TXL-KMS-038 / 28 October 2026 · One-year manufacturer warranty

Fabric Stiffness Tester — Manual (Fixed Angle)

Determines the bending length, flexural rigidity and bending modulus of fabric by the fixed-angle (41.5°) inclined plane method. Fully manual operation; suitable for woven, laminated, pile, knitted and raised fabrics. Used to assess the stiffness of products such as blankets, airbag fabrics and protective clothing.



Model technical data

1	Inclined plane angle: 41.5° fixed.
2	Scale resolution: 1 mm.
3	Fully manual operation.
4	Bending length, flexural rigidity and bending modulus are determined by simple operation and calculation.
5	Dimensions: approx. 350 × 150 × 210 mm.
6	Weight: 2 kg.

Physical specifications and utilities

Electrical supply	Manual / passive base apparatus; no mains supply assumed.
Power / connected load	Approx. 0 W connected load for preliminary planning.
Overall instrument dimensions	Dimensions: approx. 350 × 150 × 210 mm.
Instrument weight	Weight: 2 kg.
Gross / shipping weight	Approx. 4.2–4.5 kg gross; estimated packing allowance.
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	Bending length and flexural rigidity
Parameters selected for the method	Strip size, face/direction, angle and mass per unit area
Verification points	Length scale and reference angle

Control and recording specification

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

• The need for integrated software depends on the method and selected hardware; manual instruments use an external test record.

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

• The calculation and endpoint are defined by the selected method edition; instrument signals and operator assessments are kept distinct.

• 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.

Related test methods

ISO 4604 · BS 3356 · ERT 50-2

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

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.

TS ISO 4604:2004 / 4.1-4.2

1	Fixed-angle method for woven glass: observation angle 41.5°; slide width 25 mm, length at least 300 mm and mass per unit length 10 ± 2 g/cm. Template 250 × 25 mm.

BS 3356:1990 + Amendment 6337:1991 / 1–9, Figure 1; apparatus 4.1–4.3; specimens 6; procedure 7; calculation 8

1	Fixed-angle flexometer: sighting angle 41.5°; slide width 25 mm and mass 180 ± 2 g. Length accuracy at least 1 mm; timing accuracy ±1 s. These describe the test fixture, not equipment external dimensions or net mass.
2	Specimen 25 ± 1 × 200 ± 1 mm; at least three in each direction. Advance about 25 mm per 5 s and assess both faces. Overhang L = 2C; flexural rigidity G = 0.10 M C³ (M: g/m²; C: cm; G: mg·cm). Record direction, face, replicates and means.