Manuals+
Q & A | Deep Search | Upload

FLARING FM155-42US

FLARING FM155 3-in-1 MIG Welder User Manual

Model: FM155-42US | Brand: FLARING

1. Introduction

This user manual provides detailed instructions for the safe and efficient operation, setup, and maintenance of your FLARING FM155 155Amp 3-in-1 MIG Welder. This versatile machine supports Gasless MIG, Stick, and Lift TIG welding processes, making it suitable for a wide range of applications from home use to professional projects. Please read this manual thoroughly before operating the welder to ensure proper usage and to prevent injury or damage.

2. Safety Information

Welding can be dangerous. Always follow safety precautions to prevent serious injury or death. This section outlines general safety guidelines. Refer to local regulations and industry standards for comprehensive safety practices.

- **Electric Shock Can Kill:** Do not touch live electrical parts. Wear dry welding gloves and protective clothing. Ensure the work area is dry.
- **Fumes and Gases Can Be Dangerous:** Keep your head out of the fumes. Use ventilation or exhaust to remove fumes from the breathing zone.
- **Welding Can Cause Fire or Explosion:** Keep flammables away from the welding area. Have a fire extinguisher readily available.
- **Arc Rays Can Burn Eyes and Skin:** Wear a welding helmet with a proper shade filter. Wear protective clothing (long sleeves, pants, leather gloves).
- **Hot Parts Can Cause Severe Burns:** Allow welded materials to cool before handling. Use insulated gloves and tongs.
- **Always Disconnect Power:** Before servicing or moving the unit, ensure the power supply is disconnected.
- **Proper Grounding:** Ensure the welder is properly grounded according to electrical codes.

3. Package Contents

Upon opening your FLARING FM155 welder package, please verify that all the following items are included:

- 1 x FLARING 155Amp MIG Welder (FM155)
- 1 x MIG Welding Torch (3M cable)
- 1 x 0.8 Flux Cored Wire (0.5kg)
- 1 x Electrode Holder with Cable (2M)
- 1 x Brush & Hammer
- 1 x Ground Clamp with Cable (2M)
- 4 x Contact Tips

- 2 x Gas Nozzles (Gaiser)
- 1 x User Manual (this document)

Figure 3.1: Included accessories with the FLARING FM155 Welder.

4. Product Overview

The FLARING FM155 is a compact and powerful 3-in-1 welding machine designed for versatility and ease of use. It features a large LED digital display for clear parameter adjustments and supports multiple welding processes.

Figure 4.1: Front view of the FLARING FM155 Welder.

4.1 Key Features:

- **3-in-1 Functionality:** Capable of Gasless MIG, Stick (MMA), and Lift TIG welding.
- **High Output:** Maximum 155A output, suitable for welding mild steel up to 4mm (3/20").
- **Large LED Digital Display:** Provides clear readings for welding mode, current, and voltage, enhancing operational clarity.
- **Portable Design:** Weighs only 12 pounds with a convenient handle for easy transport.
- **IGBT Inverter Technology:** Ensures stable arc and efficient performance.

Figure 4.2: The 3-in-1 multi-functionality of the FM155 Welder.

Figure 4.3: Large LED Digital Display for precise control.

5. Setup

5.1 Power Connection

The FLARING FM155 operates on 110V AC power. Ensure your power source meets the voltage requirements and is properly grounded. Use a dedicated circuit if possible to avoid overloading.

5.2 Wire Installation (Gasless MIG)

For Gasless MIG welding, install the flux-cored wire spool. The machine supports 0.030" (0.8mm), 0.035" (0.9mm), and 0.040" (1.0mm) flux core wire sizes. The included wire is 0.8mm (0.5kg).

1. Open the wire feed compartment.
2. Place the wire spool onto the spool retainer. Ensure it rotates freely.
3. Feed the wire through the wire guide and into the drive roller mechanism.
4. Secure the wire with the wire pressing wheel, ensuring proper tension.

5. Close the compartment.
6. Connect the MIG welding torch to the appropriate port on the front panel.

Figure 5.1: Stable and smooth wire feed structure.

