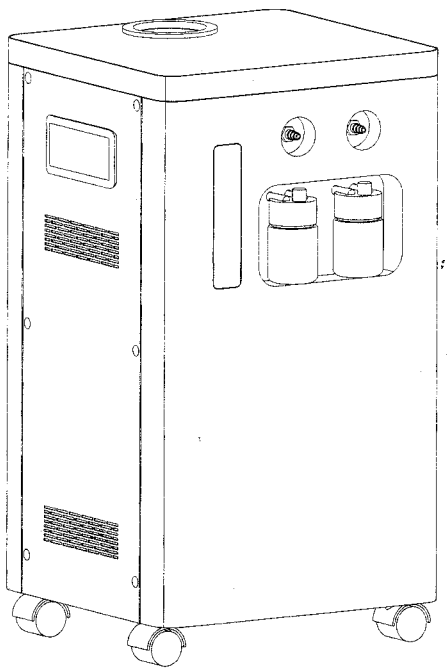
HG series
Hydrogen machine instruction manual

Version number: V2 (Date of preparation/revision : 2023. 10. 28)



Before using the hydrogen machine, please read the instruction manual carefully

⑤ Failure caused by unauthorized disassembly, repair, or modification of the product;

⑥ Failure caused by accidentally falling during use and transportation;

⑦ Failure caused by failure to operate in the correct manner according to the instructions;

⑧Damage caused by unforeseen natural disasters (such as fire, earthquake, flood, etc.).

Note: Our company reserves the right to make technical and appearance changes to our products. We apologize for any changes without prior notice.

6 Random accessory list

1	Hydrogen machine	1 set
2	Nasal oxygen tube	2 pcs
3	Connecting pipe (φ5×φ8×200mm)	2 pcs
4	Hydrogen eye mask	1 set
5	Power cable	1 pc
6	Y tee joint (φ6.4mm)	1 pc
7	Fuse (5×20mm, 5A)	1 pc
8	TDS water quality testing pen	1 pc
9	Quick plug connector buckle fork	1 pc

7 Transportation and storage

Store the repackaged hydrogen machine in a dry place, and do not place any objects on top of the machine.

Transportation and storage environmental requirements:

Ambient temperature range: 0℃~55℃

Relative humidity range: 10%~90 %

Atmospheric pressure range: 40~ 106 kPa

⚠ **Note: The hydrogen machine should be stored indoors without strong sunlight, corrosive gases and well-ventilated. During transportation, avoid severe shocks and inversion.**

⚠ **Note: If the hydrogen machine is not used for a long time, there should be a small amount of pure water or distilled water left in the electrolyzer.**

⚠ **Note: If the machine has not been used for a long time, please clean the water tank before reusing it.**

8 After-sales service

All users who import directly from the country where the factory is located must repair by themselves. The required accessories and shipping costs must be negotiated directly with the factory. Under normal use and storage, if this product has quality problems within 2 years (or within 8000 hours) from the date of shipment, the company will provide accessories free of charge (but the user must bear the cost of transportation).

For users who purchase from local dealers, under normal use and storage, if the product has quality problems within 2 years (or within 8000 hours) from the date of shipment, the dealer will provide accessories free of charge (but the user must bear the cost of transportation) .

No matter where you purchase this product, if there is a quality problem with this product after 2 years (or 8000 hours) from the date of shipment, the user can go to our after-sales service department, office or dealer based on the invoice or warranty card. Parts will be provided for maintenance at a reasonable charge. If the user cannot provide an invoice or warranty card, the company's product SN number or production date will be the actual bought date.

The following situations are not covered by the warranty:

①Easy to wear and consumable items: such as primary filter;

② The user causes water, various liquids, etc. to enter the machine and prevent it from working properly;

③The entire machine (including some parts) is damaged or deformed due to collision;

④The whole machine is exposed to water or rain;

electrolytic tank is short of water, the red light on the machine screen will light up, the machine will stop running, and "E-3" will be displayed on the display screen.

