their customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.

 <p>S7 MIG-200 OPERATION GUIDE</p>	<p>S7 MIG-200 Operation Guide: Stick, MIG, and TIG Welding</p> <p>Comprehensive operation guide for the S7 MIG-200 welder, covering Stick (ARC) mode, MIG welding (0.8mm solid wire with CO2 gas, 0.8mm flux-cored wire, and 1.0mm flux-cored wire), and TIG welding. Learn how to set up and operate the machine for various welding tasks.</p>
 <p>TIG WELDER TIG-250GC/GLC/MGC/MPLC INSTRUCTION MANUAL ANDELI</p>	<p>ANDELI TIG Welder Instruction Manual: TIG-250GC/GLC/MGC/MPLC</p> <p>Instruction manual for ANDELI TIG welders (TIG-250GC, TIG-250GLC, TIG-250MGC, TIG-250MPLC). Covers features, installation, operation, safety, and maintenance for these multi-function inverter welding machines.</p>
 <p>Operator's Manual Square Wave TIG 200 LINCOLN ELECTRIC</p>	<p>Lincoln Electric Square Wave TIG 200 Operator's Manual - Welding Guide</p> <p>Explore the capabilities of the Lincoln Electric Square Wave TIG 200 welder with this comprehensive operator's manual. Find detailed information on TIG and Stick welding, safety guidelines, installation, operation, maintenance, and troubleshooting for hobbyists and professionals.</p>
 <p>MICHIGAN WELDING CO. 200A ARC TIG WELDER ACDC INVERTER MIG/MMA/ACDC200 OPERATING INSTRUCTIONS TO PREVENT SERIOUS INJURY READ & UNDERSTAND ALL INSTRUCTIONS KEEP THE DOCUMENT</p>	<p>Michigan Welding Co. 200A ARC TIG Welder ACDC200 Operating Instructions</p> <p>Comprehensive operating instructions for the Michigan Welding Co. 200A ARC TIG Welder, model ACDC200. This manual covers safety precautions, product information, installation, operation for MMA and TIG welding, troubleshooting, and warranty details.</p>
 <p>GUOZHI OWNER'S MANUAL ARC-130 Welding Machine - STICK Please read instruction manual carefully and retain for future reference</p>	<p>GUOZHI ARC-130 Stick Welding Machine Owner's Manual</p> <p>Comprehensive owner's manual for the GUOZHI ARC-130 Stick Welding Machine. Covers safety warnings, specifications, setup, operation, troubleshooting, and maintenance for this portable DC stick welder.</p>
 <p>FEIFANKE User Manual ARC-140/ARC 2 IN 1 Inverter Welding Machine Please read the user manual carefully before using the welding machine.</p>	<p>FEIFANKE ARC-140/ARC 2 IN 1 Inverter Welding Machine User Manual</p> <p>Comprehensive user manual for the FEIFANKE ARC-140 and ARC 2 IN 1 Inverter Welding Machine. Covers safety warnings, product overview, panel introduction, installation, operation, troubleshooting, and maintenance procedures.</p>