



GEOTECHNICAL

TESTING EQUIPMENT

THE BEST IN TEST





—GEOTECHNICAL TESTING EQUIPMENT—

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THE BEST IN TEST

SOIL



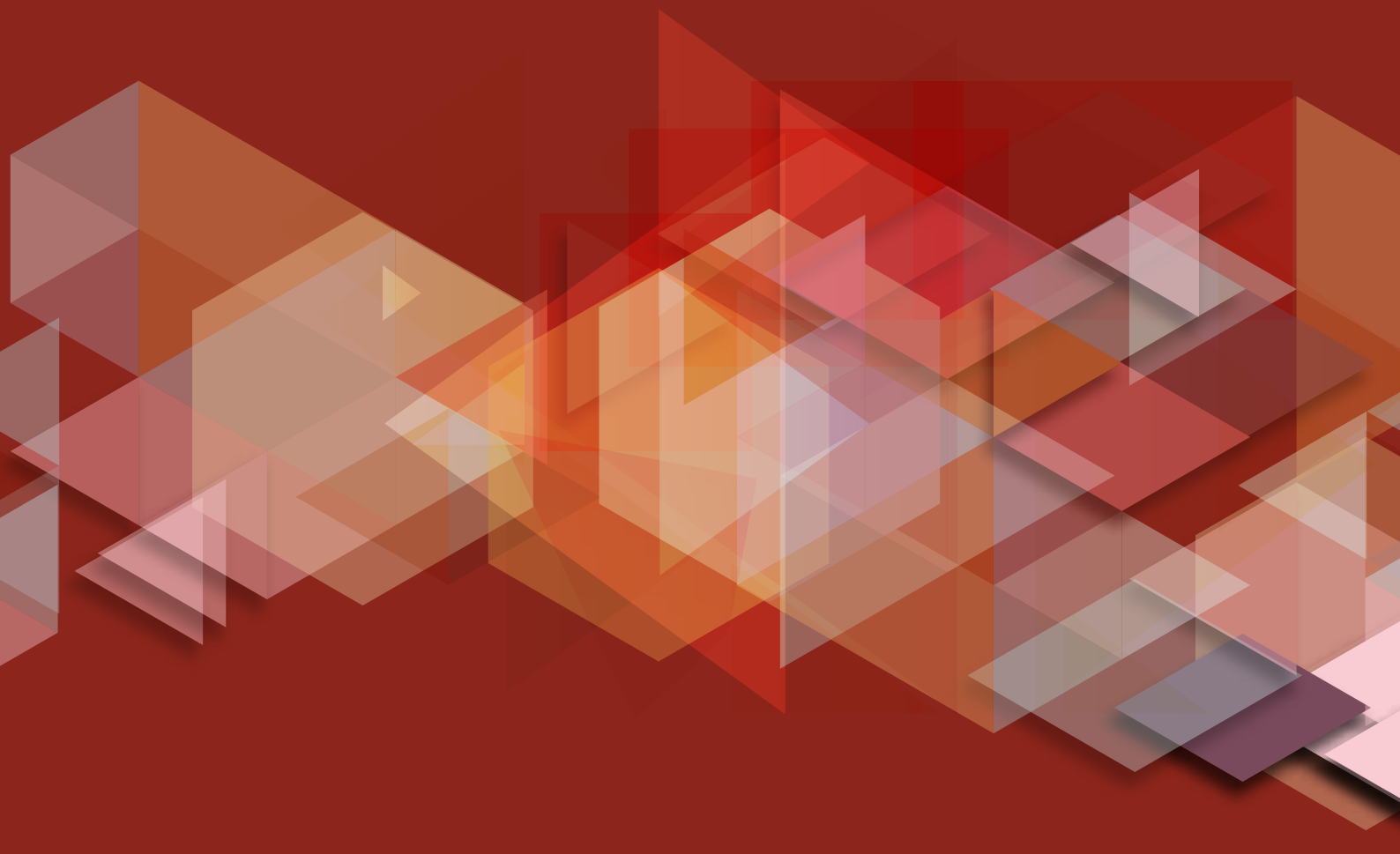
Soil

Soil is one of the oldest forming structures that our planet is formed from. Soil is a loose rocky material that is vastly used in the construction industry. Hence it is very important to test the ground soil before construction and to know the type and classification of the soil before any project.

The type of soil can be identified by several parameters one of which the percentage of clay, silt or sand found in its composition. This classification will determine the characteristics of the soil used in the civil engineering project.

Other physical parameters such as moisture content, shear strength, elasticity, specific gravity, density, degree of compaction, penetration resistance, consistency, bearing capacity, hydraulic conductivity, permeability and consolidation can effect the soil characteristics and behaviour during construction.

The testing equipment described in this section are carefully designed and manufactured to the highest international standard necessary to achieve accurate and repeatable results in testing soil material.



Soil Color Chart

DESCRIPTION:

The Color Chart is used to judge the colour of rocks, archaeological specimens and soil samples.

It includes are 115 colour chips with the Munsell numerical designation for identifying the range of rock colours.

Works with either wet or dry specimens. Excellent for describing the colour of medium to fine-grained rocks.

Also helpful when working with coarse-grained rocks.

A neutral mask is included for isolating individual colours.



EN 1426; ASTM D5; AASHTO T49

MAIN FEATURES:

- Tabbed design helps find information quickly
- Allows easy visual comparison of soil colors
- Water-resistant
- Light-weight

ORDERING:

SL 0100

Soil Color Chart

SL 0101

Tropical Soil Color Chart

SL 0102

Rock Color Chart

TECHNICAL SPECIFICATIONS:

Product Dimensions	152 x 203 mm W x H
Estimated Shipping Weight	0.91 kg

Soil Sampling Kit

DESCRIPTION:

The Soil Sampling Kit is designed to obtain samples for soil investigation and exploration purposes. The set provides all the items needed in a convenient carrying case.

We offer several models for Soil Sampling Kit that can suit all purposes.

Basic Mini Soil Sampling Kits includes:

One regular auger, one mud auger, four 3' extensions, one rubber-coated cross handle, and one poly-canvas case.

Environmental Soil Sampling Kit includes three 3-1/4" dia. thread-on augers (regular, mud and sand), one split-core sampler with slip wrench, one cross handle, and three 4' extensions

Soil Core Sampler Kit with Hammer Attachment kits include one butyrate retaining liner and two polyethene liner caps.

Basic Soil Sampling Kit includes three 3-1/4" dia. thread-on augers (mud, soil and sand), 2" dia. x 6" L thread-on core sampler with hammer attachment, butyrate liner, three 4'L thread-on extensions, rubber-coated thread-on cross handle, 2" cleaning brush, and two crescent wrenches.

ASTM D420 ASTM D1452 AASHTO T86

MAIN FEATURES:

- Stainless steel
- Easy to use

ORDERING:

SL 0103

Basic Soil Sampling Mini Kits

SL 0104

Environmental Soil Sampling Kit

SL 0105

Soil Core Sampler Kit

SL 0106

Basic Soil Sampling Kit



TECHNICAL SPECIFICATIONS:

Weight (approx.)	10 kg
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Power Auger Head

DESCRIPTION:

The Power Auger Head makes it easy to quickly dig holes for fence posts, signs, landscaping and soil sampling.

The Power Auger Head has an Ergonomic designed for optimum comfort.

It comes with a 4.5 KW two-stroke engine, equipped with a lever preventing accidental acceleration and a Quick-fit spigot-socket coupler for swift attachment, replacement of bits and 3 Augers 4', 6' 10'.



TECHNICAL SPECIFICATIONS:

Displacement	(cc)52cc
Fuel type 25	1 oil / fuel premix, 89+ Octane unleaded
Horsepower	(hp)2
Speed (max)	320 RPM
Maximum Torque	45 ft. lbs.
Sound rating	102.4 Db
Product Height	33-0.95 cm
Product Length	27.9 cm
Product Weight	9.11 Kg
Product Width	53.34-1.27 cm

MAIN FEATURES:

- Stainless steal
- Easy to use

ORDERING:

SL 0107

Power Auger Head complete

ACCESSORIES:

SL 0107-1

Auger 60 mm dia x 1 m long

SL 0107-2

Auger 80 mm dia x 1 m long

SL 0107-3

Auger 100 mm dia x 1 m long

SL 0107-4

Auger 150 mm dia x 1 m long

SL 0107-5

Auger 200 mm dia x 1 m long

SL 0107-6

Extension rod

Water Level Indicator

DESCRIPTION:

The water level indicators are used to determine the water level in boreholes and wells.

Drum mounted, with an ON/OFF switch indicator and audio signal when the probe touches the water.

The cable is marked at intervals and is battery operated.



MAIN FEATURES:

- Easy-to-use

ORDERING:

SL 0108

Water level indicators 50m

SL 0109

Water level indicators 100m

SL 0110

Water level indicators 150m

SL 0111

Water level indicators 200m

TECHNICAL SPECIFICATIONS:

Weight (approx.)	10 kg
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Water Level Indicator

EN 1426; ASTM D5; AASHTO T49

TECHNICAL SPECIFICATIONS:

Measuring Range	50m, 100m, 150m, 200m
Accuracy	1 cm for a measuring range of 100m
Reproducibility	0.5 cm
Pressure Tightness	10 bar (up to 50 var possible)
Probe	Chromium-plated brass
Standard Version	14 mm dia. 140 mm long
Special Version	10 mm dia. 320 mm long
Cable	Polyethylene with 2 steel cores (anticorrosive) with polyamide-coated steel tape, graduation in millimeters (mm), in centimeters (cm) and numbering in decimeters in black color, the meters (m) figures are red color on yellow-green base
Cable Drum	Hard Rubber, plastic material and temperature resistant
Power Supply	3V DC.2 baby-cells each 1.5V

Proctor Penetrometer (spring type)

ASTM D 1558

DESCRIPTION:

The Proctor Penetrometer is used for determining the penetration resistance of fine-grained soils.

