

## YESWELDER MIG-250 PRO

# YESWELDER MIG-250 PRO Aluminum MIG Welder User Manual

Model: MIG-250 PRO

## 1. INTRODUCTION

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Thank you for choosing the YESWELDER MIG-250 PRO Aluminum MIG Welder. This 6-in-1 multiprocess welding machine is designed for versatility and performance, offering MIG, Pulsed MIG, Flux Core, Spool Gun MIG, Lift TIG, and Stick welding capabilities. This manual provides essential information for safe operation, setup, maintenance, and troubleshooting to ensure optimal performance and longevity of your welding machine.



Figure 1.1: The YESWELDER MIG-250 PRO Aluminum MIG Welder.

## 2. SAFETY INFORMATION

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Always prioritize safety when operating welding equipment. Read and understand all safety warnings and instructions before use. Failure to do so may result in serious injury or death.

- **Electric Shock Can Kill:** Do not touch live electrical parts. Wear dry welding gloves and protective clothing. Insulate yourself from work and ground.
- **Fumes and Gases Can Be Dangerous:** Keep your head out of the fumes. Use enough ventilation or exhaust at the arc to keep fumes and gases away from the breathing zone.
- **Arc Rays Can Burn Eyes and Skin:** Wear a welding helmet with a proper shade of filter to protect your face and eyes when welding or watching. Wear appropriate eye protection with side shields.
- **Fire and Explosion Hazard:** Protect yourself and others from flying sparks and hot metal. Remove all flammables within 35 feet (10.7 m) of the welding area.
- **Hot Parts Can Cause Severe Burns:** Do not touch hot parts with bare hands. Allow cooling time before handling.

### 3. PRODUCT FEATURES

The MIG-250 PRO is engineered with advanced features for superior welding performance:

- **Multi-Functionality:** Capable of MIG, Pulsed MIG, Flux Core, Spool Gun MIG, Lift TIG, and Stick welding. Dynamic control allows setting arc characteristics from crisp to soft.
- **Advanced Digital Display:** A state-of-the-art digital display provides crystal-clear operation monitoring and precise feedback, enhancing visual acuity and streamlining workflow.
- **Synergic & Manual MIG:** Synergic control automatically adjusts wire feed speed to optimal voltage, ideal for beginners. Manual MIG offers full customization for professionals.
- **IGBT Inverter Technology:** Delivers a robust 250Amp maximum output with reliable performance and steadfast stability for demanding applications.
- **Wide Welding Wire Compatibility:** Supports various wire types including .023"/.030"/.035" solid/SS wire, .023"/.030"/.035" flux core wire, and .035"/.045" aluminum wire for spool gun MIG welding.
- **Safety Protection:** Features automatic protection against over-current, over-voltage, and over-heating, reducing energy consumption and prolonging device life.



Figure 3.1: The MIG-250 PRO offers 6 welding processes.



Figure 3.2: Detailed view of the upgraded large LED digital display.

## 4. PACKAGE CONTENTS & ACCESSORIES

Verify that all items are present and undamaged upon unpacking:

- 1 x MIG-250 PRO Welder
- 1 x Work Clamp
- 1 x Electrode Holder
- 1 x Groove Drive Roller
- MIG Gun Tips
- 1 x MIG Gun
- 1 x Gas Hose

- 1 x Graphene Feeding Liner



Figure 4.1: All accessories included with the MIG-250 PRO.

## 5. SETUP

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Follow these steps to set up your YESWELDER MIG-250 PRO:

### 5.1 Machine Overview

Familiarize yourself with the machine's components:

1. Digital Panel
2. Euro Torch Socket
3. Wire Drive Polarity Lead
4. Spool Gun Socket
5. Output Terminal (+)
6. Output Terminal (-)
7. Power Switch
8. Gas Inlet
9. Input Power Cable
10. Fan

# MACHINE OVERVIEW

- |                            |                      |
|----------------------------|----------------------|
| 1 Digital Panel            | 6 Output Terminal(-) |
| 2 Euro Torch Socket        | 7 Power Switch       |
| 3 Wire Drive Polarity Lead | 8 Gas Inlet          |
| 4 Spool Gun Socket         | 9 Input Power Cable  |
| 5 Output Terminal(+)       | 10 Fan               |



Figure 5.1: Front and rear view of the MIG-250 PRO with labeled components.

## 5.2 Panel Introduction

Understand the controls on the digital panel:

1. Wire Diameter Selector Button
2. 2T / 4T Selector Button
3. Weld Mode Selector Button
4. Spool Gun Switch Button
5. Feed Wire Button
6. Gas Selector Button
7. Left Value Knob/Button
8. Right Value Knob/Button
9. Digital Panel Display



Figure 5.2: Detailed view of the control panel and digital display.

### 5.3 Connecting Power and Gas

Connect the input power cable to a 220V power source. For MIG welding, connect your gas cylinder to the gas inlet on the rear of the machine using the provided gas hose.

