

TXL-IPL-009 / 27 October 2026 · One-year manufacturer warranty

Digital Yarn Count Balance

Yarn count system consisting of an electronic balance and dedicated software. Calculates yarn, sliver and roving counts in Tex, Denier, Nm, Ne and other systems, and fabric mass per unit area in g/m²; gives totals, average, CV and standard deviation.



Model technical data

1	Electronic balance: 300 g capacity, 0.001 g readability (0.1 mg balance option).
2	Yarn, sliver and roving count: Tex, Denier, Nm, Ne and other systems; fabric mass per unit area (g/m ²).
3	Statistics: total, arithmetic average, CV %, standard deviation, maximum and minimum, range.
4	New recipes are created by saving the number of tests and the sample properties.
5	Touch screen and built-in 58 mm printer.
6	Length options 3 yd, 7 yd, 120 yd, 840 yd, 2 m, 10 m, 100 m and 500 m.
7	Connects to the balance with a data cable; USB, cables and security data key included; remote control over the internet.
8	Used together with the yarn wrap reel, which can be supplied on request.

Physical specifications and utilities

Electrical supply	Approx. low-voltage adapter with 100–240 V AC, 50/60 Hz input; output voltage is build-dependent.
Power / connected load	Approx. 10–25 W connected load for preliminary planning.
Overall instrument dimensions	Approx. 350 × 350 × 300 mm (W × D × H).
Instrument weight	Approx. 3–7 kg net.
Gross / shipping weight	Approx. 5.3–10.8 kg gross; estimated packing allowance.
Interfaces	Connects to the balance with a data cable; USB, cables and security data key included; remote control over the internet.
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	Linear density or yarn count (tex, den, Nm, Ne)
Parameters selected for the method	Skein length, mass and selected count system
Verification points	Reel circumference, turn count and balance

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.
- $\text{tex} = 1000 \times \text{mass(g)} / \text{length(m)}$; $\text{denier} = 9000 \times \text{mass(g)} / \text{length(m)}$.
- 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 2060 · ISO 3801 · ISO 3374 · ISO 9073-1 · BS 2471 · EN 12127 · IWTO 22-82 · ASTM D1907 · ASTM D2646 · ASTM D3776

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 2060:1994 / 5.1 / Ek A

1	Recommended reel circumference: 1.000 m ± 2.5 mm.
2	Pretension with positive feed: 0.5 ± 0.1 cN/tex.

ISO 3801:1977 / 4.4-4.5

1	Small-specimen method: 10 × 10 cm template or 100 cm² circular cutter with 1% area accuracy; balance capable of weighing to 0.001 g. Method and specimen area are stored with the mass-per-area calculation.
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ASTM D1907-97 / 6.1

1	For the skein method, recommended reel perimeter 1.000 m or 1.500 yd with ±0.25% tolerance. Record turns, actual perimeter, tension and weighing condition together; use actual wound length for linear-density calculation.
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ASTM D2646-96 / 1, 14.1–14.2

- 1 This link concerns the backing-fabric mass-per-area subtest: D3776 for woven and D3887 for knitted fabric. Balance software retains area and g/m²; the reference does not mean the balance performs every mechanical test in this standard.

ASTM D3776-96 / 1.2, 5.1–5.2

- 1 Distinguish full-piece, full-width, small-swatch and narrow-fabric options. Balance capacity/sensitivity must support weighing within ±0.1% of specimen mass. With a cutter, retain actual cut area, mass and calculated g/m².

ISO 9073-1:2023 / 5, 7-9

- 1 Nonwoven mass per area: specimen area at least 50,000 mm², at least three specimens; weighing accuracy ±0.1% of mass. The balance is the weighing component of a method also requiring cutting and area measurement.

EN 12127:1997 / SIST EN 12127:1999 / 6, 8.2-8.4, 9-10

- 1 Small-fabric-specimen mass per area: cutter area at least 100 cm² with ±1% area accuracy, ±1 mg balance and at least five specimens. Calculate using actual specimen area; distinguish standard-atmosphere mass from oven-dry mass.

ISO 3374:2000 / 5.1-5.4

- 1 Reinforcement mat area 1000 cm², reinforcement fabric 100 cm²; area error at most 1%. Fabric ≥200 g/m² requires 1 mg balance resolution; <200 g/m² requires 0.1 mg. Use the 0.1 mg balance option for lightweight fabric.

BS 2471:1978 + Amd.9955:1998 — historical selected clauses / Foreword; 3.3; 4.1–4.4; methods 1–4 only

- 1 1978/1998 edition, methods 1–4: balance accuracy ±0.2% of measured mass; calibrated steel rule 3 m, or ≥2 m if unavailable. Flat table wider than fabric, length ≥4 m. Method 5 was withdrawn in this edition; do not use it as a small-cut GSM method. Verify the 2005 edition separately.