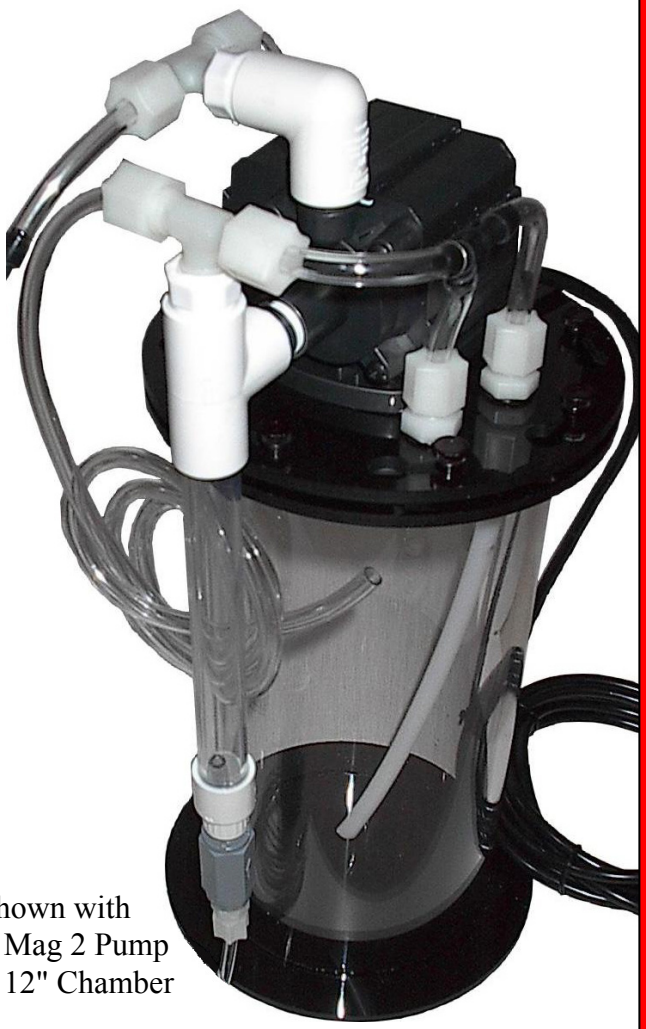
CANREEF AQUATICS



Shown with
– Mag 2 Pump
– 12" Chamber

¼" Thick Cast Chamber – Superior uncompromised quality for durability

Super Duty Integrated Check Valve – Rust proof spring-ball action ensures zero leakage

Keyholed Flange – Complete chamber removal for media disposal and refilling

Self Filling Bubble Counter – Elimination of manual suction during setup and evaporation

Oversized Pump – Higher internal turnover allows faster effluent rate for heavier loads

Innovative Design and Performance

Model 2 Calcium Reactor

Industry Firsts:

- Top Mount Design But Water Circulates Like Bottom Mount Units
- CO_2 Re-Injection
- Reaction Chambers Can Be Daisy Chained or Stacked
- Media Fills Completely From Top To Bottom
- The Only True Self Siphon Design

The Model 2 is the first and only true top mount design that draws water from the bottom of the reaction chamber, exactly the same way as any other bottom mount units. As such, it has a narrower footprint, yet will not suffer cavitation.

Most, if not all, other bottom mount design draws water from bottom of the chamber, and injects it back to the top. The effluent is also tapped off the top of the reaction chamber and any excess CO_2 is therefore pushed out of the reactor, along with the effluent, instead of being re-used.

Instead, the Model 2 is the only Ca Reactor that features CO_2 re-injection. CO_2 is first injected into the pump inlet, being chopped up into many tiny bubbles. Then any excess CO_2 that floats back to the top of the reaction chamber is re-drawn into the pump and re-cycled. This is the most efficient design.

To further expedite the exit of bubbles from within the impellor housing, the pump outlet is faced upward. This eliminates the possibility of bubbles building up within the pump for cavitation.

NOT YOUR TYPICAL REACTOR!

The Model 2 was engineered for pro applications, with unique water circuit design, commercial customers can now expand their total gallon size by daisy chaining additional units of reaction chambers.

Special internal design eliminates internal baffle partitioning media and pump intake, allowing media to fill completely from top to bottom. Special top mount connection and mobile base design allow larger chambers to be moved offsite for media disposal and refilling.

True self siphon design means pump energy is distributed evenly for recirculation and siphon. Extra pump power is transferred when needed to draw water from system. This yields complete independence to reactor location and eliminates the need for extra feeding pumps.

To allow coral growth, proper levels of calcium and alkalinity is required for calcification. Natural seawater contains Ca and dkH levels of 400-450ppm and 8^{o}-10^{o}. In order to maintain these levels, regular addition of calcium and carbonates is required. To maintain the proper level of calcium and hardness, the use of a calcium reactor is most suitable. The principle of operation is centered around the following equation:

$CaCO_3 + H_2O + CO_2 <-> CaCO_3 + H_2CO_3 <-> Ca^{2+} + 2HCO_3$

Calcium Carbonate + Water + Carbon Dioxide <-> Calcium Carbonate + Carbonate Acid <-> Calcium Ion + Bicarbonate

As illustrated by the above equation, carbon dioxide is injected into the reactor to mix with water, forming carbonate acid with a lowered pH of about 6.5 - 6.8 within the reactor chamber. The acid then dissolves the calcium carbonate media, available in the form of crushed coral, to release calcium and bicarbonate. The entire process is the exact reversal of calcification and therefore, the proper amount of calcium, carbonate, and other minerals including strontium and magnesium are added by dripping the reactor effluent to the system.

Commercially used by coral farm Seacare Maricultured Products

Specifications	Shipping Information
- 8.5" x 8" x 17-1/2" * Eheim 1250	- 21" x 12" x 12" Carton *
- 8.5" x 8" x 18-1/2" * Mag Drive 2	- 19 lbs Dimension Weight *
- 600 Gallon Capcity **	
- 11 lbs Media Capacity ***	

* Based on 12" reaction chamber height

** Based on 120g/5kg rating

*** Media capacity for every 12" of reaction chamber height

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