

YBG GROUP INTERNATIONAL

HERO Irrigation

Instruction Manual



Please read this manual carefully before using the product. Please take care of safety (must read).

New Upgrade Irrigation System — Engineered for Commercial Agriculture

Hydrogen-rich growing starts here. Healthy growing starts with hydrogen-rich water. Thank you for purchasing this hydrogen irrigation system. In order to use it correctly and safely, please read this manual carefully before use.

UNAUTHORIZED MODIFICATION IS STRICTLY PROHIBITED.

Specifications

[NOTE: "Product Name" row below still reads the manufacturer's original value — confirm correct wording before publishing.]

Product Name	HERO Irrigation Machine
Model	HERO Irrigation
Executive Standard	Q/SZQY 001-2025
Rated Voltage	100–240V ±15% 50–60Hz
Rated Power	800W
Size [L×W×H]	550 × 350 × 970mm
Weight	36kg

Overview

This series of hydrogen generators is a lightweight, efficient, energy-saving, and environmentally friendly high-tech patented product that electrolyzes pure water to produce high-purity hydrogen.

The core SPE electrode of the machine is a highly active zero-pole distance catalytic electrode formed by integrating a composite catalyst and an ion membrane. It has high electrolysis efficiency and a complete electrical control system. The whole machine has advanced design, reliable quality, a high degree of automation, high purity of hydrogen production, and a wide application range.

Operating Principle

Send the electrolyzed water that meets the requirements (resistivity greater than $2\text{M}\Omega\cdot\text{cm}$) into the anode chamber of the electrolytic cell. After the electricity is turned on, the water immediately decomposes at the anode: $\text{H}_2\text{O} = \text{H}^+ + \text{OH}^-$, and the hydrogen ions (OH^-) decompose. The electrons are released at the anode to form oxygen (O_2), which is discharged from the anode chamber and carries part of the water into the water tank. The water can be recycled, and the oxygen is output from the oxygen outlet through the small hole in the upper part of the water tank.

Hydrogen protons, in the form of hydrated ions ($\text{H}^+\cdot x\text{H}_2\text{O}$), pass through the SPE ion membrane under the action of electric field force, and reach the cathode to absorb electrons and form hydrogen gas (H_2). After water is discharged from the cathode chamber, it enters the gas-water separator, where most of the water carried out from the electrolytic cell containing trace amounts of hydrogen gas is removed and outputted from the hydrogen outlet.

Technical Parameters

Product Name	HERO Irrigation Machine
Model	HERO Irrigation
Water Yield	20L (L/min)
Hydrogen content	3000–5000 PPB
Output Pressure	0–0.2MPa
Hydrogen purity	99.99%
Voltage	100–240V $\pm 15\%$ 50–60Hz
Input power	800W
Tank volume	4.0L
Water quality requirements	<30 TDS
Net weight of the whole machine	36kg
Size (mm)	550 × 350 × 970mm

Electrical Control

The electrical control of the whole machine mainly consists of three parts: electrolytic power supply, control panel, and display components. Press the main power switch; the machine circuit is energized and enters the standby state. Add pure water greater than the minimum water level to the water tank, and press the increase or decrease key on the touch screen to control the working time of the electrolyzer.

After adjusting the time, press the Start/Pause button; the electrolyzer starts to work, the hydrogen flow meter displays the real-time hydrogen flow, and the hydrogen outlet produces hydrogen normally. In addition, to ensure the normal operation of the machine, this machine is equipped with water shortage protection, high-temperature protection, and power limit protection.

Operating Requirements

1. The Intelligent Irrigation Machine cannot be used in a closed room!
2. Working Requirements for the Intelligent Irrigation Machine:
 - a. Temperature 0–40°C.
 - b. Humidity < 85%.
 - c. Power Supply 110–220V 50–60Hz.
 - d. Place horizontally. The front panel of the machine faces the operator for ease of operation.
 - e. No direct sunlight, no open flames.
 - f. Requires good ventilation conditions.
 - g. The power supply must be well grounded.
3. When using this machine for the first time, you must first add water to the tank. After adding water, wait 5 minutes before turning it on!
4. Water quality requirements: it is required to use soft water (purified water), with resistivity of the water greater than 2MΩ·cm. Hard ions in unqualified water will deposit and block the electrode micropores, causing the motor to be damaged. Please note: otherwise, you will be responsible for the consequences.
5. Tank water level requirements: the water tank is required to be filled with more than 3/4 of the water (the water tank volume is 4.0L).
6. During the transportation of this machine, water should not be stored in the tank, to prevent water from overflowing and damaging electrical components.
7. The electrolyzer must not be short of water during transportation.
8. When servicing the machine, it must be shut down first. Do not disassemble the machine chassis or other accessories while the machine is on and running, to avoid electric shock.

