

Hounsfield passes every test

Every laboratory in every educational establishment demands three essential attributes from its test equipment – simplicity, accuracy and reliability. It is by consistently meeting these key requirements that Hounsfield Test Equipment has become the leading name in the provision of materials testing machines, not just in the UK but in many other countries across the globe.



Hounsfield S-Series machines at Cranfield University.

Cranfield University's Royal Military College has bought eight Hounsfield S-Series testing machines with accompanying QMAT Professional software. Adrian Mustey, Laboratory Manager, said: 'Working with students, we wanted machines that were simple to operate and that would guard against what I call the 'button-pushers'. Hounsfield fitted the bill... And in terms of quality, we had every confidence in their products because the previous Hounsfield machines we had gave us no problems at all.'

Hounsfield's success is built on a reputation for excellence in engineering and innovative electronic technology. With a history dating back more than 60 years, Hounsfield has developed a superior range of testing machines and associated equipment - enhanced by the use of the latest microprocessor controls - to deliver the most efficient and versatile materials testing available.

Building on their No. 1 position in the UK, Hounsfield has expanded throughout the world, earning in the process a Queen's Award for Export Achievement. Hounsfield now has more than 20,000 customers in 65 countries.

'Our aim is to ensure that anything bearing the Hounsfield name is quality-built, easy to use and service, and therefore highly competitive,' said Martin Wheeler, Sales and Marketing Director. 'This is, of course, particularly relevant to the educational sector.'

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Also in this issue:

- **FREE Education Pack**
Link to our on-line definitions reference
- **QMAT-Pro**
- **Health and Safety**
- **Hounsfield W-Series**
- **Hounsfield S-Series**



Danger! – Dealing with Mercury

For many years, mercury was a standard ingredient in measurement and control gauges. But, because of its toxic properties, manufacturers developed new sophisticated testing machines that, apart from using no mercury, were more efficient and accurate.



However, there are still a number of laboratories where mercury-filled gauges remain in use.

What should they do? What options are open to them? And what precautions should they take?

The counsel of perfection, of course, is to remove any mercury-containing equipment and replace it with modern, safe machines, such as the Hounsfield W-Series which offers a low-cost alternative. In the meantime, laboratories need to fully evaluate the risks, guard against contamination and know how to deal with spillages.

Mercury is a dangerous substance. It has a high vapour pressure which means it can be easily

inhaled. Small amounts can also find their way into the body via the skin and the mouth through smoking or eating. Whether long-term, relatively low-level exposure or a single, uncontrolled, high-level exposure, the results can be the same – damage to the kidneys and possible changes to the central nervous system.

The Control of Substances Hazardous to Health Regulations require adequate control of exposure through engineering controls – and the banning of smoking and eating in work areas.

Apart from minimising the generation of mercury and limiting areas of contamination, laboratories should ensure adequate general

ventilation and, where necessary, install local exhaust ventilation. All work surfaces should be smooth, non-absorbent and regularly cleaned. And every laboratory should have the right materials and equipment for dealing with any spillages – commercial kits are available. Suitable protective clothing should be worn during clean-up and all waste should be sealed and disposed of as chemical waste.

For full details on dealing with mercury, contact the Health and Safety Executive or suitably qualified industrial hygiene consultants.

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FREE Education Pack



Many universities and colleges are logging on to the Hounsfield website to take advantage of its highly useful **Definitions section** (<http://www.hounsfield.com/t-metal.htm>).

This gives interactive illustrations of mechanical properties along with definitions and calculations. Educational establishments are using it as a valuable reference for students as well as a link from their own websites.

Any college or university establishing such a link will receive FREE – two posters, 20 mouse mats and 50 catalogues providing simple testing definitions, which can be used as a contribution to course notes. To claim, simply e-mail proof of your link to martin.wheeler@hounsfield.com.

Top of the class

The UK's No. 1 range of materials testing machines is the Hounsfield S-Series. Widely used in industry and research, and particularly popular with educational establishments, the machines are renowned for their ease of use, accuracy and versatility.



They are designed to evaluate the physical properties of a wide range of materials from metals, plastics, rubber, and textiles, to timber, adhesives, film, paper and composites. Vertically bench-mounted, they can test for tension, compression, flexure and shear and are available with force capacities of up to 1kN, 5kN, 10kN, 25kN, 50kN or 100kN.

The S-Series machines can operate either on a stand-alone basis, allowing basic tests to be performed, or in conjunction with Hounsfield's easy-to-use 'QMAT-Pro' software. The machines feature a liquid crystal graphical display, showing force and displacement as well as real-time test graphics. They can store and retrieve test profiles and each has a parallel printer port for direct printing of graphical test reports.

Launched in 1995, the S-Series represents the best of Hounsfield's design and manufacturing expertise, quality engineering and competitive pricing policy.

