



part of the Breeze Group 

# in vitro Products

 [www.BioSpherix.com](http://www.BioSpherix.com)





## **The Cytocentric® Approach**

Continuous, Controlled Physiology at the Cell Level

Cells cultured outside their native environment lose the intricate physiologic support systems that sustain viability, stability, and function. Yet conventional laboratory workflows continue to expose cells to ambient air and fluctuating environmental conditions. Even brief deviations from optimal parameters can alter gene expression, shift metabolic activity, and ultimately affect translational performance.

At BioSpherix, we put the cell back at the center of the process.

Our Cytocentric® systems are engineered to maintain continuous, physiologically relevant environments throughout cell handling, processing, and incubation. These modular platforms integrate precise control of O<sub>2</sub>, CO<sub>2</sub>, temperature, humidity, and other critical parameters within a closed, configurable workspace. By minimizing room air exposure and reducing environmental variability, Cytocentric® systems help to:

- Preserve phenotype and functional integrity
- Improve reproducibility and data consistency
- Reduce contamination risk
- Enable scalable workflows from discovery through clinical translation

From early-stage research to advanced cell therapy manufacturing, Cytocentric® controllers and chambers deliver continuous environmental control, because cells require full-time support, not part-time conditions.

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Discover how these products are cited in research publications across the globe.

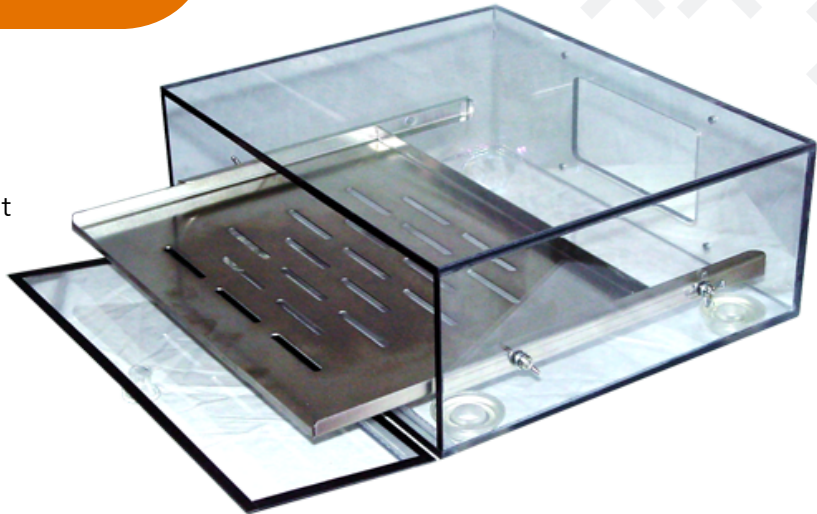


# C-Chamber

Incubator subchamber

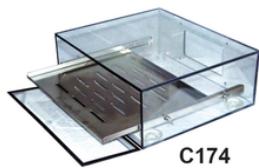
**Applications:**

- Tumor microenvironment
- Hypoxia studies
- Stem cell studies
- Ischemia
- Reoxygenation
- **Many more!**

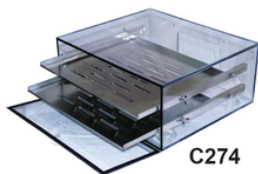


Designed to function within a standard incubator, the C-Chamber protects cells from room air exposure and environmental instability resulting from frequent door openings or movement between lab areas. This controlled microenvironment helps ensure higher-quality cells and more reproducible results.

The C-Chamber's compact, space-efficient design integrates seamlessly with most third-party incubators, upgrading existing lab space without the need for new infrastructure. Its space-saving footprint allows it to be easily moved between labs or equipment, while efficient gas consumption supports a broad range of applications.



