



IF IT'S WORTH BUILDING, IT'S WORTH TESTING

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Piston Restraint Clamp for Ele Triaxial Cells

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DS7.3 Undrained Triaxial Shear Strength for Windows 10

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Air Compressor

De-Aired Water Apparatus 15 Litre Capacity

Code: [25-1833/01](#)

Product Group: [De-Aired Water](#)

Complies to BS 1377-1



This compact self-contained unit will de-air water quickly and efficiently down to levels of dissolved oxygen acceptable for geotechnical test methods. Air is removed from the water by a vacuum system, which continuously circulates the water in the tank. The unit is supplied with a clear water container, which will hold a maximum of 15 litres of water. Input and output lines are formed using standard 6 mm tube connectors.

Standards

BS 1377-1

Specification

Dimensions l x w x h (mm) 380 x 356 x 470



Digital Tritest 50 Load Frame

Code: 25-3518/01

Product Group: Digital Tritest 50 Load Frame, CBR Load Frames, Triaxial Load Frames

- Microprocessor control
- Large on-board LED screen display
- Direct entry via a touch sensitive keyboard
- Rapid approach and return to datum of platen
- Fully variable speed, 0.00001 to 9.99999 mm/min
- Samples up to 100 mm diameter

This 50 kN capacity machine, designed primarily for triaxial testing of soil specimens up to 100 mm diameter x 200 mm long, comprises a rigid twin column construction with an integral fully variable microprocessor controlled drive unit and LCD display with a touch sensitive keyboard. The machine is normally bench mounted for ease of installation and operation.

The use of a microprocessor controlled drive system and keyboard entry provides the Digital Tritest 50 with a wide variety of features which include pause and speed reset during test, RS 232C, operator programming of speed and control functions, self test diagnostics and many other features.

A robustly constructed steel case houses the motor drive system with careful attention being given to the prevention of ingress of water or grit. All operating controls are mounted on the front panel of the machine, which is angled and recessed to prevent physical and environmental damage.

Standards

BS 1377-7, BS 1377-8, BS 1924-2, ASTM D1883, ASTM D2166, ASTM D2850, ASTM D4767, ASTM D7181, AASHTO T99, AASHTO T134, AASHTO T135, AASHTO T136, AASHTO T180, AASHTO T193, AASHTO T208, AASHTO T296, AASHTO T297

Further Information

Complete with RS 232C interface.

Specification

Capacity	50kN (11,200 lbf).
Speed Range	English mode: 0.000001 to 0.399999 in/min. Metric mode: 0.00001 to 9.99999 mm/min.
Rapid Approach Speed	1.0 in/min. (25 mm/min.).

Product Sheet

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Platen Travel	100mm (3.9"); limit switch protection.
Platen Diameter	133 mm (5.2")
Vertical Clearance	910 mm, (36 .8") maximum; 305mm, (12") minimum.
Horizontal Clearance	364mm, (15 .3").
Serial Interface	RS232C; programmable baud rate and protocol.
Overall Dimensions	500 x 500 x 1,470 mm, (19.7" w. x 19.7" d. x 57.8" h).
Weight	Net 100kg (220 lbs); Shpg. 136kg (300 lbs).



100mm Triaxial Cell 1700Kpa with 5 Pressure/ Drainage Ports. Supplied with Two Valves.

Code: [25-4157](#)

Product Group: [Triaxial Cell](#), [Triaxial Cells](#)

- Working pressure up to 1700 kPa
- All round visibility
- Sample sizes 38 to 100 mm diameter
- Rapid assembly and dismantling
- Accepts a range of interchangeable submersible load transducers

This range of precision made triaxial cells has been designed to meet the requirements of the modern soils laboratory. The cells have been treated to minimise corrosion. Particular attention has been paid to the quality of finish between the piston and the head. Final assembly includes the fitting of an O-ring seal and the use of special lubricant to reduce friction to a minimum and eliminate water leakage.

The piston load capacity is designed to accept high horizontal forces which may be present during the final stages of a test. Each cell has five take-off positions drilled in the base for top drainage/back pressure, pore water pressure and bottom drainage. Two no-volume change valves and an anvil for strain gauge/transducer datum are supplied for fitting to the cell.

A feature of these cells is that they all accept a single diameter piston. The internal height is such that a range of submersible load transducers can be fitted without any modification. Each cell will accept a range of base adaptors and various accessories for testing a wide range of specimens

Standards

BS 1377, ASTM D2850, ASTM D4767, AASHTO T296, AASHTO T297



100 mm Base Adaptor for 100 mm Triaxial Cell.

Code: [25-4186](#)

Product Group: [Specimen Base Adaptors, Base Pedestals](#)

100 mm Base Adaptor with Twin Pore Pressure Ports for 100 mm Triaxial Cell.

