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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 I 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

Rapid Approach Speed

Complete with RS 232C interface.

Specification

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





Platen Travel

Platen Diameter Vertical Clearance

Horizontal Clearance Serial Interface

Overall Dimensions

Weight

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

Accessories



50kN Clamped Boss Load Ring Code: 78-0860



Adaptor kit, to perform CBR on the Tritest 50 load frame Code: 25-3518/10



Clamped Boss Load Ring - 10.0 kN Code: 78-0460



Clamped Boss Load Ring - 28.0 kN

Code: 78-0760









Clamped Boss Load Ring - 3.0 kN

Code: 78-0160



Clamped Boss Load Ring - 4.5 kN

Code: 78-0260

Alternatives



MultiPlex 50 Load Frame

Code: 25-3700/01



Versa-Loader Code: 25-3525/02







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

Accessories

100 mm Base Adaptor for 100 mm Triaxial Cell.



Code: 25-4186







Pressure Interface Chamber

Code: 25-0695

Alternatives



50mm Triaxial Cell 1700Kpa with 5 Pressure/ Drainage Ports. Supplied with Two Valves.

Code: 25-4047



70mm Triaxial Cell 1700Kpa with 5 Pressure/ Drainage Ports. Supplied with Two Valves.

Code: 25-4117







38mm/1.5 Inch Base Adaptor for 50mm Cells.

Code: 25-4166 Product Group: Specimen Base Adaptors, Base Pedestals

38mm/1.5 Inch Base Adaptor with Twin Pore Pressure Ports for 50mm Cells.

Standards

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

Accessories

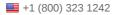


100 mm Base Adaptor for 100 mm Triaxial Cell.

Code: 25-4186



50mm Base Adapter for 50mm Cells. Code: 25-4168









50mm Base Adaptors for 70mm Cells.

Code: 25-4174



70mm Base Adaptor for 70mm Cells.

Code: 25-4176

Alternatives



100 mm Base Adaptor for 100 mm Triaxial Cell.

Code: 25-4186



50mm Base Adapter for 50mm Cells. Code: 25-4168



50mm Base Adaptors for 70mm Cells.

Code: 25-4174









70mm Base Adaptor for 70mm Cells.

Code: 25-4176







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

Accessories



38mm/1.5 Inch Base Adaptor for 50mm Cells.

Code: 25-4166



50mm Base Adapter for 50mm Cells. Code: 25-4168









50mm Base Adaptors for 70mm Cells.

Code: 25-4174



70mm Base Adaptor for 70mm Cells.

Code: 25-4176

Alternatives



38mm/1.5 Inch Base Adaptor for 50mm Cells.

Code: 25-4166



50mm Base Adapter for 50mm Cells. Code: 25-4168



50mm Base Adaptors for 70mm Cells.

Code: 25-4174









70mm Base Adaptor for 70mm Cells.

Code: 25-4176







Membrane Placing Tool 35mm/38mm.

Code: 25-4290 Product Group: Membrane Placing Tools, O-Ring Placing Tools

Membrane Placing Tool For 35Mm/1.4 Inch And 38Mm/1.5 Inch Samples.

Standards

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

Accessories

Membrane Placing Tool 100mm/4 Inch Diameter.



Code: 25-7610



Membrane Placing Tool 70mm/2.8 Inch Diameter.

Code: 25-6470

Alternatives



Membrane Placing Tool 100mm/4 Inch Diameter. Code: 25-7610



Membrane Placing Tool 70mm/2.8 Inch Diameter. Code: 25-6470







Pressure Pad 38mm/1.5 Inch Diameter.

Code: 25-5050 Product Group: Pressure Pads

38 mm / 1.5 Inch 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







Two-Way Split Former 38mm/1.5 Inch Diameter.

Code: 25-5120 Product Group: Two-way Split Formers, Two-Way Split Formers

Two-Way Split Former For 38Mm/1.5 Inch Samples.







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

Code: 26-1746 Product Group: Air/Water Pressure Systems - up to 1700 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.

Accessories



Nylon Tubing 30 Metre Length.

Code: 26-1769

Spares/Consumables



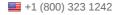
Pneumatic Pressure Reducing Panel. Provides Two Independent Pressure Outlets 1000 kPa Max.

Code: 26-1760



Replacement Bladder Wide Neck (38mm Id)

Code: 26-1746/10







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

Code: 26-1760 Product Group: Air/Water Pressure Systems - up to 1700 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 1700 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.







Pressure Test 1700 Oil/Water Constant Pressure System 0 to 1700kPa 220-240V 50/60Hz 1Ph.

Code: 26-1800/01

Product Group: Oil/Water Constant Pressure System, Air/Water Pressure Systems - up to 1700 kPa

- 0 to 1700 kPa (250 lbf/in2) fully variable
- Continuous constant pressure control
- One litre capacity

The ELE oil/water constant pressure system, PressureTest 1700, is extremely versatile and can be used in conjunction with a wide range of test equipment. The unit provides continuous variable pressure up to 1700 kPa. Pressure is increased or decreased simply by turning a control wheel.

The apparatus is supplied without a gauge for those customers who have suitable pressure monitoring equipment. A digital pressure gauge is offered as an accessory. The machine features a clear hydraulic/water interface reservoir and up to one litre capacity of water is available under pressure.

