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› FLARING 175amp MIG Welder User Manual

FLARING FM175

FLARING 175amp MIG Welder User Manual

Model: FM175 | Brand: FLARING

1. INTRODUCTION

This user manual provides essential information for the safe and effective operation of your FLARING 175amp MIG Welder, Model FM175. This versatile 5-in-1 welding machine supports Flux Core MIG, Gas MIG, Lift TIG, Stick (MMA, ARC), and Spool Gun welding modes, offering dual voltage compatibility (120V/240V). Please read this manual thoroughly before operating the machine to ensure proper usage and to maximize its performance and lifespan.



Figure 1.1: The FLARING 175amp MIG Welder (Model FM175) and its comprehensive accessory kit.

2. SAFETY INFORMATION

Welding can be dangerous. It is crucial to follow all safety precautions to prevent injury or damage. Always wear appropriate personal protective equipment (PPE), including a welding helmet with proper shade, flame-resistant clothing, welding gloves, and safety shoes. Ensure adequate ventilation to avoid inhaling fumes. Keep a fire extinguisher nearby. Disconnect power before performing any maintenance or adjustments.

- **Electric Shock:** Can kill. Do not touch live electrical parts. Insulate yourself from work and ground.
- **Fumes and Gases:** Can be hazardous to your health. Keep your head out of the fumes. Use enough ventilation and/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 filter shade to protect your face and eyes when welding or watching. Wear approved safety glasses with side shields under your helmet.
- **Fire and Explosion:** Welding can cause fire or explosion. Keep flammables away from welding area. Have a fire extinguisher readily available.
- **Hot Parts:** Can cause severe burns. Do not touch hot parts with bare hands. Allow cooling time before handling.

SAFETY & RELIABLE



Over Voltage
Protection



Over Current
Protection



Over Load
Protection



Overheating
Protection



Upgrade Faster Heat
Dissipation

Figure 2.1: The welder features multiple built-in protections including over voltage, over current, overload, and overheating protection for enhanced safety.

3. PRODUCT OVERVIEW

3.1 Key Features

- **5-in-1 Multi-function:** Supports Flux Core MIG, Gas MIG, Lift TIG, Stick (MMA, ARC), and Spool Gun welding.
- **Dual Voltage (120V/240V):** Automatic voltage sensing for versatile power input.
- **Large LED Digital Display:** Provides clear readings of voltage, current, and other parameters for improved operational efficiency.
- **Synergic Control MIG:** Auto mode simplifies setup by allowing selection of wire size for quick and easy operation, suitable for both beginners and professionals.
- **High Welding Performance:** Maximum output of 175A, capable of welding mild steel up to 5mm thick. Compatible with .030"/.035" (0.8/0.9mm) flux core wire and .030" (0.8mm) solid core wire. Performs well with 6010, 6011, 7014, and 7018 rods in Stick Welding mode.

- **Enhanced Heat Dissipation:** Features an upgraded fan system for faster heat dissipation, ensuring stable performance.

3.2 Included Components

The FLARING FM175 MIG Welder package includes the following items:

- FM175 MIG Welder Machine
- Air Hose
- Flux Core Wire Spool
- Consumable Set
- MIG Welding Torch
- Electrode Holder with Cable
- Earth Ground Clamp with Cable
- Wire Feed Wheels
- Wrench



4. SETUP

4.1 Unboxing and Initial Inspection

Carefully remove all components from the packaging. Inspect the welder and accessories for any signs of damage during transit. Ensure all listed components are present. Keep the original packaging for future storage or transport.



Figure 4.1: All components included in the FLARING FM-175 package, laid out for inspection.

4.2 Connecting Power

The FM175 supports dual voltage (120V/240V). Connect the power cord to a suitable power outlet. The machine will automatically detect the voltage. Ensure the power source meets the welder's requirements to prevent damage.

4.3 Wire Installation

Proper wire installation is crucial for consistent welding. Open the wire feed compartment. Place the wire spool onto the spindle, ensuring it rotates freely. Thread the wire through the wire feed mechanism, making sure it passes through the correct groove on the wire feed wheel. Secure the wire with the wire pressing wheel. For flux core wire, use .030" or .035" (0.8mm or 0.9mm). For solid core wire, use .030" (0.8mm).

WIRE FEED STRUCTURE



ALIMENTACION DE ALAMBRE ESTABLE Y SUAVE

- | | |
|---|-----------------------|
| 1 Recommended Welding Wire
.030"-.035" | 2 Wire Feeding Wheel |
| 3 Automatic Wire Feed | 4 Wire Pressing Wheel |

Figure 4.2: Detailed view of the wire feed structure, showing the wire spool, wire feeding wheel, automatic wire feed, and wire pressing wheel.