5 Common faults and troubleshooting

No	Fault phenomenon	Possible reason	Method of exclusion
1	After pressing the switch, the switch power indicator light and display screen do not light up.	1) There is poor contact between the power cord plug and the socket.	1) Insert the power cord plug firmly into the socket.
		2) The socket has no power output.	2) Move to a socket with power output.
		3) The power outlet of the socket power outlet is insufficient.	3) Do not use extension cords to move the machine to another power outlet or circuit.
		4) The fuse is blown.	4) Replace the fuse.
		5) If this status persists, stop using the machine and contact the supplier immediately.	
2	The machine works normally after powering on, but there is no hydrogen output or the output pressure is very low.	1) The hydrogen humidification bottle cap is leaking and not tightened.	1) Re-tighten the hydrogen humidification bottle cap.
		2) The hydrogen humidification bottle is not in place.	2) Align the hydrogen humidification bottle with the hole and insert it to the bottom.
		3) If the phenomenon persists, please contact the supplier.	
3	The machine works normally after powering on, but there is no oxygen output or the output pressure is very low.	1) The oxygen humidification bottle cap is leaking and not tightened.	1) Re-tighten the oxygen humidification bottle cap.
		2) The oxygen humidification bottle is not in place.	2) Align the oxygen humidification bottle with the hole and insert it to the bottom.
		3) Check whether the oxygen tube is broken or blocked	3) Straighten the oxygen tube.
		4) If this status persists, stop using the machine and contact the supplier immediately.	
4	After powering on, the machine runs normally and the yellow light is on	1) The temperature of the electrolytic cell is too high.	1) Check whether the cooling fan is working and there is air discharge.
		2) If this status persists, you can continue to use it, but you must contact the supplier	
4	The machine does not work, the red light is on, and the display shows " E -1 ".	1) The temperature of the electrolytic cell is too high.	1) Check whether the cooling fan is working and there is air discharge.
		2) If this status persists, stop using the machine and contact the supplier immediately.	
5	The machine does not work, the red light is on, and the display shows " E -2 ".	1) The water quality TDS value of the water tank exceeds 10 .	1) Clean the water tank and refill it with purified or distilled water.
		2) If this status persists, stop using the machine and contact the supplier immediately.	
6	The machine does not work, the red light is on and the display shows " E - 3 ".	1) The water in the water tank is lower than the minimum water level.	1) Clean immediately and add purified water or distilled water.
		2) If this status persists, stop using the machine immediately and contact the supplier.	

3.3 Water tank cleaning and maintenance

Remove the cover of the drain outlet, drain all the water in the water tank, and then remove the silicone plug of the water inlet. When there is no water flowing out of the water tank, add about 500mL of pure water or distilled water. When there is no water flowing out of the water tank, you can repeat the cleaning several times, and finally wait. After no water is drained from the water tank, close the drain cap.

3.4 Recommended maintenance intervals

Clean the Water tank	Once a month
Replace water source	Once a week
Clean the casing	Once a month If there is any external dirt, deal with it as soon as possible
Replace the ion resin filter	Replace every 6 months If you add the wrong water source, replace it immediately
Replacing the external power cord	Once every 18 months If the insulation layer of the external power cord is damaged, replace it immediately

4 Performance indicators

4.1 Hydrogen concentration >99 % (V/V), oxygen concentration >99 % (V/V).

4.2 Appearance

a) The graphic symbols and letters on the panel of the hydrogen machine are accurate, clear and even, and there must be no scratches;

b) The outer surface of the hydrogen machine should not be damaged, cracked, or obviously scratched;

c) All control key adjustment mechanisms should be flexible, accurate and reliable in control

4.3 Air tightness

All pipeline connections should be secure, and there should be no air or water leakage in the pipelines, valves and connections.

4.4 High temperature alarm:

When the temperature of the electrolytic tank exceeds 60℃, the yellow light on the screen lights up; when the temperature exceeds 70℃, the red light on the screen lights up, the machine stops running, and the display screen displays "E-1".

4.5 TDS alarm

If the TDS value of the water quality in the water tank exceeds 10, the red light on the machine screen will light up, the machine will stop running, and the display screen will display "E-2".

4.6 Water shortage alarm

When the machine is running, if the water in the water tank is lower than the minimum water level or the

oxygen outlet can be connected to the nasal oxygen tube to directly inhale oxygen; the hydrogen outlet and oxygen outlet can be connected using a 'Y' to inhale hydrogen and oxygen at the same time.

⚠ Warning: Oxygen is a combustion-supporting gas, and hydrogen is a flammable gas. Do not smoke when using, and keep away from matches, burned cigarettes, other combustible sources, and light and dark fire sources.

⚠ Warning: Do not block the hydrogen and oxygen outlets when the machine is running.

⚠ Warning: Do not move the machine when it is running. Do not turn the machine upside down or lie horizontally when there is water in the water tank.

2. 3 Key function description

2.3.1 "Run" button controls the running and stopping of the machine. In the standby state, press it once and the machine will run; press it in the running state and the machine will stop running and enter the standby state.

2.3.2 "TDS" button. When the machine is running, press it once to display the current water quality TDS value and the running time alternately. Press it again to cancel the TDS value display.

2.3.3 "Timing +" and "Timing -" buttons, when the machine is running, you can use these two buttons to set the timing time. After the timing time is reached, the machine automatically stops running and enters the standby state.

2.4 Shutdown

When shutting down the machine, first press the "Run" button to stop the machine and enter the standby state. After about 10 seconds, the machine's circulating water pump and cooling fan will stop working, then turn the switch to the "0" position to turn off the power, and finally unplug the power plug. Cut off the power.

⚠ Note: After the machine stops running, the cooling fan and circulating water pump will continue to run for 10 seconds. Please turn off the power after the cooling fan and circulating water pump stop working.

3 Maintenance

⚠ Warning : Before performing maintenance on the hydrogen machine, the power supply must be cut off and all water in the water tank must be drained.

