

X500

Twin-column, bench-mounted Universal Testing Machine with full computer control and precision AC servo drive system. High rigidity load frame with precise crosshead guidance system for the most demanding test applications up to 100kN.

	X500-25	X500-30	X500-50	X500-100
Force Capacity kN	25	30	50	100
Accuracy	Better than +/- 0.5% of reading down to 1/1000th of load cell capacity			
Crosshead travel mm*	1025	1025	950	1075
Vertical space mm	1225	1225	1150	1300
Position Control Resolution mm	0.000001	0.000001	0.000001	0.000001
Distance between columns mm	420 (Wide frame options available)			
Minimum Speed mm/min	0.00001	0.00001	0.00001	0.00001
Maximum Speed mm/min	1000	1000	1000	500
Speed Accuracy	+/- 0.1% under stable conditions			
Max force at full speed kN	25	30	50	100
Max speed at full load mm/min	1000	1000	1000	500
Data Acquisition Rate (at PC)	500Hz as standard (optional 1000Hz)			
PC Connection	Ethernet (or USB via adaptor)			
Machine Configuration	Twin-column, bench mounted (optional base cabinet available)			
Frame Stiffness kN/mm	120	120	220	400
Weight kg	155	155	195	235
Operating Temperature ˚C	0 to +55			
Operating Humidity	90% relative humidity or less			
Electrical Supply	Dual input selectable 115 or 230V, 1ph 50/60Hz			
Power kW	1	1	1	1.2

* Extended travel versions available on request.

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Made to measure

Fully digital testing system with high precision control and accuracy, includes automated computer control of test methods giving simplicity of operation.

High resolution load cells with accuracies better than +/-0.5% down to 1/1000th of the load cell capacity.

Automatic recognition of load cells and extensometers, with on-device storage of calibration parameters.

Software calibration check facility for instant verification of machine accuracy.

800% overload capability of load cells without damage.

High efficiency pre-loaded self cleaning ballscrews for fast, quiet testing. Fitted with sealed for life lubricated end bearings.

Crosshead guidance system providing precise alignment and smooth running.

Precision crosshead control via digital AC servo drive and brushless servo motor giving maintenance free operation and 23-Bit positional control.

High speed data collection systems for up to 4 synchronous channels.

Integral load cell cable routing in machine column to eliminate snagging and prevent cable damage.

6 I/O channels for additional devices such as extensometers, micrometers, calipers, balances etc.

High stiffness loading frames with precision ground steel guide rods and rigid extruded support columns with T-slots for accessory mounting.

