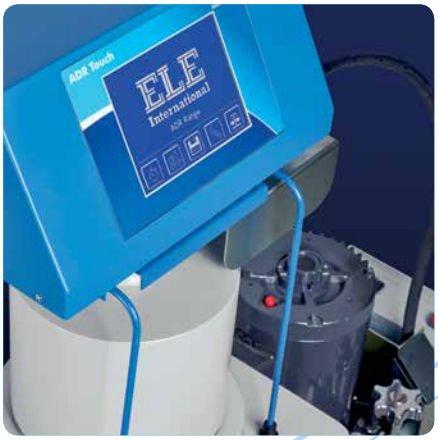
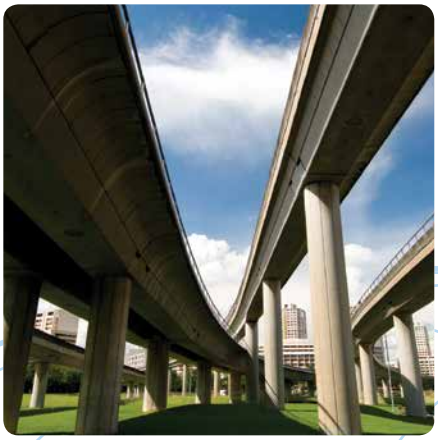
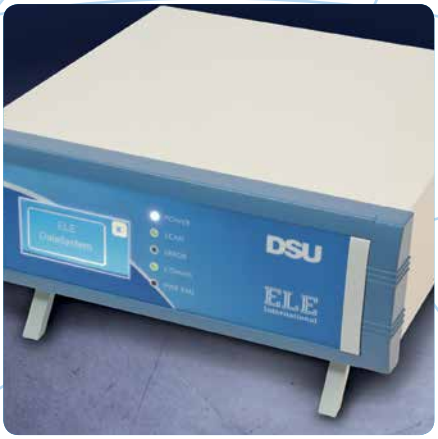
ELE International







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

www.ele.com

ELE International
A Full Service Provider







ELE International
Contents

This brochure outlines some of the major items of the ELE International product range, for full details of accessories and other products contact ELE or visit our website: www.ele.com

ELE International
The Company

ELE International is a highly experienced company supplying construction materials testing solutions worldwide. Strategically located facilities in the UK and USA, supported by regional offices with ELE associates located in People's Republic of China, Middle East and Singapore, provide high quality products and service to end users and local distributors.

This brochure features some of the major items in the ELE International product range; for full details of accessories and other products contact ELE or visit our website www.ele.com.

Customer Service

The satisfactory completion and ongoing performance of any civil engineering project is dependent on quality control tests being undertaken.

- ELE equipment meets latest standards, ensuring that performance specifications are achieved with confidence.
- Large stockholding enabling laboratories to be supplied and operational with minimum of delay.

Demonstration Laboratory

The ELE headquarters include a purpose-designed demonstration laboratory facility. Both new and existing products are installed in this area, enabling products to be evaluated for performance and compliance to various testing standards. This laboratory is also used for on-site training in setting up and equipment operation.

ISO 9001 Quality Assurance

ELE has a rigorous quality assurance system in operation, with third party certification to ISO9001:2008, throughout the company to ensure customers' requirements are met. The approval covers the design, development, procurement and warehousing of quality control testing equipment for the construction materials testing market. Established procedures are used to check each stage of manufacture as well as packing, shipping and accounts.

ELE International
Product Capabilities

Geotechnical Engineering

- Soil mechanics
- Foundation design
- Sampling, analysis and classification of soil
- Permeability
- Consolidation
- Triaxial
- Direct shear
- Site investigation and in-situ tests

Concrete Technology

- Construction strength and quality
- Strength of concrete
- Fresh concrete
- Cement analysis
- Aggregate classification
- Mix design
- Non destructive testing
- Sample preparation

General Lab Equipment

- Basic soils testing equipment
- Sieving equipment
- Ovens
- Scales

Soil Testing
Compaction

Automatic Compaction of Soils

The time and effort required to prepare specimens for compaction studies and other test methods can often be costly and time-consuming. The use of an automatic, mechanical compactor will show considerable cost benefits over hand compaction methods.

Specification

Dimensions	10” W. x 17” D. x 55” H.	
Rammer	ASTM	Circular faced 2” (50.8 mm) diameter. Adjustable to 5.5 lb (2.5 kg) or 10 lb (4.5 kg) weight
Drop	ASTM	Adjustable to 12” (305 mm) or 18” (455 mm)
Weight	419 lbs (190 kg)	

Automatic Compactor

ASTM D558, D560, D698, D1557; AASHTO T99, T134, T135, T136, T180

- Pre-set blow pattern ensures even compaction.
- Solid state controls for reliability and ease of maintenance.
- Automatic re-setting of counter after completion of blow pattern.

These machines automatically compact specimens eliminating the laborious hand compaction method. The height and weight of the rammer is adjustable to suit test requirements. An automatic blow pattern ensures optimum compaction for each layer of soil. The rammer travels across the mold and the table rotates the mold in equal steps on a base that is extremely stable. The number of blows per layer can be set at the beginning of the test.

