

Concrete Testing Equipment

Concrete, a composite mixture of water, aggregates, cement and sometimes additives, is the most commonly employed man-made building material in construction projects. The quality of concrete is crucial if structures are to be safe and serve the purpose for which they were designed. Consequently, the testing of fresh, hardened and in-situ concrete is vital to ensure that concrete structures comply with specifications and relevant standards. ELE International designs and manufactures a comprehensive range of concrete sampling and testing equipment to meet this requirement in accordance with international standards for both field and laboratory testing.

With high compressive strength and low tensile strength, concrete is usually reinforced with materials such as steel. However, different strengths of concrete are used for different applications. Lightweight, low-strength concrete has good thermal properties and is suitable for sub-screeds and filling redundant voids, whereas high strength concrete is generally specified in large projects - lower floor columns of high-rise concrete buildings and in bridge beams for example. ELE's concrete testing equipment is designed to ensure that these different types of concrete can be tested to ensure that they meet the specific requirements of each project.

Fresh concrete is tested on site and in the laboratory using the slump test and air entrainment meters to check the water-cement ratio, air content and workability. It may also be necessary to measure compaction and density, drying, shrinkage and moisture movement. To demonstrate compliance with specifications, concrete mix samples are taken and prepared in moulds as cubes, cylinders or beams. Typically concrete cubes are cured and tested in a manual or automatic concrete compression machine at 7 days and 28 days to assess compressive strength. ELE's comprehensive range of concrete compression machines are able to test concrete, mortar and cement samples such as cubes, cylinders, flagstones and beams, and accessories are available for testing the flexural and transverse strength of concrete samples.

Concrete cores can be taken from hardened concrete for testing, but Non-destructive Test (NDT) equipment enables the testing of in-situ concrete or concrete samples. ELE provides crack detection microscopes, and a (Schmidt) rebound hammer for measuring surface hardness and penetration resistance. In-situ water permeability equipment is available in addition to ultrasonic test equipment for the inspection of internal condition.

Fresh & Hardened Concrete Testing

Sampling, Consistency & Workability

The correct sampling and mixing of fresh concrete is important if test results are to be reliable. Most of the equipment necessary for efficient sampling and mixing is standard laboratory equipment detailed in the Laboratory Equipment section. To ensure that concrete achieves its maximum possible strength and yet retains its ease of placing on site, it is essential that the design of the concrete mix, in relation to the water-cement ratio and workability, is closely controlled.

Slump Test

➤ Test is appropriate for concrete mixes of medium and high workability.

The test is carried out by filling the slump cone with freshly mixed concrete, which is tamped with a steel rod in three layers. The concrete is levelled off with the top of the slump cone, the cone removed, and the slump of the sample is immediately measured.

Slump Test Set BS & ASTM

Product Code: 34-0192



Product Standards:

EN 12350-2 (BS 1881-102), ASTM C143/C143M, AASHTO T119

Set Contains

Product Code	Product
34-0110	Slump Cone
34-0180	Slump Cone Funnel
34-0160	Base Plate
34-0130	Tamping Rod
34-0140	Stainless Steel Rule

Slump Cone

Product Code: 34-0110



Included with 34-0192 Slump Test Set.

Product Standards:

EN 12350-2 (BS 1881-102), ASTM C143/C143M, AASHTO T119

Specifications

Construction	Seamless, heavy-gauge spun steel; 0.45 inches (1.1 mm) min thickness
Finish	Plated for rust and corrosion resistance
Dimensions (mm)	100 top dia x 200 bottom dia (without foot pieces) x 300 H
Weight (kg)	2.8

Accessories:

Aggregate Scoop (81-0222)
 Base Plate (34-0160)
 Cement Pan (34-0152)
 Sample Tray 1200 x 1160 x 50 mm (81-4230)
 Shovel with flat blade (81-0240)
 Tamping Rod 16 mm diameter x 600 mm long (34-0130)

Slump Cone Funnel

Product Code: 34-0180



Included with 34-0192 Slump Test Set.

Product Standards: EN 12350-2 (BS 1881-102)

Specifications	
Construction	Seamless, heavy-gauge spun steel; 0.45 inches (1.1 mm) min thickness
Finish	Plated for rust and corrosion resistance
Base Dimensions L x W x H (mm)	210 x 190 x 190
Weight (kg)	1.3

Slump Cone Base Plate

Product Code: 34-0160



Product Standards: EN 12350-2 (BS 1881-102)

Specifications	
Construction	Seamless, heavy-gauge spun steel; 0.45 inches (1.1 mm) min thickness
Finish	Plated for rust and corrosion resistance
Base Dimensions L x W x H (mm)	510 x 460 x 30.5
Weight (kg)	2

Tamping Rod

Product Code: 34-0130



Steel, 600 mm long x 16 mm diameter, hemispherical at both ends. Please note this item is not graduated.

Product Standards: EN 12350-2 (BS 1881-102)

Specifications	
Weight (kg)	0.937

Stainless Steel Rule 300 mm

Product Code: 34-0140



Included with 34-0192 Slump Test Set.

Product Standards:

EN 12350-2 (BS 1881-102), ASTM C143/C143M, AASHTO T119

Specifications	
Dimensions L x W x H (mm)	350 x 30 x 10
Weight (kg)	0.06

Aggregate Scoop

Product Code: 81-0222



Product Standards: EN 12350-2 (BS 1881-102)

Fresh & Hardened Concrete Testing

K-Slump Tester

- Simple and economical to use.
- Reduces testing time.
- No special calibration required.
- Plated for rust resistance and long life.

The K-Slump Tester was developed to determine the slump and workability of fresh concrete. The device can be used for in-place measurements and for measurements inside test moulds and forms. The device is used as an indicator to correlate to the standard slump test. In operation, the K-Slump Tester is made wet and inserted into the concrete for 40 seconds. The K-Slump reading is then taken on the scale to the height that the concrete has penetrated the tester. The tester is then removed from the concrete vertically and the workability reading is taken on the scale at the height of concrete retained in the tester. After the readings, the unit is easily cleaned with water.

K-Slump Tester

Product Code: 34-0580



Developed to determine the workability of fresh concrete and the degree of concrete compaction placed in formwork. The apparatus can be used for in-place measurements of concrete in test moulds and forms and may be correlated to the standard slump test. It is simple, economical to use and reduces testing time. No special calibration is required.

Specifications

Construction	Nickel Plated Steel. Calibrated 3/4 inches (19 mm) dia. Hollow tube; pointed insertion end; round disc controls depth of penetration.
Openings	Two groups through which concrete enters
Test Time (secs)	60
Weight (g)	450

Vebe Time

- Test appropriate for concrete mixes of low and very low workability.

This method is a mechanised variation of the slump test and includes a determination of the workability of concrete. It is based on the principle of subjecting the concrete to vibration after removal of the slump cone. The assembly is mounted upon a small vibrating table operating at a fixed amplitude and frequency. The time to complete the required vibration gives an indication of the concrete workability.

Special Note: The consistometer must be operated from the correct electrical supply in order to comply with the fixed test frequency specified.

Vibro Consistometer

Product Codes: 34-0300/01, 34-0300/06



Comprising of vibrating table, container, slump cone, graduated rod and plate. For 220-240 V AC, 60 Hz, 1 ph.

Product Standards:

EN 12350-3 (BS 1881-4)

Specifications

Product Code	Power Supply
34-0300/01	220-240 V AC, 50 Hz, 1 ph
34-0300/06	220-240 V AC, 60 Hz, 1 ph

Accessories:

Transparent Disc for Vibro Consistometer 34-0300 (34-0300/10)

Flow Table

- ▶ Test appropriate for concrete mixes of high and very high workability.

This test will be of interest to those involved with concrete having a high workability. The test determines the flow index as an arithmetic mean of the diameter of the specimen after working on a flow table. The apparatus consists of a mould, flow table, wooden tamper, metre rule, float and stopwatch.

Flow Table Apparatus for Determining Flow in Concrete

Product Code: 34-0450



Product Standards:

EN 12350-5 (BS 1881-105)

Comprising of mould, flow table, tamping bar, metre rule, float and stopwatch.

Accessories:

Aluminium Scoop large (81-0220)

Compacting Bar 25 mm² x 380 mm (34-2910)

Sample Tray 1200 x 1160 x 50 mm (81-4230)

Shovel with flat blade (81-0240)

Specifications

Overall Dimensions L x W x H (mm)	730 x 870 x 310
Weight (kg)	45

Fresh & Hardened Concrete Testing

Setting Time by Penetration Resistance

This method covers the determination of setting time of the mortar fraction of concrete mixes and is only suitable on mortars with slump values greater than zero. The definition of the initial and final setting time is taken as the period from when water was first added to the mix until the measured penetration resistance is 500 lbf/inches² and 4000 lbf/inches² respectively.

Proctor Penetrometer (Spring Type) with Adaptor Stem

Product Code: 29-3925



Product Standards:

ASTM C403/C403M, AASHTO T199

Supplied with set of needle points (29-3929)

Specifications

Dimensions L x W x H (mm)	800 x 200 x 100
Weight (kg)	2

Accessories:

Case for Proctor Penetrometer (29-3933)

Syringe with Rubber Bulb (82-2820)

Set of Needle Points (34-0810)

Proctor Penetrometer Needle Points Set 1, 1/2, 1/4, 1/10, 1/20, 1/40 inches²

Product Code: 34-0810



Stainless Steel, 1, 1/2, 1/4, 1/10, 1/20 and 1/40 inches² area (645, 323, 161, 65, 32 and 16 mm²) with Stainless Steel adaptor for the smaller needles. For use with 29-3925 Proctor Penetrometer (Spring Type).

Product Standards:

ASTM C403/C403M, AASHTO T197

Pocket Concrete Penetrometer

Product Code: 38-2695



Product Standards:

ASTM C403/C403M, AASHTO T197

A lightweight Penetrometer for field and laboratory use to evaluate the initial set of concrete mortar.

Stainless Steel, corrosion resistant, hard wearing.

2 types available: concrete and soil.

Easy to read scale.

Specifications

Dimensions dia x length (mm)	19 x 178
Needle	Steel shaft; 1/20 inches ² surface area
Range	0 to 700 psi
Scale	Direct-reading; indicator sleeve holds reading until released
Carrying Case	Canvas with belt-loop
Weight (g)	227

Air Entrainment

The determination of air content of freshly made concrete is detailed in EN 12350-7, ASTM C231/C231M, where the importance of two main applications is highlighted. The primary purpose of entraining air in concrete is to give the required resistance to weathering. The use of chemical additives to increase the workability of concrete often requires an air content check to be made.

Precision Air Entrainment Meter

The proper control of entrained air in concrete is recognised as one of the most important functions in modern concrete manufacture. For the concrete engineer, the ELE Precision Air Entrainment Meter offers an instrument for the testing and designing of concrete mixes.

Air Entrainment Meter B Type complete with Carrying Case. Supplied with Aluminium Tamping Bar.

Product Code: 34-3265



Product Standards:

EN 12350-7 (BS 1881-106), ASTM C231/C231M, AASHTO T152

The instrument is designed so that the operating parts form an integral unit. The container is rigid, thus providing an accurate device for the performance of unit weight testing. For convenience, the tare weight in grams is stamped on the bottom. When used with the supplied nomograph, the air meter provides quick and easy particle density and percent of free moisture in aggregate determinations.

- 7 litre capacity.
- Shock-proof pressure gauge mounting.
- Lightweight aluminium construction.
- Heavy-duty plastic carrying case for easy transport to site.

Specifications

External Dimensions Dia x H (inches)	9.75 x 13.25
Capacity (ltrs)	7
Readings	Up to 22% entrained air
Accuracy	± 0.25% full scale
Aggregate Size	2 inches (50.8 mm) max
Container	With tare weight stamped on bottom; 2-piece clamping device for positive seal.
Water	4 oz required
Initial Pressure	Approx. 10 strokes needed
Pressure Gauge	In shock-proof mounting
Tamping Rod	24 inches (610 mm) long
Dimensions Dia x H	9-3/4 inches x 13-1/4 inches (248 x 337 mm)
Weight	Net 15 lbs (8 kg)

Accessories:

- Aluminium Scoop large (81-0220)
- Compacting Bar 25 mm² x 380 mm (34-2910)
- Float, Plasterer's type (81-0340)
- Graduated Tamping Rod (34-0132)
- Sample Tray 1200 x 1160 x 50 mm (81-4230)
- Tamping Rod 16 mm diameter x 600 mm long (34-0130)

Spares/Consumables:

- Concrete Air Indicator (38-3280/10)
- Gauge Kit (34-3265/12)
- Pump Assembly (34-3265/10)
- Soft Headed Mallet (29-5020)
- Stop Watch (81-0521)
- Gauge for new Air Meter (1507B0101)
- Lid Gasket (3494-0004)
- 'B' Meter Clamp (8415X0412)
- Bleed Valve (1507A0108)
- Toggle Clamps (4 off) (34-3265/11)

Fresh & Hardened Concrete Testing

Mixing Equipment

The efficient mixing of concrete prior to moulding specimens in the laboratory for subsequent testing is essential if quality specimens are to be manufactured. The object of mixing is to coat the surface of all aggregate particles with cement paste, and bring the mix to a uniform condition. Pan or rotating drum mixers are suitable for the mixing of small quantities of concrete, which are generally used in a laboratory.

