



**UN**  
SYSTEMS

MINI

**DUAL STAGE CO2 REGULATOR**

## SAFETY INSTRUCTIONS

Please read the following safety instructions thoroughly before attempting to use this product. Failure to read and follow safety instructions can result in serious injuries and/or accidents.

### WARNING

- Before installation of the regulator, ALWAYS inspect for damaged threads, dirt, dust, oil or grease.
- Remove dust, dirt, oils or grease with a dry, clean cloth. DO NOT MOVE FORWARD OR ATTACH THE REGULATOR IF OIL, GREASE, OR DAMAGE IS PRESENT!
- A leak at the valve or regulator can cause asphyxiation.
- DO NOT use oil or lubricants of any kind on cylinders, valves, gauges, regulators or any other non-gas associated fittings. Doing so is dangerous and can result in serious injury.
- DO NOT disassemble regulator.
- CO2 cylinders being used must be recertified (hydro-tested) every five (5) years from the date of manufacture. The manufacture date can be found on the cylinder's shoulder.
- DO NOT attempt to fill a CO2 cylinder yourself. Take any cylinders to a certified and licensed CO2 supplier for refills.

### SAFETY

- Attach the regulator to the cylinder valve and tighten regulator nut with a wrench.
- Before opening the main CO2 cylinder valve (applicable for standard CGA-320 only), adjust the pressure knob by turning it counter-clockwise until it is completely off. This is indicated by the “-” sign.
- Position yourself safely beside the cylinder that is opposite from the regulator when opening the cylinder's main valve. Slowly and carefully open the main CO2 cylinder valve.
- To check for leaks, start by closing the cylinder's main CO2 valve. Next, adjust the pressure knob by turning it counter-clockwise until it is completely shut. Now you may check for leaks using an approved leak detector solution (or soap and water). If a leak is detected or suspected, shut off the regulator and contact your Ultum Nature Systems dealer immediately.

**Note:** The operating temperature range shall be no greater than 150° F (70°C) and no less than 0°F (-18°C). Use 15-20 foot pounds of torque for assembly. Always leak test connections before use. If temperature is 40°F or below, extra heat may be required to maintain tank pressure. Do not place near extreme heat sources.

**IMPORTANT! USE THIS REGULATOR ONLY FOR CO2!**

## WARRANTY INFORMATION

In the rare case that the unit you have received is defective, Ultum Nature Systems provides a two year limited warranty. Please take some time to register your new product at: [www.ultumnaturesystems.com/product-registration](http://www.ultumnaturesystems.com/product-registration) to expedite a future warranty claim.

Ultum Nature Systems warrants, to the original buyer, this regulator to be of the highest quality in material, craftsmanship and free of defects for a limited warranty of two years, effective starting from the original date of purchase.

Under limited warranty, Ultum Nature Systems will replace or refund any product confirmed to be defective due to manufacturer flaws based on eligibility. This warranty extends only to personal use and does not include any product that has been used for commercial or rental purposes, or any other use in which this product is not intended for. The warranty is voided if the product has been subjected to abuse, tampering, modification or repair done by personal self, another person or by a non-qualified company. This warranty excludes damage due to normal wear and tear and is not warranted against moisture or water damage.

This warranty is non-transferrable. Ultum Nature Systems assumes no liability and is not responsible in any way for any loss, damage or inconvenience caused by equipment failure or user error, negligence, abuse or use that is noncompliant with the safety instructions and warnings included.

ALL EXPRESSED AND IMPLIED WARRANTIES ARE LIMITED TO THE PERIOD OF THE ORIGINAL WARRANTY.

## USAGE GUIDE

Before usage and installation, thoroughly inspect the unit for any defects, damages or missing parts. If a part is missing or damaged, contact your Ultum Nature Systems dealer immediately.

- Ensure that all parts of the regulator are secured tightly.
- If dust is visible, remove with a clean cloth.
- Once regulator is attached to CO2 cylinder, keep CO2 system standing upright.
- Double check all power connections to ensure they are connected properly and securely.
- Turn pressure and needle valve knobs down completely before powering on.

