

















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

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DS7.2 Direct and Residual Shear Strength Program for Windows 7, 32/64 bit

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Porous Plate 60mm Sq.

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# 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 Accepts either 2.42 ", 2.5"

diam.; 60 mm square samples using accessory shear box assemblies, not included.
Variable in either English or

Speed Range Variable

Metric units

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between 0.000001"

(0.00001 mm) to 0.399999"

(9.99999

mm) per minute.

Shear Force 1,100 lbf. (5.0 kN) maximum. 2,200 lbf. (10.0 kN) using 10:1 Vertical Load

lever ratio.

Dimensions 44.7" l. x 12 .6" w. x 49.6" h.

(1,135 x 320 x 1,260 mm).

Weight Net 181 lbs. (82 kg).

#### **Accessories**



#### **Clamped Boss Load Ring - 2.0 kN**

Code: 78-0060



### **Clamped Boss Load Ring - 3.0 kN**

Code: 78-0160



#### **Clamped Boss Load Ring - 4.5 kN**

Code: 78-0260



#### **Dial Gauge 10mm Travel X 0.002mm Divisions.**

Code: 25-0440

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### Digital Proving Ring, 1,000 lbs (4.5 kN)

Code: 78-0264



# Digital Proving Ring, 450 lbs (2.0 kN)

Code: 78-0064



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

Code: 27-1697



#### **Mechanical Dial Indicator - 25 mm Range Clockwise Movement**

Code: 88-4110



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

Code: 27-1551

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### Set of Weights 50 kg Slotted.

Code: 26-2132



# **Shear Box Assembly 100mm Sq.**

Code: 26-2197



#### **Shear Box Assembly 2.5 Inch Diameter**

Code: 26-2213



#### **Shear Box Assembly 60mm Sq.**

Code: 26-2181



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

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Weight Set A

Code: 25-0535



# Weight Set B

Code: 25-0537

# Spares/Consumables



**Dial Indicator - 1.0" Range** 

Code: 88-4100



# **Electronic Digital Indicator, 0.600"/15 mm range**

Code: 88-4210



# **Vertical Dial Indicator, English**

Code: 25-0445

#### **Alternatives**

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Digital Direct/Residual Shear Apparatus Complete with Lever Loading Assembly. 110-120V 50/60Hz 1Ph.

Code: 26-2114/02



H60 Field Inspection Vane Tester 0-200Kpa In Carrying Case. includes calibration and certificates.

Code: 26-3335



**Hand Vane Tester** 

Code: 26-3346



Laboratory Vane Apparatus with 4 Springs and 12.7mm Vane; Hand Operated.

Code: 26-2270



Pocket Shearmeter with 3 Vanes 0 to 1Kgf/Cm2 X 0.5Kgf/Cm2.

Code: 26-2261

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# 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

#### **Accessories**



# **Slotted Surcharge Weight 0.25 kg**

Code: 26-2147



# **Slotted Surcharge Weight 0.5 kg.**

Code: 26-2145



# **Slotted Surcharge Weight 1 kg.**

Code: 26-2143

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### **Slotted Surcharge Weight 10 kg.**

Code: 26-2137



# **Slotted Surcharge Weight 2 kg.**

Code: 26-2141



# **Slotted Surcharge Weight 5 kg.**

Code: 26-2139

#### **Alternatives**



# **Slotted Surcharge Weight 0.25 kg**

Code: 26-2147



# **Slotted Surcharge Weight 0.5 kg.**

Code: 26-2145

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# **Slotted Surcharge Weight 1 kg.**

Code: 26-2143



# **Slotted Surcharge Weight 10 kg.**

Code: 26-2137



# **Slotted Surcharge Weight 2 kg.**

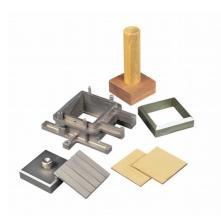
Code: 26-2141



# **Slotted Surcharge Weight 5 kg.**

Code: 26-2139

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#### **Shear Box Assembly 60mm Sq.**

Code: 26-2181

Product Group: Shear Box Assemblies, Shear Box **Assemblies** 

- •Manufactured from corrosion resistant materials
- •Sample size 60 x 60mm x 25mm high meeting BS
- •Incorporates PTFE faced box separation screws to reduce friction
- •Supplied complete with upper and lower porous plates and loading pad
- •Suitable for guick undrained or drained/residual tests

#### **Standards**

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

#### **Further Information**

All shearbox assemblies are designed to fit the carriage of 26-2114 series Digital Direct/Residual Shear Apparatus. They are supplied complete with three porous plates, one retaining plate and a loading pad. The three sizes supplied comply with the relevant requirements of BS 1377 and ASTM D3080. All assemblies can be used for quick shear tests or drained/residual shear tests.

Optional accessories are available including specimen cutters and extrusion tools.

#### **Specification**

Specimen area 60 x 60 mm Specimen thickness 25 mm Weight kg 2

Relevant standard BS 1377

#### **Accessories**



### Shear Box Assembly 100mm Sq.

Code: 26-2197

#### Spares/Consumables

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### Porous Plate 60mm Sq.

Code: 26-2181/10



# Specimen Cutter 60mm Sq.

Code: 26-2185



# Specimen Extrusion Tool 60 mm sq.

Code: 26-2189

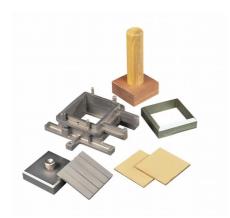
### **Alternatives**



# **Shear Box Assembly 100mm Sq.**

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# Specimen Cutter 60mm Sq.

