

ANDELI MIG-270TPL

ANDELI MIG-270TPL 4-in-1 Multi-function Welding Machine User Manual

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1. INTRODUCTION

This manual provides essential instructions for the safe and effective operation, setup, and maintenance of your ANDELI MIG-270TPL 4-in-1 Multi-function Welding Machine. Please read this manual thoroughly before using the equipment and retain it for future reference.



Figure 1: The ANDELI MIG-270TPL 4-in-1 Multi-function Welding Machine.

2. SAFETY INFORMATION

Welding operations involve significant risks. Always prioritize safety to prevent injury or damage to equipment. Adhere to all local and national safety regulations.

2.1 General Safety Precautions

- **Electric Shock:** Welding current can cause fatal electric shock. Ensure proper grounding and insulation. Never touch live electrical parts.
- **Fumes and Gases:** Welding produces fumes and gases that can be hazardous to health. Work in a well-ventilated area or use an approved respirator.
- **Arc Rays:** Arc rays can burn eyes and skin. Always wear a welding helmet with appropriate shade lenses and protective clothing.
- **Fire and Explosion:** Welding sparks and hot metal can cause fires. Keep flammable materials away from the welding area. Have a fire extinguisher readily available.
- **Burns:** Hot metal and slag can cause severe burns. Wear protective gloves and clothing.

2.2 Personal Protective Equipment (PPE)

Always wear the following PPE during welding:

- Welding helmet with appropriate filter lens
- Flame-resistant jacket and pants
- Welding gloves
- Safety glasses
- Ear protection

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package. If any items are missing or damaged, contact customer service immediately.

- MIG-270TPL Welding Machine with USA plug
- Ground Clamp (2m)
- 15AK MIG Torch (3M)
- Gas Pipe (3M)
- Carbon Steel Wire (1kg)
- Nozzle (x30)
- Nozzle Shield (x2)
- Hose Clamp (x2)
- QQ150 TIG Torch (4M)
- Collet (x10)
- Tungsten Needle (x10)
- MMA Holder

4 in 1 Multi-function Welder MIG-270TPL

6



Feature

MIG/TIG/PULSE/COLD/MMA

Wide Applicability

Meet All Your Welding Needs

Weight : 14.3KG

Dimension : 489×210×327MM



Manual



Ground Clamp 2M



15AK 3M



Gas Pipe 3M



Hose Clamp*2



Carbon Steel Wire 1KG



Nozzle Shield*2



Nozzle*20



Collet*10



Nozzle*10



QQ-150 4M



MMA Holder 3M

Figure 2: Overview of the ANDELI MIG-270TPL welding machine and its standard accessories.

4. SETUP

4.1 Power Connection

Connect the welding machine to a suitable power supply using the provided USA plug. Ensure the power source matches the machine's voltage requirements.

4.2 Ground Clamp Connection

Attach the ground clamp securely to the workpiece or a metal workbench that is electrically connected to the workpiece. A good ground connection is crucial for safe and effective welding.

4.3 Wire Installation (MIG Mode)

1. Open the wire feeder compartment.
2. Place the 1kg carbon steel wire spool onto the spindle. Ensure it is seated correctly.

3. Thread the wire through the wire feeder mechanism and into the MIG torch liner.
4. Close the compartment and adjust the wire tension as needed.



Figure 3: The wire feeder compartment, showing the spindle for wire spool installation.

4.4 Gas Connection (MIG/TIG Modes)

For MIG (CO₂/MIX) and TIG welding, connect the gas pipe to the appropriate gas inlet on the machine and to your shielding gas cylinder. Ensure all connections are tight to prevent gas leaks.

5. OPERATION

The ANDELI MIG-270TPL offers four primary welding functions: MIG, TIG, MMA, and Cold Welding. Select the desired mode using the control panel.