Ordering Information

24-9095/02 Automatic Soil Compactor, 110-120 V AC, 50/60 Hz, 1 pH.

Soil compactor includes 4” and 6” compaction molds.

Accessories

24-9097 Standard Compaction Mold 1/30 cv.ft, 4” id x 4.584” H.

24-9098 Modified Compaction Mold 1/13.33 cv.ft, 6” id x 4.584” H.

24-9095/12 Calibration kit.

Soil Testing
CBR

California Bearing Ratio

The California Bearing Ratio test, or CBR as it is usually termed, is an empirical test first developed in California, for estimating the bearing value of highway sub bases and subgrades. The test follows a standardized procedure.

Load and Penetration

A range of accessories is available enabling options to collect and analyse data with the ELE CBR-Test 50.

1. Mechanical, using standard Load Rings and Penetration Dial Gauges.
2. Electronic Load Transducers and Displacement Transducers in conjunction with the ELE DSU (DataSystem Unit).

Versa-Loader™

ASTM D-2850;AASHTO T-296

- 10,000 lbf. (45 kN) maximum load.
- Accurate loading speeds from 0.08" 0.001" (0.025 mm) per minute.
- Push-button Up-Down-Stop operation switch protection.
- Highly versatile - can be used for Quick Undrained Triaxial, Unconfined Compression and CBR testing with proper.

Ordering Information

25-3525/02 110vAC, 50/60Hz, 1e.

Accessories

24-9175	CBR Test Accessory Set English, includes lower platen, penetration piston assembly, dial indicator with 1.0" range 10,000 lb capacity proving ring and mounting hardware.
24-9185	CBR Test Accessory Set For Use with GDU or DSU. Includes Platen Assembly, 10,000 lb. capacity S-Type Load Cell, 50 mm Displacement Transducer and Penetration Piston.
27-1124/02	CBR Test Digital Readout (English) Includes: 2-channel digital readout, 10,000 lb capacity S-Type load cell, penetration transducer with 2" range, penetration piston and mounting hardware.
24-9229	CBR Molds.
24-9236	Cutting Edge.
24-9237	Spacer Disc 5-7/8" Diameter.
24-9240	Filter Screens.
24-9244	Slotted Surcharge Weights 5 lb.
24-9245	Split Surcharge Weights 5 lb.
24-9246	Slotted Surcharge Weight 10 lb.
24-9247	Circular Surcharge Weight 10 lb.
24-9248	Slotted Surcharge Weight 20 lb.
24-9250	Filter Paper - Box of 100.
24-9260	Swell Plate.
24-9262	Tripod Attachment.

Soil Testing
Consolidation

One Dimensional Consolidation

The One-Dimensional Consolidation test is used to determine the consolidation characteristics of soils of low permeability. Tests are carried out on specimens prepared from undisturbed samples. Data obtained from these tests, together with classification data and a knowledge of the soils loading history, enables estimates to be made of the behavior of foundations under load.

Consolidation Apparatus

ASTM D2435, D4546; AASHTO T216

- 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.
- Loading Pressures on 2.5" (63 mm) diameter samples of up to 48 tons per sq. ft. (5,148 kPa) using 11:1 beam ratio.
- Triple beam ratios of 9:1, 10:1 and 11:1 minimize loading weight requirements.
- Rigid frame construction ensures accuracy, repeatability and reliability of test results.
- Integral beam support jack eliminates possible shock to sample during load application procedures.
- Compact, table top design for maximum space savings in the laboratory.
- Cast aluminum and plated steel construction for rust resistance and long life.

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: 8" W. x 28" D. x 20" L. mm.
Weight 301 lbs (13.6 kgs).

Ordering Information

25-0402	Consolidation Frame supplied without dial gauge and weights.

Accessories

25-0429	Floor Mounting Stand.
25-0479	2.5" Fixed Ring Consolidometer. With cutting (specimen) ring.
25-0455	50 mm Fixed Ring Consolidometer. With cutting (specimen) ring.
25-0530	2.5" Floating Ring Consolidometer.
88-4070	Dial Indicator. 0.4" range x 0.0001" graduations.
88-4080	Dial Indicator. 10 mm range x 0.0025 mm graduations.
88-4120	Dial Indicator. 1.0" range x 0.001" graduations.
88-4130	Dial Indicator. 25 mm range x 0.010 mm graduations.
25-0535	Weight Set A. Includes: four 1 kg, five 4 kg, and four 16 kg weights.
25-0537	Weight Set B. Includes: four 1 kg, three 4 kg and one 16 kg weights.
25-0544	16 Ton Weight Set. Includes: two 1/16 ton, one 1/8 ton, one 1/4 ton, one 1/2 ton, one 1 ton and seven 2 ton weights.