Concrete Mixer 56/40 Litre Capacity

Product Codes: 34-3540/01, 34-3540/06



It is essential that the mixing of fresh concrete for laboratory test samples is thorough and consistent. The ELE Concrete Mixer is ideally suited for this purpose. The mixer has been developed to give efficient mixing of both wet and dry materials. The mixing pan is removable and tilts for easy access to the pan and emptying on completion of the mixing operation. It is rotated by a turntable driven by a 1500 W, IP55 protected electric motor.

The mixer head lifts clear to provide maximum access to the pan and holds the mixing blades at a constant depth during the mixing operation. The blades are readily adjusted to suit the different types and volume of materials to be mixed.

- Portable and compact.
- Tipping mechanism.
- Adjustable blades.
- Simple to clean and maintain.

Product Standards:

EN 12390-2, ASTM C192/C192M

Specifications

Product Code	Power Supply
34-3540/01	220-240 V AC, 50 Hz, 1 ph
34-3540/06	220-240 V AC, 60 Hz, 1 ph

Accessories:

Sample Tray 1200 x 1160 x 50 mm (81-4230)
Scoop 250 mm long (81-0222)
Shovel with flat blade (81-0240)
Transport/Storage Container (81-3545)

Spares/Consumables:

Bearing Assembly (34-3540/11)
Mixing Element (34-3540/12)
Set of Paddles (34-3540/13)
Set of Blades (34-3540/14)
Mixing Pan (34-3540/15)
Motor/Gearbox (3435401)
Spare Drum (1149D0050)
Drive Bumpers (3435403)

Tilting Drum Concrete Mixer 120/90 Litre/ (4/3 cu.ft.) Complete with Stand

Product Code: 34-3590/01



Product Standards:

EN 12390-2, ASTM C192

Specifications

Power Supply	220-240 V AC, 50 Hz, 1 ph
Mixing Capacity (litrs)	120/90

Moulding Equipment

Test procedures require that specimens are cast in a number of standard sizes convenient for compressive and flexural strength determination. The engineering tolerances specified for moulds are very stringent and the internal finish of the surface must be of a high order to comply with the recommendations laid down in many International Standards. Moulds must not deform during manufacture of concrete specimens if the specimen dimensions are to be maintained.

Cube Moulds

These cube moulds are designed to produce accurate specimens while avoiding distortion over the length of the mould.

Cube Mould 4-Part Clamp Type Cast Iron Construction

Product Code: 34-4520, 34-4570, 34-4620



Product Standards:

EN 12390-1

4-part with clamp attached base plate.
Available in three sizes.

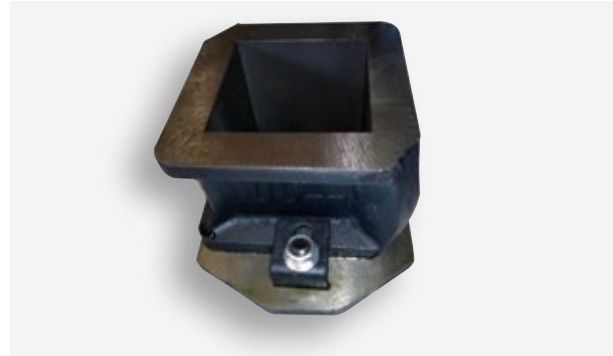
Specifications	
Cube Mould Type	4-part
Finish	Painted
Construction	Bolted sides and clamped base plate
Cube Mould 100 mm (34-4520)	
Internal Dimensions L x W x H (mm)	100 x 100 x 100
Weight (kg)	7.7
Cube Mould 150 mm (34-4570)	
Internal Dimensions L x W x H (mm)	150 x 150 x 150
Weight (kg)	18.1
Cube Mould 200 mm (34-4620)	
Internal Dimensions L x W x H (mm)	200 x 200 x 200
Weight (kg)	26.2

Accessories:

- Aluminium Scoop large (81-0220)
- Compacting Bar 25 mm² x 380 mm (34-2910)
- Float, Plasterer's type (81-0340)
- Mould Oil (25 litre drum) (82-7341)
- Wire Brush (81-0705)

Cube Mould 2-Part Clamp Type Cast Iron Construction

Product Codes: 34-4650, 34-4670



Product Standards:

EN 12390-1

2-part with clamp attached base plate.
Available in two sizes.

Specifications	
Cube Mould Type	2-part
Finish	Painted
Construction	Bolted sides and clamped base plate
Cube Mould 100 mm (34-4650)	
Internal Dimensions L x W x H (mm)	100 x 100 x 100
Weight	17 lbs (8 kg)
Cube Mould 150 mm (34-4670)	
Internal Dimensions L x W x H (mm)	150 x 150 x 150
Weight	42 lb (19.1 kg)

Accessories:

- Aluminium Scoop large (81-0220)
- Compacting Bar 25 mm² x 380 mm (34-2910)
- Float, Plasterer's type (81-0340)
- Mould Oil (25 litre drum) (82-7341)
- Wire Brush (81-0705)

Fresh & Hardened Concrete Testing

Cylinder Moulds

These cylinder moulds are designed to produce accurate specimens while avoiding distortion over the length of the mould.

Cylinder Moulds (Various Sizes)

Product Codes: 34-5210, 34-5230, 34-5260



Product Standards:

EN 12390-1

Complete with base plate. Available in three sizes.

Specifications

Cylinder Mould 100 Dia x 200 mm Long (34-5210)	
Specimen Size Dia x Length (mm)	100 x 200
Weight (kg)	6.5
Cylinder Mould 150 Dia x 150 mm Long (34-5230)	
Specimen Size Dia x Length (mm)	150 x 150
Weight (kg)	8.2
Cylinder Mould 150 Dia x 300 mm Long (34-5260)	
Specimen Size Dia x Length (mm)	150 x 300
Weight (kg)	13

Accessories:

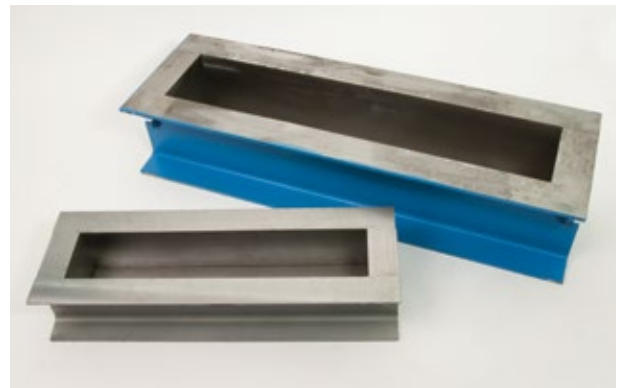
Aluminium Scoop large (81-0220)
 Compacting Bar 25 mm² x 380 mm (34-2910)
 Float, Plasterer's type (81-0340)
 Mould Oil (25 litre drum) (82-7341)
 Tamping Rod 16 mm diameter x 600 mm long hemispherical at both ends (34-0130)
 Wire Brush (81-0705)

Beam Moulds

These beam moulds are designed to produce accurate specimens while avoiding distortion over the length of the mould.

Beam Moulds

Product Codes: 34-5003, 34-5053



Product Standards:

EN 12390-1

Complete with base plate.

Specifications

Beam Mould 100 x 100 x 500 mm (34-5003)	
Specimen Size (mm)	100 x 100 x 500
Weight (kg)	18
Beam Mould 150 x 150 x 750 mm (34-5053)	
Specimen Size (mm)	150 x 150 x 750
Weight (kg)	44

Accessories:

Aluminium Scoop large (81-0220)
 Compacting Bar 25 mm² x 380 mm (34-2910)
 Float, Plasterer's type (81-0340)
 Mould Oil (25 litre drum) (82-7341)
 Wire Brush (81-0705)

Plastic Moulds

ELE International's moulds are made of high quality, durable plastic and are built for heavy duty laboratory use.

Cube Plastic Moulds

Product Codes: 34-4710, 34-4720



Product Standards:

EN 12390-1

Complete with base plate.

Specifications	
Construction	ABS
Plastic Mould 100 x 100 x 100 mm (34-4710)	
Specimen Size (mm)	100 x 100 x 100
Weight (kg)	0.4
Plastic Mould 150 x 150 x 150 mm (34-4720)	
Specimen Size (mm)	150 x 150 x 150
Weight (kg)	0.76

Accessories:

Aluminium Scoop large (81-0220)
 Compacting Bar 25 mm² x 380 mm (34-2910)
 Float, Plasterer's type (81-0340)
 Mould Oil (25 litre drum) (82-7341)
 Wire Brush (81-0705)

Compaction

The strength, durability and finish of concrete rely in part on the adequate compaction of the mix. An increasing number of contract specifications call for various forms of vibro-compacted concrete as a means to achieve a better and more consistent mixture. It should however be remembered that fluid mixes may segregate when vibrated, in which case it may be more appropriate to compact using a tamping bar or rod during laboratory mix design.

Vibrating Poker

Product Code: 34-6431/01



Product Standards:

EN 12390-2, ASTM C31/C31M, ASTM C192/C192M, AASHTO T23, AASHTO T126

Used as an internal means of vibratory compaction. The poker is inserted into the concrete which is then compacted by the high frequency vibration action. For use in either laboratory or site environments, the diameter of the vibrating tip must not exceed 25% of the smallest dimension of the specimen.

- High amplitude and speed.
- Flexible shaft for long life.

Specifications

Power Supply	220-240 V AC, 50-60 Hz, 1 ph
Tip Dimensions Dia x Length (mm)	22 x 250
Shaft Length (m)	2
Speed	200 Hz (1200 vibrations/min)
Dimensions (mm)	200 x 300 x 350
Weight (kg)	7

Fresh & Hardened Concrete Testing

Vibrating Table supplied with Clamp Assembly

Product Code: 34-6250/01



Product Standards:

EN 12390-2, EN 12350-6 (BS 1881-107), EN 12350-7 (BS 1881-106)

The ELE vibrating table is a compact unit providing controlled vibro-compaction in the laboratory, using cube or cylinder moulding equipment.

Vibrating table mounted on a steel stand, supplied with clamp assembly.

Specifications

Power Supply	220-240 V AC, 50 Hz, 1 ph
Dimensions (table top)	600 x 400 mm
Max no Cube Moulds	2 x 150 mm ²
Clamp Assembly	Single
Weight (kg)	60
Cycles per minute	3000

Accessories:

Compacting Bar 25 mm² x 380 mm (34-2910)

Wire Brush (81-0705)

Curing of Specimens

The correct environment for curing concrete test specimens is important to achieve consistent and reproducible test results. Two primary factors must be taken into consideration to satisfy the requirements, namely to maintain a stable temperature and to prevent loss of moisture from the specimen. A standard curing temperature of 20°C is usually specified and should be maintained at the required degree of accuracy. The use of water to prevent loss of moisture is the method most commonly used. In tropical climates a curing temperature of 25°C is often acceptable.

Large Curing Tank complete with Circulating Pump Heater/Thermostat Unit & Lower Rack

Product Code: 34-6575/01

This large curing tank is supplied complete with a submersible pump, immersion heater/thermostat unit and separate control panel. The tank includes a lower rack as standard and is designed to maintain the temperature at 20°C ± 2°C, providing that the ambient temperature does not fall below 15°C or rise above 20°C. 3000 cycles per minute.



Specifications

Power Supply	220-240 V AC, 50 Hz, 1 ph
Capacity (ltrs)	650
Rated Power (W)	2000
Weight (kg)	60
Dimensions	
Internal L x W x H (mm)	1040 x 1040 x 605
External L x W x H (mm)	1120 x 1120 x 730

Accessories:

Maximum and Minimum Thermometer (82-5310)

Product Standards: EN 12390-2

Small Soaking/Curing Tank

Product Code: 34-6755/01



This small curing tank is supplied complete with a stand, internal tray, immersion heater designed to maintain the temperature at $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and thermostat. The tank can hold up to 16 x 150 mm cubes or 105 x 70.7 mm cubes.

Specifications

Power Supply	220-240 V AC, 50 Hz, 1 ph
Capacity (ltrs)	270
Weight (kg)	55
Dimensions	
Internal L x W x H (mm)	650 x 650 x 550
External L x W x H (mm)	710 x 710 x 610

Accessories:

Heater Unit (34-6755/10)

Product Standards: EN 12390-2

Capping of Cylinders

When conducting a compressive strength test on a concrete cylinder it is important that the ends of the specimen are flat and parallel to each other. The trowelled face of a prepared concrete cylinder, or both ends of a concrete core, will require treatment to obtain these conditions.

Melting Pot

This unit is suitable for melting wax and capping compound and comprises a metal container in a well-lagged steel jacket. A thermostatic control and stand-by heat switch are fitted. Supplied complete with lift-off cover.

