



The battery high-low temperature explosion-proof test chamber is a specialized device for evaluating battery performance and safety under extreme conditions. It features a reinforced, explosion-proof enclosure with safety elements like an explosion-proof window, automatic pressure relief, and explosion-proof chains, preventing the release of harmful gases or debris in case of battery failure. The chamber can simulate a wide range of temperatures (from -70°C to $+180^{\circ}\text{C}$) and is equipped with advanced controls for precise temperature and humidity regulation. By identifying potential risks during testing, it helps manufacturers refine designs and enhance battery safety before products reach consumers. This ensures higher reliability and reduces the risk of accidents in real-world applications.

FEATURES

- ❖ Wide temperature range (-70°C to $+180^{\circ}\text{C}$).
- ❖ Robust explosion-proof construction with stainless steel.
- ❖ Multiple safety features (pressure relief, explosion chains).
- ❖ Smart monitoring system with smoke detection.
- ❖ Independent double-layer structure.



Explosion-proof pressure relief

The chamber has 2 mechanical relief ports that open automatically under high pressure to prevent deformation. An explosion-proof chain limits the opening angle to $80-90^{\circ}$ and the ports self-reset by gravity, requiring no manual operation.

Energy-efficient design

VRF technology, based on PID+PWM, uses cold control PID for low - temp energy - saving. During cooling and low - temp constant - temp, it adjusts refrigeration for "cold balance" (no cooling while heating and vice versa). This design saves over 30% energy vs traditional mode.



SPECIFICATIONS

Model		DR-D202-150	DR-D202-225	DR-D202-408	DR-D202-3000
Internal Dimension (W*H*D)mm		500*600*500	600*750*500	600*850*800	1500*1000*2000
External Dimension (W*H*D)mm		750*1636*1410	850*1786*1410	850*1896*1710	1800*1650*3400
Voltage（v）		Three Phase 380			
Performance	Temp.& Humi. Adjust Way	Taiwan Weinview Technology's 7-inch high-precision resistive touch screen + PLC			
	Temperature range	-70℃~+180℃（Other temperature ranges can be customized）			
	Temperature resolution	0.01℃			
	Temp. Fluctuation Degree	≤±0.5℃			
	Temperature uniformity	≤2℃（without loading）			
	Temperature deviation	≤2℃（without loading）			
	Heating rate	-70℃~+180℃≥3℃/min,with average non-linearity throughout the whole process.			
	Cooling rate	+180℃~-70℃≥3℃/min,with average non-linearity throughout the whole process.			
	Observation Window	Explosion-proof glass with explosion-proof membrane			
	Internal Chamber Material	Stainless Steel 304			
	External Chamber Material	Stainless Steel steel of paint spray			
Regulator	Cooling Method	Single stage compression, two stage compression			
	Refrigerator	Hermetically Sealed France Tecumseh Compressor or Semi-hermetic BOCK Compressor			
	Cooling Method	Air-cooled/Water-cooled			
Controller	Operation Panel	Programmable LCD Touch Screen			
	Running Mode	Fix Running, Pattern Running			
	Program Memory Capacity	120 Group Programmable, Max 100 Section Each			
	Output	Rs-232 (USB,Optional)			
Structure	Explosion-proof measures	1. A smoke alarm on the chamber top detects smoke from the tested product's combustion and alarms automatically. 2. Inner and outer cases are grounded to prevent static buildup. 3. Aluminum impeller avoids frictional sparks. 4. Stainless steel explosion-proof net protects the observation window. 5. The chamber is designed with two sets of mechanical explosion-proof pressure relief ports.			
Use	Ambient temperature 5℃ ~35℃； Relative humidity ≤85%； Atmospheric pressure 80 KPa ~ 106 KPa； No strong vibration and flammable and explosive atmosphere around.				

For more requirements regarding product dimensions and parameters, customization can be made according to specific requests.