Soil Testing
Soil Strength (Direct Shear)

Direct/Residual Shear Apparatus

ASTM D3080, AASHTO T-236

- Microprocessor controlled drive system.
- Large on-board LCD screen display.
- Direct entry of shear speeds via touch sensitive keypad.
- Rapid approach and return to start datum.
- Fully variable speed control from 0.000001" (0.00001 mm) to 0.399999" (9.99999 mm) per minute.

The ELE Shear Apparatus accepts specimens 60 mm, 100 mm square or 2.5" in diameter. The use of a microprocessor controlled drive system and keyboard entry provides the apparatus with a wide range of features which include pause and speed reset during test, 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 travel limit switches are fitted as standard.

Supplied complete with carriage, loading hanger and 10:1 lever loading device.

Specification

Sample Size	Accepts either 2.42", 2.5" diameter; 60 mm square samples using accessory shear box assemblies, not included.
Speed Range	Variable in either English or Metric units between 0.000001" (0.00001 mm) to 0.399999" (9.99999 mm) per minute.
Shear Force	1,000 lbf. (4.5 kN) maximum.
Vertical Load	2,200 lbf. (1,000 kN) using 10:1 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).

Ordering Information

26-2114/02 Series Digital Direct/Residual Shear Apparatus. Supplied without shearbox, load ring, vertical and horizontal dial gauges.

Accessories

25-0445 Dial gauge 0.5 x 0.001" divisions.

88-4100 Dial indicator 1.0 range clockwise.

78-0260 Load ring 4.5 kN capacity.

27-1583* 2000lb (8.9 kN) capacity, Net weight 1 lb (0.45 kg).

27-1689* Vertical displacement transducer 0.000001 to 0.399999" range.

27-1697* Horizontal displacement transducer.

25-0537 Weight set.

*Requires data logger and data connection software.

Shear Box Assemblies

ASTM D3080

All shearbox assemblies are supplied complete with 2 porous plates, 1 retaining plate and a loading pad.

26-2181 Specimen Area: 60 x 60 mm.

26-2197 Specimen Area: 100 x 100 mm.

26-2213 Specimen Area: 2.5" diameter.

26-2223 Specimen Area: 2.42" diameter Shear Box Assembly (California Type).

Soil Testing
Soil Strength (Triaxial)

The ELE designed and manufactured Tritest 50 load frames are the most modern of their kind available to the discerning test laboratory. Each machine incorporates the latest microprocessor control systems, clear on-board screen displays and a range of other high quality features.

Digital Tritest 50 Load Frame

BS 1377-7,-8 1924-2, ASTM D2850 D4767, AASHTO T296 T297

- 11,200 lbf. (50 kN) maximum load capacity.
- Fully variable loading speeds from 0.399999" (9.99999 mm) per minute to as low as 0.000001" (0.00001 mm) per minute.
- Large LCD screen display with touch sensitive keypad.

Specifications

Capacity	11,200 lbf. (50 kN).
Speed Range	English mode: 0.000001 to 0.399999 in/min. Metric mode: 0.00001 to 9.99999 mm/min.
Rapid Approach Speed	2.0 in/min. (50 mm/min.).
Platen Travel	3.9" (100 mm); limit switch protection.
Vertical Clearance	35 .8" (910 mm) maximum; 12 " (305 mm) minimum.
Horizontal Clearance	14 .3" (364 mm).
Overall Dimensions	19.7" W. x 19.7" D. x 57.8" H.
Weight	Net 220 lbs (100 kg), Shpg. 300 lbs (136 kg)

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. 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.

Ordering Information

25-3518/02 Digital Tritest 50 complete with RS 232C interface for 110 - 120 V AC, 50 - 60 Hz, 1 pH.

Accessories

88-4100 Axial strain dial indicator 1.0" range.

78-0860 11,200 lb proving ring.

27-1641 Volume change transducer.

27-1633 Pressure transducer.

27-1617 Axial strain transducer.

25-0698 De-air tank system.

See software options on page 11.

Tri-Flex 2 Master Control Panel

- Three independent channels of pressure control.
- Digital pressure display system to an accuracy of ± 0.25% of reading within range.
- Easy removal of burette/ annulus assembly for cleaning.
- Bridging feature to set multiple burette pressures with one regulator.

Ordering Information

25-0696/02 English. 110vAC, 50/60 Hz, 1ø.

25-0697/02 Metric. 110vAC, 50/60 Hz, 1ø.

Accessories

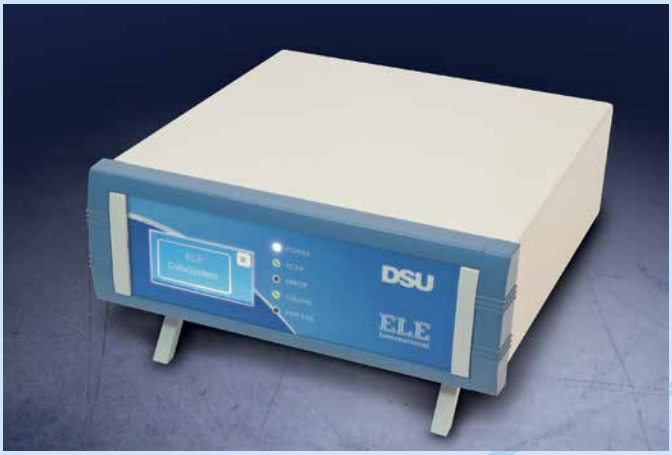
25-0698 Water De-Airing Tank System.