Melting Pot

Product Code: 34-6122/01



Product Standards:

EN 12390-3, ASTM C617/C617M, ASTM C31/C31M, ASTM C42/C42M, ASTM C39/C39M, ASTM C192/C192M, AASHTO T22, AASHTO T23, AASHTO T24, AASHTO T126, AASHTO T231

Specifications

Power Supply	220-240 V AC, 50-60 Hz, 1 ph
Internal Dimensions (dia x depth) (mm)	140 x 150
External Dimensions (dia x depth) (mm)	250 x 165
Capacity (ltrs)	4
Rated Power (W)	300
Temperature Range	50°C to 300°C
Weight (kg)	7

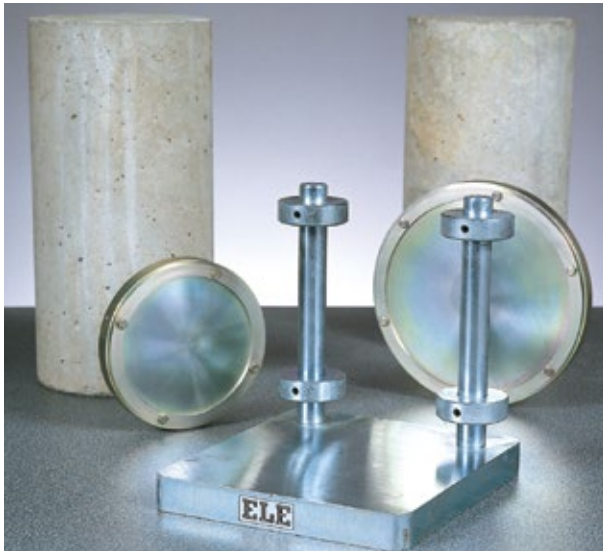
Fresh & Hardened Concrete Testing

Sulphur Compound Method

The sulphur compound method is a hot process and offers a considerable saving in time and labour over the mortar capping method. The method is virtually instant and the compound can often be recovered for further use. **Warning:** The sulphur compound, when hot, will give off sulphur fumes, and therefore it is important that good ventilation, or preferably a fume cupboard, is available in the laboratory.

Cylinder Capping Frame complete with 100 mm & 150 mm diameter Capping Plates

Product Code: 34-6031



Product Standards:

EN 12390-3, ASTM C617/C617M, ASTM C31/C31M, ASTM C42/C42M, ASTM C39/C39M, ASTM C192/C192M, AASHTO T22, AASHTO T23, AASHTO T24, AASHTO T126, AASHTO T231

Comprising of a vertical support, mounted on a steel base designed to accommodate both sizes of capping plates. Supplied complete with 100 mm and 150 mm capping plates.

Specifications

Weight (kg)	12.8
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Flake Capping Compound to ASTM C617 22 kg

Product Code: 34-6100

Supplied in flake form, this capping compound provides exceptionally easy and convenient handling and melting compared to powder, block or briquette compounds. Consistent from one box to the next, the compound is plasticised for minimum odour and even load distribution.

Product Standards:

ASTM C617/C617M, AASHTO T231

Supplied in 22 kg box.

Specifications

Density	137 lbs/ft ³ (2,186 kg/m ³)
Tensile Strength	605 psi (4.2 x 105 kg/m ²) after 48 hrs
Compressive Strength	5,000 psi (3.6 x 106 kg/m ²) minimum, after 2 hrs
Melting Range	230°F-240°F (110°C-115°C)
Optimum Pouring Range	260°F-290°F (126°C-143°C)
Weight	Net 50 lbs (22.7 kg)

Density of Fresh & Hardened Concrete

The density of both fresh and hardened concrete is of interest to the engineer for numerous reasons including its effect on durability, strength and resistance to permeability. Hardened concrete density is determined either by simple dimensional checks, followed by weighing and calculation, or by weight in air/water buoyancy methods.

Hardened Concrete - Buoyancy Balance

The density of hardened concrete specimens such as cubes and cylinders can be quickly and accurately determined using a Buoyancy Balance. The Buoyancy Balance system developed by ELE consists of a rigid support frame, incorporating a water tank mounted on a platform. The water tank has internal dimensions of 380 x 240 x 280 mm (L x W x H). A mechanical lifting device is used to raise the water tank through the frame height immersing the specimen suspended below the balance. The balance supplied calculates the specific gravity of the sample automatically. The balance may also be used as a standard weighing device, thus providing a versatile and comprehensive weighing system in the laboratory.

Buoyancy Balance

Product Code: 34-8100/09



Product Standards:

EN 12390-7 (BS 1881-114)

Specifications

Power Supply	110-240 V AC, 50-60 Hz, 1 ph
Dimensions L x W x H (mm)	600 x 400 x 1000
Weight (kg)	32

Spares/Consumables:

Lifting Frame (34-8100/10)

Cradle

Product Code: 34-8105



Product Standards:

EN 12390-7 (BS 1881-114)

Specifications

Dimensions L x W x H (mm)	210 x 140 x 280
Weight (lbs)	1.5

Bulk Density Measures (Various Sizes)



Product Standards:

EN 1097-3

Manufactured from heavy gauge steel these bulk density measures comply with the requirements of EN 1097-3. All measures incorporate carrying handles as standard.

Specifications

Product Code	Capacity (ltrs)
42-1995	3
42-2000	7
34-2830	10
34-2820	15
34-2800	30

Accessories:

Compacting Bar for BS/EN Tests (34-2910)

Tamping Rod for ASTM Tests (34-0130)

Fresh & Hardened Concrete Testing

Drying, Shrinkage & Moisture Movement

The apparatus has been designed and manufactured to the recommendations laid down in BS, EN and ASTM standards where tests are required on laboratory specimens, or on specimens taken from existing structures. The test procedure specifies a method for determining the change in length of a concrete or mortar sample brought about by a change in moisture content.

1. Initial drying shrinkage: the difference between the length of the moulded and cured specimen (under specified conditions), and its final (constant) length when dried.
2. Drying shrinkage: the difference between the length of a matured specimen cut from concrete and saturated, and its final (constant) length when dried.
3. Moisture movement: the difference between the constant length of a specimen when dried, and its length when subsequently saturated with water.

Drying Shrinkage & Moisture Movement Apparatus complete with Two Calibration Rods (Length Comparator)

Product Code: 34-8500



Product Standards:

EN 1367-4, ASTM C490/C490M, ASTM C151/C151M

Conforming to the requirements of EN 1367-4 and ASTM C490/C490M, ASTM C151/C151M comprising a steel frame with an adjustable-height beam and a dial gauge with 0.002 mm divisions. Supplied with two calibration rods EN and ASTM.

Specifications

Weight (kg)	5.4
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Measuring Equipment

Reference Rods



Product Standards:

ASTM C490/C490M, EN 1367-04

Specifications

Product Code	Specimen Dimensions L x W x H (mm)
34-8505/10	250 x 25 x 25
34-8509	200 x 25 x 25

Prism Moulds & Inserts

Prism Mould

Product Code: 34-8538



Product Standards:

BS 812

For producing specimens 75 mm² x 254 mm gauge length to BS 812-123. The mould is made of steel and constructed so that the gauge length can be set within ± 2.54 mm limits. The overall length of the manufactured prism with steel inserts is 292 mm.

Specifications

Dimensions L x W x H (mm)	254 x 75 x 75
Weight (kg)	9.5

Accessories:

Pack of 10 Steel Inserts 500g (34-8541)

Two Gang Prism Mould

Product Code: 34-8544



Product Standards:

ASTM C141, ASTM C151, ASTM C157, ASTM C227, ASTM C490, ASTM C531, AASHTO T107

To produce specimens 1 inch square x 11¼ inches long to ASTM C490. The mould is constructed so that the gauge length can be set within ± 0.1 inch limits.

Specifications

Gauge Length	10 inches (254 mm) between inner ends of embedded contact points
Construction	Plated steel
Weight	Net 20 lbs (4.3 kg)

Accessories:

Pack of 10 Steel Inserts (34-8547)

320 Litre Humidity Cabinet 220 V AC, 50 Hz, 1 ph (39-1300/01)

320 Litre Humidity Cabinet 220 V AC, 60 Hz, 1 ph (39-1300/06)

150 Litre EN Humidity Cabinet 220 V AC, 50 Hz, 1 ph (39-1600/01)

150 Litre EN Humidity Cabinet 220 V AC, 60 Hz, 1 ph (39-1600/06)

150 Litre ASTM Humidity Cabinet 220 V AC, 50 Hz, 1 ph (39-1601/01)

150 Litre ASTM Humidity Cabinet 220 V AC, 60 Hz, 1 ph (39-1606/01)

Non-Destructive Testing of Hardened Concrete

Crack Detection Microscope

Product Code: 35-2505



Specifically designed for measuring crack width in concrete, this high definition microscope operates via an adjustable light source provided by high power batteries. Supplied in a pocket sized carrying case.

Specifications

Divisions (mm)	0.02
Magnification	x 40
Measuring Range (mm)	4
Dimensions	1.5 x 3.5 x 6 inches (40 x 90 x 150 mm) in case
Weight	Net 19.4 oz (550 g)

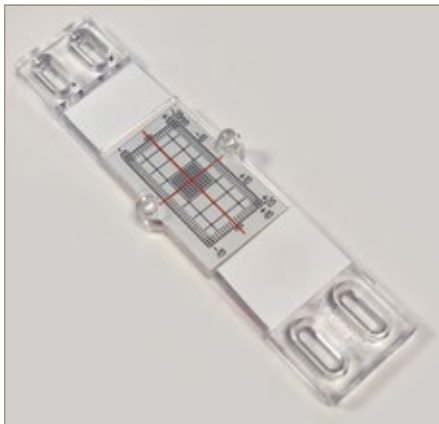
Spares/Consumables:

Bulbs (35-2505/10)

Battery (35-2505/12)

Calibrated Crack Monitor

Product Code: 35-2510



Specifications

Construction	10 kHz to 100 kHz in 4 switched ranges	
Discrimination (mm)	0.5	
Max Crack Width Movement	3/4 inch (20 mm) longitudinal	
Max Upward Movement	3/8 inch (10 mm) transverse	
Coeff. of Thermal Expansion	3.80 x 10.5 inch/°F (6.84 x 10 ⁻⁵ mm/°C)	
Dimensions	Grid	Grid: 1-1/2 x 3/4 inch (40 x 20 mm)
	Plates	1-1/4 x 4 x 1/4 inch (32 x 102 x 6.3 mm) each
	Overall	1-1/4 x 5-3/4 x 1/4 inch (32 x 146 x 6.3 mm)
Weight	Net 2 oz (57 g)	

Product Standards: ASTM C141

Permeability of Concrete

GWT Permeability Kit 0-6 Bar Range complete with Carrying Case

Product Code: 35-4043



The Water Permeability Test Kit is a portable unit capable of measuring in-situ permeability. It has a dual measuring range of 0-1.5 bar or 0-6 bar. Consisting of a sealed water reservoir and all necessary attachments, the unit is supplied complete with carrying case.

Specifications

Weight (kg)	10
Carrying Case Dimensions L x W x H (mm)	460 x 310 x 100

Pull-off Testing

Automated Pull-Off Tester

Product Code: 35-2310



Product Standards:

EN ISO 4624, EN 1015-12, EN 1542, EN 1348, EN 13963, EN 14496, ASTM D4541, ASTM C1583, ASTM D7234, ASTM D7522

The quality of concrete repairs is determined by the adhesive strength between the repair material and the substrate. Pull-off testing is the most widely used test method to assess bond strength. It is a mid-range instrument suitable for most pull-off testing applications. Calibration accuracy EN ISO 7500-1 Class 1. Comprehensive range of test discs plus adjustable foot configuration to cover a wide range of applications. Simple programming of key parameters and fully automated test. Applications for the 35-2310 pull-off tester include: adhesive strength of mortars and renders, adhesive strength of asphalt, adhesive strength of tiles, bond strength of coatings and overlays, bond strength of repair and materials such as FRP, tensile strength in concrete renovation. Maximum pulling force of 16 kN (3597 lbf).

Specifications

Working Range	0.81 to 8.1 MPa (118 to 1182 psi)
Tensile Force (50 mm test disc)	1.6 to 16 kN (60 to 3597 lbf)
Max Stroke (mm)	5
Max Pulling Speed	4.65 mm/min (0.183 inch/min)
Memory	100 measurements
Connections	USB to PC and for charging
Calibration Accuracy	EN ISO 7500-1 Class 1 (±1% from 20% of max force)
Battery Capacity	1500 mAh, 3.7 V (min 80 measurements)
Weight (kg)	4.5

Accessories:

Test Disc, steel, diameter 50 mm/M10, set of 10 (35-2310/10)

Test Disc, aluminium, diameter 50 mm/M10, set of 10 (35-2310/11)

Test Disc, aluminium, diameter 20 mm/M10, set of 10 (35-2310/12)

Test Disc, aluminium, 50 x 50 mm/M10, set of 10 (35-2310/13)

Test Disc, aluminium, 40 x 40 mm/M10, set of 10 (35-2310/14)

Test Disc, aluminium, diameter 100 mm/M10, set of 3 (35-2310/15)

Test Disc, aluminium, 100 x 100 mm/M10, set of 3 (35-2310/16)

Test Disc, aluminium, diameter 75 mm/M10, set of 5 (35-2310/17)

Adaptor Plate for large test discs (35-2310/18)

Battery Pack complete (35-2310/19)

Automated Pull-Off Tester Fixing Kit for Vertical & Overhead Surfaces

Product Code: 35-2310/20

Product Standards:

EN 1542, EN 1015-12, EN 1348, ASTM D 4541

Specifications

Dimensions L x W x H (mm)	0.01 x 0.01 x 0.01
Weight (kg)	0.2

Non-Destructive Testing of Hardened Concrete

Rebar Detection

Rebar Detector

Product Code: 35-2025



Product Standards: BS 1881-204

A versatile, fully-integrated rebar detector and cover meter with a unique real-time rebar visualisation allowing the user to see the location of the rebar beneath the concrete surface to a maximum depth of 180 mm. This is coupled with rebar-proximity indicators and optical and acoustical locating aids. Rebar diameter can also be estimated within the specified testing range. It combines these unique features in a compact, light device that allows the user to operate this rebar detector with one hand making the task of locating rebars a simple and efficient process. The intuitive user interface makes the instrument very easy to use.

