



## Stainless Steel Glove Box System With H<sub>2</sub>O & O<sub>2</sub> Purification System CE Approved

Our Product Introduction

### Basic Information

- Place of Origin: China
- Brand Name: MRBEST
- Certification: CE
- Model Number: MR-Lab2000
- Minimum Order Quantity: 1 Set
- Price: Negotiable
- Packaging Details: Standard Export Wooden Packing
- Delivery Time: 7-30 working days
- Payment Terms: T/T, Western Union, MoneyGram
- Supply Ability: 500 sets per month



### Product Specification

- Name: Glove Box System
- Application: For Lithium-ion Battery Fabrication
- Leakage Rate Of Box: 0.05 Vol /h
- Environment Of Box Inside: H<sub>2</sub>O <1 Ppm O<sub>2</sub> <1 Ppm
- Antechamber: Φ360mm (Dia.)x 600mm(length)
- Mini Chamber Size: Φ150 Mm(Dia.) X 300mm(L)
- Work Station: One Work Station
- Material: Stainless Steel Type 304, Thickness 3mm
- Highlight: **Stainless Steel Glove Box System, CE Glove Box System**




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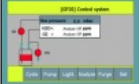



## Glove Box with H<sub>2</sub>O & O<sub>2</sub> Purification System and Hinged Front Window









Lab2000 is a stainless steel glove box with a hinged type of front door designed for easier loading and unloading devices into the glove box. The purification cylinder is made of BASF R3-11 Copper Catalyst and Lindy Molecular Sieve in order to achieve a low water and oxygen concentration of **lower than 1 ppm**, such that experiments can be conducted in an ultra-clean and highly purified gas environment. It is integrated with a vapor pressure control system, purity control system, automatic gas purity regeneration control system, and system data log recording. Lab2000 is widely used in preparing nanomaterials, Li-ion battery materials, catalysts, and metallorganics.

### Specifications:

Structure	Integrated structure (Purification System integrated under the box)	
Power Supply	110 - 220V AC, 50/60Hz, Single-phase	
Glove box Box	Box Material: 304 Stainless Steel (Type 304), thickness 3mm Box Size(excluded antechamber and support): 1200mm(L) x 750mm(W) x 900mm(H) Box Support height: 900mm(35.43" ) Product Dimension: 2000 mm L x 1000 mm W x 1880 mm H (79" x 40" x 74")	
Tray	Standard Layout 	Two layers in box.
	Option/Add: tool boxes or other 	Various tool boxes, can be placed according to user needs.
Front Window Open	The front window can be designed to open instead of fix, in order to put in a variety of instruments. 	
Environment of Box inside	H <sub>2</sub> O <1 ppm (20°C/68 , 1 atm) O <sub>2</sub> <1 ppm (20°C/68 , 1 atm)	