The unit consists of a special calibrated spring dynamometer with a pressure-indicating scale on the stem of the handle.

It comes with a stainless steel adaptor stem for larger needles.

The pressure scale is calibrated to 100 lbs. by 1 lb. subdivisions. There is a major division located at each 10 lb. interval.

A sliding ring on the stem indicates the maximum load obtained during the test.



MAIN FEATURES:

- Scale graduations
- Threaded needles are interchangeable

ORDERING:

SL 0112

Proctor penetrometer complete set with needle point.

ACCESSORIES:

SL 0112-1

Set of spare needle point (0.25, 0.5, 1, 1.5, 2, 3, 5, 6 cm²)

TECHNICAL SPECIFICATIONS:

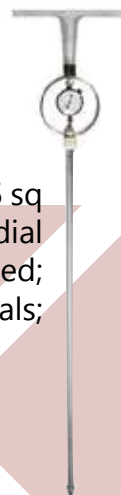
Load scale	0 - 55kg
Subdivision with max load indicator	1kg
Weight approx.	3.5kg

Proving Ring Penetrometer

DESCRIPTION:

Used to determine the bearing capacity of subgrades, or to measure soil compaction.

Supplied complete with calibration chart, 30°, 6.45 sq cm cone; 1.1kN capacity proving ring; brake type dial indicator holds final reading until manually released; 19mm dia shaft graduated at 152mm intervals; 19mm dia extension rod graduated at 152mm intervals; cast aluminium.



MAIN FEATURES:

- Light and easy to handle in the field.

ORDERING:

SL 0113

Proving ring Penetrometer complete

TECHNICAL SPECIFICATIONS:

Weight (approx.)	4kg
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Light Weight Deflectometer

ASTM E2835-11; TP-BF-StB part 8.3; ZTV E-StB 09; ZTV T-StB 95; ZTV A- StB 97; RVS 8; RIL 836

DESCRIPTION:

The dynamic plate load test performed with the Lightweight deflectometer is used to determine the soil bearing capacity and compaction quality of soils and non-cohesive subbases, as well as for soil improvement applications.

Built-in soil layers can easily be tested without load abutment, facilitating quick assessments of test lots even under limited space conditions. The test method is suited to coarse-grain and mixed grain soils with a maximum grain size of 63mm and can be used to determine the dynamic modulus of deformation of soil in the range $E_{vd} = 15$ to 70 MN/m^2 .

Applications

- Road and railway construction, earthmoving
- Quality assurance in canal construction
- Compaction monitoring in pipe trenches and cable ducts
- Testing of pavement bedding
- Testing of foundation backfill
- Quality inspection in boreholes
- Testing of modulus of deformation in line with soil exploration

TECHNICAL SPECIFICATIONS:

Loading mechanism

Total weight	15 kg
Drop weight	10 kg
Maximum impact force	7.07 kN
Duration of impact	17 ms
Material	zinc coated/hard-chrome plated steel

Load plate

Total weight	300 x 20 mm
Diameter	15 kg
Material	zinc coated steel

Electronic settlement measuring instrument

Interfaces	USB, Thermal-Printer, GPS, PC software included
Power supply	4 x R6 batteries
Dimensions	210 x 100 x 45 mm
Settlement measuring range	0.1 to 2.0 mm \pm 0.02 mm
Measuring range	$E_{vd} < 225 \text{ MN/m}^2$
Temperature range	0 to 40°C
Storage capacity of measured data	500 series

MAIN FEATURES:

- Fast and cost-saving: maximum 2 minutes per measuring point
- No vehicle required
- Immediate on-site evaluation of test results
- It can be easily operated and carried by one person only
- Testing can be achieved in difficult to reach locations

ORDERING:

SL 0114

Lightweight deflectometer used to determine the bearing capacity and compaction quality of soils and non-cohesive subbases. Printer & PC-Software

ACCESSORIES:

SL 0114-1

Transport cart for easier on-site transport of the Lightweight deflectometer between the measuring points

SL 0114-2

Magnetic base plate for proper positioning of loading unit

SL 0114-3

Carrying case for secure transport of the Lightweight deflectometer



Poket Dial Penetrometer

DESCRIPTION:

The Pocket Penetrometer is used in field exploration and comparing similar types of soil.

Classifying cohesive soils in terms of consistency and estimation of approximate unconfined compressive strength and shear strength.

The cylindrical tip of 0.32 cm² area penetrates into the soil up to 6mm market point. A cursor on the scale reads directly unconfined compressive strength in kgf/cm².



TECHNICAL SPECIFICATIONS:

	SL 0115	SL 0116
Tip Diameters	4.5 mm dia. for very hard soil; 6.35 mm for medium and soft soil; 8.98 mm for soft soil.	4.5 mm dia. for very hard soil; 6.35 mm for medium and soft soil; 8.98 mm for soft soil.
Measuring range	0 to 1000 kPa	0 to 500 kPa
Dimensions (assembled)	210 mm length x 20 mm dia. approx.	20 mm dia. x 173 mm length
Weight approx.	0.5 kg	0.5 kg

MAIN FEATURES:

- Portable
- Easy-to-use

ORDERING:

- SL 0115**
Heavy Duty Pocket Penetrometer
- SL 0116**
Heavy Duty Pocket Penetrometer with three interchangeable tips

Dynamic Cone Penetrometer

DESCRIPTION:

The Dynamic Cone Penetrometer is used for the rapid, in situ measurement of structural properties of existing road pavement constructed with unbound materials.

It incorporates an 8 kg weight dropping through a height of 575 mm and 60° cone having a diameter of 20 mm. with the standard DCP measurements can be made down to a depth of approximately 850 mm or when extension shafts are used to a recommended maximum depth of 2 m.

Readings are usually taken after a set number of blows, changing the number according to the strength of the layer being penetrated.



BS 1377, 1924, 812; EN 932-1

MAIN FEATURES:

- Efficient method

ORDERING:

- SL 0117**
Dynamic Cone Penetrometer set

ACCESSORIES:

- SL 0117-1**
Cones
- SL 0117-2**
Extension Rods

TECHNICAL SPECIFICATIONS:

Dimensions	1200x350x200 mm
Weight (approx.)	30 kg

Static Cone Penetrometer

DESCRIPTION:

The static cone penetrometer is used to evaluate the consistency of soils, their level of compaction and the bearing capacity of shallow foundations and pavement subgrades.

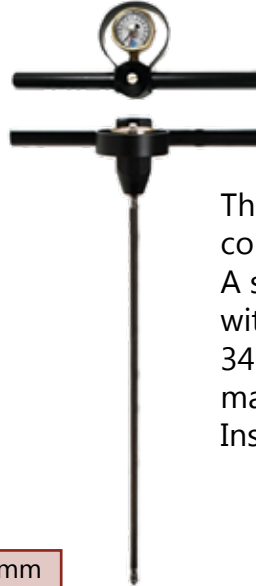
Specifically developed for use in fine-grained soils, particularly soft soils, to depths of 30 feet. They use a 60° cone with an area of 1.5 cm². An optional cone with a 3 cm² area is available for use in very soft soils.

Dual rod construction isolates cone resistance from shaft friction

Pressure gauge ranging from 0 to 70 kg/cm² reads cone resistance directly, eliminating the need for proving ring conversions. Stainless steel and anodized aluminium construction for reliable performance.

TECHNICAL SPECIFICATIONS:

Dimensions	Penetrometer: 610 x 203 mm Starter Rod: 89 x 610 mm
Estimated Shipping Weight	3.63 kg



MAIN FEATURES:

- Low soil friction
- Simple to use
- Uses 60° penetration cones with 1.5cm² or 3.0cm² area
- Direct gauge reading

ORDERING:

SL 0118
Static cone penetrometer

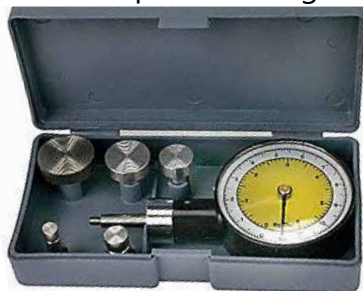
The standard model includes: A 600 cone with a maximum area of 1.5 cm²
A started Rod Assembly designed to withstand an axial force of 250 lbs (340 N.m) maximum, Pressure gauge marked in kg/cm², Operating Instructions and parts list

Dial Penetrometer

DESCRIPTION:

The Dial Penetrometer is used to check the penetration power of the soil. The Dial Penetrometer comes in three different versions, the dial has a maximum value holding system with 0 settings by push button.

The Dial dia is 60 mm, with peak holding features.



TECHNICAL SPECIFICATIONS:

Penetrometer Dimensions	63 x 114mm Dia. x H
Net Weight	369 g
Estimated Shipping Weight	0.45 kg

BS 1377, 1924, 812; EN 932-1

MAIN FEATURES:

- Provides unconfined compressive strength
- Tests a wide range of cohesive soils
- Non-corrosive
- User-calibrated dial

ORDERING:

SL 0119
Range 0 to 5 kgf/cm², plungers dia is 6.35 mm
SL 0120
Range 3 to 15 kgf/cm², plungers dia is 6.35 mm
SL 0121
Range 0 to 6 kgf/cm², plungers dia is 6.35 mm - 10 - 15 - 20 - 25

Pocket Shear Vane Device

DESCRIPTION:

The Pocket Shear Vane Apparatus is widely used to perform onsite or lab measurements of excavations covering trenches and test pits, thin-wall or split core samples, by providing a quick and efficient method for shear strength measurements.