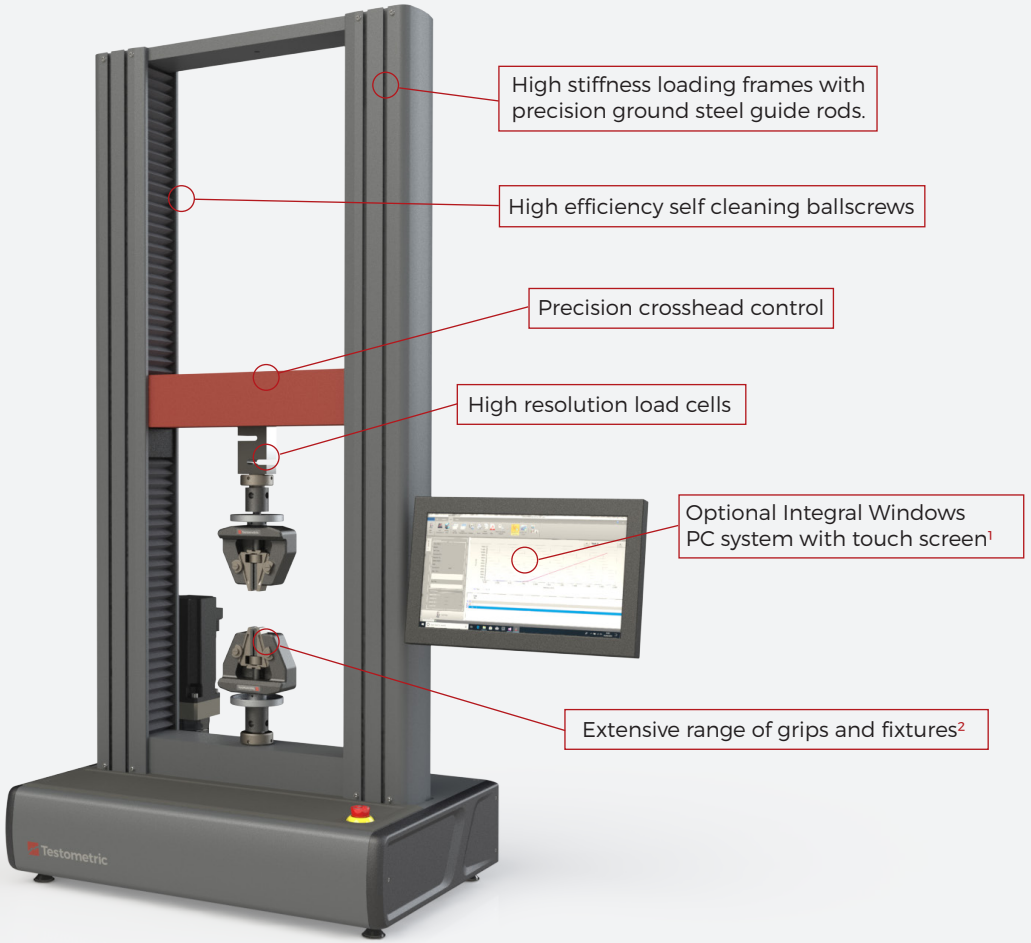
Overload, overtravel and impact protection.

Telescopic covers giving additional protection for ballscrews against dust and testing debris.

Small footprint design, giving economy of bench and floor space.

Extensive range of grips and fixtures for tension, compression, flexural, shear, peel and product testing etc.

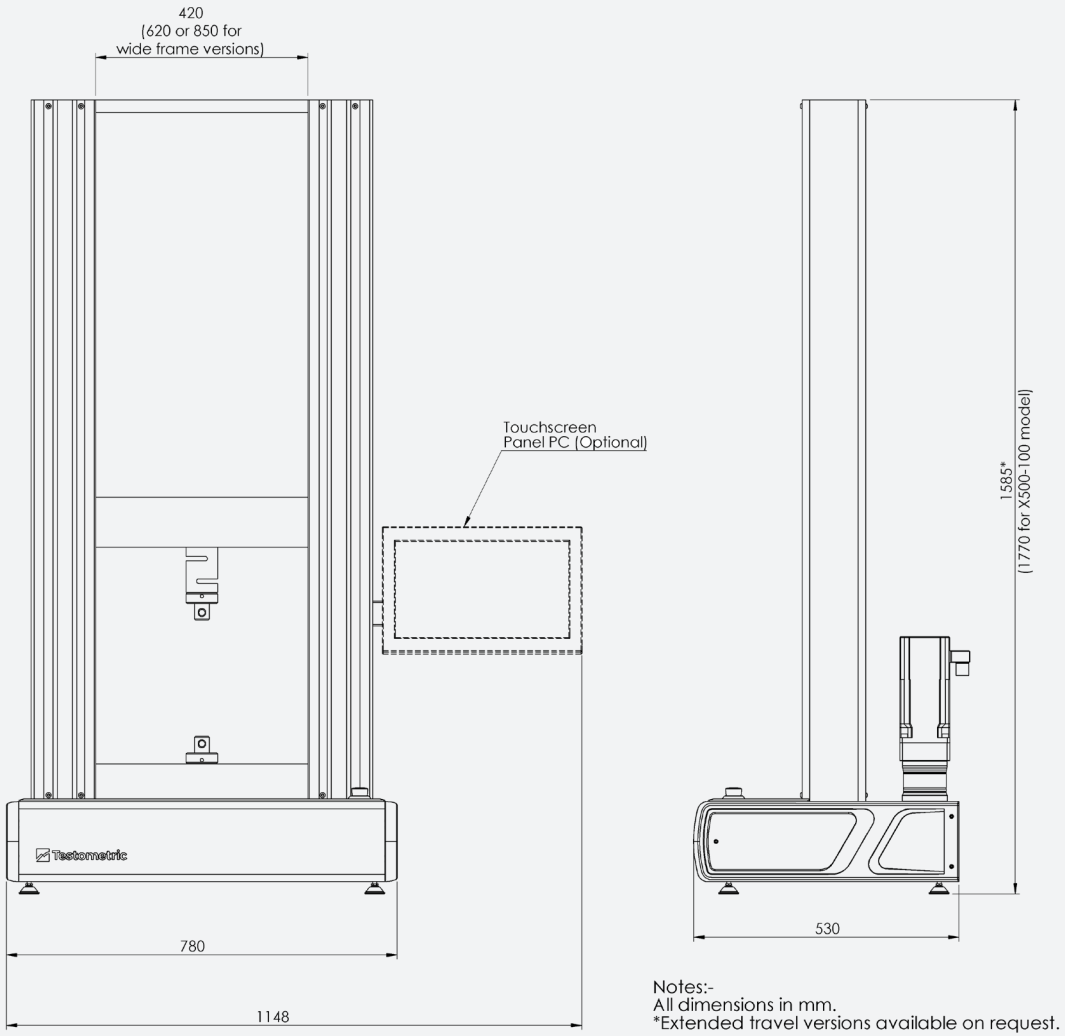
A wide range of contacting and non-contacting extensometers is available including laser and video models.