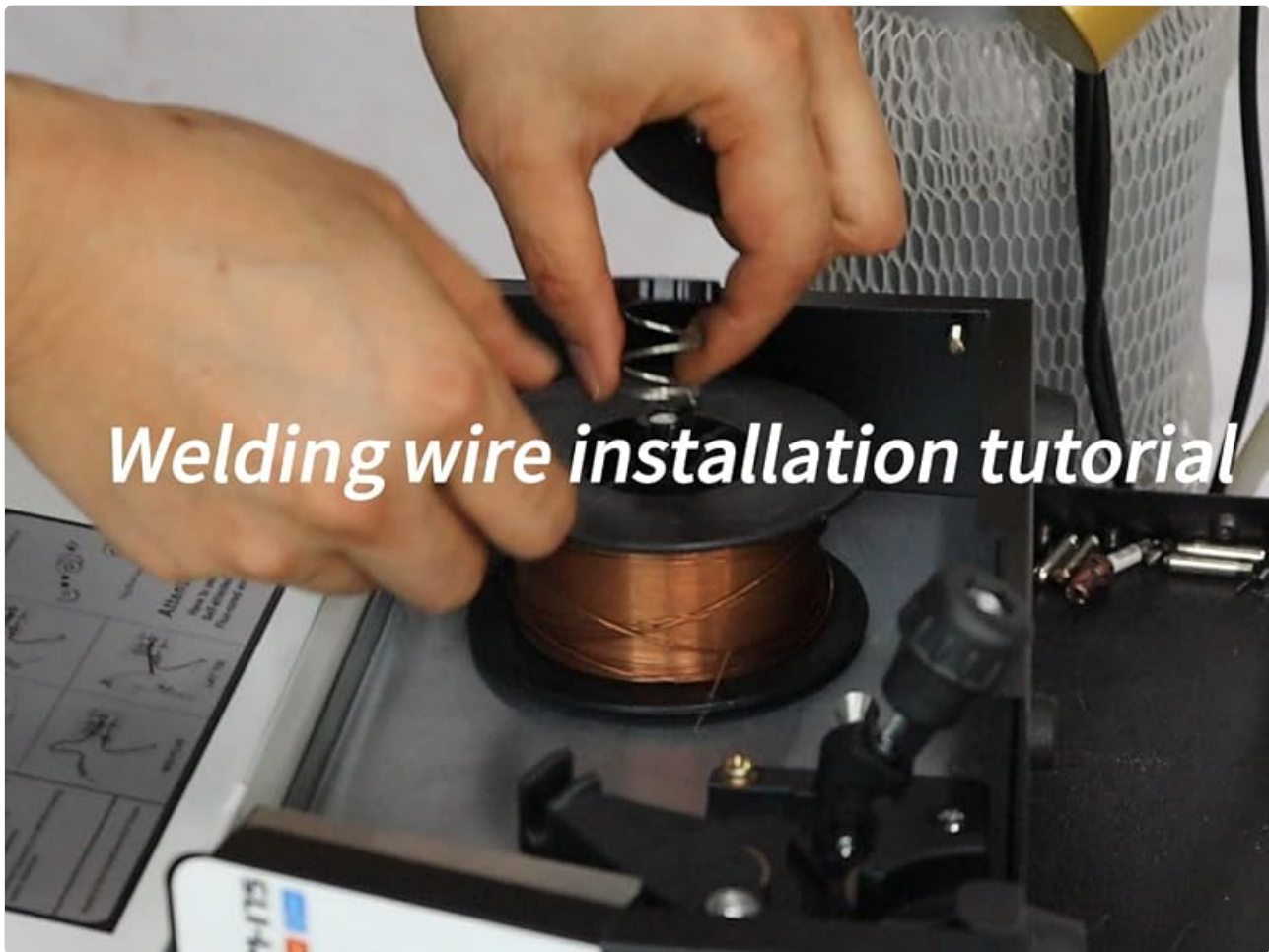


Figure 4.3: Visual guide for installing welding wire into the machine.

