



ProLab series Glove box designed specifically for production and research applications. ProLab Glove Boxes are used in controlled atmospheres (dry boxes) or for use with hazardous materials. Protector Controlled Atmosphere Glove Boxes provide a leak-tight environment for work with contamination-sensitive materials.

## Glove Box System

### Model: ProLab GB II

- **Dimension** : 1240 mm W x 790 mm D x 900 mm H (2 ports, one side)
- **Internal Finish**: 304 stainless steel Brushed Finish
- **External surfaces** : 304 stainless steel Brushed Finish (Powder coating Optional)
- **Wall Thickness** : 2.5 mm (3 mm Optional)
- **Removable front window** : Laminated safety Glass 10mm (Scratch proof and chemical Resistance polycarbonate 9.5mm Optional )
- **Glove Ports** : Delrin (POM) Natural white 220 mm
- **Gloves** : Butyl 0.4mm thickness
- **Box Light** : LED (Fluorescent tube optional)
- **Feedthroughs** : DNKF40 4 No's
- **Electrical Feedthrough** : 1 electrical feedthrough with fuse protected 6 outlet power strip
- **Dust Filter** : HEPA filter class H14 1 inlet /1 outlet
- **Shelves** : 3 height adjustable 304 stainless steel brushed finish
- **Box Stand** : Height adjustable with wheels and locking mechanism

## Large Antechamber Stainless Steel

- Cylindrical type 400 mm Ø 600 mm Length
- Inside and outside surface brushed finish
- Stainless steel sliding tray
- Aluminum anodized door 10mm thickness
- Analogue vacuum gauge
- Manual evacuating and refill valve (Automatic refill and evacuating control optional)

## Small Antechamber

- Cylindrical type 154 mm Ø 410 mm Length
- Inside and outside surface brushed finish
- Manual evacuating and refill valve

## Elite single coloum Gas purification system

- 7 inch Siemens touch screen HMI, Siemens PLC controller
- Auto-regeneration
- <1ppm O<sub>2</sub> and <1ppm H<sub>2</sub>O purity
- O<sub>2</sub> capacity – 41L purification Coolum
- H<sub>2</sub>O capacity – 1450 g purification capacity
- Variable speed circulation blower 110m<sup>3</sup>/h
- Automatic pressure control +/- 15mbar
- Manual pressure control Siemens ip65 water proof foot switch
- Automatic purging
- O<sub>2</sub> and H<sub>2</sub>O High alarm
- 20 m<sup>3</sup>/h rotary vane pump with oil mist filter
- Integrated solid probe oxygen analyzer 0-1000ppm (electrochemical sensor optional)
- Integrated moisture analyzer 0-1000ppm

### Eco mode operation

## Applications

### Battery R&D

The ProRes Scientific manufacture Glove Box for Li, Na, Graphene and advanced Metal air based Battery research. We recommend our Prolab with Elite glovebox models for manufacturing high efficiency batteries , we design and fabricate glove box that provides moisture free inert atmosphere which is prime requisite for Li, Na, Graphene and Metal air battery assembly units.

### OLEDs sectors:

- Various Material Research in inert atmosphere conditions
- Vapor Deposition of Metal Oxides and Polymers
- Polymer Deposition by Spin Coating
- Deposition by Printing Processes
- Sealing- Epoxy/UV Curing and LASER Welding

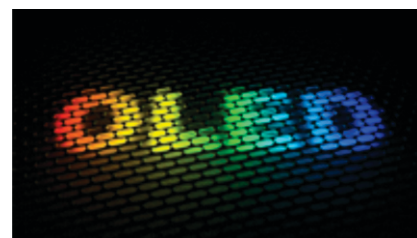
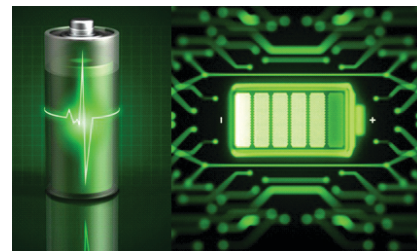
### Aerospace, TIG Welding and vacuum welding Applications:

Glove box welding is a proficient service that plays a part in delivering reliable and repeatable process quality for welded aerospace materials. The top three benefits of glove box welding include:

- Clean welds – Weld chambers help prevent oxidation of materials (i.e. aluminum and titanium) by creating an atmosphere free of oxygen and moisture to safely produce aerospace parts.
- No defects – Glove box welding eliminates cracking due to atmospheric contamination, which leads creating high quality welded joints.