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Hi-Tech at low cost

For those who need high technology at minimum cost, the Hounsfield W-Series of universal materials testing machines is the solution.

As a replacement for the original Hounsfield Tensometer, it has been specially developed to provide accurate testing at an affordable price. The range is therefore well suited to colleges, universities and other educational establishments.

W-Series machines are horizontal and come in three frame capacities of 5kN 10kN and 20kN. They feature a range of functions including the ability to produce comprehensive test reports with user-defined titles, test parameters and high-resolution graphs, plus accurate force and displacement measurements and automatic measurement calculations.

Test reports can be output to a printer directly from the machine or exported in a standard ASCII format. And, for all W-Series machines ordered before June 2001, Hounsfield will supply a FREE terminal software application for Microsoft Windows. The application will allow users to capture data from the testing machine and transfer it easily into an excel template for viewing and manipulation.

Made to Hounsfield's demanding quality standards, W-Series machines are easy to operate, strongly built, portable, easily stored and, above all, safe to use.

The range is the ideal solution for those establishments needing to upgrade from machines containing mercury – at minimum cost.

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QMAT-Pro

The userfriendly link between material, machine and operator.



In an educational environment, there is a greater need than normal for materials testing equipment to be simple and user-friendly. And it is precisely to meet that need that Hounsfield developed its advanced 'QMAT Professional' software.

Designed for use on the Hounsfield S-Series of testing machines, 'QMAT-Pro' is an easy-to-use and powerful link between the operator and material under test, complementing and enhancing the hardware. Most importantly, it has been designed to enable quick and easy testing by operators of all skills levels. In fact, testing can be carried out with minimal training without a user ever having operated a computer before. And, as it is so quick and simple, students can focus on the actual testing rather than on how to operate the machine.

'QMAT-Pro' (QMAT is derived from 'Questions MATerials') is actually an extremely sophisticated piece of software with advanced features such as post-test analysis and test generator, making it the most versatile materials testing application available.

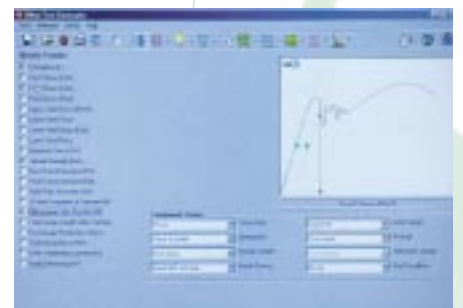
One key advantage for educational establishments is its ability to run over 1,000 test routines, developed and referenced to international and industrial testing standards (including ISO, ASTM, BS, DIN, EN & JIS), thereby meeting a vast range of testing requirements.

'QMAT-Pro' has four main elements:

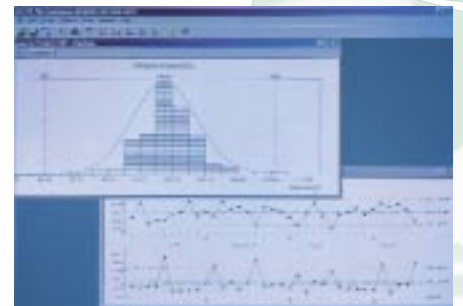
- **Test Zone** gives access to the comprehensive library of test routines – tension compression, shear, flexure, puncture, tear, peel and friction. It controls the machine during the test and calculates the results.
- **Post Test Analysis** is a sophisticated facility that enables original test results to be modified and additional calculations made, even after the sample has been destroyed during testing.
- **File Examination** provides instant access to test results, graphs and data for in depth statistical analysis, whether immediately after a test or weeks, months or even years later.
- **Test Generator** offers maximum flexibility allowing the operator to modify existing tests, select results required, define test profiles and calculations, and to simulate tests safely before actual execution.

'QMAT-Pro' is compatible with Windows 95, 98, 2000 and NT4 operating systems. All test data is fully portable within the windows environment – copy and paste raw ASCII data and bitmaps to Word, Excel, Access, Data files or e-mails.

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Create your own test routines using 'Test Generator'



Monitor your quality over time with 'File Examination'

The Standard

FAXBACK ON 01737 764768

Visit us at www.hounsfield.com

TO:
Martin Wheeler
Sales and Marketing Director
Hounsfield Test Equipment Ltd

We hope you have enjoyed this first issue of The Standard. For more information relating to the subjects covered in this Newsletter, please tick the box and fax back to us. If you have any specific comments or wish to see more about other areas, please let us know.

Please send me more information on:

- Hounsfield W-Series.
- Health and Safety – Recommendations and references relating to working with mercury.
- Hounsfield S-Series.
- QMAT-Pro – A new improved software solution that makes every stage of material testing simple and accurate.
- Hounsfield History – An introduction to the company.

Please ensure I receive a copy of The Standard in future

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