- A rebar detector with real-time visualisation of the rebars beneath the instrument.
- Visual indication of rebars in close proximity.
- Ability to identify the mid-point between rebars as well as the orientation of rebars.
- Optical and acoustical indication of rebar location and minimum cover alert.
- Offers neighbouring bar correction.
- Regional settings (metric, imperial).
- Cordless and single handed operation.
- Switchable display backlight for dark environments.
- Icon-based language independent menus.
- Start-up test kit allows user to familiarise him/herself with all functions in a comfortable environment, wasting no time on site.

Specifications

Power Supply	2 x 1.5 V AA Batteries
Power Range	3.6 V to 1.8 V
Dimensions	205 x 92 x 41 mm (8 x 3.6 x 1.6 inches)
Temperature Range	-10°C to 60°C (14°F to 140°F)
Humidity Range	0 to 100% rH
Protection Range	IP54

Advanced Cover Meter

Product Code: 35-2304/09



Product Standards:

EN 12504-2 (BS 1881-202), ASTM C805/C805M

Advanced Cover Meter based on the new generation touchscreen with universal probe and scan cart. An enhanced correction factor for maximum cover accuracy on congested rebar arrangements. Dedicated functionalities for mapping concrete cover and for reporting any 2D rectangular rebar arrangement.

- Highest cover measurement accuracy through Artificial Intelligence (AI) feature.
- Full 2D rebar visualisation with detailed cover, rebar size and spacing data for fast reporting.
- Applications include: locate rebars before drilling, cutting and coring, spot check of cover and rebar size, measurements on rough surfaces with scan cart, measuring wide areas over long distances, conformity check of new buildings, fire resistance assessment, investigation on unknown structures and complete imaging of rebar geometry.

Surface Hardness

Surface hardness is used to measure the resistance of concrete to impact or penetration. From the measurements it is possible to obtain an estimation of the concrete strength and quality.

The method is based on the principle that the rebound of an elastic mass depends on the hardness of the surface which it strikes. The test is fast and unlikely to cause damage to the concrete.

Advanced Silver Schmidt Concrete Test Hammer

Product Code: 35-1500



Product Standards:

EN 12504-2 (BS 1881-202), ASTM C805/C805M

The Silver Schmidt ST/PC is the first integrated concrete test hammer featuring true rebound value and unmatched repeatability. Two factors contribute to the improved performance of this concrete test hammer over its predecessors:

- Velocity based detection of the rebound quotient.
- The lightweight hybrid design of the impact plunger made from aerospace alloy, matched to the elastic properties of the concrete and equipped with a hardness steel cap. Independent validation testing by BAM (Federal Institute for Materials Research and Testing, Germany) has shown the Silver Schmidt ST/PC to have less dispersion than the classical concrete test hammer over the entire range. The unique design and high quality construction of the concrete test hammer Silver Schmidt ST/PC makes rebound hammer testing quicker and more accurate than ever before.

The Silver Schmidt ST/PC concrete test hammer combines a high measurement accuracy with an unmatched repeatability.

- The rebound value requires no angular correction. The concrete test hammer offers customer conversion curves for a wide range of compressive concrete strengths, including low f_c (<10 N/mm², 1'450 psi) and high strength concrete (up to 100 N/mm², 14'500 psi).
- A large number of measurement points can be easily collected by the concrete test hammer and automatically evaluated according to statistical data. The concrete test hammer offers automatic conversion to the required measurement unit (MPa, N/mm², kg/cm², psi).

Specifications

Technical Data	Silver Schmidt
Impact Energy (Nm)	2.207
Hammer Mass (g)	135
Spring Constant	0.79 N/mm
Spring Extension	75 mm (2.95 inches)
Dimensions	55 x 55 x 255 mm (2.16 x 2.16 x 9.84 inches)
Concrete Compressive Strengths	10-100 N/mm ² (1450 -14500 psi)
Weight	570 g (1.4 lb)

Non-Destructive Testing of Hardened Concrete

Standard Concrete Test Hammer

Product Code: 35-1480



Product Standards:

EN 12504-2 (BS 1881-202), ASTM C805/C805M

The hammer is intended for testing the quality of concrete in finished structures such as buildings and bridges. Supplied complete with carrying case and carborundum stone, the hammer is suitable for testing concrete with compressive strengths of 10 to 70 N/mm².

Specifications

Body	Includes indicator scale, calibration curves
Calibration Curves	Rebound number vs. compressive strength
Rubbing Stone	Prepares test surface
Accuracy	Within 15%
Carrying Case	Plastic
Weight	Net 3 lbs (1.4 kg)

Spares/Consumables:

Rubbing Stone (35-1475/10)

Testing Anvil

Product Code: 35-1530



Product Standards:

EN 12504-2 (BS 1881-202), ASTM C805/C805M

Specifications

Dimensions L x W x H (mm)	400 x 200 x 230
Volume (cm)	0.0184
Weight (kg)	0.2

Pulse Velocity Measurement

The basic principle of this method of testing is that the velocity of an ultrasonic pulse through concrete is related to its density and elastic properties. Some care is necessary when testing, but an experienced operator may obtain a considerable amount of information about a concrete member. The advantage of this method is that the pulse passes through the complete thickness of the concrete so that the significant defects can be detected. Pulse Velocity Measurement can be used for the following applications:

- The measurement of concrete uniformity.
- Determination of the presence or absence of voids, cracks and other imperfections.
- Deterioration of the concrete which might have occurred due to age or through the action of fire, frost or chemical attack.
- Measurement of layer thickness and elastic modulus.
- Determination and monitoring of concrete strength.

Pundit Lab

Pundit Lab Ultrasonic Concrete Tester

Product Code: 35-2302/09



Product Standards:

BS 1881-203, EN 12504-4, ASTM C597

Pundit Lab is the most versatile Pundit to date. It has all the functions of the classic Pundit 7, but offers additional benefits. Designed with laboratory use in mind, its compact size, rugged construction and optimised power consumption make it equally suitable for on-site use. Along with the traditional transit time and pulse velocity measurement, Pundit Lab offers path length measurement, perpendicular crack depth measurement and surface velocity measurement. Optimised pulse shaping gives greater transmission range at lower voltage levels.

This, coupled with automated combination of the transmitter voltage and the receiver gain, ensures an optimum received signal level for accurate and stable measurements.

The waveform can be viewed either via an external oscilloscope connection or directly on a connected PC screen. Full remote control capability completes the package. Complete with two 54 kHz transducers each with 3.6 metres of cable, coupling agent, carrying case and instruction manual.

Specifications

Dimensions L x W x H (mm)	120 x 180 x 60
Power Supply	110-240 V AC, 50-60 Hz, 1 ph

Accessories:

Ultrasound Couplant supplied in 250 ml bottle (35-2305)



New

ADR Touch Control Pro

Accurate and Consistent Testing

- Larger 7-inch, high resolution, colour display
- Favourites option for test samples
- Flexible head: 75-degree rotation and 45-degree tilt
- Available in English, Spanish, Portuguese and French options
- Remote operation away from test area via App
- Remote diagnostics
- Dual sensor for testing both concrete and cement samples on one frame
- Upgrade kits available for compatibility with existing lower consoles
- Over 100 pre-programmed test profiles and large memory storage capacity available

Contact the team now for further information

+44 (0)1525 249 200 • ele@eleint.co.uk

ELE International is pleased to announce the release of a new Automatic Digital Control Readout, the ADR Touch Control Pro.



With new tilt and turn screen

The ADR Touch Control Pro will deliver all the features and quality of the established ADR-Auto range, with its 20 year history, but with a new sleek design and additional capabilities. The console assembly consists of an ADR Touch Control Pro and power base which can be used with all existing concrete and cement frames.

User interface

The new ADR Touch Control Pro has an improved user interface providing a high quality platform for testing that will enhance the performance of our compression machines. It now has a larger 7-inch colour touch screen with a higher definition display, allowing easier observation of test progress. A favourites option is also available, allowing users to save the most common set-ups for immediate access, without the need for navigating through selection menus.

User flexibility

The ADR Touch Control Pro has a unique flexible head with rotation capabilities of 75-degrees and a 45-degree tilt, improving usability and comfort for individual users. It is available in four languages: English, Spanish, Portuguese and French, making it even more user-friendly and accessible to a wider audience. The new LAN connectivity feature lets the operator use the PC based App (ELE Logger) to download test results away from the test area.

User flexibility has also increased with the new ADR Touch Control Pro as it can now be operated remotely, so tests can be initiated away from the test area. Many issues can be resolved quickly by our service team through the new remote diagnostics feature and updating to the latest version of software has never been easier.

Compatibility

The all new dual sensor capabilities allow users to test both concrete and cement samples on one frame. The ADR Touch Control Pro is compatible with all existing compression frames and upgrade kits are also available. The upgrade kits can be used to convert existing ADR-Auto consoles to the new Automatic Digital Control Readout.

Testing times

The new generation ADR Compression Machines have an increased control over the pace rate, which allows users to run the pace rate higher than average, but still within standard. This produces an average time saving of 10% for a typical 150 mm cube sample.

Electrical

The reduced component count and modular design offer increased reliability and serviceability and the new low voltage interlocks and e-stop have increased safety. The ADR Touch Control Pro has the latest Arm Core Processor technology which has improved the processing power and speed.

Compression Machines

ADR Touch Control Pro 2000 BS EN Auto Compression Machine

Product Codes: 36-5150/01, 36-5150/06



Product Standards:

EN 12390-4 (BS 1881-115), EN 12390-3 (BS 1881-116), EN 12504-1, EN 1354, EN 13286-41, EN 772-1, EN ISO 7500-1, ASTM E4

The ADR Touch Control Pro 2000 BS EN is supplied complete with self-centring lower platen, oil filled ball seating assembly and safety gates fitted with interlock switches ready for testing 300 x 150 mm diameter cylinders. When used for cube testing, distance pieces (EN) of the appropriate size must be ordered separately.

Specifications

Force Capacity (kN)	2000
Max Ram Travel (mm)	50
Cubes (Concrete)	Up to 200 mm
Cylinders (Concrete)	Up to 160 x 320 mm
Blocks	Via optional Platen Handling System
TFV and ACV	Yes
Frame Type	Welded
Max vert. Clearance	375 mm
Max hor. Clearance	355 mm
Platen Sizes	Lower 220 mm ² Upper 300 mm dia
Product Code	Power Supply
36-5150/01	220-240 V AC, 50 Hz, 1 ph
36-5150/06	220-240 V AC, 60 Hz, 1 ph

Spares/Consumables:

Power Supply or Switch Mode PSU (1850A0044)
 Switch (Console on/off) (6013X0186)
 Outlet Adaptor (1858A0046)
 Console Assembly (1887B0001)
 ADR Autotest Power Pack (1858B0031)
 Solenoid Assembly (1676A0083)
 Gasket (1210B0015)
 Oil Pump (5020A0061)
 Top Plate Assembly (1676D0025)
 Dump Valve Assembly, 110 V, 60 Hz, 1 ph (1676B0098)
 Dump Valve Assembly, 240 V, 50 Hz, 1 ph (1676B0039)
 Motor Power Pack (1312B201)
 Upgrade Head (37-4900/01)
 ADR MK111 LCD (1850A0050)
 Relay Board (1819A0049)
 Tension Spring (8426X0039)
 Keyboard (1887B0031)
 Flexible Hose (5038B0021)
 Stepper Linear Actuator Assembly (1676C0024)

ADR Touch Control Pro 3000 BS EN Auto Compression Machine

Product Codes: 36-5165/01, 36-5165/06



Product Standards:

EN 12390-4 (BS 1881-115), EN 12390-3 (BS 1881-116), EN 12504-1, EN 1354, EN 13286-41, EN 772-1, EN ISO 7500-1, ASTM E4

The ADR Touch Control Pro 3000 BS EN is supplied complete with self-centring lower platen, oil filled ball seating assembly and safety gates fitted with interlock switches ready for testing 300 x 150 mm diameter cylinders. When used for cube testing, distance pieces (EN) of the appropriate size must be ordered separately.

