TXL-UNI-007 / 28 October 2026 · One-year manufacturer warranty

Dual-Column Universal Strength Tester (10 / 50 kN)

Dual-column universal strength tester for tensile, tear, seam slippage and carpet tuft-pull testing of fabrics, yarns, seams, carpets and technical textiles. Models TL-K001-DC-10 (10 kN) and TL-K001-DC-50 (50 kN); manual or pneumatic grips, instrument-mounted touchscreen, TensiLab PC software via Ethernet / Modbus TCP. Supply 220 V / 6 A; 4–8 bar air for pneumatic grips.



Model technical data

1	Models: TL-K001-DC-10 (10 kN / 10,000 N) and TL-K001-DC-50 (50 kN / 50,000 N) nominal platform capacity.
2	Frame: dual-column test platform; front-accessible test area.
3	Grip choice: manual (side handwheel, TL-A006) or pneumatic (TL-A007); interchangeable jaw faces TL-A001…TL-A005.
4	Application fixtures: yarn grip TL-A008, loop-bar holder TL-A009, carpet pile/fringe pull fixture TL-A015, accessory holders TL-A010…TL-A014.
5	Operator interface: instrument-mounted touchscreen; air pressure shown digitally on the HMI; accessible emergency stop on the body.
6	Software: TensiLab; Windows 10/11 64-bit, Ethernet / Modbus TCP, minimum 1366 × 768 display; method management for 10 test types, six-language interface and reports, demo mode without an instrument.
7	Statistics and reporting: mean, standard deviation, CV %, minimum, maximum, 95% confidence interval; A4 PDF, Excel and CSV; series transfer as a .tlab file.
8	Calibration records: multi-point load cell and jaw-gap calibration; ISO 7500-1 verification reports.
9	Usable test force depends on load cell, grip, connection and fixture capacities; platform capacity does not mean every accessory has the same rating.

Physical specifications and utilities

Electrical supply	Electrical supply / current: 220 V / 6 A.
Power / connected load	Approx. 0.75–1.3 kW; upper bound from the 220 V / 6 A supply, for preliminary planning.
Overall instrument dimensions	Approx. 10 kN: 900 × 600 × 1900 mm; 50 kN: 1100 × 700 × 2100 mm (W × D × H).
Instrument weight	Approx. 10 kN: 150–250 kg; 50 kN: 300–450 kg net.
Gross / shipping weight	Approx. 200–550 kg gross; preliminary estimate by model and packing.
Compressed air	Compressed air 4–8 bar for pneumatic grips; air hose 8 mm.
Interfaces	PC connection: Ethernet / Modbus TCP; Windows 10/11 64-bit.
Lab requirements	220 V / 6 A electrical supply; 4–8 bar air and an 8 mm hose for pneumatic grips; prepare the workspace and specimen-conditioning conditions.

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	Breaking force (N), elongation (%)
Parameters selected for the method	Grip type, gauge length, test speed and load cell
Verification points	Force, displacement and speed verification

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.
- Force-extension curve; strain = 100 × $(L-L_0)/L_0$; crosshead and extensometer results are identified 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.

Related test methods

ISO 13934-1 · ISO 13934-2 · ASTM D5035 · ASTM D5034 · ISO 13937-2 · ISO 13937-3 · ISO 13937-4 · ASTM D2261 · ASTM D5587 · ISO 2062 · ASTM D2256 · ISO 6939 · ASTM D1578 · ISO 13935-1 · ISO 13935-2 · ISO 13936-1 · ISO 13936-2 · ISO 20932-1 · ISO 4919 · ASTM D1335 · ISO 11857 · ASTM D3936

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