Manual to HP500 Series Hydrogen Generator

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To Our Valued Customers

Thank you for using the Helper's HP series of products. Before using our products, please carefully read the product manual, and check whether the equipment appearance and internal anomalies are all in normal status after transportation, and then check whether the parts are complete as the Instruction states. For questions please contact us immediately and we will do all we can to provide you with the best quality service.

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1. Overview

My company produce mainly the HP500 series of electrolytic hydrogen generator system, constituting pressure control systems, purification systems and display system. Electrolytic hydrogen, by using the most advanced membrane separation technology, from infrared optoelectronic feedback devices and switching power supply consisting of pressure control system, will enable the occurrence of the needed amount of hydrogen to automatically adjust the output to maintain the output flow and pressure stability. The working principle is to produce hydrogen through electrolysis of water to produce oxygen while venting oxygen into the atmosphere. The key part of the system is electrolytic separation pool, with positive in anode cylinder structure and negative in the sheet-type cathode (all stainless steel material). It enables liquid storage, hydrogen production, hydrogen to be ranked at the same time, and this is the best replacement product of Plate Electrolytic Cell. This instrument has the advantages of big electrolysis area, low pool temperature, excellent performance, great gas production, and high Hydrogen purity. This device can effectively prevent the phenomenon of returning to liquid.

2. Main technical parameters

(1) Produces Purity: 99.999%

(2) The Output Flow Rate :0-500mL / min

(3) Output Pressure :0-0 .5 MPa 0-0.7MPa (HP500H type)

(4) Power Requirements: 220V / 50Hz

(5) Maximum Power: 200w

(6) Size: 330 × 170 × 380mm (L × W × H)

(7) Weight: 10kg

3. Characterization

(1) The instrument has auto-level instructions and alarm systems, flow controlled by the LED digital display, more intuitive and eye-catching.

(2) An over-voltage alarm system, when the output pressure exceeds 0.5Mpa, if continuing the production of hydrogen, the instrument’s "failure alarm" red light will be on, and buzzer alarm sound generated, which automatically cut off the machine power, to protect electrolytic barrel, extending the life of usage.

(3) After the integration of storage, electrolytic hydrogen production, hydrogen-row in one, it makes electrolysis in larger pool while of low-temperature, pro-longing its life, producing larger volume of hydrogen, and of higher purity.

(4) It can effectively prevent the equipment from return-to-fluid phenomenon, and reduce the number of replacement of silica gel.

(5) By applying the advanced switching power supply, it can improve electrolysis efficiency dramatically.

4.Operation Instructions:

Before using this product, please check the equipment appearance and internal anomalies which might be caused by transportation.

The preparation of the electrolyte: The certain amount of pure KOH (potassium hydroxide) and deionized water (or distilled water) by a ratio of 1:5. After cooling, it is dissolved into the electrolytic barrel until the liquid level indicator reaches between 50% and 100%.

(1) Screw off the mouth seal on the "exporting", to keep straight the output gas flow path.

(2) Switch on the power, equipment flow display should be 0-500ml/min.

(3) After booting to normal state, with the sealing pressure to take the "output" mouth tightened, so that it does not leak.

(4) After booting about 3 minutes, the pressure indicator will be at 0.5MPa, and the LED digital display flow shows as "000" or close to "000", indicating a normal running status; Otherwise, leakage may take place. By using soap post-test, it can exclude the leakage fault.

(5) Switch off the power, remove the seal on the "output" port. With the pipeline diameter Φ3mm connection, it can ensure that seals do not leak, and it can normally supply hydrogen.

(6) Before or after each work, just to switch on/off the power. The machine itself will take care of everything else.

5. Working Environment:

(1) This machine is indoor unit, please be sure to set up indoors.

(2) Request that this machine be set on a good indoor ventilation.

(3) Request that this machine be away from heat.

(4) Request to avoid a possibly salty, organic solvents and corrosive gas environments.

(5) For long-distance transport or handling, please pour out electrolyte from the bucket in advance.

Electrolyte will cause corrosion damage to equipment chassis.