Supplied complete with:

Standard 25mm dia, vane range 0 to 10N/cm², Sensitive Vane adaptor, range 0 to 2N/cm², High capacity vane adaptor range 0 to 25N/cm² in a plastic carrying case.

TECHNICAL SPECIFICATIONS:

Van type	Range
Standard 25 mm Diameter Vane	0-10 N/cm ²
Sensitive Vane Adaptor	0-2 N/cm ²
High Capacity Vane Adaptor	0-25 N/cm ²
Dimensions	240x210x50 mm
Weight (approx.)	1,5 kg

MAIN FEATURES:

- Suitable for laboratory and site usage.
- Used for determining the shear strength of cohesive soils.

ORDERING:

SL 0122
Pocket Shear Vane apparatus
Complete Vane



Field Inspection Vane Test

DESCRIPTION:

The Field Inspection Vane Tester can be used to determine the maximum shearing force that can be exercised on a soil.

Measurement in the field (on the surface, in profile pits or at the bottom of boreholes) as well as in the laboratory (on samples) are possible.

The shear stress measured can be read on a clearly readable scale ring.

In soft soils, it is not necessary to make a borehole first. In order to determine the friction on the extension rods, a dummy vane is available in these situations.

TECHNICAL SPECIFICATIONS:

Maximum measuring depth	3 m
Maximum shear stress	200 kPa
Measuring accuracy	< ± 10%
Reading accuracy	1%
Registration type	manual
Package size	56 x 12 x 5 cm
Vane size (shear stress)	5.12, 8, 12.9 cm ²
Weight	2.95 kg

ASTM D2573

MAIN FEATURES:

- Unconfined compressive strength
- Heavy duty, stainless steel construction

ORDERING:

SL 0123
Field Inspection Vane
Testing Kit



Field inspection vane tester, the standard set for measurements to 200 kPa (20 t/m²) and a depth of 3m, complete with 3 vanes (16x 32mm, 20x40 mm and 25.4x50.8 mm), dummy vane, extension rods, tools and carrying bag

Laboratory Vane Apparatus

ASTM D4648; BS 1377

DESCRIPTION:

The Laboratory Vane Apparatus is used to determine the shear strength in soft soils of undisturbed or remoulded samples.



The hand-operated frame has a 200mm diameter base plate capable of accepting standard specimen moulds and sample tubes. Scales indicate the load application and any vane deflection.

It is also available with motorizing attachments that can be fitted to automate the test process and provide better accuracy.

If purchased with the machine, the motorizing attachment will be fitted and tested. Alternatively, the motorizing attachment can be purchased at a later date and easily fitted at the customer site.

TECHNICAL SPECIFICATIONS:

Dimensions	200 X 240 X 560mm
Weight (approx.)	10 kg

MAIN FEATURES:

- Rapid way of determining the shear strength in soft soils
- Easy to use
- Manual Unit can easily be updated to a motorized version
- Two calibrated springs provided
- Supplied with 12.7mm x 12.7mm vane

ORDERING:

SL 0124

Manual Laboratory Vane Apparatus

SL 0125

Motorized Laboratory Vane Apparatus

ACCESSORIES:

SL 0124-1

Vane 12.7 mm x 12.7 mm

SL 0124-2

Vane 12.7 mm x 19 mm

SL 0124-3

Vane 12.7 mm x 25.4 mm

SL 0124-4

Attachment to hold a sample tube of 38 mm or 100 mm dia

Laboratory Mixer

BS 598-107, 1377-1, 1924-1, EN 12697-35

DESCRIPTION:

This Laboratory Mixer is suitable for sample preparation of soils, bituminous concrete and cement mortars.

The Laboratory mixer is a planetary beater type, where the flat beaters rotate in the opposite direction to the orbit around the inside of the mixing bowl.

The hand lever can raise, lower and lock the bowl at the desired position. Adjustment is allowed for proper clearance between the bowl and the beater.

It is available in several sizes : 5, 7.5, 10, 20, 30 ltrs.



MAIN FEATURES:

- Uniform mixing
- Direct gear drive transmission
- Three speeds set
- Control lever

ORDERING:

SL 0126

Laboratory Mixer 5 ltrs

SL 0127

Laboratory Mixer 7.5 ltrs

SL 0128

Laboratory Mixer 10 ltrs

SL 0129

Laboratory Mixer 20 ltrs

SL 0130

Laboratory Mixer 30 ltrs

ACCESSORIES:

SL 0126-1
Spare Stainless Bowl 5 ltrs

SL 0127-1
Spare Stainless Bowl 7.5 ltrs

SL 0128-1
Spare Stainless Bowl 10 ltrs

SL 0129-1
Spare Stainless Bowl 20 ltrs

SL 0130-1
Spare Stainless Bowl 30 ltrs

TECHNICAL SPECIFICATIONS:

Dimensions	700x750x800 mm
Weight (approx.)	75 kg
Power	550 W

Porcelain Mortar and Rubber Head Pestle

DESCRIPTION:

The Porcelain Mortar and Rubber Head Pestle are used for sample reduction by gently crushing individual particles.

TECHNICAL SPECIFICATIONS:

Weight (approx.)
1Kg



ASTM D420; BS 1377:2; BS 1924:1

ORDERING:

SL 0131
Porcelain Mortar and Rubber Head Pestle complete set

ACCESSORIES:

SL 0131-1
Spare Porcelain Mortar 125 mm dia

SL 0131-2
Spare Rubber Head Pestle

Laboratory Soil Grinder

DESCRIPTION:

It is an efficient method for reducing agglomerations of caked soil to individual grains, and much less labour intensive than manual mortar and pestle operation. It preserves true grain size for accurate and repeatable test results.

The hopper has a capacity of about 1 pint (0.6L) and features a manually operated gate to control the feed rate to the grinding chamber.

Operation is simple, just load the hopper, start the grinder and use the gate to control material feed.

A #10 (2.0mm) perforated stainless steel plate is included and retains larger particles. Most soil types are processed completely in less than 30 seconds per pint.

The reliable direct-drive motor and the grinding unit are mounted on a sturdy steel tripod stand. An in-line switch controls motor operation.

MAIN FEATURES:

- Fast, efficient sample preparation of soils
- Manually-operated gate controls feed rate
- Processes most soil types in less than 30 seconds



ASTM D4318

ORDERING:

SL 0132
Laboratory soil grinder

ACCESSORIES:

AS 0132-1
Stainless steel perforated plates No. 10

AS 0132-2
Stainless steel perforated plates No. 4

AS 0132-3
Stainless steel perforated plates No. 35

TECHNICAL SPECIFICATIONS:

Dimensions	305x381x483 mm
Estimated Shipping Weight	15kg



Sieves Shaker

DESCRIPTION:

The Sieve Shaker imparts a circular motion to the material being sieved so that it makes a slow progression over the surface of the sieve.

At the same time, a feature of the rapid vertical movement agitates the sample which helps to clear the sieve apertures and avoid them blinding.

The shaker is fitted with a timer which can be pre-set for any duration up to 60 minutes.

This unit will accept 127inch, 200mm and 300mm sieves dia.

Wet sieving kits in the appropriate sizes may be used with this shaker.



EN 932-5; ISO 3310-1

MAIN FEATURES:

- Sieve capacity: up to twelve 200 mm (8") and up to eight 300 mm (12") sieves plus pan and cover.

ORDERING:

SL 0133

Sieve Shaker with Time Adjustment, for 200 mm (8") & 300 mm (12") dia. frame sieves

SL 0134

Sieve Shaker with Frequency and Time Adjustment, for 200 mm (8") & 300 mm (12") dia. frame sieves

Two models are available: One with a digital timer and another one with a digital timer and vibrating frequency controller.

TECHNICAL SPECIFICATIONS:

Overall Dimensions	540x372x1013 mm
Weight approx	75 kg

Electromagnetic Sieve Shaker

DESCRIPTION:

The Sieve Shaker is powered by an electromagnetic drive which has no rotating parts to wear making it maintenance free and extremely quiet in operation.

The vibratory action produced by the power unit moves the sample over the sieve in a unique way producing faster more efficient sieving, while the rapid vertical movements also help keep the apertures from pegging.

The digital controller is used to set both the processing time and amplitude setting while further control enables the vibration to run continuously or intermittently.



EN 932-5; ISO 3310-1

MAIN FEATURES:

- High screening efficiency
- Strong-vibrating force
- Simple structure and easy maintenance

ORDERING:

SL 0135

Electromagnetic sieve Shaker with Time Adjustment, for 200 mm (8") & 300 mm (12") dia. frame sieves

SL 0136

Electromagnetic sieve Shaker with Frequency and Time Adjustment, for 200 mm (8") & 300 mm (12") dia. frame sieves

TECHNICAL SPECIFICATIONS:

Overall Dimensions	496x406x946 mm
Weight approx	30 kg

Testing Sieves

EN 933-2; ISO 3310-1; ISO 3310-2; ISO 565

ORDERING:

as per the table below

SL 0137-3

Sieve Set, 200 mm dia., mesh sizes of 37.5 mm (1 1/2") - 31.5 mm (1 1/4") - 25 mm (1") - 19 mm (3/4") - 12.7 mm (1/2") - 9.5 mm (3/8") - 4.74 mm (No.4) - 2.36 mm (No.8) - 1.19 mm (No.16) - 0.600 mm (No.30) - 0.300 mm (No.50) - 0.150 mm (No.100) - 0.074 mm (No.200) 13 analysis sieves, complete with pan and cover.