25-0699 Auxiliary Control Panel.

88-3110/02 Compressor Vacuum.

Soil Testing
Data Collection

The measurement of total stress or effective stress requires the use of different procedures and therefore different accessories and equipment.



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

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

DS Mode (with the new DS7.2!)

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

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

Ordering Information

27-1300/02 Electronic read out and control system 110vAC 60 Hz

The GDU allows you to increase testing accuracy and productivity in your laboratory.

- 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.
- Built-in 6 point transducer calibration as standard to maximize transducer accuracy.
- Range of self diagnostics and fault detection systems that report errors directly to the DS7 software for easy trouble shooting should it be required.

A major feature of the GDU is its unique ability to react and maintain test continuity to safeguard important test data should the power supply be interrupted for short periods.

Ordering Information

27-1500/02 GDU 8 Channel Data Acquisition Unit 100-120 V 60 Hz 1 pH.

27-1505 8 Channel Expansion Analog Input Module.

For further information and specifications of equipment and additional items that may be required please contact ELE.

Concrete Testing
Compression Machines

ACCU-TEK Touch™ 250 Compression Machine

The ACCU-TEK Touch™

Machines are supplied with the new ADR Touch digital controller which offers all the following capabilities:

- 5.7" (145 mm) touch screen, incorporating full key pad (QWERTY type).
- 2 GB of internal memory for storing thousands of test results.
- Download data directly to PC via USB or to printer via RS-232 interface.
- Visual pace rate indicator.
- Load vs. Time data logged and displayed for determination of "goodness of test".
- Analysis of trend data.
- One-touch set up.
- Automatic scaling of stress calculations for custom sample sizes.

Compressive strength tests of concrete, complies with ASTM C-39 and AASTHO T22.

Flexural strength tests of concrete complies with ASTM C-78, C-293, AASTHO T97.

Compressive strength test of mortar mixes, complies with ASTM C-109.

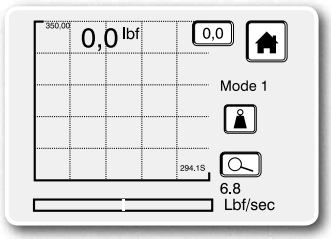
Compressive strength test of masonry units, complies with ASTM C-140.

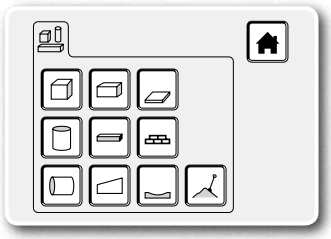
ACCU-TEK Touch™ 350 Compression Machine

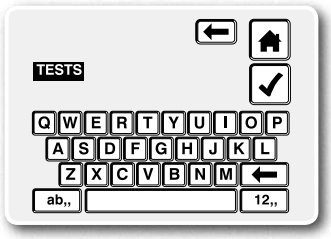
ACCU-TEK Touch™ 500 Compression Machine

Concrete Testing
Compression Machines

ELE International's digital Controller, the ADR Touch, is available in all the ACCU-TEK™ Series Compression Machines.







ADR Touch™

While delivering all the features of the established ACCU-TEK™ Series with its extensive design history, the new and improved user interface provides a high quality platform for testing that enhances the performance of our compression machines.

Sophisticated electronics further the benefits of simplified operation while delivering the highest levels of accuracy in testing concrete and cement/mortar samples, satisfying the needs of Quality Control Managers, Lab Managers and Technicians.

Accuracy & Savings

The ACCU-TEK Touch™ Series with 5.7" (145mm) high resolution QVGA touch screen interface and intuitive menu-driven operation reduces the time taken to set up the machine and perform tests, reducing the time to train staff by up to 25%.

- Up to 6 sample types can be set as favorites, enabling one-touch set up of repeat tests.
- Full, QWERTY touch pad for input of test data.

Most testing errors produce lower strength results. Noncompliant loading rates can generate errors in measured strength. The user interface includes real-time display of load vs. time, further ensuring accurate and consistent test results and providing "goodness of test" data to improve traceability in your QC operations.

Traceability & Data Quality

The ACCU-TEK Touch™ Series now provides improved data quality and traceability in due diligence cases – it is now possible to demonstrate traceability all the way from the machine/user to the accreditation body, protecting your reputation – all test results now come complete with the machine serial number attached.

- Full customization of sample sizes – stress calculations are automatically recalculated.

User Safety

With full safety gates as standard, total systems diagnostics, ram run-out switches and overload warnings ensure the safety of your employees and the reliability of your machine.

