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Stanley 460187

Stanley Power 185 Arc Welding Station User Manual

MODEL: 460187

1. Introduction and Safety Information

This manual provides essential instructions for the safe and effective operation, maintenance, and troubleshooting of your Stanley Power 185 Arc Welding Station. Please read this manual thoroughly before operating the equipment and retain it for future reference.

Safety First:

- Always wear appropriate personal protective equipment (PPE), including a welding helmet with suitable shade, welding gloves, and protective clothing.
- Ensure the work area is well-ventilated to avoid inhaling welding fumes.
- Protect bystanders from arc flash and sparks.
- Never weld near flammable materials.
- Ensure the welding machine is properly grounded.
- Disconnect power before performing any maintenance or adjustments.

2. Product Overview and Components

The Stanley Power 185 is an inverter-based welding station designed for both MMA (Manual Metal Arc) and TIG LIFT welding processes. It offers precise current adjustment via a digital display and features like Anti-stick, Arcforce, and Hotstart for enhanced welding performance.



Figure 2.1: Stanley Power 185 Arc Welding Station. This image shows the overall view of the yellow and black welding machine with its carrying strap.

Included Components:

- Stanley Power 185 Inverter Welding Station
- Electrode Holder with Cable
- Earth Clamp with Cable
- TIG Torch (for TIG LIFT function)
- CE Welding Mask
- Hammer Brush
- Stanley Tool Box



Figure 2.2: Stanley Power 185 Welding Station with all included accessories. This image displays the welding machine, electrode holder, earth clamp, TIG torch, welding mask, hammer brush, and a Stanley toolbox.

3. Setup

Follow these steps to set up your welding station for operation.

1. **Power Connection:** Connect the welding machine to a suitable 230V/50Hz AC power supply. Ensure the power outlet is capable of handling the machine's wattage (6 KW).
2. **Grounding:** Always ensure the welding machine is properly grounded.
3. **Connecting Welding Cables:**
 - **For MMA Welding:** Connect the electrode holder cable to the positive (+) terminal and the earth clamp cable to the negative (-) terminal on the front panel. Securely attach the earth clamp to the workpiece.
 - **For TIG LIFT Welding:** Connect the TIG torch cable to the negative (-) terminal and the earth clamp cable to the positive (+) terminal. Securely attach the earth clamp to the workpiece.
4. **TIG Gas Connection (for TIG LIFT):** If performing TIG welding, connect your argon gas cylinder to the TIG torch's gas inlet. Ensure the gas regulator is properly installed and set to the appropriate flow rate for your welding application.



Figure 3.1: Front panel of the Stanley Power 185. This image highlights the digital display, current adjustment knob, MMA/TIG LIFT selector, and welding cable terminals.

4. Operating Instructions

The Stanley Power 185 supports both MMA and TIG LIFT welding processes.

4.1. MMA (Manual Metal Arc) Welding

1. **Select MMA Mode:** Use the selector switch on the front panel to choose 'MMA'.
2. **Insert Electrode:** Securely insert the appropriate electrode (Ø1.6 to 4 mm) into the electrode holder. The machine supports continuous welding with 2.5 mm electrodes at 20°C.
3. **Adjust Current:** Use the large red knob to set the welding current between 30A and 160A. The digital display will show the selected amperage. Refer to electrode manufacturer guidelines for recommended current settings.
4. **Initiate Arc:** Strike the electrode against the workpiece to initiate the arc. The built-in *Hotstart* feature assists with easy arc ignition.
5. **Weld:** Maintain a consistent arc length and travel speed. The *Arcforce* feature helps modulate the current to prevent the arc from extinguishing, while *Anti-stick* prevents the electrode from sticking to the workpiece.
6. **Material Compatibility:** This machine is suitable for welding steel (basic, rutile, cellulose electrodes), cast iron, and stainless steel.

4.2. TIG LIFT Welding

1. **Select TIG LIFT Mode:** Use the selector switch on the front panel to choose 'TIG LIFT'.
2. **Prepare TIG Torch:** Ensure a sharpened tungsten electrode is correctly installed in the TIG torch.
3. **Gas Flow:** Open the gas valve on the TIG torch and adjust the gas flow rate from your argon cylinder regulator.
4. **Adjust Current:** Use the large red knob to set the desired welding current.
5. **Initiate Arc (Lift Arc):** Gently touch the tungsten electrode to the workpiece and then lift it slightly. The machine will sense the contact and initiate a stable arc without high-frequency interference.
6. **Weld:** Maintain a consistent arc length and feed filler rod if necessary.
7. **Terminate Arc:** Slowly pull the torch away from the weld puddle to terminate the arc. Maintain gas flow for a few seconds after welding to protect the hot tungsten and weld puddle.

5. Maintenance

Regular maintenance ensures the longevity and safe operation of your welding station.

- **Cleaning:** Periodically clean the exterior of the machine with a dry cloth. Use compressed air to blow out dust and debris from the ventilation openings. Ensure the machine is disconnected from power before cleaning.
- **Cable Inspection:** Regularly inspect all welding cables, electrode holders, earth clamps, and the TIG torch for damage, cuts, or loose connections. Replace any damaged components immediately.
- **Storage:** Store the welding machine in a clean, dry environment, away from excessive dust and moisture. Use the provided Stanley tool box for organized storage of accessories.



Figure 5.1: Stanley Tool Box. This image shows the yellow and black Stanley branded toolbox, ideal for storing the welding station and its accessories.

6. Troubleshooting

This section addresses common issues you might encounter during operation.

Problem	Possible Cause	Solution
Machine does not power on	No power supply; Faulty power cable; Internal fault	Check power outlet and circuit breaker; Inspect power cable; Contact qualified service personnel.
No welding arc (MMA)	Poor earth connection; Wet or incorrect electrode; Insufficient current setting; Faulty cables	Ensure earth clamp is on clean metal; Use dry, correct electrode; Increase current; Check cables for damage.
Arc extinguishes frequently (MMA)	Incorrect arc length; Low current; Electrode sticking	Maintain proper arc length; Increase current; Utilize Anti-stick and Arcforce features.
Poor TIG arc initiation (Lift Arc)	Contaminated tungsten; Incorrect gas flow; Poor earth connection	Regrind or replace tungsten; Adjust gas flow; Ensure good earth connection.
Overheating indicator active	Exceeded duty cycle; Blocked ventilation	Allow machine to cool down; Ensure clear ventilation paths.

7. Specifications

Technical specifications for the Stanley Power 185 Arc Welding Station (Model 460187).

Feature	Specification
Model Number	460187
Welding Processes	MMA, TIG LIFT
Input Voltage	230V / 50Hz
Power Source Type	AC
Wattage	6 KW
Welding Current (MMA)	30 - 160 A
Electrode Diameter	Ø1.6 to 4 mm
Duty Cycle (20°C)	30% at 160 A
Duty Cycle (40°C, EN60974-1)	15% at 160 A
Protection Class	IP21S
Product Dimensions	37 x 21 x 32 cm
Item Weight	9.8 kg
Manufacturer	Mecafer

8. Warranty and Support

For warranty information, please refer to the documentation provided at the time of purchase or contact your retailer. Stanley products are designed for reliability and performance.

Should you require technical assistance or have questions not covered in this manual, please contact Stanley customer support or your authorized service center. Always provide the model number (460187) when seeking support.