

CO₂ Supply



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Witch units needs a CO₂ supply?

All units in that calcareous material should be dissolved need a CO₂ supply. In the sea water range e.g. the *Turbo* Chalk Reactor, conventional chalk reactors and the AquaCare magnesium reactor must be connected with a carbon dioxide supply. In the fresh water range the carbon dioxide reactor COR and all other CO₂ fertilize units needs carbon dioxide. In the tap water treatment range a mineral or calcite filter can be connected with CO₂ to increase the harden up capacity.

What from a CO₂ supply consists of?


Only very small aquaria can be provided with fermenting units or low pressure tanks. Normal aquaria or show size aquaria need a professional carbon dioxide supply. The optimum CO₂ supply consists of a pressure tank, pressure relief valve with needle valve and check valve.

The pressure tanks of AquaCare has different sizes from 2 to 15 kg, some of them can be delivered in different diameters and headroom. For best adjusting the AquaCare pressure relief valve consists of two pressure gauges – one of the tank pressure, one for the operation pressure – a relief valve with big wheel and a high precision needle valve.

To prevent the pressure tank and the fittings against back flowing water a high quality check valve should be used. A second safety stage can be mounted very easily. After the check valve the pressure tube should be laid about one meter over the aquarium and then back to the CO₂ consuming unit. This safety loop prevents back flowing water even if the check valve is not in order. Be sure to use only check valves suitable for CO₂ – valves for air are not useable because they have a counter-pressure.



Check valve and pressure relief valve for a safe CO₂ supply

AquaCare pressure tanks				
	order number	article	diameter	headroom*
	320-020	2 kg with cage	114 mm	500
	320-030	3 kg with screw cap	114 mm	
	320-060	6 kg with screw cap	114 mm	
	320-061	6 kg with screw cap	140 mm	770
	320-100	10 kg with screw cap	140 mm	1230
	320-101	10 kg with screw cap	204 mm	
	320-131	13,2 kg with screw cap	204 mm	970
	320-150	15 kg with screw cap	204 mm	
	CO ₂ accessories			
	321-000	CO ₂ pressure relief valve with two pressure gauges and high precision needle valve		
	321-002	Check valve for CO ₂ mit approx. 0.2 bar counter-pressure; connector for 6/4 mm pressure tube		
	890-006	PE pressure tube without softener; best suitable for CO ₂ ; size 6/4 mm		
		pH-probe for pH-control see measuring technique		

* with assembled AquaCare pressure relief valve

Night Shut Down



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The problem

If a conventional chalk reactor, the AquaCare magnesium reactor or the AquaCare carbon dioxide reactor COR (CO₂ fertilizing unit) should not run all the day you can use a night shut-off. Especially at night the animals (corals) and plants / algae do not need carbon dioxide. So at this time span you do not need a CO₂ supply. Many pH-controller are not able to stop the carbon dioxide feed, too. The AquaCare night shut-off can solve this problem.

Functionality	Technical Data	
The night shut-off consists of a timer and a rigid solenoid valve, that is suitable for CO ₂ very well. The solenoid of the unit should be mounted between carbon dioxide pressure tank and the CO ₂ check valve. The mains cable must be connected with the timer. If you use a compact pH-controller the solenoid should be connected between controller and carbon dioxide pressure tank. You can program the timer in that way that the solenoid shut on only at night. With this operation mode you can save a lot of carbon dioxide.	order number	321-003
	scope of delivery	timer, solenoid with plug and connectors
	adjustable time interval	15 min
	Time control	mechanically
	electrical connection of solenoid	230 V, 50-60 Hz, 4 W, three-pin plug
	duty cycle	100%
	length of cable	1.5 meter
	fittings	6 mm for pressure tube

BasiTech Turbo-Chalk Reactor Control



Structure of the Turbo-Chalk Reactor Control

This control is made for the AquaCare Turbo Chalk Reactor only and consists of a shapely casing with built-in micro controller, solenoid valve and CO₂ check valve. The CO₂ sensor that can be connected to every AquaCare Turbo Chalk Reactor is connected with a plug to the circuit.

Functionality

If CO₂ lack occurs at the Turbo Chalk Reactor the circuit shut on the CO₂ solenoid with a time delay of 3 seconds. If the optimum CO₂ volume is obtained the solenoid shuts off. The electrical supply of the control should be connected to the same timer that provides the circulation pump of the Turbo Chalk Reactor.

The AquaCare Turbo Chalk Reactor is very efficient. So it should run only about 1 to 12 hours daily.

Technische Daten	
order number	600-001
dimensions L×W×D of box	160 × 90 × 45 mm
scope of delivery	box with solenoid, check valve and CO ₂ sensor
time delay	3 seconds
electrical connection	230 V, 50/60 Hz, 7 W
length of cable	2 m
material of box	ABS
mass	800 g