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› Fablestoryem ARC-120 Handheld ARC Welder User Manual

Fablestoryem ARC-120

Fablestoryem ARC-120 Handheld ARC Welder User Manual

Model: ARC-120

1. INTRODUCTION

Welcome to the user manual for your Fablestoryem ARC-120 Handheld ARC Welder. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your welding machine. Please read it thoroughly before use and retain it for future reference.



This image illustrates the compact and portable design of the handheld welder compared to a larger, traditional welding machine, highlighting its ease of use in narrow spaces.

2. IMPORTANT SAFETY INSTRUCTIONS

To prevent injury and damage to the equipment, always adhere to the following safety guidelines:

- **Electrical Shock Hazard:** Do not touch electrically live parts or electrodes with bare skin or wet clothing. Ensure your work area is dry and free from moisture.
- **Fire Hazard:** Do not allow the machine to get wet with rain or water. Keep flammable materials away from the welding area.
- **Ventilation:** Please make sure the heat dissipation holes are uncovered and unblocked. Good ventilation is of critical importance to the normal performance and service life of the machine.
- **Personal Protective Equipment (PPE):** Always wear appropriate PPE, including a welding helmet with a suitable shade filter, welding gloves, and protective clothing to shield against arc rays, sparks, and hot metal.
- **Fume Inhalation:** Operate the welder in a well-ventilated area to avoid inhaling welding fumes, which can be hazardous to your health.

- **Work Area Safety:** Keep children and unauthorized personnel away from the welding area. Ensure the work area is clean and free of clutter.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- Hand-held Welding Machine x 1
- Ground Clamp x 1
- Steel Brush x 1
- Toolbox x 1
- Protective Masks x 1
- English Manual x 1

4. PRODUCT OVERVIEW

The Fablestoryem ARC-120 is a compact and portable handheld ARC welder designed for various welding tasks. It features advanced IGBT inverter technology for stable output and precise current control, making it suitable for both novices and experienced welders.



This image displays the Fablestoryem ARC-120 handheld welding machine along with its included accessories: a ground clamp, a steel brush, and protective gloves. The welder itself is green and black, featuring a pistol-grip design.

4.1 Key Features

- **IGBT Inverter Technology:** Advanced IGBT inverter technology ensures stable arc and efficient welding performance.
- **Variable Current Adjustment:** A 6-step knob allows for precise output current adjustment from 20-120A, matching the project's requirements.
- **Portable Design:** Weighing only 1.5kg (3.3 lbs), its compact and lightweight design enables easy one-hand operation and transport for various work environments.
- **Rod Compatibility:** Suitable for welding rods of 2.5mm (3/32") diameter and below.
- **Safety Features:** Equipped with over-heating protection, over-current protection, and over-loading protection, complemented by a built-in 360° cooling system for safe and stable operation.

UPGRADED HANDHELD ARC WELDER



20–120A
Output



Advanced IGBT
Technology



Easy to
Start ARC



Handheld
Design



Pure Copper
Transformer



Equipped with
Safety Base



This image highlights the key features of the upgraded handheld ARC welder, including 20-120A output, advanced IGBT technology, easy arc start, handheld design, pure copper transformer, and an equipped safety base.

4.2 Component Identification



This diagram illustrates the main components of the handheld welder. Key parts include the welding rod clamp button, welding rod interface, current power adjustment button, start button, main power switch, and welding ground wire connection.

1. **Welding Rod Clamp Button:** Used to secure and release the welding rod.
2. **Welding Rod Interface:** The port where the welding rod is inserted.
3. **Current Power Adjustment Button:** A rotary knob for selecting the desired welding current (20-120A, 6 steps).
4. **Start Button:** Initiates the welding process.
5. **Main Power Switch:** Turns the welder on or off.
6. **Welding Ground Wire:** The connection point for the ground clamp, which completes the electrical circuit.

