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Note: This image is for reference only; the actual product image will vary based on the selected product specifications.

## **4 PORT GLOVE BOX (DOUBLE STATION)**

### **TECHNICAL SPECIFICATIONS**

Model : 2440,750,900

An ISO 9001:2015 Company

## **(1) Model: 2440/750/900**

Dual stations (4 ports), Single-sided operation, integrated single-column purification unit, PLC control and touch screen operation, vacuum pump, bracket, a closed box with inclined operation surface and detachable safety glass front window. Under standard conditions, that is, 20 °C constant temperature, a standard atmospheric pressure, 99.999% inert gas source, water and oxygen level less than 1 ppm.

## **(2) Function**

- Closed loop**

The inert gas in the glove box is circulated in a closed loop by the circulating fan and purifier to continuously remove water and oxygen

- Automatic control of regeneration**

The water and oxygen removal materials can be regenerated, and the regeneration process is controlled by the program

- Automatic cleaning**

The atmosphere replacement in the glove box is completed by an automatically controlled cleaning valve

- Cabinet pressure control**

The pressure in the glove box is automatically controlled by PLC, which can be set freely, if it exceeds +/- 16mbar, the system will automatically protect it.

- Automatic control of vacuum pump**

The vacuum pump is required to be automatically turned on when the system needs it

## **(3) Basic Configuration**

- Two 304 stainless steel boxes are connected by flanges, acid resistant, thickness 3 mm, internal dimensions: length: 2440mm; depth: 750mm; height: 900mm.
- 1 large **heating transition chamber** made of stainless steel, heating temperature 150°C, diameter 360mm, length 600mm, right side.
- 1 small transition chamber, diameter 150mm, length 300mm, right side.
- 1 **refrigerator, 30L**, length 300mm, width 220mm, height 450mm, the temperature can be set freely, lowest temperature -35°C, left side.
- 2 glass front window with 2 glove ports
- 2 pairs of butyl rubber gloves
- 2 sets of lighting system
- 1 power interface in the box

- 8 KF40 standby interfaces
- 1 high-performance circulating blower 90m<sup>3</sup>/h, equipped with frequency conversion
- 1 Vacuum Pump
- 1 set of Purification system
- 1 set of Moisture Analyzer
- 1 set of Oxygen Analyzer
- 1 set of quickly replace organic solvent adsorber
- 1 Bracket casters
- 1 Foot switch

## **(4) Key Components of Spare Parts**

• Vacuum Pump	EDWARDS (UK)
• Circulating Blower	DARGANG (Taiwan)
• Oxygen analyzer	VTI (USA)
• Moisture analyzer	VTI (USA)
• Pressure sensor	HALSTRUP (Germany)
• Purification materials	BASF, UOP (Germany, USA)
• PLC control system and touch screen	SIEMENS (Germany)
• Pressure gauge	WIKA (Germany)
• Integrated valve seat	

## **(5) Main Parameters:**

- Water and oxygen index: less than 1 ppm;

## **(6) Technical specifications:**

- **Glovebox**
  - Boxbody
  - Material: 304 stainless steel, thickness 3mm.
  - Innersurface: stainless steel wire drawing treatment.
  - Outersurface: spray paint, white
  - Frontwindow: inclined window, thickness 8mm
  - Glove opening: material is aluminum alloy, O-ring seal
  - Gloves: butyl rubber, thickness 0.4mm, diameter 8", length 32"
  - Filter: size 0.3 micrometer, 1 gas inlet and 1 gas outlet
  - Shelf: stainless steel material, adjustable height
  - Box lighting: LED lights, installed above each glass window
  - Interface: 8 standby interfaces, DN40KF; 1 power interface (220V)

- **LargeTransitionChamber**

- **Transition chamber**

Dimensions: diameter 360mm, length 600mm

Material: 304 stainless steel

Surface: inner surface wire drawing treatment, outer surface spray paint (white)

- **Accessories**

Sliding tray: 304 stainless steel

Bin gate: dual doors, anodized aluminum alloy material, thickness 10mm, vertical operation, with lift structure

Pressure gauge: analog display

- **Control**

Solenoid valve touch screen automatic operation, once finish the operation of the big transition bin, it will vacuumize and refill the gas 3 times immediately (Auto Operation)

- **SmallTransitionChamber**

- **Transition chamber**

Size: 150mm in diameter, 300mm in length, and the length of the part that enters the box is 100mm

Material: 304 stainless steel

Surface: inner surface wire drawing treatment, outer surface spray paint (white)

- **Accessories**

Bin gate: dual doors with movable sliding plate, press-button opening method

Pressure gauge: analog display

- **Control**

Manual valve manual operation

- **Gaspurificationcirculatingsystem**

- **Purification column**

Function: gas seal, water removal, oxygen removal

Container material: 304 stainless steel

Purification material: copper catalyst: 4.8 kg; molecular sieve: 4.8 kg

Purification capacity: oxygen removal: 60L; water removal: 2Kg

Water and oxygen index: less than 1ppm

- **Circulation system**

Working gas: nitrogen, argon, helium

Circulation capacity: integrated fan flow 90m<sup>3</sup>/h, variable frequency, it can adjust the fan flow according to the water and oxygen content.

