

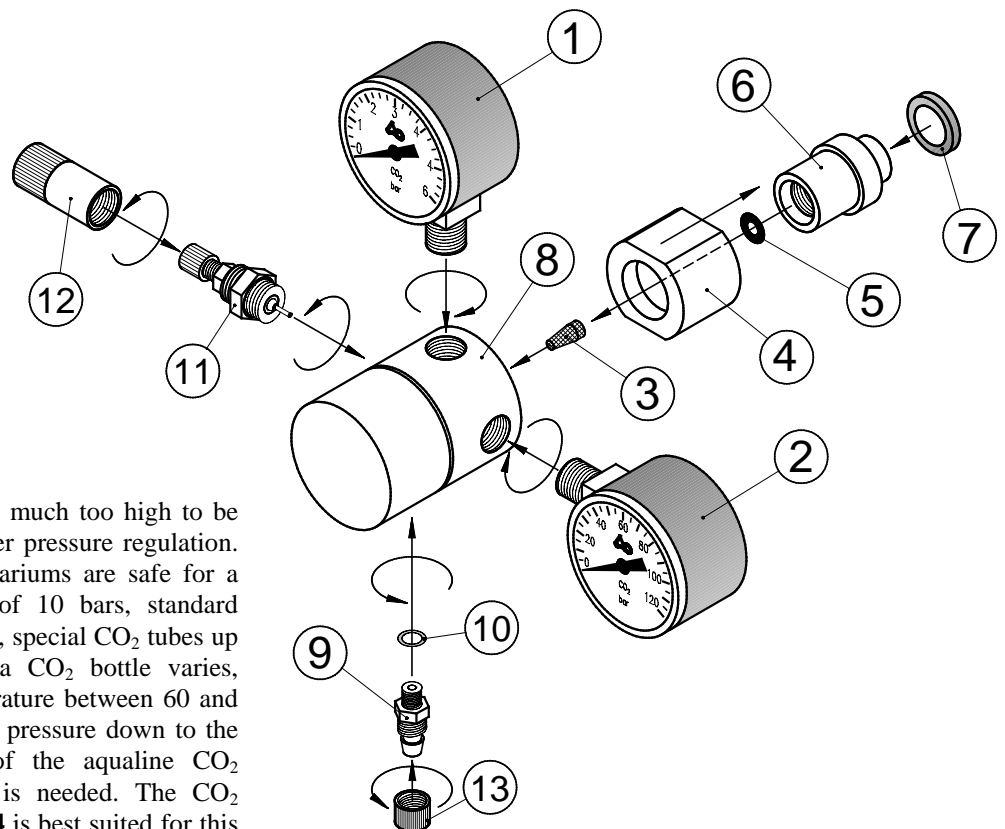
# **AQUA MEDIC** CO<sub>2</sub> - pressure regulator regular - 104

The pressure regulator **regular- 104** has been especially designed for use with either marine or freshwater aquariums. To ensure maximum service life, dependable performance and trouble free operation, read and follow all instructions.

## Technical characteristics:

- Type: **regular-104**
- code no: 71011
- flow rate: 70 - 1200 ml/min
- max pressure: 250 bar
- gas: CO<sub>2</sub> only, working pressure 70 bar
- material: brass, chrome plated
- working pressure 1.5 bar ( at 70 bar primary pressure), fix adjusted.
- pressure gauges: 2 pieces, chrome plated for working pressure and primary pressure
- needle valve for adjustment of the CO<sub>2</sub> flow rate
- metal cap to protect the needle valve against dirt and humidity.

- 1 working pressure gauge
2. storage pressure gauge
3. brass sinter filter
4. mounting nut (for bottle)
5. O-ring, washer
- 6 .connector to bottle
7. square washer
8. body of the regulator
9. CO<sub>2</sub> hose fitting
10. Washer
- 11 needle valve
12. protection nut
13. nut for base



The pressure in CO<sub>2</sub> bottles is much too high to be handled safely without a proper pressure regulation. Solenoid valves, used for aquariums are safe for a pressure up to a maximum of 10 bars, standard tubing may be used up to 1 bar, special CO<sub>2</sub> tubes up to 6 bars. The pressure in a CO<sub>2</sub> bottle varies, depending on the room temperature between 60 and 70 bar. In order to reduce this pressure down to the optimum working pressure of the aqualine CO<sub>2</sub> system, a pressure regulator is needed. The CO<sub>2</sub> pressure regulator **regular -104** is best suited for this purpose. It is a rugged instrument, engineered to withstand regular use while providing sufficiently delicate regulation. The pressure regulator **regular - 104** is a complete top class instrument. The whole unit is chrome plated, to improve the corrosion resistance.


The unit is fitted with 2 chrome plated pressure gauges. The primary pressure gauge shows the CO<sub>2</sub> pressure inside of the bottle. This pressure is 60 - 70 bar, as long as there is liquid CO<sub>2</sub> left in the bottle. The second pressure gauge shows the fix adjusted working pressure of 1,5 bar ( between 1 and 2 bar).

## Installation

1. Fix the connection nut of the regulator on the thread of the CO<sub>2</sub> bottle (hand tight)
2. Adjust the pressure regulator ( fig2) and secure the connection nut with a spanner (size 23)
3. Connect the CO<sub>2</sub>- tube to the corresponding fitting(4). Remove the nut, and put it on the hose. The hose is then fixed on the fitting with the nut.

## Adjustion

1. The needle valve(2) is protected by the metal cap against dirt and humidity. To adjust it, the cap has to be removed. Now, close the valve.
2. Open the valve at the CO<sub>2</sub> bottle (four full turns). The primary pressure gauge shows now 60 - 70 bars, the working pressure gauge 1.5 bar ( 1-2 bar).
3. Open the needle valve, until the desired number of bubbles is reached. If the right value is adjusted, the metal cap can be mounted back on the valve.



**Bubble counter:** The exact control of the flow rate is only possible, if a bubble counter is used. We recommend the type **counter** art.no: 71211 from the  **AQUA MEDIC** CO<sub>2</sub> program. Without bubble counter, the adjustment can only be controlled at the CO<sub>2</sub> reactor. This is not as precise and will not permit tightly regulated control of CO<sub>2</sub> levels in the aquarium.


## Safety tips

- Never separate a stationary pressure regulator from a CO<sub>2</sub> bottle, if it is under pressure. Close the bottle valve, and open the needle valve to release the gas before you separate both units.

Keep all CO<sub>2</sub> pressure bottles away from heat.

## Warranty:

This product is warranted for 24 months after date of purchase on material and production faults by  **AQUA MEDIC** Warranty only by proof of purchase by the original invoice. Our obligation under this warranty is limited to the free of charge repair or replacement of the unit (excluding freight costs). In case of problems please contact your  **AQUA MEDIC** dealer. This warranty will not apply to units that were improperly installed, misapplied or modified by non-authorized institutions.

 **AQUA MEDIC** is not liable for any consequential damages caused by the use of the product.