SL 0137-4

Sieve Set, 8 inch dia., mesh sizes of 37.5 mm (1 1/2") - 31.5 mm (1 1/4") - 25 mm (1") - 19 mm (3/4") - 12.7 mm (1/2") - 9.5 mm (3/8") - 4.74 mm (No.4) - 2.36 mm (No.8) - 1.19 mm (No.16) - 0.600 mm (No.30) - 0.300 mm (No.50) - 0.150 mm (No.100) - 0.074 mm (No.200) 13 analysis sieves, complete with pan and cover.

SL 0137-5

Sieve Set, 12 inch dia., mesh sizes of 37.5 mm (1 1/2") - 31.5 mm (1 1/4") - 25 mm (1") - 19 mm (3/4") - 12.7 mm (1/2") - 9.5 mm (3/8") - 4.74 mm (No.4) - 2.36 mm (No.8) - 1.19 mm (No.16) - 0.600 mm (No.30) - 0.300 mm (No.50) - 0.150 mm (No.100) - 0.074 mm (No.200) 13 analysis sieves, complete with pan and cover.

SL 0137-1

Sieve Brush, double ended, brass and nylon bristle

SL 0137-2

Sieve Brush, nylon, double ended

200 mm dia	300 mm dia	8 inch dia	12 inch dia	Woven wire stainless steel mesh
Product code	Product code	Product code	Product code	Mesh Size BS 410/ISO 3310 ASTM E11
SL 0137	SL 0174	SL 0211	SL 0248	Lid
SL 0138	SL 0175	SL 0212	SL 0249	Receiver
SL 0139	SL 0176	SL 0213	SL 0250	20 micron - no. 635
SL 0140	SL 0177	SL 0214	SL 0251	25 micron - no. 500
SL 0141	SL 0178	SL 0215	SL 0252	32 micron - no. 450
SL 0142	SL 0179	SL 0216	SL 0253	36 micron
SL 0143	SL 0180	SL 0217	SL 0254	38 micron - no. 400
SL 0144	SL 0181	SL 0218	SL 0255	40 micron
SL 0145	SL 0182	SL 0219	SL 0256	45 micron - no. 325
SL 0146	SL 0183	SL 0220	SL 0257	50 micron
SL 0147	SL 0184	SL 0221	SL 0258	53 micron - no. 270
SL 0148	SL 0185	SL 0222	SL 0259	56 micron
SL 0149	SL 0186	SL 0223	SL 0260	63 micron - no. 230
SL 0150	SL 0187	SL 0224	SL 0261	71 micron
SL 0151	SL 0188	SL 0225	SL 0262	75 micron - no. 200
SL 0152	SL 0189	SL 0226	SL 0263	80 micron
SL 0153	SL 0190	SL 0227	SL 0264	90 micron - no. 170
SL 0154	SL 0191	SL 0228	SL 0265	100 micron
SL 0155	SL 0192	SL 0229	SL 0266	106 micron- no. 140
SL 0156	SL 0193	SL 0230	SL 0267	112 micron
SL 0157	SL 0194	SL 0231	SL 0268	125 micron - no. 120
SL 0158	SL 0195	SL 0232	SL 0269	140 micron
SL 0159	SL 0196	SL 0233	SL 0270	150 micron - no. 100
SL 0160	SL 0197	SL 0234	SL 0271	160 micron
SL 0161	SL 0198	SL 0235	SL 0272	180 micron - no. 80
SL 0162	SL 0199	SL 0236	SL 0273	200 micron
SL 0163	SL 0200	SL 0237	SL 0274	212 micron - no. 70
SL 0164	SL 0201	SL 0238	SL 0275	224 micron
SL 0165	SL 0202	SL 0239	SL 0276	250 micron - no. 60
SL 0166	SL 0203	SL 0240	SL 0277	280 micron
SL 0167	SL 0204	SL 0241	SL 0278	300 micron - no. 50
SL 0168	SL 0205	SL 0242	SL 0279	315 micron
SL 0169	SL 0206	SL 0243	SL 0280	355 micron - no. 45
SL 0170	SL 0207	SL 0244	SL 0281	400 micron
SL 0171	SL 0208	SL 0245	SL 0282	425 micron - no. 40
SL 0172	SL 0209	SL 0246	SL 0283	450 micron
SL 0173	SL 0210	SL 0247	SL 0284	500 micron - no. 35

200 mm dia	300 mm dia	8 inch dia	12 inch dia	Woven wire stainless steel mesh
Product code	Product code	Product code	Product code	Mesh size BS 410/ISO 3310 ASTM E11
SL 0285	SL 0350	SL 0415	SL 0480	560 micron
SL 0286	SL 0351	SL 0416	SL 0481	560 micron
SL 0287	SL 0352	SL 0417	SL 0482	600 micron - no. 30
SL 0288	SL 0353	SL 0418	SL 0483	630 micron
SL 0289	SL 0354	SL 0419	SL 0484	710 micron - no. 25
SL 0290	SL 0355	SL 0420	SL 0485	800 micron
SL 0291	SL 0356	SL 0421	SL 0486	850 micron - no. 20
SL 0292	SL 0357	SL 0422	SL 0487	900 micron
SL 0293	SL 0358	SL 0423	SL 0488	1.00mm - no. 18
SL 0294	SL 0359	SL 0424	SL 0489	1.12 mm
SL 0295	SL 0360	SL 0425	SL 0490	1.18mm - no. 16
SL 0296	SL 0361	SL 0426	SL 0491	1.25 mm
SL 0297	SL 0362	SL 0427	SL 0492	1.40mm - no. 14
SL 0298	SL 0363	SL 0428	SL 0493	1.60 mm
SL 0299	SL 0364	SL 0429	SL 0494	1.70mm - no. 12
SL 0300	SL 0365	SL 0430	SL 0495	1.80 mm
SL 0301	SL 0366	SL 0431	SL 0496	2.00mm - no. 10
SL 0302	SL 0367	SL 0432	SL 0497	2.24 mm
SL 0303	SL 0368	SL 0433	SL 0498	2.36mm - no. 8
SL 0304	SL 0369	SL 0434	SL 0499	2.50 mm
SL 0305	SL 0370	SL 0435	SL 0500	2.80mm - no. 7
SL 0306	SL 0371	SL 0436	SL 0501	3.15 mm
SL 0307	SL 0372	SL 0437	SL 0502	3.35mm - no. 6
SL 0308	SL 0373	SL 0438	SL 0503	3.55 mm
SL 0309	SL 0374	SL 0439	SL 0504	4.00mm - no. 5
SL 0310	SL 0375	SL 0440	SL 0505	4.50 mm
SL 0311	SL 0376	SL 0441	SL 0506	4.75mm - no. 4
SL 0312	SL 0377	SL 0442	SL 0507	5.00 mm
SL 0313	SL 0378	SL 0443	SL 0508	5.60mm - 3 1/2
SL 0314	SL 0379	SL 0444	SL 0509	6.30mm - 1/4 inch
SL 0315	SL 0380	SL 0445	SL 0510	6.70mm - 0.265 inch
SL 0316	SL 0381	SL 0446	SL 0511	7.10 mm
SL 0317	SL 0382	SL 0447	SL 0512	8.00mm - 5/16 inch
SL 0318	SL 0383	SL 0448	SL 0513	9.00 mm
SL 0319	SL 0384	SL 0449	SL 0514	9.50mm - 3/8 inch
SL 0320	SL 0385	SL 0450	SL 0515	10.00 mm
SL 0321	SL 0386	SL 0451	SL 0516	11.2mm - 7/16 inch
SL 0322	SL 0387	SL 0452	SL 0517	12.5mm - 1/2 inch
SL 0323	SL 0388	SL 0453	SL 0518	13.2mm 0.530 inch
SL 0324	SL 0389	SL 0454	SL 0519	14.00 mm
SL 0325	SL 0390	SL 0455	SL 0520	16.0mm - 5/8 inch
SL 0326	SL 0391	SL 0456	SL 0521	18.00 mm
SL 0327	SL 0392	SL 0457	SL 0522	19.0mm - 3/4 inch
SL 0328	SL 0393	SL 0458	SL 0523	20.00 mm
SL 0329	SL 0394	SL 0459	SL 0524	22.4mm - 7/8 inch
SL 0330	SL 0395	SL 0460	SL 0525	25.0mm - 1 inch
SL 0331	SL 0396	SL 0461	SL 0526	26.5mm - 1.06 inch
SL 0332	SL 0397	SL 0462	SL 0527	28.00 mm
SL 0333	SL 0398	SL 0463	SL 0528	31.5mm - 1 1/4 inch
SL 0334	SL 0399	SL 0464	SL 0529	35.5 mm
SL 0335	SL 0400	SL 0465	SL 0530	37.5mm - 1 1/2 inch
SL 0336	SL 0401	SL 0466	SL 0531	40.00 mm
SL 0337	SL 0402	SL 0467	SL 0532	45.0mm 1 3/4 inch
SL 0338	SL 0403	SL 0468	SL 0533	50.0mm - 2 inch
SL 0339	SL 0404	SL 0469	SL 0534	53.0mm - 2.12 inch
SL 0340	SL 0405	SL 0470	SL 0535	56.00 mm
SL 0341	SL 0406	SL 0471	SL 0536	63.0mm - 2.5 inch
SL 0342	SL 0407	SL 0472	SL 0537	71.00 mm
SL 0343	SL 0408	SL 0473	SL 0538	75.0mm - 3 inch
SL 0344	SL 0409	SL 0474	SL 0539	80.00 mm
SL 0345	SL 0410	SL 0475	SL 0540	90.0mm - 3 1/2 inch
SL 0346	SL 0411	SL 0476	SL 0541	100mm - 4 inch
SL 0347	SL 0412	SL 0477	SL 0542	106mm - 4.24 inch
SL 0348	SL 0413	SL 0478	SL 0543	112.00 mm
SL 0349	SL 0414	SL 0479	SL 0544	125mm - 5 inch

Testing Sieves

EN 933-2; ISO 3310-1; ISO 3310-2; ISO 565

All test sieves are manufactured to National and International Specifications and are supplied with a "Certificate of Compliance".

