

















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

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This wishlist was generated on 25/04/2016, and contains the following Products:

#### 25-3518/01

**Digital Tritest 50** 

#### 27-1551

S-Type Load Cell 5 kN.for Triaxial Tests. Fitted with 5 Pin Din Plug.

#### 27-1617

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

#### 27-1633

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

#### 26-1880

Universal Pump and Pressure Indicating Panel 1700Kpa.

#### 26-1760

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

#### 26-1746

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

#### 83-1730/01

**Air Compressor** 

#### 26-1926

Nylon Tubing 6mm Od 3500Kpa.

#### 26-1769

Nylon Tubing 30 Metre Length.

#### 27-1293

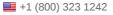
Distance Piece Stainless Steel for Use with Submerisble Load Cells and Axial Strain Transducers.

#### 25-4047

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

#### 25-4168

50mm Base Adapter for 50mm Cells.





#### 25-5470

Membrane Placing Tool 50mm Diameter.

#### 25-5480

Suction Membrane Device 50mm Diameter.

#### 25-5500

**Two-Way Split Former 50mm Diameter.** 

#### 25-5430

**Pressure Pad 50mm Diameter.** 

#### 25-5441

Rubber Membrane 50mm Diameter Pack of 10.

#### 25-5461

Membrane Sealing Ring 50mm Diameter Pack of 10.

#### 25-4166

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

#### 25-4290

Membrane Placing Tool 35mm/38mm.

#### 25-5100

Suction Membrane Device 38mm/1.5 Inch Diameter.

#### 25-5120

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

#### 25-5050

Pressure Pad 38mm/1.5 Inch Diameter.

#### 25-5061

Rubber Membrane 38mm/1.5 Inch Diameter. Pack of 10.

#### 25-5081

Membrane Sealing Ring 38mm/1.5 Inch Diameter. Pack of 10.

#### 24-9150/01

Cbr-Test 50 Machine 50kN Capacity BS and ASTM Supplied with Stabilising Bar.



#### 27-1559

50kN S-type Load Cell

#### 27-1705

CBR Penetration Transducer 50mm Travel Fitted with 5 Pin Din Plug.

#### 24-9182

**Penetration Piston** 

#### 24-9188

Bracket and Adaptor. Dual Purpose Mounting Bracket for CBR Penetration Gauges EL24-9184/EL24-9186

#### 24-9214

2Kg Annular Surcharge Weight

#### 24-9216

2Kg Split Surcharge Weight.

#### 25-0402

Consolidation Frame One Dimensional Consolidation Incremental Loading Device.

#### 25-0408

Set of Weights 100Kg Total Weight.

#### 25-0503

**Consolidation Cell Complete 75mm Diameter Sample** 

#### 25-0509

**Calibration Disc 75mm Cell** 

#### 27-1649

**Consolidation Transducer Assembly 15mm Travel Fitted with 5 Pin Din Plug.** 

#### 26-2114/01

Digital Direct/Residual Shear Apparatus Complete with Lever Loading Assembly. 220-240V 50/60Hz 1Ph.

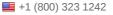
#### 27-1561

S-Type Load Cell 5 kN.for Use with Direct/ Residual Shear Machine. Fitted with 5 Pin Din Plug.

#### 26-2132

Set of Weights 50 kg Slotted.

+44 (0)1525 249 200





#### 26-2201

Specimen Cutter 100mmsq.

#### 26-2205

Specimen Extrusion Tool 100 mm sq

#### 27-1697

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

#### 27-1689

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

#### 25-0580

Constant Head Permeability Cell 75mm Diameter Specimen.

25-0591 Manometer Tubes & Stand.

25-0593 Constant Level Tank.

42-4580 Tamping Rod 8mm Dia X 300mm.

#### 82-0380

Measuring Cylinder - Glass 100 ml

82-0460

Measuring Cylinder - Glass 500 ml

82-1060 Volumetric Flask - 1000 ml

27-1500/01 GDU 8 Channel Data Acquisition Unit 220-240 V 50/60 Hz, 1 Ph.

