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LOTOS LTP8050CNC

LOTOS LTP8050 CNC 80AMP Plasma Cutter User Manual

Model: LTP8050CNC

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient operation, setup, maintenance, and troubleshooting of your LOTOS LTP8050 CNC 80AMP Plasma Cutter. Please read this manual thoroughly before operating the equipment and retain it for future reference.

2. SAFETY INFORMATION

Plasma cutting involves high voltage, high temperatures, and intense light. Always follow safety precautions to prevent injury or damage to equipment.

- Wear appropriate personal protective equipment (PPE), including welding helmet with proper shade, flame-resistant clothing, gloves, and safety shoes.
- Ensure adequate ventilation to remove fumes and gases.
- Do not operate in damp or wet conditions.
- Keep children and unauthorized personnel away from the work area.
- Disconnect power before performing any maintenance or changing consumables.
- Ensure proper grounding of the equipment.
- Use clean, dry compressed air as specified.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Plasma Cutter Power Supply
- Blow Back 18ft Plasma Cutting Torch
- Ground Cable
- Consumables (starter set)
- 2 Pin & 5 Pin CNC Connectors



Image: The LOTOS LTP8050 CNC Plasma Cutter unit with its plasma torch, ground clamp, power cord, and a set of consumables (nozzles and electrodes) laid out in front.

4. SETUP

4.1 Power and Air Connection

1. Connect the plasma cutter to a single-phase 215–245V power supply. A 50A breaker is recommended.
2. Connect a clean, dry air supply to the pre-installed NPT 1/4" Type-D plug and air filter-regulator. Ensure the air supply provides at least 80 PSI at 4.5 SCFM.
3. Verify the air pressure on the unit's display.

4.2 Torch and Ground Cable Connection

1. Connect the 14-ft plasma torch to the central connector on the front panel of the unit.
2. Attach the ground cable to the appropriate terminal on the front panel.
3. Securely attach the ground clamp to the workpiece, ensuring good electrical contact.

4.3 CNC Interface Connection (Optional)

The LTP8050CNC is equipped with a pre-installed CNC port for Torch Height Control (THC) and ARC OK signals. This non-HF blowback start design reduces electromagnetic interference (EMI) for CNC electronics.

- Connect your CNC plasma table interface to the dedicated CNC port on the rear of the unit using the provided 2-pin and 5-pin connectors.
- Refer to your CNC table's manual for specific wiring instructions for THC and ARC OK signals.



Image: A detailed view of the rear panel of the plasma cutter, highlighting the ARC VOLTAGE OUTPUT (2-pin) and SIGNAL CONTROL (5-pin) ports for CNC integration.

5. OPERATING INSTRUCTIONS

5.1 Power On and Initial Settings

1. Turn on the main power switch located on the rear of the unit.

2. The large LED display will illuminate, showing current settings.
3. Adjust the amperage (20-80A DC) using the control knob on the front panel according to the material thickness and type.
4. Adjust Pilot-Arc Time (6–15 seconds) and Post-Flow (2–10 seconds) as needed for your application. An input-pressure reminder assists in maintaining consistent kerfs and extending torch life.



Image: The front panel of the plasma cutter, featuring a large LED display for monitoring amperage, pilot arc time, post-flow, and air pressure, along with control buttons and an air regulator knob.

5.2 Cutting Techniques

The LTP8050CNC supports both stand-off and drag cutting methods.

- **Stand-off Cutting:** Maintain a consistent gap (typically 1-2mm) between the torch tip and the workpiece. This method requires a steady hand and can result in rougher edges if the gap is not consistent.
- **Drag Cutting:** The torch tip rests directly on the workpiece. This method is easier for beginners, provides better stability, results in fewer burrs, cleaner cut lines, and is ideal for template tracing or freehand cutting. Drag consumables are sold separately.



