

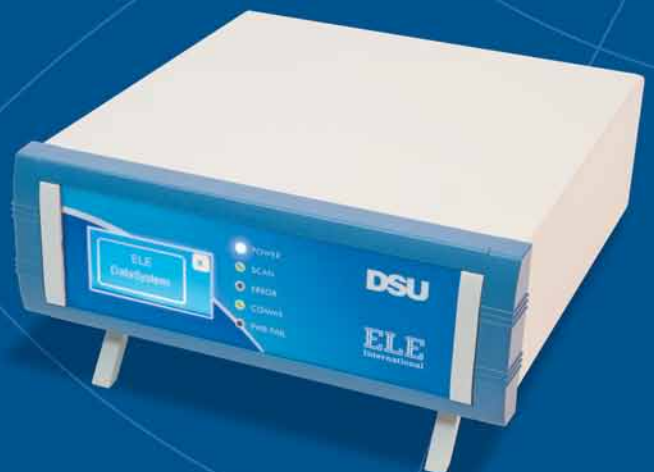


# Data System Unit (DSU)

## Accurate and Consistent Testing

New

- 4 channel automatic control and data-logging unit
- For performing CBR, Marshall, Unconfined Compression, Direct and Residual Shear, One-Dimensional Consolidation, Unconsolidated Undrained, Consolidated Drained and Consolidated Undrained tests
- LAN communication now supported – run multiple DSUs on the same network, with remote access
- Never lose data from power failures – 2 gigabytes of non-volatile memory
- 2 year warranty



# The 2014 enhanced ELE DataSystem range

ELE International is pleased to announce the release of a NEW automatic control and data-logging unit, the DSU in conjunction with DS7.2.



BS1377: Part 4, Part 5, Part 7, ASTM D1883 D2435 D2850 D3080 D3668, AASHTO T-193 T-216 T-245 T-296, EN 12697-34

The DSU is a versatile instrument designed to accommodate the general logging requirements of geotechnical and materials testing engineers. Its intelligent interface allows the user to work with a range of different sensors.

The DSU has two distinct modes of operation. The first is referred to as DS mode (DataSystem) for operation with ELE International's established DS7 geotechnical testing software.

## DS Mode (with the new DS7.2!)

In DS mode, the unit can be used to perform simultaneous CBR (up to 2) and One-Dimensional Consolidation tests (up to 4). It will also perform a single Unconsolidated Undrained, and Direct and Residual Shear test.

The DS7 software is a "Windows" based program that is user-friendly in operation and unrivalled in the wide range of facilities to satisfy the following soil testing subjects and standards. It has full compliance to both BS/EN and ASTM/AASHTO requirements, guiding the user step-by-step through the testing procedure, generating fully-compliant reports.

### Geotechnical Software Modules

27-1753	DS7.2 Undrained Triaxial Shear Strength Program for Windows 7
27-1763	DS7.2 One-Dimensional Consolidation Program for Windows 7
27-1793	DS7.2 Direct and Residual Shear Strength Program for Windows 7
27-1798	DS7.2 California Bearing Ratio (CBR) Penetration software

## DU Mode

The 4 channel unit will be capable of performing two Marshall or CBR tests, or one Marshall and one CBR on a standalone mode. A license-free Windows application will show real time graphical data, test calculations for CBR, Marshall and Unconfined Compression with output to .csv files. The DSU may be connected to up to two different compression frames and run independent tests on each, whilst controlling the frame:

Part No.	Product	Control functions
25-3700	Multiplex 50 range	Fully automatic start and stop facility
45-6810	Marshall Test 50 range	Requires manual start and stop of DSU and load frame
24-9150	CBR Test 50	Requires manual start and stop of DSU and load frame

The DSU itself may be connected to any standard personal computer via an RS232 interface or Ethernet link. An additional USB connection is available for updating software and viewing/copying the test result files.