Code: 26-2185

Product Group: Shearbox Assemblies- Accessories

and Spares

#### Standards

ASTM D3080, AASHTO T236

#### **Accessories**



#### **Shear Box Assembly 60mm Sq.**

Code: 26-2181

### Spares/Consumables



### Specimen Cutter 100mmsq.

Code: 26-2201



# **Specimen Cutter 2.5 Inch Diameter.**

Code: 26-2217

#### **Alternatives**

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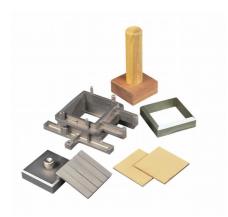
# Specimen Cutter 100mmsq.

Code: 26-2201



# **Specimen Cutter 2.5 Inch Diameter.**

Code: 26-2217



# Specimen Extrusion Tool 60 mm sq.

Code: 26-2189

Product Group: Shearbox Assemblies- Accessories

and Spares

Standards

ASTM D3080, AASHTO T236

#### **Accessories**



#### **Shear Box Assembly 60mm Sq.**

Code: 26-2181

#### Spares/Consumables



### **Specimen Extrusion Tool 2.5 Inch Diameter.**

Code: 26-2221

#### **Alternatives**



# **Specimen Extrusion Tool 2.5 Inch Diameter.**

Code: 26-2221

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#### **DSU Electronic Readout and Control** System 220 - 240 V AC 50/60 Hz

Code: 27-1300/01

Product Group: Data Logging with the DSU, Electronic Instrumentation, Electronic Instrumentation, Electronic Instrumentation, Data Logging with the DSU

- · Download the full brochure here [/Page/catalogue-download/NTRmZS9UaGUgTkVXIE RTVSBVU0EucGRm1
- · 4 channel automatic control and data-logging unit
- · Automatic, dual-frame control
- · Performs CBR, Marshall, Unconfined Compression, Direct and Residual Shear, One-Dimensional Consolidation and Unconsolidated Undrained tests
- · LAN connection software can be running anywhere on your server
- · Never lose data from power fails 2 gigabytes of non-volatile memory
- · Extended warranty

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

#### **Further Information**

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

- 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

#### **OVERVIEW**

• Touch Screen data entry for standalone operation, Marshall/CBR/Quick un-drained

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- Automatic single and dual frame control (with multiplex 50 frame)
- Log memory of 2 gigabytes
- · Non-volatile memory
- Ethernet TCPIP link and serial comms support
- · Market leading signal stability
- Certificate and manual calibration features

Become a member of the ELE International web site, add this new product to a wishlist to receive a quote! Click here [/Login]

This product is now available in the USA and Canada!

#### **Accessories**



Cable, Safety/ID

Code: 27-1300/11



**Dual Frame Comms Cable** 

Code: 27-1300/10



**PC Cable** 

Code: 27-1300/12

#### **Alternatives**



**DSU Electronic Readout and Control System 110 V AC 60 Hz** 

Code: 27-1300/02

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#### **Marshall Test 50**

Code: 45-6810/06



#### **Marshall Test 50**

Code: 45-6810/01

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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: Load Measurement, Measurement of Load (Shear Stress)

- •Repeatability better than ± 0.02% of rated output
- •Non-Linearity better than ± 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

#### **Accessories**



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

Code: 27-1551

#### **Alternatives**



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

Code: 27-1551

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### **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 Fully encapsulated electronics,

sealed in a stainless steel case

Excitation 12 V DC

Connector 5-pin DIN type

Included as standard Mounting bracket

Weight kg

Fully encapsulated electronics, Construction

sealed in a stainless steel

case.

Excitation 10vDC.

Connector 5-Pin DIN type.

Mounting Bracket Included as standard. Weight Net 1 lb. (0.45 kg).

#### **Accessories**



**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**

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

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

Code: 27-1697

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

Code: 27-1697

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

- •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 Fully encapsulated electronics,

sealed in a stainless steel case

Excitation 13 V DC

Connector 5-pin DIN type

Mounting bracket Included as standard

Weight kg 0.45

Construction Fully encapsulated electronics,

sealed in a stainless steel

case.

Excitation 10vDC.

Connector 5-Pin DIN type.

Mounting Bracket Included as standard. Weight Net 1 lb. (0.45 kg).

#### **Accessories**



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

Code: 27-1617

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# 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**



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

Code: 27-1617



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

Code: 27-1689

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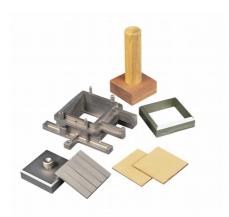


### **DS7.2 Direct and Residual Shear Strength** Program for Windows 7, 32/64 bit

Code: 27-1793

Product Group: DS7, DS7.2 Direct/Residual Shear Software, Automatic Data Acquisition - Direct Shear

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. Realtime plots of settlement, shear versus displacement and vertical displacement during shearing is readily available via the PC screen or printer.



# Porous Plate 60mm Sq.

Code: 26-2181/10

Product Group: Shearbox Assemblies- Accessories

and Spares

Standards

ASTM D3080, AASHTO T236

#### **Accessories**



#### **Shear Box Assembly 60mm Sq.**

Code: 26-2181

### Spares/Consumables



#### 2.42" Diameter Porous Stone

Code: 26-2223/10



#### **Porous Plate 2.5 Inch Diameter**

Code: 26-2213/10

#### **Alternatives**

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#### 2.42" Diameter Porous Stone

Code: 26-2223/10



#### **Porous Plate 2.5 Inch Diameter**

Code: 26-2213/10