Unpacking and Acceptance

First check whether the machine is intact and whether the spare parts are complete according to the packing list. If the machine is damaged, please contact the transportation unit and manufacturer in time for timely resolution.

Install and Use

1. The working environment conditions of this machine should comply with Article 5.2 of the instruction manual.

2. Open the water tank cover on the top of the machine, add purified water, and then close the top cover.

Note: You must add water before turning on the machine to ensure that the electrolyzer is not short of water!

3. Take the power cord from the spare parts and connect it to the power supply.

Note: The power supply must be well grounded.

4. Turn on the power switch on the rear panel, and the front panel display lights up at the same time, entering standby mode.

5. Tap the start/pause switch at the middle bottom of the display screen, and the hydrogen machine starts to produce hydrogen (the default time is 15 minutes when it is turned on). The countdown begins. After the countdown ends, the machine enters standby mode.

6. Click the start/pause switch again, and the machine will enter the next timing cycle; the timing time can be adjusted, using the timing "+" and "-" in the lower right corner of the display screen. Each time "+" is pressed, the timing time will increase by 15 minutes, up to 60 minutes. Each time "-" is pressed, the timer will be reduced by 15 minutes. (Note: the minimum time is not less than 15 minutes.)

Alarm Conditions and Troubleshooting

Reference: screen mockups from the original manual are shown below for context — text has been retyped correctly to the right.

IF "TDS VALUE IS HIGH"



Reason for alarm: Impure water is added, or the water contains salt.
Solution: Drain the water in the water tank from the drain outlet, add pure water again, it is best to add water several times, and wait until the water tank is clean before working again.

DISPLAY "PLEASE ADD TIME"



Reason for alarm: hydrogen production time is zero.
Solution: Please increase the time before starting.

DISPLAY "HIGH TEMPERATURE"



Reason for alarm: The temperature inside the chassis reaches 60 degrees and the display temperature is high
Solution: Please change the water or allow the chassis to cool down for a period of time before normal use.

DISPLAY: "PLEASE CHECK TDS SENSOR"



Reason for alarm: The TDS sensor is not recognized. There may be an internal blockage (please drain water from the drain outlet 1-2 times, and then add water to start the machine again) or the TDS sensor is damaged.

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Alarm	Reason	Solution
TDS value is high	Impure water is added, or the water contains salt.	Drain the water in the water tank from the drain outlet, add pure water again — ideally several times — and wait until the water tank is clean before working again.
High temperature	The temperature inside the chassis reaches 60°C and the display temperature is high.	Change the water or allow the chassis to cool down for a period of time before normal use.
Please add time	Hydrogen production time is zero.	Increase the time before starting.
Please check TDS sensor	The TDS sensor is not recognized. There may be an internal blockage, or the sensor is damaged.	Drain water from the drain outlet 1–2 times, then add water to start the machine again. If the alarm persists, the TDS sensor may be damaged.
Water level low	The water tank is short of water. More than half of the water in the tank needs to be added.	Add water manually or automatically as described in Machine Usage Instructions.

