

## EQUIPMENT DETAILS OF AIR PERMEABILITY TESTER



Test Head / Area

20 cm<sup>2</sup>

### GENERAL SPECIFICATIONS

Packaging Dimensions: (W x D x H) 1170\*780\*1,230mm

Power supply source: single-phase, 220V±10%, 50/60Hz

Gross Weight: 120kg

**TEST STANDARD:**

ASTM D737 Standard Test Method for Air Permeability of Textile Fabrics

ISO 9237 Textiles - Determination of the Permeability of Fabrics to Air

BS 5636, DIN 53887, AFNOR G07-111, EDANA 140.1, ISO 7231, ISO 9073-15, JIS L1096-A

TAPPI T251, WSP 070.1.R3, EDANA 140.2-99

**STANDARD FEATURES**

Measuring range	0.1-12,000 mm/s at 20 cm <sup>2</sup> test area.
Units of measure	mm/s, ft <sup>3</sup> /ft <sup>2</sup> /min, cm <sup>3</sup> /cm <sup>2</sup> /s, l/m <sup>2</sup> /s, l/dm <sup>2</sup> /min, m <sup>3</sup> /m <sup>2</sup> /min, m <sup>3</sup> /m <sup>2</sup> /h, dm <sup>3</sup> /s Pa (pressure drop)
Measuring accuracy	better than ± 2 % of the displayed value.
Test pressure	1-4,000 Pa
Test areas	5, 20, 25, 38.5 and 100 cm <sup>2</sup>
Sample thickness	0 ... 12mm
Dimensions	1070 x 670 x 1080 mm
Power supply	220V, 50Hz or 110V, 60Hz
Weight	75kg

**APPLICATION**

[Air permeability](#) is an important factor in the performance of such textile materials as gas filters, fabrics for air bags, clothing, mosquito netting, parachutes, sails, tentage, and vacuum cleaners. In filtration, for example, efficiency is directly related to air permeability. Air permeability also can be used to provide an indication of the breathability of weather-resistant and rainproof fabrics, or of coated fabrics in general, and to detect changes during the manufacturing process. In specialty, industrial and military applications, it can play a vital role in protection. In every market, satisfying the demands of consumers and producers requires ways to accurately and repeatably test material air flow.

**USAGE**

To determine the resistance of fabrics (woven, knitted and nonwoven textile materials) to the passage of air (air flow) under constant pre-set air pressure while firmly clamped in the test rig of selected test head/area.



## TEST PROCEDURE

1. Test the conditioned specimens in the standard atmosphere for testing textiles, which is  $21 \pm 1^\circ\text{C}$  ( $70 \pm 2^\circ\text{F}$ ) and  $65 \pm 2\%$  relative humidity, unless otherwise specified in a material specification or contract order.
2. Handle the test specimens carefully to avoid altering the natural state of the material.
3. Place each test specimen onto the test head of the test instrument, and perform the test as specified in the manufacturer's operating instructions.
4. Place coated test specimens with the coated side down (towards low pressure side) to minimize edge leakage.
5. Make tests at the water pressure differential specified in a material specification or contract order. In the absence of a material specification or contract order, use a water pressure differential of 125 Pa (12.7 mm or 0.5 in. of water).
6. Read and record the individual test results in SI units as  $\text{cm}^3/\text{s}/\text{cm}^2$  and in inch-pound units as  $\text{ft}^3/\text{min}/\text{ft}^2$  rounded to three significant digits.

## SALIENT FEATURES

1. Wide measuring range of 0.1-12,000  $\text{l}/\text{m}^2/\text{s}$  at 20  $\text{cm}^2$  test area.
2. Wide test pressure range of 1-4,000 Pa.
3. For filter media: Determination of the pressure drop at a given air velocity.
4. Automatic control of the test pressure.
5. Fast and simple sample clamping (Pneumatic Clamping Assembly).
6. Touch control panel for digital display of the test result.
7. Quiet and mobile instrument, perfectly suitable for use in the laboratory and in the production area.
8. Data ports: RS 232. Ethernet for direct network access.
9. Integrated software for evaluation and storage of the test results in office format.
10. Can be connected to a PC with the Evaluation Program SBT461 Air Permeability Tester lab-cloud.
11. Works in accordance with all major test standards.

## ACCESSORIES SUPPLIED WITH THE INSTRUMENT

1. Main Unit: 01 No.
2. Test Heads: 02 Nos.  
**20 cm<sup>2</sup> for DIN 53887, EN ISO 9237, WSP 70.1**  
**38.5 cm<sup>2</sup> for ASTM D 737, JIS L 1096-A, TAPPI T 251, WSP 70.1**
3. SBT461 Air Permeability Tester lab-cloud: 01 No.
4. Calibration Check Plate: 02 Nos. ( $\Phi\text{O}=7.8$  and  $\Phi\text{O}=21.6$ )
5. O-Ring for Air Seal: 01 No. (pack of 5)



6. Nozzle: 11 Nos.

**Nozzles**

No.	0	1	2	3	4	5	6	7	8	9	10
ΦO(mm)	0.8	1.2	2	3	4	6	8	10	12	16	20

7. Power Cord: 01 No.

8. This User's Manual:01 No.

9. Inspection & Conformance Certificate: 01 No.

**TOUCH CONTROL PANEL**