#### 27-1505

8-Channel Expansion Analog Input Module

#### S1160

DS7.2 Software-UU/CU/CD Triaxial, Permeability, Consolidation, Direct/Residual Shear, CBR









#### **Digital Tritest 50**

Code: 25-3518/01

Product Group: Digital Tritest 50 Load Frame, 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

Dimensions (I x w x h) Max vertical clearance Horizontal clearance Platen diameter Platen travel Platen speed range 500 x 500 x 1470 mm 910 mm 364 mm 133 mm 100 mm 0.00001 to 9.99999 mm/min

#### www.ele.com +44 (0) 01525 249 200



### **Product Sheet**

Rapid approach speed Weight kg Capacity Speed Range

Rapid Approach Speed Platen Travel

Vertical Clearance

Horizontal Clearance Serial Interface

**Overall Dimensions** 

Weight

25 mm/minute 140 12 ,200 lbf. (50 kN). English mode: 0.000001 to 0.399999 in/min. Metric mode: 0.00001 to 9.99999 mm/min. 2.0 in/min. (50 mm/min.). 3.9" (100 mm); limit switch protection. 36 .8" (910 mm) maximum; 12 " (305 mm) minimum. 15 .3" (364 mm). RS232 C; programmable baud rate and protocol. 19.7" w. x 19.7" d. x 57.8" h. (500 x 500 x 1,470 mm). Net 220 lbs. (100 kg); Shpg. 300 lbs. (136 kg).



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#### S-Type Load Cell 5 kN.for Triaxial Tests. Fitted with 5 Pin Din Plug.

Code: 27-1551 Product Group: Load Measurement, Load Measurement

•Repeatability better than  $\pm$  0.02% of rated output •Non-Linearity better than  $\pm$  0.03% of rated output •Supplied complete with 5-pin DIN type connector for connection to GDU

Ideally suited for a wide range of applications, ELE S-type load cells provide high accuracy and minimum deformation. Various models are available, with the necessary adaptors, for use with ELE Triaxial Load Frames, Multiplex 50/Marshall Test 50/CBR Test 50 and Direct Shear machine.



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#### 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

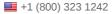
Displacement Transducers are used in consolidation, shear, CBR and triaxial test applications for accuratevdisplacement measurements. They are supplied complete with a 5-pin DIN type connector for direct connection to the GDU.

#### Specification

Construction

Excitation Connector Mounting bracket Weight kg Construction

Excitation Connector Mounting Bracket Weight Fully encapsulated electronics, sealed in a stainless steel case 10 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).





#### Pressure Transducer Assembly 1700Kpa Fitted with 5 Pin Din Plug.

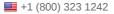
Code: 27-1633

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

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 Excitation Output Thread Construction Excitation Thread Construction Excitation Thread Stainless steel 10 V DC 143 mV full range ¼âIII BSP Stainless Steel. 10vDC. 1/4 BSP. Stainless Steel. 10vDC. 1/4 BSP.





# 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



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#### 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.





#### 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.

#### 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







#### **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 ( $I \times w \times h$ )	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





#### Nylon Tubing 6mm Od 3500Kpa.

Code: 26-1926 Product Group: Volume Change Measurement, Permeability of Rock

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





#### 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.





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

Code: 27-1293

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

Required when using submersible load cells.





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

Code: 25-4047 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

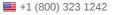
#### Standards

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

mm

#### Specification

50 mm
50 x 100 n
1700 kPa
45 kN
380 mm
155 mm
4





#### 50mm Base Adapter for 50mm Cells.

Code: 25-4168 Product Group: Base Pedestals, Specimen Base Adaptors

50mm Base Adapter with Twin Pore Pressure Ports for 50mm Cells.

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





#### Membrane Placing Tool 50mm Diameter.

Code: 25-5470 Product Group: Membrane Placing Tools, O-Ring Placing Tools

50 mm Diameter Membrance Placing Tool.







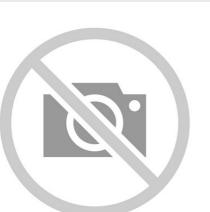


# Suction Membrane Device 50mm Diameter.

Code: 25-5480 Product Group: Suction Membrane Devices, Suction Membrane Device

50 mm Diameter Suction Membrane Device.





#### Two-Way Split Former 50mm Diameter.

Code: 25-5500 Product Group: Two-way Split Formers, Two-Way Split Formers

50 mm Diameter Two-Way Split Former.



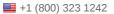


#### Pressure Pad 50mm Diameter.

Code: 25-5430

Product Group: Specimen Caps, Pressure Pads

50 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.







# Rubber Membrane 50mm Diameter Pack of 10.

Code: 25-5441 Product Group: Rubber Membranes

50 mm diameter rubber membrane (Pack Of 10).







# Membrane Sealing Ring 50mm Diameter Pack of 10.

Code: 25-5461 Product Group: Membrane Sealing Rings, Sealing Rings

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







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

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

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





#### 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







# Suction Membrane Device 38mm/1.5 Inch Diameter.

Code: 25-5100 Product Group: Suction Membrane Devices, Suction Membrane Device

Suction Membrane Device For 38Mm/1.5 Inch Samples.