Specifications

Force Capacity (kN)	3000
Max Ram Travel (mm)	50
Cubes (Concrete)	Up to 200 mm
Cylinders (Concrete)	Up to 160 x 320 mm
Blocks	Via optional Platen Handling System
TFV and ACV	Yes
Frame Type	Welded
Max vert. Clearance	375 mm
Max hor. Clearance	320 mm
Platen Sizes	Lower 220 mm ² Upper 300 mm dia
Product Code	Power Supply
36-5165/01	220-240 V AC, 50 Hz, 1 ph
36-5165/06	220-240 V AC, 60 Hz, 1 ph

Accessories:

Flexural Fitting Kit for ADR Auto 220-240 V AC, 50 Hz, 1 ph (37-6135/01)

Flexural Fitting Kit for ADR Auto 220-240 V AC, 60 Hz, 1 ph (37-6135/06)

3000 kN capacity Calibration Load Cell with Hand-Held Readout and Calibrated to UKAS (37-8400/10)

300 mm Lower Brick Platen (37-4842)

BS Block Platens and Platen Handling Assembly for 2000 kN and 3000 kN BS Frames (37-4830)

BS/EN Standard Rectangular Platen (37-4860)

EN 12390-3/4 Distance Piece - 20 mm depth (37-5110)

EN 12390-3/4 Distance Piece - 50 mm depth (37-5120)

EN 12390-3/4 Distance Piece - 60 mm depth (37-5140)

EN 12390-3/4 Distance Piece - 80 mm depth (37-5170)

EN 12390-3/4 Distance Piece - 100 mm depth (37-5180)

Self-Centring Lower Platen (1857C0001)

T46 Hydraulic Oil (26-1805)

Flexible Hose (5038B0027)

Impact Printer RS 232 serial connection. Supplied complete with 1 paper roll (37-4859/01)

Spares/Consumables:

Pressure Transducer, 0-700 bar, 0.05 to 10 V DC Output (6014A0062)

Compression Machines

ADR Touch Control Pro 2000 Auto Compression Machine

Product Codes: 36-5125/01, 36-5125/02, 36-5125/06



Product Standards:

BS EN 7500, BS EN 196

ADR Touch Control Pro supplied complete with interlocked safety gates ready for testing 300 x 150 mm diameter cylinders. When used for cube testing, distance pieces of the appropriate size must be ordered separately.

Specifications

Force Capacity (kN)	2000
Dimensions L x W x H (mm)	480 x 765 x 1050
Rated power (W)	1600
Cubes (Concrete)	Up to 150 mm
Cylinders (Concrete)	Up to 160 x 320 mm
Max vert. Clearance	375 mm
Max hor. Clearance	355 mm
Max Ram Travel (mm)	50
Blocks	N/A
TFV and ACV	Yes
Frame Type	Welded
Platen Sizes	Lower 222 mm dia Upper 222 mm dia
Product Code	Power Supply
36-5125/01	220-240 V AC, 50 Hz, 1 ph
36-5125/02	110-120 V AC, 60 Hz, 1 ph
36-5125/06	220-240 V AC, 60 Hz, 1 ph

Accessories:

100 kN Flexural Fitting Kit for ADR Auto 220-240 V AC, 50 Hz, 1 ph (37-6135/01)

100 kN Flexural Fitting Kit for ADR Auto 220-240 V AC, 60 Hz, 1 ph (37-6135/06)

2000 kN capacity Calibration Load Cell with Hand-Held Readout and Calibrated to UKAS (37-8315)

Flexible Hose (5038B0027)

Impact Printer RS 232 serial connection. Supplied complete with 1 paper roll (37-4859/01)

Standard Distance Piece - 20 mm depth (37-4980)

Standard Distance Piece - 50 mm depth (37-5000)

Standard Distance Piece - 60 mm depth (37-5020)

Standard Distance Piece - 80 mm depth (37-5050)

Standard Distance Piece - 100 mm depth (37-5100)

Spares/Consumables:

Pressure Transducer, 0-700 bar, 0.05 to 10 V DC Output (6014A0062)

T46 Hydraulic Oil (26-1805)

Self-Centring Lower Platen (37-5250)

Dual Frame Compression Machine

Designed to provide comprehensive test facilities, dual-frame compression machines enable a versatile testing programme. Controlled by a single console, dual-frame compression machines provide an economic means of testing the full range of concrete, mortar and cement samples.

ADR Touch Control Pro 2000/250 kN Auto BS EN Compression Machine

Product Codes: 36-5155/01, 36-5155/06



Product Standards:

EN 12390-4 (BS 1881-115), BS EN 12390-3 (BS 1881-116), BS EN 12504-1, BS EN 1354, BS EN 13286-41, BS EN 772-1, BS EN ISO 7500-1, ASTM E4, EN 196-1, EN 459-2, ASTM C109/C109M, ASTM C349

Designed to provide comprehensive test facilities, this twin-frame compression machine is controlled by the automatic console. The 2000 kN capacity frame meets the requirements of EN Standards and accepts the range of on-board accessories. The 250 kN frame is supplied complete with compression jig, 40 mm, 50 mm/2 inch square platens and meets the requirements of EN 196-1. When selecting the frame to be used for testing, the automatic changeover valve incorporated in the system delivers the hydraulic fluid to that frame.

- 220-240 V AC, 50 Hz, 1 ph.
- 2000/250 kN capacity.
- Concrete and cement specimens.
- Tests 200, 150, 100, 70.7, 50 and 40 mm cubes and cylinders up to 320 x 160 mm diameter.
- Calibration accuracy and repeatability conforms to BS EN ISO 7500-1; ASTM E4.
- Supplied with Windows(R) download software as standard.

Specifications

Frame 1 (kN)	2000
Frame 2 (kN)	250
Product Code	Power Supply
36-5155/01	220-240 V AC, 50 Hz, 1 ph
36-5155/06	220-240 V AC, 60 Hz, 1 ph

Accessories:

- Flexural Fitting Kit for ADR Auto 220-240 V AC, 50 Hz, 1 ph (37-6135/01)
- Flexural Fitting Kit for ADR Auto 220-240 V AC, 60 Hz, 1 ph (37-6135/06)
- 2000 kN capacity Calibration Load Cell with Hand-Held Readout and Calibrated to UKAS (37-8315)
- BS/EN Standard Rectangular Platen (37-4860)
- EN 12390-3/4 Distance Piece - 20 mm depth (37-5110)
- EN 12390-3/4 Distance Piece - 50 mm depth (37-5120)
- EN 12390-3/4 Distance Piece - 60 mm depth (37-5140)
- EN 12390-3/4 Distance Piece - 80 mm depth (37-5170)
- EN 12390-3/4 Distance Piece - 100 mm depth (37-5180)
- Self-Centring Lower Platen (1857C0001)
- T46 Hydraulic Oil (26-1805)
- Extended Front Safety Gate for use with 2000 kN BS/EN Load Frames fitted with Rectangular Platens (37-4835)
- Flexible Hose (5038B0027)
- Impact Printer RS 232 Serial Connection. Supplied complete with 1 paper roll (37-4859/01)

Spares/Consumables:

- Pressure Transducer, 0-700 bar, 0.05 to 10 V DC Output (6014A0062)

Compression Machines

Manually-Operated Compression Machines

Accuracy and Savings:

The new ADR Touch Series, with 145 mm (5.7 inches) 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 per operating mode can be set as favourites, enabling one-touch set up for repeat testing.
- Full QWERTY touch pad for input of test data.

Most testing errors produce lower strength results. Non-compliant 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 and Data Quality:

The ADR range 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, increasing your reputation and peace of mind, all test results now come complete with the machine serial number attached.

- Enhanced USB data communications between PC and machine, eliminating the need for download software.
- Two GB of storage memory.
- Full customisation of sample sizes - stress calculations are automatically recalculated.

Compression Machines BS EN

- 2000 kN and 3000 kN capacity.
- Optional platen handling systems which include BS 6073-1, EN 772-1 specification rectangular platens.
- Machines to meet the requirements of EN 12390-3, -4, -5, 12504-1, 1354, 1521, 3161, 1338, 772-6, 13286-41 BS 3892-3, 187, 6717.
- Tests 200, 150 and 100 mm cubes and cylinders up to 320 x 160 mm diameter.

The ADR Touch range of 2000 kN and 3000 kN capacity compression machines has been designed to meet the need for reliable and consistent testing. The load frame is a welded steel fabrication carrying the ball-seated upper platen. Positively located on the loading ram, which is protected from debris by a flexible cover, the lower platen is marked for the centring of cube and cylinder specimens. Self-centring lower platens for cube location are supplied as standard on EN machines and are available as an optional extra on the standard machine. The two machines for cube testing to EN standards are assembled and aligned using a special compression frame stability tester. The dimensions of the frame allow the testing of concrete cylinders up to 320 mm long x 160 mm diameter, 150 and 100 mm square cubes, and on EN/BS machines, 200 mm square cubes. Kerbs and flagstones may also be tested on ADR machines as well as 150 mm and 100 mm square section beams to ASTM C78 using the optional 100 kN flexural frames which are connected to the power pack.

Further Information:

ADR Touch BS EN 2000 kN and 3000 kN compression machines are supplied complete with self-centring lower platen and safety gates fitted with interlock switches ready for testing 300 x 150 mm diameter cylinders. Whilst delivering all the features and reputation of the established ADR Series with its extensive design history, the new and improved user interface provides a high quality platform for testing that enhances the performance of ELE's compression machines. New, sophisticated electronics further the benefits of simplified operation, whilst delivering the highest levels of accuracy in testing concrete and cement/mortar samples, satisfying the needs of Quality Control Managers, Laboratory Managers and Technicians.

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.

ADR Touch 2000 BS EN Compression Machine with Digital Readout & Self-Centring Platens

Product Code: 36-3280/01



Product Standards:

EN 12390-4 (BS 1881-115), BS EN 12390-3 (BS 1881-116), BS EN 12504-1, BS EN 1354, BS EN 13286-41, BS EN 772-1, BS EN ISO 7500-1, ASTM E4, EN 196-1, EN 459-2, ASTM C109/C109M, ASTM C349

Specifications	
Power Supply	220-240 V AC, 50-60 Hz, 1 ph
Force Capacity (kN)	2000
Max Ram Travel (mm)	50
Cubes (Concrete)	Up to 200 mm
Cylinders (Concrete)	Up to 160 x 320 mm
Blocks	Via optional Platen Handling System
Flexural Testing	Via Flexural Frame
TFV and ACV	Yes
Frame Class (Stability)	Tested
Frame Type	Welded
Max vert. Clearance	375 mm
Max hor. Clearance	355 mm
Platen Sizes	Lower 220 mm ² Upper 300 mm dia

Spares/Consumables:

Switch, Circuit Breaker (6013X0084)
 Display Touch Screen (6033X0027)
 Pressure Release Valve (5021X0136)
 Piston (RAM) (1147C0461)
 Cylinder 2000 kN Load Frame (1796D0048)
 Dust Cover, Rubber Ram Gaiter (1147C0467)
 2000 kN Ram Seal (5125A0140)
 3000 kN Ram Seal (5125A0675)
 Single Cylinder Injection Pump (5020A0061)
 Pump Holder (994117)
 20 mm RAM Extension 2000 KN (1562C0028)
 Ball Seating Oil Filled (1489C0001)
 20 mm RAM Extension 3000 kN (1600C0058)
 Bleed Screw (1188A0064)
 Bleed Ball 8 mm (8420X0325)
 3000 kN RAM Dust Cover (1600C0059)
 Ball Seat Cover, Gaiter (1489D0012)
 Dump Valve (1706B0035)
 Special Lubricant Oil for Ball Seating (1489A0020)
 Gaiter Moulding, Ball Seal (1489D0012)
 Self-Centring Lower Platen (1857B0001)
 Micro Switch (6013X0082)
 Oil Tank Gasket (1706A0041)
 Door Switch/Gate Operated Micro Switch (6013X0199)
 Terminal Block for Power Pack (1312B300A)
 Power Pack (1706D0001)
 Knob Control (1706A0050)
 Electric Motor, 230 V (6018A0021)

Compression Machines

ADR Touch 3000 BS EN Compression Machine with Digital Readout & Self-Centring Platens

Product Code: 36-3320/01



Product Standards:

EN 12390-4 (BS 1881-115), BS EN 12390-3 (BS 1881-116), BS EN 12504-1, BS EN 1354, BS EN 13286-41, BS EN 772-1, BS EN ISO 7500-1, ASTM E4, EN 196-1, EN 459-2, ASTM C109/C109M, ASTM C349

Specifications

Power Supply	220-240 V AC, 50-60 Hz, 1 ph
Force Capacity (kN)	3000
Max Ram Travel (mm)	50
Cubes (Concrete)	Up to 200 mm
Cylinders (Concrete)	Up to 160 x 320 mm
Blocks	Via optional Platen Handling System
Flexural Testing	Via Flexural Frame
TFV and ACV	Yes
Frame Class (Stability)	Tested
Frame Type	Welded
Max vert. Clearance	340 mm
Max hor. Clearance	310 mm
Platen Sizes	Lower 220 mm ² Upper 300 mm dia

Accessories:

100 kN Flexural Fitting Kit (ADR) used for connecting Flexural Frames to ADR Compression Machines (37-6138)
3000 kN Load Calibration Device complete with Hand-Held Readout Unit (37-8400)

ADR Touch Head for Compression Machines (37-4950/09)

BS/EN Standard Rectangular Platen (37-4860)

EN 12390-3/4 Distance Piece - 20 mm depth (37-5110)

EN 12390-3/4 Distance Piece - 50 mm depth (37-5120)

EN 12390-3/4 Distance Piece - 60 mm depth (37-5140)

EN 12390-3/4 Distance Piece - 80 mm depth (37-5170)

EN 12390-3/4 Distance Piece - 100 mm depth (37-5180)

Self-Centring Lower Platen (1857C0001)

T46 Hydraulic Oil (26-1805)

Impact Printer RS 232 serial connection. Supplied complete with 1 paper roll (37-4859/01)

Spares/Consumables:

Pressure Transducer, 0-700 bar, 0.05 to 10 V DC Output (6014A0062)

General Purpose Compression Machines



1560 kN / 350,000 lbf and 2000 kN / 450,000 lbf capacity.