Standards

BS 1377, ASTM D2850, ASTM D4767, AASHTO T296, AASHTO T297



Piston Restraint Clamp for Ele Triaxial Cells

Code: [25-4200](#)

Product Group: [Aggressive Materials](#), [General Cell Accessories](#)

For ELE Triaxial Cells Manufactured From July 1996.

Standards

BS 1377, ASTM D2850, ASTM D4767, AASHTO T296, AASHTO T297

Further Information

To lock the loading piston into position



**Valve No Volume Change 1/4 Inch BSp
Fitted with 6 mm Connector and Integral
Sealing Ring.**

Code: [25-4520](#)

Product Group: [Accessories for CU/CU effective
stress, General Cell Accessories](#)

Standards

ASTM D2850, ASTM D4767, ASTM D7181, AASHTO T296, AASHTO T297

Pressure Pad 100mm Diameter.

Code: [25-7590](#)

Product Group: [Specimen Caps](#), [Pressure Pads](#)

100 mm diameter pressure pad. The pad shall have two empty ports and will come complete with two blanking plugs, plastic tubing and connector. Suitable For both drained and undrained tests.



Standards

ASTM D2850, ASTM D4767, ASTM D7181, AASHTO T296, AASHTO T297, ASTM D5084



Membrane Placing Tool 100mm/4 Inch Diameter.

Code: [25-7610](#)

Product Group: [Membrane Placing Tools, O-Ring Placing Tools](#)

100Mm/4 Inch Diameter Membrane Placing Tool.

Standards

ASTM D2850, ASTM D4767, ASTM D7181, AASHTO T296, AASHTO T297, ASTM D5084



Rubber Membrane 100mm/4 Inch Diameter. Pack of 10

Code: [25-7621](#)

Product Group: [Rubber Membranes](#), [Tri-Flex 2](#)
[Permeability Test Cell](#), [Rubber Membranes](#)

100 mm/4 Inch diameter rubber membrane (pack of 10).

300 mm length x 0.5 mm thickness.

Black sealing rings pictured are sold separately (25-7631 100 mm).

Standards

ASTM D2850, ASTM D4767, ASTM D5084, AASHTO T296, AASHTO T297, ASTM D7181



Membrane Sealing Ring 100mm Diameter. Pack of 10.

Code: [25-7631](#)

Product Group: [Membrane Sealing Rings](#), [Sealing Rings](#), [Tri-Flex 2 Permeability Test Cell](#)

100 mm diameter membrane sealing ring (Pack Of 10).

Standards

ASTM D2850, ASTM D4767, ASTM D5084, AASHTO T296, AASHTO T297



Suction Membrane Device 100mm/4 Inch Diameter.

Code: [25-7640](#)

Product Group: [Suction Membrane Devices](#), [Suction Membrane Device](#)

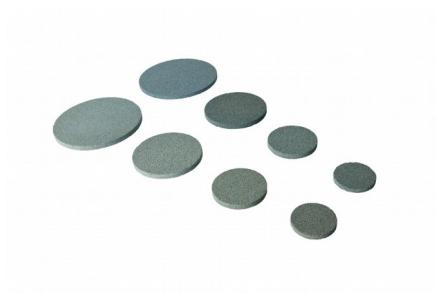
100Mm/4 Inch Diameter Suction Membrane Device.



Two-Way Split Former 100mm Diameter.

Code: [25-7650](#)

Product Group: [Two-way Split Formers](#), [Two-Way Split Formers](#)



Porous Disc 100mm Diameter Pack of 2.

Code: [25-7661](#)

Product Group: [Accessories for CU/CU effective stress, Porous Stones, Tri-Flex 2 Permeability Test Cell](#)

100 mm diameter porous disc (Pack of 2).

Standards

ASTM D2850, ASTM D4767, ASTM D5084, AASHTO T296, AASHTO T297, ASTM D7181



Filter Paper Drain 100mm/4 inch Diameter. Pack of 50.

Code: [25-7670](#)

Product Group: [Accessories for CU/CU effective stress, Filter Paper Drains](#)

Filter paper drain 100 mm diameter (Pack of 50).

Standards

ASTM D2850, ASTM D4767, ASTM D7181, AASHTO T296, AASHTO T297



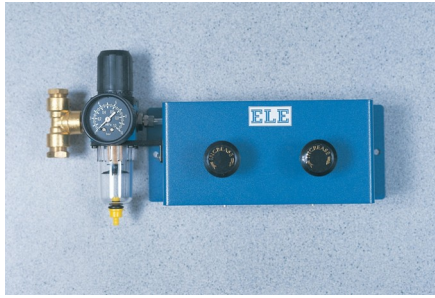
Bladder-Type Air/Water Pressure Assembly. 1000 Kpa Maximum Working Pressure.

