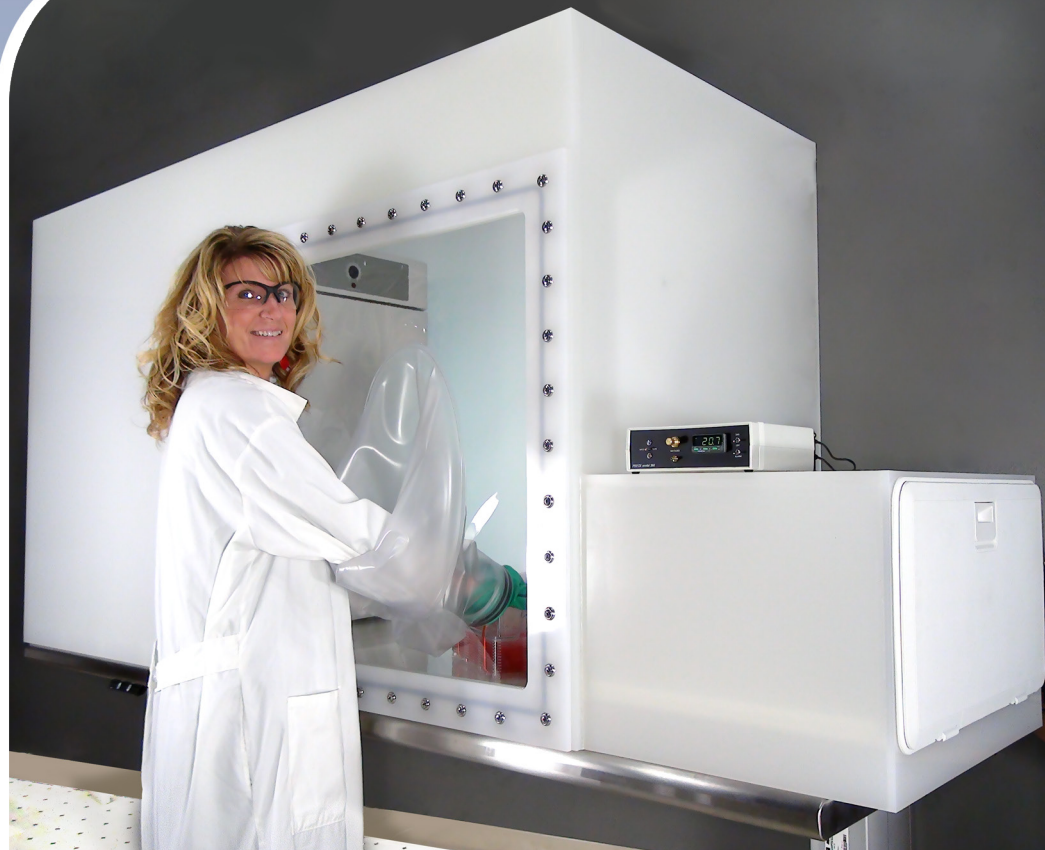


- Full Time O<sub>2</sub>/CO<sub>2</sub> Optimization
- Full Time Protection
- More Consistent Data
- Quick O<sub>2</sub>/CO<sub>2</sub> Recovery
- Maximum User Comfort
- Ample Workspace
- Accommodates Subchambers
- No Disturbance When Incubator Is Opened



O<sub>2</sub> and CO<sub>2</sub> (optional) Optimized Incubation and Processing

### CYTOCENTRIC ALTERNATIVE TO HOODS

The incubator is an essential part of the cell culturing process. The only drawback is the exposure to ambient air. Processing cells contained solely in an incubator is widely accepted, though it creates numerous complications.

### FULL TIME OPTIMIZATION

Primarily, the optimal atmospheric environment inside the incubator is disturbed whenever the door is opened. Secondly, a large amount of gas is required to restore the contained atmosphere to optimal conditions (especially hypoxia). Lastly, cultures are usually manipulated in a hood outside the incubator under suboptimal conditions.

