

<< Ziss CO₂ Generator ZC-II >>

The Ziss CO₂ Generator ZC-II is a carbon dioxide generator that uses chemical neutralization reactions. The input speed control valve on the top of the generator controls dropping rate of the solution from the top chamber, allowing carbon dioxide to be generated safely and consistently with a desired speed. The pressure relief safety valve prevents excess pressure buildup, keeping the unit safe.

Unlike yeast and sugar-based fermentation CO₂ generators, ZC-II works immediately, does not produce unnecessary ethanol and works perfectly in the winter season without being affected by temperature as there is no biological reaction, supplying high-purity carbon dioxide at almost constant speed for more than 45days.

Comparison Chart with Fermentation CO₂ generator

| | Fermentation CO ₂ | Ziss ZC-II CO ₂ Generator |
|----------------------------------|------------------------------|--------------------------------------|
| Instant Start | No (Delay) | Yes |
| Speed Control | No | Yes |
| Temperature Effect | Yes | No |
| Explosion Occurrence | Low | No |
| CO ₂ Evolution Amount | Under 50g ¹ | Average 160g ² |
| Duration | Under 2 weeks ¹ | Over 45days ² |
| Carbon Dioxide Purity | EtOH contain | >99% High Purity |
| Number of Container | 1EA | 1EA |
| On/Off Control | Can't be | Can't be |



1. In-house result : Measured by weight loss of the container. (temperature : 20 °C)
2. In-house result : Measured by weight loss of the container. (CR-160 160g Ziss CO₂ generation Kit and one bubble at around 5 min)

Using guide of Ziss CO₂ Diffuser ZD-200

* To generate fine bubbles tighten the head as much as you can.

1. Allow the ZD-200 to fill with water, which acts as the bubble counter.
2. It will benefit if you wet the pad and force air through the ZD-200 prior to connecting to the ZC-II
3. First you will get large bubbles between the non-woven fabrics followed by fine bubbles.

Please be aware

In the case of a 100L tank, 20ppm of carbon dioxide concentration is provided by a single drop per 6 seconds of the bubble counter. More than 40ppm of carbon dioxide concentration can cause aquarium animals to die.

Carbon Dioxide Generation Kit & Reuse

If you use our 160g carbon dioxide generation kit (CR-160), you can conveniently generate and supply carbon dioxide for your aquarium.

If you want to DIY, you can make a 100g carbon dioxide generation kit by the following method.

Up Solution for the #1 Up Solution Tank : Add 160g of citric acid in a beaker (or bottle) and add water to fill 350ml. Dissolve completely.

Down Powder for the #2 Down Powder Tank : Use 200g of Baking Soda (Sodium bicarbonate)

Once the solution from the top tank has been used up and CO₂ has stopped generating, you can discard the contents in the sink, wash the container, and reinstall the powder and solution for reuse.

How to Install and Use

| Structure of the ZC-II generator | How to install and use |
|----------------------------------|--|
| | <ol style="list-style-type: none"> 1) Firstly, close the #3 speed control valve. (Important) 2) Install the main sealing on the groove in the #2 Down Powder Tank. 3) Add the powder into the #2 Down Powder Tank. 4) Add about 200ml of water with washing the red main sealing into the #2 Down Powder Tank. 5) Place the #1 Up Solution Tank onto the #2 Down Powder Tank and close. 6) Add the Up solution to #1 Up Solution Tank through the #4 Cap. (please check the #3 speed control valve was closed prior to adding) 7) Close the cap and install the diffuser ZD-200 into the tank 8) Open and adjust the #3 speed control valve to allow the solution from the #1 Up Tank drop along the #5 Dropping Hole. (160g Kit : One drop per five to eight minutes, 100g Kit : One drop per three to five minutes) * Please use stopwatch function in the mobile phone * 9) Mark the location on the top with a marker. You can conveniently set it up at the next installation. 10) Please check again to see if the upper solution drops at the speed you set. * If the up solution drops but the diffuser does not produce carbon dioxide, open the main body and wash the red main sealing with water subscribed as in step 4 and reconnect. * If you soak the entire container in water, you can easily check the leaking. * If the rate of carbon dioxide generation slows down, just open the # 3 valve a little bit. (ca. 1 mm) |

Caution

- 1) Don't shake your generator: When the solution in the #1 Up tank is dropping consistently into the #2 Down tank, the production of CO₂ is continuous. But, if you shake the container, it reacts immediately and produces too much carbon dioxide instantly. Subsequent injection of the solution from the #1 Up tank will take time to settle and become stable.
- 2) Use 24 hours continuously: Closing the #3 speed control valve can stop the carbon dioxide generation, but it does not stop immediately. Also, adjusting the CO₂ generation speed will take more time for the CO₂ pressure to increase to release carbon dioxide from the diffuser. Use 24 hours continuously unless you want to stop for a long time.
- 3) Do not use gas or air control valves: This product can supply CO₂ at a constant rate by adjusting the drip rate from the #1 Up tank. So you don't need to use gas or air control valves. In addition, there is a pressure relief safety valve to prevent high pressure buildup of CO₂ safely.

* If generator sets correctly, carbon dioxide will be generated consistently, there is no possibility of backflow and anti-return valve is not required.

However, backflow can be occurred when the external temperature drops and the internal gas in the container contracts. Positioning the generator in a warm place (e.g. above the light) can increase the possibility of backflow. (If the aquarium water does siphon back into the #1 Up Tank, this solution will be diluted, but this can't go into the #2 Down Tank. For this reason, even if the back flow does occur, all you need to do is adjust the input speed again by opening the #3 Speed Control Valve.)

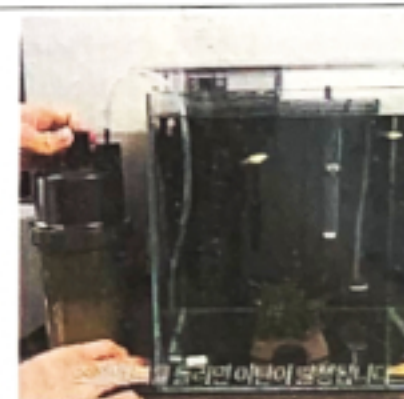
Pictures of precautions when using the installation



Solid can remained after the Down powder is added. For this reason, the sealing must be washed with the water. Don't wipe after washing.



Place the body on the floor and slowly close the upper container to seal perfectly.



After installation, adjust dropping speed of the upper solution per certain minute. (Use with stopwatch function)