MAKE & KEEP

CO₂ Advanced System - Forest Easy-to-use CO₂ injection kit for healthy and beautiful plant growth.

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Every month, this column introduces useful knowledge, skills, and product information to make and keep your Nature Aquarium and Aqua-Terrarium. In this issue, we will discuss the importance of CO₂ supplementation essential for healthy and lush aquatic plant growth, and explain how to use ADA's new CO₂ Advanced System - Forest.

ADA NATURE AQUARIUM GOODS

CO2 ADVANCED SYSTEM - FOREST







Ideal conditions for healthy plants and reasons for CO₂ supplementation.

In the Nature Aquarium, you will create a beautiful aquascape by growing vibrant and lush aquatic plants. The conditions required for healthy plant growth in an aquarium are the sources of nutrients contained in the substrate and supplied by liquid fertilization, sufficient lighting for photosynthesis, and efficient CO2 injection. Without CO2 supplementation, the major sources of CO2 in a tank are carbon dioxide in tap water and air which is naturally dissolved in the aquarium water, and carbon dioxide breathed out by fish, shrimp and bacteria. Once all the plants start photosynthesizing

in a limited tank space, they will instantly use up the CO₂ in a tank and a shortage of CO₂ will stop photosynthesis. Since photosynthesis is essential to sustain aquatic plants growth, they will not grow healthy without CO₂ injection, resulting in a poor outcome. Therefore, ADA has developed CO₂ supplementation systems using liquefied CO₂, which can deliver CO₂ to a tank in an optimal form for photosynthesis; all the Nature Aquariums produced by ADA are equipped with a CO₂ system. New CO₂ Advanced System-Forest is a basic CO₂ supplementation kit which can be adapted to aquariums up to 60cm in width.

CO₂ Advanced System - Forest New features and usage

The previous Advanced System version consisted of CO₂ System 74-YA/Ver.2 for small CO₂ cartridges, Pollen Glass, CO₂ Bubble Counter and Cap Stand. Whereas the new Advanced System - Forest keeps the CO₂ System 74-YA/Ver.2, it offers Pollen Glass EZ (a CO₂ Bubble Counter-integrated Pollen Glass) and the newly designed Metal Cap Stand. Pollen Glass EZ enables easy installation and simplifies the arrangement of the CO₂ tubing from the cartridge to the diffuser by performing as both a CO₂ diffuser and a CO₂ counter.

The kit comes with both pressure-resistant and silicone tubes necessary for connecting the parts, and provides hassle-free installation by connecting each part as shown in the illustration below. For a W60 cm aquarium tank (approximately 60 liters in volume) during the initial set-up period, it is recommended to provide one CO₂ bubble per second via Pollen Glass EZ. Use this as a guide to measure the adequate amount of CO₂ to inject, depending upon the plant's growth stage. Always start CO₂ supplementation when turning the light on and stop it when turning the light off. (Providing 8 to 10 hours of lighting time per day is recommended.)

CO2 ADVANCED SYSTEM - FOREST [Usage example]



CO₂ Forest Bottle

CO₂ Forest Bottle is a newly introduced replacement CO₂ cartridge in the CO₂ System 74 series. Refreshing the design of the old Tropical Forest, it offers easy usage without packaging.



Pollen Glass EZ

Pollen Glass EZ is a CO₂ diffuser that integrates Pollen Glass with CO₂ Bubble Counter. It simplifies installation and goes nicely with small size aquariums, such as DOOA System Aqua 30.



CO₂ Metal Stand

A stainless-steel stand for small CO₂ cartridges. The stand can stably hold a CO₂ Forest Bottle with a wider bottom surface and a heavier body than the existing cap stands.

Installation example