# 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.



#### 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





#### Rubber Membrane 38mm/1.5 Inch Diameter. Pack of 10.

Code: 25-5061

Product Group: Rubber Membranes

Rubber Membrance For 38Mm/1.5 Inch Samples (Pack Of 10).





#### Membrane Sealing Ring 38mm/1.5 Inch Diameter. Pack of 10.

Code: 25-5081 Product Group: Membrane Sealing Rings

Membrane Sealing Ring 38Mm Diameter (Pack Of 10).





# Cbr-Test 50 Machine 50kN Capacity BS and ASTM Supplied with Stabilising Bar.

Code: 24-9150/01 Product Group: Load frames

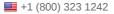
- Single speed machine (BS/EN and ASTM)
- Rapid platen adjustment
- Complete with stabilising bar
- Compact, bench-mounting design
- Options for mechanical or electronic measurement

Designed for performing laboratory CBR tests to BS 1377, EN13286-47 and ASTM D1883, this bench mounting machine comprises a twin column frame incorporating a motorised drive system. Rapid adjustment of the platen is provided, which enables daylight to be taken up quickly and also close control of application of a seating load.

#### Standards BS 1377, BS 1924, EN 13286-47, ASTM D1883, AASHTO T193

#### **Specification**

Dimensions ( $I \times w \times h$ )	550 x 400 x 1220 mm
Max vertical clearance	800 mm
Horizontal clearance	255 mm
Platen diameter	133 mm
Platen travel	105 mm
Weight kg	80







#### 50kN S-type Load Cell

Code: 27-1559 Product Group: Force measurement, Load Measurement, Electronic Instrumentation

Maximum working capacity of 50 kN and excitation 10 V ac/dc with an output of 2.7 mV/V nominal. Aluminium alloy and stainless steel construction with IP65 environmental protection.

Standards EN 12697-34

#### **Further Information**

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



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#### CBR Penetration Transducer 50mm Travel Fitted with 5 Pin Din Plug.

Code: 27-1705

Product Group: Penetration Measurement, Penetration and measurement

- 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 Fully encapsulated electronics, sealed in a stainless steel case 14 V DC 5-pin DIN type Included as standard 0.45







#### **Penetration Piston**

Code: 24-9182

Product Group: Penetration and measurement

1.935 mm2 (3 in2) area foot of case hardened steel. Designed to fit all ELE load rings.





#### Bracket and Adaptor. Dual Purpose Mounting Bracket for CBR Penetration Gauges EL24-9184/EL24-9186

Code: 24-9188

Product Group: In-situ CBR, Conversion of In-situ to Laboratory CBR, Penetration and measurement

Dual purpose mounting bracket for CBR penetration dial gauges. Allows gauge to be fixed to penetration piston or load ring.









### 2Kg Annular Surcharge Weight

Code: 24-9214 Product Group: BS EN CBR mould and accessories

Standards BS 1377, BS 1924, EN 13286-4, EN 1997-2









### 2Kg Split Surcharge Weight.

Code: 24-9216 Product Group: BS EN CBR mould and accessories

Standards BS 1377, BS 1924, EN 13286-4, EN 1997-2





#### Consolidation Frame One Dimensional Consolidation Incremental Loading Device.

Code: 25-0402

Product Group: Consolidation Apparatus, Table Top Consolidation Apparatus

- High capacity 8800 kPa on 50 mm diameter specimens using 11:1 beam ratio
- Triple beam ratio, 9:1, 10:1, 11:1
- Compact unit ensures maximum space saving

The ELE Oedometer is rigidly constructed to ensure minimum frame distortion. The frame is designed to load the specimen through a yoke assembly and one of three alternative beam ratios. The beam is fitted with a counterbalance weight and beam support jack. The cell platform will accept the complete range of ELE consolidation cells and is fitted with a central spigot to ensure accurate centring of the cell under the loading yoke. Dimensions without hanger 711 x 203 x 508 mm (l x w x h). Weight 22 kg.

#### Standards

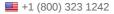
BS 1377, EN 1997-2, ASTM D2435, ASTM D4546, AASHTO T216

#### **Further Information**

Supplied without dial gauge and weights.

#### Specification

Load Capacity	48 tons/sq. ft. (5,14 8 kPa) on 2.5" (63 mm) diam. samples.
Loading Beam	Cast aluminum; counterbalanced; 9:1,10:1 and 11 :1 ratios.
Frame	Cast aluminum; integral beam support jack; plated steel and platform.
Dimensions	8" w. x 28" d. x 20" h. (203 x 711 x 508 mm), excluding weight hanger.
Weight	Net 30 lbs. (13 .6 kg); Shpg. 40 lbs. (18.1 kg).







