



科学材料站
SGI Materials Hub

Tel: +86 13003038751
Fax: +86 553-7458-388
Email: contact@scimaterials.cn
www.scimaterials.cn

Alkaline Water Electrolyzer Stack- 10 Cell

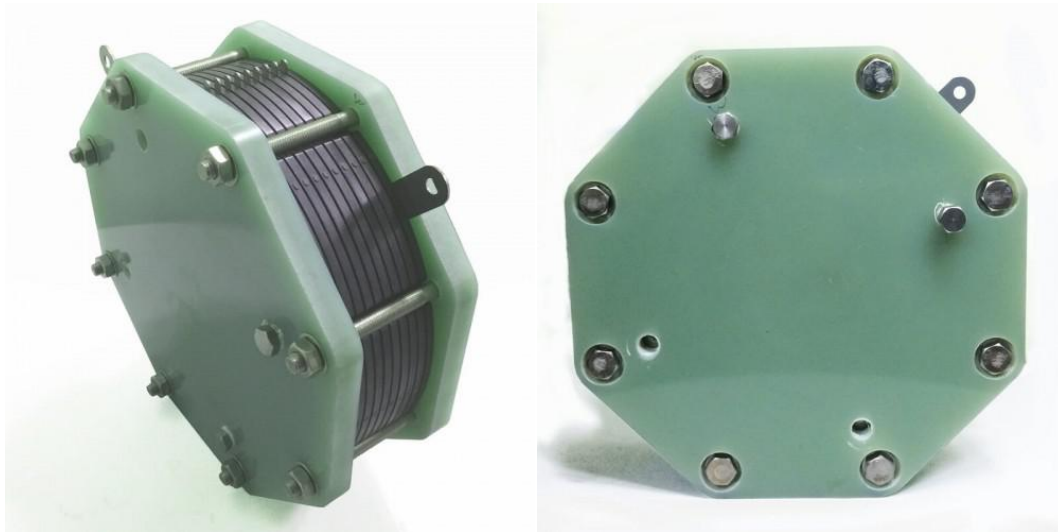
Product code: LCF10

Stack Install Guide User Manual

Contents

1. Stack Specification -----	p2
2. Connection Method -----	p3
3. System Schematics -----	p4
4. Operation Conditions -----	p5
5. Cautions -----	p6

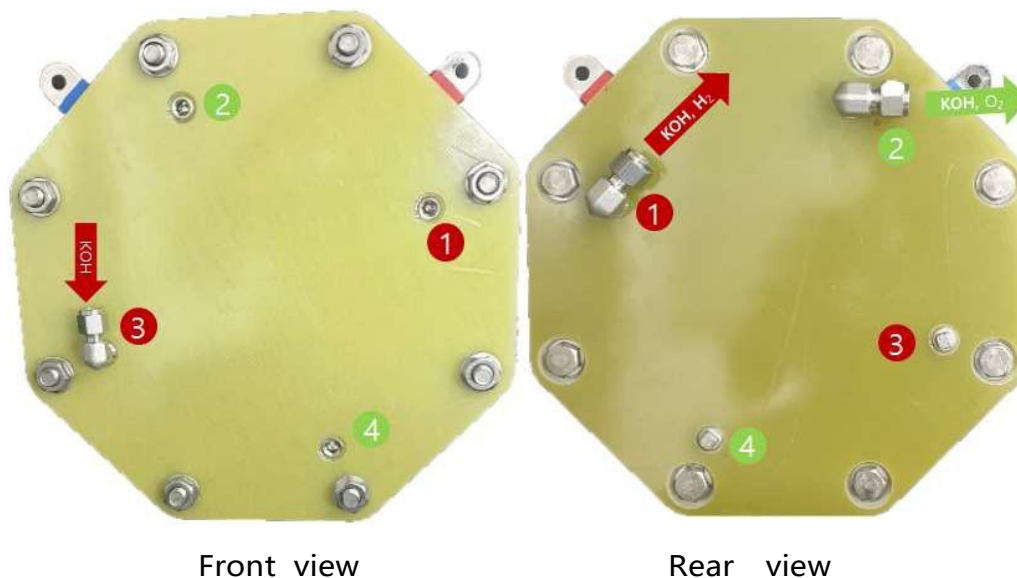
1. Stack Specificaton



- Product code: LCF10
- Size: 265 x 265 x 80mm
- Material: FRP, Engineering plastic
- Number of unit cell: 10 ea
- Separation membrane: Porous polymer
- Electrode material: Nickel based compound
- Current density: 300 ~ 500mA/cm² @ 1.8v
- Power capacity range: 1kW ~ 2kW

Electrolyte: Alkaline solution(KOH, 30wt%)