C174



C274



C374



C474

Part No.	Description	Outer Dimensions
C174	1-shelf chamber	14"W x 13"D x 5.25"H
C274	2-shelf chamber	14"W x 13"D x 6"H
C374	3-shelf chamber	14"W x 13"D x 8"H
C474	4-shelf chamber	14"W x 13"D x 10"H

## ProOx P110

Compact, versatile O<sub>2</sub> controller



### Standard Features:

- Control Range: 0.1-99.9% ( ±1-2%) O<sub>2</sub>
- Footprint: 4 3/8"H x 8 7/8"W x 9"D, 3.9lbs
- Gas Infusion Rate: 1-28 SCFH
- Electrical Power: 12 VDC/2.5A
- Alarm: Audible (40 dB), flashing indicator
- Gas Supply: Pressurized O<sub>2</sub> or N<sub>2</sub>

The ProOx P110 is a reliable tool for oxygen-sensitive work, with a full range of control from 0.1% to 99.9% oxygen. It adjusts levels by infusing nitrogen to lower or oxygen to raise concentrations within any semi-sealable enclosure. Efficient operation is ensured with precise feedback from sensors, minimizing gas wastage.

## ProOx P360

High-infusion-rate O<sub>2</sub> controller

### Standard Features:

- Control Range: 0.1-99.9% ( ±1-2%) O<sub>2</sub>
- Footprint: 4 3/8"H x 8 7/8"W x 9"D, 4.1lbs
- Gas Infusion Rate: 1-140 SCFH
- Electrical Power: 12 VDC/2.5A
- Alarm: Audible (40 dB), flashing indicator
- Gas Supply: Pressurized O<sub>2</sub> or N<sub>2</sub>



The ProOx P360 is a high-infusion rate oxygen control tool designed for sensitive in vivo and in vitro applications, offering precise control from 0.1% to 99.9% oxygen. It uses sterile tank gas to adjust levels efficiently and without gas waste. Compatible with any semi-sealed enclosure, including incubators, gloveboxes, refrigerators, plant chambers, and many more, the ProOx P360 is a versatile tool for a wide range of protocols.

## ProCO<sub>2</sub> P120

### Compact CO<sub>2</sub> controller



#### Standard Features:

- Control Range: 0.1-20% CO<sub>2</sub> ( $\pm 0.3-0.7\%$ )
- Footprint: 4  $\frac{3}{8}$ "H x 8  $\frac{7}{8}$ "W x 9"D, 3.9lbs
- Electrical Power: 12 VDC/2.5A
- Alarm: Audible (40 dB), flashing indicator
- Gas Supply: Pressurized CO<sub>2</sub> and N<sub>2</sub>

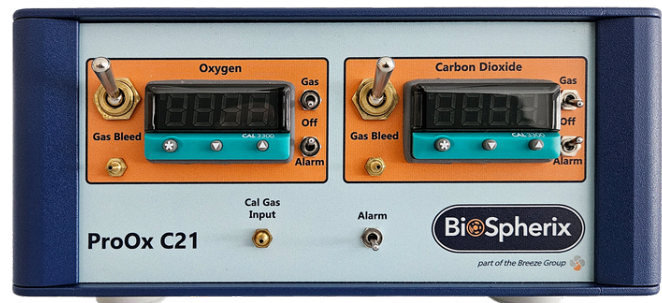
The ProCO<sub>2</sub> P120 is a versatile controller designed for CO<sub>2</sub>-sensitive applications, offering a control range of 0.1-20.0% CO<sub>2</sub>. The ProCO<sub>2</sub> P120 is designed to fit and control CO<sub>2</sub> within any semi-sealable enclosure, offering flexible integration across a wide range of systems and applications.

## ProOx C21

### Compact O<sub>2</sub> and CO<sub>2</sub> controller

#### Standard Features:

- Control Range:
  - 0.1-99.9% O<sub>2</sub> ( $\pm 1-2\%$ )
  - 0.1-20% CO<sub>2</sub> ( $\pm 1.5-2\%$ )
- Footprint: 4  $\frac{3}{8}$ "H x 8  $\frac{7}{8}$ "W x 9"D, 4.7lbs
- Gas Infusion Rate: 1-14 SCFH
- Electrical Power: 12 VDC/2.5A
- Alarm: Audible (40 dB), flashing indicator
- Gas Supply: Pressurized CO<sub>2</sub>, and/or O<sub>2</sub>, N<sub>2</sub>



The ProOx C21 efficiently controls oxygen (0.1-99.9%) and carbon dioxide (0.1-20.0%). The ProOx C21 works with bench-top incubators. When combined with the BioSpherix C-Chamber, The ProOx C21 can simulate and effectively maintain the desired gas levels for continuous and accurate physiologic control, upgrading your existing lab space without additional footprint.

