



Sweating Guarded Hotplate Model: ADL-SGH01

Product Description

ADL-SGH01 is the most professional, most advanced Thermal and Evaporative Resistance test instrument, simulate the human skin test plate, Automatic water supply system, Wind speed stabilization system, test unit and Climate Chamber completely separated design, Aluminum alloy shell to ensure that won't rust.

Technical Specifications

(RCT)Thermal resistance range : 0.002-2 .0 m²K / W

Repeatability: ≤ ± 2%

Resolution: 0.001m²K / W

(Ret)evaporative Resistance range : 0-1000m²Pa / W

Repeatability: ≤ ± 2%

Resolution: 1m²· Pa / W

Test plate temperature range: 20 °C ~ 50 °C adjustable

Temperature control accuracy: ± 0.03 °C

Temperature measurement: ± 0.01 °C

Air velocity: 0 ~ 1.5 m / s continuously adjustable

Air velocity accuracy: ± 1%

The sample platform lift range :0~50mm automatic lift

Sample thickness : 0~50mm

Test plate area: 254mm × 254mm

Guard ring size: 512mm × 512mm

Guard ring width: 127mm

Sample size:500mm*500mm

Dimensions: 73 × 61 × 350cm (L x W x H) (not including Climate Chamber)

Weight: 45Kg (not including Climate Chamber)

Host power: AC220V ± 10%, 100W or AC110V ± 10%, 100W

Warranty: 24 Months



Professional Technology

1. The world's first independent design concept, integrated design of control systems and automatic water supply system, users can choose the standard Climate Chamber.
2. Automatic water supply, Automatic drain system, Strong feed water system (In the Evaporative Resistance, water uniformly wets test plate faster)
3. High-precision automatic platform mobile systems, enter the thickness of the test the test platform to move to the corresponding position.
4. According to the thickness of the sample, the machine automatically adjust the PID control parameters, test conditions can quickly reach.
5. The patented Air velocity parallel stabilization system, let the Air velocity homogeneous and stable, so that the test results are more stable.
6. Air velocity continuously adjustable from 0 ~ 1.5m / s to meet any Thermal and Evaporative resistance testing standards.
7. Guard ring width 127mm, to ensure that heat is passed from the test sample.
8. Wifi communication to PC, to make the connection more convenient.

Testing Standards

GB / T 11048, ISO 11092, ASTM F 1868-09, ASTM D 1518-85, JIS L1096-2010, ASTM F 1868-02, BS8510-2009

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Test Principle

Clothing is often made of materials that impede the flow of heat and moisture from the skin to the environment. Consequently, people may suffer from heat stress or cold stress when wearing clothing in different environmental conditions. Therefore, it is important to quantify the thermal resistance and evaporative resistance of clothing materials and to consider these properties when selecting materials for different clothing applications.

Application

Measurement of the thermal resistance and the evaporative resistance, under steady-state conditions, of fabrics, films, coatings, foams, and the quilt, including multi-layer assemblies, for use in Clothing production.

Configuration

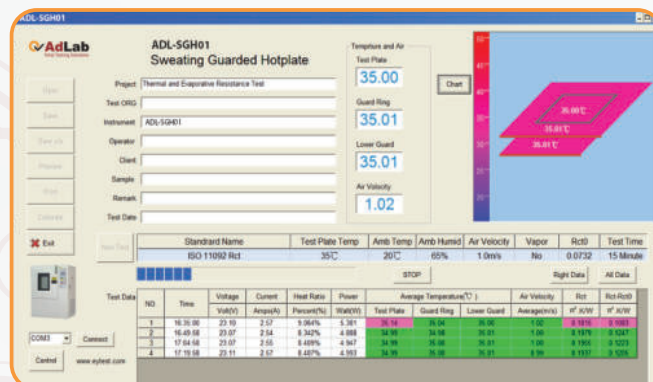
Standard configuration: host test unit, a power line, LABTest analysis PC software
Optional accessories: Climate Chamber.