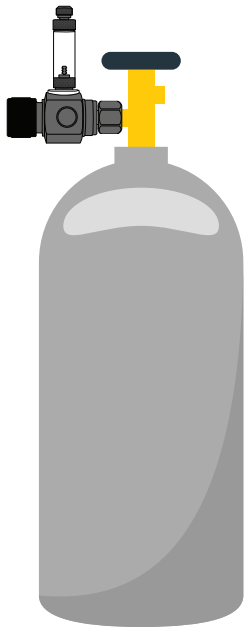
FOR MORE INFORMATION PLEASE VISIT: [WWW.ULTUMNATURESYSTEMS.COM/CO2/](http://WWW.ULTUMNATURESYSTEMS.COM/CO2/)

## APPLICATION GUIDE

The Ultum Nature Systems Mini Regulator can be used on numerous CO2 cylinders depending on user preference. Applications include standard CGA-320 cylinders, paintball cylinders, and Ultum Nature Systems Disposable 95g Cartridges. The performance of the regulator will not change based on application.

To better understand the different applications of this regulator, refer to the diagrams provided on the following page.

**STANDARD CGA-320 CYLINDER**  
with gauge and bubble counter  
facing upwards



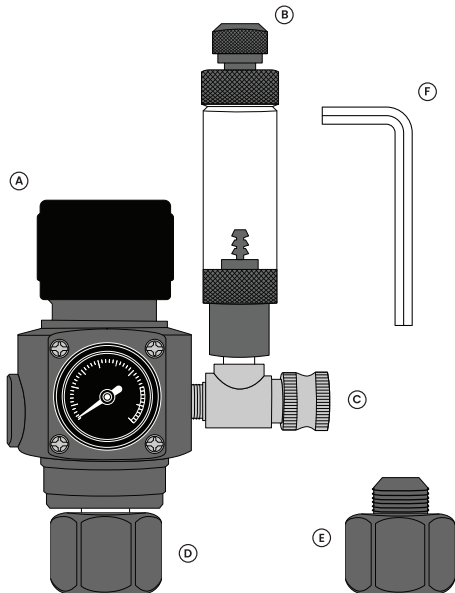
**PAINTBALL CO2 CYLINDER**  
with included adapter



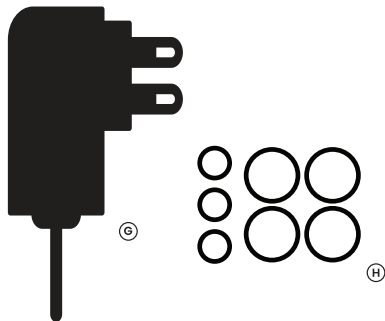
**DISPOSABLE CO2 CARTRIDGE**  
with pre-attached CGA-320  
adapter removed



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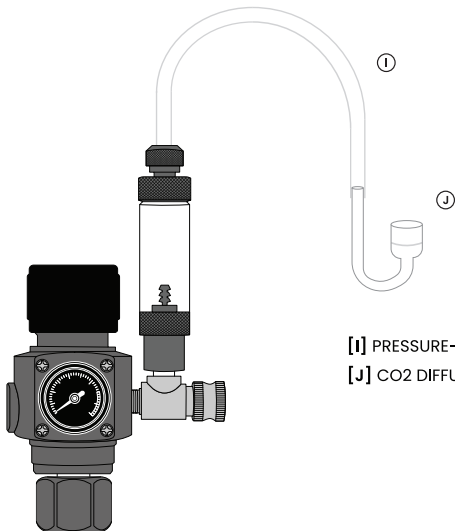


- [A] PRESSURE ADJUSTMENT KNOB
- [B] BUBBLE COUNTER WITH BUILT-IN CHECK VALVE
- [C] NEEDLE VALVE
- [D] CGA-320 ADAPTER
- [E] PAINTBALL ADAPTER
- [F] ALLEN KEY
- [G] POWER PLUG
- [H] EXTRA O-RING SET



## ADDITIONAL ACCESSORIES

For a complete planted aquarium CO2 injection system, the following additional CO2 accessories are required. We recommend using Ultum Nature Systems CO2 accessories for best results.



[I] PRESSURE-PROOF CO2 TUBING

[J] CO2 DIFFUSER

## SETUP GUIDE

Please follow the instructions below for safe CO2 regulator setup:

1. Turn Pressure Knob counter-clockwise all the way down **AND** Needle Valve clockwise all the way down. This is indicated by the “-” **AND** “OFF” sign respectively.

2. Ensure that the adapter (CGA-320 or Paintball) of choice is tightened down correctly. Then, attach regulator securely to CO2 cylinder of choice.

**Note:** If you are using this regulator on an Ultum Nature Systems Disposable CO2 Cartridge, please remove any attached adapter.

