

Applied Mechanics



P5030-25

UNIVERSAL TEST MACHINE 25kN

FEATURES

- Integral PC system running full universal windows software with industry standard and customer specific test methods pre-installed.
- Touch screen display with active tester control panel and readout screen showing real time test curves calculated results and statistics. Height adjustable and fully articulated.
- Optional full colour printer system mounted on universal position swivel arm.
- 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 +/-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 Tslots 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.



INSTRUMENTATION

Force Measurement

Universally calibrated, better than Grade 0.5 EN 7500-1, D IN 51221 ASTM E-4. AFNOR A03-501. Range 0.4% to 100% minimum. Automatic identification of load cell. Resolution 1 part in 500000 with auto ranging. 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, inch 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 support column. Frame stiffness 50kN/mm plus K factor facility built-in. Re-circulating ballscrew with bellows. Electronic limit strips, total travel trips and customer programmable safety stops.



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Software

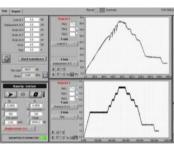
Windows software covering, tensile, compression, peel, shear, tear, cyclic, creep and multi stage testing. It includes a wide range of industry standard test methods and facility to create and store an unlimited number of further test methods. There is automated storage of all test data and ease of export to other software packages such as word, excel, access and SPC systems for enhanced report generation.

ACCESSORIES INCLUDED

- Pair of pre tightening wedge grips maximum load 25kN for flat and square specimens up to 20mm wide x 10mm thick.
- Strain gauge extensometer for metals & rigid plastics, 25mm gauge length, range 5mm, resolution 0.0001mm. Accuracy Grade 0.5, EN 100002-4. & EN ISO 9513
- Compression platens 150mm square, 25kN.
- Variable span 3 point bend fixture 50-300mm
- Set of inserts for round specimen 3-8mm diameter and 8-15mm diameter. 50kN capacity











Results sample

DIMENSIONS AND WEIGHTS

Dimensions: W x D x H 762 x 505 x 1585mm

Weight: 186 kg approx.

TECHNICAL SPECIFICATIONS

- [1] Range: 25 kN.
- [2] Data sampling rate: Maximum 12kHz with up to 200Hz
- [3] Crosshead travel/resolution: 1100 by 0.001 mm.
- [4] Throat 295mm.
- [5] Operating temp: -10 to +40 degree C.
- [6] Frame stiffness: 150 kN/mm.
- [7] Operating humidity: +10 to +90% non-condensing.
- [8] Speed range mm/min 0.001 to 500.
- [9] Machine layout: Table top, base cabinet available.
- [10] Speed accuracy: +/- 0.1% under stable conditions.
- [11] Number of Columns: 2.
- [12] Crosshead guidance: Linear slides integral within column.
- [13] Available load cells: 5N, 10N, 20N, 100N, 250N, 500N. 1kN, 2.5kN, 3kN, 5kN, 10kN, 20kN Maximum of four load cells up to capacity of machine.
- [14] Max force at full speed: 25kN
- [15] Spigot Ø: 20 mm
- [16] Max speed at full load: 500 mm/min
- [17] Power: 4.5 kW

INSTALLATION REQUIREMENTS

Electrical Supply:

110V, 60Hz

Head Office

Cussons Technology Limited 102 Great Clowes Street, Manchester.

M7 1RH England

Tel: + (44)161 833 0036 Fax: + (44)161 834 4688

SGS

E-mail: sales@cussons.co.uk

















The company may alter specifications as its discretion and without notice, in line with its policy of continuous development