

Peace of mind. Guaranteed.

Continuous monitoring of carbon monoxide and ethylene in production greenhouses.

Ethylene is naturally produced by plants and aids in the growth and development of the crop. However, too much ethylene can damage the plants and affect marketability. Decaying foliage, ripening fruit and stressed plants produce more ethylene than young, healthy plants. Other sources of ethylene gas are blowers, trimmers and carts with combustion engines, propane powered forklifts, heating systems, vent stacks and leaky fuel lines. Most often when there are high levels of ethylene gas, there is also a high concentration of carbon monoxide, which is dangerous to humans working inside the greenhouse.

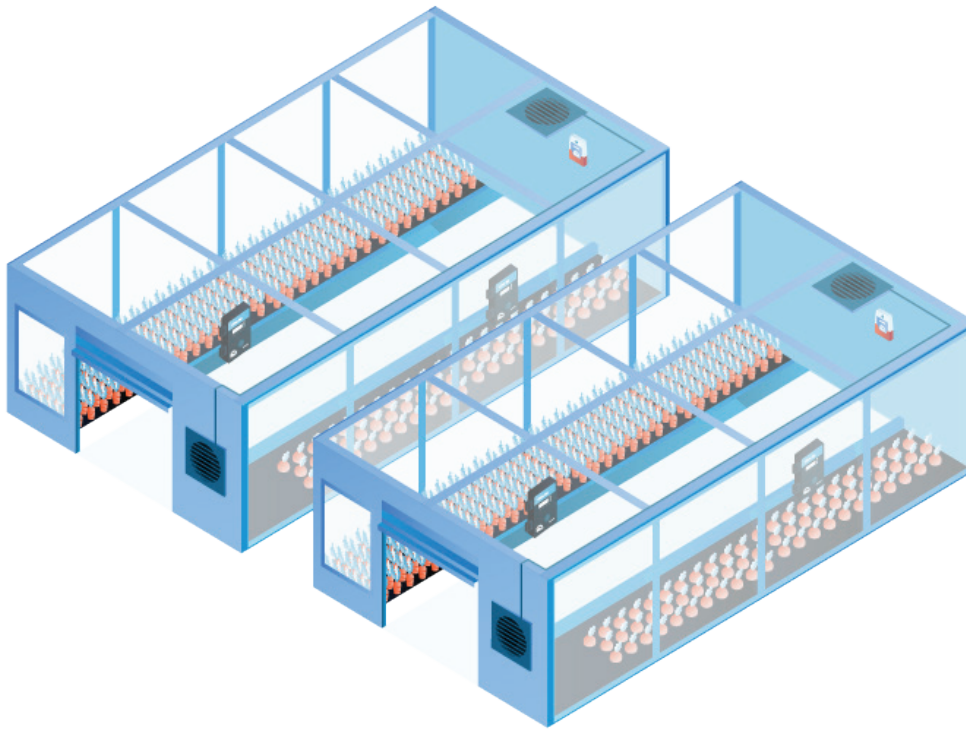
The best way to monitor CO and C₂H₄ levels is with a fixed gas detection system permanently installed in the greenhouse. Gas level readings can be used to trigger alarms, turn on the ventilation system and call emergency response.

Critical Environment Technologies' cGas-SC Self Contained Controller with an internal carbon monoxide sensor and an internal ethylene gas sensor offers the features and functionality to ensure a safe breathing environment workers.



Continuous Monitoring of Carbon Monoxide (CO) & Ethylene (C₂H₄) in Greenhouses

The cGas-SC Self Contained Controller with an internal carbon monoxide sensor and internal ethylene sensor should be mounted in the greenhouse where the plants are growing. The cGas-SC should be mounted (1.2 m - 1.8 m / 4 - 6 ft) from the floor as both gases are close to the same weight as air and will hang around in the “breathing zone”.



One cGas-SC will monitor approximately 650 sq m (7,000 sq ft). The most appropriate location for the device to be installed is close to where people frequent the most such as pathways and work areas inside the growing area.

The cGas-SC Controller has three gas alarm setpoints and two dry contact relays rated 5A @ 240 VAC. Alarm level 1, 2 and 3 may also be referred to as LOW, MID and HIGH. Depending on the application, all three may be used or just the LOW and HIGH. The LED lights on the front of the enclosure will turn red in sequence from LED 1 to 3, corresponding with the level of alarm. The gas level readings will show on the display of the cGas-SC for easy viewing. An RSH-24V-R Remote Strobe / Horn should be

visibly mounted inside the growing room. One of the two internal relays of the cGas-SC can be used to trigger the Remote Strobe / Horn device in the event either gas level reaches or exceeds the alarm setpoints. The second relay can be used to activate the mechanical ventilation system or trigger another set response as required.

The cGas-SC can be ordered with two user configurable analog outputs (Option -2AO) that can be used for VFD control and/or interface with a Building Automation System (BAS) which in turn can trigger alarms and other safety procedures as appropriate.

The cGas-SC comes standard with an internal audible alarm and is available with an optional extra loud buzzer that can be ordered and installed at the time of purchase. If enabled, the external OK button can be used to temporarily silence the internal and any remote horns/strobes and clear any latched relays.

The cGas-SC fixed system is fully set up, programmed, calibrated and tested prior to being shipped from the factory. It is ready to install upon arrival and operate following the appropriate warm up period.

NOTE: Use a cGas-SC with internal CO sensor and a remote 7 series ethylene sensor (CGAS-A-7C2H4) if high concentrations of ethylene for extended periods of time is expected.