- **Regeneration**

Operation: PLC automatically controls the regeneration process

Regeneration gas: working gas mixed with hydrogen (hydrogen 5-10%)

- **Valve**

Main valve: DN 40 KF, electropneumatic angle valve

Control valve: solenoid integrated valve, reduce leakage rate

- **Controlsystem:**

- **Function:** including self-diagnosis, power-off and self-starting features, with pressure control and adaptive functions; automatic control, cycle control, password protection, unit control adopts SIEMENS PLC touch screen

- **Pressure control:** The working pressure of the control box and transition bin can be set freely within +/- 15mbar, and the system will automatically protect if it exceeds +/- 16mbar;

- **Foot pedal:** Control the pressure of the box body, convenient to operate the pressure increase and decrease

- **Displaysystem:**

SIEMENS PLC touch screen smart 700 is used to display operating status, box pressure, system records, etc.

- **Controlofvacuumsystem**

UK EDWARDS vacuum pump, type:RV12, which can be started manually or through PLC, with a flow of 12m<sup>3</sup>/h, which can vacuum the transition bin and maintain the pressure balance of the box body. The ultimate vacuum of the vacuum pump is less than or equal to 2x10<sup>-1</sup>pa.

- **OxygenAnalyzer**

Measuring range: 0~1000ppm

The use of ZrO<sub>2</sub> sensor avoids the problem that the fuel cell has a short life and cannot be exposed to the air.

- **MoistureAnalyzer**

Measuring range: 0~500ppm

It has a wide range of applications, especially for users in lithium battery manufacturing and metal-organic fields, it can be restored to the original state through the cleaning and regeneration process, avoiding the problem of scrapping after one pollution

- **Organic solvent absorber**

Dimension: diameter 238 mm, height 407 mm, filled with 7.3 kg absorption material, Placed under the box, connected with the main circulation pipeline, the circulating gas can first flow through the organic solvent adsorber device to absorb the organic solvent in the gas and with internal solvent trap (1.25KG Absorbent Activated carbon).

## **(7) Acceptance criteria:**

Under standard conditions, that is, a constant temperature of 20°C, a standard atmospheric pressure, an inert gas source of 99.999%, and an empty box operation, the water and oxygen index is less than 1 ppm.

## **(8) We Care**

Sophisticated technical team to achieve continuous improvement and improvement of products & Perfect after-sales service system and rich after-sales service experience, setting up service organizations in India, USA, Dubai, G-2 & 3, Rajlaxmi Commercial Complex, Kalher, Bhiwandi Road, Thane, Maharashtra, India - 421302

### **Accessories List**

			
Oxygen analyzer	Dew analyzer	Oil mist filter	Bellows hose
			
Gloves	Edward vacuum pump	Clamps	Glove seal rings

## After-sales Service

### Matlabs "365 days worry-free", value-added warranty service

"365 days worry-free" extended warranty service value, extended warranty service value, all-day, whole process, save more money, more timely, more reassuring and more convenient, controllable maintenance cost, professional maintenance service

★ The whole process: one-stop repair, maintenance and training services, and establish a complete user file.

★ Save more money:

- 1) After purchasing the extended warranty service, you do not need to pay any additional fees for equipment maintenance (except consumables);
- 2) Free value-added services, timely replacement of parts you usually do not pay attention to repair, eliminate hidden dangers, and ensure that the equipment has been in good condition;
- 3) More favorable hardware upgrades to meet your higher demand for equipment;
- 4) Buy consumables more preferentially.

★ More timely:

After you choose extend the warranty service, the company will store commonly used modular accessories for engineers. Engineers can replace faulty modules efficiently and in a timely manner, shorten the maintenance cycle, and make your production work smoother and more efficient, and make high profits for you.

★ More reassuring :

After the free warranty period of 1 year, the device will no longer enjoy the free warranty service. After purchasing the extended warranty service, you can continue to enjoy the free warranty. We will regularly return to the use of the device to provide you with quality and perfect Equipment warranty service, to avoid your worries.

★ More convenient:

You only need to call the customer service number of Matlabs: +91 9248383393. We can meet all your needs immediately.

★ Controllable maintenance costs:

If the extended warranty service is not purchased, the maintenance cost will be charged according to the faulty equipment and the fault situation. The enterprise cannot control the maintenance cost of the equipment; after purchasing the extended warranty service, the maintenance cost can be controlled, and it becomes a budgetary investment, which can greatly reduce equipment maintenance risks caused by increased costs.

★ Professional maintenance services: Let our service team provides you with more professional support and work together to create a better future!

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