### FULL TIME PROTECTION

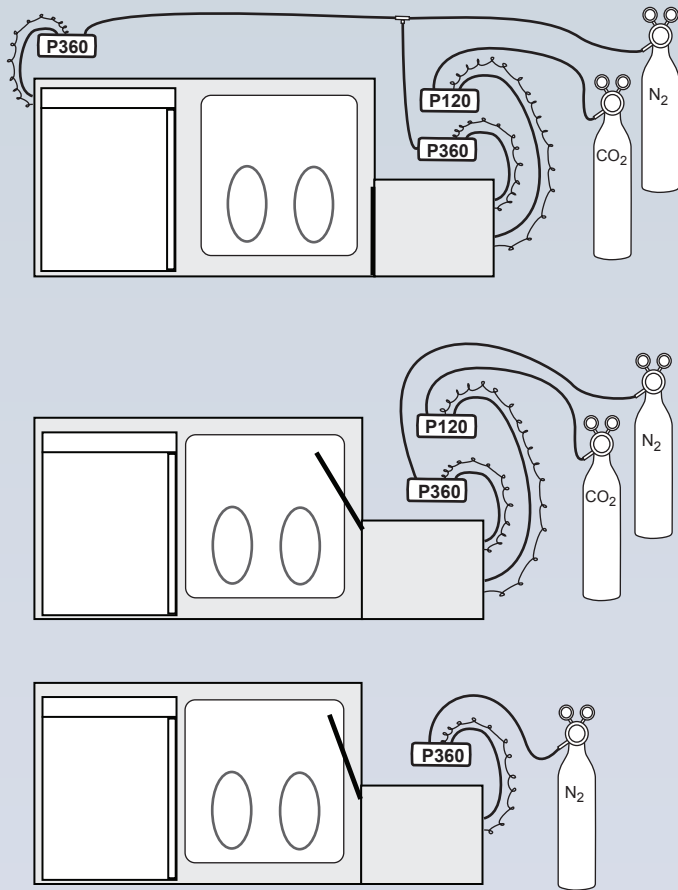
The I-Glove is a valuable, affordable solution to these problems. It is a large glove box in which your incubator sits. Identical conditions can be controlled both inside and outside the incubator allowing cultures to be manipulated under optimal conditions. This process removes the necessity of a hood and consumes minimal gas.

This means the control range of the incubator is also easily controlled. Inside the I-Glove, extreme oxygen levels are easily maintained.



Cells are brought into the I-Glove via subchambers. The buffer chamber matches the workspace setpoint, then cells are accessed from the interior door.

## Installation Schematic



## Installation

1. Set I-Glove on secure level surface.
2. Remove side panel and place existing incubator inside.
3. Replace side panel.
4. Place controller on or near buffer chamber.
5. Hook up gas supply/supplies.
6. Connect the controller(s), power supply and sensor.

## How It Works

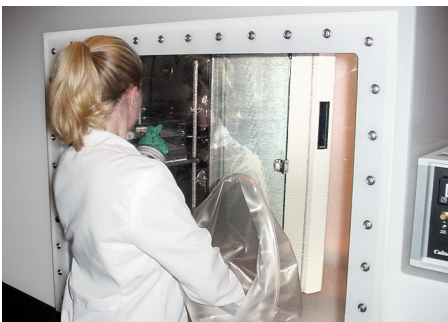


Pictured with optional Continuous Recirculating Atmosphere Conditioner (CRAC)

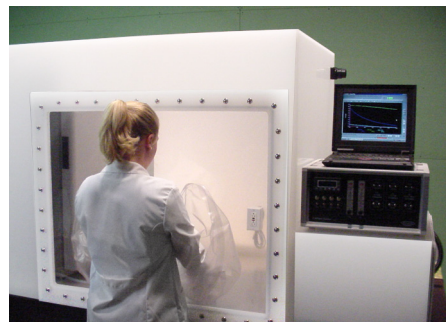
The I-Glove provides a workspace equivalent to the size of a standard small hood. The technician works with gloves that are seam-welded into a clear plastic window to maximize visibility, and ambient room lighting. The flexibility of the window allows maximum mobility and comfort. Atmospheric conditions inside the I-Glove can be controlled to optimize  $O_2/CO_2$  conditions outside the incubator. The I-Glove is separated from outside air by a buffer chamber. Aseptic conditions, as well as isolation from technicians and room air, minimize chance of contamination. The I-Glove also provides a protective barrier against harmful viruses, vectors, prions, and other infectious agents.

Chambers and vessels are moved in and out through the buffer chamber. It is large enough to receive a wide range of subchambers and specialized culture vessels. This allows you to integrate the I-Glove and your existing incubator with many other specialized cell culture systems from BioSpherix.