Optional Accessories (Climate Chamber) Specifications

- Resolution degree: 0.1 ° C, 1%, P.I.D Control
- Temperature range: 0 °C ~ 100 °C
- Humidity range: 20 ~ 98% R.H.
- Temperature accuracy: ± 0.5 °C
- Humidity accuracy: ± 2.5% R.H.
- Warming Time: 0 °C ~ 100 °C approximately 35 minutes
- Cooling Time: 40 °C ~ 20 °C about 40 minutes
- Inside t box size: 90x70x80cm
- Carton size: 170 × 125 × 189cm
- Within the box material: SUS # 304 stainless steel mirror
- Carton Material: SUS # 304 stainless steel surface the matte lines hairline treatment
- Insulation material: rigid foam
- Refrigeration systems: single-stage air-cooled Europe and the United States imported Hermetic compressor, environmentally friendly refrigerants
- Protection device: compressor overload protection switch, refrigerant pressure protection switch, ceramic fuse the water dish water protection switch, electromagnetic switch and air burning protection switch, sirens
- Weight: about 195kg
- Power supply: 3 φ , AC380V ± 10% 50/60Hz

Main Screen

The Main is what the user sees when in during the test, a simple graphical temperature indication window, connection status indication, test results observation window is very convenient.

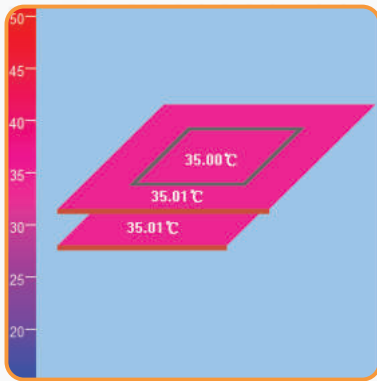
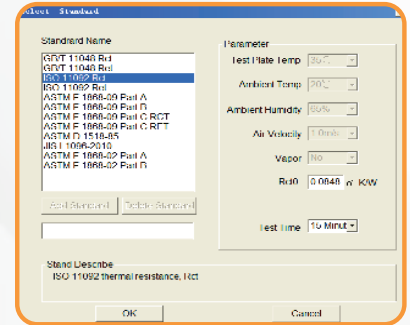




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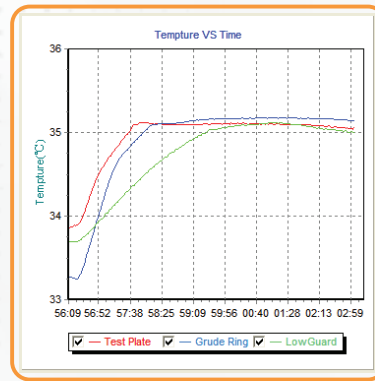
Test Standards Screen

The Test Standard Screen includes all the thermal Thermal and Evaporative Resistance resistance testing standards, users only need to select the test standard, the software in the background to complete the complex calculations and operations.



Indication

The indicating that windows, the window may specific temperature, change is with Chart window the process of time.



Temperature Screen

temperature there are two graphical indicate the location of the the color associated temperature. indicates that temperature vs

Test Report

The test results can be saved as Excel format, concise and practical, to make the perfect test report.

Standard Name		Test Plate Temp	Amb Temp	Amb Humidity	Air Velocity	Vapor	Rct0			
GB/T 11048 Rct		35°C	20°C	65%	1.0m/s	No	0			
NO	Time	Voltage	Current	Heat Ratio	Power	Average Temperature(°C)			Air Velocity	Rct
		Volt(V)	Amps(A)	Percent(%)	Watt(W)	Test Plate	Guard Ring	Lower Guard	Average(m/s)	(m².K/W)
1	16:12:33	23.02	2.40	15.72%	8.683	35.00	35.00	35.00	0.99	0.1115
2	16:17:33	23.01	2.40	15.72%	8.681	34.99	35.00	35.00	1.00	0.1114
3	16:22:33	23.01	2.40	15.83%	8.744	34.98	35.00	35.00	1.01	0.1105

**Technical Data Subject to change without notice.*

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Our Skill

At AdLab, we combine expertise in precision engineering with advanced laboratory technology to create innovative and reliable testing instruments. Our team of skilled professionals continuously works on improving product designs, integrating the latest advancements in technology, and ensuring compliance with international quality standards. With a strong focus on research and development, we provide customized solutions that cater to the unique needs of our customers worldwide.

