TXL-KMS-048 / 28 October 2026 · One-year manufacturer warranty

Hydraulic Bursting Strength Tester (K012H)

Measures the bursting strength of knitted, woven, nonwoven and laminated fabrics using hydraulic pressure. Maximum 7000 kPa, standard 50 cm² test head and USB connection.



Model technical data

1	Fabric bursting strength measurement using hydraulic pressure.
2	Maximum test pressure: 7000 kPa.
3	Standard test head area: 50 cm².
4	Optional test head areas: 7.1, 7.3, 7.55, 10 and 100 cm².
5	USB communication port supplied as standard.
6	Computer, printer and application software are optional.

Physical specifications and utilities

Electrical supply	Approx. 220–240 V AC, 50/60 Hz, single phase; build-dependent.
Power / connected load	Approx. 250–600 W connected load for preliminary planning.
Overall instrument dimensions	Approx. 650 × 600 × 650 mm (W × D × H).
Instrument weight	Approx. 45–80 kg net.
Gross / shipping weight	Approx. 74.5–125 kg gross; estimated packing allowance.
Interfaces	USB communication port supplied as standard.
Lab requirements	Level, stable working surface; specimen conditioning follows the selected method.

Dimension order and approximate values are stated in each row. Packaging data are separate from instrument dimensions and net mass. Approx. rows are preliminary engineering estimates based on comparable equipment and function/capacity; they are not verified manufacturing measurements or standard requirements. Installation and shipment are finalised against the approved drawing and nameplate. Estimate scope: base product / one unit; external computer, bench and auxiliary plant excluded.

Specifications, dimensions, and power requirements are approximate and subject to change without prior notice for continuous design improvements.

Product technical specifications and images may vary according to manufacturing conditions and applicable standards.

Test and configuration

Measured output / function	Bursting pressure by hydraulic diaphragm (kPa)
Parameters selected for the method	Test area, pressure rise and diaphragm correction
Verification points	Pressure, area, diaphragm and distension measurement

Control and recording specification

Method-specific software and recording requirements follow. Delivered software modules are defined by the order scope.

• Method code and edition, specimen ID, operator and selected test parameters are linked to the record.

• Burst pressure, diaphragm correction and available bursting distension are stored separately.

• Raw measurements, units, valid/invalid test flags and the reported result remain traceable.

• Calculations are checked against known inputs and an independent calculation; sensor channels are checked against calibration values.

• For the BS 3137 paper recipe, retain selected gauge range/full scale, pumping rate, clamp load, diaphragm check and calibration record. Keep textile, paper and board methods separate; track recalibration after gauge over-range.

Related test methods

ISO 13938-1 · ASTM D3786 · BS 3137 · BS 4768 · DIN 53861

Listed methods are application references. Suitability is established by assessing hardware, method edition and calibration together.

Historical method references: BS 4768, DIN 53861

Test parameters for the reviewed method

The values below were reviewed in selected clauses of the stated source edition. They are not a declaration of equivalence to a later edition or independent instrument verification.

ISO 13938-1:1999 / 6.1.1-6.1.6

1	Volume increase: 100-500 cm³/min, ±10% of setting; alternative time-controlled burst: 20 ± 5 s.
2	Preferred area: 50 cm²; holder internal-diameter tolerance: ±0.2 mm.
3	Where bursting distension is measured, required accuracy over 70 mm: ±1 mm.

ASTM D3786-01 / 6.1.1.1, 6.1.4

1	Hydraulic diaphragm method: coaxial test-aperture diameter 31 ± 0.75 mm; fluid displacement rate 95 ± 5 mL/min. Diaphragm correction and burst pressure are linked to the same specimen recipe.

BS 3137:1972 (BSI 03-2000 reprint) / 1.1–1.3, 2.1.1–2.1.5, 2.2; Annexes A–H not obtained

1	BS 3137 Section 2 paper method: scope 70–1100 kPa; hydraulic pumping rate 95 ± 5 mL/min. Clamp apertures concentric within 0.25 mm during testing; normal clamping load at least 2700 N. Report any agreed alternative load limits.
2	Paper diaphragm secured approximately 3.5 mm below the lower clamp top plane; bulging 9 mm above that plane requires 30 ± 10 kPa. Hydraulic circuit free of air and leaks; instrument level and isolated from external vibration.
3	This edition specifies a maximum-reading Bourdon gauge: preferably 25–75% of scale, never outside 15–85%; accuracy ±0.5% of full scale. Verify digital-gauge equivalence, low-pressure range and Annex A clamp dimensions separately. A 7000 kPa maximum and 50 cm² textile head alone do not verify this paper method; Section 3 board apparatus requirements are absent from this preview.