



# HC018 User Manual

## Hygger CO2 Generator Kit

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Support

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The CO2 generator kit is specifically designed for aquatic planted tanks, generating CO2 through specific chemical reactions. The diffuser breaks down CO2 gas into fine bubbles, providing aquatic plants with ample carbon sources to enhance photosynthesis. This promotes healthier, lusher plant growth while improving the aesthetic appeal and ecological balance of the aquarium. The needle valve adjusts the number of bubbles released per second via the bubble counter, and the solenoid valve, when paired with a timer, enables automated on/off control for precise CO2 delivery.

## 1. PACKING LIST

- ① 1x Stainless steel air cylinder
- ② 1x Valve
- ③ 1x Filter cartridge
- ④ 1x Solenoid valve
- ⑤ 1x Adapter
- ⑥ 1x CO2 bubble counter
- ⑦ 1x CO2 diffuser
- ⑧ 3x Snap-on suction cup
- ⑨ 1x Flush mount suction cup
- ⑩ 1x Air tube
- ⑪ 1x Check valve
- ⑫ 1x Silicone collapsible funnel
- ⑬ 1x U-bend tube
- ⑭ 1x Large sealing ring (spare)
- ⑮ 1x Small sealing ring (spare)
- ⑯ 1x User manual



## 2. INSTALLATION STEPS

1. Attach the filter cartridge to the valve.
2. Add citric acid and baking soda according to the ratio marked on the bottle neck or specified in the manual.
3. Tilt the bottle at a 45-degree angle, then add water in the appropriate ratio (as indicated on the bottle neck or manual).
4. Quickly screw the valve onto the air cylinder clockwise and tighten securely.
5. Close the fine adjustment valve.
6. Allow 12 hours for the reaction to complete (opening it prematurely may cause valve clogging).
7. Install the solenoid valve.
8. Fill the bubble counter with water up to 3/4 of its capacity, then attach it to the solenoid valve and tighten clockwise.
9. Cut the tube to the desired length, then connect the check valve, U-shaped tube, and diffuser using the tubing. Note: Install the check valve in the direction of the arrow to avoid reverse installation.
10. Connect the tube to the bubble counter, and secure the diffuser inside the aquarium using suction cups.
11. Power on the solenoid valve, open the fine adjustment valve, and adjust the gas flow rate as needed.

### 3. PRECAUTIONS

1. Read this manual thoroughly before operation to ensure correct usage.
2. When installing the solenoid valve, check for the presence of a sealing ring at the connection between the solenoid valve and the fine-tuning valve.
3. Add raw materials strictly according to the proportions specified in this manual. Exceeding the recommended quantity or doubling the dosage is strictly prohibited.
4. Always tilt the bottle at a 45-degree angle before adding water.
5. Do not touch or move the air cylinder during the reaction process.
6. During the reaction process, normal condensation may occur at the bottle base. The air cylinder should be thoroughly cleaned before replenishing with new raw materials.
7. Prior to replenishing new raw materials, ensure to deactivate the power supply to the solenoid valve first.
8. Material Replacement Steps: Disconnect the tubing from the bubble counter. Open the fine-tuning valve until the pressure gauge reads zero. Unscrew the valve, thoroughly clean the filter element and air cylinder, then add new raw materials.

### 4. TROUBLESHOOTING

**Issue 1:** Solenoid valve energized but fails to output gas

**Solution:**

1. Turn off the fine adjustment valve, loosen the nut, and remove the solenoid valve.
2. Unscrew the copper rod to purge residual gas (listen for a hissing sound indicating gas release).
3. Reinstall the copper rod and solenoid valve assembly.
4. Open the fine adjustment valve.

**Issue 2:** Gas continues flowing when solenoid valve is de-energized.

Post-deactivation residual gas discharge from the valve body is normal. To verify solenoid valve integrity: Disconnect the bubble meter tubing. Open the fine adjustment valve while closing the solenoid valve. Observe bubble formation – absence indicates normal operation. If bubbles persist, proceed with:

**Resolution:**

1. Close the fine adjustment valve, loosen the nut, and remove the solenoid valve.
2. Disassemble the copper rod assembly, inspect the rubber seal for contaminants, clean thoroughly, then reinstall after elongating the spring.
3. Reassemble the copper rod and solenoid valve.
4. Reactivate the fine adjustment valve.

 **CAUTION INFORMATION**

- Do not invert the air cylinder.
- Avoid using strong acids or bases.
- Do not disassemble valves during operation.

**Raw Material Dosage Ratio:**

For 1L capacity: Add 100g citric acid + 100g baking soda + 150mL water

For 2L capacity: Add 200g citric acid + 200g baking soda + 300mL water

For 5L capacity: Add 600g citric acid + 600g baking soda + 900mL water

## **5 . CONTACT INFORMATION**

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