ELE International

DataSystem 7.2

Accurate and Consistent Geotechnical Testing for Windows 7 32/64 bit

- ➤ Now supports Ethernet communications

- ➤ Programs available for Triaxial, Permeability Consolidation, Direct/Residual Shear and CBR tests

- ➤ Full support for Windows 7 and MS Word 2007/2010

- ➤ Accurate and repeatable test procedures

- ➤ 24 hour unsupervised logging

- ➤ Eliminate the possibility of errors while taking manual readings

- ➤ Tests are run with step-by-step instructions selectable between BS and ASTM/AASHTO standards

- ➤ Automatic report generation in accordance with the above standards

- ➤ Real-time graphical outputs to both screen and printer as required

DS 7.2

ELE International is pleased to present a NEW version of its geotechnical data acquisition and analysis testing software, DS7.2 (DataSystem 7.2), compatible with Microsoft Windows 7, in conjunction with the new DSU.

With the growing demand for automated testing, ELE International offer the DataSystem 7.2 suite of geotechnical data acquisition, analysis and reporting software, providing significant efficiency benefits in high volume testing laboratories.

The ELE DataSystem is a unique instrument designed to interface with ELE testing equipment, data loggers (the GDU and the new DSU) and a range of transducers – more detail can be found in the DataSystem Specifications sheet section of this brochure. This allows technicians to perform other activities. It provides geotechnical engineers with fully automated data collection and analysis capabilities for the laboratory.

With TCP/IP connection now fully supported, users can get the benefit of the using the new DSU with DS7.2, enabling remote connection of the software to the data logging facility.

The system has been designed to suit the requirements of a wide range of geotechnical testing laboratories. Commercial Testing Labs, Contractors, Consultants and Government bodies will quickly realise the productivity benefits of DataSystem, while students in Educational Institutions will have the added benefit of direct involvement in the use of computer technology related to conventional materials testing methods.

Through the ELE DataSystem and your computer, you will achieve not only professional testing procedures in accordance with industry standards, but also cost-effective benefits in productivity.

You can eliminate the need for overtime, night shifts and weekend shifts for data logging purposes, as automated logging enables greater utilisation of working hours. Considerable time can also be saved in the recording and calculation of tests, with automatic printing and plotting of test results for direct entry into reports.

The ELE DataSystem can be configured to work on a wide variety of laboratory testing devices, including equipment not manufactured by ELE. Our highly trained technical service group is always available to help develop a system that best meets your requirements.

To take full advantage of the extensive analysis facility the package provides, Microsoft Word (Version 2007 to 2010) should be resident on the system. This facility will allow reports to be generated automatically.
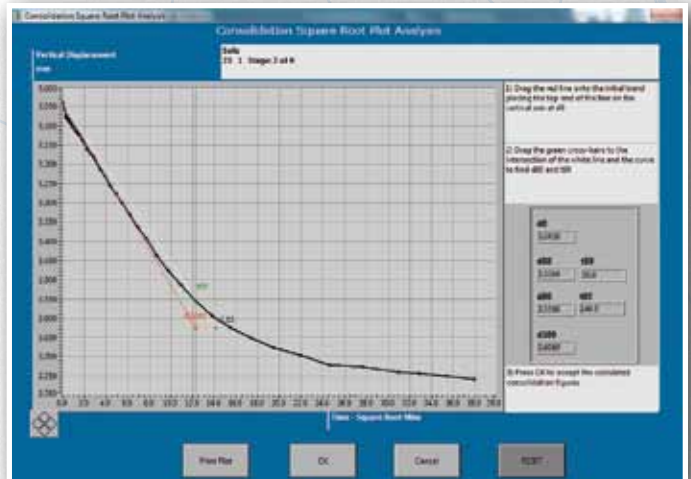
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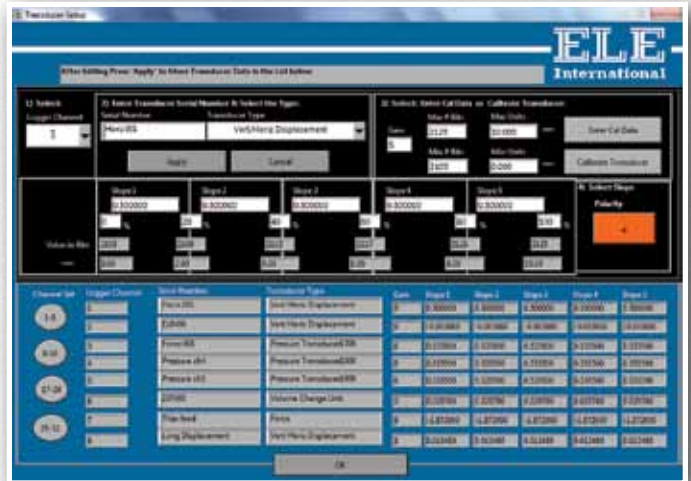
Effective Stress Test Monitoring
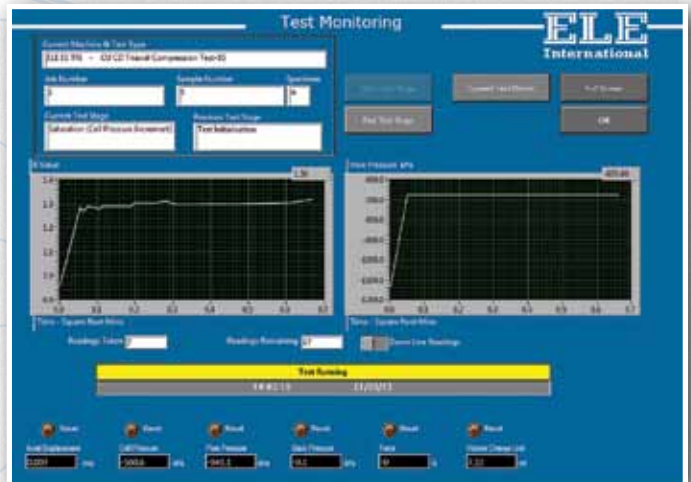
Square-Root Plot Analysis