Code: 26-1746

Product Group: [Air/Water Pressure Systems - up to 1000 kPa](#)

With transparent plastic chamber for operating continuously at pressures up to 1000 kPa. A length of tubing is provided for connecting the air/water cylinder outlet to a pressure measuring system.

- Used to supply hydraulic pressure from a pneumatic pressure source.
- Prevents air entering the hydraulic pressure system.
- Maximum working pressure 1000kpa.
- Supplied with connectors and tubing for fitting to pressure measuring systems.



Pneumatic Pressure Reducing Panel. Provides Two Independent Pressure Outlets 1000 kPa Max.

Code: **26-1760**

Product Group: **Air/Water Pressure Systems - up to
1000 kPa**

Comprising two constant pressure reducing valves with inlet water trap and pressure indicator. The unit allows a maximum output pressure of 1000 kPa. Maximum input pressure should not exceed 1400 kPa. The panel has an inlet connector to accept Nylon tubing from the air compressor and two 6 mm outlets for connecting Bladdertype Air/Water Pressure Assemblies. An outlet connector is fitted for the connection of an additional panel using Nylon tubing to increase the total capacity of the system. This outlet is blanked off when not required.



Nylon Tubing 30 Metre Length.

Code: [26-1769](#)

Product Group: [Air/Water Pressure Systems - up to 1000 kPa](#)

30 metre length. For pressures up to 1700 kPa. Used for connecting Air Compressors to Pneumatic Pressure Reducing Panels, or for connecting two Pressure Reducing Panels together.

Further Information

Nylon tubing 30 metres with pressure fittings.



Universal Pump and Pressure Indicating Panel 1700Kpa.

Code: [26-1880](#)

Product Group: [Modular Pressure Panel System](#)

This is the main pressure display in the system for monitoring various pressures and also provides fine control of the pressure within the system using the rotary hand pump. The unit is fitted with a dual calibrated 250 mm diameter pressure gauge, four inlet/outlet no-volume change valves, screw controlled rotary hand pump, water reservoir and isolating valves. The unit is housed in a hinged case for wall or bench mounting. By using an isolating valve the panel may be used to monitor cell or back pressure. 1700 kPa and 250 lbf/in².



Nylon Tubing 6mm Od 3500Kpa.

Code: [26-1926](#)

Product Group: [Permeability of Rock, Volume Change Measurement](#)

6 mm outside diameter x 4 mm inside diameter. For use up to a pressure of 3500 kPa. Priced per metre.



6mm Elbow Connector.

Code: [26-1928](#)

Product Group: [Volume Change Measurement](#)



6mm T Connector.

Code: [26-1930](#)

Product Group: [Volume Change Measurement](#)



Distance Piece Stainless Steel for Use with Submersible Load Cells and Axial Strain Transducers.

Code: [27-1293](#)

Product Group: [Load Measurement, Load Measurement, Submersible Load Transducers](#)

Required when using submersible load cells.



GDU 8 Channel Data Acquisition Unit 220-240 V 50/60 Hz, 1 Ph.

Code: 27-1500/01

Product Group: Data Logging with the GDU, Geotechnical Data Acquisition Unit (GDU), Automatic Data Acquisition - Triaxial, Automatic Data Acquisition - Consolidation, Automatic Data Acquisition - Direct Shear, Automatic Data Acquisition - CBR

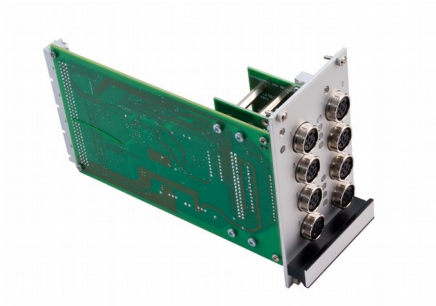
The GDU is a stand-alone, multi-tasking, multi-channel data logger, that is reliable and powerful, enabling it to co-ordinate test data from the range of ELE transducers required for various test methods.

The ELE Geotechnical Software package (DS7.1 and following), in conjunction with the GDU and a range of transducers, are the two central components required to create a modern turnkey soil testing system. Being fully modular it can be adapted to a wide range of soil testing laboratory configurations.

- For performing CBR, Consolidation, Direct/Residual Shear and Total & Effective Stress Triaxial tests
- 8 Channels expandable to 32 for performing multiple, concurrent tests for cost savings
- Independent signal conditioning on each channel to maintain data accuracy
- Field-upgradeable software, meaning no downtime for future software and functionality upgrades
- PC link via RS232 (DS7.1 only), or RS232 and Ethernet P2P/LAN (with DS7.2 and following)
- Extended warranty

Specification

Case	Aluminum, free standing; houses power supply, analog to digital conversion module and an 8-channel analog input module with transducer energization.
Sockets	Standard 5-pin DIN type.
Input Range	± 5 volts to ± 10 mV full scale.
Transducer Supply	10vDC.
Dimensions	12.8" w. x 14.3" d. x 6.1" h. (325 x 363 x 155 mm).
Weight	Net 14.08 lbs. (6.4 kg).



