REBOOT RBC4000LF

REBOOT RBC4000LF Non-Contact Low-Frequency Plasma Cutter User Manual

Model: RBC4000LF | Brand: REBOOT

1. Introduction

This manual provides essential instructions for the safe and effective operation, setup, and maintenance of your REBOOT RBC4000LF Non-Contact Low-Frequency Plasma Cutter. Please read this manual thoroughly before using the equipment to ensure proper function and to prevent injury or damage.

Figure 1: REBOOT RBC4000LF Plasma Cutter with included torch and consumables.

2. Safety Information

Plasma cutting involves high temperatures, electricity, and compressed air. Always prioritize safety to prevent serious injury or property damage. This section outlines general safety precautions. Refer to local regulations and standards for comprehensive safety guidelines.

- **Personal Protective Equipment (PPE):** Always wear appropriate PPE, including a welding helmet with a suitable shade, flame-resistant clothing, heavy-duty gloves, and safety shoes. Protect bystanders with welding screens.
- **Electrical Safety:** Ensure the machine is properly grounded. Do not operate in wet conditions. Inspect power cables for damage before each use. Disconnect power before performing any maintenance or changing consumables.
- **Fire and Explosion Hazards:** Plasma cutting produces sparks and molten metal. Keep flammable materials away from the work area. Ensure adequate ventilation to disperse fumes. Do not cut containers that have held flammable substances.
- **Fumes and Gases:** Ensure proper ventilation to avoid inhaling hazardous fumes produced during cutting. Use a fume extractor

if necessary.

- **Compressed Air:** Ensure the air compressor is rated for the required pressure and flow. Always use clean, dry air.
- **Work Area:** Keep the work area clean, dry, and well-lit. Ensure stable footing.

3. Product Overview and Key Features

The REBOOT RBC4000LF is a 230V IGBT plasma cutter designed for efficient and precise metal cutting. Its advanced features ensure reliable performance for both professional and DIY applications.

- **Non-Contact Low-Frequency Ignition:** This plasma cutter features an advanced non-contact low-frequency arc ignition system. The torch does not need to touch the metal surface, allowing for clean cuts through rust, paint, or dirt without damaging the workpiece. It is suitable for all conductive metals, including stainless steel, aluminum, copper, brass, and mild steel.
- **Stable 40A Output:** Equipped with a powerful IGBT inverter, the 40A output provides consistent and reliable performance. It supports a maximum cutting thickness of 25mm, with 12mm being optimal for ultra-clean, dross-free cuts. The 25% duty cycle is suitable for light professional tasks and home DIY projects without overheating.
- **Anti-Tripping Upgrade and 1-Button Lock:** The unit includes an enhanced 1-button lock feature (active by default) to prevent common household circuit tripping. For switches ≤ 20A (normal socket circuits), it limits the current to 15-22A (adjustable). For high-performance switches (> 20A/32A), press and hold for 3 seconds to unlock, then adjust current from 15-40A. This ensures safe operation in various electrical environments.
- **Intuitive Digital Display and Pre-installed Air Filter Regulator:** The digital display shows real-time parameters suchs as air pressure (45-65 psi, adjustable), voltage, and amperage. Error codes facilitate quick troubleshooting. The air filter regulator comes pre-installed, reducing setup effort and risk of component loss, making the unit ready for immediate use (a separate air compressor ≥ 750W is required).
- **2T/4T Modes:** Choose between 2T (semi-automatic) for quick, single cuts or 4T (fully automatic) for extended cutting tasks. Both modes reduce hand fatigue, making the unit suitable for both beginners and experienced users.

Figure 2: REBOOT RBC4000LF in operation, illustrating its core features.

4. Setup

Before operating the plasma cutter, ensure all connections are secure and correct.