27-1753 Quick Undrained Triaxial Software Undrained Shear Strength in Triaxial

➤ **Options for single or multi-stage testing on a sample**

➤ **Mohr circles produced for graphical analysis**

Compression Software (Quick Undrained Triaxial)

Single-stage includes:
BS1377: Part 7, ASTM/AASHTO D2850, T296

Multi-stage includes: BS1377: Part 7

Options are available for a single test on one sample, standard three-sample procedure with linking of the results, or for a multi-stage test on one sample. Load and strain are monitored through transducers. Various printouts and graphical plots are available including basic sample data, moisture content and density. The program tabulates shearing data and plots stress against strain. Mohr circles are produced for graphical analyses.

27-1763 CU/CD Effective Stress Triaxial Software

➤ **Complete package for consolidated drained and consolidated undrained triaxial tests**

CU/CD Triaxial Compression Test Software

CU includes:
BS1377: Part 8, ASTM/AASHTO D4767, T297

CD includes: BS1377: Part 8

This advanced package includes procedures for consolidated drained and consolidated undrained tests. Standard options are available for saturation, consolidation and shearing with automatic monitoring of the various parameters through transducers linked to the system. Load, strain, volume-change, pore-pressure, cell pressure and back pressure can all be monitored. Various prints and graphical plots are available to the engineer and include saturation data such as pore pressure build-up and B values, consolidation, volume change against time, shearing load versus strain with pore pressure monitoring.

27-1768 Triaxial Permeability Software

Permeability in a Triaxial Cell Software

Package includes:
Permeability in a Triaxial Cell BS1377: Part 6

This program provides data for the determination of permeability of soil specimens using a triaxial cell and two volume change units in accordance with BS 1377.

27-1773 One-Dimensional Consolidation Software

One-Dimensional Consolidation Software (Oedometer).

Package includes:
BS1377: Part 5, ASTM/AASHTO D2435, T216

DS7.1 Consolidation Software provides all basic functions needed to record and analyse consolidation test data. Options are available for monitoring settlement on a log time or square-root time basis. Printouts and graphical plots are available for all stages including Mv and Cv moisture content, voids ratio plots, and initial sample conditions.

27-1793 Direct/Residual Shear Software

Shear Strength by Direct and Residual Shear Software

Package includes:
BS 1377: Part 7, ASTM/AASHTO D3080

This unique package provides test options for quick undrained or drained shear tests with the user selectable option of residual testing. Individual test results can be linked together to produce the Coulomb Envelope. Printouts and plots are available for sample description and basic test data such as moisture content, etc. Real-time plots of settlement, shear versus displacement and vertical displacement during shearing is readily available via the PC screen or printer.

27-1798 CBR Penetration Software

California Bearing Ratio (CBR) Penetration Software

Package includes:
BS1377: Part 4 ASTM/AASHTO D1883, D3668, T193

This program provides the classical data for the CBR test. Load and penetration are monitored simultaneously. The program tabulates the results and provides a graphical presentation report.

S1160 DS7 Software Suite

Comprising of the following programs; Undrained and CU-CD, Triaxial, Permeability, Direct & Residual Shear, CBR and One-dimensional Consolidation tests.