### Applications

- ▶ Anhydrous, anaerobic and clean, ultra-clean work environment
- ▶ R&D and production of batteries and battery materials (lithium-ion battery, battery, solar cell, the lithium iron phosphate, etc.)
- ▶ R&D and manufacturing of HID lamps, metal halide, ceramic metal halide
- ▶ Welding: resistance welding, TIG welding, laser welding, plasma welding, brazing
- ▶ OLED R&D and production
- ▶ R&D and production of medical supplies
- ▶ R&D and production of the super capacitor
- ▶ Fine chemicals, nuclear industry
- ▶ New energy materials, Functional materials R&D and production.



## Small Antechamber

- Cylindrical type 154 mm Ø 410 mm Length
- Inside and outside surface brushed finish
- Manual evacuating and refill valve

## Elite single column Gas purification system

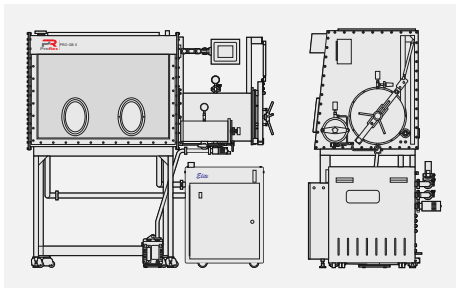
- 7 inch Siemens touch screen HMI, Siemens PLC controller
- Auto-regeneration
- <1ppm  $\text{O}_2$  and <1ppm  $\text{H}_2\text{O}$  purity
- $\text{O}_2$  capacity – 41L purification Column
- $\text{H}_2\text{O}$  capacity – 1450 g purification<sub>3</sub> capacity
- Variable speed circulation blower 110m<sup>3</sup>/h
- Automatic purging
- $\text{O}_2$  and  $\text{H}_2\text{O}$  High alarm
- Automatic pressure control +/- 15mbar
- Manual pressure control foot switch (Siemens ip65 water proof foot switch optional)
- 20 m<sup>3</sup>/h rotary vane vacuum pump with oil mist filter
- Integrated solid probe oxygen analyzer 0-1000ppm (electrochemical sensor optional)
- Integrated moisture analyzer 0-1000ppm

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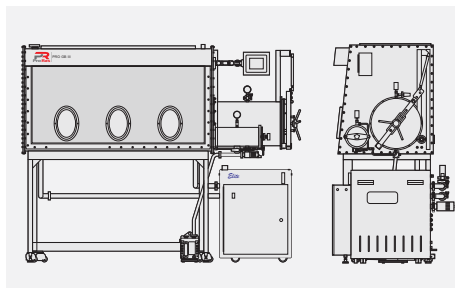
## Eco mode operation

### ProLab GB II



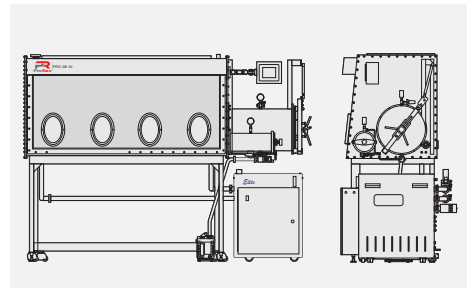
**Internal Dimensions:**  
1240 mm W x 790 mm D x 900 mm H

### ProLab GB III



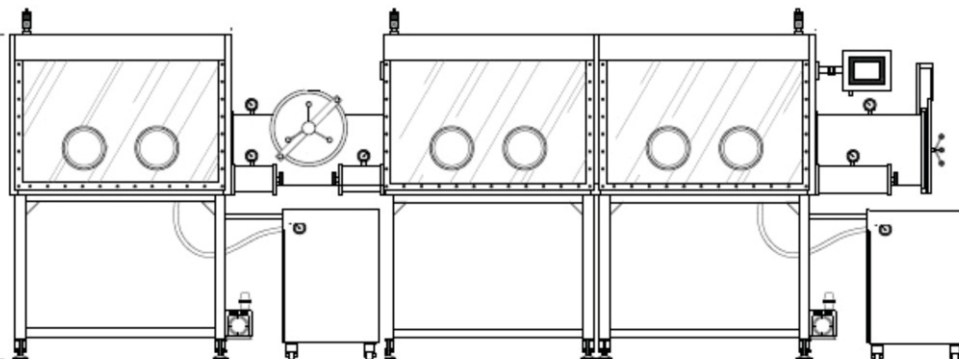
**Internal Dimensions:**  
1550 mm W x 790 mm D x 900 mm H