6. Notes

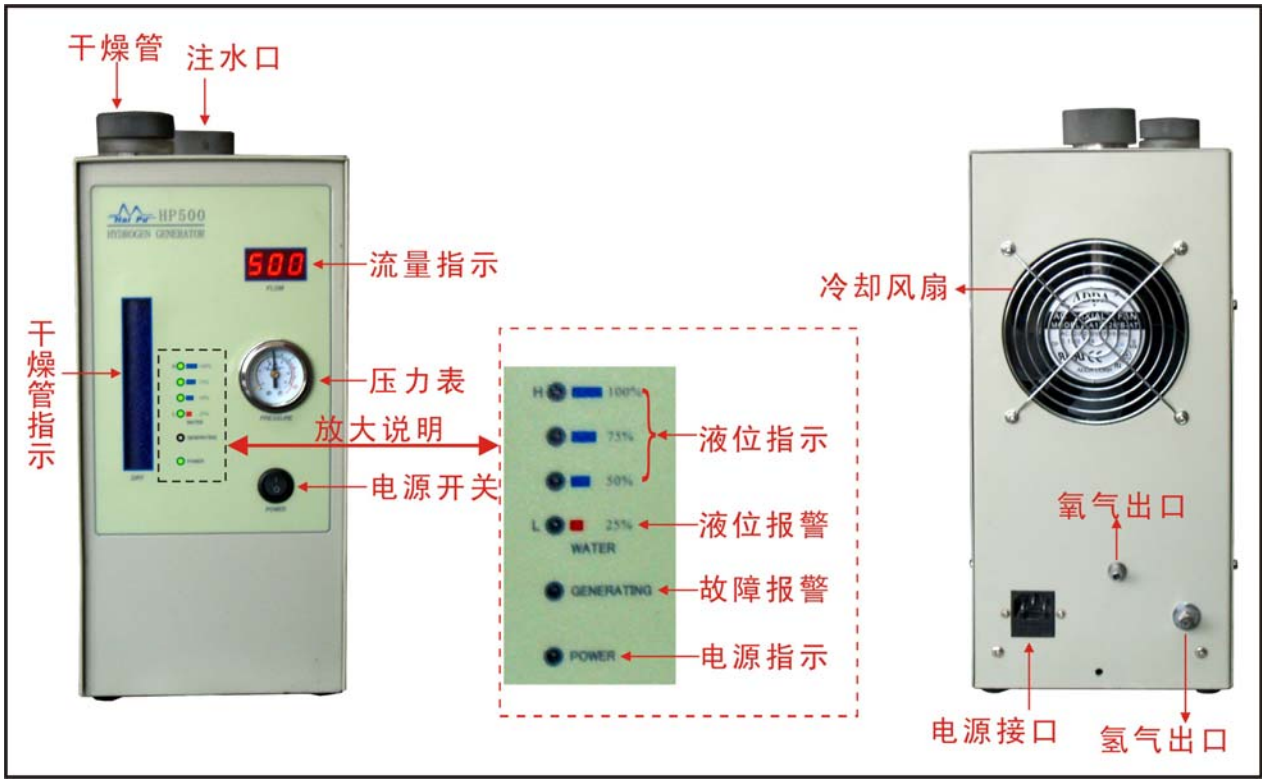
(1) When using, please pay attention to the electrolyte level. When the liquid level is below 25%, the instrument level indicator light will turn from green to yellow until red, the device will alarm and cut off the output automatically. At this point, it requires to add deionized water (or distilled water), till the liquid level between 50% and 100%.

(2) After using for a period of time, please pay attention to the color status of silica gel. When the silica gel inside the drying tube changes its color to some certain height from the bottom up, it requires to replace the silica gel with new ones.

(3) After using for a period of time, please pay attention to purity of lye. If it is found in muddy phenomenon, please replace the lye.

lye Replacement method: Turn off the power supply, screw down "hydrogen-exporting" Φ3mm pipeline, pour out lye. When pouring, the hydrogen generator should be poured from the left side of the panel, After then, clean the electrolysis bucket with water, repeated washing three times, then drain the water, re-injection of lye, and cleaning completed. It will cause electrolyte turbidity if not timely replacement to lye, which can reduce the hydrogen output, or even more serious problems such as the machine stops working completely.

7. Instrument Diagram



8. Packing List

No.	Names of parts	Specifications	Qty.
01	HP Hydrogen Generator	HP500	1set
02	KOH	100 grams	1bottle
03	Power Line		1pc
04	Instructions		1pc
05	O-ring	Φ1.8×1.8mm	4 pcs
06	O-ring	Φ4.5×2mm	4 pcs
07	O-ring	Φ23.4×3.6mm	1pc
08	Silicone pad	Φ6.5×5mm	4pcs
09	Silicone pad	Φ8×4mm	4pcs
10	Rubber cap	Φ7×6mm	3pcs
11	Product certification		1pc
12	Warranty Cards		1pc

9. Malfunction and Solution

Malfunction	Reason and Solution
Fail to Boot	1.Check the switch; 2.Check and replace the fuse.
After switching on, Pressure increases very slowly (over 10 minutes) or Pressure has always fallen short of the set pressure, or Flow meter is always displayed in the maximum flow （500ml/min）	1. Pneumatic system leak, to use soap water to detect the gas Junction, tighten the leak-point or Replace the leaking components； 2. Drying tubeor its cover gets loose. Tighten it.
Fault Alarm light in red, alarming.	Air Pressure exceeds 0.1Mpa： 1. the light Block board of the Auto-tracking device is Dislocation or falls off； 2. Photoelectric Sensor damaged； 3. Control circuit failure。 Contact us immediately.

10. we guarantee:

By using the machine complying with the proper conditions, within one year from the date of the product shipped, due to poor quality of the product resulting in damage or abnormal working, we will replace new machine for the user free of charge.

Please contact us for any technical question, we will always provide customers with quality services.

Directory