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› STANLEY FATMAX EVO 160 MMA + TIG Welding Machine User Manual

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Model: STANLEY FATMAX EVO 160

INTRODUCTION

The STANLEY FATMAX EVO 160 is a versatile inverter welding machine designed for both MMA (Manual Metal Arc) and TIG LIFT welding processes. It is capable of welding electrodes on stainless steel, cast iron, and steel, accommodating electrode diameters from 1.6 mm to 4 mm, and material thicknesses up to 10 mm. This machine features a high duty cycle of 160 Amps at 60%, making it suitable for continuous daily welding tasks. Its compact and robust design, coupled with advanced features like ANTI-STICK technology and Hot Start, ensures ease of use and professional welding quality.



Figure 1: The STANLEY FATMAX EVO 160 welding machine shown with its included accessories, including the welding mask, ground clamp, electrode holder, and wire brush.

SAFETY INSTRUCTIONS

Always prioritize safety when operating welding equipment. Failure to follow these instructions may result in serious injury or damage to the equipment.

- **Eye and Face Protection:** Always wear a welding helmet with appropriate shade settings to protect your eyes and face from intense light, UV radiation, and sparks.
- **Body Protection:** Wear flame-resistant clothing, welding gloves, and sturdy footwear to protect against burns, sparks, and electrical shock.
- **Ventilation:** Ensure adequate ventilation in the work area to disperse welding fumes, which can be hazardous if inhaled.
- **Fire Prevention:** Keep a fire extinguisher nearby. Remove all flammable materials from the welding area. Sparks and hot metal can travel.

- **Electrical Safety:** Ensure the welding machine is properly grounded. Do not operate in wet conditions. Inspect cables for damage before each use.
- **Workpiece Safety:** Secure the workpiece properly before welding. Ensure the ground clamp has good electrical contact.
- **Children and Bystanders:** Keep children and unauthorized persons away from the welding area.
- **Maintenance:** Disconnect power before performing any maintenance or cleaning.

PACKAGE CONTENTS

Upon unpacking, verify that all the following components are included:

- STANLEY FATMAX EVO 160 Inverter Welding Machine
- Welding Hand Mask (basic protection)
- Ground Clamp with Cable
- Electrode Holder with Cable
- Hammer Brush (for slag removal)



Figure 2: The standard accessories included with the welding machine: a basic hand mask, ground cable, electrode cable, and a hammer brush.

SETUP

1. Initial Inspection

Before connecting the machine, inspect it for any visible damage from shipping. Ensure all cables are intact and connections are secure.

2. Power Connection

Connect the machine's power cord to a suitable power outlet. The machine operates on 230V AC. Ensure the power source is capable of providing the necessary wattage (7 KW).



Figure 3: Rear view of the welding machine, highlighting the main power switch and power cable connection point.

3. Electrode Holder Connection (MMA)

Insert the DINSE connector of the electrode holder cable into the positive (+) terminal on the front panel of the welding machine. Twist to secure.

4. Ground Clamp Connection

Insert the DINSE connector of the ground clamp cable into the negative (-) terminal on the front panel of the welding machine. Twist to secure. Attach the ground clamp firmly to the workpiece or welding table, ensuring good electrical contact.

OPERATING INSTRUCTIONS

1. Powering On/Off

To power on the machine, flip the main power switch located on the rear panel to the 'ON' position. The indicator light on the front panel will illuminate. To power off, flip the switch to the 'OFF' position.

2. MMA Welding (Stick Welding)

This mode is used for welding with coated electrodes.

1. **Select Mode:** Ensure the switch on the control panel is set to 'MMA'.
2. **Insert Electrode:** Securely insert the appropriate electrode into the electrode holder.
3. **Set Amperage:** Adjust the amperage knob on the front panel according to the electrode type and diameter, and the material thickness. The machine supports electrodes from 1.6 mm to 4 mm.
4. **Start Welding:** Strike the electrode against the workpiece to initiate the arc. The Hot Start feature assists with easy arc ignition. The ANTI-STICK feature prevents the electrode from sticking to the workpiece.
5. **Maintain Arc:** Maintain a consistent arc length and travel speed for optimal weld quality.



Figure 4: Front control panel of the welding machine, showing the amperage adjustment knob, mode selection switch (TIG LIFT/MMA), and indicator lights. (Note: Image shows EVO 200, but controls are similar for EVO 160).

3. TIG LIFT Welding

This mode provides a cleaner weld and is suitable for thinner materials. A TIG torch (sold separately) is required for this function.

1. **Connect TIG Torch:** Connect the TIG torch to the appropriate terminals on the machine (refer to TIG torch manual for specific connections).
2. **Select Mode:** Set the switch on the control panel to 'TIG LIFT'.
3. **Set Amperage:** Adjust the amperage knob as required for your TIG welding application.
4. **Initiate Arc:** Gently touch the tungsten electrode to the workpiece and then lift it slightly to initiate the arc. This 'lift-arc' method prevents tungsten contamination.
5. **Weld:** Proceed with TIG welding, maintaining proper torch angle and filler rod technique if applicable.

MAINTENANCE

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

- **Cleaning:** Periodically clean the machine's exterior with a dry cloth. Use compressed air to blow out dust and debris from the ventilation openings. Ensure the machine is unplugged before cleaning.
- **Cable Inspection:** Regularly inspect all welding cables, electrode holder, and ground clamp for cuts, cracks, or loose connections. Replace damaged components immediately.
- **Storage:** Store the welding machine in a dry, clean, and well-ventilated area, away from direct sunlight and extreme temperatures.
- **Fan Vents:** Ensure the cooling fan vents are not obstructed to prevent overheating.

TROUBLESHOOTING

Refer to the table below for common issues and their potential solutions.

Problem	Possible Cause	Solution
Machine does not power on.	No power supply; power switch off; faulty power cord.	Check power outlet; ensure power switch is ON; inspect power cord for damage.
Arc is difficult to strike or maintain.	Incorrect amperage setting; poor ground connection; damp electrode; worn electrode.	Adjust amperage; ensure ground clamp has good contact; use dry electrodes; replace electrode.
Electrode sticks to workpiece (MMA).	Low amperage; improper arc length; electrode type.	Increase amperage; adjust arc length; ensure ANTI-STICK feature is active.
Machine overheats and shuts down.	Exceeded duty cycle; obstructed ventilation; high ambient temperature.	Allow machine to cool down; clear ventilation openings; operate in a cooler environment.
Poor weld quality.	Incorrect settings; improper technique; contaminated workpiece.	Adjust amperage/voltage; refine welding technique; clean workpiece thoroughly.

SPECIFICATIONS

Feature	Detail
Model Number	STANLEY FATMAX EVO 160

Feature	Detail
Manufacturer	Stanley Fatmax
Welding Processes	MMA (Manual Metal Arc), TIG LIFT
Input Voltage	230 Volt (AC)
Wattage	7 KW
Output Current	160 Amps (at 60% duty cycle)
Electrode Diameter	1.6 mm to 4 mm
Welding Thickness	1.5 mm to 10 mm
Material	Steel (for casing)
Item Weight	5 Kilograms
Display Type	Digital
Included Components	Welding hand mask, ground cables, electrode holder, hammer brush

WARRANTY AND SUPPORT

Warranty Information

The STANLEY FATMAX EVO 160 welding machine comes with a **2-year warranty** for spare parts availability and duration within the EU. Please retain your proof of purchase for warranty claims.

Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact your retailer or the official Stanley customer support. Refer to the product packaging or the Stanley website for specific contact details in your region.