4.4 Panel Button Introduction

Familiarize yourself with the control panel for efficient operation:

1. **Function Select:** Choose between MIG, TIG, or Stick welding modes.
2. **AC 120V/240V Input:** Indicates the detected input voltage.
3. **MIG Torch/Spool Gun Switch:** Toggles between MIG torch and optional spool gun.
4. **Current Display:** Shows the welding current in amperes.
5. **OC Light:** Over Current indicator light.
6. **Voltage Adjust:** Knob to adjust welding voltage.
7. **Mode Selection:** Further refine welding parameters within selected function.
8. **Current Adjust Function:** Knob to adjust welding current.

LARGE LED DISPLAY

PROVIDES ACCURATE DATA DISPLAY, EASIER FOR BEGINNERS



Figure 4.4: The large LED display provides accurate data, making it easier for beginners to monitor welding parameters.

PANEL BUTTON INTRODUCTION

1: Function Select

2: AC 120V/240V input

3: MIG Torch/Spool Gun Switch

4: Current Display

5: OC Light

6: Voltage Adjust

7: Mode Selection

8: Current Adjust Function



Figure 4.5: Detailed diagram of the control panel with numbered functions for easy identification.

5. OPERATING MODES

The FLARING FM175 offers five distinct welding modes:



Figure 5.1: Visual representation of the five welding modes supported by the FM175 welder.

5.1 MIG Welding (Gas & Gasless)

MIG welding is ideal for fast and efficient welding of various metals. The FM175 supports both gas-shielded MIG and gasless flux core MIG. For gas MIG, connect a suitable shielding gas cylinder (e.g., CO₂ or Argon/CO₂ mix) to the gas inlet on the machine. For gasless MIG, use flux core wire which contains a fluxing agent to protect the weld puddle from atmospheric contamination.



Figure 5.2: Comparison of MIG Gas and MIG Gasless welding processes.



Figure 5.3: Demonstrating MIG Gas welding with the FLARING FM-175.



Figure 5.4: Demonstrating MIG Gasless welding with the FLARING FM-175.

5.2 Lift TIG Welding

Lift TIG welding provides precise control and high-quality welds, especially on thinner materials. An optional Lift TIG torch is required for this mode. Ensure proper tungsten electrode selection and preparation, and use appropriate shielding gas (100% Argon recommended).



Figure 5.5: Demonstrating Lift TIG welding with the FLARING FM-175.

5.3 Stick (MMA/ARC) Welding

Stick welding is a robust process suitable for outdoor use and on dirty or rusty materials. The FM175 performs well with 6010, 6011, 7014, and 7018 rods. Connect the electrode holder and ground clamp as per standard stick welding procedures.



Figure 5.6: Demonstrating Stick welding with the FLARING FM-175.

5.4 Spool Gun Welding

Spool gun welding is particularly useful for welding softer wires like aluminum, as it minimizes wire feeding issues. An optional spool gun is required for this mode. Refer to the spool gun's specific instructions for setup and operation.



Figure 5.7: Overview of Lift TIG, Stick, and Spool Gun welding capabilities.

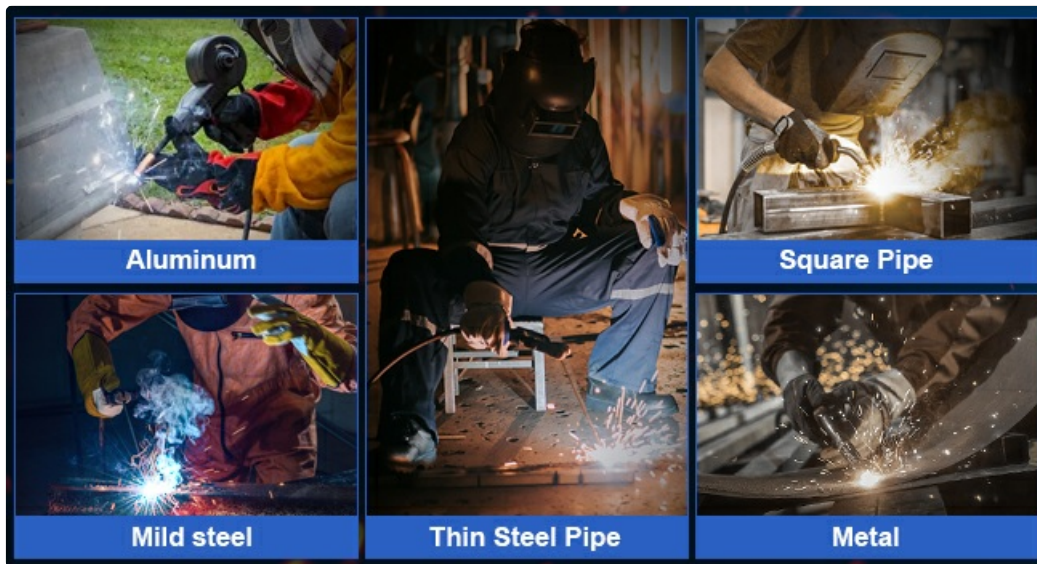


Figure 5.8: Examples of materials and applications suitable for welding with the FM175, including aluminum, square pipe, mild steel, thin steel pipe, and general metalwork.