### 5.4 Loading Welding Wire

Open the wire feed compartment. Place the welding wire spool onto the spindle, ensuring it rotates freely. Thread the wire through the drive roller and into the MIG gun liner. Select the appropriate groove on the drive roller for your wire diameter. The machine supports both 2LB and 10LB welding wire spools.



Figure 5.3: Illustration of compatible welding wire spool sizes.

## 6. OPERATING INSTRUCTIONS

The MIG-250 PRO offers multiple welding processes. Select the desired mode using the Weld Mode Selector Button on the control panel.

### 6.1 Welding Modes Overview



Figure 6.1: Examples of Flux Core, Gas MIG, Spool Gun, Lift TIG, and Stick welding.



Figure 6.2: Setup configurations for MIG, Lift TIG, Spool Gun, Flux-Core, and Stick welding.

## 6.2 Synergic MIG & Manual MIG

The MIG-250 PRO offers both Synergic and Manual MIG modes. In Synergic mode, the machine automatically sets optimal voltage based on your selected wire feed speed, simplifying operation for consistent welds. Manual mode provides full control over voltage and wire feed speed for experienced users.



Figure 6.3: Demonstrating Manual MIG and Synergic MIG capabilities.

## 6.3 Stick Welding

For Stick welding, connect the electrode holder and work clamp to the appropriate terminals. The machine features Hot Start, Arc Force, VRD (Voltage Reduction Device), and Anti-Stick functions for enhanced performance and safety.



Figure 6.4: Key features for Stick welding, including Hot Start and Anti-Stick.

### 6.4 Spool Gun MIG Welding

The MIG-250 PRO is compatible with a spool gun (sold separately) for aluminum welding. Connect the spool gun to the dedicated socket and select the Spool Gun mode.



Figure 6.5: The MIG-250 PRO is compatible with spool guns for aluminum welding.

## 6.5 Supported Materials

The MIG-250 PRO is suitable for welding various materials, including Mild Steel, Cast Iron, Square Pipe, Stainless Steel, Sheet Metal, and Aluminum.