3.1 Clean the housing box

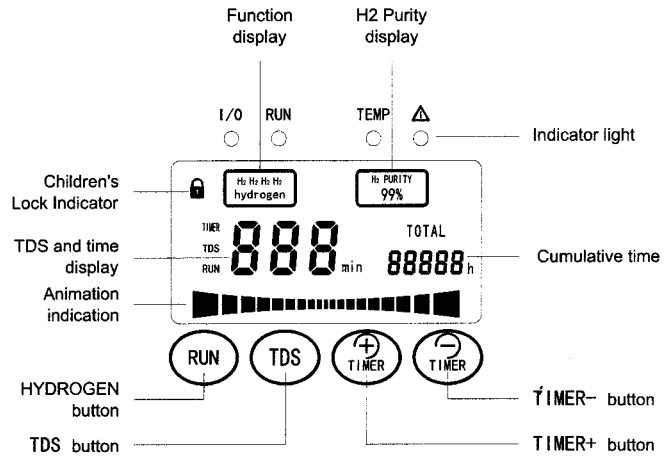
Stop the machine and cut off the power supply, wipe it with a clean soft cotton cloth or sponge, and do not allow liquid to penetrate into the gaps in the chassis.

3.2 Replace the ion exchange resin filter

The ion exchange resin filter is on the lower right side of the back of the machine. Unscrew the cover screws on the back of the machine, remove the cover, take out the ion exchange resin filter, install a new filter, and tighten the silicone tube interface with a tie. Finally, install the cover and tighten the cover screws.

10	Hydrogen humidification bottle	11	Three-in-one power socket	12	Heat dissipation vent
13	Back cover screws	14	Back cover	15	Drain outlet

1.6 Operation panel diagram



2 Operation and use

2.1 Preparation before use

2.1.1 First check whether there is any damage to the appearance of the machine; whether the power cord, plug, switch and power socket are intact; check whether the drain cover has fallen; check whether the oxygen outlet and hydrogen outlet are intact; check whether the hydrogen and oxygen humidification bottles are intact or fall off.

2.1.2 Place the machine on a horizontal table, remove the silicone plug of the water inlet, and slowly add pure water or distilled water into the water tank of the machine through the water inlet. The amount of water added should be between the maximum and minimum water levels. After adding water, cover the water inlet with the silicone plug, and check whether the machine is leaking.

⚠ Warning: The water added must be pure water or distilled water, and the TDS value must be <2; it can be tested with the TDS test pen provided with the machine.

2.2 Power on and run

2.2.1 After connecting the power cord to the machine, turn the switch to the 'I' position. At this time, the machine enters the self-test state. After completing the self-test, it enters the standby state.

2.2.2 Press the "Run" button at the bottom of the screen, and the machine starts to run. At this time, the cooling fan and circulating water pump run first, and start to output hydrogen and oxygen after about 20 seconds.

2.2.3 The hydrogen outlet can be connected to the nasal oxygen tube to directly inhale hydrogen; the

1 Product introduction

1.1 Product model introduction

Model	Input power	Power supply	Hydrogen flow	Oxygen flow	Hydrogen concentration	Oxygen concentration	Water Consumption
HG-1500A	390W	AC230V 50/60Hz	1000 mL/min	500 mL/min	>99%	>99%	60 mL/h
HG-3000A	690W	AC230V 50/60Hz	2000 mL/min	1000 mL/min	>99%	>99%	120 mL/h

1.2 size

Model	Product size (L×W×H):	Packaging size(L×W×H):
HG-1500A	260*230*455mm	350*320*630mm
HG-3000A	280*265*506mm	375*360*680mm

1.3 Weight:

Model	Net weight	Gross weight
HG-1500A	13 kg	15 kg
HG-3000A	16 kg	18.5 kg

1.4 Operating environment conditions:

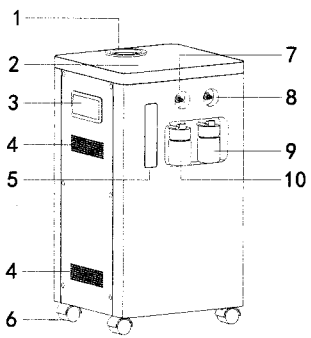
Ambient temperature: 5-40°C

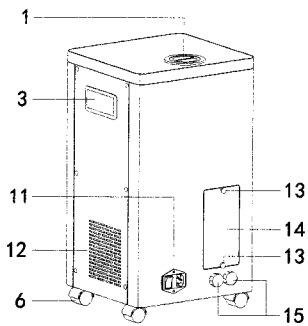
Relative humidity: 30-90%

Atmospheric pressure: 45-106kPa

⚠ Note: When the storage and transportation temperature is below 0 °C, the machine should be placed in a normal working temperature environment for more than four hours before use.

1.5 Schematic diagram of the complete machine





1	Water filling port	2	Display	3	Handle
4	Air Inlet	5	Water level observation window	6	Casters
7	Hydrogen outlet	8	Oxygen outlet	9	Oxygen humidification bottle

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