Our Products

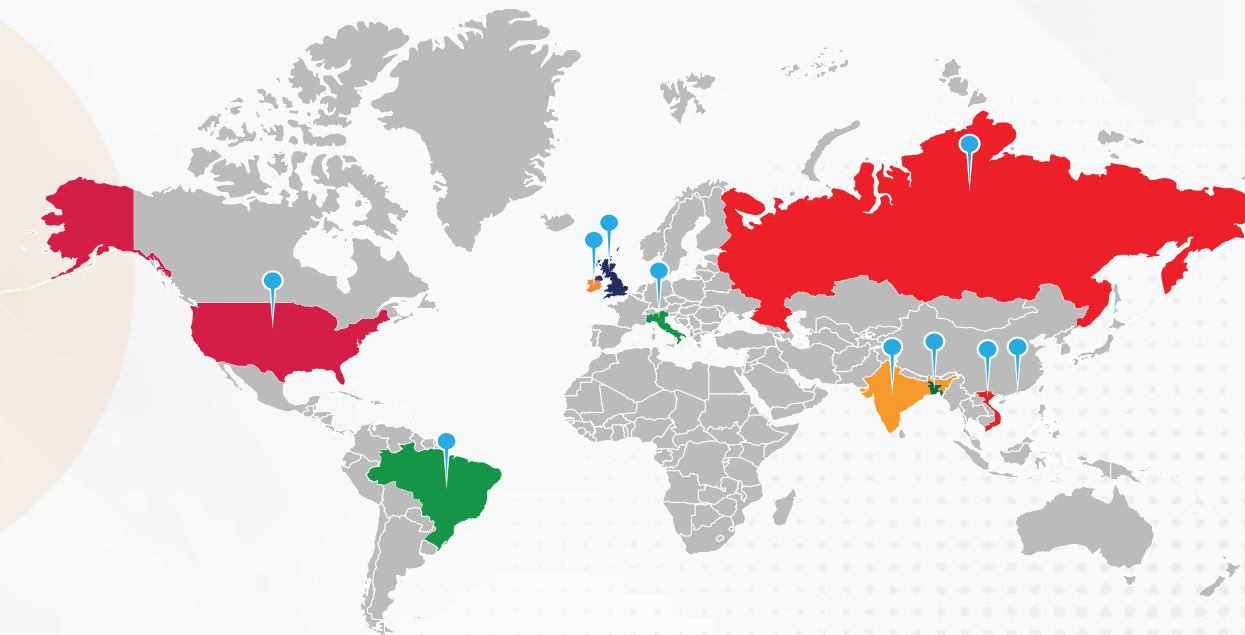
AdLab offers a wide range of high-quality laboratory and textile testing instruments, including Yarn & Fiber Testing Instruments, Laboratory Fume Hood Chambers, Ovens & Incubators, Water Baths, Textile Testing Instruments, Dyeing & Finishing Machines, Ceramic Testing, Tensile Testing, Washers & Dryers, Needle Detectors, and In-House Testing Equipment. Designed for precision and efficiency, our products ensure accurate testing and reliable performance across various industries.

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- ✓ Calibration & Maintenance – Regular calibration and maintenance services ensure that your laboratory instruments remain accurate and in optimal working condition.
- ✓ Customized Solutions – We provide tailored solutions to meet specific industry requirements, helping our clients achieve maximum efficiency in their operations.

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