Each sieve is individually serial numbered, ensuring full traceability. Particle Size Analysis is probably performed in all laboratories engaged in testing materials for civil engineering applications.

The range of sieves offered includes ISO, EN, BS and ASTM sieves. Woven wire test sieves are manufactured from stainless steel mesh while the Perforated plate test sieves are manufactured from tinned steel plate.

All test sieves unless otherwise indicated are supplied with full-depth frames. ASTM E11 sieves are similar in construction to those used in the British Standard range plate.



200 mm dia	300 mm dia	8 inch dia	12 inch dia	Perforated Plate mild steel plate sieve
Product code	Product code	Product code	Product code	Mesh Size BS 410/ISO 3310 ASTM E11
SL 0545	SL 0587	SL 0629	SL 0671	4.00 mm
SL 0546	SL 0588	SL 0630	SL 0672	4.50 mm
SL 0547	SL 0589	SL 0631	SL 0673	4.75 mm
SL 0548	SL 0590	SL 0632	SL 0674	5.00 mm
SL 0549	SL 0591	SL 0633	SL 0675	5.60 mm
SL 0550	SL 0592	SL 0634	SL 0676	6.30 mm
SL 0551	SL 0593	SL 0635	SL 0677	6.70 mm
SL 0552	SL 0594	SL 0636	SL 0678	7.10 mm
SL 0553	SL 0595	SL 0637	SL 0679	8.00 mm
SL 0554	SL 0596	SL 0638	SL 0680	9.00 mm
SL 0555	SL 0597	SL 0639	SL 0681	9.50 mm
SL 0556	SL 0598	SL 0640	SL 0682	10.00 mm
SL 0557	SL 0599	SL 0641	SL 0683	11.2 mm
SL 0558	SL 0600	SL 0642	SL 0684	12.5 mm
SL 0559	SL 0601	SL 0643	SL 0685	13.20 mm
SL 0560	SL 0602	SL 0644	SL 0686	14.00 mm
SL 0561	SL 0603	SL 0645	SL 0687	16.00 mm
SL 0562	SL 0604	SL 0646	SL 0688	18.00 mm
SL 0563	SL 0605	SL 0647	SL 0689	19.00 mm
SL 0564	SL 0606	SL 0648	SL 0690	20.00 mm
SL 0565	SL 0607	SL 0649	SL 0691	22.4 mm
SL 0566	SL 0608	SL 0650	SL 0692	25.00 mm
SL 0567	SL 0609	SL 0651	SL 0693	26.50 mm
SL 0568	SL 0610	SL 0652	SL 0694	28.00 mm
SL 0569	SL 0611	SL 0653	SL 0695	31.5 mm
SL 0570	SL 0612	SL 0654	SL 0696	35.50 mm
SL 0571	SL 0613	SL 0655	SL 0697	37.50 mm
SL 0572	SL 0614	SL 0656	SL 0698	40.00 mm
SL 0573	SL 0615	SL 0657	SL 0699	45.00 mm
SL 0574	SL 0616	SL 0658	SL 0700	50.00 mm
SL 0575	SL 0617	SL 0659	SL 0701	53.00 mm
SL 0576	SL 0618	SL 0660	SL 0702	56.00 mm
SL 0577	SL 0619	SL 0661	SL 0703	71.00 mm
SL 0578	SL 0620	SL 0662	SL 0704	75.00 mm
SL 0579	SL 0621	SL 0663	SL 0705	80.00 mm
SL 0580	SL 0622	SL 0664	SL 0706	90.00 mm
SL 0581	SL 0623	SL 0665	SL 0707	100.00 mm
SL 0582	SL 0624	SL 0666	SL 0708	106 mm
SL 0583	SL 0625	SL 0667	SL 0709	112 mm
SL 0584	SL 0626	SL 0668	SL 0710	125 mm
SL 0585	SL 0627	SL 0669	SL 0711	75 micron Washing Sieves
SL 0586	SL 0628	SL 0670	SL 0712	63 micron Washing Sieves

Digital Gauge Calcimeter

ASTM D4373

DESCRIPTION:

The Digital Gauge Calcimeter Kit + Magnetic Stirrer provides all of the necessary apparatus to perform easy and accurate field Calcimetry testing.

The addition of the Magnetic Stirrer and Stir Bar allows for more convenient and accurate testing.

Calcimetry is used to determine the Calcite (Calcium Carbonate- CaCO_3) and Dolomite ($\text{CaMg}(\text{CO}_3)_2$) content of a soil, oil well core or drill cutting sample.

The buildup of Calcite in drilling fluids and in water treatment processes can cause scaling issues. The data collected from Calcimetry testing aids in determining a suitable chemical treatment. The data collected also provides a host of other geological information.

The equipment for testing is somewhat fragile, expensive and not ideal of field testing applications.

The Gauge Model Calcimeter Kit mitigates many sources of error and introduces a simplified testing procedure which allows the user to perform the test with accuracy and ease.

The Digital Gauge Calcimeter Kit contains:

- Reaction Chamber (5" x 2.25")
- Reaction Chamber Top (includes Luer Lock Valve, Pressure Release Valve, Digital Pressure Gauge and Neoprene-O Rings)
- Reaction Chamber Stand
- Magnetic Stirrer
- 1.25" Magnetic Stir Bar
- Luer Lock Syringe(s) 20ml and/or 60ml
- 3" ASTM #100 Brass Sieve
- Digital Weighing Scale
- Stop Watch
- Pestle-Mortar
- Spatula
- Sample Tray
- Laboratory Grade Hydrochloric Acid
- Laboratory Grade Calcium Carbonate
- User Manual



ORDERING:

SL 0713
Digital Gauge Calcimeter Kit

ACCESSORIES:

SL 0713-1
Reaction Chamber

SL 0713-2
Reaction Chamber

SL 0713-3
Reaction Chamber Stand

SL 0713-4
Magnetic Stirrer

SL 0713-5
Magnetic Stirrer

SL 0713-6
3" ASTM #100 Brass Sieve

SL 0713-7
Laboratory Grade Hydrochloric Acid

SL 0713-8
Laboratory Grade Calcium Carbonate

TECHNICAL SPECIFICATIONS:

Dimensions	200 X 240 X 560mm
Weight (approx.)	10 kg

Ultrasonic Cleaning Bath

ASTM E11

DESCRIPTION:

The Ultrasonic cleaning baths use cavitation to remove dirt from objects that are immersed in the cleaning liquid.

Cavitation is the sequential formation and collapse of vapour bubbles and voids in a liquid subjected to acoustic energy at high frequency and intensity.

Cavitation occurs wherever the liquid penetrates, ensuring that the smaller and larger aperture sieves are cleaned equally well. Ultrasonic baths are also useful for cleaning fragile items such as glassware and sieves.

The 25 litre cleaning bath has an internal diameter of 410mm and a height of 200mm. Accommodating sieves of up to 400mm diameter.

Cleaning baths are manufactured from stainless steel, supplied complete with:

a timer, lid and incorporate an ultrasonic generator which is suitable for continuous operation.

TECHNICAL SPECIFICATIONS:

	Weight
25 liters	
5 liters	8 kg

Diameter	410 mm
Height	200 mm
Sieves diameter up to	400 mm



ORDERING:

SL 0714
Ultrasonic Cleaning Baths
25 lt capacity

ACCESSORIES:

SL 0714-1
Cleaning Liquid, 5 lt

Speedy Moisture Meter

BS 812; ASTM D4944; AASHTO T217; EN 413-2; 459-2; 1015-4; DIN 4211

The Speedy Moisture Tester is a portable system comprising a vessel with an integral pressure gauge a weighing scale and carries case.

A small sample of the material is prepared weighed and placed into the vessel. The reagent is then added and the vessel.

The reagent is then added and the vessel is sealed and shaken to mix the reagent with the sample.

Free moisture within the sample reacts with the reagent to produce a gas and pressure rise within the vessel that is proportional to the amount of moisture.

The moisture content value is then read directly from the calibrated pressure gauge.

Speedy vessel manufactured from cast aluminium and fitted with a calibrated pressure gauge with a moisture measurement range of 0 -20%. With 0.2% Gauge divisions.

TECHNICAL SPECIFICATIONS:

Dimensions	510x380x200 mm (case)
Weight (approx.)	9 kg



ORDERING:

SL 0715
Small speedy, 6gr sample

SL 0716
Large Speedy, 20gr sample

ACCESSORIES:

SL 0715-1
Calcium Carbide

Universal Carbide Meter

DESCRIPTION:

The moisture content can be determined using the Moisture tester based on the calcium carbide method.