6. WELDING PERFORMANCE

The FLARING FM175 is designed to deliver consistent and high-quality welds across various applications. Its 175A output allows for effective welding of mild steel plates up to 5mm thick. The synergic control simplifies parameter settings, contributing to clean and strong weld beads.

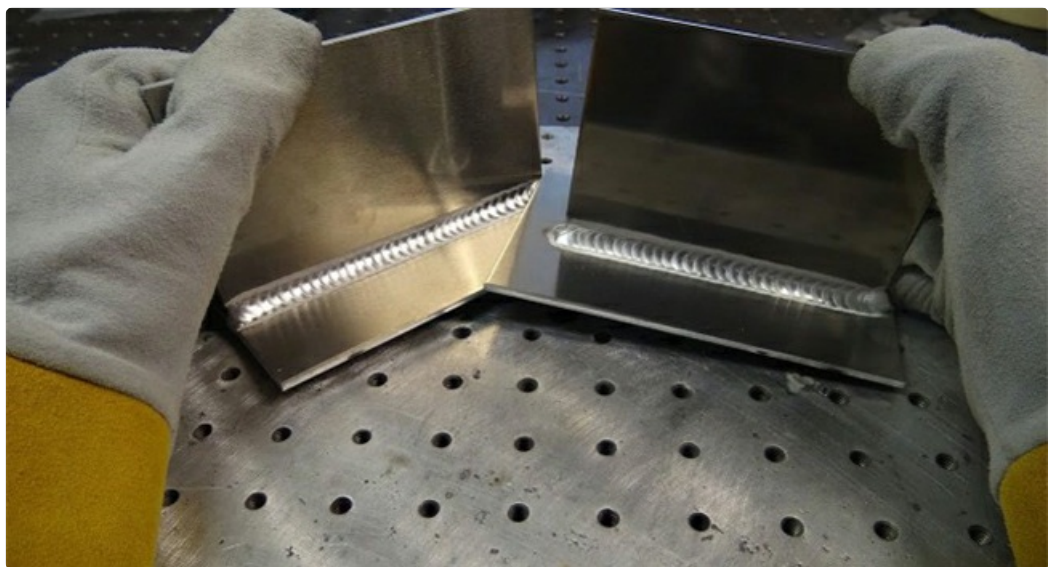


Figure 6.1: Examples of clean and strong weld beads achieved with the FLARING FM175.

FM175 GREAT WELDING PERFORMANCE



Figure 6.2: A visual comparison highlighting the superior weld quality of the FM175 compared to other welders.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your welding machine. Always disconnect the power supply before performing any maintenance.

- **Cleaning:** Periodically clean the exterior of the machine with a dry cloth. Use compressed air to blow out dust and debris from the internal components and cooling vents.
- **Wire Feed System:** Inspect the wire feed rollers and liner for wear or blockages. Clean any accumulated debris to ensure smooth wire feeding.
- **Torch and Cables:** Check the welding torch, electrode holder, and ground clamp for damage, frayed cables, or loose connections. Replace worn parts as necessary.
- **Consumables:** Regularly inspect and replace worn contact tips, nozzles, and diffusers on the MIG torch. For TIG, check tungsten electrodes. For Stick, ensure proper electrode storage.
- **Storage:** Store the welder in a clean, dry environment, away from excessive dust, moisture, and extreme temperatures.

