TQD-G1A Air Permeability Tester

TQD-G1A Air Permeability Tester is applicable to the test of air permeability and air resistance of automotive interior decoration materials, such as polyurethane foam, PVC, leather, textiles, nonwovens etc. In addition, it can also be used to test the permeability of separation membrane, sponge, carpet, non-woven fabric, paper and leather. Through measurement, the performance control of materials is realized to meet the needs of practical application of products.

Product Features

- Two measurement methods of constant pressure difference and constant flow can be freely selected.
- High precision electronic air flow and air pressure sensors ensure the accuracy of test data.
- Built-in imported maintenance-free vacuum pump system for better airflow stability.
- Professional sample fixture for safer operation.
- Pneumatic clamping of the sample saves time and labor, and the clamping force is consistent.
- 7" color industrial touch screen & desktop operating system are for simple and convenient operations.
- The system has built-in calendar, multi-language switching & multi-level authority management, etc.
- Needle micro printer is connectable for the output of test results, and the results can be stored for a long time (optional).
- Standard RS232 interface facilitates the connection between the system and computer and data transmission (optional)

Test Principle

Method A: the air flow is stabilized vertically through the sample at a constant flow. Then, the pressure difference formed on both sides of the sample is measured under this condition, and air flow resistance and other parameters are calculated.

Method B: through adjustment, a constant pressure difference is formed on both sides of the sample, the air flow passing vertically through the given area of the sample in a certain time is measured, and the air permeability and other parameters are calculated.

Test Standards

ISO 9237, ISO 4638, ISO 5636, GB/T 10655, GB/T 5453, GB/T 4689.22, GB/T 13764, ASTM D737, TAPPI T460, JIS P8117

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Test Applications Note 1

Basic Applications	Auto Interior Materials	It is suitable for testing the air permeability and air resistance of automotive interior materials, such as polyurethane, PVC, leather, textiles, non-woven and so on.
	Polymer Porous Elastic Materials	It is applicable to the air permeability test of high polymer porous elastic materials, such as sponge, etc.
	Textile	It is applicable to the permeability test of textile materials, such as cloth, non-woven fabric, etc.
	Leatherwear	It is suitable for air permeability test of leather materials.
Extended Applications	Paper	It is applicable to the air permeability test of paper materials, such as tissue and toilet paper, etc.
	Masks	It is applicable to the test of ventilation resistance and pressure difference of various masks.

Technical Specifications

Table 1: Test Parameters Note 2

Parameters\Model		**TQD-G1A**
Differential Pressure Test Range	**Pa**	0～1000
Differential Pressure Resolution	**Pa**	0.1
Differential Pressure Accuracy	**Pa**	0.25%
Flow Measurement Range	**L/min**	0～30
Flow Resolution	**L/min**	0.1
Flow Accuracy	**L/min**	2%

Table 2: Technical Specifications

No. of Test Cell	1 Set
Sample Size	2” x 2” (5cm×5cm)
Sample Thickness	≤40 Mil (1mm)
Test Area	20cm^2 (other sizes can be customized)

Gas Specification	Clean Compressed Air (the air source is provided by the user)
Air Source Pressure	72.5 PSI / 500kPa
Interface Size	Φ8 mm Polyurethane Pipe
Dimensions	12” H x 18” W x 20” D (30cm× 46cm× 52cm)
Power Supply	120VAC±10% 60Hz / 220VAC±10% 50Hz (one from the two)
Net Weight	55Lbs (25kg)

Table 3: Product Configuration

Standard Configuration	Mainframe, one set of fixtures and Φ8mm polyurethane pipe
Options	Computer software, air compressor
Notes	The compressed air inlet of this tester isΦ8mm polyurethane pipe (pressure≥79.7 PSI / 550 kPa, outlet flow > 120L/min); Air source is to be provided by the user.

Note 1: the reference standards, test applications and product features mentioned are subject to the parameters in the "Technical Parameters".

Note 2: the parameters in the table are measured by professional operators in Labthink laboratory according to the requirements and conditions of relevant laboratory environmental standards.

Please Note: Labthink is always dedicated to the innovation and improvement of product performance and function. Therefore, technical specifications are subject to change without further notice. Please visit our website at www.labthink.com for the latest updates. Labthink reserves the rights of final interpretation and revision.