

FLARING FM155-42CA

FLARING 155Amp MIG Welder User Manual

Model: FM155-42CA | Brand: FLARING

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and effective operation, setup, maintenance, and troubleshooting of your FLARING 155Amp MIG Welder. This versatile 3-in-1 machine supports Gasless MIG, Stick, and Lift TIG welding, designed for various applications from home projects to professional use.

2. SAFETY INFORMATION

Always prioritize safety when operating welding equipment. Failure to follow safety guidelines can result in serious injury or death.

- Wear appropriate personal protective equipment (PPE), including welding helmet, gloves, and protective clothing.
- Ensure adequate ventilation to avoid inhaling welding fumes.
- Keep flammable materials away from the welding area.
- Always disconnect power before performing maintenance or changing accessories.
- Do not operate the welder in wet conditions.
- Consult local safety regulations and standards.

3. PRODUCT OVERVIEW

The FLARING 155Amp MIG Welder (Model FM155-42CA) is a compact and powerful 3-in-1 welding machine. It features a large LED digital display for clear control and easy operation.



Figure 3.1: FLARING 155Amp MIG Welder and included accessories.

3.1 Key Features:

- **3-in-1 Multi-function:** Capable of Gasless MIG, Stick (MMA), and Lift TIG welding. (Note: Lift TIG torch sold separately).
- **High Performance:** Maximum output of 155A, suitable for mild steel up to 4mm (3/20"). Supports 0.8mm, 0.9mm, and 1.0mm flux-cored wire.
- **Large LED Digital Display:** Provides clear readings for welding mode, current, and voltage, enhancing operational efficiency.
- **Portable Design:** Weighs only 12 pounds (5.67 kg) with a convenient handle for easy transport.
- **Advanced Technology:** Incorporates IGBT inverter technology for stable and smooth arc performance, along with overheat/overload protection and efficient cooling.

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3 IN 1 MULTI-FUNCTION WELDER FM-155



Figure 3.2: Illustration of the 3-in-1 multi-function capabilities of the FM-155 welder.



Figure 3.3: Close-up view of the large LED digital display, showing welding parameters.

4. SETUP

4.1 Unpacking and Inspection:

Carefully unpack all components and inspect for any shipping damage. Retain original packaging for future transport or storage.

- 1 x MIG155A Welder
- 1 x MIG Welding Torch (3M)
- 1 x 0.8 Flux Cored Wire (0.5kg)
- 1 x Electronic Holder
- 1 x Brush & Hammer
- 1 x Ground Clamp (2M)
- 4 x Contact tips
- 2 x Gaiser

- 1 x User Manual (this document)



Figure 4.1: All standard accessories included with the FLARING FM155 welder.

4.2 Connecting the Welder:

1. Connect the MIG Welding Torch to the appropriate port on the front panel.
2. Attach the Ground Clamp to the workpiece or welding table, ensuring good electrical contact.
3. For Stick welding, connect the Electronic Holder to the positive terminal and the Ground Clamp to the negative terminal.
4. For Lift TIG welding, connect the TIG torch (sold separately) to the appropriate terminal and the Ground Clamp to the negative terminal.

4.3 Installing Flux-Cored Wire (for MIG Gasless):

The welder features a stable and smooth wire feed structure.

1. Open the wire feed compartment.
2. Place the 0.5kg flux-cored wire spool onto the spindle.

3. Thread the wire through the wire pressing wheel and into the automatic wire feed mechanism.
4. Ensure the wire feeding wheel is correctly sized for the 0.8mm flux-cored wire. The welder supports 0.030" (0.8mm), 0.035" (0.9mm), and 0.040" (1.0mm) flux core wire sizes.
5. Close the compartment.



Figure 4.2: Internal view of the wire feed structure, showing the spool and feeding mechanism.

5. OPERATING INSTRUCTIONS

The FLARING FM155 offers three welding modes: Gasless MIG, Stick (MMA), and Lift TIG. Select the appropriate mode using the controls on the large LED digital panel.

3-IN-1 WIRE FEED STRUCTURE



Figure 5.1: Visual representation of the three welding modes: MMA/Stick, Flux Cored Wire (MIG), and Lift TIG.