5.3 Electrode Holder and Ground Clamp Connection (Stick/Lift TIG)

For Stick welding or Lift TIG (requires an additional TIG torch), connect the electrode holder and ground clamp:

1. Connect the ground clamp cable to the negative (-) terminal on the welder.
2. Connect the electrode holder cable to the positive (+) terminal on the welder.
3. Attach the ground clamp securely to the workpiece or welding table, ensuring good electrical contact.

6. Operating Instructions

The FLARING FM155 offers three welding modes: Gasless MIG, Stick, and Lift TIG. Select the appropriate mode using the controls on the front panel.

Figure 6.1: Multi-functional welding capabilities.

6.1 Gasless MIG Welding

Gasless MIG welding uses flux-cored wire, eliminating the need for external shielding gas. This is ideal for outdoor use or when portability is key.

1. Ensure flux-cored wire is correctly installed (refer to Section 5.2).
2. Select "MIG Gasless" mode on the control panel.
3. Adjust current (Amperage) and voltage settings based on the material thickness and wire diameter. The LED display will guide you.
4. Position the MIG torch at the desired angle (typically 10-15 degrees from vertical) and maintain a consistent stick-out.
5. Press the trigger to initiate the arc and begin welding.

Your browser does not support the video tag.

Video 6.1: Demonstration of Gasless MIG welding on 4mm carbon steel using 0.8mm flux core wire.

Your browser does not support the video tag.

Video 6.2: FLARING FM155 Flux Core MIG Gasless Welding in action.

Your browser does not support the video tag.

Video 6.3: Overview of the 155A MIG Welder Machine during operation.

Your browser does not support the video tag.

Video 6.4: Gasless MIG welding on 3mm carbon steel using 0.8mm flux core wire.

6.2 Stick (MMA) Welding

Stick welding (Manual Metal Arc) is a robust process suitable for various metals and conditions.

1. Connect the electrode holder and ground clamp (refer to Section 5.3).
2. Select "Stick/MMA/ARC" mode on the control panel.
3. Insert the appropriate welding electrode into the electrode holder.
4. Adjust the current (Amperage) based on the electrode type and diameter, and material thickness.
5. Strike the arc by lightly touching and quickly lifting the electrode from the workpiece. Maintain a consistent arc length and travel speed.

Your browser does not support the video tag.

Video 6.5: Demonstration of FLARING FM155 Stick Welding.

6.3 Lift TIG Welding

Lift TIG welding provides precise control and high-quality welds. An additional Lift TIG torch is required (not included).

1. Connect the ground clamp and your Lift TIG torch (not included) to the welder.
2. Select "Lift TIG" mode on the control panel.
3. Adjust the current (Amperage) as needed for your material and tungsten size.
4. Gently touch the tungsten electrode to the workpiece to initiate the arc, then lift slightly to establish the arc.
5. Feed filler rod manually into the weld puddle as you progress.

6.4 Welding Samples

The FLARING FM155 is capable of welding various materials and joint types, including iron block, galvanized pipe, round tube, chair frames, stainless steel, and general steel frames.