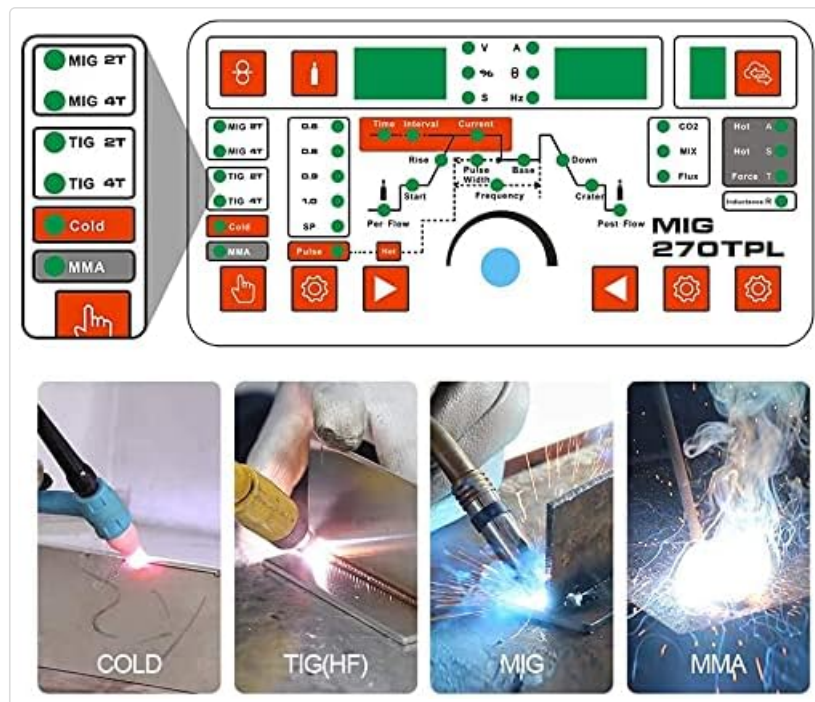


Figure 4: The control panel, illustrating mode selection and parameter adjustments.

5.1 Welding Modes

- **MIG (CO₂/MIX/FLUX):** For general-purpose welding of various metals. Supports both gas-shielded and gasless flux-cored wire welding.
- **TIG (HF):** High-frequency TIG for precise welding, especially on stainless steel.
- **COLD Welding:** A specialized mode for low-temperature welding, ideal for thin stainless steel without significant heat distortion. Produces silver-white fish scale weld beads that typically do not require polishing.
- **MMA (Stick Welding):** For welding with coated electrodes, suitable for various applications and conditions.



Figure 5: Visual representation of the four welding processes: Cold, TIG (HF), MIG, and MMA.

5.2 Parameter Adjustment (Synergy)

The machine features synergy adjustment, which automatically matches voltage and wire feeding speed based on your selected current. This simplifies setup and optimizes welding performance.

Your browser does not support the video tag.

Video 1: This video demonstrates the various functions and effects of the ANDELI MIG-270TPL welding machine, including cold welding, pulse hot welding, and synergy adjustment.

5.3 Welding Performance Examples

The MIG-270TPL is capable of producing high-quality welds across various materials and thicknesses.

- **TIG Hot Welding:** Capable of welding 3mm stainless steel plates.
- **Precision Cold Welding:** Achieves excellent results on 0.8mm stainless steel plates, producing silvery fish scales that do not require polishing.
- **MMA Welding:** Supports 4.0 carbon steel electrodes at 220V, ensuring strong output for continuous welding.
- **MIG Welding:** Effective for gas welding of 5mm carbon steel plates, mixed gas welding of 1mm cold rolled plates, and flux welding of 5mm carbon steel plates.

TIG hot welding
3mm stainless steel plate



Precision cold welding
0.8mm stainless steel plate



4.0 carbon steel electrode
Voltage: 220v



Gas welding of CO2
5mm carbon steel plate



Welding of mixed gas
1mm cold rolled plate



Flux welding
5mm carbon steel plate



Figure 6: Examples of weld beads produced by the machine in different modes and on various materials.

6. MAINTENANCE

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

- **Cleaning:** Periodically clean the machine's exterior and ventilation openings to prevent dust buildup. Use compressed air to clear internal components if necessary, ensuring the machine is unplugged.
- **Torch and Cable Inspection:** Regularly inspect welding torches, cables, and connections for wear, damage, or loose fittings. Replace damaged parts immediately.
- **Wire Feeder Maintenance:** Clean the wire feeder rollers and guides to ensure smooth wire feeding. Check for proper tension.
- **Storage:** Store the welding machine in a dry, clean environment when not in use.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

7.1 No Power

- Check the power cord connection and ensure it is securely plugged into a functional outlet.
- Verify the circuit breaker or fuse for the power supply.
- Ensure the machine's power switch is in the 'ON' position.

7.2 Poor Arc Start or Instability

- **Ground Connection:** Ensure the ground clamp has a clean, secure connection to the workpiece.
- **Electrode/Wire Condition:** Check the welding electrode or wire for proper size and condition. Replace if necessary.
- **Settings:** Adjust current, voltage, or wire feed speed according to the material and welding process.
- **Gas Flow (MIG/TIG):** Verify adequate shielding gas flow and ensure no leaks in the gas line.

7.3 Overheating

- Allow the machine to cool down. The machine has a duty cycle; exceeding it can cause overheating.
- Ensure ventilation openings are clear and not obstructed.
- Reduce the welding current or increase the rest time between welds.

8. SPECIFICATIONS

Feature	Specification
Model Number	MIG-270TPL
Item Weight	51.9 pounds
Package Dimensions	24 x 20.5 x 14 inches
Manufacturer	ANDELI
Functions	MIG (CO2/MIX/FLUX), TIG (HF), COLD, MMA
Safety Certification	CE certified
Technology	IGBT



Figure 7: Dimensional overview of the ANDELI MIG-270TPL welding machine.

9. WARRANTY & SUPPORT

The ANDELI MIG-270TPL welding machine comes with a **two-year warranty**. For any technical assistance, troubleshooting, or warranty claims, please contact our professional after-sales customer service. Refer to your purchase documentation for specific contact details.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question