5. TECHNICAL SPECIFICATIONS

Feature	Value
Model	ARC-120

Feature	Value
Material	ABS+Metal
Plug Voltage	110V
Rated Output Voltage	24.8V
Output Current	20-120A (6 steps: 20A, 40A, 60A, 80A, 100A, 120A)
Rated Input Power	4.6KW
Enclosure Protection Grade	IP21
Electrode Diameter	φ1.6-φ3.2 (2.5mm/0.098inch recommended)
Power Factor	0.76
Insulation Class	F
Duty Cycle at 40°C/104°F	20%
Working Temperature	-10~40°C / -50~104°F
Efficiency	About 85%
Net Weight	1.5kg / 3.3lbs
Gross Weight	2.4kg / 5.29lbs

6. SETUP INSTRUCTIONS

Follow these steps to prepare your Fablestoryem ARC-120 for operation:

- Power Connection:** Connect the welder to a suitable 110V power outlet. Ensure the power supply matches the welder's voltage requirements.
- Ground Clamp Connection:** Attach the ground clamp securely to the workpiece or a clean, bare metal part of the work table. A good ground connection is essential for safe and effective welding.
- Electrode Installation:** Insert the appropriate welding rod (2.5mm/0.098inch or smaller) into the welding rod interface. Ensure it is firmly clamped.
- Personal Protective Equipment:** Before powering on, always put on your protective masks, welding gloves, and other necessary PPE.

7. OPERATING INSTRUCTIONS

Once the welder is set up and you are wearing appropriate PPE, you can begin welding:

- Power On:** Flip the main power switch to the "ON" position.
- Current Adjustment:** Use the current power adjustment knob to select the desired output current (20-120A). Refer to the table below for recommended settings based on rod size and material thickness.

Step	Output Current	Recommended Rod Diameter
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Step	Output Current	Recommended Rod Diameter
1-Step	20A	1.6mm (1/16")
2-Step	40A	2.0mm (5/64")
3-Step	60A	2.5mm (3/32")
4-Step	80A	2.5mm (3/32")
5-Step	100A	3.2mm (1/8")
6-Step	120A	3.2mm (1/8")

3. **Initiate Arc:** Bring the welding rod into contact with the workpiece to strike an arc. The hot start arc force anti-stick technology assists in easier arc initiation.
4. **Welding Technique:** Maintain a consistent arc length and travel speed for optimal weld quality. Practice on scrap material before working on your main project.
5. **Power Off:** After welding, turn off the main power switch. Allow the machine to cool down before storing.

IDEAL ASSISTANT IN WELDING WORK

Welding Quickly & Efficiently

EXCELLENT WELDING MOLDING



This image demonstrates the effectiveness of the welder, showing examples of clean and efficient welding on various metal surfaces.

2.5MM welding rod WELDING RODS



Continuous welding all day
Can be use for welding **cast iron** and **mild steel**

This image illustrates the types of welding rods compatible with the machine, specifically highlighting 2.5mm rods and its ability to weld cast iron and mild steel.

8. MAINTENANCE

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

- **Cleaning:** Regularly clean the exterior of the welder with a dry cloth. Use the included steel brush to remove slag and spatter from welds.
- **Ventilation:** Ensure the ventilation openings are free from dust and debris. Blocked vents can lead to overheating and reduced efficiency.
- **Cable Inspection:** Periodically inspect all cables and connections for damage, such as cuts, fraying, or loose connections. Replace any damaged cables immediately.
- **Storage:** Store the welder in a dry, clean environment, preferably in its toolbox, when not in use. Protect it from dust and moisture.

9. TROUBLESHOOTING

This section addresses common issues you might encounter. For problems not listed here, please contact customer support.

- **No Power:**

- Check if the power cord is securely plugged into a live 110V outlet.
- Verify the main power switch is in the "ON" position.
- Check for tripped circuit breakers in your electrical panel.

- **Difficulty Striking Arc:**

- Ensure the ground clamp has a good, clean connection to the workpiece.
- Check if the welding rod is properly inserted and firmly clamped.
- Adjust the current setting; a slightly higher current might be needed for easier arc initiation.

- **Poor Weld Quality (e.g., porosity, lack of penetration):**

- Adjust the current setting according to the rod size and material thickness.
- Ensure the workpiece is clean and free of rust, paint, oil, or other contaminants.
- Practice maintaining a consistent arc length and travel speed.

- **Overheating Protection Activated:**

- The welder has an automatic overheating protection system. If it shuts down, allow it to cool down for several minutes.
- Ensure ventilation holes are clear and the ambient temperature is within the operating range (-10~40°C).
- Reduce the duty cycle or welding duration if continuous operation causes frequent overheating.

10. WARRANTY AND CUSTOMER SUPPORT

For warranty information or technical assistance, please refer to the contact details provided with your purchase documentation or visit the official Fablestoryem website. Keep your purchase receipt as proof of purchase for any warranty claims.