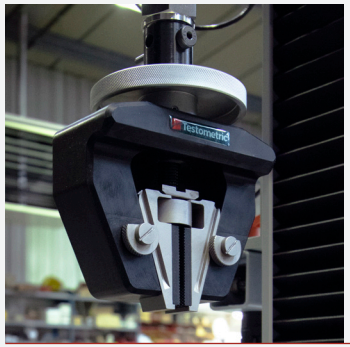
1. Available at additional cost. Machine can alternatively be controlled using a standard PC or laptop (not supplied).
2. Machine shown with PWG pre-tightening wedge grips (available separately).

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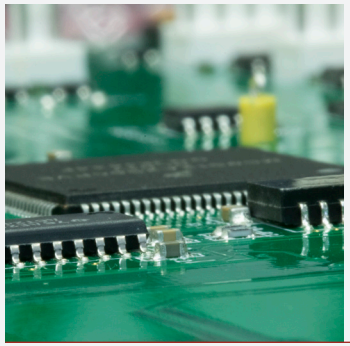
X500 Dimensions



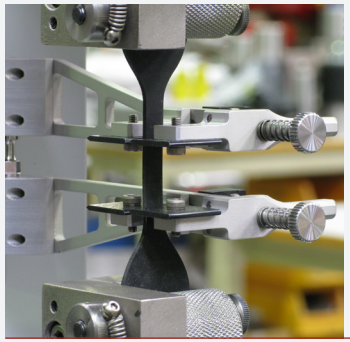
Notes:-
All dimensions in mm.
*Extended travel versions available on request.



Large range of grips and fixtures available



High-speed modular electronics



Comprehensive range of extensometry

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Built for precision

Force Measurement

Universally Calibrated, better than Grade 0.5 EN 7500-1, DIN 51221 ASTM E-4. AFNOR A03-501. Range 0.4% to 100% minimum. Automatic identification of load cell. Resolution 1 part in 500000. Electronic load cell protection.

Extension Measurement

Full frame length to a maximum resolution of 0.000001mm (selectable). Accuracy +/- 0.01mm. Absolute, relative and auxiliary modes in mm, inch and percent.

Speed Control

Class-leading low speed performance with speeds down to 0.00001mm/min. Drive system temperature and current protection.