5.1 Gasless MIG Welding:

This mode is ideal for welding stainless steel, carbon steel, and thicker steel without the need for external shielding gas, using flux-cored wire.

1. Ensure flux-cored wire is correctly installed (refer to Section 4.3).
2. Select "MIG Gasless" mode on the control panel.
3. Adjust current and voltage settings as required for your material thickness. The machine provides clear digital readouts.
4. Begin welding, maintaining a consistent travel speed and arc length.

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Video 5.1: Demonstration of FLARING FM155 Flux Core MIG Gasless Welding. This video illustrates the process and results of gasless MIG welding with the FM155.

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Video 5.2: Example of MIG Gasless welding on 4mm carbon steel using 0.8mm flux core wire. This video provides a visual guide to

achieving a weld on thicker carbon steel.

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Video 5.3: Example of MIG Gasless welding on 3mm carbon steel using 0.8mm flux core wire. This video demonstrates the welding process on thinner carbon steel.

5.2 Stick (MMA) Welding:

For stick welding, ensure the electronic holder and ground clamp are connected as described in Section 4.2.

1. Insert the appropriate electrode into the electronic holder.
2. Select "Stick/MMA/ARC" mode on the control panel.
3. Adjust the current (amperage) according to the electrode type and material thickness.
4. Strike an arc and maintain a consistent arc length and travel speed for optimal results.

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Video 5.4: Demonstration of FLARING FM155 Stick Welding. This video shows the stick welding process and the resulting weld bead.

5.3 Lift TIG Welding:

For Lift TIG welding, an additional Lift TIG torch is required (sold separately). This mode provides precise control for delicate welding tasks.

1. Connect the Lift TIG torch and ensure proper tungsten electrode installation.
2. Select "Lift TIG" mode on the control panel.
3. Adjust current settings.
4. Initiate the arc by gently touching the tungsten to the workpiece and lifting slightly.

5.4 Welding Samples:

The FLARING FM155 is capable of welding various materials and shapes, including iron blocks, galvanized pipes, round tubes, chairs, stainless steel, and steel frames.

Welding sample



Figure 5.2: Examples of welds performed on different materials and structures, showcasing the versatility of the welder.

6. MAINTENANCE

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

- **Cleaning:** Periodically clean the welder's exterior and ventilation openings to prevent dust and debris buildup. Use a dry, soft cloth.
- **Contact Tips:** Inspect and replace contact tips regularly, especially for MIG welding, to ensure consistent wire feeding and arc stability.
- **Ground Clamp & Cables:** Check the ground clamp and all cables for damage or loose connections before each use.
- **Storage:** Store the welder in a dry, clean environment when not in use.



Figure 6.1: The welder features internal cooling and protection systems to ensure durability and safe operation.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your FLARING 155Amp MIG Welder.

Problem	Possible Cause	Solution
No power to the unit.	Power cord unplugged, circuit breaker tripped, faulty power switch.	Check power connections, reset circuit breaker, contact support if switch is faulty.
Poor arc starting or unstable arc.	Improper ground connection, incorrect settings, worn contact tip (MIG), damp electrodes (Stick).	Ensure solid ground connection, adjust current/voltage, replace contact tip, dry electrodes.
Wire feeding issues (MIG).	Incorrect wire tension, clogged liner, wrong contact tip size, tangled wire spool.	Adjust wire tension, clean/replace liner, use correct contact tip, untangle wire.

Problem	Possible Cause	Solution
Overheat indicator (ER) on.	Exceeded duty cycle, insufficient ventilation.	Allow the machine to cool down, ensure clear airflow around the unit.

8. SPECIFICATIONS

Detailed technical specifications for the FLARING 155Amp MIG Welder (Model FM155-42CA).

Specification	Value
Manufacturer	FLARING
Part Number	FM155
Product Dimensions	30.51 x 14.3 x 17.5 cm
Item Model Number	FM155-42CA
Pattern	MIG Welder-7GEN-155A-120V
Power Source	AC
Voltage	110 Volts
Item Weight	5.67 kg (12 pounds)
Batteries Required?	No
First Available	Aug. 16 2024



Figure 8.1: Detailed specification label for the FLARING FM-155 welder.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact details provided with your purchase documentation or visit the official FLARING website. Keep your purchase receipt as proof of purchase.