3. Ensure that the Bubble Counter is secure and tightened. Then, fill Bubble Counter chamber with water from the top.

**Note:** Pressure-Proof CO2 Tubing should be attached during this time.

4. Connect the Power Plug to the regulator solenoid cable, then to a power outlet.

5. Open the flow of gas from CO2 cylinder all the way (applicable for standard CGA-320 CO2 cylinders only).

6. Turn the Pressure Knob clockwise to adjust the working pressure.

**Note:** Suggested working pressure is 25 PSI.

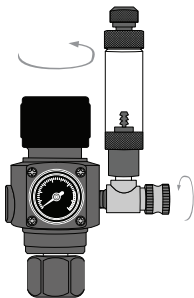
7. Adjust Needle Valve counter-clockwise to desired CO2 output.

8. CO2 bubbles should now be visible in the Bubble Counter chamber.

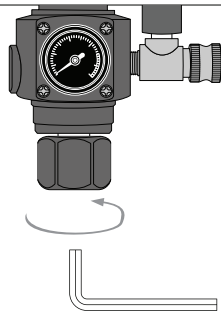
**IMPORTANT!** Double check that any and all additional CO2 accessories are attached securely before operation. If unsure, check and repeat instructions.



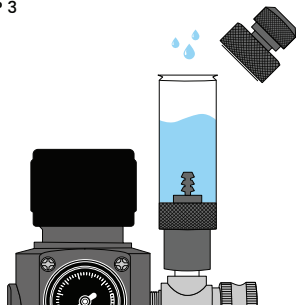
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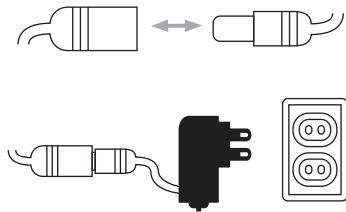
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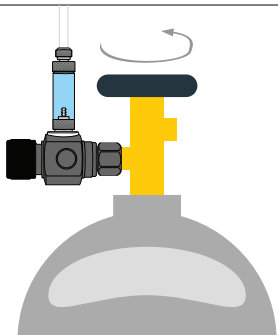
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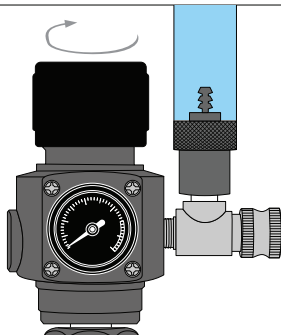
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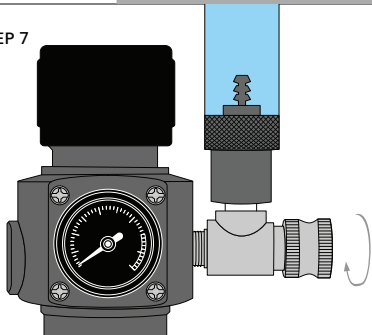
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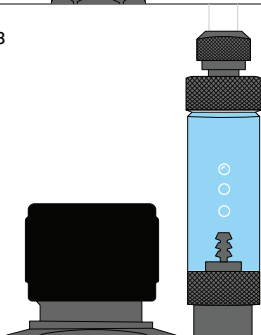
STEP 6



STEP 7



STEP 8



# ULTUM NATURE SYSTEMS

TRANSCEND INTO A DEEPER UNDERSTANDING AND APPRECIATION OF NATURE

## **ULTUM NATURE SYSTEMS**

DESIGNED IN LOS ANGELES, USA

MADE IN CHINA

FOR MORE INFORMATION PLEASE VISIT: [WWW.ULTUMNATURESYSTEMS.COM](http://WWW.ULTUMNATURESYSTEMS.COM)

ULTUM NATURE SYSTEMS, INC. IS NOT RESPONSIBLE FOR ANY DAMAGE OR DEATH OF LIVESTOCK IN YOUR AQUARIUM. THIS INCLUDES, BUT IS NOT LIMITED TO, AQUATIC PLANTS, FISH AND/OR SHRIMP.

THIS PRODUCT IS INTENDED FOR AQUARIUM USE ONLY. KEEP AWAY FROM CHILDREN.

The background features a technical line drawing of a CO2 regulator. On the left, a portion of the regulator's body is shown with a knurled adjustment knob. On the right, three circular gauges are depicted. The top-left gauge has a needle pointing towards the right. The bottom-right gauge has a needle pointing towards the left and is marked with 'HI+' at the top and 'LO-' at the bottom. The overall style is clean and technical, using black lines on a white background.