- Tests 150 and 100 mm cubes, or cylinders up to 320 x 160 mm diameter.
- ADR Touch Digital readout in kN/lbf/kgf.
- Calibration accuracy to BS EN ISO 7500-1; ASTM E4.
- Efficient hydraulic power packs.
- Economic machines ideal for site use.

Incorporating the ADR Touch digital readout, the machines are designed to test cubes and cylinders in accordance with most International Standards. Supplied fitted for cylinder testing with safety gates. When used for cube testing appropriate distance pieces, according to the size of specimen to be tested, are required and must be ordered separately.

Further Information:

The standard range of compression machines has been designed to meet the need for a simple, economic and reliable means of testing concrete. Whilst delivering all the features and reputation of the established ADR Series with its extensive design history, the new and improved user interface provides a high quality platform for testing that enhances the performance of ELE's compression machines. New, sophisticated electronics further the benefits of simplified operation, whilst delivering the highest levels of accuracy in testing concrete and cement/mortar samples, satisfying the needs of Quality Control Managers, Laboratory Managers and Technicians.

Accuracy and Savings:

The new ADR Touch Series, with 145 mm (5.7 inches) 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 per operating mode can be set as favourites, enabling one-touch set up for repeat testing.
- Full QWERTY touch pad for input of test data.

Most testing errors produce lower strength results. Non compliant 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 and Data Quality:

The ADR range 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, increasing your reputation and peace of mind - all test results now come complete with the machine serial number attached.

- Enhanced USB data communications between PC and machine, eliminating the need for download software.
- 2GB of storage memory.
- Full customisation 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.

Compression Machines

ADR Touch 2000 Standard Compression Machine with Digital Readout

Product Code: 36-3090/01



Product Standards:

BS EN ISO 7500-1, ASTM E4

- 2000 kN / 450,000 lbf capacity.
- Tests 150 and 100 mm concrete cubes or cylinders up to 320 x 160 mm diameter.

Specifications

Power Supply	220-240 V AC, 50-60 Hz, 1 ph
Force Capacity (kN)	2000
Max Ram Travel (mm)	50
Dimensions L x W x H (mm)	410 x 630 x 1195
Cubes (Concrete)	Up to 150 mm
Cylinders (Concrete)	Up to 160 x 320 mm
Blocks	N/A
Flexural Testing	Via Flexural Frame
TFV and ACV	Yes
Frame Type	Welded
Max vert. Clearance	340 mm
Max hor. Clearance	325 mm
Platen Sizes	Lower 222 mm dia Upper 222 mm dia
Weight (kg)	595

Accessories:

100 kN Flexural Fitting Kit (ADR) used for connecting Flexural Frames to ADR Compression Machines (37-6138)
 3000 kN Load Calibration Device complete with Hand-Held Readout Unit (37-8400)
 ADR Touch Head for Compression Machines (37-4950/09)
 BS/EN Standard Rectangular Platen (37-4860)
 EN 12390-3/4 Distance Piece - 20 mm depth (37-5110)
 EN 12390-3/4 Distance Piece - 50 mm depth (37-5120)
 EN 12390-3/4 Distance Piece - 60 mm depth (37-5140)
 EN 12390-3/4 Distance Piece - 80 mm depth (37-5170)
 EN 12390-3/4 Distance Piece - 100 mm depth (37-5180)
 Self-Centring Lower Platen (1857C0001)
 T46 Hydraulic Oil (26-1805)
 Impact Printer RS 232 serial connection. Supplied complete with 1 paper roll (37-4859/01)

ADR Touch 1500 Compression Machine with Digital Readout

Product Code: 36-0720/01



Product Standards:

BS EN ISO 7500-1, ASTM E4

The Compact 1500 range of compression machines has been designed to meet the need for a simple, economic and reliable means of testing concrete.

Specimen Capacity:

The dimensions of the frame allow the testing of cylinders up to 320 mm long x 160 mm diameter, and cubes 150 or 100 mm square. Kerbs and flagstones may also be tested on the ADR machine as well as 150 mm and 100 mm square section beams to ASTM C78, using the optional 100 kN flexural frames which are connected to the power pack.

Load Indication:

The ADR digital readout is a microprocessor controlled instrument which is fitted as standard to all digital machines in the range. Load can be displayed in kN, lbf or kgf as selected by the operator.

- 1560 kN / 350,000 lbf capacity.
- Efficient hydraulic power packs.
- Economic machines ideal for site use.

Specifications

Power Supply	220-240 V AC, 50-60 Hz, 1 ph
Force Capacity (kN)	1500
Max Ram Travel (mm)	50
Dimensions L x W x H (mm)	430 x 600 x 1035
Rated Power (W)	1350
Cubes (Concrete)	Up to 150 mm
Cylinders (Concrete)	Up to 160 x 320 mm
Blocks	N/A
Flexural Testing	Via Flexural Frame
TFV and ACV	Yes
Frame Type	Welded
Max vert. Clearance	340 mm
Max hor. Clearance	325 mm
Platen Sizes	Lower 222 mm Upper 222 mm
Weight (kg)	350

Accessories:

100 kN Flexural Fitting Kit (ADR) used for connecting Flexural Frames to ADR Compression Machines (37-6138)

2000 kN capacity Calibration Load Cell with Hand-Held Readout Unit (37-8315)

ADR Touch Head for Compression Machines (37-4950/09)

Impact Printer RS 232 serial connection. Supplied complete with 1 paper roll (37-4859/01)

Standard Distance Piece - 20 mm depth (37-4980)

Standard Distance Piece - 50 mm depth (37-5000)

Standard Distance Piece - 60 mm depth (37-5020)

Standard Distance Piece - 80 mm depth (37-5050)

Standard Distance Piece - 100 mm depth (37-5100)

Spares/Consumables:

Pressure Transducer, 0-700 bar, 0.05 to 10 V DC Output (6014A0062)

ADR Touch Machines Spares Kits

Grouped Product Matrix:

Product Code	Product
36-3280/K	ADR 2000 BS Spares Kit
36-0720/K	ADR 1500 Standard Spares Kit
36-3090/K	ADR 1500/2000 Standard Spares Kit

Compression Machines

Compression/Tension Testing

Motorised Compression/Tension Machine (complete with Grips) 1000/500 kN

Product Code: 36-1410/01



Specifications

Power Supply	220-240 V AC, 50-60 Hz, 1 ph
Dimensions L x W x H (mm)	440 x 600 x 1250
Max Vert. Clearance of platens (mm)	340
Platen Dia (mm)	Upper 220
Rated power (W)	1350
Weight (kg)	455

Accessories:

Pack of Grips for Tensile Testing of 6 mm diameter Reinforcing Bar (Pack of 2) (36-1420)

Pack of Grips for Tensile Testing of 8 mm diameter Reinforcing Bar (Pack of 2) (36-1421)

Pack of Grips for Tensile Testing of 10 mm diameter Reinforcing Bar (Pack of 2) (36-1422)

Pack of Grips for Tensile Testing of 12 mm diameter Reinforcing Bar (Pack of 2) (36-1423)

Pack of Grips for Tensile Testing of 14 mm diameter Reinforcing Bar (Pack of 2) (36-1424)

Pack of Grips for Tensile Testing of 16 mm diameter Reinforcing Bar (Pack of 2) (36-1425)

Pack of Grips for Tensile Testing of 18 mm diameter Reinforcing Bar (Pack of 2) (36-1426)

Pack of Grips for Tensile Testing of 20 mm diameter Reinforcing Bar (Pack of 2) (36-1427)

Pack of Grips for Tensile Testing of 22 mm diameter Reinforcing Bar (Pack of 2) (36-1428)

Pack of Grips for Tensile Testing of 25 mm diameter Reinforcing Bar (Pack of 2) (36-1429)

Pack of Grips for Tensile Testing of 28 mm diameter Reinforcing Bar (Pack of 2) (36-1430)

Pack of Grips for Tensile Testing of 32 mm diameter Reinforcing Bar (Pack of 2) (36-1431)

Set of Grips for Tensile Testing including 1 pair of 10 mm, 12 mm, 20 mm, and 25 mm (SP36GRIPKIT)

Set of Grips for Tensile Testing including 1 pair of 6 mm, 8 mm, and 16 mm (SP36GRIPKIT2)

Spares/Consumables:

Gauge (5022A0137)

Co-Axial Seal (5125A0640)

Co-Axial Seal (5125A0641)

Product Standards:

BS EN ISO 7500-1, ASTM E4

The load frame is of high quality steel construction with a fixed upper head carrying a ball-seated platen. The ram carrying the lower platen is contained in the base of the frame and is protected by a shroud. Sufficient clearance between the platens allows the compression testing of concrete cylinders up to 160 mm diameter by 320 mm long. To allow for the compression testing of concrete cubes, a range of distance pieces is available. Tension tests on steel reinforcing bars are conducted by replacing the platens with special grips. As standard the machine is supplied with the following size grips for testing bars, 10 mm, 12 mm, 20 mm, and 25 mm diameter. The machine is motorised, incorporating a change-over lever to select either compression or tension output from the pump.

- Compression testing of concrete cubes and cylinders.
- Calibration in compression is accurate to 1% of indicated load, satisfying BS EN ISO 7500-1; ASTM E4.
- Self-aligning upper platen for compression tests.
- Easily fitted grips for tension testing.

Compression Tension Machine Spares Kit

Product Code:	Product
36-1410/K	Spares Kit for 1000/500 kN Motorised Compression/Tension Machine

Compression Machines

Compression Machines Accessories

The selection and use of the correct accessories is essential if the range of machines described in the Compression Machines section are to be utilised to their full advantage. This section details a wide range of accessory items including distance pieces, specialist platens, flexural testing frames and other devices.

“Demec” Mechanical Strain Gauge 200 mm

Product Code: 35-2846



Product Standards: BS 1881-206

This gauge is ideal for monitoring cracks and strains in a number of structure types.

Flexible Hose for Compression Machines

Product Code: 5038B0027

For use on compression machines, allowing you to place the frame on the right hand side of an ADR Auto Console.

Compressometers

Product Code: 37-5630



Product Standards:

BS 1881-121, ASTM C469/C469M

- With metric reading dial indicators.
- Used to determine Young's Modulus and Poisson's Ratio in concrete cylinders.
- Compressometers come with one dial to measure axial strain.

Distance Pieces

Distance pieces are used to reduce the amount of vertical space between the upper platen and the top surface of the specimen. Two versions are offered, both of which have a maximum load capacity of 3000 kN and are for use with fixed head load frames.

Product Standards:

EN 12390-4 (BS 1881-115), ASTM C39/C39M

Product Code	Machine Type	Depth (mm)
37-4980	Standard	20
37-5000	Standard	50
37-5020	Standard	60
37-5050	Standard	80
37-5100	Standard	100
37-5110	BS EN	20
37-5120	BS EN	50
37-5140	BS EN	60
37-5170	BS EN	80
37-5180	BS EN	100

Compression Machines

Platen Assemblies

All ELE compression machines are supplied as standard with relevant platen assemblies. The versatility of the machines is such that other tests may be performed in addition to the main application. Often these tests will require different platens, e.g. for block testing. ELE offers a range of optional platen assemblies which are quickly fitted for use.

Block Platens & Platen Handling Assembly for 2000 kN & 3000 kN BS Frames

Product Code: 37-4830



Product Standards: EN 772-1

Sub-Platen Assembly for 150 mm diameter Specimens for Split Cylinder Testing to BS1881 / EN12390-6

Product Code: 37-5420



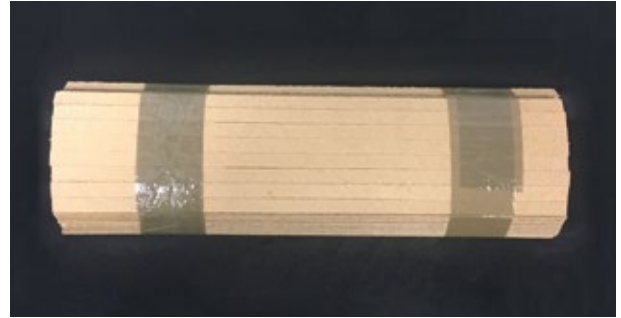
Product Standards:

EN 12390-6 (BS 1881-117), ASTM C496/C496M

For testing cylinders of 150 x 150 mm and 150 x 300 mm (diameter x length).