Load Frame

Rigid frame, using precision ground steel guide rods and rigid extruded support column. Frame stiffness up to 400kN/mm plus K factor facility built-in. Re-circulating ball screw with bellows. Electronic limit trips, total travel trips and customer programmable safety stops.

Electronics System

Modular electronics system offers fast data transfer to the PC (up to 1000Hz) via high-speed Ethernet connection. Extensive input options allow the connection of a wide range of extensometers and accessories via simple plug-in interface modules.

Safety Features

Extensive safety features to ensure highest levels of operator safety, including E-Stop, programmable extension limits and overload/impact detection. Fully compliant with global safety directives:- 2006/42/EU Machinery Directive, 2014/35/EU Low Voltage Directive and 2014/30/EU Electromagnetic Compatibility Directive.

Optional Touchscreen Panel PC

When paired with the optional IPC3 industrial-grade Panel PC with touchscreen control, the machine becomes a robust standalone system without the need for an external PC or Laptop.

Using the latest Windows 10 operating system and running a full version of Testometric's winTest software the system allows complete control of the test machine and provides storage and access to unlimited test methods and results. The included mounting arm which attaches to the machine column T-Slots is fully adjustable for height, reach and viewing angle allowing the user to find the most ergonomic working position.

Specification:-
Display 15.4" 1280x800, 24 bit full colour panel with projected capacitive touch screen and anti-reflective, dirt repellent screen protection.
2xUSB3.0, 2xUSB2.0, 3xGigaLAN.
CPU-i5-7300U Intel Core i5 Processor, 2.6GHz.
8GB RAM (non-ECC)
128GB CFast MLC storage (SSD), SATA III 6GB/s
Microsoft Windows 10 IoT Enterprise LTSB - 64-Bit.



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Tried and tested software

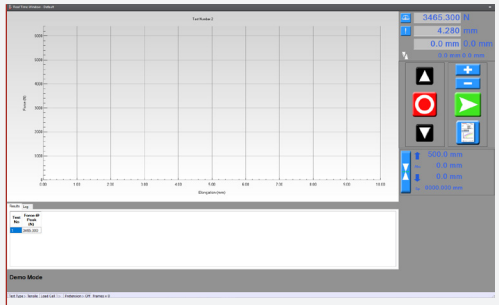
All Testometric models are supplied with our comprehensive winTest Analysis software package.

The product of many years of continuous development, winTest Analysis provides a flexible and intuitive software package to suit all types of material testing. With built-in test methods covering tensile, compression, flexural, peel, shear, tear, cyclic, creep and multi-stage tests.

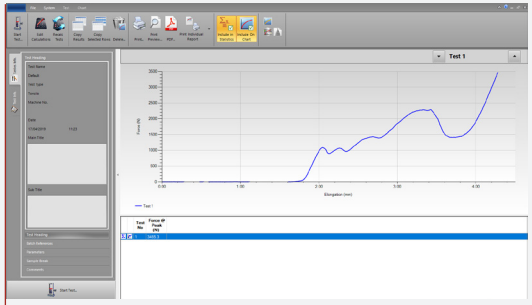
It includes a wide range of industry standard test methods and the facility to create and store an unlimited number of further test methods. There is automated storage of all test data and ease of export to other software packages such as word, excel, access and SPC systems for enhanced report generation.

Please refer to the winTest software datasheet for further information.

With the addition of the RCE remote connection option all machines can be web-linked directly to Testometric for remote investigation, monitoring and software upgrades. Please refer to the RCE datasheet for more information.



Real time test screen



Test analysis screen



Standing the test of time

Testometric is a private limited company that has been involved in the design and manufacture of testing machines and quality control equipment since its foundation in 1970.

Fifty years of continuing development has resulted in a main product line of universal strength testing machines for tension, compression, flexure, shear and product testing. Testometric machines are used in over 100 countries worldwide and supported by a network of offices and approved agencies.

Testometric is established in all industries and educational sectors and we have an enviable reputation for innovation, product quality and excellent customer support.

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