FOR IMMEDIATE RELEASE

Testing Machines Group

New Burst Tester from Büchel B.V.

(Netherlands) February 2007 – Büchel B.V. is releasing its "New Burst Tester", 13-60 series. The latest in burst testing from the top rated company in testing machines, the burst tester is used as a multi-directional tensile test to identify failure in the direction of least resistance for evaluating the materials physical strength and fiber bond.

The instrument is designed for measuring the bursting strength of sheet 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 a multi-directional tensile test, 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.

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 measure 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)

The three burst testers 13-60, 13-61 and 13-62 are designed to meet international standards for tests on papers, flat and corrugated cardboard and textiles. In textiles, the burst tester measures the fabrics strength, the results of wear, age and environment along with immediate or eventual effects of dyes, chemicals and processes.

Some important features of this tester include:

- The tightness pressure is measured with a pressure transducer and displayed in bar/PSI
- Large graphic LCD
- Software to transfer data to Excel: TestLinkR3
- 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
- **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.
- **Option**: Height gauge to measure the height of the Burst.

Ideal for the assessment of mechanical resistance to aggressions (shocks, penetration,) the bursting test also called “Mullen test” is widely used in sheet material testing laboratories. This includes applications in aluminum foils, plastic film, papers, paper board, corrugated boards and textiles. Meets ISO/CD 2758, ISO/CD 2759, ISO 2960, ASTM D774 and NF.G 07112.

About TMI

Testing Machines Inc. (TMI) manufactures and markets physical property testing instruments for the paper, pulp, film, foil, ink, coatings, nonwoven, textile and corrugated industries. TMI has a network of sales offices and agents throughout the US and in over 50 countries.

The TMI Group of Companies consists of Testing Machines Inc., New York, Lawson-Hemphill, Swansea, Ma., Messmer Instruments Ltd., UK, Büchel BV, Netherlands, Adamel Lhomargy, France and TMI Canada.

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