Test Pieces EN 12390-6 Pack of 100 Hardboard

Product Code: 37-5450



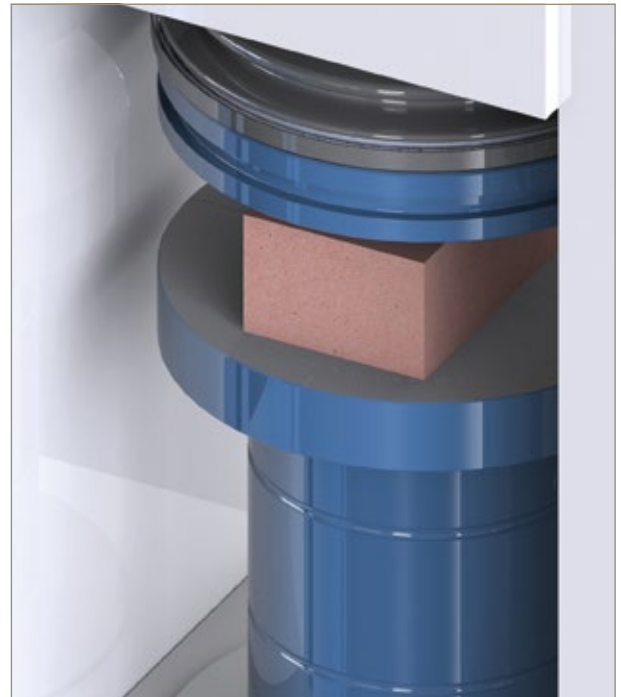
Product Standards:

EN 12390-6 (BS 1881-117)

Hardboard strips for use with Split Cylinder Platen Assemblies. Pack of 100.

Lower Brick Platen 300 mm Diameter

Product Code: 37-4842



Product Standards: EN 12390-4

300 mm diameter lower platen hardened to 60 HRC minimum. Certified by UKAS approved laboratory to EN 12390-4 with calibration certificate.

Compression Machines

Standard Rectangular Platen BS/EN

Product Code: 37-4860

Product Standards:

EN 772-1

Manufactured to the requirements of BS 6073-1 and EN 772-1 these platens, measuring 445 x 250 x 75 mm thick, are suitable for testing a wide range of samples. The upper platen is clipped to the machine's standard ball seating assembly. The platens are supplied complete with 2 bolt-on spacers for use when testing blocks of 140 mm or 190 mm height. Maximum vertical clearance is 245 mm. Please note: Platen handling kit is required for this product (37-4830).

Extended Front Safety Gate for use with 2000 kN BS/EN Load Frames fitted with Rectangular Platens

Product Code: 37-4835



For use with 2000 kN capacity machines fitted with rectangular platens.

Printing of Results

Impact Printer RS 232 Serial Connection

Product Code: 37-4859/01



Supplied complete with serial RS 232 communications cable and 1 paper roll.

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

Impact Printer RS 232 Paper Rolls

Product Code: 37-4859/12

Paper rolls 76 mm wide. Box of 20 rolls.

Impact Printer RS 232 Printer Ribbon (Black/Red)

Product Code: 37-4859/10

Compression Machines

ADR Auto Machines Spares Kits

ADR Auto 3000 BS Spares Kit

Product Code: 36-4165/K

The Kit Includes

Description	Qty	Description	Qty
3000 kN Ram Seal	1	Tension Spring	3
Ram Cover (3000 kN)	1	3/8 inch B.S.P. Dowty Seal	4
Bleed Screw	1	1/4 inch B.S.P. Dowty Seal	2
Bleed Ball 8 mm dia steel	1	Oil 5 ltrs T46	2
Microswitch	1	Special Lubricant for Ball Seatings 350 ml	1
1/2 inch Dowty Seal	2	Fuse 500 mA Antisurge (T) 20 x 5 mm dia UL approved	2
Non Return Valve Steel Ball	2		
Replacement Filter for Power Pack	1	Gaiter Moulding	1
Steel Ball 6 mm	2	Fuse 10 amp	2

Compression Machine Upgrades

Upgrade your ELE compression machines to enjoy the features of the ADR Touch and ADR range.

ADR Touch Control Pro V2.0 to V3.0 Console Assembly Upgrade

Product Codes: 37-4881/01, 37-4881/02, 37-4881/06

For upgrading ELE concrete compression machines please speak to an ELE representative as there may be more options available.

Specifications

Product Code	Power Supply
37-4881/01	220-240 V AC, 50 Hz, 1 ph
37-4881/02	110 V AC, 60 Hz, 1 ph
37-4881/06	220-240 V AC, 60 Hz, 1 ph

ADR Touch Solo Kit to Upgrade Manual Compression Machines

Product Code: 37-4990/09

Following the introduction of the new range of ADR Touch compression machines, ELE are pleased to announce the release of an upgrade package for existing machines. This package is suitable for a wide range of ELE manually-controlled machines in service (contact our service department for details) and in most cases can fit directly to the existing machines. Supplied complete in colour-matched housing with all fittings and new replacement high quality pressure transducer, this system enables users to take advantage of the latest touch screen technology plus enhanced data facilities.

➤ Includes sensor and all cables.

110-240 V AC, 50-60 Hz, 1 ph.

Compression Machine Calibration Devices

- ▶ Calibrated to BS EN ISO376.
- ▶ 3000, 2000, 600 and 300 kN capacity.
- ▶ 7½ digit high-resolution hand-held readout.
- ▶ Designed for the calibration and verification of concrete compression machines.

The ELE electronic 2000 kN load cell and readout unit is an accurate and sensitive system for the calibration and verification of the load measuring systems of concrete compression machines. Each system can be supplied complete with NPL (National Physical Laboratory UK) calibration certificate in compliance with BS EN ISO376 or with UKAS traceable certificate.

Product Standards:

EN ISO 376, ASTM E74

Supplied with rechargeable batteries and universal charger. 110-240 V AC, 50-60 Hz, 1 ph.

Accessories:

CCDHA High Accuracy Column/Canister Load Cell (37-4800/10)

Product Code	Machine Type	Capacity (kN)
37-8300	Calibration Load Cell with Hand-Held Readout and UKAS Calibration Certificate	600
37-8320	Calibration Load Cell with Hand-Held Readout	2000
37-8315	Calibration Load Cell with Hand-Held Readout and UKAS Calibration Certificate	2000
37-8310	Calibration Load Cell with Hand-Held Readout	300
37-8400/10	Calibration Load Cell with Hand-Held Readout	3000
37-8400	Calibration Load Cell with Hand-Held Readout and UKAS Calibration Certificate	3000

Flexural, Transverse Machines & Accessories

The flexural and transverse strength of concrete is of interest to engineers for many reasons. Movement of structures which may be induced by temperature changes, ground vibrations, cyclic loading of road pavements and many other external influences, will set up internal stresses within a concrete member. Modern concrete technology utilises a wide range of materials such as glass or steel fibres to improve the flexural strength of the concrete. These modified concretes often require the use of special tests and equipment. Lower loads are used to test concrete in flexure; however, the shape and size of test specimens is such that larger and often heavy specimens can be difficult to handle. ELE has designed the range of machines offered to provide for ease of specimen positioning and subsequent testing. The range of flexural test equipment offered provides a wide variety of choice and test methods including low strength compression tests using optional ball seating assemblies.

Flexural & Transverse (Flags) Frame 100 kN. Supplied without Specimen Bearers & Fitting Kit

Product Code: 37-6140



Product Standards:

EN 1339, EN 1440, EN 12390-5 (BS 1881-118), EN 1521, EN 13161, EN 772-6, ASTM C78/C78M, ASTM C293/C293M, AASHTO T97, AASHTO T177

This rigidly constructed, open sided frame is suitable for testing kerbs and flagstones to EN 1339. With optional accessories it can also be used to test 100 mm and 150 mm section beams for flexural strength to EN 12390-5. The frame supports a hydraulic ram and upper sub-platen assembly incorporating spherical seating. The upper and lower sub-platens will accept specimen loading bearers, which are supplied separately.

- Open sided for ease of specimen loading.
- Meets EN 1339, 1340 for kerbs and flagstones.
- Optional ball seating assembly.

Specifications

Dimensions L x W x H (mm)	840 x 845 x 1215
Vertical Clearance with Bearers (mm)	170
Throat Clearance (mm)	330
Ram Travel (mm)	330
Weight (kg)	460

Accessories:

- Ball Seating Assembly, 150 mm diameter platens (37-6133)
- Specimen Bearer Assembly (37-6330)
- Specimen Bearers for Testing Kerbs, used on 37-6140 Flags Frame (37-6362)
- Specimen Bearers for Testing Flags, used on 37-6140 Flags Frame (37-6364)
- Standard Distance Piece - 20 mm depth (37-4980)
- Standard Distance Piece - 50 mm depth (37-5000)
- Standard Distance Piece - 60 mm depth (37-5020)
- Standard Distance Piece - 80 mm depth (37-5050)
- Standard Distance Piece - 100 mm depth (37-5100)

Spares/Consumables:

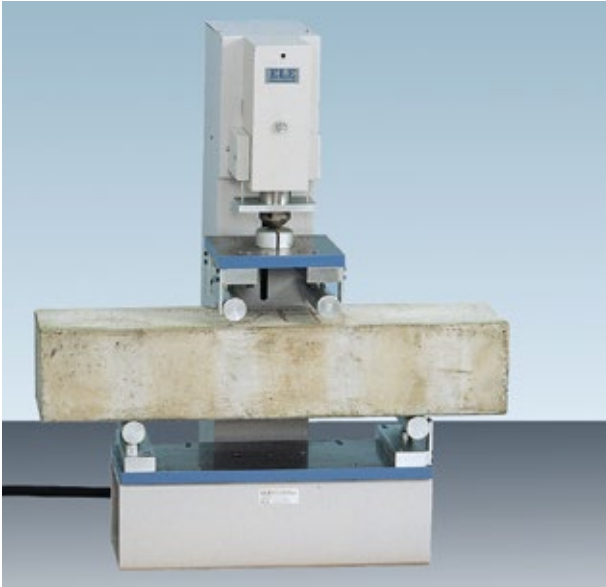
- Spares Kit (37-6140/K)

Flexural Testing for Beams

These flexural frames can be used with a wide range of ELE compression machines. Simply select one of the two fitting kits designed to link the flexural frame to either the ADR-Auto range of compression machines or any other ADR compression machine. For fitting kits please see Page 158.

Flexural (Beams) Frame 100 kN. Supplied without Specimen Bearers & Fitting Kit

Product Code: 37-6130



- Open sided for ease of specimen loading.
- Meets EN 12390-5, 1521, 13161, 772-6 and ASTM C78 for standard section beams.
- Optional ball seating assembly.

Specifications

Weight (kg)	159
Dimensions L x W x H (mm)	380 x 505 x 845
Max Vertical Clearance (mm)	164
Max Ram Travel (mm)	75

Accessories:

- BS 1881 Specimen Bearer Assembly, 38 mm diameter x 160 mm length (37-6131)
- ASTM C78 Specimen Bearer Assembly, case-hardened, 38 mm diameter x 160 mm length (37-6132)
- Ball Seating Assembly, 150 mm diameter platens (37-6133)
- Standard Distance Piece - 20 mm depth (37-4980)
- Standard Distance Piece - 50 mm depth (37-5000)
- Standard Distance Piece - 60 mm depth (37-5020)
- Standard Distance Piece - 80 mm depth (37-5050)
- Standard Distance Piece - 100 mm depth (37-5100)

Spares/Consumables:

- Spares Kit (37-6130/K)

Product Standards:

EN 12390-5 (BS 1881-118), EN 1521, EN 13161, EN 772-6, ASTM C78/C78M, ASTM C293/C293, AASHTO T97, AASHTO T177

This rigidly constructed, open sided frame is suitable for testing 100 mm and 150 mm square-section beams. The frame supports a hydraulic ram and upper sub-platen assembly incorporating a spherical seating. The upper and lower sub-platens will accept various specimen loading bearers, which are supplied separately.

Specimen Bearer Assembly

Product Code: 37-6330

Product Standards:

EN 12390-5 (BS 1881-118), EN 1521, EN 13161, EN 722-6

Comprising 2 self-aligning upper roller bearers, 1 self-aligning and 1 fixed lower roller bearer. Roller bearers are 38 mm diameter x 320 mm long and suitable for 3-point or 4-point flexural testing of beams.

Specimen Bearers for Testing Kerbs. Used on 37-6140 Flags Frame

Product Code: 37-6362

Product Standards: EN 1340

For transverse testing of kerbs to EN 1340.

Specimen Bearers for Testing Flags. Used on 37-6140 Flags Frame

Product Code: 37-6364

Product Standards: EN 1339

For transverse testing of flags to EN 1339.