The soil sample is introduced in the bottle with the reagent. The water reacts with calcium carbide and develops a gas pressure, which is indicated on the manometer and easily converted in the percentage of moisture.

It is possible to vary the sample weight from 3 to 100g for the complete reaction between the sample and carbide with accurate moisture measurements from 0 to over 20%.

The glass ampoule containing the calcium carbide is broken when the bottle is closed and shaken, granting better accuracy to the test.

The instrument comprises the testing bottle with manometer, small balance, 20 ampoules of reagent, accessories, case.



BS 812, ASTM D4944, AASHTO T217

ORDERING:

SL 0717

Small Carbide Meter, 10 gr sample

SL 0718

Medium Carbide Meter, 20 gr sample

SL 0719

Large Carbide Meter, 50 gr sample

ACCESSORIES:

SL 0717-1

Calcium Carbide reagent ampoules pack of 100 pieces

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
520x340x140 mm.	6 kg

Liquid Limit Devices Casagrande Method

DESCRIPTION:

Liquid limit device Casagrande method is used to determine the moisture content at which clay soil passes from a plastic to a liquid state.

It helps in the classification of soil when comparing the potential properties of soil material against empirical data.

Consists of:

a brass cup, adjustable crank, mechanical blow counter, base and grooving tools.

TECHNICAL SPECIFICATIONS:

	Manual	Motorized
Dimensions	240x230x150 mm	200x290x170 mm
Weight (approx.)	2 kg	4.2 kg



BS 1377, 1997-2, ASTM D4318, AASHTO T89

MAIN FEATURES:

- Adjustable crank
- Different models with the same shape

ORDERING:

SL 0720

Manual liquid complete with counter, metal grooving tool and test gauge, BS standards

SL 0721

Motorized liquid complete with counter, metal grooving tool and test gauge, BS standards

SL 0722

Manual liquid complete with counter, less ASTM standard

SL 0723

Motorized liquid complete with counter, less ASTM standard

ACCESSORIES:

SL 0720-1

ASTM Metal Grooving Tool

SL 0720-2

BS Metal Grooving Tool

SL 0720-3

AASHTO casagrande grooving tool

Cone Penetrometer Test

DESCRIPTION:

The Cone Penetrometer is used to carry on liquid limit tests on soil samples.

It is a static test depending on the soil shear strength.

The test is based on the relationship between moisture content and the penetration of a cone into the soil sample under pre-set conditions.

TECHNICAL SPECIFICATIONS:

Dimensions	Weight
230x175x415 mm	9.7 kg

BS 1377	Yes
BS 1924-2	Yes
Voltage Supply	220-240 V 50/60 Hz
Weight, kg	8.6
Description	Semi-Automatic Cone Penetrometer
Cone Release	Semi-Automatic
EN 1997-2	Yes



BS 1377; 1924-2; EN DD ENV 1997-2

MAIN FEATURES:

- Adjustable crank
- Different models with the same shape

ORDERING:

SL 0724
Semi-Automatic Cone Penetrometer supplied complete

SL 0725
Fully Automatic Cone Penetrometer supplied complete

Strenght of Stabilized Soil

DESCRIPTION:

To perform the unconfined compressive strength of hydraulically bound mixtures of fine and medium-grained soil specimens, the main Standards require to manufacture the test specimens using a suitable mould set kit.

Several versions are available according to the Standard: EN 13286-53 NF P94-100



- Each test set conforming to
- 1 mould,
 - set of 2 end plugs
 - set of 2 plug displacing collars with 3 different heights (5.00 mm; 8.33 mm and 12.50 mm)
 - 1 demoulding plunger
 - 1 specimen collector

Each test set conforming to NF P94-100 includes:

- 1 mould
- 5 stainless steel casing
- 2 compaction plugs
- 1 set of plug displacing collars
- 1 demoulding plunger
- 1 specimen collector

EN 13286-53; NF P94-100

ORDERING:

SL 0726
EN Stabilized soil set for fine and medium grained soils, specimen size \varnothing 50x50 mm, according to EN 13286-53

SL 0727
EN Stabilized soil set for fine and medium grained soils, specimen size \varnothing 50x100 mm, according to EN 13286-53

SL 0728
EN Stabilized soil set for fine and medium grained soils, specimen size \varnothing 100x100 mm, according to EN 13286-53

SL 0729
EN Stabilized soil set for fine and medium grained soils, specimen size \varnothing 100x200 mm, according to EN 13286-53

SL 0730
NF Stabilized soil set for fine and medium grained soils, specimen size \varnothing 50x50 mm, according to NF P94-100

Determination of Plastic Limit

DESCRIPTION:

The Plastic Limit (WP) is defined as the lowest moisture content of a soil that will permit a sample to be rolled into threads of 3mm diameter without the threads breaking.

The Plastic Limit Set comprises of: a glass plate, steel rod, mixing dish, spatula and 4 moisture content tins.



ASTM 4318, AASHTO T90, BAS 1377:2

ORDERING:

SL 0731
The Plastic Limit complete set

ACCESSORIES:

SL 0731-1
Steel rod
SL 0731-2
4 Moisture content tins

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
340x290x90 mm	1,5 kg

Determination of Shrinkage Limit

DESCRIPTION:

When the water content of a fine grained soil is reduced below the plastic limit, shrinkage of the soil mass continues until the shrinkage limit is reached.

This method of test covers the determination of the shrinkage limit, shrinkage ratio, volumetric shrinkage and linear shrinkage.

The set comprises prong plate, shrinkage dish, spatula, glass measuring cylinders and two moisture content tins.



ASTM D427; AASHTO T92; UNE 103-108; UNI 10014 BS 1377

ORDERING:

SL 0732
The Shrinkage Limit Test Set is supplied complete

ACCESSORIES:

SL 0732-1
Shrinkage Dish
SL 0732-2
Prong Plate
SL 0732-3
Moisture Content Tin with Lid, aluminum, Ø:45 mm h:10 mm, 2 pcs.
SL 0732-4
Moisture Content Tin with Lid, aluminum, Ø:55 mm h:35 mm
SL 0732-5
Porcelain Dish, 120mm dia.
SL 0732-6
Spatula, 120 mm

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
340x290x90 mm	1,5 kg

SL 0732-7
Graduated Glass Cylinder, 25 ml
SL 0732-8
Carrying Case

Linear Shrinkage Mold

DESCRIPTION:

The Linear shrinkage test covers the determination of the shrinkage of soils and indicates the plastic properties of soils with low clay content.



BS 1377:2

MAIN FEATURES:

- Made from brass

ORDERING:

SL 0733
Linear shrinkage Mold

ACCESSORIES:

SL 0733-1
Vernier Caliper

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
140 mm long, 12.5 mm radius.	300 g

Voluvessel, 1/20 CU. FT. (1600ML) Capacity

DESCRIPTION:

The Voluvessel determine the in-place density of compacted or firmly-bonded soils using a rubber balloon apparatus viewed through a graduated, direct-reading clear plastic cylinder protected by a metal casing.

The model features a plastic cylinder, which screws into the density plate with the pump assembly mounted to the base.

The Voluvessel comes with: a pressure-vacuum pump assembly, pressure gauge, quick coupler valve, double graduated cylinder, 10 balloons and a density plate

TECHNICAL

SPECIFICATIONS:

Dimensions	Weight
250x250x700 mm	7 kg



ASTM D2167; AASHTO T205

MAIN FEATURES:

- Durable, clear plastic cylinder

ORDERING:

SL 0734

Voluvessel complete test set.

ACCESSORIES:

SL 0734-1

Spare Balloons, Pack of 10

Guelph Permeameter Apparatus

ASTM D5126

DESCRIPTION:

The Guelph Permeameter is used for measuring in-situ hydraulic conductivity.

Accurate evaluation of soil hydraulic conductivity, soil captivity, and matrix flux potential can be made in all types of soils.

The Guelph permeameter is a complete kit consisting of: the permeameter, field tripod, well auger, well preparation and cleanup tools, collapsible water container, and vacuum test hand pump, all packaged in a durable carrying case.

TECHNICAL

SPECIFICATIONS:

Dimensions	Weight (approx.)
54x17x7 cm	40 kg



ORDERING:

SL 0735

Guelph Permeameter Complete Set

Falling Head Permeability Apparatus

DESCRIPTION:

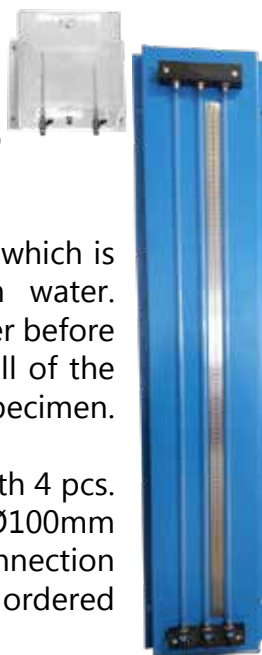
The Falling Head Permeameter apparatus is used to determine the permeability of clay-like or silty soils.

The specimen is confined within the permeameter which is connected to the manometer tube filled with water. The sample must be completely saturated with water before the test, and the operator will check the rate of fall of the water in the tube passing through the test specimen.

Falling Head Permeability Set consists of a stand with 4 pcs. manometer tubes with connection valves, a Ø100mm permeability cell, soaking reservoir tank and connection hoses. (Water De-Airing equipment should be ordered separately.)

