

BURST TESTER

13-60, 13-61



FEATURES

- The clamping pressure is measured with a pressure transducer and displayed in bar/PSI
- Software to transfer data to Excel: Testlink3
- Pneumatic sample clamping
- Date of last calibration stored in memory (clamp pressure, bursting pressure, and height gauge)
- Menus allow programming to meet pre-defined test methods and international standards
- Number of test performed with diaphragm stored in memory

BURST TESTING

Burst Testers are used as a multi-directional tensile test to identify failure in the direction of least resistance for evaluating physical strength and fiber bond. Models are available to test a variety of materials. These models can also be fitted with a device to measure the deflection of the sample prior to burst.

The Burst tester is designed to meet international standards for tests on paper, foils, paper boards, corrugated board, textiles etc.

OPERATION

The Burst Tester is designed for measuring the bursting strength of fabric materials subjected to an increasing hydrostatic pressure. This pressure is applied to a circular region of the specimen via an elastic diaphragm. The specimen is firmly held round the edge of this circular region by a pneumatic clamping device. When the pressure is applied, the specimen deforms together with the diaphragm. The bursting strength

corresponds to the maximum pressure supported by the specimen before failure. Identical, in the principle to the multi-directional tensile test, Ball Burst Method for Fabrics, this measurement is independent from the cutting direction of the sample (machine or cross) since the failure naturally occurs in the least resistance direction.

The rubber diaphragms with specific thickness and shore hardness must have a bulge versus pressure pattern within the tolerance of the standards related to the type of material tested.

APPLICATIONS

- Textiles, Fibers, Non-woven's, Polyester, Fabrics and Felts etc.
- Strength, stiffness, dye ability, resilience, fatigue elasticity, orientation and crystallinity.

MEETS STANDARDS

- ISO 2758, ISO 2759, , ISO 1328-2:1999, ISO 2960, ASTM D 3786 , ASTM D-774, BS 4768,

Pressure system:

The hydrostatic pressure is transmitted to the diaphragm by a hydraulic jack associated with a frictionless ball-screw driven by a precision DC motor. The rotational speed and the position of the motor are servo-controlled by means of an optical encoder ensuring a perfect control of the fluid flow rate together with the determination of the displaced volume of fluid.

Note: This measurement may be used to determine the profile of the resistance pressure of the rubber diaphragm itself versus the displaced volume of fluid. The corresponding values may then be subtracted from the values actually measured during a test in order to take into account the sample resistance only. (Applications to textiles for instance).

Sample tightening system:

- A large pneumatic jack enables an accurate and reproducible tightening.
- The tightening surfaces have an adequate profile to minimize the slippage even for difficult materials like textiles for high volume bags.
- The tightening pressure is measured with a precision manometer and may be displayed in metric or imperial units.
- The gripping strength is recalculated according to the geometry of the tightening surfaces, and displayed in newtons.

Bursting pressure measurement:

- The pressure is measured by a metallic gages pressure transducer (0 to 100 bars)
- Accuracy: +/-1% of read value +/-1 digit between 5% and 100% of the FSD.
- Resolution: 2 mbars (50,000 points)

Specifications

Model	13-60-00 EC35	13-61-00 EC36	13-62 EC37
	Paper and Foils	Paper boards and Corrugated Board	Textiles
Measuring Range	40 - 2000 kPa	0 - 725 psig (0-5000 kPa)	0 - 1015 psig
Dimensions W x D x H	517 mm x 565 mm x 495 mm (20.35 in x 22.25 in x 19.5 in)		
Weight	65 kg (143.3 lbs)		
Electrical	110V/60Hz or 220V/50Hz		
Air	Instrument Quality 600 kPa (6 Bars)		
Safety	One start button when safety hood covers the test area and two start buttons, which has to be pushed simultaneously when cover is up to have a better view on the test area.		
Option	Height gauge to measure the height of the Burst		
Option	Printer, small sized and handy roll printer delivers 40 column tickets. Exits with a serial port for direct connection to the burst tester or with a centronics port for PC operations.		

Standards

ISO 2758	Paper. Determination of bursting strength
ISO 2759	Board. Determination of bursting strength
ASTM D 3786	Standard Test Method for Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method
ISO 1328-2:1999	Bursting properties of Fabrics
ISO 2960	Test method for Bursting Strength
BS 4768	Determination of Bursting Strength and Bursting Distension

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