

TXL-KMS-007 / 27 October 2026 · One-year manufacturer warranty

Martindale Abrasion & Pilling Tester

8-station Martindale motion. Combined abrasion and pilling test. Lissajous motion, auto revolution counter, standard load weights included.



Model technical data

1	Motion: Martindale/Lissajous; abrasion and pilling kits are selected separately.
2	Listed Texlab configuration: 8 stations.
3	Family options: 4, 6, 8, 9 or 12 test positions; the model is specified in the order.
4	Touchscreen control; USB computer interface is standard.
5	Method-specific options: cutters, felts, backing foams, abrasants and assessment photographs.

Physical specifications and utilities

Electrical supply	Approx. 220–240 V AC, 50/60 Hz, single phase; build-dependent.
Power / connected load	Approx. 50–150 W connected load for preliminary planning.
Overall instrument dimensions	Approx. 900 × 750 × 400 mm (W × D × H).
Instrument weight	Approx. 65–95 kg net.
Gross / shipping weight	Approx. 96.5–143.8 kg gross; estimated packing allowance.
Interfaces	Touchscreen control; USB computer interface is 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	Abrasion cycles, mass loss or pilling grade
Parameters selected for the method	Abrasion/pilling kit, load, backing and endpoint
Verification points	Lissajous trace, loads, counter and holders

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.
- 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 12945-2 · ASTM D4966 · ISO 12947-1 · ISO 12947-2 · ISO 12947-3 · ISO 12947-4 · ASTM D4970

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.

ISO 12945-2 (earlier edition) / 5.2

1	Pilling stroke: 24 ± 0.5 mm; holder 155 ± 1 g plus disc 260 ± 1 g; total 415 ± 2 g.
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ISO 12947-1 (earlier edition) / 5

1	Abrasion travel in each axis 60.5 ± 0.5 mm; the 9 kPa or 12 kPa loading assembly is selected for method and material.
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EN ISO 12947-2:1998 / TS EN ISO 12947-2:2001 / 7.4

1	Specimen and foam-disc diameter 38 mm, tolerance $+0.5/0$ mm; abradant at least 140 mm in diameter or 140×140 mm. Abradant mounting weight 2.5 ± 0.5 kg, diameter 120 ± 10 mm.
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EN ISO 12947-3:1998 / TS EN ISO 12947-3:2001 / 7.4, 10

1	Mass-loss method: specimen diameter 38 mm ($+0.5/0$ mm). Link mass loss to cycle count at each assessment interval; report the mean, dispersion and mass-loss versus cycle graph.
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EN ISO 12947-4:1998 / TS EN ISO 12947-4:2001 / 7.4, 9

1	Appearance-change method: specimen at least 140 mm in diameter or 140×140 mm; abradant diameter 38 mm ($+0.5/0$ mm). Holder and shaft total mass 198 ± 2 g; assessed separately from the mass-loss recipe.
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ASTM D4966-98 / 6.1.2, 6.1.4

1	Martindale abrasion preparation uses felt of 750 ± 50 g/m ² and thickness 3 ± 0.3 mm; cutters are 38 and 140 mm in diameter. Link abradant, backing and load set to the test identity.
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ASTM D4970-02 / 6.2, 11.3

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| 1 | Martindale pilling recipe: felt $750 \pm 50 \text{ g/m}^2$ and $3 \pm 0.3 \text{ mm}$; this arrangement gives approximately 3 kPa on the larger specimen without extra weights. Record visual grade, cycle count and reference set together. |
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