Antechamber	Control way: manual Design: two circular antechambers Main chamber size: $\Phi 360\text{mm}$ (Dia.) x 600mm(length)(location: right-side of box) 14.17 "(Dia.) x 23.62" (L) Mini chamber size: $\Phi 150\text{ mm}$ (Dia.) x 300mm(L)(location: right-side of box) 5.9 "(Dia.) x 11.8" (L) Vacuum degree: $\leq 0.1\text{MPa}$ (right side antechambers included main chamber and mini chamber, all of that are need vacuum and display. The vacuum pressure gauge brand is German WIKA.	
	Option/add auto control way 	It will automatically control the antechamber by time setting and the number of times for gas exhaust and filling.
	Option/Add: heating mode 	Max temperature: 200 / 392 Control accuracy: $\pm 2 / \pm 3.6$ The main chamber and mini chamber are both can adding the heating function (compared with standard antechamber the size is a little different)
Working gas and regeneration gas	Working gas: 99.999% high pure $\text{N}_2$ , Ar, He and other inert gas Control gas: 99.999% high pure inert gas Regeneration gas: mixing gas of working gas and $\text{H}_2$ , hydrogen( $\text{H}_2$ ) Volume accounted for 5-10% If the pure system only has moisture removal function, the regeneration gas is the same with working gas	
Gas purification system	Single Column Gas Purification System included: German BASF Oxygen removal material, US UOP high moisture absorb material. The regeneration process of purification system is auto control and automatic moisture and oxygen removal function. Gas purity can be sustained and keep long-term: $\text{H}_2\text{O} < 1\text{ppm}$ , $\text{O}_2 < 1\text{ppm}$ .	
	<b>Option:</b> Double Columns Purification System (one in use and the other is reserve) <b>Why Choose Double Column?</b> 1. The Pure column need to be regenerated after saturated by absorbing the oxygen and moisture. The regeneration time is 16 hours. If there is no reserved column, it may stop working. (we recommend double column purification system to factory or other unit which need glove box working Continuously); 2. The pure capacity of double pure columns is two times as much as single column	
Pressure control system	Box pressure can be auto controlled by PLC touch screen Control accuracy: $\pm 1\text{Pa}$ Can also be manually controlled by foot switch	
Filter system	The ends of inlet and outlet both are provided with filter The filter precision is: $0.3\text{ }\mu\text{m}$	
Closed circulating fan	High speed frequency conversion fan, flow 0-100 $\text{m}^3/\text{h}$ , microprocessor control, Stainless steel device for pressure testing. With water cooling device (can equipped with water cooler and external refrigeration equipment)	
Control system	 SIEMENS colors touch screen (6 inches), PLC control system, Bilingual in Chinese and English can be switched Pressure sensor: -2500 2500Pa touch screen, accuracy $\pm 1\text{Pa}$ Pressure control: control the box pressure to one setting point (scope can be set)	
measurements		Moisture analyzer: US Avcray brand, 0 500ppm touch screen display, precision 0.1ppm
		Oxygen analyzer: US Avcray brand, 0 1000ppm touch screen display, precision 0.1ppm
Vacuum Pump	 Britain Brand EDWARDS, pumping speed 8.4-12 $\text{m}^3/\text{h}$ , Model: RV12 Extreme pressure 2 x 10 $^{-3}$ mbar/1.5 x 10 $^{-3}$ Torr Inlet flange NW25 Outlet flange NW25 Noise level: 50 Hz 48 dBA	
Glove	 Brand: US GUARDIAN Material: Butyl	
illumination system	Equipped with Fluorescent lamp. Brand: PHILIP	

Solvent removal system	Efficient adsorption of activated carbon, can effectively remove trace organic solvents;	
Spare KF40 standard joint	Special design to KF40 Joint, you can lead the water into the box 	
Can be connected to other devices (low temperature refrigerator, film coating machine, microscope, solvent purification system, low temperature cold trap, heating furnace, etc.)	low temperature refrigerator	
	microscope	
	Solvent Purification System	
	Coating machine	Inside connection(one door of Coating machine is inside of glove box)  Outside connection 
Equipment size and room requirements	Overall size	2000 mm L x 1000 mm W x 1880 mm H (79" x 40" x 74")
	Room size	2200mm(L) x 1500mm(W) x 2000mm(H) 133.86" x 59" x 78.74"
Wooden Package size and weight	2185mm(L) x 1145mm(W) x 2300mm(H) 86" x 45" x 91" (5.8M3)	
	650 kg (1400 lbs)	
Notice	<p>When the gas is circulating, must ensure that the piping of the circulation system is clear and cannot be blocked (if the color of the filter is changed from white to black, the filter should be replaced timely).</p> <p>No corrosive gas in the glove box.</p> <p>It needs to regenerate the column when the moisture and oxygen indicators cannot meet the work requirements.</p> <p>If the corrosive gas is released from inside of glove box.(such as LiPF6 electrolyte), please do not use. you must put the bottle filled with liquid seal.</p> <p>Vacuum pump needs to be checked the oil level and maintain in regular time.</p>	



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