



Tensile Testing Machine

Model X250

1kN, 2.5kN, and 3kN Options

Machine Features:

- Aluminium alloy load frame giving high strength and stiffness
- Fully digital testing system with high precision control and accuracy, includes automated computer control of test methods giving simplicity of operation
- High resolution auto ranging load cells with accuracies better than $\pm 0.5\%$ down to 1/1000th of the load cell capacity
- Automatic recognition and calibration of load cells and extensometers, with instant calibration check facility
- 800% overload capability of load cells without damage
- Small footprint design, giving economy of bench and floor space
- 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 4,000,000 steps per revolution positional control
- High speed data collection systems for up to 4 synchronous channels
- 6 I/O channels for additional devices such as extensometers, micrometers, callipers, balances etc
- High stiffness loading frames with solid specialised steel crossheads 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
- 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

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 with autoranging. Electronic load cell protection.

Extension Measurement

Full frame length to 0.001mm. Resolution 0.001 min. Accuracy 0.01mm. Absolute, relative and auxiliary modes mm, or mm and percent. Programmable extension limits.

Speed Control

Drive system temperature and current protection. Positional jog speed 0.001mm/min to maximum. Speed setting increments 0.001mm/min.

Load Frame

Rigid frame, using dual slide crosshead guidance system and rigid extruded support column. Frame stiffness 2.5kN/mm plus K factor facility built-in. Re-circulating ball screw with bellows. Electronic limit trips, total travel trips and customer programmable safety stops. Rubber mat front protection.

Software

winTest™ Lite software, cut down version of winTest™ Analysis software with tabulated values of force and elongation, test curves and statistical analysis of test series. For more advanced testing and report generation, upgrade to the winTest™ Analysis software is available.

Options

In addition to standard fixtures we can test your specimens in our applications laboratory and design special grips and fixtures for custom applications. Models are available with extended frames and wider throat.

CE Marking

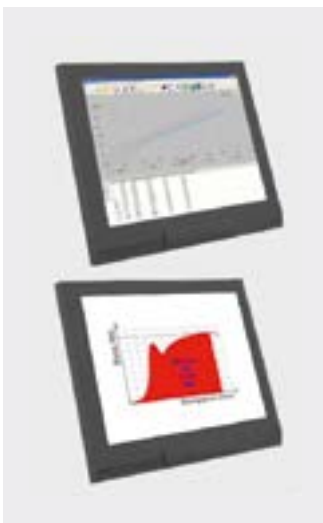
Conforms to all relevant European standards with UKAS certification.

Environmental

Energy efficient, lead-free and fully RoHS compliant.

Technical Specification:

Model X250	84-01-X1-0011	84-02-X2-0009	84-02-X2-0010
Force Capacity	1kN	2.5kN	3kN
Accuracy	Better than +/- 0.5% of reading down to 1/1000th of load cell capacity		
Crosshead travel	630mm	990mm	990mm
Vertical space	800mm	1160mm	1160mm
Position Control Resolution	0.000001mm	0.000001mm	0.000001mm
Throat depth (force axis to column)	108	108	108
Minimum Speed	0.00001mm/min	0.00001mm/min	0.00001mm/min
Maximum Speed	2500mm/min	2500mm/min	2500mm/min
Speed Accuracy	+/- 0.1% under stable conditions		
Max force at full speed	1kN	2.5kN	3kN
Max speed at full load	2500mm/min	2500mm/min	2500mm/min
Data Acquisition Rate (at PC)	500Hz as standard (optional 1000Hz)		
PC Connection	Ethernet (or USB via adaptor)		
Machine Configuration	Single-column, bench mounted (optional base cabinet available)		
Frame Stiffness	8kN/mm	8kN/mm	8kN/mm
Weight	73kg	80kg	80kg
Operating Temperature	0 to +55°C		
Operating Humidity	90% relative humidity or less		
Electrical Supply	230V, 1ph 50/60Hz (115V option available)		
Power	0.3kW	0.3kW	0.3kW



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.

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