UN

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**DUAL STAGE CO2 REGULATOR**

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- Attach the regulator to the cylinder valve and tighten regulator nut with a wrench.
- Before opening the main CO2 cylinder valve (applicable for standard CGA-320 only), adjust the pressure knob by turning it counter-clockwise until it is completely off. This is indicated by the “-” sign.
- Position yourself safely beside the cylinder that is opposite from the regulator when opening the cylinder's main valve. Slowly and carefully open the main CO2 cylinder valve.
- To check for leaks, start by closing the cylinder's main CO2 valve. Next, adjust the pressure knob by turning it counter-clockwise until it is completely shut. If the tank volume gauge drops, there is likely a leak in the cylinder valve or inlet fitting. Now you may check using an approved leak detector solution (or soap and water). If a leak is detected or suspected, shut off the regulator and contact your Ultum Nature Systems dealer immediately.

**Note:** The operating temperature range shall be no greater than 150° F (70°C) and no less than 0°F (-18°C). Use 15-20 foot pounds of torque for assembly. Always leak test connections before use. If temperature is 40°F or below, extra heat may be required to maintain tank pressure. Do not place near extreme heat sources.

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- Double check all power connections to ensure they are connected properly and securely.
- Turn pressure and needle valve knobs down completely before powering on.

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## APPLICATION GUIDE

The Ultum Nature Systems Pro Regulator is designed for use with standard CGA-320 cylinders.

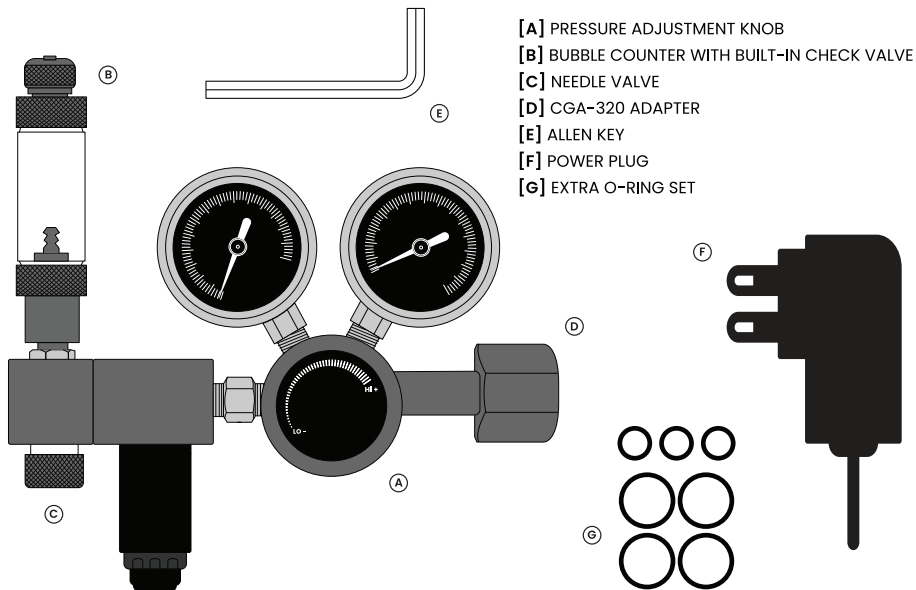
To better understand the application of this regulator, refer to the diagram on the following page.

STANDARD CGA-320 CYLINDER



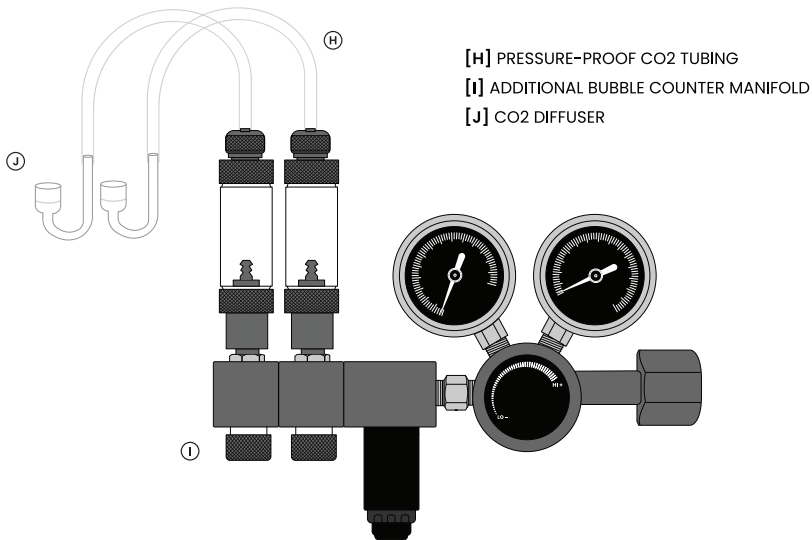


## PACKAGE CONTENTS



## ADDITIONAL ACCESSORIES

For a split planted aquarium CO2 injection system, the following additional CO2 accessories are required. We recommend using Ultium Nature Systems CO2 accessories for best results.