Further Information

Dimensions (without gauge) 240 x 400 x 500 mm (l x w x h).

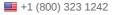
Accessories



Digital Pressure Gauge 1700 kPa for Use with 26-1800 Series Oil/Water Constant Pressure System.

Code: 26-1820

Spares/Consumables









Oil 5 Litres T46

Code: 26-1805







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 diamter 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.

Spares/Consumables



Pressure Gauge 1700Kpa (250Psi) 250mm Diameter.

Code: 26-1865/10







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

Code: 27-1293 Product Group: Load Measurement, Load Measurement, Submersible Load Transducers

Required when using submersible load cells.

Accessories



Submersible Load Transducer Assembly 10kN Capacity In Compression.

Code: 27-1575



Submersible Load Transducer Assembly 5kN Capacity In Compression.

Code: 27-1573

Alternatives



Submersible Load Transducer Assembly 10kN Capacity In Compression.







Submersible Load Transducer Assembly 5kN Capacity In Compression.







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

Aluminum, free standing; houses power supply, analog to digital conversion module and an 8-channel analog input module with transducer

Standard 5-pin DIN type. \pm 5 volts to \pm 10 mV full scale.

12.8" w. x 14.3" d. x 6.1" h.

(325 x 363 x 155 mm). Net 14.08 lbs. (6.4 kg).

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Case

Sockets Input Range Transducer Supply Dimensions

Weight

Accessories





8-Channel Expansion Analog Input Module

Code: 27-1505



USB to Serial Adapter

Code: 27-1701

Alternatives



GDU 8 Channel Data Acquisition Unit 100-120 V 60 Hz

Code: 27-1500/02



RS232/USB Cable, GDU







8-Channel Expansion Analog Input Module

Code: 27-1505 Product Group: Geotechnical Data Acquisition Unit (GDU)







Submersible Load Transducer Assembly 5kN Capacity In Compression.

Code: 27-1573

Product Group: Load Measurement, Load Measurement, Submersible Load Transducers

- •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

Overload capacity Output Excitation Non-linearity Hysteresis Deflection

Side force

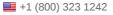
Connector Compensated temperature range Weight g 75 x 50 mm (dia x h) excluding piston and adaptor 150% 26 mv full range 10 V DC (15 V DC max) 0.1% maximum 0.1% maximum 0.05 mm at full load 50% full scale maximum without effect 5-pin DIN plug 0 to 50°C

850

Accessories



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







Submersible Load Transducer Assembly 10kN Capacity In Compression.

Code: 27-1575

Alternatives



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

Code: 27-1293



Submersible Load Transducer Assembly 10kN Capacity In Compression.







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

Overload capacity Output Excitation Non-linearity Hysteresis Deflection

Side force

Connector Compensated temperature range Weight g 76 x 50 mm (dia x h) excluding piston and adaptor 150% 27 mv full range 11 V DC (15 V DC max) 0.1% maximum 0.1% maximum 0.05 mm at full load 50% full scale maximum without effect 5-pin DIN plug 1 to 50°C

850

Accessories



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







Submersible Load Transducer Assembly 5kN Capacity In Compression.

Code: 27-1573

Alternatives



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

Code: 27-1293



Submersible Load Transducer Assembly 5kN Capacity In Compression.







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

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

Accessories



Horizontal Displacement Transducer Assembly 15mm Travel 5 Pin Din Plug Mounting Pillar

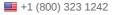
Code: 27-1697



Vertical Displacement Transducer Assembly 15mm Travel with 5 Pin Din Plug Bracket for Shear Box

Code: 27-1689

Spares/Consumables









CBR Displacement Transducer

Code: 27-1706

Alternatives



Horizontal Displacement Transducer Assembly 15mm Travel 5 Pin Din Plug Mounting Pillar

Code: 27-1697



Vertical Displacement Transducer Assembly 15mm Travel with 5 Pin Din Plug Bracket for Shear Box







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 Excitation Output Capacity Case

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







Vertical Displacement Transducer Assembly 15mm Travel with 5 Pin Din Plug Bracket for Shear Box

Code: 27-1689

Product Group: Displacement Measurement, Measurement of Horizontal and Vertical Movement, Displacement Transducers

0 to 10 mm range. For use with Direct/Residual Shear Machines. •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 accuratevdisplacement measurements. They are supplied complete with a 5-pin DIN type connector for direct connection to the GDU.

Specification

Construction

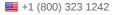
Excitation Connector Mounting bracket Weight kg Construction

Excitation Connector Mounting Bracket Weight Fully encapsulated electronics, sealed in a stainless steel case 12 V DC 5-pin DIN type Included as standard 0.45 Fully encapsulated electronics, sealed in a stainless steel case. 10vDC. 5-Pin DIN type. Included as standard. Net 1 lb. (0.45 kg).

Accessories



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







Horizontal Displacement Transducer Assembly 15mm Travel 5 Pin Din Plug Mounting Pillar

Code: 27-1697

Spares/Consumables



CBR Displacement Transducer

Code: 27-1706

Alternatives



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

Code: 27-1617



Horizontal Displacement Transducer Assembly 15mm Travel 5 Pin Din Plug Mounting Pillar







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.

