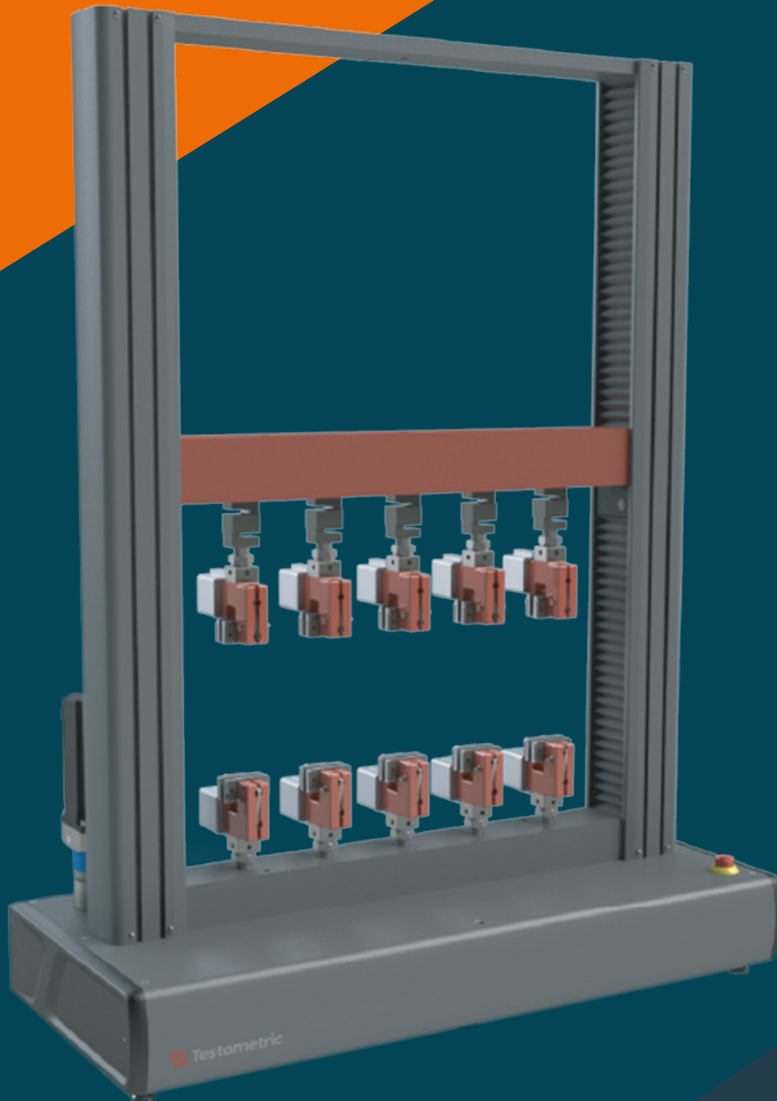




High-Performance Dual Column Tensile Tester (Multi-Station)

Model X500

TMI Büchel X500 Model High-Performance Dual Column Tensile Tester

A high-capacity, multi-station dual-column tensile tester engineered for fast, accurate, and fully automated materials testing. Designed for high-volume quality control, the X500 MS series performs up to five simultaneous tensile tests - ideal for polymer and film applications - delivering exceptional precision, rigidity, and repeatability. Suitable for laboratories, production lines, and demanding industrial environments.

High-throughput tensile testing with exceptional precision

The TMI Büchel X500 Multi-Station Tensile Tester is a high-performance dual-column system designed to dramatically increase tensile testing efficiency. With five stations operating in parallel, users can complete multiple polymer and film tensile tests simultaneously—ideal for high-volume environments where speed, accuracy, and repeatability are essential.

Built on a rigid twin-column load frame and powered by fully digital servo control, the X500 MS delivers exceptionally stable crosshead movement, precise force measurement, and industry-leading data accuracy. It provides automated test control, real-time plotting of up to five curves, and configurable methods for a wide range of tensile standards, including ASTM D882 and ISO equivalents.