## SETUP GUIDE

Please follow the instructions below for safe CO2 regulator setup:

1. Turn Pressure Knob counter-clockwise all the way down **AND** Needle Valve clockwise all the way down. This is indicated by the “-” **AND** “OFF” sign respectively.

**Note:** Any additional UNS Bubble Counter Manifold Blocks should be attached during this time.

2. Ensure that the Bubble Counter Manifold Block is secure and tightened, then fill Bubble Counter chamber with water from the top.

3. Attach regulator to CO2 cylinder and ensure CGA-320 adapter is tightened down correctly.

**Note:** Pressure-Proof CO2 Tubing should be attached during this time.

4. Connect the Power Plug to the regulator solenoid cable, then to a power outlet.

5. Open the flow of gas from CO2 cylinder all the way.

6. Turn the Pressure Knob clockwise to adjust the working pressure.

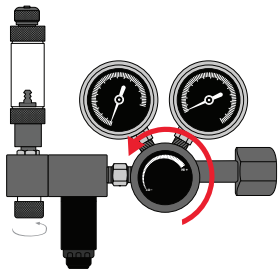
**Note:** Suggested working pressure is 25 PSI.

7. Adjust Needle Valve counter-clockwise to desired CO2 output.

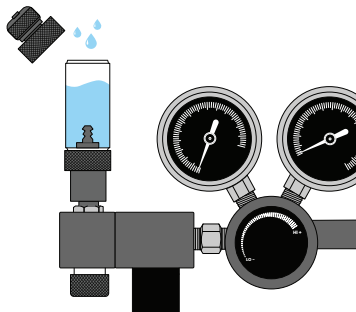
8. CO2 bubbles should now be visible in the Bubble Counter chamber.

**IMPORTANT!** Double check that any and all additional CO2 accessories are attached securely before operation. If unsure, check and repeat instructions.

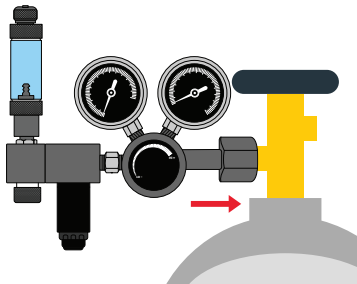
STEP 1



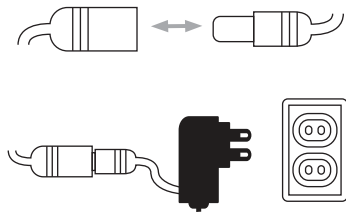
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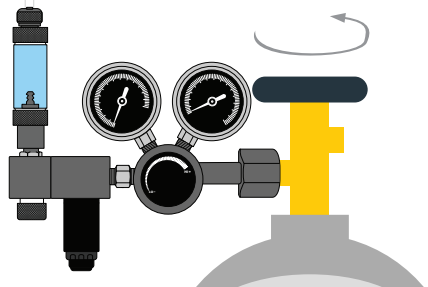
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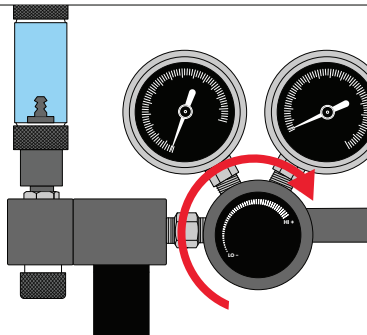
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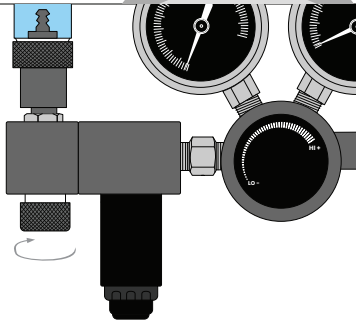
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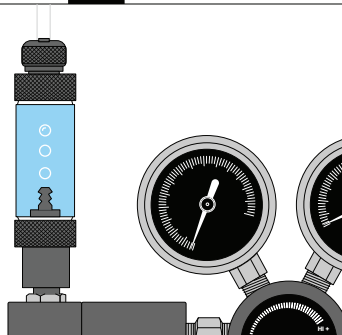
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