8-Channel Expansion Analog Input Module

Code: [27-1505](#)

Product Group: [Geotechnical Data Acquisition Unit \(GDU\)](#)



Submersible Load Transducer Assembly 10kN Capacity In Compression.

Code: [27-1575](#)

Product Group: [Load Measurement, Load Measurement](#)

- Eliminates effects of piston friction on readings
- Unaffected by cell confining pressures
- Easily installed in triaxial cell
- Supplied complete with calibration certificate and 5-pin DIN type connector for use with GDU

Submersible Load Transducers are used to measure accurately the axial loads applied to triaxial test specimens. Consisting of a load cell and piston assembly these units replace the standard triaxial cell loading piston. A major advantage is that these transducers measure loads directly on top of the specimen. All transducers are supplied complete with a 5-pin DIN type connector and calibration certificate.

Specification

Dimensions	76 x 50 mm (dia x h) excluding piston and adaptor
Overload capacity	150%
Output	27 mv full range
Excitation	11 V DC (15 V DC max)
Non-linearity	0.1% maximum
Hysteresis Deflection	0.1% maximum 0.05 mm at full load
Side force	50% full scale maximum without effect
Connector	5-pin DIN plug
Compensated temperature range	1 to 50°C
Weight g	850



Axial Strain Transducer Assembly 50mm Travel Fitted with 5 Pin Din Plug.

Code: [27-1617](#)

Product Group: [Axial Displacement](#), [Axial Displacement](#), [Displacement Transducers](#)

0 to 50 mm range. For use with Triaxial Cells.

- Ideally suited for use with GDU for accurate displacement measurements
- Models available for use in consolidation, shear, CBR and triaxial test applications
- Supplied complete with mounting hardware for specified products

Displacement Transducers are used in consolidation, shear, CBR and triaxial test applications for accurate displacement measurements. They are supplied complete with a 5-pin DIN type connector for direct connection to the GDU.

Specification

Construction	Fully encapsulated electronics, sealed in a stainless steel case
Excitation	10V DC
Connector	5-pin DIN type
Mounting bracket	Included as standard
Weight kg	0.45



Pressure Transducer Assembly 1700Kpa Fitted with 5 Pin DIN Plug.

Code: 27-1633

Product Group: Pressure Measurement, Tri-Flex 2
One-Cell Permeability Test System, Pressure
Transducer

Pressure Transducers are used to measure the cell, pore and back pressures during triaxial testing. Assemblies are supplied complete with a de-airing block, valve, 5-pin DIN plug connector and calibration certificate

Specification

Construction	Stainless Steel
Excitation	10 V DC
Output	143 mV full range
Thread	1/4" BSP



Volume Change Transducer Assembly 80ml Capacity Maximum Working Pressure 1700KPa

Code: 27-1641

Product Group: [Volume Change Measurement](#),
[Tri-Flex 2 One-Cell Permeability Test System](#), [Volume Change Measurement](#), [Volume Change Transducer](#)

- Reversing valves to increase capacity
- Steel case for wall mounting and access to piping
- Supplied complete with calibration certificate

The Volume Change Transducer provides continuous measurements of volume change during the triaxial test. The assembly includes a valve to reverse the flow through the unit, providing increased capacity.

Specification

Maximum Pressure	250 psi (1,700 kPa).
Excitation	10V DC.
Output	1.25 Volts full range.
Capacity	80 cc x 0.1 cc sensitivity.
Case	Steel; hinged for access to piping.
Connector	5-Pin DIN type.
Overall Dimensions LXWXH	0.44 x 0.3 x 0.27 m
Weight	Net 11 lbs. (5 kg).



DS7.3 Undrained Triaxial Shear Strength for Windows 10

Code: [27-2753](#)

Product Group: [Automatic Data Acquisition - Triaxial, DS7.3 for Windows 10, DS7.3](#)

- Options for single or multi-stage testing on a sample
- Mohr circles produced for graphical analysis

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.



Air Compressor

Code: 83-1730/01

Product Group: Air Compressors, Air/Water Pressure Systems - up to 1000 kPa

Further Information

****NOT AVAILABLE FOR SALE IN THE USA****

Specification

Dimensions (l x w x h)	483 x 457 x 864 mm
Free air delivery	2.0 cfm
Receiver capacity	50 litres
Maximum pressure	1000 kPa
Continuous working pressure	700 kPa
Electrical supply	220 – 240 V AC 1 ph 50 Hz
Water Trap	No
Weight	57 kg