### Set of Weights 100Kg Total Weight.

Code: 25-0408 Product Group: Consolidation Apparatus 9 x 10 kg, 1 x 5 kg, 2 x 2 kg, 1 x 1 kg.

Standards ASTM D2435, ASTM D4546, AASHTO T216



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#### Consolidation Cell Complete 75mm Diameter Sample

Code: 25-0503

Product Group: BS EN consolidation cells and accessories, Pneumatic Consolidation Apparatus, Fixed Ring Consolidation, Table Top Consolidation Apparatus

#### Standards

BS 1377, EN 1997-2

#### Specification

•	
Application	BS/EN 10:1
Specimen Dia	75 mm
Specimen area	4418 mm <sup>2</sup>
Beam ratio	9:1
Load kg	1
Stress	20 kPa
Typical max stress	3.2 MPa
Stress for 1 kg m <sup>2</sup>	20 kPa
Application	BS
Specimen Diameter	75 mm
Specimen Area	4418 mm <sup>2</sup>
Beam Ratio	10:01
Load	1 kg
Stress	20 kPa
Typical Maximum Stress	3.2 MPa
Stress for 1 kg	20 kPa

#### Spares/Consumables



75mm Dia Upper and Lower Porous Stones for Use on EL25-0503 Series Cell.

Code: 25-0503/13



#### Cutting Ring 75mm Cell.

Code: 25-0506











### **Calibration Disc 75mm Cell**

Code: 25-0509 Product Group: BS EN consolidation cells and accessories, Fixed Ring Consolidation

Standards BS 1377, EN 1997-2





#### Consolidation Transducer Assembly 15mm Travel Fitted with 5 Pin Din Plug.

Code: 27-1649

Product Group: Displacement Transducers, Vertical settlement measurement, Displacement Measurement

Fitted with 5 pin DIN plug.

#### Specification

Construction

Excitation Connector Mounting bracket Weight kg Construction

Excitation Connector Mounting Bracket Weight Fully encapsulated electronics, sealed in a stainless steel case 11 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).





#### Digital Direct/Residual Shear Apparatus Complete with Lever Loading Assembly. 220-240V 50/60Hz 1Ph.

Code: 26-2114/01

Product Group: Direct/Residual Shear Apparatus, Direct/Residual Shear Apparatus

- Microprocessor control
- Large on-board LCD screen display
- Direct entry via touch sensitive keyboard
- Rapid approach and return to start datum
- Fully variable speed, 0.00001 to 9.99999 mm/minute
- Accepts specimens up to 100 mm square

The ELE Direct Shear Apparatus accepts specimens 60 mm, 100 mm square or 2.5 inches in diameter. The use of a microprocessor controlled drive system and keyboard entry gives the apparatus a wide range of features that include pause and speed reset during test, RS 232C interface, operator programming of speed and control functions, self test diagnostics and many other features. A return to start datum provides a positive means of reversing the shearbox when either preparing for a new test or continuing with residual testing procedures.

Safety forward/reverse travel limit switches are fitted as standard and monitored through the electronics system control.

The electronics are housed in a modern moulded shroud, which includes a large LCD display and keyboard entry. The apparatus is enclosed in a robustly constructed case, has been designed for floor mounting and is supplied complete with carriage, loading hanger and 10:1 lever loading device.

#### Standards

ASTM D3080, AASHTO T236, BS 1377, EN 1997-2

#### **Further Information**

for 220 - 240 V AC, 50 - 60 Hz, 1 ph.

#### Specification

Sample Size

Speed Range

Accepts either 2.42 ", 2.5" diam.; 60 mm square samples using accessory shear box assemblies, not included. Variable in either English or Metric units





between 0.000001" (0.00001 mm) to 0.399999" (9.99999 mm) per minute. 1,000 lbf. (4.5 kN) maximum. 2,200 lbf. (1,000 kN) using 10:1 lever ratio.
44.7" l. x 12 .6" w. x 49.6" h. (1,135 x 320 x 1,260 mm). Net 181 lbs. (82 kg).

#### Spares/Consumables



Shear Force Vertical Load

Dimensions

Weight

### Dial Indicator - 1.0" Range

Code: 88-4100



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#### S-Type Load Cell 5 kN.for Use with Direct/ Residual Shear Machine. Fitted with 5 Pin Din Plug.

