

W4B CO2 Growth Generator

4 Burner CO2 growth Generator

ABOUT:

The W4B is a safe and economical solution, to produce CO2 by burning propane or natural gas or methane. This 4 burner can produce 3-13 cubic feet per hour. The W4B is recommended for areas under 3200 cubic feet.

NOTE: An air exchange is recommend when using CO2 generators. At least once every hour, to avoid your plants from getting CO2 poisoning.

The W4B comes standard with an electronic ignition module, no standing pilot light to worry about.

A standard tip over switch is one of the safety features of the W4B. Which would kill the fuel, in the event it tipped over or fell.

Also, comes standard with 4 brass burners and a 12 foot hose (expandable up to 36 feet). A regulator is provided, so that you can connect or tap into existing lines.

WARNING: Not recommended for use inside of a Grow tent. The high heat can cause melting of the wall material.

INSTALLATION:

Determine the desired location for the W4B. It must be mounted at least 18" away from walls or any flammable material. An 18" clearance must be maintained between the unit and ceiling (18" of chain provided with W4B). Open flames are present inside unit, unit does get warm to the touch.

The W4B must be hung correctly for optimum operation. Use the hooks & chains provided with the unit to secure to ceiling (J hooks not included). Tighten all slotted brass caps by hand, may come loose during shipping.

The hose provided is fitted with a standard 3/8" female flare connector. Connect the hose to the back of the W4B (Do not turn fitting on back of W4B, it's sealed against leaks). Use two crescent wrenches or similar to properly tighten the connection. This should be done without twisting any other connections.

WARNING: Connecting the W4B-LP unit to a Natural Gas line, will result in very large flames. Alternatively, if a W4B-NG is hooked up to propane, this will result in very low and insufficient flames. Make sure your fuel matches the Generator type.

Propane Generator only:

NOTE: The W4B-LP comes with a standard tank mounted regulator, which should be used. Unless, the incoming pressure is already regulated to 11" WC (water column).

Connect other end of hose to the brass connector on the LP regulator provided. Use the two wrenches again, one to hold the regulator from the bottom side. The other to twist the 3/8" brass connector on tightly.

Open the valve on #20 LP tank or bigger fuel source. Check the Lines and connections for leaks, by spraying them with soapy water from a spray bottle. Look for constant bubbling, that would indicate a leak. Fix leak repeat process.

Flip power switch to on position, within 20 secs unit will begin to spark to ignite the fuel.

Natural Gas Generators only:

NOTE: It is very important to install the regulator "in-Line" between your gas supply and generator. The regulator supplied with the W4B is present to maintain a constant pressure of 4.5" WC. Which is about ¼ PSI. Before installation, verify your main gas pressure. Most Gas companies install low pressure gas regulators at the meter that are about ½ PSI. Some commercial buildings have a high pressure gas main (usually around 2 PSI). If the pressure is high, it will need to be reduced to ½ PSI or lower before installing regulator (high pressure can keep the valves open, causing unit to run with no power).

When installing, make sure to install a gas shut-off valve on your line (turn off at main or meter). Install the shut-off valve in an accessible location. Install the in-line regulator to the gas supply (3/8" NPT female thread). Connect the hose to the flared fitting on regulator. Using two crescent wrenches or similar to tighten connections.

Open the inline shut off valve (make sure the main is on). Check for leaks using soapy water and a spray bottle. Look for bubbling, this indicates a leak.

Connecting to Co2 controller:

NOTE: The recommended CO2 level for optimum growth is between 1000 to 1500 PPM. Above these levels is considered wasteful. Above 5000 PPM is considered dangerous to animals and humans. Side effects of excessive CO2 includes headache, drowsiness & shortness of breath. Use a PPM controller to ensure you're maintaining proper PPM levels.

Connect the CO2 generators power supply to the controller that you are using. Usage of the generator should be during lights ON hours. At bare minimum, a timer can be used to turn the generator on/off. Possibilities are likely to exceed recommended PPM range with this method.

Set CO2 controller to desired PPM level, then turn on power at the generator to start dispensing CO2.

Upon start up the generator could make a few attempts before lighting, due to air in the gas lines.

A time lapse of 17 secs will occur before next attempt to light. Unit will attempt to light 5 times. Failure to light in 5 tries will lock the unit out from lighting again. A red LED on module will be flashing, this indicates failure to light within 5 tries. You will need to power off/on the unit to regain normal operation.

Red LED next to the power switch indicates power to module.

SAFETY FEATURES:

Tip-over shut-off switch: Gas and electric heaters manufacturers are required to use a simple safety device in the units that shut it off, in the event that it tips over or falls from it area. We have incorporated these same features into our unit. If the unit is tilted more than 35 degrees in any direction the unit will shut off, preventing the fuel from flowing to the main burners.

All components used for assembly of this generator we made to meet or exceed AGA standards. All gas components used are appropriate to use with Lp, NG or methane gases. The W4B comes with a low pressure regulator for the appropriate gas type purchased. We use a Type I "no tool required" LP regulator to make tank replacement easier. The Type I regulator incorporates a flow limiting device that reduces and maintains 10 SCFH. Also, contains a heat sensing spring-loaded module which stops gas flow if the temperature exceeds 240 degrees F.

Powder-coated steel enclosure: We have used a powder coated steel enclosure for a long lasting finish that will not fade or shift color over time. The enclosure has been engineered to allow heat to dissipate and operate cooler than most generators. This unit withstand the test of time.

Convert BTU into CO2 per hr:

BTU 1 burner: Propane 2,794/ Natural Gas 3,135

Example: $(2,794 \text{ Btu} \times 1.18) / 1000 = 3.30 \text{ cuft CO}_2/\text{hr}$

How to calculate Cubic ft:

Room length x Width x height = cubic feet

Warranty:

The W4B is warrantied against defects in workmanship and parts for Three years, non-transferable.

Specifications:

Power supply in: 120V~ or 240V~, Depending on the power supply

Power supply out: 24 volts AC

Propane Pressure: 11" WC Natural Gas Pressure: 4.5" WC

Total BTU 4 burner: Propane 11,178/ Natural Gas 12,540

Shipping Weight: 12 lbs

Dimensions: 11"x16 ½" x 8 ½"