DRAG CUT READY

Smoothen, more accurate cuts with torch-on-workpiece

STAND-OFF CUTTING

1-2mm



- Requires consistent gap
- Potential for rough edges

DRAG CUTTING



- Easier for beginners
- Cleaner, smoother edges

DRAG CUT ADVANTAGES

- Torch rests on workpiece for better stability
- Fewer burrs and a cleaner cut line
- Ideal for template tracing or freehand cutting

Image: A visual comparison illustrating stand-off cutting, where a small gap is maintained between the torch and workpiece, and drag cutting, where the torch tip directly contacts the workpiece for smoother cuts.

5.3 Material Compatibility and Cutting Capacity

The unit cuts stainless steel, mild/alloy steel, aluminum, and copper with reduced slag and minimal post-processing.

- **Clean Cut:** Up to 1 inch (25mm)
- **Severance Cut:** Up to 1.5 inches

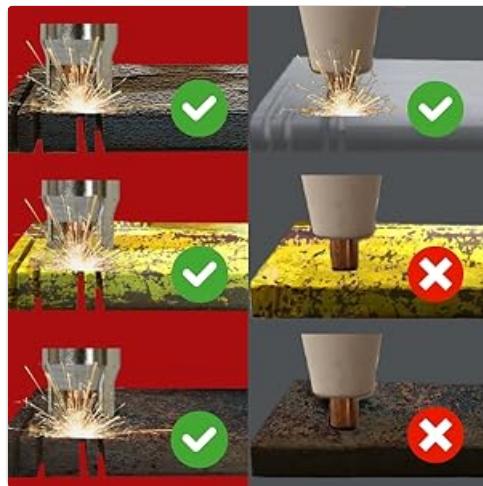


Image: Examples of plasma cutting on different metal surfaces, including clean, painted, and rusty metal, demonstrating the cutter's versatility.

ALL NEW 80 AMP LTP8050 CNC DRAG CUTTING PLASMA CUTTER FOR FAST & PRECISE CUTTING

- Enhanced with NEWLY Designed PC Boards
- Drag Cut Ready
- Cleaner cutting edges with minimal slag
- Enhanced precision for superior cutting results
- Lower Your Costs - with Longer Consumable Life

USA BASED LIFETIME TECHNICAL SUPPORT

- Solve your problem timely
- 30 days money-back
- 1 year new replacement
- 3-year hardware coverage
- Lifetime technical support

15%
 BOOST IN CUTTING SPEED

1" CLEAN CUT

1 1/2" SEVERANCE CUT

Image: The plasma cutter in operation, showing the torch cutting through metal, with text indicating 15-80A DC output, 1" ideal clean cut, and 1 1/2" max severance cut.

6. MAINTENANCE

6.1 Consumables

Regularly inspect and replace torch consumables (nozzles, electrodes, shield cups) as they wear out. Worn consumables can negatively affect cut quality and torch performance. Refer to the consumables section of the full manual for replacement procedures.

6.2 Air System

Ensure your compressed air supply is clean and dry. Periodically drain any moisture from the air filter-regulator and the compressor tank. Moisture in the air line can cause poor cut quality and damage to the torch.

7. TROUBLESHOOTING

This section covers common issues. For detailed troubleshooting, consult the complete product manual.

Problem	Possible Cause	Solution
No arc initiation	Poor ground connection, worn consumables, insufficient air pressure, incorrect amperage setting.	Check ground clamp, replace consumables, verify air pressure, adjust amperage.
Poor cut quality	Worn consumables, incorrect cutting speed, improper air pressure, moisture in air line.	Replace consumables, adjust cutting speed, check air pressure and dryness.
Unit powers on but no output	Internal fault, safety lockout.	Turn off and restart. If problem persists, contact customer support.

