

HZXVOGEN HVM140

HZXVOGEN HVM140 3-in-1 Multi-Process Welder User Manual

Model: HVM140 | Brand: HZXVOGEN

1. IMPORTANT SAFETY INSTRUCTIONS

Always read and understand all safety warnings and instructions before operating this welding machine. Failure to follow these instructions may result in electric shock, fire, serious injury, or death.

- **Electric Shock Can Kill:** Do not touch live electrical parts. Wear dry welding gloves and protective clothing. Insulate yourself from work and ground.
- **Fumes and Gases Can Be Dangerous:** 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 of filter to protect your face and eyes when welding or watching. Wear appropriate protective clothing to protect your skin.
- **Fire and Explosion Hazard:** Protect yourself and others from flying sparks and hot metal. Remove all flammables within 35 feet (10 meters) of the welding area.
- **Hot Parts Can Cause Severe Burns:** Allow cooling period before touching welded material.
- **Overcurrent, Overvoltage, Overheating Protection:** The machine is equipped with built-in protection. If activated, allow the machine to cool down before resuming operation.

For detailed safety information, refer to relevant industry standards and local regulations.

2. PACKAGE CONTENTS

Carefully unpack the welding machine and check for any damage. Ensure all items listed below are present:

7 PCS PACKAGE INCLUDES

- ① .030 Flux Core Wire
- ② Brush Hammer
- ③ Welding Rod*5
- ④ Earth Clamp 4.9ft
- ⑤ Electrode Holder 4.9ft
- ⑥ MIG Torch 8.2ft
- ⑦ Welder Machine



Figure 2.1: HVM140 Welder and Included Accessories

This image displays the HZXVOGEN HVM140 welding machine along with its complete set of accessories, including the MIG torch, electrode holder, earth clamp, flux core wire, brush hammer, and welding rods.

- 1. HZXVOGEN HVM140 Welding Machine (1 unit)
- 2. MIG Torch (1 unit)
- 3. Electrode Holder (1 unit)
- 4. Earth Clamp (1 unit)
- 5. Flux Core Wire (0.8mm or 1.0mm, 1 spool)

6. Brush Hammer (1 unit)
7. Welding Rods (5 pieces)
8. User Manual (1 copy)

3. PRODUCT OVERVIEW

The HZXVOGEN HVM140 is a versatile 3-in-1 multi-process inverter welding machine designed for various welding applications. It supports Gasless MIG, MMA (Stick), and Lift TIG welding modes.

3.1 Key Features



Figure 3.1: 3-in-1 Multi-Process Capabilities

This image highlights the HVM140's ability to perform Gasless MIG, MMA (Stick), and Lift TIG welding, showcasing its versatility for different welding tasks.

- **3-in-1 Multi-Process:** Supports Gasless MIG, MMA (Stick), and Lift TIG welding modes.
- **IGBT Inverter Technology:** Provides stable arc, high efficiency, and energy saving.
- **Digital Rotating Screen:** Intuitive one-button control for easy and quick adjustment of welding parameters.
- **VRD (Voltage Reduction Device):** Enhances safety, especially in MMA mode, by reducing open-circuit voltage.
- **Hot Start:** Improves arc ignition in MMA mode, preventing electrode sticking.

- **Anti-Stick:** Automatically reduces current if the electrode sticks, making it easier to remove.
- **Arc Force:** Provides additional current during short arc length, preventing the arc from extinguishing.
- **Efficient Cooling Fan:** Reduces internal dust accumulation and prolongs machine lifespan.
- **Portable and Compact:** Lightweight design (approx. 3.7 kg) with a convenient handle for easy transport.



Figure 3.2: Digital Control Interface

This image shows the digital display and single knob control of the HVM140, allowing for precise and easy adjustment of welding parameters.

PROFESSIONAL WELDER



Figure 3.3: Professional Welder Features

This image visually represents the advanced features of the HVM140, including IGBT technology, VRD, Hot Start, efficient cooling, Anti-Stick, and Arc Force, contributing to professional welding performance.

4. SETUP

4.1 Initial Inspection

Before connecting the machine, inspect all cables, connections, and the machine casing for any signs of damage. Ensure the work area is clean, dry, and well-ventilated, free from flammable materials.

4.2 Power Connection

- Ensure the power switch on the machine is in the "OFF" position.
- Connect the power cord to a suitable power outlet. The HVM140 supports a range of input voltages (refer to specifications for details).

4.3 Gasless MIG Setup

1. Open the wire feeder cover.
2. Install the flux core wire spool onto the spindle. Ensure the wire unwinds smoothly.
3. Thread the wire through the wire feeder mechanism and into the MIG torch liner.
4. Close the wire feeder cover.
5. Connect the MIG torch to the designated MIG output terminal on the front panel.
6. Connect the earth clamp to the work piece. Ensure a good electrical connection.
7. Turn on the machine. Press and hold the wire feed button (usually on the front panel or torch trigger) for approximately 5 seconds to feed the wire through the torch until it exits the contact tip.

