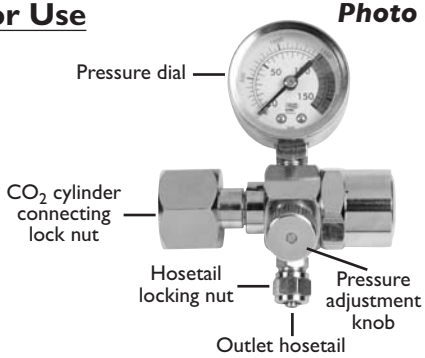
V^2 Pressure Regulator For Aquarium Applications

DIN477 Connection

(EU standard CO_2 cylinders with fitted gas control valve)

Instructions for Use

Photo 1



Tools required for installation
28mm spanner or similar tool

Parts required for installation
CO_2 cylinder and 6mm ($^1/_4$") flexible hosing.

CO_2 is supplied in a compressed gas cylinder that is pressurised to a high pressure of approx. 60 bar (900psi). In order to use this gas in an aquarium system the flow of gas has to be reduced to more manageable levels. The adjustable **V^2 Pressure Regulator** reduces the flow of CO_2 from the cylinder and allows the accurate adjustment and dosage of CO_2 into the aquarium.

1. Ensure that the V^2 Pressure Regulator is compatible with your chosen CO_2 cylinder.
2. Before connecting the V^2 Pressure Regulator to the CO_2 cylinder ensure that the pressure adjustment knob (see Photo 1 above) on the pressure regulator is rotated clockwise to the fully closed position.
3. Place your CO_2 cylinder in a stable position on a level surface and connect the regulator securely to the CO_2 cylinder by turning the connecting lock nut (see Photo 1 above) clockwise until it is fully hand tightened. Then, using a 28mm spanner or similar tool, secure the connection. **Caution:** For safety, it is good practice when attaching a regulator to any compressed gas cylinder to point the regulator dial away from you.
4. The V^2 Pressure Regulator has an outlet hosetail designed for standard 6mm ($^1/_4$") flexible tubing with a hosetail locking nut for added safety (see Photo 1 above).
5. Unscrew the hosetail locking nut (see Photo 2) and then thread one end of your chosen flexible tubing through the hole in the end of the locking nut, and attach this same end to the outlet hosetail (see Photo 3).


Photo 2


Photo 3

6. Re-attach and secure the hosetail locking nut.
   Please note: We strongly advise that a non return valve is installed in the flexible tubing between the CO_2 regulator and your calcium reactor or other chosen piece of equipment to prevent water flowing back into the regulator.
7. Connect and secure the other end of your flexible tubing to your calcium reactor or other chosen piece of equipment.
8. Double check that all connections have been made correctly and are secure.
9. You are now ready to open the gas control valve on the CO_2 cylinder. As soon as you have opened the valve on the CO_2 cylinder the dial on the pressure regulator should indicate a reading. If the connection to the CO_2 cylinder has been made correctly there will be no escaping gas (and no hissing sound will be heard). However, if gas is escaping (and a hissing sound is heard) please close the gas control valve on the CO_2 cylinder and then reconnect and tighten the regulator as described in 3 above.
10. You are now ready to open the pressure adjustment knob (see Photo 1) on the V^2 Pressure Regulator by turning it anti-clockwise, and to start dosing CO_2 according to your application and equipment requirements.

CAUTION

- The adjustment on the V^2 Pressure Regulator is very precise and the pressure adjustment knob must be turned slowly and carefully to avoid any problems with dosing.
- Do not apply any lubrication to any parts of the regulator.
- Do not attempt to modify or change any parts of the CO_2 regulator.
- The V^2 Pressure Regulator **cannot** be used in conjunction with a solenoid valve.
- Keep all CO_2 cylinders away from heat.

When to Replace the CO_2Cylinder

During normal operation the pressure inside the CO_2 cylinder will remain fairly constant until the CO_2 cylinder is almost empty. Therefore the easiest way to determine when the CO_2 cylinder needs replacing is to note the pressure reading on the V^2 Pressure Regulator dial (see Photo 1) when the CO_2 regulator is first connected to a full CO_2 cylinder. A significant drop in the pressure reading should indicate that the cylinder is almost empty and should be replaced as soon as possible. Please note: The total gas output from a CO_2 cylinder will be dependent on both the temperature at which the cylinder is filled and the ambient temperature it is used at.

Disconnecting/Replacing the CO_2 Cylinder

1. Ensure that the gas control valve on the CO_2 cylinder is fully closed.
2. Undo the hosetail locking nut on the outlet hosetail (see Photo 1) and remove the flexible tubing from the outlet hosetail. Any CO_2 trapped inside the tubing will be released and a hissing sound from escaping gas may be heard.
3. Turn the pressure adjustment knob on the V^2 Pressure Regulator clockwise to the fully closed position.
4. Carefully disconnect the V^2 Pressure Regulator from the CO_2 cylinder by undoing the securing nut on the V^2 Pressure Regulator with a 28mm spanner or similar tool.
5. Reconnect as described above.

Tropical Marine Centre is not liable for any consequential damages caused by the use of this product.

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