## Operation



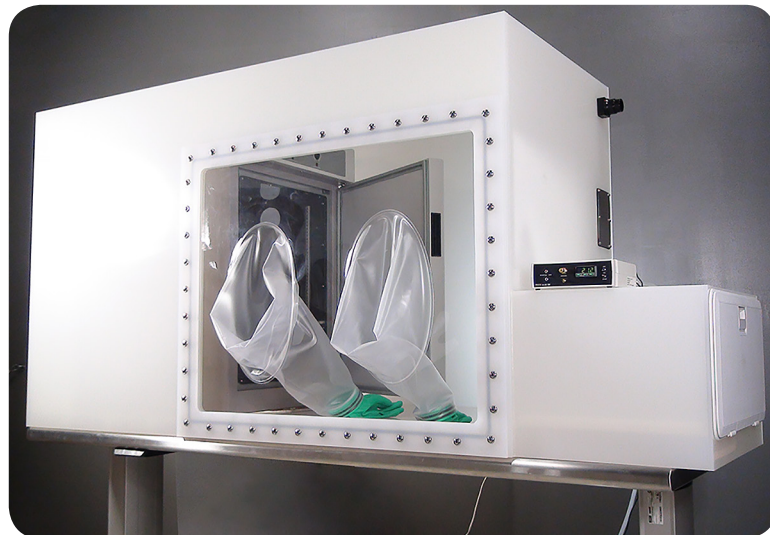
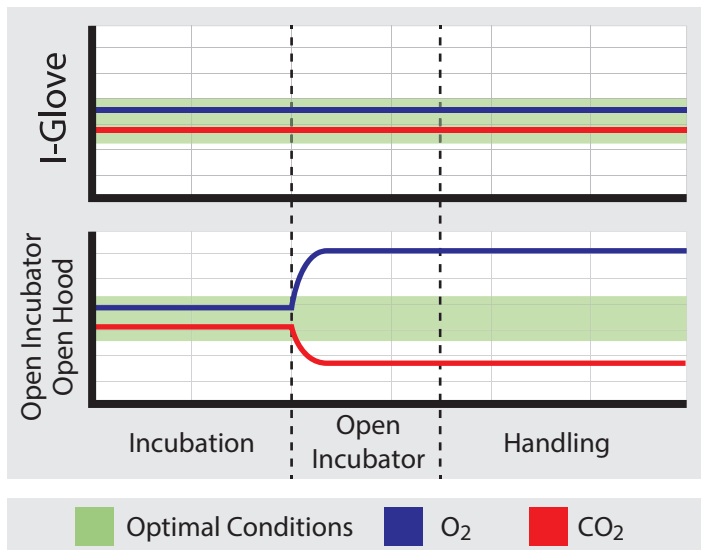
Cells can be removed from the incubator without disturbing optimal  $O_2$  and/or  $CO_2$  conditions.



Handle and manipulate cells in aseptic environment without disturbance in optimal  $O_2/CO_2$  conditions. No BSL2 hood required.

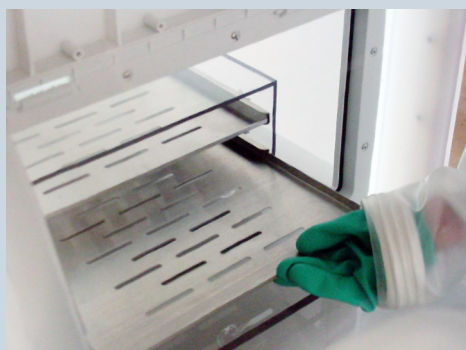


Cells and all necessary supplies enter through the buffer chamber.



The I-Glove accommodates most standard incubators. Access to the incubator door is easy via the soft comfortable glove front. The cells can then be brought out into the workspace for uninterrupted optimal cell processing.

Cells removed from normal incubator and handled in normal hood are exposed to suboptimal conditions. Cells removed and handled from incubator in I-Glove are never exposed to suboptimal conditions.



### I-GLOVES PROTECT THE RESEARCHERS

Cells are often purposely grown and processed to generate or test viruses and vectors. More worrisome is when cells are unknowingly infected with viruses or other transmissible agents. C-Chambers will limit exposure to harmful viruses, vectors and prions where conventional open labs allow the technicians to breathe potentially dangerous non-cellular biological entities.

### UNINTERRUPTIBILITY

When working in a I-Glove your cells are never exposed to sub-optimal conditions. Whether you're using O<sub>2</sub>/CO<sub>2</sub>/N<sub>2</sub> your workspace and transport is always controlled to a precise and optimal level. Top scientists have been telling us for decades that the sudden shift of oxygen from open incubator doors and manipulating cells in normal room air is causing havoc on HIF and other transcription factors.

Additionally, cells cultured in any remote subchamber can be moved into the system without disruption as well.

### PROTECTION AGAINST CONTAMINATION

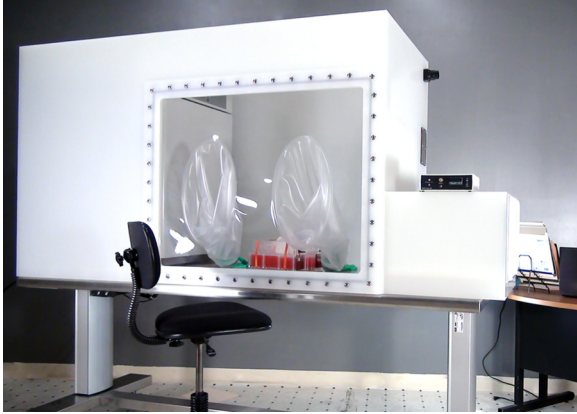
In open labs with open hoods, cells and researchers share the critical workspace most of the time. The majority of contamination in labs is caused by humans and their bioburden. A closed environment provided by the I-Glove and C-Chambers ensures that the main source of contamination is removed.