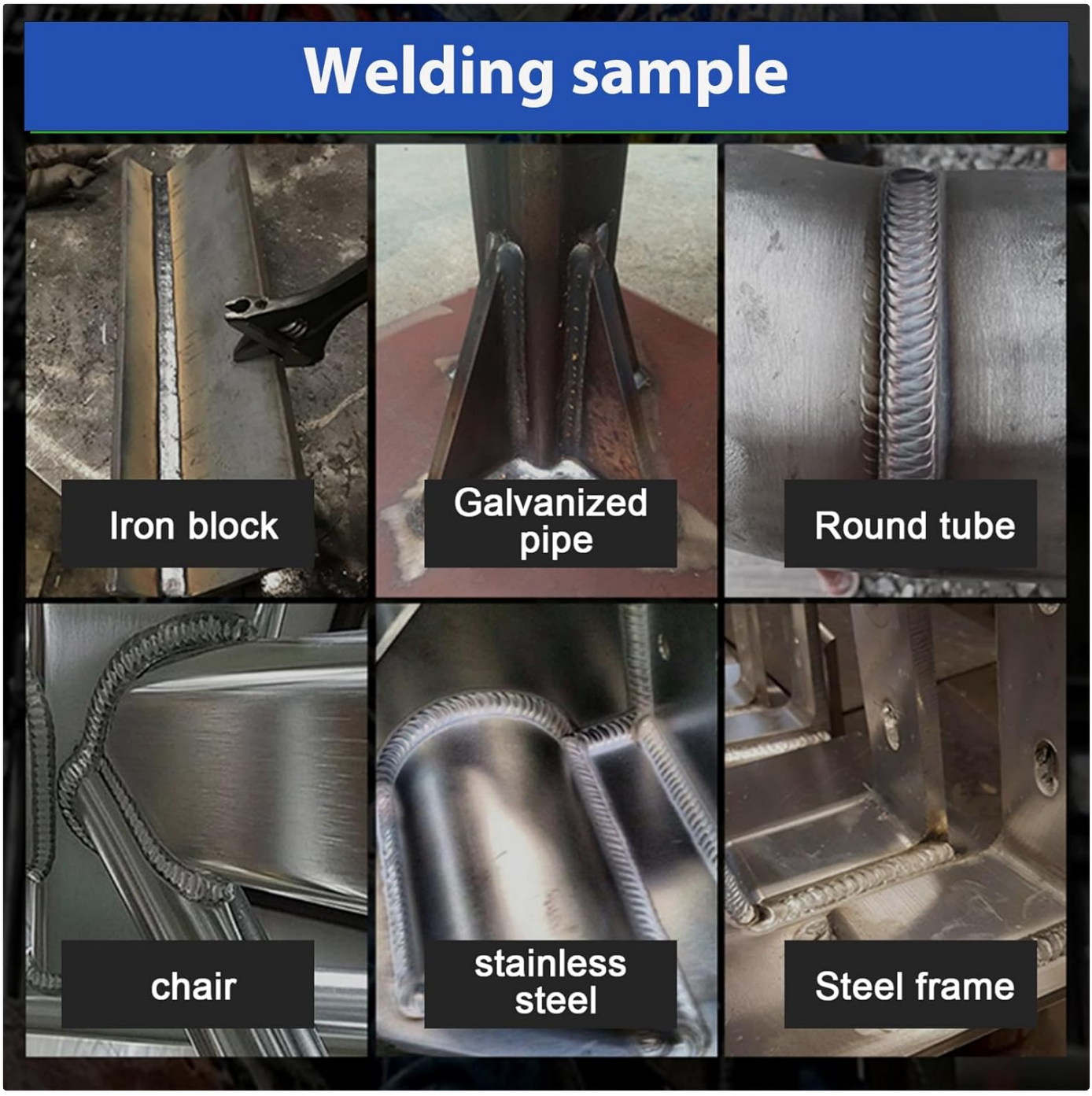

Figure 6.6: Examples of welding applications and results.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your FLARING FM155 welder. Always disconnect power before performing any maintenance.

- **Cleaning:** Periodically clean the exterior of the welder with a dry cloth. Use compressed air to blow out dust and debris from the cooling vents.
- **Wire Feed System:** Inspect the wire feed rollers and guides for wear or debris. Clean as necessary to ensure smooth wire feeding. Replace worn contact tips and gas nozzles regularly.
- **Cable Inspection:** Check all cables (power, MIG torch, electrode holder, ground clamp) for cuts, fraying, or damaged insulation. Replace damaged cables immediately.
- **Storage:** Store the welder in a clean, dry environment, away from excessive dust, moisture, and extreme temperatures.

Figure 7.1: Internal protection and cooling features.

8. Troubleshooting

This section addresses common issues you might encounter with your FLARING FM155 welder. If the problem persists after attempting these solutions, please contact customer support.

Problem	Possible Cause	Solution
No power to the unit.	Power cord unplugged, circuit breaker tripped, faulty power outlet.	Check power connections, reset circuit breaker, try a different outlet.
No arc.	Poor ground connection, incorrect welding mode, wrong settings, faulty torch/electrode holder.	Ensure ground clamp is secure, verify welding mode, adjust current/voltage, inspect torch/holder for damage.
Wire not feeding (MIG).	Wire tangled, drive roller tension incorrect, contact tip clogged, liner clogged.	Check wire spool, adjust drive roller tension, clean/replace contact tip, inspect/clean torch liner.
Poor weld quality.	Incorrect settings, improper technique, contaminated workpiece, wrong wire/electrode.	Adjust settings, practice technique, clean workpiece thoroughly, use correct consumables.
Overheat indicator on.	Exceeded duty cycle, insufficient ventilation.	Allow the machine to cool down. Ensure adequate airflow around the welder.

