

LITHIUM BATTERY GLOVEBOX

Glovebox with oxygen and moisture levels below 1ppm

OVERVIEW

Lithium battery glovebox ASP series possess a high efficiency gas purification system to reduce the moisture and oxygen levels in the chamber down to 1ppm. The glovebox is ideal for lithium ion battery fabrication, as well as other applications where ppm level moisture and oxygen are needed. The closed cycle purification system removes oxygen and moisture, as well as organic vapors (VOCs) and dust particles. All the processes are controlled using a PLC and a dedicated software on a 10 inch HMI display. The system can be monitored and debugged over internet.



FEATURES

- Oxygen and moisture removal to below 1 ppm
- PLC control system and a dedicated software
- Removal of organic vapors (VOC) and dust particles
- Regeneration of moisture and oxygen absorbers
- Applicable for positive and negative pressures

LITHIUM BATTERY GLOVEBOX

SPECIFICATIONS

GLX-600ASP Technical Specifications		
Main Chamber	Glovebox size (l x w x h)	200 cm x 75 cm x 195 cm
	Main chamber size (l x w x h)	110 cm x 70 cm x 80 cm
	Main chamber walls	Stainless steel 304, t = 3 mm
	Glovebox window	Tempered glass, t = 10 mm
	Glove Port	Round Al port, for 8 inch gloves
	Shelves	2 shelves, 60 cm x 20 cm, mounted at different height
	Gas Ports	KF-40 port (4x), 1/4 inch manual on/off valve (2x)
	Gloves	Butyl gloves, l = 32 inch, D = 8 inch, t = 0.4 mm
	Light	Warm white (1x), Cool white (1x)
	Electric ports	4 banana plug connections 2 BNC Connections 1 Power outlet, 220 V, 16 A
Antechambers	Dimension	Large vacuum chamber: a cylinder with a length of 50 cm, diameter: 30 cm Small vacuum chamber: a cylinder with a length of 30 cm, diameter: 13 cm
	Loading chamber doors	Outer and inner door of large vacuum chamber with lifting mechanism Outer and inner door of small vacuum chamber with hinged mechanism
	Control system	The pressure inside each of the large and small vacuum chambers is indicated by a hand gauge and the pressure information is digitally transmitted to the PLC by a pressure transmitter and displayed on the HMI. The process of vacuuming and gassing the vacuum chambers is done automatically and according to the defined scenarios, and the corresponding process is displayed on the HMI. The user is able to view the pressure of the containers online.
Sensors	Temperature sensor	Resolution 0.1 °C
	Differential pressure sensor	0-4000 Pascal, precision: 1 Pascal
	Pressure sensors (2x)	-1000 mbar - +1000 mbar
	Pressure regulator at the inert gas input line	0-18 bar
	VOC sensor	Solid state sensor, Indicator
Analyzers	Oxygen analyzer	Micro-fuel cell sensor
	Humidity analyzer	Capacitive sensor
Display	10 Inch Capacitive Touch Screen HMI Panel	
Software	Adjusting the pressure of main chamber between 10- mbar and 10+ mbar Automatic controlling the vacuum of chambers and adjusting the desired pressure Independent program to enter parts and materials into the main chamber (Sample Load) Independent program to remove parts and materials from inside the main compartment (Sample Unload) Independent program to purge the main chamber (Continuous Purge) Adjusting and changing all parameters of programs and scenarios (Setting) Manual turning off and on all valves and also through touch monitor (Manual Operation) Independent manual and automatic program for the regeneration of absorbents. Turning the vacuum pump on and off intelligently through the software and switchboard Possibility of switch on and off the purifier system and adjust the intensity of purifier system Display of oxygen and humidity in ppm and percentage Ability to issue commands and open and close programs using the pedal Remote controlling and monitoring using LAN cable Ability to define countless user codes, passwords and access levels	

GLX-600ASP Technical Specifications-Continued

Purifier Unit	Particle Filter	HEPA
	VOC absorber	Activated carbon
	O2 absorber	Cu-based
	Humidity absorber	Molecular sieve
	Blower	Variable up to 15 m3/h
	Connections	KF40
	Final O2 concentration	< 1ppm
	Final humidity concentration	< 1ppm
power	Single phase, 220V, 16A	
Weight	410 Kg	