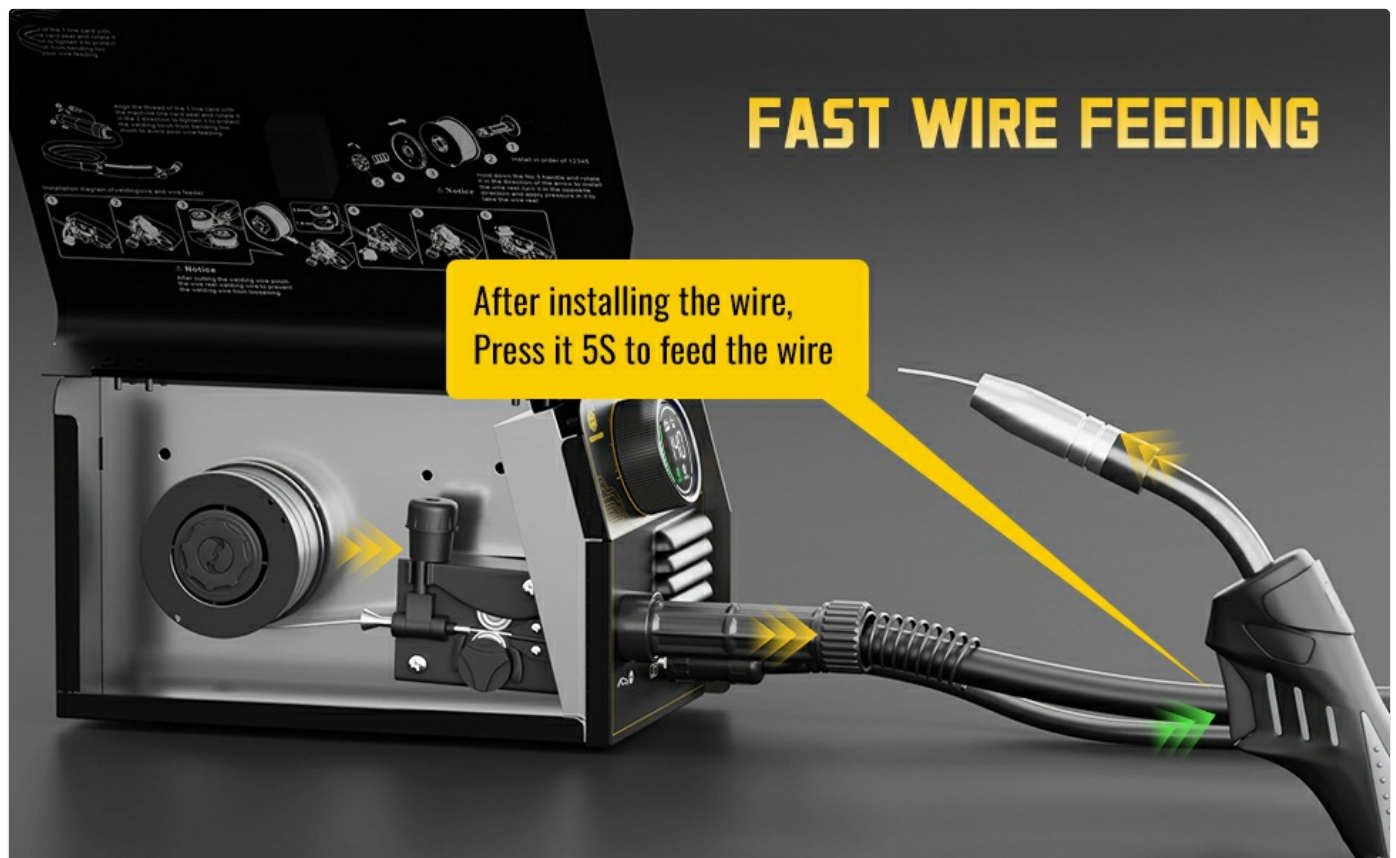


Figure 4.1: Wire Feeding Mechanism

This diagram illustrates the internal wire feeding system of the HVM140, detailing how to install the flux core wire spool and feed the wire into the MIG torch for operation.

4.4 MMA (Stick) Setup

1. Connect the electrode holder cable to the positive (+) terminal on the front panel.
2. Connect the earth clamp cable to the negative (-) terminal on the front panel.
3. Securely insert the welding electrode into the electrode holder.
4. Connect the earth clamp to the work piece.

