Universal Testing Machine
Model: F0025

a measurable difference...

The Universal Testing Machine has been specially designed and manufactured to perform tests in both compression and tensile, without having to change the attachments.

The universal measurement of firmness and hardness is based on a physical property called the indentation force deflection (IFD). It is calculated by determining the force required to deflect a test piece a percentage of its original thickness using a circular indentor, which applies a force, while also recording the degree of indentation.

IDM Instruments Pty Ltd has designed their Universal Testing Machine with fixed dual testing capabilities comprising of compression testing on the inner and tensile testing on the outer frame. By incorporating the dual testing space design, this eliminates the need of having two machines required for testing. The same machine is used for compression and tensile testing.

The software program has been designed to allow testing of both compression and tensile capabilities, enabling the same software to be used on the one machine with dual testing.

The great benefit of the Universal Testing Machine is the dual testing capability, saving time for operators needing to change between fixtures, as they are fixed onto the machine at their own designated area. The operator needs only to switch a button on the machine to select from tensile to compression, which in turn speeds up production time, test set up time, reduces operator fatigue and decreases possible setup errors.

The twin column bench-mounted Universal Testing Machine has a strong and durable frame to withstand years of use. It offers excellent accuracy and ease of use, operating on the IDM Instruments Pty Ltd software program. The Universal Machine can also be custom made to accommodate a wider testing space, while leaving no restrictions on the sample length that can be tested.

Applications:

- Polyurethane
- Plastic
- Rubber
- Textiles
- Springs

and many other materials

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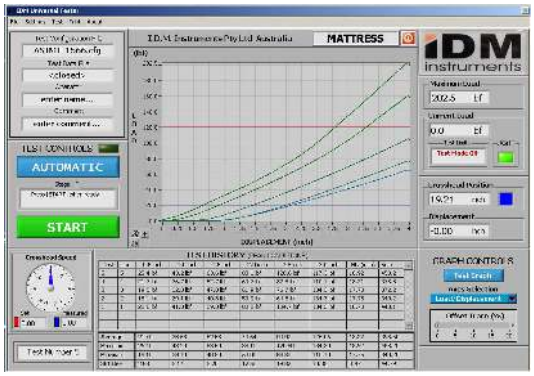
Standards:

- ASTM D3574 – Test B
- ASTM D3574 – Test C
- ASTM D3574 – Test E
- ASTM D3574 – Test F
- AS 2281
- AS 2282.8
- ASTM F1566
- ISO 3386
- ISO 2439
- ISO 1798
- ISO 8067
- GB 10807
- JIS K 6400

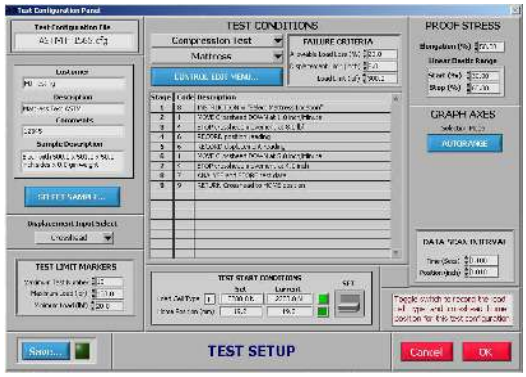


Universal Testing Machine
- Sample test screen -

Software Packaging:

The Universal Testing Machine offers a variety of software features that allows programming of parameters of the test, operational control and real-time display of the on-going test. This software package allows the operator to conduct a wide range of tests with an almost limitless array of test parameters and displayed test information. The PC based control system uses the Universal Tester program developed by IDM Instruments Pty Ltd.

The test configuration is prepared for each test sample type, as a fully automated process. The test scripts as well as the operating parameters are entered in the Configuration Panel to run a test as per International standard requirements or customer requirements. Values including the test type, sample piece, sample size, standard reference and many more values can all be entered and also saved to be retrieved at a later stage.



Sample Test Configuration Screen

The Software Program for the Universal Testing Machine is automatic. Once the Test Configuration menu has been programmed, “Start” button is pressed, initiating the test. The results of the test are displayed on the PC in real time. They can then be saved and/or printed for later use.

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IDM instruments

Software Features:

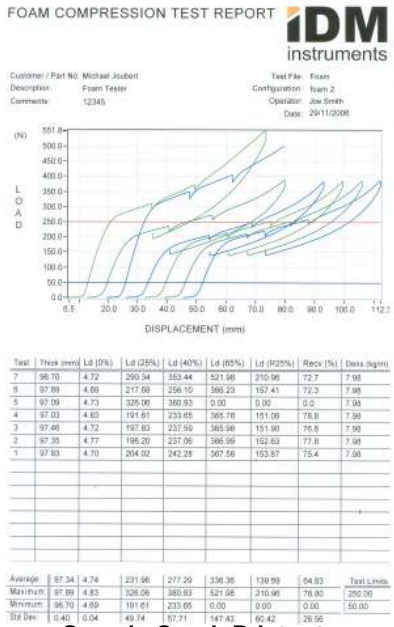
- Data Sampling is adjustable from 1-200,000Hz
- Position or Load control
- Test parameters displayed with graph simultaneously
- Real time graphic display of data
- Overlay display of data curve possible during test
- Selectable graphical display presentation
- Test Methods programmable
- Data can be sent to Excel
- Other test methods can be programmed by the operator
- Out of range alarm and stop
- Cyclic testing with data recording during cycle
- Auto return after a test is selected
- Calibration File to calibrate the instrument
- Statistical analysis requirements
- Printable Reports
- Windows based software

Features:

- Loading System – closed loop micro computer, which drives a ball screw and nut for its vertical movement
- Maximum Capacity: 0-2224N
- Travel (mm) approx.: 600mm x 0.1mm with out tensile jaws
- Speed (mm/min) 1 to 500 mm/min
- Return Speed (mm/min) 500mm/min
- Speed Accuracy better than +0.5%
- Tensile Load Measurement Accuracy - 0.5% of indicated value or ±0.5% of full scale
- Load auto-zeroing, load cell discrimination
- Safety function for overloading provided
- Max. Stroke Limiter upper/lower – 2 points
- 2 load cells, 250 Kg for compression and 50kg for tension
- Foam compression platens area: 400mm x 400mm (standard)
- Test area of 600mm wide and not restricted at front and rear
- PC controlled

Benefits:

- Easy to use
- Fast results
- Accurate



Sample Graph Printout

Computer Hardware:

- The latest computer hardware and 17" Flat Screen Monitor

Options:

- Other Load Cells
- Grips
- Compression Platens
- Custom made frame to suit wider samples

Connections:

- **Electrical:** 220/240 VAC @ 50 HZ or 110 VAC @ 60 HZ

(please specify when ordering)

Dimensions:

- **H:** 1,215 mm
- **W:** 975 mm
- **D:** 515 mm
- **Weight:** 85 kg

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