TECHNICAL SPECIFICATIONS:

	Dimensions	Weight
Falling Head Permeability Cell 100 mm dia.	150x150x260 mm	3 kg
Wooden Stand with 4 Manometer Tubes	230x100x1700 mm	6.6 kg
Soaking Reservoir Tank	320x320x250 mm	3.6 kg



ORDERING:

- SL 0736**
Falling Head Permeability Apparatus
- SL 0737**
Water De-Airing equipment

ACCESSORIES:

- SL 0736-1**
Stand with 4 pcs. manometer tubes with connection valves
- SL 0736-2**
Ø100mm Permeability Cell
- SL 0736-3**
Soaking Reservoir Tank
- SL 0736-4**
Connection Hoses



Constant Head Permeameter Apparatus

BS 1377:5; ASTM D2434; AASHTO T215

DESCRIPTION:

The Constant Head Permeameter apparatus is used for testing the permeability of granular soils (sand and gravels).

The specimen is formed in a permeability cell and water is passed through it from a constant level tank. Take off point located along the sides of the permeability cell are connected to three manometer tubes mounted on a panel complete with a meter scale.

Water passing through the specimen is collected and measured, either for a specific quality or over a while. The reduction of the head is noted from the variation of water level in the manometer tubes.

Constant Head Permeability Set consists of an 80 mm dia. constant head permeability cell, wooden stand with 3 pcs. manometer tubes, constant level tank, and 3m connection hoses. (Water De-Airing equipment and tamping rod should be ordered separately.)

Constant Head Permeability Set consists of a 120 mm dia. constant head permeability cell, wooden stand with 3 pcs. manometer tubes, constant level tank, and 3m connection hoses. (Water De-Airing equipment and tamping rod should be ordered separately.)

TECHNICAL SPECIFICATIONS:

	Dimensions	Weight
Wooden Stand with 3 Manometer Tubes	220x70x1700 mm	5.6 kg
Constant Level Water Tank	300x200x250 mm	3 kg
Tamping Rod	Ø 8x300 mm	0.5 kg



ORDERING:

- SL 0738**
Constant head permeability for 80mm dia cell
- SL 0739**
Constant head permeability for 120mm dia cell
- SL 0740**
Water De-Airing equipment

ACCESSORIES:

- SL 0738-1**
Wooden Stand with 3 pcs. Manometer Tubes
- SL 0738-2**
Manometer Tubes
- SL 0738-3**
Constant Level Tank
- SL 0738-4**
Connection Hoses 3m

End Over End Shaker

BS 1377:2 EN 1997-2

DESCRIPTION:

The Particle density or specific gravity is a measure of the actual particles which make up the soil mass and is defined as the ratio of the mass of the particles to the mass of the water they displace.

This method is suitable for soils containing up to 10% of particles retained on a 37.5 mm BS sieve.



TECHNICAL SPECIFICATIONS:

Weight (approx.)	Dimensions
20 kg	900x700x600 mm

ORDERING:

SL 0741
End Over End Shaker 230V
50 Hz, 1 pf

ACCESSORIES:

SL 0741-1
Gas jar, 1 ltr. Capacity
complete with rubber bung.

Sedimentation Hydrometer

EN 933-8; ASTM D2419; AASHTO T176

TECHNICAL SPECIFICATIONS:

Overall Weight (approx.)	Dimensions
25 kg	600x300x380 mm



DESCRIPTION:

The Sedimentation Hydrometer test set is used to determine particle size distribution in soil from the coarse sand size down to the smallest fractions.

In this method, the sample is from organic matter after which it is dried and weighed. Next, it is suspended in water and sieved.

The solution that passes through the sieve is transferred to a measuring cylinder with water.

Hydrometer readings are taken after regular intervals. Sedimentation time and hydrometer readings are used to determine the grain sizes according to the stoke's Law.

Sedimentation Hydrometer test set consisting of soil dispersion mixer, hydrometer bath, 1pcs. hydrometer 151H or 152H, sodium hexametaphosphate 1 kg, 6 pcs. 1000 ml sedimentation cylinder, heater, circulation pump, rubber stopper and 600 ml beaker.

ORDERING:

SL 0742
Sedimentation Hydrometer
test set

ACCESSORIES:

- SL 0742-1**
Constant Temperature Bath
- SL 0742-2**
Sodium Hexametaphosphate
500 g
- SL 0742-3**
Hydrometer Sedimentation
Cylinder 1000 ml
- SL 0742-4**
Mechanical Analysis Stirrer
- SL 0742-5**
Soil Hydrometer BS/EN,
graduated 0.0995 to 1.030
g/ml.
- SL 0742-6**
Soil Hydrometer ASTM/
AASHTO(152H) graduated -5
to +60 g/litre.
- SL 0742-7**
Soil Hydrometer ASTM D422
(151H) graduated 0.0995 to
1.038 g/ml.+60 g/litre.

Mechanical Analysis Stirrer

DESCRIPTION:

The compact, bench-top mechanical stirrer is used for dispersing soil samples in water for hydrometer analysis.

The stirrer is supplied complete with: Mixing Paddle and Dispersion Cup.



BS ASTM D422; AASHTO T88

MAIN FEATURES:

- Durable, long-lasting mixing unit
- Baffled Dispersion Cup is included

ORDERING:

SL 0743
Mechanical Analysis Stirrer

TECHNICAL SPECIFICATIONS:

Revolutions per Minute	13,000/18,000rpm speeds
Electrical	115V / 60Hz, 7.5 Amps
Product Dimensions	165 x 171 x 521 mm
Estimated Shipping Weight	7.71 kg

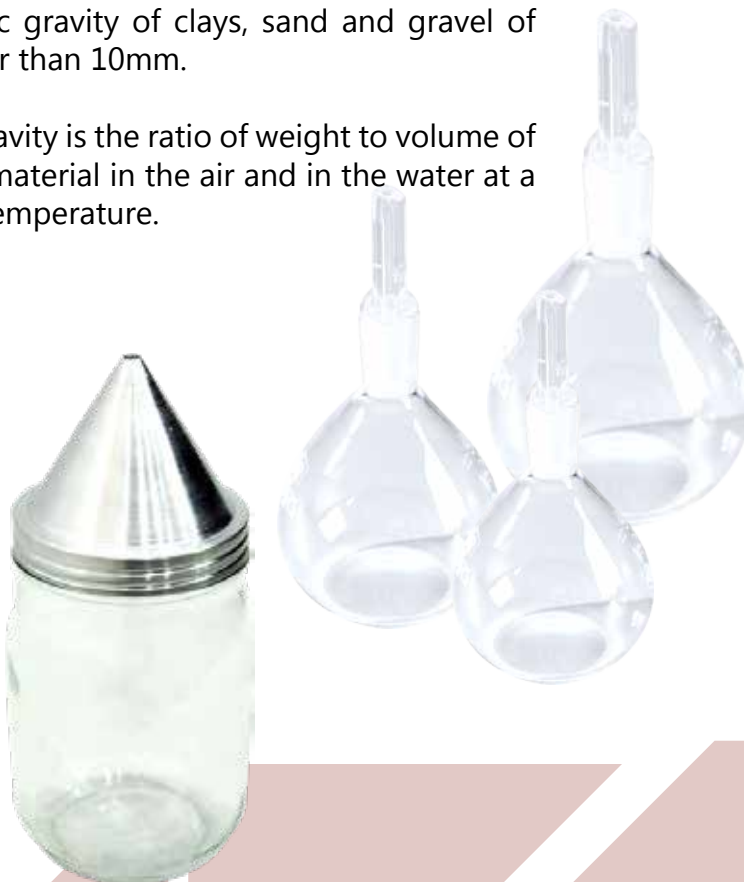
Pyknometer Method

BS 1377, 812-2, EN 1097-7, 1997-2, ASTM D 854, AASHTO T100

DESCRIPTION:

The Pyknometer Method is used to determine the specific gravity of clays, sand and gravel of size smaller than 10mm.

Specific gravity is the ratio of weight to volume of a specific material in the air and in the water at a constant temperature.



ORDERING:

SL 0744

Density Bottle 25 ml, Supplied complete with capillary vent stopper.

SL 0745

Density Bottle 50 ml, Supplied complete with capillary vent stopper.

SL 0746

Density Bottle 100 ml, Supplied complete with capillary vent stopper.

SL 0747

Pyknometer 1000 ml, Glass jar complete with non-corrodible cone and rubber seal.

ACCESSORIES:

SL 0744-1

Spare Rubber seal

Sand Equivalent Test

EN 933-8, AASHTO T 176; AASHTO T 210; ASTM D2419

DESCRIPTION:

The Sand Equivalent Test indicates the relative portion of undesirable clay-like or plastic fines and dust that occur in granular soils and fine aggregates passing the No. 4 sieve.

The sample to be tested is placed in a special solution of calcium chloride, formaldehyde and glycerine.

After shaking the cylinder, it is allowed to stand for a 20-minute sedimentation period.

Readings are then taken on the cylinder scale for the level of the top of the clay suspension and the sand level.

The "Sand Equivalent" is the sand reading divided by the clay reading x 100. When the water content of fine-grained soil is reduced below the plastic limit, shrinkage of the soil mass continues until the shrinkage limit is reached.