Concrete Testing
Compression Machines

ACCU-TEK Touch™ Compression Machine Specifications

Compression Machine Model	ACCU-TEK Touch 250	ACCU-TEK Touch 350	ACCU-TEK Touch 500
Frame			
Frame type	4 column	Welded	Welded
Capacity	250,000 lbf (1,112 kN)	350,000 lbf (1,555 kN)	500,000 lbf (2,224 kN)
Maximum vertical clearance	14.5” (368 mm) without lower platen	19.75” (502 mm) without upper platen	19.62” (498 mm) without upper platen
Maximum horizontal clearance	9.0” (229 mm)	11.5” (292 mm)	14.0” (355 mm)
Maximum ram travel	3.0” (76 mm)	2.0” (50 mm)	2.5” (64 mm)
Electro-hydraulic pump	1 hp (0.7 kw)	1 hp (0.7 kw)	1 hp (0.7 kw)
Compression Machine Ordering information			
115 VAC, 60 Hz, 1 phase	36-0690/02	36-0735/02	36-3095/02
220 VAC, 50 Hz, 1 phase	36-0690/01	36-0735/01	36-3095/01
220 VAC, 60 Hz, 1 phase	36-0690/06	36-0735/06	36-3095/06
Accessories			
Frame Stand	37-5570	37-5575	37-5575
Printer	Part Number:37-4861/02 Portable Impact Tape Printer, Serial Interface. 110vAC, 50/60 Hz, 1ø.		
Platen Set Ordering Information			
Cubes			
2.0” (50 mm) - mortar mixes	37-5514	37-5510	37-5510
6.0” (150 mm) - concrete	37-5516	37-5512	37-5512
Cylinders - concrete			
3” x 6” (76 x 152 mm)	37-5508	37-5504	37-5504
4” x 8” (102 x 203 mm)	37-5561	37-5561*	37-5561*
6” x 12” (152 x 305 mm)	Included with machine	37-5500	37-5500
Blocks			
	37-5522 8” x 8” x 16” (203 x 203 x 406 mm)	37-5520 Up to 10” (254 mm)	37-5518 Up to 12” (305 mm)
Beams (Flexural Testing)			
	37-5528	37-5524	37-5526

*Requires the use of the 6” x 12” platen set 37-5500. Storage temperature range: -4°F to 158°F (-20°C to 70°C)
Operating temperature range: 32°F to 104°F (0°C to 40°C)

Concrete Testing
Accessories

Precision Air Entrainment Meter Type B

ASTM C-231;AASHTO T-152.

- Shock-proof pressure gauge mounting.
- Lightweight aluminum construction.
- Heavy-duty plastic carrying case for easy transport.

Ordering Information

34-3265 Includes tamping rod, straight edge, syringe, nomograph and carrying case.

Accessories

34-0132 Graduated Tamping Rod.

Replacement Parts

34-3265/10 Pump Assembly.
34-3265/12 Gauge Kit.

Press-Ur-Meter Type A

ASTM C-231;AASHTO T-152.

- Direct-reading 3-1/2" (89 mm) diameter gauge.
- Built-in hand pump with instant release valve.
- Quick-operating lid clamps.

Ordering Information

34-3267 Includes straight edge, syringe, calibration vessel, tamping rod and carrying case.

Accessories

34-3267/10 Calibration container.

Portable Slump Test Set

ASTM C-143, C-192;AASHTO T-23, T-119, T-126.

- Designed for easy transporting to the test site.
- Includes our graduated tamping rod for accurate.
- Slump determinations.

Ordering Information

Set includes:
1 Metal Slump Cone (34-0108),
1 Slump Cone Base (34-0150),
1 Graduated Tamping Rod
(34-0132). EI3010E.

Accessories

34-0180 Slump Cone Funnel.

Concrete Test Hammer

ASTM C-805.

- Accurate results to within approx. 15% on 1,250 to 8,500 psi concrete.
- Calibration curves plot the hammer rebound number versus compressive strength.
- Lightweight and portable.

Ordering Information

35-1475 With English Calibration Curves.
35-1480 With Metric Calibration Curves.

Accessories

35-1530 Calibration Anvil.

Spare/Replacement Parts

35-1475/10 Rubbing Stone.

Concrete Testing
Accessories

Concrete Capping Pads and Retainers

ASTM C-1231;AASHTO T-22.

- Time saving and odorless.
- Available in a variety of sizes.

Ordering Information

Capping Pads with Retainers can be used only on compression testers with a vertical daylight opening of 14-1/2" (368 mm) between platens.

34-6132	4" (102 mm) Retaining Caps. Set of 2.
34-6132/10	4" (102 mm) Compression Pads. 60 durometer, set of 2.
34-6132/12	4" (102 mm) Compression Pads. 70 durometer, set of 2.
34-6134	6" (152 mm) Retaining Caps. Set of 2.
34-6134/10	6" (152 mm) Compression Pads. 60 durometer, set of 2.
34-6134/12	6" (152 mm) Compression Pads. 70 durometer, set of 2.

Cement Cube Mold (ASTM)

ASTM C-87, C-109, C-141, C-579, C-593;AASHTO T-106.

- Manufactured in strict conformance to ASTM and AASHTO specifications.
- Three-gang design for multiple sample preparation.
- Wide flange design mold stability.

