

WnewTools MIG-250

WnewTools MIG-250 4-in-1 Multi-Process Welding Machine

User Instruction Manual

1. INTRODUCTION

This manual provides essential information for the safe and effective operation of your WnewTools MIG-250 4-in-1 Multi-Process Welding Machine. This versatile unit supports MIG (Gas/Gasless), MMA (Stick), and TIG welding processes. Please read this manual thoroughly before operating the machine to ensure proper usage and to prevent injury or damage.

2. SAFETY INFORMATION

WARNING: Welding can be dangerous. Always follow safety precautions to prevent serious injury or death.

- **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 hazardous to your health. Keep your head out of the fumes. Use ventilation or exhaust to remove fumes from the breathing zone.
- **Arc Rays:** Can burn eyes and skin. Wear a welding helmet with a proper shade filter. Wear protective clothing to protect skin.
- **Fire and Explosion:** Welding sparks can cause fire or explosion. Keep flammable materials away from the welding area. Have a fire extinguisher readily available.
- **Hot Parts:** Can cause severe burns. Allow welding equipment to cool before touching.
- **Noise:** Excessive noise can damage hearing. Wear ear protection.

3. PRODUCT OVERVIEW

The WnewTools MIG-250 is a compact and portable multi-process welding machine designed for various welding tasks. It offers four primary welding functions: MMA (Manual Metal Arc), MIG (Metal Inert Gas), MIG GAS/MAX (Gas Shielded

MIG with solid core wire), and TIG (Tungsten Inert Gas).



Image: The WnewTools MIG-250 welding machine with its various accessory configurations for MMA, MIG, MIG GAS/MAX, and TIG welding processes.

4. SETUP

4.1 Power Connection

Connect the machine to a 220V 50Hz power supply. Ensure the power outlet is properly grounded and capable of handling the machine's power requirements.

4.2 Ground Clamp Connection

Attach the ground clamp securely to the workpiece. A good ground connection is crucial for stable arc and safe operation.

4.3 Wire Spool Installation (MIG/GAS/MAX)

1. Open the side panel of the welding machine.
2. Lift the carabiner or wire spool retainer.

3. Place the wire spool (up to 5kg capacity for 1.0mm flux-cored or 0.8mm solid-cored wire) onto the spindle.
4. Secure the spool with the retainer.
5. Feed the welding wire through the spring-loaded pipes and into the torch liner.



Image: Internal view of the welding machine illustrating the wire feed mechanism, showing how to lift the carabiner and feed the wire through the spring-loaded pipes. Compatible wire spools (5kg 1.0mm flux-cored and 5kg 0.8mm solid-cored) are also shown. Note: Wire tray not included.

4.4 Torch Connection

Connect the appropriate welding torch (MIG or TIG) to the front panel connectors. Ensure all connections are tight and secure.

5. OPERATING MODES

The MIG-250 offers distinct welding modes, each requiring specific setup and technique.

5.1 MIG Welding (Flux-Cored / Gas Shielded)

For MIG welding, the machine supports both flux-cored (gasless) and solid-core (gas shielded) wires. For flux-cored welding, use 1.0mm wire. For gas-shielded welding (GAS/MAX), use 0.8mm solid-core wire with an appropriate shielding

gas.



Image: Detailed view of the MIG torch components, including the nozzle, contact tip, and diffuser. The image also highlights the trigger button used to adjust wire length during operation.

5.2 TIG Welding

The TIG welding function supports wire diameters of 0.8mm, 1.0mm, and 1.2mm. Ensure the correct tungsten electrode and shielding gas (typically Argon) are used for optimal results.



Image: Exploded view of TIG torch components, including the collet body, collet, and ceramic cup. A bundle of TIG welding wires is shown, indicating compatibility with 0.8mm, 1.0mm, and 1.2mm sizes. Note: Welding wire not included.

5.3 MMA Welding (Stick)

For MMA welding, connect the electrode holder and ground clamp as specified. The machine supports standard MMA welding electrodes. Ensure the electrode holder is connected to the negative terminal and the ground clamp to the positive terminal for typical DC electrode positive (DCEP) welding, or reverse for DC electrode negative (DCEN) as required by the electrode type.

6. MAINTENANCE

- **Cleaning:** Regularly clean the machine's exterior and ventilation openings to prevent dust buildup, which can hinder cooling. Use compressed air to clear internal dust.
- **Wire Feed System:** Inspect the wire feed rollers and liner for wear or blockages. Clean or replace as necessary to ensure smooth wire feeding.
- **Cable Inspection:** Periodically check all welding cables, torches, and ground clamps for damage, fraying, or loose connections. Replace damaged components immediately.
- **Storage:** Store the welding machine in a dry, clean environment when not in use.

7. TROUBLESHOOTING

If you encounter issues with your welding machine, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No power	Power switch off, circuit breaker tripped, loose power cable	Turn on power switch, reset breaker, check power cable connection
No arc	Poor ground connection, incorrect settings, faulty torch/electrode holder	Ensure ground clamp is secure, verify welding parameters, inspect torch/holder
Irregular wire feed (MIG)	Wire tangled, dirty liner, worn feed rollers, incorrect tension	Untangle wire, clean/replace liner, check/adjust feed rollers, adjust tension
Overheating	Exceeded duty cycle, blocked ventilation	Allow machine to cool, ensure proper ventilation, reduce welding time

8. SPECIFICATIONS

- **Model:** MIG-250
- **Input Voltage:** 220V 50Hz
- **No-load Voltage:** 59 Volt
- **Duty Cycle (Browsing Continuity Rate):** 60%
- **Power Factor:** 0.93
- **Efficiency:** 0.95
- **Insulation Class:** F
- **Shell Protection Grade:** IP21S
- **Dimensions (L x W x H):** Approximately 40 x 18 x 28.5 cm (15.7 x 7.1 x 11.2 inches)
- **Weight:** Approximately 14.5 kg (32 lbs)
- **MIG Wire Compatibility:** Flux-cored 1.0mm (gasless), Solid-core 0.8mm (gas shielded)
- **TIG Wire Compatibility:** 0.8mm - 1.2mm

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact information provided with your purchase documentation or visit the official WnewTools website. Keep your purchase receipt as proof of purchase for warranty claims.

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

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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