Features and Advantages

Regenerable Organic Solvent Adsorber

Efficiently adsorbs volatile organic solvents (carbonates, ethers, etc.) from the electrolyte to maintain a pure atmosphere inside the glovebox.

Regenerable design: restores adsorption capacity through a simple regeneration process, significantly reducing the frequency of consumable replacement.

Prevents cross-contamination of organic solvents, improving experimental reproducibility.

Extends the service life of the glovebox’s core purification system.

HF (Hydrofluoric Acid) Adsorber

Targeted chemical adsorption for efficient removal of trace hydrofluoric acid gas.

Protects operator safety by reducing exposure to hazardous acid vapors.

Prevents corrosion of lithium battery materials (cathode, electrolyte) by HF, improving battery consistency.

Extends the service life of internal glovebox components and analytical equipment.

Integrated Cooling Unit

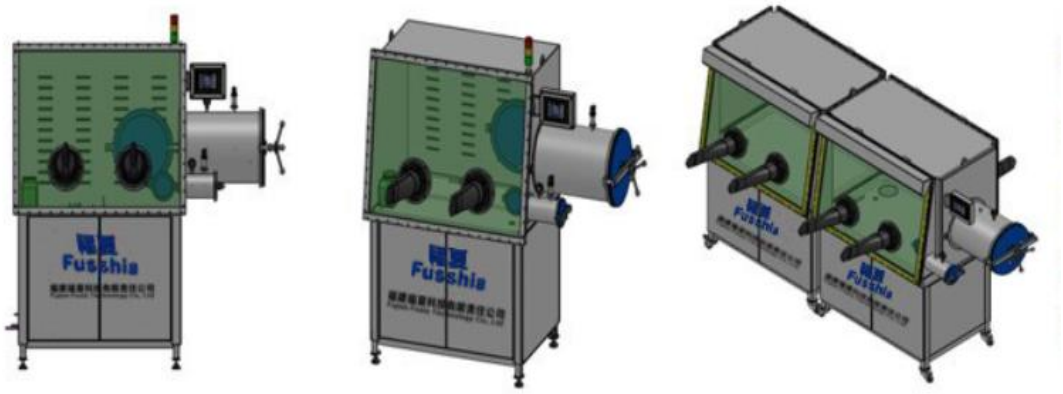
Precision temperature control to support low-temperature synthesis or thermal management experiments for lithium battery materials.

Integrated design: seamlessly interfaced with the glovebox system, saving space.

Provides a stable low-temperature environment to suppress side reactions and improve battery assembly processes.

Supports long-term stable operation of high-nickel / high-voltage systems.

Synergistic Advantages: The three modules comprehensively optimize the lithium battery R&D workflow—from atmosphere purification to temperature management—providing full-chain protection for sensitive materials.



Technical Specifications

Parameter	Description
Equipment Name	Integrated Glovebox for Lithium Battery Experiments
Integrated Module ①	Regenerable Organic Solvent Adsorber (targeting ester/ether organic vapors, regenerable)
Integrated Module ②	HF (Hydrofluoric Acid) Adsorber (dedicated chemisorption medium, efficient HF removal)
Integrated Module ③	Cooling Unit (integrated temperature control device, assists thermal management)
Design Positioning	Specifically designed for cutting-edge experiments such as lithium-ion batteries, solid-state batteries, and lithium metal batteries

Application Areas

Lithium-ion Battery R&D: High-nickel NCM, silicon-carbon anodes, electrolyte optimization, and other systems sensitive to organic solvents and HF.

Solid-state / Lithium Metal Batteries: Strict control of moisture and acidity – the HF adsorber significantly improves interfacial stability, while the cooling unit assists low-temperature assembly.

Failure Analysis & Disassembly Experiments: Disassemble failed batteries inside the glovebox while adsorbing organic volatiles and HF gas, ensuring operator safety.

Electrolyte / Additive Synthesis: Handle fluorine-containing or highly reactive solvents under inert atmosphere, with the cooling unit supporting temperature-controlled reactions.