Ordering Information

39-0412	Cement Cube Mold.

Accessories

39-0412/10	Cover Plate, used with 39-0412 Mould to prepare 2" cubes to determine strength of Capping Compound in accordance with ASTM C617.
39-0420	Hard Rubber Tamper. 1/2" x 1" x 6" l. (12.7 x 25.4 x 152.4 mm).

Plastic Cylinder Molds

ASTM C-39, C-192, C-470;AASHTO M-205.

- Molded single unit for consistent dimensional uniformity.
- Test cylinder molds are virtually non-absorptive.
- Molded polypropylene construction for quick and easy.

Ordering Information

Lids not included; order separately.

34-5292	4" x 8" (102 x 203 mm). Carton of 36.
34-5294	6" x 12" (152 x 305 mm). Carton of 20.

Accessories

34-5292/10	Plastic Lids for 4" (102 mm) diameter molds. Carton of 50.
34-5294/10	Plastic Lids for 6" (152 mm) diameter molds. Carton of 50.
34-5295	Stripping Tool.

Plastic Beam Form

ASTM C-31, C-78, C-192, C-293.

- Reusable, lightweight and inexpensive.
- Will not rust and easy to maintain.

The new, durable, lightweight Plastic Beam Form is used to mold concrete test beams. Simple thumb screws are utilized for ease of stripping, cleaning and assembly.

Ordering Information

34-5065	For 6" x 6" x 21" (152 x 152 x 533 mm) samples.

Aggregate Testing
Abrasion

Los Angeles Abrasion Machine

ASTM C-131, C-535;AASHTO T-96.

- Heavy steel cylinder and base frame.
- Safety Stop button.
- Full length opening with dust-proof cover plate.
- Adjustable shelf positions for ASTM/AASHTO and EN methods.
- Includes steel tray for specimen unloading.

Specification

Capacity	5,000 g each of aggregate and charge
Drum Speed	30-33 rpm
Frame	Welded structural steel
Counter	Adjustable; automatic shut-off; push-button reset and adjustment.
Controls	Magnetic motor starter with overload protection and integral On-Off switches.
Dimensions	38.6” W. x 36.2” D. x 38.6” H. (980 x 920 x 980 mm).
Weight	Net 882 lbs. (400 kg).

Ordering Information

42-5305/02 110-120vAC, 60 Hz, 1ø.

Accessories

42-5300/10 Abrasion Charges, ASTM/AASHTO.

ELE Buoyancy Balance (8,000 g)

ASTM C-127;AASHTO T-85.

The ELE 8,000 gram capacity Buoyancy Balance system is designed for use in determining the particle density (specific gravity) of aggregates between 63 mm and 5 mm.

The system consists of a heavy-duty support frame that incorporates a water tank mounted on a platform. A mechanical lifting device is used to raise the water tank and immerse the specimen suspended below the balance.

Specification

Capacity	8,000 g
Construction	Heavy-duty support frame with water tank and mechanical lifting device. A suspension hook is included.
Balance	Electronic; 6,000 g capacity x 0.1 g
Weight	Net 92 lbs. (41.7 kg).

Ordering Information

Shown with Density Basket; not included, order separately.

42-1000/02 110-120vAC, 50/60 Hz, 1ø.

Accessories

42-1003 Density Basket. ASTM C-127; AASHTO T-85. 8” diameter. x 8” high, #8 stainless steel mesh.

Digital Point Load Tester

ASTM D-5731.

The strength of rock can be quickly determined in the field on core or irregular lump samples by using the Digital Point Load Tester. The frame, loading jack and digital readout are supplied as an integral unit mounted on the base of the carrying case. Loading pressures up to 13,000 lbf. (55 kN) can be applied to specimens as large as 4" (101.6 mm) in diameter. A scale mounted on the frame provides specimen diameter information for use in point load index calculations.

Specification

Capacity	13 ,000 lbf. (55 kN)
Specimen Size	4" (101.6 mm) maximum
Load Range	0-13 ,000 lbf. (55 kN) x 0.2 lbf. (0.001 kN)
Weight	Adjustable; automatic shut-off; push-button reset and adjustment.
Controls	Magnetic motor starter with overload protection and integral On-Off switches.
Dimensions	38.6" W. x 36.2" D. x 38.6" H. (980 x 920 x 980 mm).
Weight	Net 55 lbs. (25 kg)

Ordering Information

77-0115 Includes carrying case and safety goggles.

Sand Absorption Cone and Tamper

ASTM C-128, AASHTO T-84.

- Precision spun brass mold.
- Steel tamper plated for rust resistance and long life.

The Sand Absorption Cone and Tamper are used for checking the surface moisture conditions of sand.

Specification

Mold	Brass; 40 mm top diameter x 90 mm base diameter. x 75 mm H.
Tamper	Steel; 1" diameter working face x 6-5/8" l. (25.4 x 168 mm); 12 oz. (340 g) weight.
Weight	Net 1 lb. (453 g).

Ordering Information

42-1725 Sand Absorption Cone and Tamper.
42-1700 Sand Absorption Cone.
42-1720 Sand Absorption Tamper.