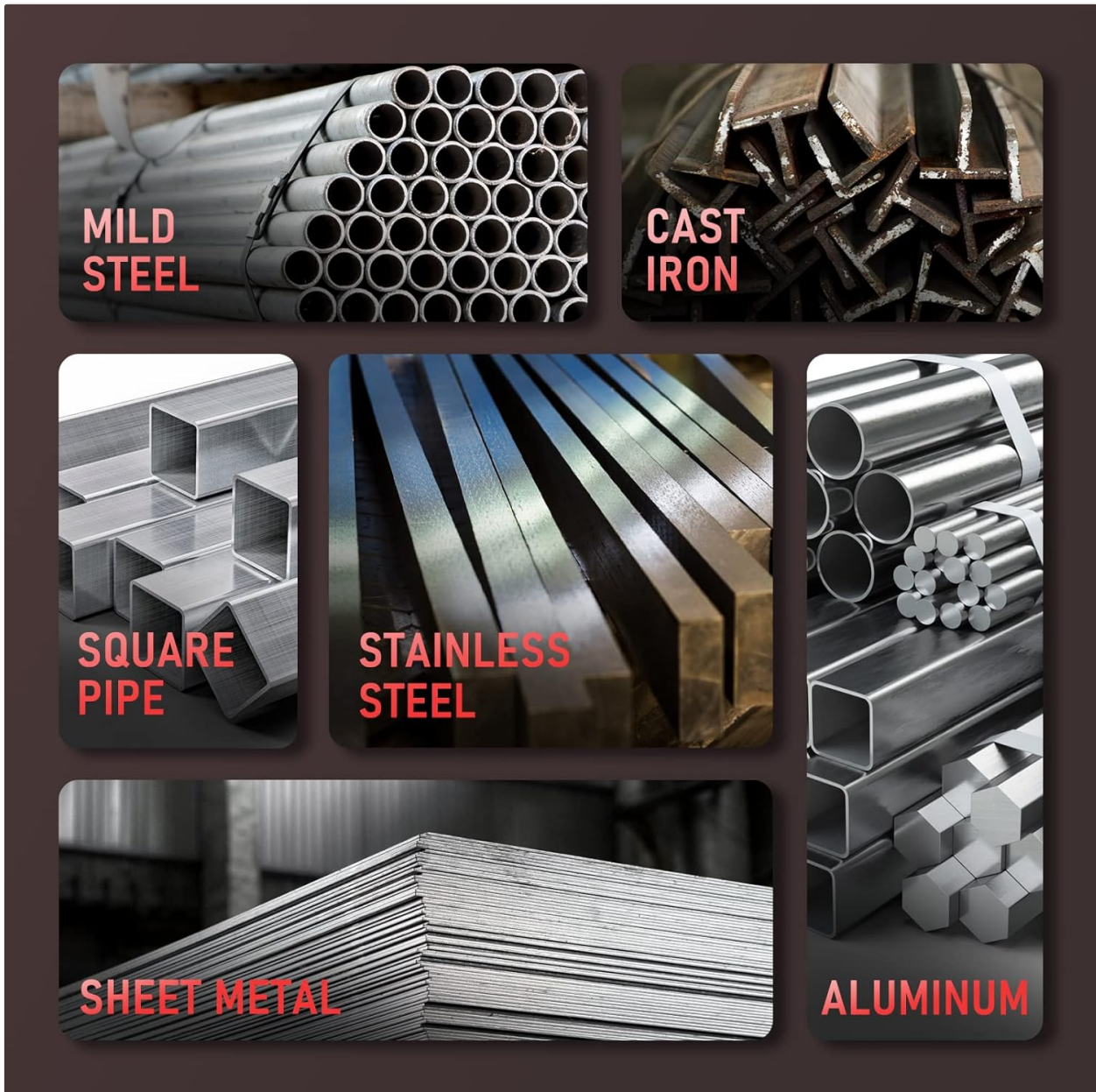


Figure 6.6: Examples of materials that can be welded with the MIG-250 PRO.

## 6.7 Official Product Video

Video 6.1: Official product video demonstrating the features and capabilities of the YESWELDER MIG-250 PRO Aluminum MIG Welder.

## 7. MAINTENANCE

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

- **Cleaning:** Regularly clean the machine's exterior and ventilation openings to prevent dust and debris buildup. Use compressed air to clear internal components if necessary, ensuring the machine is

unplugged.

- **Consumables:** Inspect and replace MIG gun tips, nozzles, and drive rollers as they wear out. Ensure proper wire feeding by checking the liner for kinks or blockages.
- **Connections:** Periodically check all electrical connections, including power cables, work clamp, and electrode holder, for tightness and signs of wear or damage.
- **Cooling Fan:** Ensure the cooling fan is free from obstructions and operating correctly to prevent overheating.



Figure 7.1: Ensure the cooling fan is clean and unobstructed for proper machine operation.

## 8. TROUBLESHOOTING

This section addresses common issues you might encounter with your MIG-250 PRO. For problems not listed here, contact YESWELDER customer support.

Problem	Possible Cause	Solution
No power	Power switch off, loose power cable, circuit breaker tripped	Turn on power switch, check cable connections, reset breaker
No wire feed	Wire spool empty, drive roller tension incorrect, liner clogged	Replace wire, adjust tension, clear liner
Poor arc stability	Incorrect settings, poor ground connection, worn consumables	Adjust voltage/wire speed, ensure good ground, replace tip/nozzle
Overheat protection activated	Exceeded duty cycle, blocked ventilation	Allow machine to cool, clear obstructions from fan/vents

## 9. SPECIFICATIONS

Technical specifications for the YESWELDER MIG-250 PRO:

Attribute	Detail
Model Number	MIG-250 PRO
Manufacturer	YESWELDER
Input Voltage	220 Volts
Item Weight	32.5 pounds
Package Dimensions	20.63 x 15.75 x 13.31 inches
Material	Metal
Cooling Mode	Fan Cooling
Insulation Grade	F
Protection Grade	IP21S

## SPECIFICATION

MODEL: MIG-250PRO		S/N:	
ANSI/IEC STD.60974-1			
	U <sub>1</sub> =220V	40A/16V-250A/26.5V	
		X	60% 100%
		I <sub>2</sub>	250A 193A
		U <sub>2</sub>	26.5V 23.6V
	U <sub>1</sub> =220V	20A/10.8V-250A/20V	
		X	60% 100%
		I <sub>2</sub>	250A 193A
		U <sub>2</sub>	20V 17.7V
	U <sub>1</sub> =220V	20A/20.8V-225A/29V	
		X	60% 100%
		I <sub>2</sub>	225A 174A
		U <sub>2</sub>	29V 26.9V
	U <sub>1</sub> =220V	I <sub>1 max</sub> =34A	I <sub>1 eff</sub> =26.3A
Cooling Mode: Fan Cooling   Insulation Grade: F   IP21S			

Figure 9.1: Comprehensive technical specifications for the MIG-250 PRO.

## DIMENSIONS & WEIGHT

**18.11"**  
**8.46"**  
**13.97"**  
**20.50 lbs**  
**WEIGHT ONLY**

Figure 9.2: Physical dimensions and weight of the MIG-250 PRO.

## 10. WARRANTY AND SUPPORT

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For detailed warranty information and customer support, please refer to the official YESWELDER website or the user guide PDF provided with your product.

A digital version of the user guide can be found here: [YESWELDER MIG-250 PRO User Guide \(PDF\)](#)

The product typically comes with a 30-day return/replacement policy. For specific terms, please consult your purchase documentation.