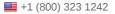
Code: 27-1561

Product Group: Measurement of Load (Shear Stress), Load Measurement

•Repeatability better than  $\pm$  0.02% of rated output •Non-Linearity better than  $\pm$  0.03% of rated output •Supplied complete with 5-pin DIN type connector for connection to GDU

Ideally suited for a wide range of applications, ELE S-type load cells provide high accuracy and minimum deformation. Various models are available, with the necessary adaptors, for use with ELE Triaxial Load Frames, Multiplex 50/Marshall Test 50/CBR Test 50 and Direct Shear machine.

#### Standards BS 1377, ASTM D3080





### Set of Weights 50 kg Slotted.

Code: 26-2132 Product Group: Application of Normal Stress

Normal stress is applied to the specimen through the lever loading device and the appropriate slotted weights





#### Specimen Cutter 100mmsq.

Code: 26-2201 Product Group: Shear Box Assemblies, Shear Box Assemblies

Standards ASTM D3080, AASHTO T236

### Spares/Consumables



Specimen Cutter 2.5 Inch Diameter.

Code: 26-2217



### Specimen Cutter 60mm Sq.

Code: 26-2185









### Specimen Extrusion Tool 100 mm sq

Code: 26-2205 Product Group: Shear Box Assemblies

Standards ASTM D3080, AASHTO T236





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

Code: 27-1697

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

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

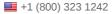
Displacement Transducers are used in consolidation, shear, CBR and triaxial test applications for accuratevdisplacement measurements. They are supplied complete with a 5-pin DIN type connector for direct connection to the GDU.

#### Specification

Construction

Excitation Connector Mounting bracket Weight kg Construction

Excitation Connector Mounting Bracket Weight Fully encapsulated electronics, sealed in a stainless steel case 13 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).





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

Code: 27-1689

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

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

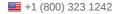
Displacement Transducers are used in consolidation, shear, CBR and triaxial test applications for accuratevdisplacement measurements. They are supplied complete with a 5-pin DIN type connector for direct connection to the GDU.

#### 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).







# Constant Head Permeability Cell 75mm Diameter Specimen.

Code: 25-0580 Product Group: Constant Head Apparatus

75 mm Diameter

#### Standards

BS 1377, EN 1997-2, ASTM D2434, AASHTO T215

### Specification

Nominal Cell inside diameer Cell wall Take-off points End plates Weight kg

75 mm Transparent plastic 3 Anodised aluminium 2.6





#### Manometer Tubes & Stand.

Code: 25-0591

Product Group: Constant Head Apparatus

Comprising three glass tubes of constant bore, metre scale and connecting tubing for cell pressure take-off points, all mounted on a free-standing panel.Comprising three glass tubes of constant bore, metre scale and connecting tubing for cell pressure take-off points, all mounted on a free-standing panel.

Standards BS 1377, EN 1997-2, ASTM D2434, AASHTO T215



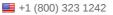


#### **Constant Level Tank.**

Code: 25-0593 Product Group: Constant Head Apparatus

Manufactured from transparent plastic with attachment for wall mounting. The inlet, outlet and overflow pipes are fitted to the base of the tank and can be adjusted for height within the tank. Supplied complete with connecting tubing.

Standards BS 1377, EN 1997-2, ASTM D2434, AASHTO T215





### Tamping Rod 8mm Dia X 300mm.

Code: 42-4580 Product Group: Aggregate Crushing Value (ACV) and Ten Percent Fines Value (TFV)

Spare: 8mm diameter  ${\rm x}$  300mm long with rounded end.





### Measuring Cylinder - Glass 100 ml

Code: 82-0380 Product Group: Measuring Cylinders, BS, Volumetric Shrinkage

Soda glass, spouted, BS EN 4788.







### Measuring Cylinder - Glass 500 ml

Code: 82-0460 Product Group: Measuring Cylinders, BS Soda glass, spouted, BS EN 4788.









#### Volumetric Flask - 1000 ml

Code: 82-1060 Product Group: Funnels and Flasks Soda glass, stoppered to BS ISO 1042 Class B.





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

Code: 27-1500/01

Product Group: Automatic data acquisition, Automatic Data Acquisition, Automatic data acquisition, Automatic Data Acquisition, Data Logging with the GDU, Geotechnical Data Acquisition Unit (GDU)

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), 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

Sutended werrent

• Extended warranty.

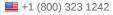
### Specification

Case

Sockets Input Range Transducer Supply Dimensions

Weight

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









### 8-Channel Expansion Analog Input Module

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







#### DS7.2 Software-UU/CU/CD Triaxial, Permeability, Consolidation, Direct/Residual Shear, CBR

Code: **S1160** 

Product Group: DS7, DS7.2 Geotechical Software General Module

• 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

