



part of the Breeze Group

ProCO₂ P120ppm in vivo Off-Gas Limit Controller



Applications:

- in vivo off-gas limiting
- Environmental control
- Developmental biology
- Aqueous applications
- Behavior studies
- Toxicology
- Ecology
- **Many more!**



Scan to read how the ProCO₂ P120ppm is used in research

Versatile Off-Gas Control

The ProCO₂ P120ppm is a parts-per-million limit controller that assures consistent and accurate off-gas levels in in vivo enclosures.

Flexible Application

The ProCO₂ P120ppm is designed to fit and control CO₂ within any semi-sealable enclosure, offering flexible integration across a wide range of systems and applications. It can be combined with any BioSpherix oxygen or OxyCycler AT Series controller to maintain air quality without disruption in O₂, NO, or CO-sensitive experiments.

Efficient Operation

The ProCO₂ P120ppm remotely senses CO₂ levels inside the host chamber. Efficient, closed-loop control ensures accuracy without waste. Continuous feedback from the CO₂ sensor allows the ProCO₂ P120ppm to regulate gas infusion precisely to the setpoint, so gas is used only when necessary.



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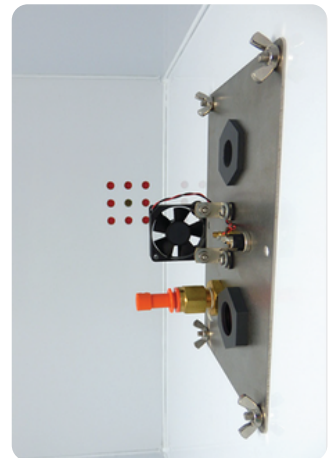
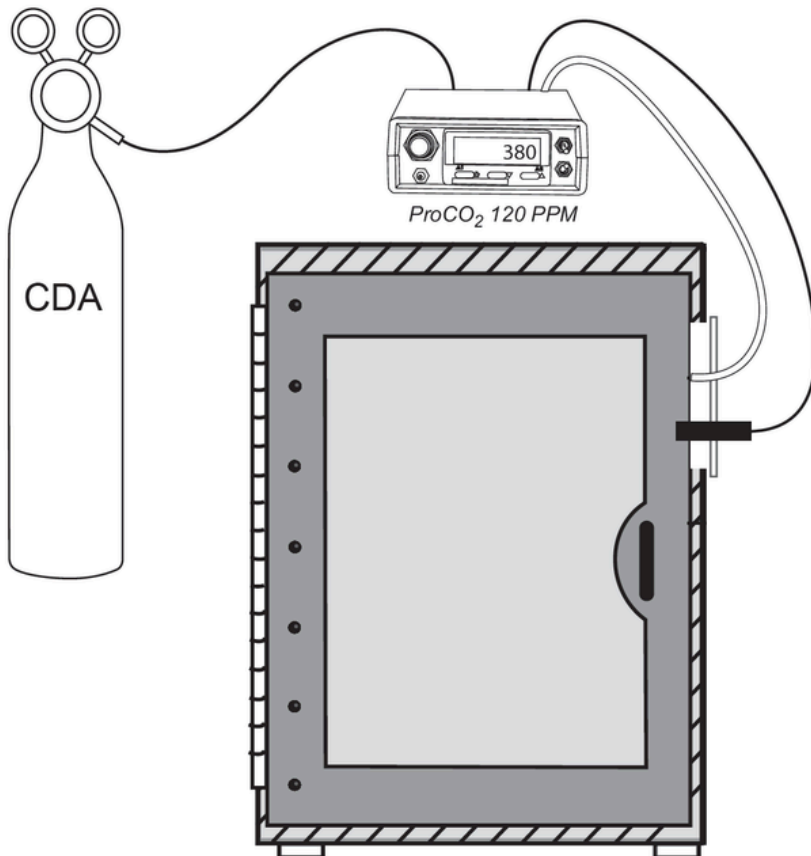
ProCO₂ P120ppm

The ProCO₂ P120ppm is compatible with most semi-sealable enclosures, including the BioSpherix A-Chamber which is designed specifically for in vivo research. By measuring and controlling CO₂ levels in the chamber, the ProCO₂ P120ppm maintains adequate air quality for in vivo subjects. It can also be used to measure indoor air quality to ensure proper ventilation to OSHA standards (1200ppm CO₂).

Note: Avoid practices that generate high chamber humidity (e.g., overly moist litter or excessive animal respiration), as these can overwhelm the ability of the ProCO₂ P120ppm to limit off-gases in the chamber.

Installation

1. Set ProCO₂ P120ppm on or near host chamber and plug it in to standard outlet.
2. Mount the adapter plate to its host chamber.
3. Attach gas supply. Compressed gas is recommended for low consumption applications, and liquid for medium to high consumption.
4. Turn on controller by flipping the switch on the front panel.
5. Change or monitor CO₂ levels via buttons underneath the display.