1. **Unpacking:** Carefully remove the plasma cutter and all accessories from the packaging. Inspect for any shipping damage.
2. **Connect Earth Clamp:** Connect the earth clamp cable to the negative (-) terminal on the front panel of the plasma cutter. Secure the clamp to the workpiece or a sturdy metal workbench that is electrically connected to the workpiece. Ensure a good electrical connection.
3. **Connect Plasma Torch:** Connect the plasma torch cable to the positive (+) terminal on the front panel. Ensure it is securely tightened.
4. **Connect Air Compressor:** The RBC4000LF requires a separate air compressor (recommended ≥ 750W) to operate. Connect the air hose from your compressor to the pre-installed air filter regulator inlet on the back of the unit. Ensure all air connections are tight to prevent leaks.

5. **Power Connection:** Connect the power cable to a suitable 230V power outlet. Ensure the outlet can handle the required amperage.

Figure 3: Pre-installed air regulator connection. Note: Air compressor is not included.

Figure 4: Detailed panel introduction with labeled components for easy identification.

5. Operating Instructions

Follow these steps for safe and effective plasma cutting.

1. **Power On:** Turn on the main power switch located on the back of the unit. The digital display will illuminate.
2. **Adjust Air Pressure:** Use the air filter regulator to set the desired air pressure, typically between 45-65 psi, as indicated on the digital display.
3. **Set Cutting Current:** Use the current adjust knob on the front panel to set the appropriate amperage for your material thickness. The digital display shows the current setting.
4. **Select 2T/4T Mode:**
   - **2T (Semi-Automatic):** Press and hold the torch trigger to initiate the arc and cut. Release the trigger to stop. Ideal for short, quick cuts.
   - **4T (Fully Automatic):** Press and release the torch trigger to start the arc. The arc will remain active until you press and release the trigger again. Suitable for long, continuous cuts to reduce hand fatigue.

5. **Anti-Tripping Lock:** If operating on a circuit ≤ 20A, the 1-button lock is active by default, limiting current to 15-22A. For higher current needs on circuits > 20A/32A, press and hold the 1-button lock for 3 seconds to unlock, then adjust current from 15-40A.
6. **Begin Cutting:** Position the torch nozzle approximately 1/8 inch (3mm) above the workpiece. Press the torch trigger (or press and release for 4T mode) to initiate the pilot arc. Move the torch steadily along the cut line. Maintain a consistent speed for optimal cut quality.
7. **Post-Cut Air Flow:** The unit will continue to flow air for a short period after cutting to cool the torch consumables.

Figure 5: Digital display and 1-button lock feature for circuit protection.

Figure 6: Illustration of 2T and 4T operating modes and cutting thickness capabilities.

6. Maintenance

Regular maintenance ensures optimal performance and extends the lifespan of your plasma cutter.

- **Consumables Inspection:** Regularly inspect the torch consumables (electrode, nozzle, shield cup, swirl ring). Replace them when they show signs of wear or damage to maintain cut quality.
- **Air Filter Regulator:** Periodically check the water trap on the air filter regulator. Drain any accumulated moisture to ensure clean, dry air supply to the torch.
- **Cleaning:** Keep the plasma cutter clean. Use a dry cloth to wipe down the exterior. Ensure cooling vents are free from dust and debris to prevent overheating. Do not use solvents or abrasive cleaners.
- **Cable Inspection:** Inspect all cables (power, torch, earth clamp) for cuts, abrasions, or loose connections. Repair or replace damaged cables immediately.

7. Troubleshooting

This section provides guidance for common issues. For complex problems, contact customer support.

- **No Arc:**
  - Check power supply and connections.
  - Ensure earth clamp has a good connection to the workpiece.
  - Verify air pressure is within the recommended range (45-65 psi).
  - Inspect torch consumables for wear or damage and replace if necessary.
- **Poor Cut Quality:**
  - Check and replace worn torch consumables.
  - Adjust cutting speed and amperage for the material thickness.
  - Ensure proper air pressure and dry air supply.
  - Maintain correct torch standoff distance from the workpiece.
- **Unit Overheating:**
  - Allow the unit to cool down. The duty cycle is 25%.
  - Ensure cooling vents are clear and not obstructed.
  - Reduce cutting amperage or duration.
- **Circuit Tripping:**
  - Verify the 1-button lock setting. For circuits ≤ 20A, the lock limits current. For > 20A/32A circuits, unlock by pressing for 3 seconds to access full current range.
  - Ensure the power supply circuit can handle the load.
- **Error Codes:** The digital display may show error codes. Refer to the specific error code in the full manual (if available) or contact customer support for interpretation and resolution.