Minimum PC System Requirements

- Computer: IBM-compatible PC
- Disk Space: Minimum of 1 Gbyte free hard disk space
- RAM: Minimum of 2 Gbyte
- Processor: 2GHz minimum*
- Screen: 1024 x 768 for best results, or higher
- System Software: Windows™ 7 and XP (SP3)
- Net Framework 4 (included)
- For full advantage of the advanced reporting facilities, Microsoft Word (Version 2007 or 2010) should be resident on the system.

* (Note : AMD processors not supporting SSE2 are not compatible. These include all AMD 'Socket A' parts)

ELE DataSystem Specifications

Item		Description	California Bearing Ratio	One Dimensional Consolidation	Direct/ Residual Shear	Triaxial — Total Stress (QU/UU)	Triaxial — Effective Stress (CU/CD) - 1 cell system	Triaxial — Effective Stress (CU/CD) - 3 cell system	Triaxial — Permeability - 1 cell system	Triaxial — Permeability - 2 cell system
			BS 1377,1924; EN 13286-47; ASTM D1883; AASHTO T193	BS 1377; EN 1997-2; ASTM D2435; AASHTO T216	BS 1377; EN 1997-2; ASTM D3080	BS 1377-7, -8 1924-2, ASTM D2850 D4767, AASHTO T296 T297				
Transducers	27-1559	S-Type Load Cell 50 kN for CBR or Marshall Tests	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	27-1705	CBR Penetration Transducer 50mm Travel	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	27-1649	Consolidation Transducer Assembly 15mm Travel	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a
	27-1551	S-Type Load Cell 5 kN for Triaxial Tests	n/a	n/a	n/a	*Samples up to 100mm dia	*Samples up to 50mm dia	n/a	n/a	n/a
	27-1553	S-Type Load Cell 10 kN for Triaxial Tests	n/a	n/a	n/a	*Samples up to 100mm	*Samples up to 100mm	n/a	n/a	n/a
	27-1555	S-Type Load Cell 25 kN for Triaxial Tests	n/a	n/a	n/a	*	*	n/a	n/a	n/a
	27-1561	S-Type Load Cell 5 kN for Use with Direct/ Residual Shear Machine	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a
	27-1689	Vertical Displacement Transducer Assembly 15mm Travel	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a
	27-1697	Horizontal Displacement Transducer Assembly 15mm Travel	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a
	27-1617	Axial Strain Transducer Assembly 50mm Travel	n/a	n/a	n/a	1	1	1	n/a	n/a
	27-1625	Pressure Transducer Assembly 1700 kPa	n/a	n/a	n/a	1	3	9	1	2
	27-1573	Submersible Load Transducer Assembly 5 kN Capacity in Compression	n/a	n/a	n/a	n/a	1	*Samples up to 50mm dia	n/a	n/a
	27-1575	Submersible Load Transducer Assembly 10 kN Capacity in Compression	n/a	n/a	n/a	n/a	*Samples up to 100mm dia	3	n/a	n/a
	27-1641	Volume Change Transducer Assembly 80Cm3 Capacity Maximum Working Pressure 1700 kPa	n/a	n/a	n/a	n/a	1	3	2	4
DS7 Software	27-1798	DS7.2 California Bearing Ratio (CBR) Penetration	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	27-1773	DS7.2 One-Dimensional Consolidation	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a
	27-1793	DS7.2 Direct and Residual Shear Strength	n/a	n/a	1	n/a	n/a	n/a	n/a	n/a
	27-1753	DS7.2 Undrained Triaxial Shear Strength	n/a	n/a	n/a	1	n/a	n/a	n/a	n/a
	27-1763	DS7.2 CU/CD Triaxial Shear Strength	n/a	n/a	n/a	n/a	1	1	n/a	n/a
	27-1768	DS7.2 Permeability in a Triaxial Cell	n/a	n/a	n/a	n/a	n/a	n/a	1	1
	S1160	DS7.2 Software-UU/CU/CD Triaxial, Permeability, Consolidation, Direct/Residual Shear, CBR								
		Total number of channels required for the above tests#	2	1	3	3	6	16	3	6
GDU Options	27-1505	8 Channel Expansion Analogue Input Module. Fitted with 8 Standard 5 Pin Din Sockets#	n/a	n/a	n/a	n/a	n/a	1	n/a	n/a
DSU	27-1300	DSU electronic readout and control system	1	1	1	1	n/a	n/a	n/a	n/a

For details of all other testing equipment and accessories to perform these tests, please visit www.ele.com. DS7.2 software system requirements: Operating System - Windows 7 or XP (SP3 or higher)., Automatic Report Generation Microsoft Word 2007 to 2010. *Available as an option we recommend use of submersible load transducers when performing effective stress tests. # The GDU offers up to 32 channels - concurrent testing is possible - ability to perform all of the above tests concurrently or multiple tests of the same type.

Distributor:

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