Machine Usage Instructions

1. Unpack the machine and take out the accessories and the machine ([CONFIRM ACCESSORY LIST — manufacturer original: Bath Spa Machine ×1, Water Inlet Pipe ×1, Water Outlet Pipe ×1, Inlet Connector ×1, Bath Nozzle ×1, User Manual ×1]).
2. Remove the inlet and outlet plugs.
3. When using the machine for the first time, add water manually (3L).
4. Open the water tank cover for the first time and take out the protective film of the water tank cover. Because the machine's water tank cover is designed to prevent fertilizer gas ingress, it is designed to be opened. The machine has residual water after factory testing and cannot be completely drained. To prevent residual water from flowing out during transportation, protective film is added to seal the water tank cover.
5. Manually add water. Open the water tank cover for the first time and add 3,000ml of purified water.
6. If the machine is short of water in subsequent use, the screen will give an alarm prompting "Please add water manually." You can choose to add water manually or automatically. Add about 2000ml of purified water manually. If the screen still shows a water shortage warning, continue adding water until the alarm clears.
7. If the machine has not been used for a long time, or the TDS alarm value is high, drain all the water from the machine. (Manual)
8. Manual drainage operation: the machine can be drained by connecting the manual drain hole at the back of the machine with the 1-meter silicone hose included in the accessories.
9. Precautions: water drainage and water supply cannot be carried out simultaneously.

Manual Water Addition & Drainage

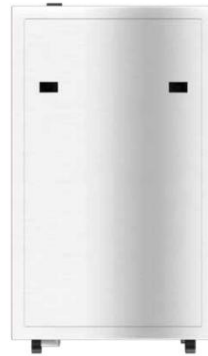
See original manual pages 9–12 for step illustrations.

Front / Rear View & Dimensions

FRONT VIEW



REAR VIEW



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45° TOP-DOWN VIEW



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Dimensions: 550mm (W) × 350mm (D) × 970mm (H). Key features: pure water filling port (top), residual current circuit breaker and door lock (front panel), viewing window, drain hole (normally closed), drain outlet, outlet, and water inlet (lower front).

Warning

- (1) Keep indoor air circulation and do not use it in a completely closed room!
- (2) When using this instrument, it is strictly prohibited to smoke, keep away from open flames, etc!

Common Fault Causes and Troubleshooting Methods

1. Device does not power on

Possible causes:

- Loose or poor power connection
- Blown fuse
- Damaged power switch

Solutions:

- Check that the power plug is securely connected
- Replace the fuse with one of the same specification
- If the issue persists, contact the manufacturer or authorized service provider for repair or replacement

2. Device surface feels warm during operation

This is normal — the operating temperature of the electrolyzer is 50–60°C (122–140°F) and does not indicate a malfunction.

3. Cooling fan does not start

The fan activates automatically when the internal temperature exceeds 35°C (95°F). This is normal behavior and does not indicate a fault.

4. Low gas output at startup

The device includes a self-protection function that gradually increases output during startup. Normal gas output should be reached within approximately 1 minute.

5. Unusual noise from the water pump

Possible cause: air trapped in the water pump, common during first-time use.

Disclaimer

The hydrogen series products provided in this manual are neither drugs nor medical devices. False and exaggerated publicity is strictly prohibited.

Regulatory Disclaimer

This product is not a medical device as defined under applicable USA FDA regulations (or the regulations of Norway, Canada, Sweden, EU countries, Australia) and is not intended for medical use. This product is intended solely for non-medical, non-therapeutic use in accordance with the operating instructions provided in this manual. The hydrogen generator is not designed to diagnose, treat, cure, mitigate, or prevent any disease or medical condition.

All information provided in this manual relates solely to the technical operation, handling, and safety of the device. Any external statements, marketing materials, or third-party representations suggesting medical or therapeutic benefits are unauthorized and expressly disclaimed.

Limitation of Liability

To the maximum extent permitted by applicable law:

- The manufacturer and distributors shall not be liable for any indirect, incidental, special, consequential, or punitive damages arising from the use, misuse, or inability to use this product.
- The manufacturer's total liability, whether in contract, warranty, tort, or otherwise, shall not exceed the original purchase price of the product.
- The user assumes all responsibility for proper installation, operation, maintenance, and compliance with local regulations.

This limitation applies regardless of whether the manufacturer has been advised of the possibility of such damages.

Packing List

[CONFIRM — items below still reflect the manufacturer's original accessory names]

No.	Name	Qty	Remarks
1	HERO Irrigation Machine	1	
2	Water Inlet Pipe	1	
3	Water Outlet Pipe	1	
4	Inlet Connector	1	
5	Nanobubble Nozzl	1	
6	User Manual	1	