### Unit Specification

Voltage	Single phase 115/230VAC +10% 50/60Hz
Current	Fused at 400mA T
Power	15VA
Degree of protection	IP30
Operational temperature	0°C...40°C
Transport and storage	-40°C...70°C
Humidity	10%...90% (with no condensation)
Size (W x D x H)	260 x 260 x 100mm
Weight	2.1kg

### Minimum PC System Requirements

- **Computer:** IBM-compatible PC
- **Disk Space:** Minimum of 2Gbyte free hard disk space
- **RAM:** Minimum of 2Gbyte
- **Processor:** 2Ghz or faster is recommended
- **Screen:** 1280 x 768 for best results, or higher
- **System Software:** Windows™ 7 & XP (SP3)
- For full advantage of the advanced reporting facilities, Microsoft Word (Version 2007 or later) should be resident on the system.

# The new Automatic Control Data-logging Unit

## DS Mode

- Up to four one dimensional consolidation tests
- Up to two CBR tests
- One direct/residual shear test
- One triaxial quick un-drained test

## DU Mode

- Up to two Marshall tests
- Up to two CBR tests
- Up to two Unconfined compression tests
- Automatic frame control

- Touch Screen data entry for standalone operation, Marshall/CBR/Quick un-drained
- Automatic single and dual frame control (with Multiplex 50 frame)
- Log Memory of 2 Gigabytes
- Non-volatile memory
- Ethernet TCP/IP link and serial comms support
- Market leading signal stability
- Certificate and manual calibration features



The DSU itself may be connected to any standard personal computer via an RS232 interface or Ethernet link.



			DU Mode		DS Mode			
			Included as standard					
			Marshall Stability Test	California Bearing Ratio	California Bearing Ratio	One Dimensional Consolidation	Direct/Residual Shear	Total Stress (QU/UU)
			Export data via PC application		Full analysis and reporting			
Item	Description	EN 12697; AASHTO T-245	BS 1377, 1924; EN 13286-47; ASTM D1883; AASHTO T193	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	1	1	n/a	n/a	n/a
	27-1705	CBR Penetration Transducer 50mm Travel	n/a	1	1	n/a	n/a	n/a
	27-1649	Consolidation Transducer Assembly 15mm Travel	n/a	n/a	n/a	1	n/a	n/a
	45-6820	Flow Transducer 10mm	1	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	n/a	n/a	*
	27-1553	S-Type Load Cell 10 kN.for Triaxial Tests	n/a	n/a	n/a	n/a	n/a	1
	27-1555	S-Type Load Cell 25 kN.for Triaxial Tests.	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	n/a	n/a	1	n/a
	27-1689	Vertical Displacement Transducer Assembly 15mm Travel	n/a	n/a	n/a	n/a	1	n/a
	27-1697	Horizontal Displacement Transducer Assembly 15mm Travel	n/a	n/a	n/a	n/a	1	n/a
	27-1617	Axial Strain Transducer Assembly 50mm Travel	n/a	n/a	n/a	n/a	n/a	1
	27-1625	Pressure Transducer Assembly 1700Kpa	n/a	n/a	n/a	n/a	n/a	1
DS7 Software	27-1798	California Bearing Ratio (CBR) Penetration Program.	n/a	n/a	1	n/a	n/a	n/a
	27-1773	One Dimensional Consolidation Test Program.	n/a	n/a	n/a	1	n/a	n/a
	27-1793	Direct and Residual Shear Strength Program.	n/a	n/a	n/a	n/a	1	n/a
	27-1753	Undrained Triaxial Shear Strength Program. Single and Multi-Stage Options.	n/a	n/a	n/a	n/a	n/a	1

For details of all other testing equipment and accessories to perform these test, please visit [www.ele.com](http://www.ele.com)  
 \*Available as an option

27-1300 DSU electronic readout and control system	Accessories for use with the Multiplex 50
Add /01 for 220-240 V AC 50/60 Hz	27-1300/10 Dual Frame Comms Cable
Add /02 for 110 - 120 V AC 50/60 Hz	27-1300/11 Safety/ID Cable
	27-1300/12 PC Cable



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