德瑞检测
DERUI TESTING

DR-H301
Xenon Lamp Aging Test Chamber

The xenon lamp aging test chamber is a crucial device for simulating the aging impact of sunlight and environmental conditions on materials. It utilizes a high-intensity xenon lamp to emit light that closely resembles sunlight, and a sophisticated filtering system fine-tunes the spectrum. With its integrated temperature, humidity control, and a built-in spraying system, it can replicate diverse environmental scenarios, from tropical heat with heavy rains to arid conditions followed by sudden showers. Widely adopted in automotive, electronics, coatings, and plastics industries, it assesses material durability and color fastness under light and wet conditions. By providing critical data, it helps manufacturers optimize designs and enhance product performance.

FEATURES

- Xenon lamp accurately simulates natural sunlight.
- Chamber temp & humidity control for realistic tests.
- Water spray function to mimic rain and dew effects.
- Black panel temp sensor for precise surface monitoring.
- Long - life xenon lamp with stable light output.

International Standard Adherence

The xenon lamp aging test chamber strictly adheres to international standards such as ASTM G155, ISO 105 - B02, and SAE J2527. It guarantees accurate, reliable test results, positioning itself as the go - to option for industries requiring compliant, high - quality material aging evaluations.

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.

https://www.deruitest.top/ shirley@deruitest.com Phone：+8615580327593

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SPECIFICATIONS

Model		DR-H301-150	DR-H301-225	DR-H301-270	DR-H301-1000
Internal Dimension (W*H*D)mm		500*600*500	750*500*600	750*600*600	1000*1000*1000
External Dimension (W*H*D)mm		1050*960*1760	1250*1750*1100	1360*1260*1850	1600*1510*2200
Voltage（v）		Three Phase 380			
Performance	Xenon lamp radiation intensity (Optional based on customer requirements)	0.25～0.58W/m2@340nm 0.45～1.50W/m2@420nm 0.25～80W/m2@300～400nm 450～1120W/m2@280nm～800nm			
	Effective exposure area	Approximately 2200cm2			
	Number of Lamps	3 lamps, 1.8KW each			
	Total Lamp Power	5.4KW			
	Lamp Life	Approximately 1200 hours			
	Temperature Range	RT + 10℃ ~ 70℃			
	Black Panel Temp Range	40℃ ~ 100℃ (lighting cycle); 25℃ ~ 85℃ (dark cycle)			
	Temperature Sensor	Black Panel Thermometer (BPT)			
	Irradiance Meter	Intelligent automatic irradiance compensation			
	Temperature Accuracy	±0.1℃			
	Temperature Fluctuation	±0.5℃			
	Temperature Deviation	±3℃			
	Humidity Range	30%～98% RH (dark cycle); 20%～60% RH (light cycle)			
	Humidity Accuracy	±1% RH			
	Humidity Fluctuation	±3% RH			
	Humidity Deviation	≤±5% RH			
	Lighting Cycle Time	1S～999H59M59S continuously adjustable			
	Rain Cycle	1～240min interval (off) for adjustable rainfall			
	Spraying Cycle	18min/102min or 12min/48min (spraying time/no-spraying time)			
	Water Spray Pressure	0.12～0.15Mpa			
Regulator	Cooling Method	Single stage compression, two stage compression			
	Refrigerator	Hermetic Tecumseh or Semi-hermetic Bock Compressor			
	Cooling Method	Air-cooled/Water-cooled			
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.					