## OxyCycler C42

Dynamic O<sub>2</sub> and CO<sub>2</sub> controller



### Standard Features:

- Control Range:
  - 0.1-99.9% O<sub>2</sub> (±1-2%)
  - 0.1-20% CO<sub>2</sub> (±1.5-2%)
- Footprint: 8 1/3"H x 12 3/4"W x 14 1/2"D, 17 lbs
- Electrical Power: 12 VDC/6.6A
- Alarm: 12V output adaptable to external systems
- Gas Supply: Pressurized O<sub>2</sub>, CO<sub>2</sub>, and/or N<sub>2</sub>

The OxyCycler C42 is a dual channel gas controller for control of O<sub>2</sub> (0.1-99.9%) and CO<sub>2</sub> (0.1-20.0%). Capable of enabling multiple setpoints, ranges, and number of cycles, the OxyCycler C42 makes complex oxygen cycling easy. It works within any semi-sealed incubator subchamber, including the BioSpherix C-Chamber, and can control multiple chambers simultaneously.

## OxyStreamer

Gas control for live cell microscopy

### Standard Features:

- Control Range:
  - 0.1-99.9% O<sub>2</sub>
  - 0.1-20% CO<sub>2</sub>
- Footprint: 13"H x 9.3"W x 14.2"D, 10 lbs
- Electrical Power: 12 VDC/2.5A
- Alarm: Audible (40 dB), flashing indicator

The OxyStreamer provides two identical streams of any mix of oxygen (0.1-99.9%) and carbon dioxide gas (0.1-20.0%) without the use of premixed gas cylinders. This dual-stream functionality can be used to condition the atmosphere in microscope cell culture incubators/chambers and the dissolved O<sub>2</sub> or CO<sub>2</sub> in media or perfusate.



# OxyCycler GT Series

## Bioactive gas controller



### Standard Features:

- Control Range:
  - 0.1-99.9% O<sub>2</sub> (GT41)
  - 0.1-20.0% CO<sub>2</sub> (GT41)
  - 0-400 ppm CO (GT4181C, GT81CN)
  - 0-50 ppm NO (GT4181N, GT81CN)
- Dimensions (ea): 9"H x 17"W x 17"D, 22 lbs
- Electrical Power: 12 VDC/6.6A
- Alarm: 12V output adaptable to external systems
- Gas Supply: O<sub>2</sub>, N<sub>2</sub>, CO<sub>2</sub>, NO/N-mixture, CO, O<sub>2</sub>/CO<sub>2</sub> CAL gas

The OxyCycler GT Series is a family of controllers providing precise control of O<sub>2</sub> (0.1-99.9%), CO<sub>2</sub> (0.1-20.0%), and relative humidity (RH) (GT41), with optional control of CO (0-400 ppm) (GT4181C), NO (0-50 ppm) (GT4181N), or combined CO/NO (GT4181CN). Featuring both static and dynamic programming, the GT Series supports a wide range of physiologic and pathophysiologic applications. Because many pathophysiologic processes and gasotransmitter responses are interrelated, the ability to add CO and NO exposure provides a logical and scalable upgrade path.

Product Name	Gases Controlled	Gas Supply
OxyCycler GT41	O <sub>2</sub> , CO <sub>2</sub>	O <sub>2</sub> , N <sub>2</sub> , CO <sub>2</sub>
OxyCycler GT4181C	CO (<400 ppm)	N <sub>2</sub> , O <sub>2</sub> , CO <sub>2</sub> , O <sub>2</sub> /CO <sub>2</sub> cal gas, CO/N <sub>2</sub> mix, CO cal gas
OxyCycler GT4181N	NO (<50 ppm)	N <sub>2</sub> , O <sub>2</sub> , CO <sub>2</sub> , O <sub>2</sub> /CO <sub>2</sub> cal gas, NO/N <sub>2</sub> mix, NO cal gas, NO <sub>2</sub> cal gas
OxyCycler GT4181CN	CO (<400 ppm), NO (<50 ppm)	NO/N-mixture, CO, O <sub>2</sub> /CO <sub>2</sub> CAL gas