

DR-H203L2 Two Chamber Thermal Shock Test Chamber



The two-chamber thermal shock test chamber is an advanced device. It quickly moves samples between a high-temperature chamber (up to 200°C) and a low - temperature one (down to -80°C), mimicking harsh conditions. This tests the adaptability and reliability of products, components, or materials.

In the electronics industry, it checks circuit boards' resilience to temperature changes, preventing solder joint cracks and component malfunctions. In aerospace, it ensures aircraft parts can endure extreme temperature shifts in the atmosphere. The automotive sector uses it to test vehicle components like batteries, guaranteeing long - term performance. This chamber plays a key role in ensuring product quality across these industries, reducing real - world failure risks.

FEATURES

- Rapid temperature transitions for extreme reliability testing.
- \bullet Transfer time ≤ 10 s, meets int'l test stds.
- Uniform airflow boosts temp uniformity, slashes variances.
- Right side cable port eases specimen wiring.
- * Test data stored, exported via USB.



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.



Intuitive Curve Visualization

The thermal shock test chamber's control screen has an intuitive curve display. It shows real - time temperature change curves clearly, helping operators quickly see temperature trends and spot anomalies. This ensures test reliability and is a user - friendly feature.





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SPECIFICATIONS

Model	DR-H203L2-16	DR-H203L2-49	DR-H203L2-80	DR-H203L2-150
Internal Dimension (W*H*D)mm	250*260*250	400*350*350	400*500*400	500*500*600
External Dimension (W*H*D)mm	750*1575*1450	1335*1545*1699	1385*1849*1845	1430*2149*1960
Preheat temperature range	+80°C~+200°C			
Precool temperature range	-10°C~-40°C; -10°C~-60°C; -10°C~-80°C			
Test temperature range	+60°C~+180°C; -10°C~-40°C; -10°C~-55°C; -10°C~-65°C			
Temp.& Humi. Adjust Way	Balanced temperature and humidity control (BTHC) PID intelligent adjustment			
High temperature impact range	+60°C~180°C			
Low temperature impact range	-10°C~-55°C			
Temperature Deviations	±0.3℃			
Temperature Average	±2°C			
Heating rate	3°C / min			
Cooling rate	0.5~1.2°C / min			
Cold storage time	$RT \rightarrow -80^{\circ}C \leq 65 min$			
Heat storage time	$RT \rightarrow 180^{\circ}C \leq 35min$			
Cooling system	Imported compressor, Tecumseh compressor (or Bizer Compressor), finned typeevaporator.air (Water)-cooling condenser			
Cooling-down method	Air-cooled cooling / Water-cooled cooling			
Condenser	Finned Condenser			
Heater / Evaporimeter	Nichrome Heater / Finned Evaporator			
Refrigerant	R404A, R23 environmentally friendly refrigerant			
Operation Panel	High-precision touch screen for instrumentation and control + PLC			
Running Mode	Fixed value operation (manual mode)&program operation (automatic mode)			
Program Memory Capacity	120 Group Programmable, Max 100 Section Each			
Output	PID+SSR/SCR automatic bidirectional synchronous output			
Internal Material	1.0mm thick SUS#304 high &low temperature resistance stainless steel.			
External Material	Adopt flame retardant high strength PU Polyurethane foam insulation material.			
Power Supply	Three Phase 380			
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Ambient temperature 5° C $\sim 35^{\circ}$ C; Relative humidity $\leq 85\%$; Atmospheric pressure $80 \text{ KPa} \sim 106 \text{ KPa}$; No strong vibration and flammable and explosive atmosphere around.