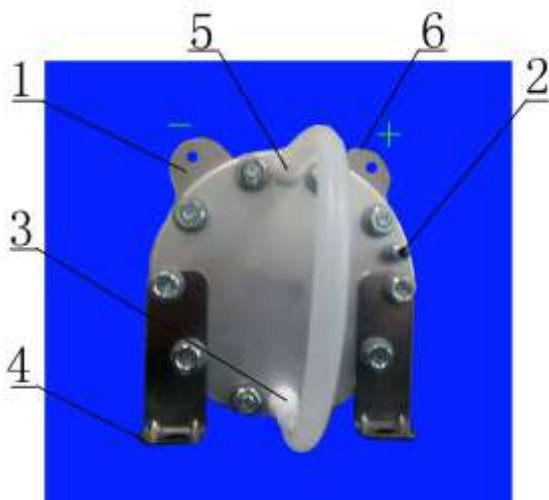


## Titan EZ-500 Stack Instruction

### 1. Brief introduction

Titan series electrolyzer cell, developed by our group, is a kind of Solid polymer electrolyte electrolysis device. The electrolyzer cell produces hydrogen by electrolyzing pure water through a solid polymer membrane. It features high current density, low electrolysis voltage, high electrolysis efficiency, etc.

### 2. Outlook and structure



- 1. Negative electrode
- 2. Hydrogen and water outlet
- 3. Water inlet
- 4. Support frame
- 5. Oxygen and water outlet
- 6. Positive electrode

### 3. Operation instruction

- ① Remove the sealing film on the Water Inlet (NO.3) and Oxygen water outlet (NO.5). Then erect the electrolyzer stack, a little amount of deionized water will flow out.
- ② Fix the electrolyzer stack frame in a suitable position with M5 screw.
- ③ Connect Water inlet (NO.3) with outlet of water tank by  $\Phi 6 \times 9$  Silicone hose.
- ④ Connect Oxygen and water outlet (NO.5) with Circulating water inlet of water tank by  $\Phi 6 \times 9$  Silicone hose. This way, water from the electrolyzer cell can be reused again.
- ⑤ Connect Positive electrode (NO.6) with positive lead of power supply, connect Negative electrode (NO.1) with negative lead of power supply, and tighten them with M6 screw (if they are in loose condition, it may be heated and burn out electrode lead).
- ⑥ Connect Hydrogen and water outlet (NO.2) with inlet of hydrogen and water separator. The connection parts should be sealed well with screw nut in case of gas leakage.

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Model	Titan EZ-500 Stack
Advised voltage and current	DC 4V,40A
Power supply Current range (DC) (please note it ask constant current power supply)	0-40A
Stack Diameter	138mm
Working temperature range	5-45°C
Water requirement	1.ask Deionized water,uptra-pure water or re-distilled water; 2.ask water Resistivity>1M Ω *cm,Or water Conductivity<1us/cm

#### 4.Parameter

#### 5.Note

- ① Used water should be deionized water or re-distilled water. Water Resistivity should be larger than 1MΩ/cm. Unqualified water will damage electrolyzer cell stack. The damage can not be restored. (the pure water, the better effect).
- ② Connection between electrolyzer cell stack electrode and power lead should be right.
- ③ Electrolyzer cell stack can not lack water for long time. Please add some deionized water or re-distilled water to electrolyzer cell stack if long time (e.g. more than 7 day). no using the stack.
- ④ The electrolyzer stack can not be stored in the environment that temperature lower than 0°C.