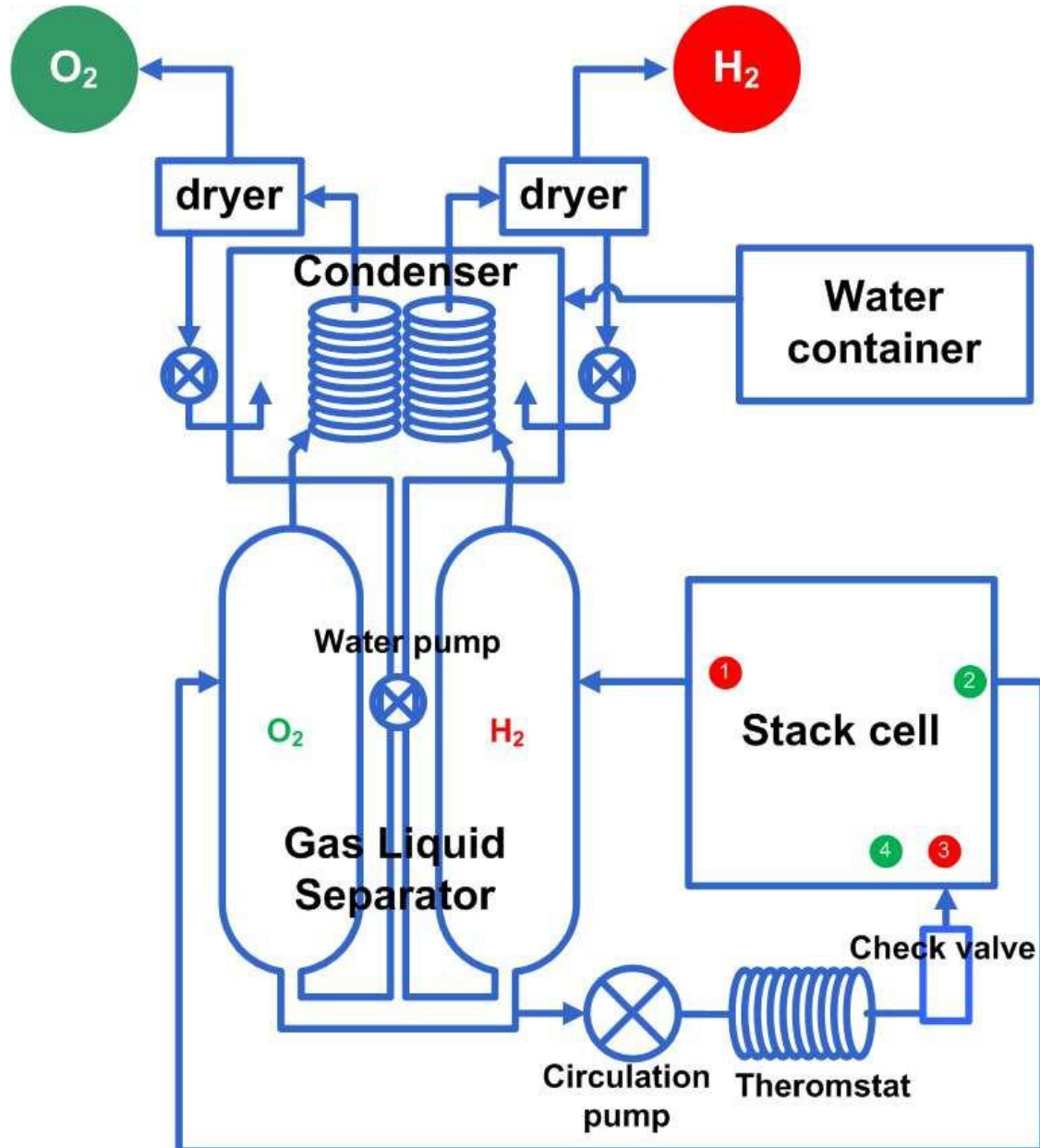
2. Connection Method



- ① Block Port 1, Port 2, Port 4 in the front view of the stack.
- ② Block Port 3 and Port 4 in the rear view of the stack.
- ③ Insert electrolyte liquid of Hydrogen side into Port 3 (Lok fitting 1/4') in the front view of the stack
- ④ Connect Port 1 (Lok fitting 3/8')in the rear view of the stack to the separator from the hydrogen side
- ⑤ Connect Port 2 (Lok fitting 3/8') in the rear view of the stack to the separator from the oxygen side
- ⑥ For the detailed connections. Please refer to the system schematics



3. System schematics



4. Operation Conditions

- ① Please set the basic BOP system of the alkaline electrolyzer before the start.
- ② KOH has the best performance in 30wt% of concentration, and shows the highest performance when the temperature is 80 °C.
- ③ Connect the red label electrode to the positive voltage and the blue label electrode to the negative voltage.
- ④ Apply the voltage of 15V~20V
- ⑤ During the start of electrolysis, it needs sufficient aging. Try to let the temperature rise due to the electric power from the electrolysis, and it is recommended to install the cooling system.
- ⑥ Operation condition has to be adequately adjusted according to the function of temperature and current
- ⑦ The circulation speed of the electrolyte has to be maintained at 250 cc/min. (Gear pump is recommended)

5. Cautions

- Make sure electrolyte solution (KOH) does not contact with the skin.
- Do not lay the electrolyzer stack by side of upside down.
- Do not disassemble or open the stack.
- Please set the generation pressure of hydrogen and oxygen at least to 10 bar.
- Do not allow the setting of the heater temperature to be above 80 °C.
- If the electrolyte solution leaks, stop the operation and ask for customer support.
- Do not arbitrarily short the electrodes of the stack.
- Please try to apply DC power or pulse form power to the stack.

Please try not to apply the voltage over 20V