Pycnometer Top and Jar

ASTM C-128;AASHTO T-84.

- Precision spun top, plated for rust resistance and long life.

Ordering Information

24-2885 Pycnometer Top and Jar.

Aggregate Testing
Pavement & Bearing Plate Testing

Pendulum Skid Resistance Tester

New

ASTM E303-93

- Designed for laboratory and on site road surface testing.
- Low friction arm and lightweight pointer.
- Supplied with 'F' scale for use with small slider set for 76 mm slide length (PSV test).
- Highly repeatable.
- Supplied with carrying case.

Applications

- Assessment of surface friction and skid resistance properties.
- Testing of aggregates in the PSV (Polished Stone Value) test.
- Testing of new road surface materials.
- Testing of pedestrian pavements.
- RTA (road traffic accidents).
- Litigation investigations.

Specification

Dimensions (L x W x H)	27.4" x 11.6" x 27.4" (695 x 295 x 695 mm)
Volume	3.0388 Lv. ft. (0.15 m^3)
Weight	66.141 lbs (30 kg)

Ordering Information

42-6000 Pendulum Skid Resistance Tester.

Plate Bearing Apparatus Complete

New

500kN Capacity

Applications include the determination of bearing capacity of the soil in situ, designing for static loads on spread footings, and repetitive and non-repetitive plate loading tests of soils and flexible pavements.

Manufactured from machined steel plate with a finished thickness exceeding 25 mm. The plate has concentric markings on one face. All plates are supplied with two lifting eyes except for the 150 mm diameter plate.

Specification

Loading Jack	500 kN capacity with integral ball seating
Pump	Hand operated, single speed with integral oil reservoir
Hose	9.84 ft (3 m) long. Maximum pressure 70 MPa with quick release couplings
Gauge	3.937" (100 mm) diameter with quick release couplings and graphs to convert readings to kN, kgf and lbf
Weight	Loading jack 24 kg Pressure system 12.5 kg

Ordering Information

29-3800 Plate Bearing Apparatus Complete

Asphalt Testing
Marshall Stability Testing

The accurate measurement of stability and flow of specimens tested in a load frame is important if consistent and representative results are to be achieved. The load frames and ancillary items listed have been designed to enable technicians to test specimens quickly and easily with confident recording of results.

Marshall Stability Tester

AASHTO T-245, ASTM D6927

- Compact size takes up little counter space in the lab.
- Push-button operation controls movement of load screw Indicator lights show when unit is running and when test limit or maximum travel is reached.
- Standard unit equipped with 6,000 lb. (27 kN) capacity proving ring.

The Marshall Stability Tester quickly and accurately measures the resistance to plastic flow of bituminous mixtures, in accordance with AASHTO T-245 testing standards.

With operator convenience in mind, the machine features push-button operation with indicator lights to show when the unit is in operation and when the platen has reached its limit or point of maximum travel.

Specification

Frame capacity	10,000 lbf. (44.5 kN) maximum
Proving ring	Up to 10,000 lbf. (sold separately)
Controls	Push-button up / down / stop with running and limit indicator lights
Motor	3/4 h.p. reversible
Speed	2” (50.8 mm) per minute
Travel	2.5” (64 mm) maximum
Clearances	10” (254 mm) between uprights. 7-1/2” (191 mm) between platen and load piston
Overall dimensions	14” W. x 23” D. x 40” H. (356 x 584 x 1,016 mm)
Housing	14” W. x 23” D. x 11” H. (356 x 584 x 279 mm)
Weight	Net 189 lbs. (89 kg): Shpg. 236 lbs. (107 kg)

Ordering Information

45-68289/02 Marshall Stability Tester 110 V, 60 Hz, 1 pH.

45-6855 “4” Marshall breaking head.

45-6892 Asphalt flow indicator.

45-6894 Asphalt flow indicator with brake metric.

50 kN Load Measuring Ring calibrated in compression.

DSU (Data System Unit)

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

- 4 channel automatic control and data-logging unit.
- For performing CBR, Marshall, Unconfined Compression, Direct and Residual Shear, One-Dimensional Consolidation and Unconsolidated Undrained tests.
- LAN communication now supported – run multiple DSUs on the same network, with remote access.

Ordering Information

27-1300/02 DSU 110-120 V AC, 50/60 Hz.