8. SPECIFICATIONS

Feature	Detail
Model Number	LTP8050CNC
Input Power	Single-phase 215–245V
Recommended Breaker	50A at 220V
Output Current	20–80A DC
Clean Cut Capacity	Up to 1" (25mm)
Severance Cut Capacity	Up to 1.5"
Air Requirement	≥80 PSI @ 4.5 SCFM (clean, dry air)
Torch Type	Blow Back Plasma Cutting Torch (18ft)
CNC Interface	Pre-installed CNC port (THC & ARC OK output)
Pilot Arc Time Adjustment	6–15 seconds
Post-Flow Adjustment	2–10 seconds
Dimensions (Package)	24 x 15 x 12.6 inches

Feature	Detail
Weight (Package)	39 Pounds

9. WARRANTY AND SUPPORT

LOTOS Technology provides comprehensive support for its products.

- **Warranty:** 3-year hardware coverage.
- **Returns:** 30-day money-back guarantee.
- **Replacement:** 1-year new replacement policy.
- **Technical Support:** Lifetime technical support is available.

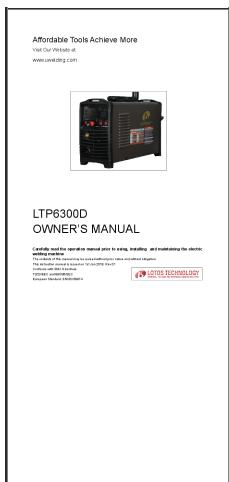
For assistance, please contact LOTOS Technology customer service. Contact information can typically be found on the official LOTOS website or in the full product manual.



Image: A customer service representative smiling, symbolizing the availability of US-based technical support.

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Related Documents - LTP8050CNC



LOTOS LTP6300D Plasma Cutter Owner's Manual

Comprehensive owner's manual for the LOTOS LTP6300D plasma cutter, detailing safety precautions, specifications, installation, operation, maintenance, troubleshooting, and reference tables for optimal cutting performance. Learn to use your plasma cutter effectively and safely.

 <p>LOTOS LTP7500CNC OWNER'S MANUAL Carefully read the operation manual prior to using, installing, and maintaining the electric arc cutting machine. The contents of this manual are for informational purposes only. The contents of this manual are not to be reproduced or distributed without the written consent of LOTOS TECHNOLOGY.</p>	<p>LOTOS LTP7500CNC Plasma Cutter Owner's Manual & Operating Guide</p> <p>Comprehensive owner's manual for the LOTOS LTP7500CNC plasma cutter, covering safety, specifications, installation, operation, maintenance, troubleshooting, and reference tables for industrial and professional use. Learn how to operate and maintain your plasma cutter for optimal performance.</p>
<p>LOTOS LTP7000 Plasma Cutter</p>	<p>LOTOS LTP7000 Plasma Cutter Operation Manual</p> <p>This manual provides detailed instructions for the safe installation, operation, maintenance, and troubleshooting of the LOTOS LTP7000 Plasma Cutter. It covers specifications, safety precautions, connection procedures, and operational techniques for optimal performance.</p>
<p>LOTOS LTP6000 Plasma Cutter</p>	<p>LOTOS LTP6000 Plasma Cutter User Manual and Safety Guide</p> <p>Comprehensive user manual for the LOTOS LTP6000 Plasma Cutter. This guide provides detailed information on safety precautions, product specifications, installation procedures, operation instructions, maintenance guidelines, and troubleshooting tips for safe and effective use.</p>
 <p>OWNER'S MANUAL Carefully read the operation manual prior to using, installing, and maintaining this electric cutting machine. </p>	<p>LOTOS Supreme CUT60D Plasma Cutter Owner's Manual</p> <p>Comprehensive owner's manual for the LOTOS Supreme CUT60D Plasma Cutter, covering safety, specifications, installation, operation, maintenance, and troubleshooting. Includes detailed instructions and reference tables for optimal performance.</p>
<p>LOTOS LTP8000 Plasma Cutter</p>	<p>LOTOS LTP8000 Plasma Cutter Operation Manual Specifications, Safety, and Troubleshooting</p> <p>Comprehensive operation manual for the LOTOS LTP8000 Plasma Cutter. Includes detailed specifications, safety guidelines, installation, operation, maintenance, and troubleshooting information for this 80-amp pilot arc plasma cutter.</p>