



Lab2000 Series Integrated Single-Sided Glove Box

The Lab2000 glove box is a high-performance, high-quality closed-loop system that automatically absorbs water and oxygen molecules, purifying the working environment. It provides an inert atmosphere with ≤ 1 ppm O_2 and H_2O , meeting your specific clean environment requirements. This system is an economical circulating purification system designed to meet the research and development needs of our customers.

The Lab2000 system includes a sealed enclosure, a set of (large and small) transition chambers, a rotary vane vacuum pump, and a circulating purification system with an integrated microcontroller control panel. The standard Lab2000 system is equipped with an inert gas purification system that installs a purification column (fully automatic and regenerable) to purify and maintain the atmosphere inside the glove box.



Performance Characteristics

- Stainless steel enclosure design, tempered glass or polycarbonate front window (optional);
- Specifications: Water, Oxygen ≤ 1 ppm;
- Leakage rate: ≤ 0.05 vol%/h;
- Modular design of solenoid valves reduces leakage and facilitates replacement;
- Large transition chamber with sliding tray, uniquely designed transition chamber door that is lightweight and easy to open;
- GP-20 inert gas purification system;
- SIEMENS microcontroller;
- SIEMENS touch screen for easy access to functions;
- Data memo: Automatically records system data;
- Closed-loop gas circulation, oil-free and vacuum;
- Foot pedal pressure control instead of manual adjustment;
- All stainless steel gas flow piping and fittings;
- EDWARDS RV12 vacuum pump;
- HEPA high-efficiency filter;
- Automatic pressure control, working pressure settable within ± 12 mbar range;
- Height-adjustable stand;
- Adjustable casters for easy movement;
- Lampshade with anti-reflective coating;

Technological Advantages

1. The glove box features an attractive design, compact structure, and fine workmanship.
2. The inert gas inside the glove box is circulated in a closed loop by a circulating fan and purifier, continuously absorbing oxygen and water.
3. The deoxygenation material is regenerable, and the regeneration process is automatically controlled by a program.
4. It adopts the latest European technology, and all key components are imported from Europe from world-renowned manufacturers.
5. The control system includes self-diagnosis, power-off self-starting, pressure control and adaptive functions, password protection, and the control unit uses a Siemens PLC touch screen.
6. The water analyzer is highly corrosion-resistant and has a wide range of applications, especially for users in lithium battery manufacturing and metal-organic industries. It can be cleaned three times free of charge and reused, avoiding the problem of being scrapped after a single contamination.
7. The oxygen analyzer uses a ZrO_2 sensor, avoiding the problem of short fuel cell lifespan and continuous exposure to air.
8. An integrated valve structure is adopted, reducing and optimizing... The optimized system piping layout reduces potential leaks, simplifies leak detection, and ensures greater product stability and reliability.
9. The equipment operates stably and can run continuously 24/7.
10. Automatic control simplifies operation and reduces maintenance costs.
11. Specialized, standardized, and large-scale production of all glove box components.
12. Products are available to meet various special requirements.
13. All components undergo rigorous review and control.
14. Extensive design and control experience.
15. The production process strictly adheres to ISO9001 standards.
16. High-precision, modern testing methods are used, including helium buoy leak testing of critical stages during production to ensure impeccable product quality.
17. A highly skilled technical team enables continuous product improvement and perfection.

Product Dimensions



Parts List

			
Oxygen Analyzer 1pcs	Water Analyzer 1pcs	Oil Mist Filter 1pcs	Bellows 3pcs
			
Gloves 4pcs	Edwards Vacuum Pump 1pcs	Clamp 7pcs	Glove Sealing Ring 8pcs

Technical Parameters

Glove Box

Describe	Material: Stainless steel 1.4301(SUS type 304), thickness 3mm.Dimensions: 2400mm (L) x 750mm (W) x 900mm (H)
Volume	0.8 m ³
Front Window	Panel: 8 mm thick tempered safety glass or 10 mm thick polycarbonate (optional) Dimensions: 1123 mm (L) x 839 mm (H)
Glove Caliber	Made of hard aluminum alloy or polyoxymethylene (optional), 220 mm diameter, O-ring seal
Gloves	Material: Butyl rubber Thickness: 0.4 mm or 0.8 mm (optional)
Filter	Inlet and outlet filters, filtering <0.3μm
Illumination	LED lighting is located at the top of the front windshield
Leakage Rate	Final acceptance testing will be conducted according to the standard of leakage rate < 0.05 vol%/h

GP20 Gas Purification System

Describe	Automatic removal of H ₂ O and O ₂ ; single purification column system with automatic regeneration (optional GP2000 dual purification column); closed gas circulation pipeline
Use Voltage	AC 230 V / 50-60 Hz, 10 A or AC 115 V / 50-60 Hz, 20 A (optional)
working Gas	Working gas: N ₂ , Ar, He (purity ≥ 99.999%); Regeneration gas: H ₂ accounts for 5%-10%, the remainder is working gas (purity ≥ 99.999%)
Vacuum Pump	Specifications: Rotary vane vacuum pump, equipped with oil mist filter and gas ballast control; Flow rate: 12 m ³ /h (7 cfm), vacuum level < 2 x 10 ⁻³ mbar (dry pump optional)
Loop Unit	Oil-free high-speed fan; air volume: 0 - 100 m ³ /h
Valve	Electromagnetic high vacuum valve
Leakage Rate	Final acceptance testing will be conducted according to the standard of leakage rate < 0.05 vol%/h