4.5 Lift TIG Setup

1. Connect the TIG torch (not included) to the negative (-) terminal on the front panel.

2. Connect the earth clamp cable to the positive (+) terminal on the front panel.
3. Ensure a suitable tungsten electrode is installed in the TIG torch.
4. Connect the earth clamp to the work piece.
5. *Note: This machine supports Lift TIG, which means arc initiation is done by touching the tungsten to the workpiece and lifting it slightly. No high-frequency start.*

5. OPERATING INSTRUCTIONS

5.1 Mode Selection

Turn on the machine. Use the mode selection button (usually near the digital display) to cycle through MIG, MMA, and Lift TIG modes. The selected mode will be indicated on the digital screen.

5.2 Current Adjustment

Once the desired mode is selected, use the single control knob to adjust the welding current (Amperage). The digital display will show the current setting. Refer to welding charts for recommended current settings based on material thickness and welding process.

5.3 Welding Techniques

Proper welding technique is crucial for quality welds. Practice on scrap material before welding critical components.

- **MIG Welding:** Maintain a consistent stick-out and travel speed. Use a slight push or pull angle depending on the application.
- **MMA Welding:** Maintain a short arc length. Use a slight weaving motion for wider beads.
- **Lift TIG Welding:** Touch the tungsten to the workpiece to initiate the arc, then quickly lift it a small distance (1-3mm) to establish the arc. Maintain a consistent arc length and travel speed.

5.4 Duty Cycle

The HVM140 has a 60% duty cycle at its maximum output. This means it can operate continuously for 6 minutes out of every 10-minute period at maximum current before requiring a 4-minute cooling period. Exceeding the duty cycle can damage the machine. The machine's built-in thermal protection will activate if it overheats.

60% EFFICIENT WORK

High efficiency, high speed, high power for welding



Figure 5.1: Duty Cycle Explanation

This graphic explains the 60% duty cycle of the HVM140, indicating that for every 10 minutes of operation at maximum output, the machine can work for 6 minutes and requires a 4-minute break to cool down.

6. MAINTENANCE

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

- **Cleaning:** Regularly clean the machine's exterior with a dry cloth. Use compressed air to blow out dust from the cooling vents. Ensure the machine is unplugged before cleaning.
- **Cable Inspection:** Periodically inspect all cables (power, MIG torch, electrode holder, earth clamp) for cuts, abrasions, or loose connections. Replace damaged cables immediately.
- **MIG Torch Maintenance:** Clean the contact tip and gas nozzle regularly. Replace worn contact tips and diffusers.
- **Wire Feeder:** Keep the wire feeder rollers clean and free of debris. Ensure proper tension on the wire spool.
- **Storage:** Store the machine in a clean, dry, and dust-free environment when not in use.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Machine does not power on.	No power supply; Power switch off; Internal fuse blown.	Check power outlet and cord; Turn on power switch; Contact service for fuse replacement.
No arc.	Poor earth clamp connection; Incorrect mode selected; Wire feed issue (MIG); Electrode not making contact (MMA/TIG).	Ensure good earth connection; Select correct mode; Check wire feed path; Ensure electrode/tungsten touches workpiece.

Problem	Possible Cause	Solution
Wire not feeding (MIG).	Wire tangled; Rollers not tensioned correctly; Contact tip blocked; Liner clogged.	Untangle wire; Adjust roller tension; Clean/replace contact tip; Clean/replace liner.
Machine overheats / Thermal protection activates.	Exceeded duty cycle; Poor ventilation; Fan blocked.	Allow machine to cool down; Ensure adequate airflow around machine; Clear fan vents.

8. SPECIFICATIONS

Technical specifications for the HZXVOGEN HVM140 welding machine:

Model Number	HVM140
Manufacturer	H HZXVOGEN
Dimensions (L x W x H)	Approx. 22 x 23 x 33 cm (8.7 x 9.1 x 13 inches)
Package Dimensions	37.9 x 27.3 x 19.9 cm (14.9 x 10.7 x 7.8 inches)
Weight	Approx. 3.7 kg (8.16 lbs) - Machine only
Package Weight	6.18 kg (13.62 lbs)
Current Range	30 - 140 A
Supported Wire Diameter (MIG)	0.8 mm, 1.0 mm Flux Core Wire
Power Type	Gasless (Flux Core) for MIG
ASIN	B0DBL932XG

Small Machine, High Quality

[illegible]

5.9in/15cm

WEIGHT
3.50kg/7.72Lb

This image provides a visual representation of the HVM140's compact dimensions and lightweight design, emphasizing its portability for various work environments.

HZXVOGEN is committed to providing high-quality products and excellent customer service.

- **Warranty:** This product comes with a 3-Year Extended Warranty. Please retain your proof of purchase for warranty claims.

- **Customer Support:** For any questions, technical assistance, or warranty inquiries, please contact HZXVOGEN customer support. Our team is available 24/7 to assist you.
- **Contact Information:** Refer to the contact details provided on the product packaging or the official HZXVOGEN website.



Figure 9.1: Warranty and Support Information

This image confirms the product's certifications (DEELAY, UL), the availability of a 3-Year Extended Warranty, and 24/7 customer support, ensuring reliability and assistance.