8. Specifications

Feature	Detail
Model Number	RBC4000LF
Input Voltage	230V
Technology	IGBT Inverter
Max Cutting Current	40A
Max Cutting Thickness	25 mm
Optimal Cutting Thickness	12 mm (for ultra-clean cuts)
Duty Cycle	25%
Ignition Type	Non-Contact Low-Frequency Pilot Arc
Air Pressure Range	45-65 psi (adjustable)
Air Compressor Requirement	≥ 750W (separate, not included)

Feature	Detail
Dimensions (Package)	44 x 27.5 x 24.5 cm
Weight (Package)	6.5 kg
Power Type	AC/DC

9. Included Components

The following items are typically included with your REBOOT RBC4000LF Plasma Cutter:

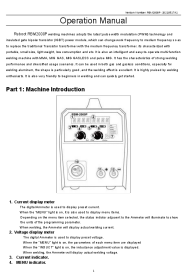
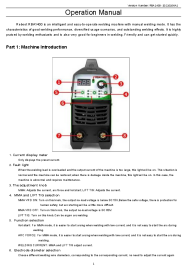
- REBOOT RBC4000LF Plasma Cutter Unit
- PT-40 Plasma Torch (x1)
- Air Pressure Regulator (pre-installed)
- Gas Hose (x1)
- Earth Clamp (x1)
- User Manual
- Consumables Kit

10. Warranty and Support

REBOOT stands by its products with over 13 years of experience in plasma technology. Each component undergoes rigorous testing to ensure reliability. For any operational issues or technical assistance, please contact REBOOT customer service. Specific warranty terms and conditions may vary; please refer to your purchase documentation for details.

Related Documents - RBC4000LF

	Reboot RBC-5000DL Cutting Machine Operation Manual This operation manual provides detailed instructions for the Reboot RBC-5000DL Cutting Machine, covering its features, installation, operation, maintenance, and troubleshooting. It includes technical parameters, safety precautions, and warranty information.
	Reboot RBM1300 Operation Manual: Your Guide to Advanced Welding Discover the capabilities of the Reboot RBM1300 welding machine. This comprehensive manual covers operation, technical specifications, and troubleshooting for MMA, MIG, and LIFT TIG welding modes.

	[Reboot RBM2000P Operation Manual: Welding Machine Guide] Comprehensive operation manual for the Reboot RBM2000P welding machine. Learn about its features, MMA, MIG, and Pulse MIG welding modes, technical specifications, setup, operation, and troubleshooting for efficient welding.
	[Reboot RBM1600 Operation Manual: Your Guide to MMA, MIG, and LIFT TIG Welding] Comprehensive operation manual for the Reboot RBM1600 welding machine. Learn to use MMA, MIG (Gas/Gasless), and LIFT TIG modes with detailed instructions, technical specifications, and troubleshooting tips for optimal performance.
	[Reboot RBM1300 Welding Machine Operation Manual] This manual provides detailed instructions for operating the Reboot RBM1300 welding machine, covering its features, setup, different welding modes (MMA, MIG Gas, MIG Gasless, LIFT TIG), technical specifications, safety precautions, and troubleshooting.
	[Reboot RBA1400 & RBA1400D Welding Machine Operation Manual] Detailed operation manual for Reboot RBA1400 and RBA1400D welding machines. Covers machine introduction, parts, setup, MMA and LIFT TIG modes, technical specifications, troubleshooting, and welding parameters. Includes safety tips and internal component descriptions.