Top Left: Cultures can be handled inside the workspace at the same O<sub>2</sub> and/or CO<sub>2</sub> by simply opening the C-Chamber from inside.

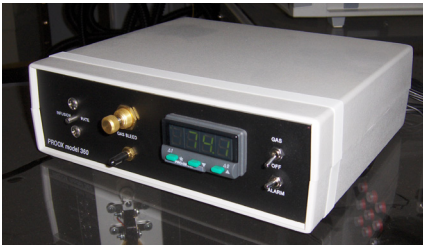
Left: I-Glove buffer chamber receives chambers C174, C274, and C374. Cultures can easily be moved from their host incubator, without disturbance of O<sub>2</sub> and/or CO<sub>2</sub>.



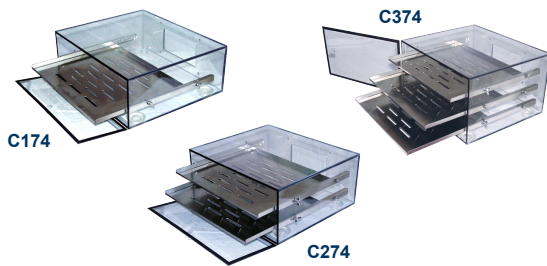
## Complete System Parts



**COMPLETE SYSTEM** - A nitrogen gas supply is necessary for hypoxia. If CO<sub>2</sub> control is necessary, a tank of CO<sub>2</sub> is also required, as is a CO<sub>2</sub> controller to control it. (Incubator not included).



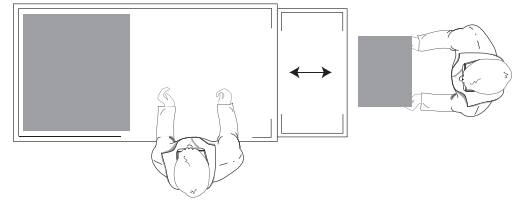
**CONTROLLERS** - Oxygen controllers, such as the ProOx P360 pictured, and CO<sub>2</sub> controllers fit the I-Glove.



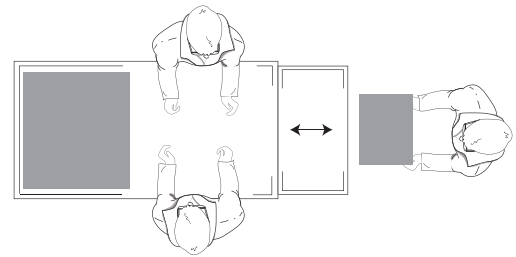
**SUBCHAMBER** - A subchamber, such as the 1-shelf C-Chamber above (Multiple sizes available), is used to transport cells to and from the I-Glove. They sit inside your incubator, providing isolated environments and allowing multiple protocols per incubator.

## Options

- Right hinge or left hinge configurations



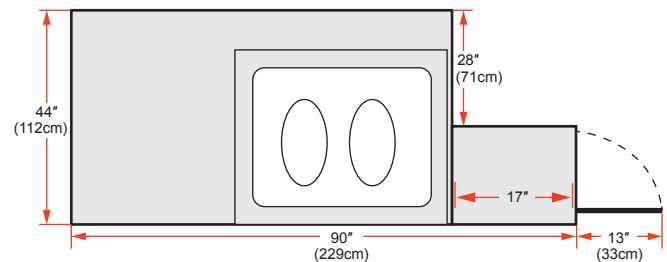
- Single or Dual user



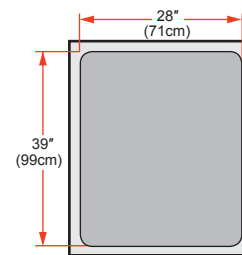
Two user configuration is best located on an island or a peninsula counter top to achieve access on three sides.

- O<sub>2</sub> and/or CO<sub>2</sub> control in buffer chamber only
- O<sub>2</sub> and/or CO<sub>2</sub> control in glove chamber in addition to buffer chamber
- Continuous recirculating atmosphere conditioner

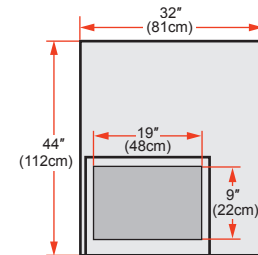
## Dimensions



**Front View**



**Incubator End View**



**Buffer End View**



*cytocentric*  
cell incubation and processing  
systems

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