U.S Standard Testing Sieves Table

Sieve Size or Number Fine Series	Sieve Opening		8" (203 mm) Diameter	12" (305 mm) Diameter
	Standard (mm)	Alternative (in)		
1/4"	6.3 mm	0.250	79-5000	79-5800
No. 3-1/2	5.6 mm	0.223	79-5010	79-5810
No. 4	4.75 mm	0.187	79 5020*	79-5820
No. 5	4.00 mm	0.157	79-5030	79-5830
No. 6	3.35 mm	0.132	79-5040	79-5840
No. 7	2.36 mm	0.0937	79-5050	79-5850
No. 8	2.36 mm	0.0937	79-5060*	79-5860
No. 10	2.00 mm	0.0787	79-5070	79-5870
No. 12	1.70 mm	0.0661	79-5080	79-5880
No. 14	1.40 mm	0.0555	79-5090	79-5890
No. 16	1.18 mm	0.0469	79-5100*	79-5900
No. 18	1.00 mm	0.0394	79-5110	79-5910
No. 20	850 µm	0.331	79-5120	79-5920
No. 25	710 µm	0.0278	79-5130	79-5930
No. 30	600 µm	0.0234	79-5140*	79-5940
No. 35	500 µm	0.0197	79-5150	79-5950
No. 40	425 µm	0.0165	79-5160	79-5960
No. 45	355 µm	0.0139	79-5170	79-5970
No. 50	300 µm	0.0117	79-5180*	79-5980
No. 60	250 µm	0.0098	79-5190	79-5990
No. 70	212 µm	0.0083	79-5200	79-6000
No. 80	180 µm	0.0070	79-5210	79-6010
No. 100	150 µm	0.0059	79-5220*	79-6020
No. 120	125 µm	0.0049	79-5230	79-6030
No. 140	106 µm	0.0041	79-5240	79-6040
No. 170	90 µm	0.0035	79-5250	79-6050
No. 200	75 µm	0.0029	79-5260*	79-6060
No. 230	63 µm	0.0025	79-5270	79-6070
No. 270	53 µm	0.0021	79-5280	79-6080
No. 325	45 µm	0.0017	79-5290	79-6090
No. 400	38 µm	0.0015	79-5300	79-6100

Coarse Series				
5/16"	8.0 mm	0.312	79-5500	79-6200
3/8"	9.5 mm	0.375	79-5510*	79-6210
7/16"	11.2 mm	0.438	79-5520	79-6220
1/2"	12.5 mm	0.500	79-5530*	79-6230
5/8"	16.0 mm	0.625	79-5550	79-6250
3/4"	19.0 mm	0.750	79-5560*	79-6260
7/8"	22.4 mm	0.875	79-5570	79-6270
1"	25.0 mm	1.00	79-5580	79-6280*
1-1/4"	31.5 mm	1.25	79-5600	79-6300
1-1/2"	38.1 mm	1.50	79-5610	79-6310*
1-3/4"	45 mm	1.75	79-5620	79-6320
2"	50 mm	2.00	79-5630	79-6330
2-1/2"	63 mm	2.50	79-5650	79-6350*
3"	75 mm	3.00	79-5660	79-6360*
3-1/2"	90 mm	3.50	79-5670	79-6370*
4"	100 mm	4.00	79-5680	79-6380*
Pan			79-5410*	79-6160*
Pan with extended rim			79-5415	79-6165
Cover without ring			79-5400*	79-6150*
Cover w/recessed center ring			79-5405	

General
Sieving

Hand sieving of a large number of samples can often be tedious and sometimes lead to inaccuracy of results. The following machines provide a wide choice of options for the busy laboratory.

Laboratory Sieve Shaker

The new Laboratory Sieve Shaker is designed to accept up to eleven 8" (203 mm) diameter by 2" (50.8 mm) high or seven 12" (305 mm) by 3" (76.2 mm) high standard test sieves and cover.

The unit is fitted with a 1/4 h.p. motor and 30-minute timer. 110vAC. 60 Hz. 1ø.

- Cost effective design for the efficient separation of materials.
- Accepts 8" (203 mm) and 12" (305 mm) standard test sieves.
- Built in 30 minute timer.

Specification

Capacity	Eleven 8" (203 mm) or seven 12" (305 mm) diameter sieves plus cover
Motor	1/4 h.p.
Dimensions	14.5" W. x 18" D. x 48" H.
Weight	Net 73 lbs. (33.2 kg)

Ordering Information

80-0455/02 Laboratory Sieve Shaker 110 V 60 Hz.

ELE Rotasift™ Laboratory Sifter

Ordering Information

80-0417/02 110vAC, 60 Hz, 1ø.

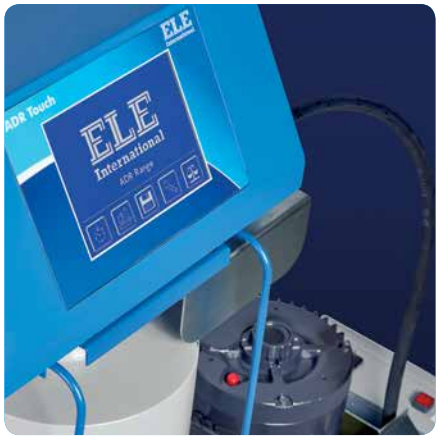
Ro-Tap® Sieve Shakers

Ordering Information

80-0455/02 Laboratory Sieve Shaker 110 V 60 Hz.


ADR Touch
ELE International
ADR Range
ELE International

ELE International



ELE International

PO BOX 389
Loveland, CO 80539 - 0389
U.S.A.

Toll Free: (800) 323 - 1242
Direct Line: (970) 663 - 9780
Email: soiltest@eleusa.com
www.ele.com

Distributor:

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