### ProLab GB IIII



**Internal Dimensions:**  
1940 mm W x 790 mm D x 900 mm H

## Custom Design Glove Box System

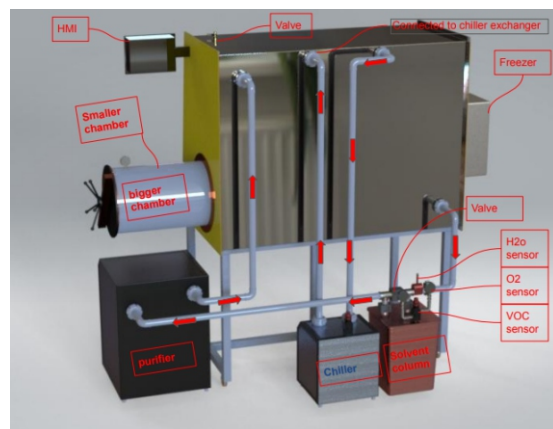
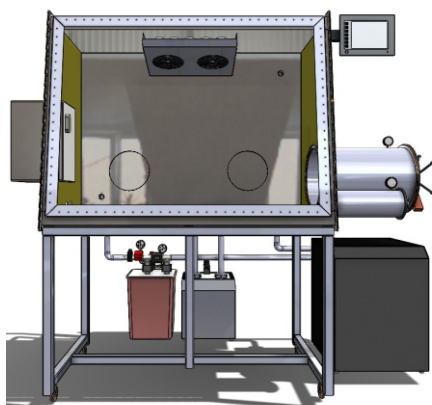
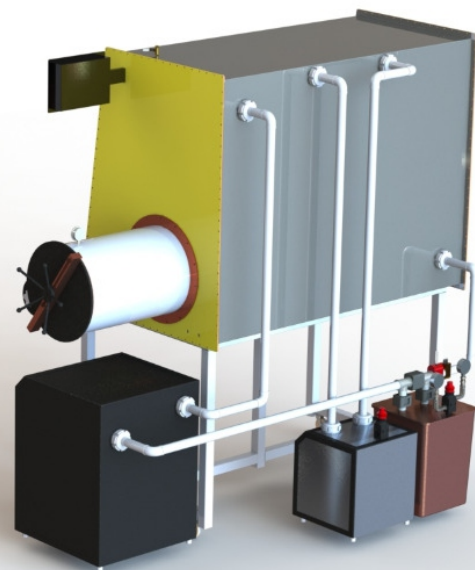


## DESIGN OPTIONS

- Double Sided Access
- Left Sided Antechambers
- Through Flow Antechambers
- Laminar Flow
- Circular Glove Ports
- Polycarbonate Window
- Dry Vacuum Pump
- PureSolv MD Integration
- Other Customizations

## Custom Design Glove Box System

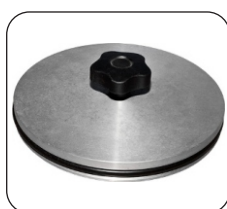
- ▶ Glove Box - custom design
- ▶ Different prot size and combination
- ▶ Integrate with thermal evaporator
- ▶ Customized feed through or flange connection
- ▶ Integrate with freezer / Integrate with Box cooling
- ▶ Integrate with oven / Integrate with Heat exchanger
- ▶ Integrate with solvent purification system and voc sensor
- ▶ Other special requirement



## Glove Box Accessories Spare Parts



**Electrochemical  
O2 sensor**



**Glove port cover**



**Gloves**



**H2O sensor 0-3000ppm**



**POM Glove port**



**Solid probe Oxygen  
sensor**



**Solvent trap with  
provision for VOC  
sensor**



**VOC sensor**