

H HZXVOGEN HVT250P

H HZXVOGEN TIG Welder and Foot Pedal User Manual

Model: HVT250P

1. INTRODUCTION

Thank you for choosing the H HZXVOGEN TIG Welder and Foot Pedal. This industrial-grade welding machine is designed for versatile welding applications, including ARC, AC TIG, DC TIG, and Pulse TIG. The accompanying foot pedal provides precise current control for enhanced welding performance. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your welding equipment.

Please read this manual thoroughly before operating the equipment to ensure proper usage and to prevent injury or damage.

2. SAFETY INFORMATION

Always prioritize safety when operating welding equipment. Failure to follow safety precautions can result in serious injury or death.

- **Electric Shock Can Kill:** Ensure proper grounding. Do not touch live electrical parts. Wear dry welding gloves and protective clothing.
- **Fumes and Gases Can Be Hazardous:** 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 appropriate eye protection with side shields. Protect exposed skin with appropriate clothing.
- **Fire and Explosion Hazard:** Remove all flammable materials from the welding area. Have a fire extinguisher readily available.

- **Hot Parts Can Cause Severe Burns:** Allow equipment to cool before touching. Use insulated tools and gloves.
- **Magnetic Fields:** Pacemaker wearers should consult their doctor before operating.
- **Only Qualified Personnel:** Operation and maintenance should only be performed by qualified individuals.

3. PRODUCT OVERVIEW

The H HZXVOGEN TIG Welder (Model HVT250P) is a multi-functional welding machine capable of various welding processes. The included foot pedal provides remote current control for precise operation.

3.1 Main Components

- **TIG Welder Unit (HVT250P):** The main power source and control panel.
- **TIG Torch:** For directing the arc and filler material.
- **Ground Clamp:** To establish the electrical circuit.
- **Foot Pedal:** For remote current adjustment during welding.
- **Gas Hose:** For shielding gas supply.



Figure 3.1: H HZXVOGEN TIG Welder HVT250P with connected foot pedal.



Figure 3.2: H HZXVOGEN TIG Welder HVT250P with TIG torch and ground clamp connected.



Figure 3.3: Close-up view of the H ZXVOGEN 5-Pin TIG Welding Foot Pedal.

4. SETUP

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

4.1 Power Connection

1. Ensure the welder is turned off before connecting to power.
2. Connect the power cord to a suitable power outlet. The HVT250P operates on 220V.
3. Verify the power supply meets the welder's requirements.

4.2 Gas Connection (for TIG Welding)

1. Connect the gas hose from your shielding gas cylinder (e.g., Argon) to the gas inlet on the rear of the welder.
2. Ensure all gas connections are tight to prevent leaks.
3. Set the gas flow rate according to your welding requirements (typically 10-20 CFH for TIG).

4.3 Torch and Ground Clamp Connection

1. Connect the TIG torch cable to the appropriate positive (+) or negative (-) terminal on the welder, depending on the welding process (DC TIG typically uses DCEN - Direct Current Electrode Negative).
2. Connect the ground clamp cable to the remaining terminal.
3. Securely attach the ground clamp to the workpiece or welding table, ensuring good electrical contact.

4.4 Foot Pedal Connection

1. Locate the 5-pin connector port on the welder.
2. Connect the 5-pin plug of the foot pedal cable to this port. Ensure it is fully inserted and secured.
3. The foot pedal allows for remote current adjustment from 0 to 200 amperes.



Figure 4.1: The 5-pin connector of the TIG welding foot pedal.

5. OPERATING INSTRUCTIONS

The HVT250P offers multiple welding modes for various applications.

5.1 Control Panel Overview

Familiarize yourself with the digital display and control knobs/buttons on the welder's front panel. These allow for precise setting of welding parameters.

- **Digital Display:** Shows current welding parameters.
- **Menu Button:** Navigates through different settings.
- **Adjustment Knob:** Used to change parameter values.
- **Mode Selection:** Buttons/switches for ARC, AC TIG, DC TIG, Pulse TIG.

5.2 Welding Modes and Settings

The HVT250P supports the following welding processes:

- **ARC (Stick Welding):** Ideal for outdoor use or thicker materials.
- **AC TIG:** Suitable for welding aluminum and magnesium alloys. Allows setting of AC frequency.

- **DC TIG:** For welding steel, stainless steel, copper, and other non-ferrous metals (except aluminum).
- **Pulse TIG:** Provides better control over heat input, reducing distortion and improving bead appearance, especially on thin materials.