9. Specifications

Detailed technical specifications for the FLARING FM155 3-in-1 MIG Welder:

Attribute	Detail
Model Number	FM155-42US
Manufacturer	FLARING
Item Weight	14.17 pounds
Product Dimensions	11.42 x 5.63 x 6.89 inches
Power Source	AC
Voltage	110 Volts
Max Output Current	155 Amps
Welding Processes	Gasless MIG, Stick (MMA), Lift TIG
Supported Wire Sizes	0.030" (0.8mm), 0.035" (0.9mm), 0.040" (1.0mm) flux core wire
Max Welding Thickness	Up to 3/20" (4mm) mild steel

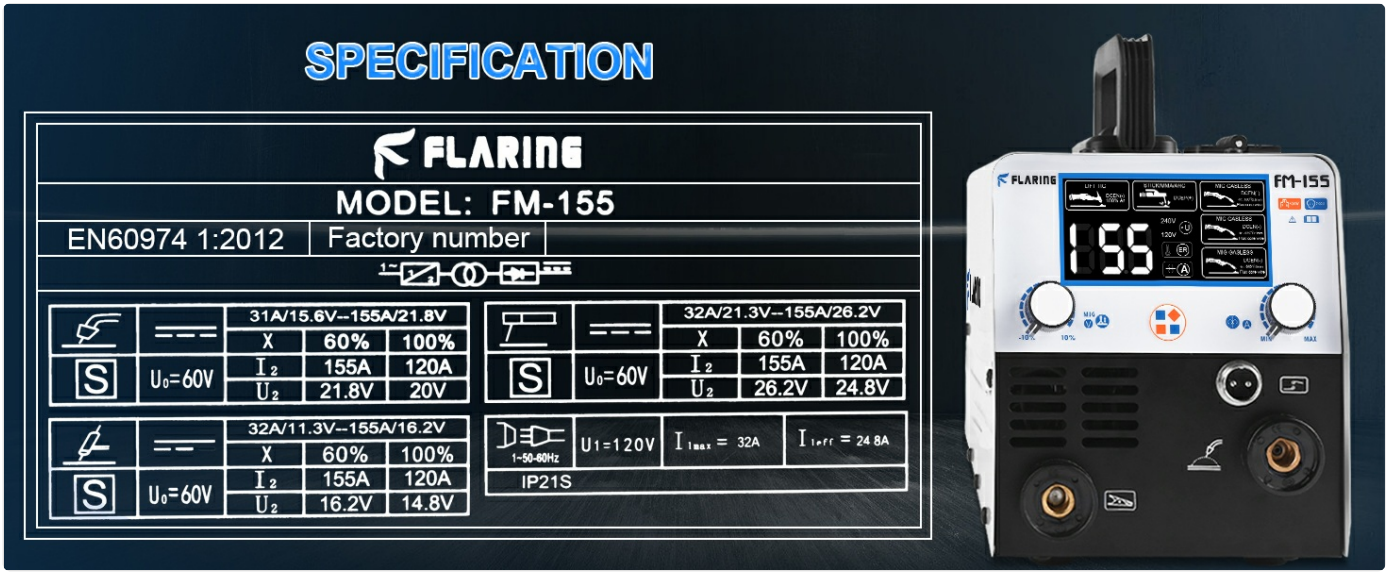

Figure 9.1: Official product specifications and ratings.

10. Warranty and Support

For warranty information, technical support, or service inquiries regarding your FLARING FM155 welder, please refer to the contact details provided on the product packaging or visit the official FLARING website. Keep your purchase receipt as proof of purchase for warranty claims.

You can also visit the FLARING Store on Amazon for more information and support resources.

© 2024 FLARING. All rights reserved.