8. TROUBLESHOOTING

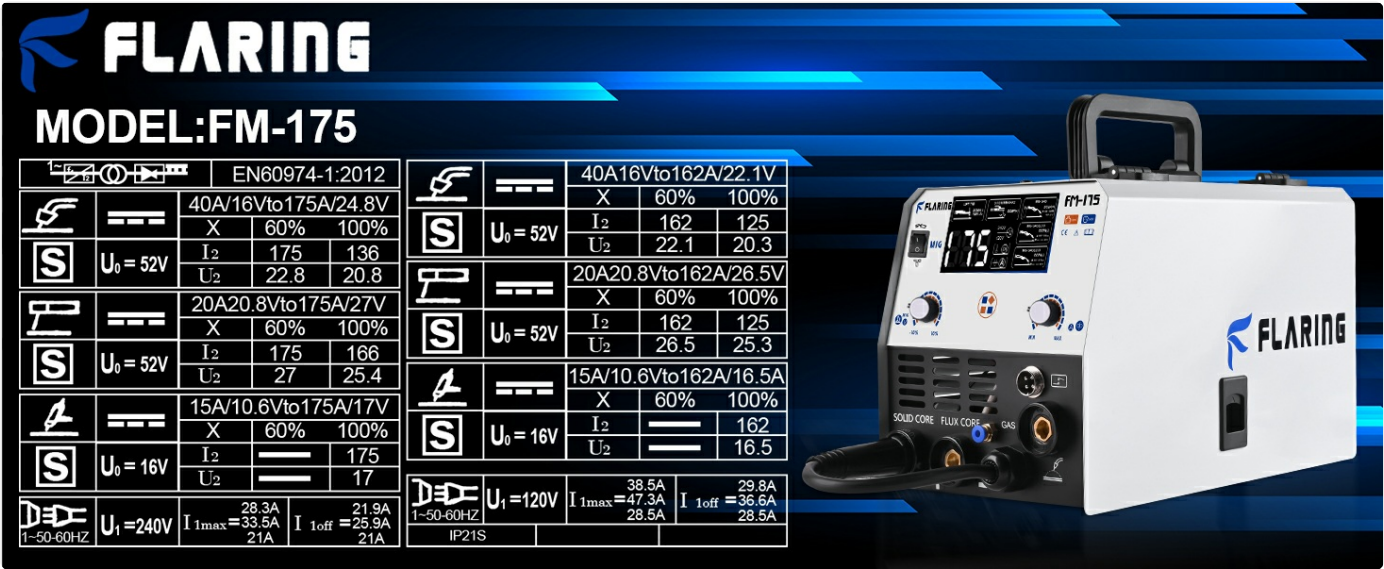
If you encounter issues with your FLARING FM175 welder, refer to the following common troubleshooting tips. For more complex problems, contact FLARING customer support.

Problem	Possible Cause	Solution
No Power	Power cord disconnected, circuit breaker tripped, faulty outlet.	Check power connections, reset breaker, try a different outlet.
No Arc	Poor ground connection, incorrect settings, worn consumables, wire feed issue.	Ensure ground clamp is on clean metal, verify settings, replace contact tip/nozzle, check wire feed.
Poor Weld Quality	Incorrect voltage/current, improper wire speed, contaminated material, wrong shielding gas.	Adjust settings, clean workpiece, ensure correct gas/wire type.
Overheating (OC Light On)	Exceeded duty cycle, blocked ventilation.	Allow machine to cool down, ensure clear airflow to vents.

9. SPECIFICATIONS

Detailed technical specifications for the FLARING 175amp MIG Welder (Model FM175):

Specification	Value
Brand	FLARING
Model Number	FM175
Item Weight	7.96 pounds
Product Dimensions	12.2 x 5.51 x 9.45 inches
Color	White
Pattern	MIG Welder-5EN-175A-120/240V
Power Source	AC
Voltage	120/240 Volts
Max Output Current	175A
Max Weld Thickness (Mild Steel)	5mm
Compatible Wire Diameter	.030"/.035" (0.8/0.9mm) flux core, .030" (0.8mm) solid core
Compatible Stick Rods	6010, 6011, 7014, 7018
Date First Available	May 15, 2024



ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual

What electrodes should I use and where do I connect the cables for stick welding with the FLARING FM175 welder?

To perform Stick (MMA/ARC) welding with the FLARING FM175, follow these setup instructions:Electrodes (Rods): The machine is compatible with 6010, 6011, 7014, and 7018 welding rods.Connections: Connect the Electrode Holder and the Earth Ground...

[Read full answer](#)

Which 8-pin integrated circuit can replace the ZW3065 in a FLARING FM175 welder?

The ZW3065 is an 8-pin integrated circuit (IC) often used in the control or power supply circuitry of inverter welding machines like the FLARING FM175. While the provided manual does not list internal component...

[Read full answer](#)

Why is my FLARING FM175 welder not creating an arc in gasless MIG mode regardless of the settings?

If your FLARING FM175 is not producing an arc in gasless MIG mode, please check the following troubleshooting steps based on the manual:Check the Ground Connection: Ensure the earth ground clamp is securely attached...

[Read full answer](#)