Available in 25 kN (5 × 5 kN) and 50 kN (5 × 10 kN) configurations, the X500 MS is built for demanding production applications across plastics, films, packaging materials, and related polymer-based products.

Technical Specification:

Force Capacity	25 kN or 50 kN (multi-station)
Accuracy	± 0.5% down to 1/1000 load cell capacity
Crosshead Travel	950 mm (extended options available)
Vertical Space	1150 mm
Position Resolution	0.000001 mm
Distance Between Columns	860 mm
Speed Range	0.00001 – 1000 mm/min
Speed Accuracy	± 0.1%
Max Force at Full Speed	25 kN / 50 kN
Data Acquisition Rate	500 Hz standard (1000 Hz optional)
Frame Stiffness	120 kN/mm
PC Connection	Ethernet or USB via adaptor
Operating Temperature	0 – 55 °C
Operating Humidity	≤ 90% RH
Standards	EN 7500-1, DIN 51221, ASTM E4 AFNOR A03-501 (Additional methods supported via winTest software)
Power Supply	Dual input selectable 115/230V, 1-phase, 50/60 Hz
Power	1 kW
Weight	320 kg approx. (configuration dependent)
Machine configuration	Twin-column, bench-mounted (optional base cabinet available)

Model Options:

Model	Force Capacity	Crosshead Travel	Speed Range	Accuracy	Frame Stiffness
X500-25MS	25 kN (5 × 5 kN)	950 mm	0.00001–1000 mm/min	±0.5%	120 kN/mm
X500-50MS	50 kN (5 × 10 kN)	950 mm	0.00001–1000 mm/min	±0.5%	120 kN/mm

Why the X500 MS improves your testing workflow:

- Simultaneous multi-station testing: Run five tensile tests at once to dramatically reduce turnaround time in polymer and film workflows.
- Unmatched accuracy and stability: Better than $\pm 0.5\%$ accuracy down to 1/1000 of load cell capacity ensures consistent, repeatable tensile measurements across all stations.
- Fully automated, digital control: Integrated digital AC servo drive and winTest software provide precise test control, automatic home/return positioning, load cell recognition, and instant calibration verification. All Testometric frames require a current Windows PC or can be supplied with an Industrial Touchscreen interface.
- High-rigidity frame for demanding applications: Twin-column construction, precision-ground guide rods, and high-stiffness loading frames ensure stable alignment during high-load tensile testing.
- Fast, quiet, and maintenance-free operation: High-efficiency pre-loaded self-cleaning ballscrews provide smooth crosshead movement even at extreme speeds—up to 1000 mm/min at full load.
- Flexible integration with sensors and accessories: Supports extensometers, micrometers, calipers, balances, and more. Compatible with a wide range of contacting and non-contacting extensometers, including laser and video systems.
- Custom vertical space options: Custom crosshead and vertical openings are available—an important advantage across all Testometric X-series frames and Testometric box compression testers.
- Advanced PC or standalone touchscreen control: Operate via Windows PC or optional industrial touchscreen Panel PC for full test control and unlimited method storage.

Disclaimer

The information contained in this document is liable to modification from time to time in the light of experience and our policy of continuous product development. Check the Industrial Physics website for the latest version.

Features & Benefits:

- Multi-station design performs five tests simultaneously
- High-rigidity twin-column frame ensures accurate alignment
- $\pm 0.5\%$ force accuracy down to 1/1000 of load cell capacity
- Fully digital control with automatic load cell and extensometer recognition
- High-resolution positional control (0.000001 mm)
- High-speed data acquisition up to 1000 Hz
- Self-cleaning, high-efficiency ballscrews for quiet operation
- Overload, overtravel, and impact protection for operator safety
- Wide range of grips and fixtures for tensile, compression, flexural, shear, peel, and product testing
- Optional industrial touchscreen Panel PC for standalone operation
- winTest Analysis software included as standard
- Ethernet or USB (via adaptor) connectivity

Ordering Information:

Article Number	Article Description
X500	TMI Büchel X500 Model High-Performance Dual Column Tensile Tester (Multi-Station)

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