Cleaning System

Describe	Once the appropriate time and pressure are set, the system can automatically replace the gas in the chamber.
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Analyzer		
Volume	Size	205 mm (L) x 80 mm (W) x 60 mm (H)
	Measurement Range	0-1000 ppm
	Other Oxygen Analyzers	GE oxy.IQ™ Oxygen Transmitter
Gloves	Size	205 mm (L) x 80 mm (W) x 60 mm (H)
	Measurement Range	0-500 ppm
	Other Oxygen Analyzers	GE VeriDri™ Dew-Point Transmitter
Solvent Purification System		
Leakage Rate	Material: 1.4301 stainless steel (SUS type 304), 3 mm thick; Internal dimensions: 220 mm (Φ) x 450 mm (H); High-quality activated carbon;	
Optional Equipment		
Refrigerator	Independent control system integrated into the side panel of the cabinet; temperature range -35°C; 18L or 32L capacity available; main body made of 304 stainless steel; 5-layer variable partition; R404 environmentally friendly refrigerant, original import;	
Heated Chamber	The large transition chamber is equipped with a heating system with a temperature of 200°C and a temperature control range of ±1°C.	
Other Notes		
Product Certification	ISO9001 certification, CE certification, UL certification	
Warranty Period	One-year warranty, lifetime repair	
Precautions	For details, please refer to the danger, warning, and precaution clauses in the instruction manual	

Order Information

E	*	1	2	3	4	Explanation
Standard Enclosure	1200					The box dimensions are 1200mm (L) × 750mm (W) × 900mm (H)
	1500					The box dimensions are 1500mm (L) × 750mm (W) × 900mm (H)
	1800					The box measures 1800mm (L) × 750mm (W) × 900mm (H)
	2400					The box measures 2400mm (L) × 750mm (W) × 900mm (H)
Structural Configuration	U					Standard integrated glove box
	S					Standard split glove box
	D					Configured with operable double-sided glove box
Function Options	P					Equipped with an automatic cleaning function, it can quickly replace the gas inside the chamber
	G					The rapid absorption chamber contains trace amounts of H ₂ O and O ₂ ≤ 1 ppm (including water and oxygen analyzers).
	O					Equipped with an organic solvent adsorption system and high-quality activated carbon
Transition Cabin	A0					Large transition cabin φ360mm×600mm(L)
	A1					Large transition cabin φ390mm×600mm(L)
	A2					Small transition compartment: φ150mm×330mm (L)
	A3					Square cabin: 400mm (L) × 300mm (W) × 300mm (H)
Other Function Options	FW					With an openable front window
	18F					Includes a refrigerator with a capacity of 18L and a temperature of -36°C
	32F					Includes a refrigerator with a capacity of 32L and a temperature of -36°C

* Indicates a basic required option; 1, 2, 3, and 4 are optional order numbers that can be configured according to your needs. Please contact us if you have any special requirements for ordering.

Example of order number:

- ① E-1200UPGO indicates an integrated single-station 1200mm long glove box with automatic cleaning, water and oxygen purification system, and solvent adsorption system;
- ② E-1800SDPG-A3 indicates a split-type 1800mm double-sided four-station glove box with automatic cleaning, a water and oxygen purification system, and other configurations.

After-sales service

"365 Worry-Free", Excellent Extended Warranty Service

The Value of "365 Worry-Free" Extended Warranty Service: 24/7, All-round, More Cost-Effective, More Timely, More Peace of Mind, More Convenient, Controllable Repair Costs, Professional Maintenance Service

★ The entire process includes one-stop repair, maintenance, and training services, and the establishment of complete user files.

★ Save more money:

- 1)After purchasing the extended warranty service, you will not need to pay any additional fees for equipment repair (excluding consumables)
- 2)Free value-added services, timely replacement of parts that you usually don't pay attention to when reporting for repair, eliminating potential problems and ensuring that the equipment is always in good working order
- 3)More affordable hardware upgrades to meet your higher demands for equipment
- 4)Purchase consumables at a more favorable price

★ More Timely:

By choosing the extended warranty service, the company can stock commonly used modular parts with engineers, who can efficiently and promptly replace faulty modules, shortening the repair cycle and making your production work smoother and more efficient, thus creating higher profits for you.

★ More peace of mind:

After the one-year free warranty period, the equipment will no longer be covered by the full warranty service. However, by purchasing the extended warranty service, you can continue to enjoy free warranty service. We will regularly follow up on the equipment usage to provide you with high-quality and comprehensive equipment warranty service, eliminating your worries.

★ More convenient:

Simply call ETEX's unified customer service hotline: 400-086-8156. Our 400 call center will be at your service 24 hours a day, and we can meet all your needs immediately.

★ Repair costs are controllable:

Without extended warranty service, repair costs will be charged based on the faulty equipment and the extent of the fault, and the company has no control over the equipment repair costs; with extended warranty service, repair costs become controllable, turning into budgeted investment, which can significantly reduce the risk of increased equipment repair costs.

★ Professional Maintenance Services: Let our service team provide you with more professional support and work together to create a better future!

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