Flexural, Transverse Machines & Accessories

Flexural/Transverse Frame Fitting Kits for ELE Compression Machines

Product Code	Power	Product
37-6135/02	110-120 V AC, 60 Hz, 1 ph	Flexural Fitting Kit for ADR Auto
37-6138	N/A	Flexural Fitting Kit for ADR Touch
37-6135/01	220-240 V AC, 50 Hz, 1 ph	Flexural Fitting Kit for ADR Auto
37-6135/06	220-240 V AC, 60 Hz, 1 ph	Flexural Fitting Kit for ADR Auto

Flexural Machine Spares Kits

Product Code	Product
37-6130/K	Spares Kit for 37-6130/6140 Series 100 kN Flexural Load Frame
37-6140/K	Spares Kit for 37-6130/6140 Series 100 kN Flexural Load Frame

Flexural Machine, Hand-operated

Mini-Flexural Machine 50 kN

Product Code: 37-6040



Product Standards:

EN 12390-5 (BS 1881-118), EN 1521, EN 13161, EN 772-6, ASTM C78/C78M, ASTM C293/C293, AASHTO T97, AASHTO T177

This compact flexural machine is designed for testing 100 mm and 150 mm square section beams. The base incorporates a series of bearer locating points, enabling a wide range of tests to be performed. The unit is self contained with hydraulic pressure applied through a double-action hand pump to a ram fitted in the top of the frame, making this an ideal portable on-site quality control machine. A 200 mm diameter load gauge, dual calibrated to 50 kN x 0.1 kN and 11000 lbf x 50 lbf graduations is fitted as standard.

- Hand operated.
- Rugged, high strength frame.
- Double-action hydraulic pump.
- Dual calibrated (kN/lbf) gauge.

Specifications

Dimensions L x W x H (mm)	500 x 350 x 1090
Max Vertical Clearance (mm)	160
Max Ram Travel (mm)	15
Weight (kg)	50

Mixing & Sampling Fresh Concrete, Site & Laboratory

The correct sampling and mixing of fresh concrete is important if test results are to be reliable. This Standard specifies two procedures for sampling fresh concrete, by composite and spot sampling.

Standard(s)	EN 12350-1	
Product Code	Product	Qty
81-0222	Aggregate Scoop with Two Handles 250 mm long by 125 mm dia 5 kg capacity	1
81-0240	Shovel (Flat)	1
81-4230	Sample Tray 1200 x 1160 x 50 mm	1
81-3545	Transport/Storage Container complete with Snap-on Lid and Handle 22 ltrs	10
34-3540/01	ELE Concrete Mixer 56/40 ltrs capacity, 220-240 V AC, 50 Hz, 1 ph	1

Determination of Slump

The Slump Test is sensitive to changes in the consistency of concrete which correspond to slumps of 10 to 200 mm. This test is not suitable for concrete containing aggregate greater than 40 mm.

Standard(s)	EN 12350-2	
Product Code	Product	Qty
34-0110	Slump Cone	1
34-0130	Tamping Rod 16 mm dia x 600 mm long hemispherical at both ends	1
34-0140	Stainless Steel Rule 300 mm	1
34-0160	Base Plate for Slump Test	1
34-0180	Slump Cone Funnel	1
81-0220	Aluminium Scoop Large	1
81-0521	Stop Watch	1
81-0240	Shovel (Flat)	1
81-4230	Sample Tray 1200 x 1160 x 50 mm	1

Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1

Determination of Vebe Time

This test method is suitable for concrete mixes of low and very low workability but is not applicable to concrete containing aggregate greater than 63 mm. If the Vebe time is less than 5 secs or more than 30 secs the concrete has a consistency that is not suitable for this test method.

Standard(s)	EN 12350-3	
Product Code	Product	Qty
34-0130	Tamping Rod 16 mm dia x 600 mm long hemispherical at both ends	1
34-0300/01	Vibro Consistometer 220-240 V AC, 50 Hz, 1 ph, EN 12350-3	1
81-0220	Aluminium Scoop Large	1
81-0521	Stop Watch	1
81-0240	Shovel (Flat)	1
81-4230	Sample Tray 1200 x 1160 x 50 mm	1

Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1

Density of Compacted Fresh Concrete

The density of fresh concrete has an effect on the durability, strength and resistance to permeability of the finished structure.

Standard(s) EN 12350-6

Product Code	Product	Qty
34-2830	Bulk Density Measure 10 ltrs	1
34-2910	Compacting Bar 25 mm ² x 380 mm	1
24-9010	Straight Edge 300 mm	1
78-6050/01	Electronic Top Loading Balance 50 kg x 10 g	1
81-0240	Shovel (Flat)	1
81-4230	Sample Tray 1200 x 1160 x 50 mm	1
81-0340	Plasterers Steel Float	2
81-0220	Aluminium Scoop Large	1
29-5020	Soft Headed Mallet	1
24-0430	Glass Plate	1

Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1

Air Content of Fresh Concrete, Pressure Gauge (Type B) Method

The determination of air content of freshly made concrete is important for giving the concrete the required resistance to weathering. The use of chemical additives to increase the workability often requires an air content check to be made. The test method is suitable for concrete containing normal weight or relatively dense aggregate up to 63 mm maximum size.

Standard(s) EN 12350-7

Product Code	Product	Qty
34-3265	Air Entrainment Meter 'B' Type complete with Carrying Case, supplied with Aluminium Tamping Bar	1
34-2910	Compacting Bar 25 mm ² x 380 mm	1
34-0130	Tamping Rod 16 mm dia x 600 mm long hemispherical at both ends	1
81-0220	Aluminium Scoop Large	1
29-5020	Soft Headed Mallet	1
81-0240	Shovel (Flat)	1
81-4230	Sample Tray 1200 x 1160 x 50 mm	2
81-0340	Plasterers Steel Float	1
81-0521	Stop Watch	1

Also required for calibration

78-7090	Harvard Trip Balance 2000 g capacity x 0.1 g with 225 g additional Tare	1
78-7110	Weight Set for 78-7090	1
78-6040/01	Balance 30 kg at 1 g	1
82-1880	Plastic Measuring Cylinder 500 ml	1
24-0430	Glass Plate	1

Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1

Making Specimens from Fresh Concrete

Test procedures require that specimens are cast in a number of standard sizes which are convenient to compressive and flexural strength determination.

The following lists of equipment to produce various types/sizes of specimen include hand compaction and, as an alternative, compaction by vibrating table. It should be noted that fluid mixes may segregate when vibrated making hand compaction more appropriate.

Making 100 mm Test Cubes from Fresh Concrete

Standard(s)	EN 12390-1, 2	
Product Code	Product	Qty
34-2910	Compacting Bar 25 mm ² x 380 mm	1
34-4520	Cube Mould 100 mm 4-Part Clamp Type, Cast Iron Construction	6
81-0220	Aluminium Scoop Large	1
81-0340	Plasterers Steel Float	2
81-0705	Wire Brush	1
82-7341	Mould Oil (20 ltr drum)	1
29-5020	Soft Headed Mallet	1
Optional		
34-6250/01	Vibrating Table 600 x 400 mm Table Top, 220-240 V AC, 50 Hz, 1 ph supplied with clamping assembly	1
Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1		

Making 150 mm Test Cubes from Fresh Concrete

Standard(s)	EN 12390-1, 2	
Product Code	Product	Qty
34-2910	Compacting Bar 25 mm ² x 380 mm	1
34-4570	Cube Mould 150 mm 4-Part Clamp Type, Cast Iron Construction	6
81-0220	Aluminium Scoop Large	1
81-0340	Plasterers Steel Float	2
81-0705	Wire Brush	1
82-7341	Mould Oil (20 ltr drum)	1
29-5020	Soft Headed Mallet	1
Optional		
34-6250/01	Vibrating Table 600 x 400 mm Table Top, 220-240 V AC, 50 Hz, 1 ph supplied with clamping assembly	1
Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1		

Making Test Beams from Fresh Concrete (150 x 150 x 750 mm)

Standard(s)	EN 12390-1, 2	
Product Code	Product	Qty
34-2910	Compacting Bar 25 mm ² x 380 mm	1
34-5053	Beam Mould 150 x 150 x 750 mm	6
81-0220	Aluminium Scoop Large	1
81-0340	Plasterers Steel Float	2
81-0705	Wire Brush	1
82-7341	Mould Oil (20 ltr drum)	1
29-5020	Soft Headed Mallet	1
Optional		
34-6250/01	Vibrating Table 600 x 400 mm Table Top, 220-240 V AC, 50 Hz, 1 ph supplied with clamping assembly	1
Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1		

Making Test Beams from Fresh Concrete (100 x 100 x 500 mm)

Standard(s)	EN 12390-1, 2	
Product Code	Product	Qty
34-2910	Compacting Bar 25 mm ² x 380 mm	1
34-5003	Beam Mould 100 x 100 x 500 mm	6
81-0220	Aluminium Scoop Large	1
81-0340	Plasterers Steel Float	2
81-0705	Wire Brush	1
82-7341	Mould Oil (20 ltr drum)	1
29-5020	Soft Headed Mallet	1
Optional		
34-6250/01	Vibrating Table 600 x 400 mm Table Top, 220-240 V AC, 50 Hz, 1 ph supplied with clamping assembly	1
Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1		

Making Test Cylinders from Fresh Concrete (150 mm diameter x 300 mm)

Standard(s)	EN 12390-1, EN 12390-2	
Product Code	Product	Qty
34-2910	Compacting Bar 25 mm ² x 380 mm	1
34-5260	Cylinder Mould 150 mm dia x 300 mm long	6
81-0220	Aluminium Scoop Large	1
81-0340	Plasterers Steel Float	2
81-0705	Wire Brush	1
82-7341	Mould Oil (20 ltr drum)	1
29-5020	Soft Headed Mallet	1
Optional		
34-6250/01	Vibrating Table 600 x 400 mm Table Top, 220-240 V AC, 50 Hz, 1 ph supplied with clamping assembly	1
Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1		

Making Test Cylinders from Fresh Concrete (100 mm diameter x 200 mm)

Standard(s)	EN 12390-1, EN 12390-2	
Product Code	Product	Qty
34-2910	Compacting Bar 25 mm ² x 380 mm	1
34-5210	Cylinder Mould 100 mm dia x 200 mm long	6
81-0220	Aluminium Scoop Large	1
81-0340	Plasterers Steel Float	2
81-0705	Wire Brush	1
82-7341	Mould Oil (20 ltr drum)	1
29-5020	Soft Headed Mallet	1
Optional		
34-6250/01	Vibrating Table 600 x 400 mm Table Top, 220-240 V AC, 50 Hz, 1 ph supplied with clamping assembly	1
Additional equipment also required as stated in mixing and sampling fresh concrete, site and laboratory, EN 12350-1		

Capping 150 & 100 mm diameter Hardened Cylinders & Cores

When performing compressive strength tests on concrete cylinders it is important that the ends of the specimen are flat and parallel to each other.

Standard(s) EN 12390-3

Product Code	Product	Qty
34-6031	Cylinder Capping Frame complete with 100 mm and 150 mm dia Capping Plates	1
34-6122/01	Melting Pot for use with Capping Compound 220-240 V AC, 50-60 Hz, 1 ph	1
34-6100	Flake Capping Compound 22 kg	1

Normal Curing of Test Specimens (20°C Method)

The correct environment for curing concrete specimens is important to achieve consistent and reproducible results. Two key factors are to maintain a stable temperature and prevent loss of moisture from the specimen.

Standard(s) EN 12390-2

Product Code	Product	Qty
34-6575/01	Large Curing Tank complete with Circulating Pump Heater/Thermostat Unit and Lower Rack	1
82-5310	Max/Min Thermometer (Mercury Free) Range -40.0°C to +50.0°C	1

Standard Concrete Cube & Cylinder Compression Testing of 100 mm & 150 mm Specimens

The design and manufacture of reliable compression machines is essential in ensuring accurate and reproducible test results. ELE International has a wide range of compression testing machines and accessories.

For full details on the range of machine types/capacities contact ELE.

Product Code	Product	Qty
36-3090/01	ADR Touch 2000 Standard Compression Machine with Digital Readout 220-240 V AC, 50-60 Hz, 1 ph	1
37-5000	Standard Distance Piece 50 mm Effective Height	1
37-5020	Standard Distance Piece 60 mm Effective Height	
37-5050	Standard Distance Piece 80 mm Effective Height	1
37-5100	Standard Distance Piece 100 mm Effective Height	1

Compression Testing of 150 mm Cubes & Flexural Testing of Beams

Standard(s)	EN 12390-3, EN 12390-5	
Product Code	Product	Qty
36-3280/01	ADR 2000 BS Compression Machine with Digital Readout and Self Centring Platens	1
37-5170	Distance Piece to 80 mm Effective Height	1
37-5180	Distance Piece to 100 mm Effective Height	1
37-6138	100 kN Flexural Fitting Kit (ADR) used for connecting Flexural Frames to ADR Compression Machines	1
37-6130	100 kN Flexural (Beams) Frame supplied without Specimen Bearers and Fitting Kit	1
37-6131	BS 1881 Specimen Bearer Assembly 38 mm dia x 160 mm length	1

Automatic Compression Testing of 150 mm Cubes & Flexural Testing of Beams, Kerbs & Flags

Standard(s)	EN 12390-3, EN 1340, EN 1339	
Product Code	Product	Qty
36-5150/01	ADR Touch Control Pro 2000 Auto BS EN Compression Machine 220-240 V AC, 50 Hz, 1 ph	1
37-5170	Distance Piece to 80 mm Effective Height	1
37-5180	Distance Piece to 100 mm Effective Height	1
37-6135/01	100 kN Flexural Fitting Kit (ADR-Auto)	1
37-6330	Specimen Bearer Assembly	1
37-6362	Specimen Bearers for Testing Kerbs	1
37-6364	Specimen Bearers for Testing Flags	1



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Contact the team now for further information: +44 (0)1525 249 200 • ele@eleint.co.uk