Figure 5.1: Illustration of the 6-in-1 multi-function welding capabilities including HF TIG (AC/DC), Pulsed TIG (AC/DC), Spot TIG, and Stick welding.



Figure 5.2: Examples of MMA (Stick) and TIG welding processes.

5.3 Digital Parameter Setting

The HVT250P allows for precise digital setting of various parameters:

- **Pre-gas Time:** Duration of gas flow before arc ignition.
- **Start Current:** Initial current for arc ignition.
- **Uphill Time:** Time taken to ramp up from start current to peak current.
- **Peak Current:** Maximum welding current.
- **AC Frequency (AC TIG only):** Controls the arc cone width and cleaning action.
- **Pulse Frequency (Pulse TIG only):** Number of pulses per second.
- **Downhill Time:** Time taken to ramp down from peak current to end current.

- **After-gas Time:** Duration of gas flow after arc extinction to protect the weld puddle and tungsten.

5.4 Foot Pedal Operation

The 5-pin foot pedal provides convenient hands-free current control.

1. Ensure the foot pedal is correctly connected to the welder.
2. When the foot pedal is pressed, the welding current will increase. Releasing the pedal will decrease the current.
3. The foot pedal allows for current adjustment within the range of 0 to 200 amperes.
4. Use the foot pedal to precisely control the heat input during welding, especially for intricate or varying thickness welds.



Figure 5.3: The foot pedal features an adjustment knob for fine-tuning the current range (0-200A).

5.5 2T/4T Torch Control

The welder supports both 2T (Two-Touch) and 4T (Four-Touch) torch control modes for convenience.

- **2T Mode:** Press and hold the torch trigger to weld; release to stop.
- **4T Mode:** Press and release the torch trigger to start welding; press and release again to stop. This mode is useful for long welds to reduce hand fatigue.

6. MAINTENANCE

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

- **Cleaning:** Regularly clean the welder's exterior with a dry cloth. Use compressed air to blow out dust from inside the machine, especially from cooling vents, at least once a month or more frequently in dusty environments.
- **Cable Inspection:** Periodically inspect all cables (power, torch, ground, foot pedal) for cuts, cracks, or damaged insulation. Replace damaged cables immediately.
- **Connections:** Ensure all electrical and gas connections are tight and free from corrosion.
- **Tungsten Electrode:** Sharpen or replace tungsten electrodes as needed for optimal arc stability and weld quality.
- **Consumables:** Regularly check and replace worn-out torch consumables (collets, collet bodies, nozzles).
- **Storage:** Store the welder in a clean, dry environment when not in use.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Welder does not power on.	No power supply; power switch off; internal fuse blown.	Check power cord and outlet; ensure power switch is ON; contact service if fuse is suspected.
No arc.	Poor ground connection; incorrect torch connection; gas flow issue (TIG); wrong welding mode.	Ensure ground clamp is secure; check torch connections; verify gas supply and flow; select correct welding mode.
Unstable arc.	Contaminated tungsten; insufficient shielding gas; incorrect current settings.	Re-grind or replace tungsten; check gas cylinder and flow rate; adjust current settings.
Foot pedal not controlling current.	Foot pedal not connected properly; foot pedal faulty; welder not in foot pedal control mode.	Ensure 5-pin connector is secure; test foot pedal if possible; check welder settings for foot pedal activation.
Poor weld quality (porosity, discoloration).	Insufficient shielding gas; contaminated workpiece; incorrect travel speed or arc length.	Increase gas flow; clean workpiece thoroughly; adjust welding technique.

8. SPECIFICATIONS

Key technical specifications for the H HZXVOGEN TIG Welder HVT250P and Foot Pedal.

Feature	Description
Model	HVT250P (Welder), 5-Pin Foot Pedal
Welding Processes	ARC / AC TIG / DC TIG / Pulse TIG
Input Voltage	220V (Specific voltage may vary, refer to product label)
Current Range	10-200 Amperes (Welder), 0-200 Amperes (Foot Pedal Control)
AC Duty Cycle Range	60%
Max. Aluminum Thickness	Up to 1/4" (6.35mm)
Max. Mild Steel Thickness	Up to 3/8" (9.5mm)
Foot Pedal Connector	5-Pin
Foot Pedal Cable Length	3 meters (approx. 118.11 inches)
ASIN	B0DDTMFVC4



9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your purchase or contact H HZXVOGEN customer service directly.

Please retain your proof of purchase for warranty claims.

For further assistance, you may visit the official H HZXVOGEN store on Amazon: [HZXVOGEN Store](#)