

# HOW TO USE

## FAUNA MARIN SKIM BREEZE CO<sub>2</sub>-REACTOR

Special air filter for connecting directly to a protein skimmer  
for air purification and CO<sub>2</sub> reduction.

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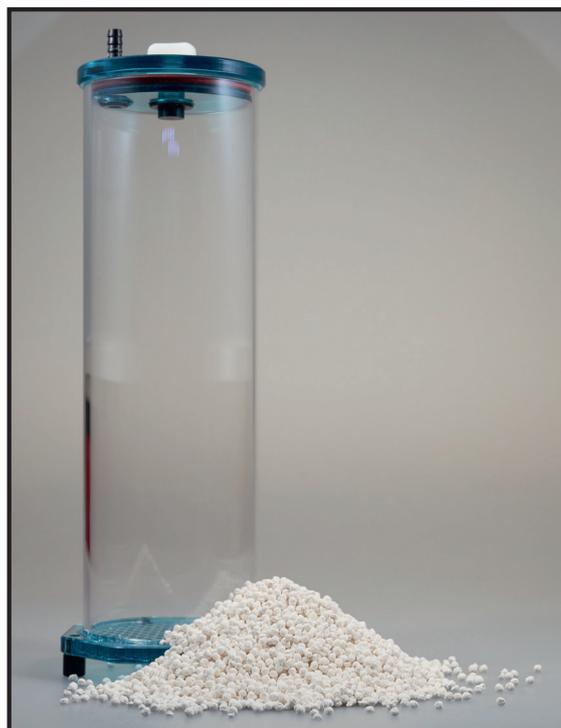
## FAUNA MARIN SKIM BREEZE CO<sub>2</sub>-REACTOR

### How to use the Skim Breeze CO<sub>2</sub> - reactor

#### How important is CO<sub>2</sub> content and pH value in the aquarium?

Very important. When it comes to understanding the relationship between pH and CO<sub>2</sub> in the aquarium, one must first understand how one affects the other. In aquariums, **the pH value of water is strongly dependent on the amount of dissolved CO<sub>2</sub> within the water.** This means that the more CO<sub>2</sub> content in the water, the lower pH value will be. Conversely, **it is possible to increase pH by limiting the amount of CO<sub>2</sub> added into the water.**

An examination of coral behavior and water tests show that corals consume CO<sub>2</sub> during photosynthesis, then later release it back into the water at night. This natural process explains why we have daily pH fluctuations in aquariums. In other words, **when the aquarium lighting is ON, corals are consuming the CO<sub>2</sub> in the water thus resulting in increasing pH. When the lights turn OFF, corals begin to release the CO<sub>2</sub>, resulting in decreasing pH.**



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### How is CO<sub>2</sub> introduced into the aquarium in the first place?

Normal outside air typically has a CO<sub>2</sub> content of 0.04%. When it comes to aquariums and CO<sub>2</sub> in the air, the pH of the aquarium is directly affected. One must take into account the placement of the aquarium as most are usually placed in an enclosed area. This same space is also occupied by several people and pets. By simply breathing, the CO<sub>2</sub> content in the air is greatly increased, even more so with multiple people in the same area. When we exhale, we release a CO<sub>2</sub> content of approximately 4%.

**With the presence of humans and animals, the CO<sub>2</sub> content in the room steadily increases over time.** One can reduce CO<sub>2</sub> in the air by simply opening a few windows and ventilating the room when possible.

**The aquarium water undergoes continuous gas exchange with the ambient air. This means that if the air has a higher CO<sub>2</sub> content, the aquarium water will use this air during the gas exchange and result in an increased CO<sub>2</sub> value in the water.**

Since most modern saltwater aquariums are equipped with powerful skimmers, the effectiveness of mixing air and water results in a strong gas exchange. The strong pull of air into the skimmer body introduces ambient air which may contain elevated levels of CO<sub>2</sub>. **The addition of high CO<sub>2</sub> filled air can result in a decrease of pH.**

**This is where the Skim Breeze CO<sub>2</sub> reactor comes into play.**



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### How does the Skim Breeze reactor increase the pH value in the aquarium?

The **Skim Breeze CO<sub>2</sub> reactor from Fauna Marin** is a **dedicated filter** that is used to hold a special filter media called Skim Breeze. This product is **responsible for removing all the CO<sub>2</sub> gas** it comes into contact with.

By connecting the Skim Breeze reactor to the air inlet of a protein skimmer, **the air pulled through the reactor and into the skimmer can be purified and stripped of any CO<sub>2</sub> gas**. Because protein skimmers are so effective at pulling in mass amounts of air, it is possible to filter this air **before it is introduced into the skimmer**, thereby reducing the amount of CO<sub>2</sub> being added to the tank. With the Skim Breeze reactor, CO<sub>2</sub> entry is minimized and **pH value can be increased and stabilized**.

### What are the effects of higher pH in the aquarium?

- Water with a pH value that is closer to the **natural value of 8.3**
- **Increased coral growth** through more efficient calcification
- **Small amount of precipitation** of pH value in the water
- **Increased reproduction rate of calcareous organisms such as snails**
- Increased pH results in a **lower Phosphate level** which thereby **reduces unwanted algae growth**
- Nutrient reduction – the increased pH value creates a nutrient buildup limitation and limits how much nutrients are introduced into the aquarium. **Under these conditions nutrients are bound to the water surface instead of dissolving into the water column.**



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### Benefits of using the Skim Breeze CO<sub>2</sub> reactor compared to conventional pH buffers

Due to the functional principal of the Skim Breeze reactor and media, **it is not possible to overdose!** Other products such as pH buffers, will in fact raise pH, but will have no effect on the CO<sub>2</sub> content that is already in the water. In order to extract the CO<sub>2</sub> from the water, the process usually entails heavy interventions in water chemistry. With Skim Breeze, the **CO<sub>2</sub> gas is removed from the air before it is introduced into your aquarium.**

The Skim Breeze CO<sub>2</sub> reactor is designed to operate passively through the air inlet of the skimmer and **therefore does not require any sort of manual dosing.**

The "Skim Breeze" filter media has a **color changing feature which shows the saturation state of the media as it changes from white to violet.**

**With Skim Breeze, protein skimmer performance can increase by up to 15%.**



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### How to handle the filter and filter material

The reactor and filter media are intended for use only as described above.

**Under no circumstances should the filter and media come into contact with water.**

**The Skim Breeze filter media DOES NOT require any kind of activation** and is ready to use right out of the product container.

We recommend you position the reactor in an area that will always stay dry.

**Please keep away from water. Neither the housing nor filter media should ever come into contact with water.**

**When connecting the air hose to the reactor and skimmer, please make sure to use a dry hose.**

Since the Skim Breeze media absorbs CO<sub>2</sub> from the air, we recommend you **tightly seal any remaining media in the original container and store in a dry area.**

After initial use of Skim Breeze, one may notice a decrease in their Calcium, Alkalinity, and Magnesium. This is due to the increased calcification rate of corals. **Please test your parameters and adjust as needed.**



### TIPS

- **Low pH values are not only attributed to increased CO<sub>2</sub> content in the aquarium. These values can also be caused by low KH values and use of a calcium reactor.**
- **Protein skimmers may need to be adjusted due to the performance increase from using Skim Breeze.**
- **The effectiveness of the media will greatly depend on the aquarium's current pH value and CO<sub>2</sub> content of the surrounding area.**

For further assistance, please visit our **support forum** at [www.fauamarin.de](http://www.fauamarin.de)