Visit our YouTube channel for calibration and installation how-to's



www.BioSpherix.com



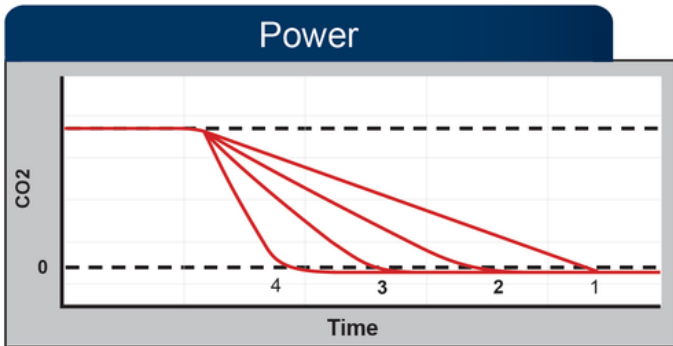
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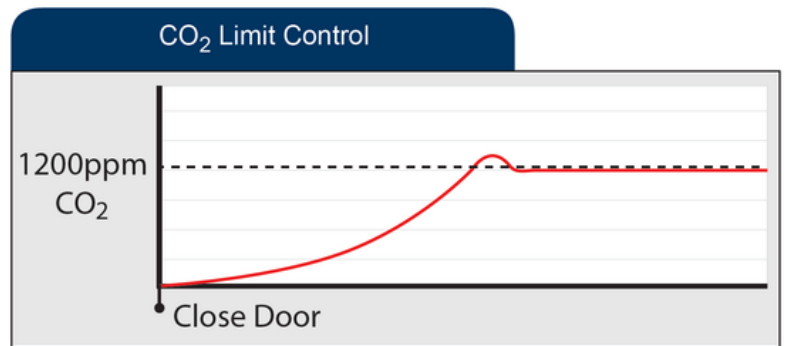
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ProCO₂ P120ppm

Control Scenarios



Power is a function of infusion rate of control gas. The higher the infusion rate, the faster to setpoint. Above: infusion rate 4>3>2>1. Infusion rate is a function of control gas supply pressure. The higher the pressure, the higher the infusion rate. Maximum 25 PSIG provides 35 SCFH.



The ProCO₂ P120ppm automatically limits CO₂ to a 1200 ppm setpoint, compensating for variations in animal type and activity level. It operates efficiently alongside other controllers controlling additional gases.

Front Panel



1. Bleed Valve: Bleeds gas out of gas supply line
2. Control Indicator Light: On when gas is infused
3. Digital Display: Continuously displays current gas level, control status, and alarm status in all chambers
4. Alarm Indicator Light: Flashes during alarm
5. Gas Switch: Manual gas shut off
6. Alarm Switch: Manual alarm shut off
7. Control keys
8. Bleed Barb: 1/8" hose barb where gas bleeds out

Back Panel



1. Sensor Input Jack: Locking sensor cable connects here by finger tightened locking nut
2. Power Connection (12VDC)
3. Gas Supply Inlet: 1/8" hose barb where incoming gas supply line connects. Pressure rated to 25 PSIG
4. Control Gas Outlet: 1/8" hose barb connects infusion tubing to host chamber



ProCO₂ P120ppm

Electrical Requirements

Electrical Power: 12 VDC at 2.5A

Physical Specifications

Weight: 0.7 lbs (controller only)

Dimensions: 1 ½"H x 3 ½"W x 7"D (controller only)

CO₂ Control Performance

Control Range: 10-10,000ppm CO₂

Accuracy: ±150ppm (at 0ppm) to ±350ppm (at 1000ppm) (25°C, 1013hPa)

Resolution: 1ppm

Alarms & Safety

Alarm Output: Audible (40 dB), visible flashing indicators

Alarm Modes: 1) process high 2) process low 3) deviation high 4) deviation low 5) deviation band

Sensor Specifications

Sensor Cable Length: 5'

Sensor Cable Diameter: 6mm

Gas Delivery & Tubing

Gas Infusion Rate: 0-25 SCFH

Gas Consumption: depends on 1) size and leakiness of host chamber 2) frequency and duration of chamber door openings 3) controller setpoint

Infusion Tubing Hose Fitting: 1/4" OD one-touch fitting

Infusion Tubing Diameter: 1/4" OD x 1/8" ID

Infusion Tubing Length: 2x10' (custom lengths available)

Gas Supply & Compatibility

Gas Source: compressed gas tanks, liquid dewar

Gas Supply: compressed dry air (CDA)

Gas Supply Line: 1/4" O.D. hose pressure rated to 25 PSIG, 95A durometer

Gas Supply Line Pressure: 1-25 PSIG

Gas Supply Hose Fitting: 1/8" hose barb

Operation Parameters

Host Chamber Temperature: -20-50°C

Host Sensor Humidity: 0-99%, non-condensing