Sand Equivalent Test Set ASTM EN, supplied with 4 pcs. transparent two graduated acrylic plastic measuring cylinders, 2 pcs. solid rubber stopper, syphon assembly (irrigator tube with valve, syphon tube and hose, blow tube and hose, 5 L plastic can with two-hole stopper), plunger assembly, the measuring can, wide-mouth funnel, a ruler with a special set bag. Washing and Flocculating (Stock Solution) should be ordered separately.



MAIN FEATURES:

- Durable Design

ORDERING:

SL 0748

Sand Equivalent Test Set

TECHNICAL SPECIFICATIONS:

Dimensions	Case: 660 x 203 x 406 mm
Estimated Shipping Weight	6.80 kg / 4.08 kg

Sand Equivalent Shaker

AASHTO T 176; AASHTO T 210; 217; 229; ASTM D3744; ASTM D2419

DESCRIPTION:

The Sand Equivalent Shaker is recommended for laboratories performing sand equivalent tests on a regular basis.

The shaker is used for uniform shaking of Sand Equivalent Measuring Cylinders. Provides shaking action at the specified rate and stroke. Clear Plastic Graduated Test cylinder is held securely by base pin and spring-loaded holder on the stoppered end.



MAIN FEATURES:

- Improves repeat ability and consistency
- Supplied with a timer

ORDERING:

SL 0749

Sand Equivalent Shaker

TECHNICAL SPECIFICATIONS:

Dimensions	31x61x61 cm
Weight	36.3 kg

Sand Cone Density

DESCRIPTION:

The Sand Cone Density is used for on site determination of the degree of compaction of sand.

Two sizes are available:

Sand Cone Set 6.5", complete with valved double cone, 5 lt plastic jar, base plate with a flanged hole.

Sand Cone Set 12", complete with valved double cone, 5 lt plastic jar, base plate with a flanged hole.

TECHNICAL SPECIFICATIONS:

	Dimensions	Weight
Sand Cone Set 6.5"	300x300x550 mm	4 kg
Sand Cone Set 12"	600x600x650 mm	15 kg

AASHTO T 191; ASTM D1556

MAIN FEATURES:

- Detachable cone fitting
- Comes with Valve Stopper

ORDERING:

SL 0750
Sand Cone Set 6.5",
SL 0751
Sand Cone Set 12"



BS 1377:9; 1924:2

Sand Replacement

DESCRIPTION:

The Sand Replacement is used to determine the dry density of in-situ compact, fine, medium-grained soils and for layers not exceeding 50 cm thickness.

A circular hole is dug in the ground, all the soil from within it is collected, weighed and dried.

The hole is then back-filled with the standard uniform sand or fine gravel poured from a calibrated container for calculating the volume of the hole.

The complete set consists of:

pouring cylinder, calibration container and a tray.

The sand pouring cylinder is made of cast aluminium and precisely machined.

The calibration container and tray are made of plated sheet steel.

TECHNICAL SPECIFICATIONS:

	Dimensions	Weight
Sand Replacement Test Set 100 mm	300x300x440 mm	8 kg
Sand Replacement Test Set 150 mm	300x300x500 mm	14 kg
Sand Replacement Test Set 200 mm	500x500x660 mm	27 kg

MAIN FEATURES:

- Heavy duty precisely machined

ORDERING:

SL 0752
Sand replacement Set
100 mm
SL 0753
Sand replacement Set
150 mm
SL 0754
Sand replacement Set
200 mm



Riffle Box

BS 1377, 1924, 812; EN 932-1, 933-3; ASTM C72

DESCRIPTION:

Riffle Boxes are used for dividing soil aggregates into representative sample increment for testing. Heavy Duty Electrostatic painted and manufactured from heavy gauge sheet metal the slot widths and number of slots as required in the standards.

Riffle boxes are supplied complete with 3 containers easy to handle.



ORDERING:

SL 0755	7 mm	2,2 kg
SL 0756	13 mm	6,2 kg
SL 0757	15 mm	8 kg
SL 0758	19 mm	9,5 kg
SL 0759	25 mm	12,5 kg
SL 0760	30 mm	19,9 kg
SL 0761	38 mm	21 kg
SL 0762	45 mm	24,7 kg
SL 0763	50 mm	26,8 kg
SL 0764	64 mm	32,1 kg
SL 0765	75 mm	35,3 kg

Universal Sample Splitter

AASHTO T248; AASHTO T27,T92; ASTM C 136; ASTM C 702; ASTM C 778 ;ASTM D 75; BS 1377; ASTM D427

DESCRIPTION:

The Universal Sample Splitter is a rugged, sample divider samples of aggregate, ore and other granular materials.

This original model of the Universal design is suitable for laboratory or field use with materials with particle sizes from 4in (102mm) down to fine sand.

The lever-release allows controlled, accurate splits from the 1ft3 (28.3L) hopper. Made from heavy-gauge painted steel and anodized aluminium.

Adjustable chute design features easy to adjust chutes and spring-loaded lever-release hoppers to assure top accuracy when reducing bulk materials.

Particle sizes from 60 microns to 6 inch, Includes 2 pans.

ORDERING:

SL 0766
Universal Sample Splitter



TECHNICAL SPECIFICATIONS:

Dimensions	737x483x990 mm
Hopper/Pans Capacity	28.3 L
Chute Bar Width	102mm
Chute Bars	48
Chute Slope	45°
Estimated shipping weight	61.69 kg

Plate bearing test equipment

ASTM D1194, ASTM D1195, ASTM D1196; BS 1377:9

DESCRIPTION:

The Plate Bearing Test is used to determine the bearing capacity of a soil under field loading conditions for a specific loading plate and depth of embedment. It is also used for load tests of soil and flexible pavement components.

Plate Loading Test Set with Digital Dial Gauges and LPI Digital Readout Unit, 200 kN. Supplied complete with Hydraulic hand pump, 1,5 m flexible hose with quick release coupling, Pressure transducer, LPI battery operated digital readout unit, 200kN capacity piston assembly, 300 mm and 450 mm dia. loading plates, 2.4 m long datum bar, 3 pcs. 25 mm travel x 0.01 mm digital dial gauges with dial supports.

Plate Loading Test Set with Digital Dial Gauges and LPI Digital Readout Unit, 500 kN. Supplied complete with Hydraulic hand pump, 1,5 m flexible hose with quick release coupling, Pressure transducer, LPI battery operated digital readout unit, 500kN capacity piston assembly, 600 mm and 760 mm dia. loading plates, 2.4 m long datum bar, 3 pcs. 25 mm travel x 0.01 mm digital dial gauges with dial supports.

TECHNICAL SPECIFICATIONS:



	Dimensions	Weight
SL 0767	650x330x570 mm	120 kg
SL 0768	840x840x120 mm	155 kg

ORDERING:

SL 0767
Plate Bearing test equipment set 200kN

SL 0768
Plate Bearing test equipment set 500kN

ACCESSORIES:

SL 0767-1
Digital Dial Gauge

SL 0767-2
300mm dia loading plate

SL 0767-3
450mm dia loading plate

SL 0767-4
600 mm dia loading plate

SL 0767-5
760 mm dia loading plate

Electrical Density Gauge

ASTM standard D7113 and AASHTO T 343-12

DESCRIPTION:

The Electrical Density Gauge measures pavement density indirectly by measuring its dielectric constant. It passes a small current through the pavement, which creates an electrical sensing field.

Density is measured by the response of this electrical sensing field to changes in the pavement's complex impedance (consisting of the pavement's composite resistivity and dielectric constant).

The advantage of using the electrical density gauge is that the readings can be obtained in seconds. It contains no radioactive source and therefore not subject to radiological controls. More effective cost control, no licensing or special training needed, easier to use, light in weight.

MAIN FEATURES:

- Full Color VGA display
- Customizable Project Entries
- Customizable Material Entries
- Diagnostics reading mode

ORDERING:

SL 0769
Electrical Density Gauge for soil

SL 0770
Electrical Density Gauge for asphalt

TECHNICAL SPECIFICATIONS:

Dimensions	Weight
27.9x27.9x30.4 cm	19.27 kg



Nuclear density gauge

ASTM D6938, D2950, C1040 and AASHTO T310

DESCRIPTION:

The Nuclear Density Gauge that is better in performance than any other gauge on the market today with the lowest maintenance and operating costs.

Operation is straightforward and uncomplicated. Menu options are easy to read and navigate. A backlit LCD screen and special scroll functions allow operators to easily read.

The gauge uses advanced microprocessor-based technology to provide highly-accurate measurements of density and moisture that are automatically computed for direct readouts of wet density, dry density, moisture content, per cent of moisture, per cent of compaction (Proctor or Marshall), void ratio and air voids.

MAIN FEATURES:

- Simple to Operate
- Lightweight
- Prompts user

ORDERING:

SL 0771
Nuclear Density Gauge



TECHNICAL SPECIFICATIONS:

Dimensions	Weight
400x220x140 mm	41 kg

Consolidation apparatus

BS 1377:5 / ASTM D2435, D3877, D4546, AASHTO T216

DESCRIPTION:

The One-dimensional Consolidation test is used to determine the consolidation characteristics of soils of low permeability.

Tests are carried out on specimens prepared from undisturbed samples. Data obtained from these tests together with classification data and knowledge of the soils loading history enables estimates to be made of the behaviour of foundations under load.

The consolidation apparatus is rigidly constructed to ensure minimum frame distortion. The frame is designed to load the specimen through a lever arm assembly and one of three alternative beam ratios as 9:1, 10:1 and 11:1.

The beam is fitted with a counterbalance weight and beam support jack. The cell platform will accept the complete range of consolidation cells and is fitted with a central spigot to ensure accurate centring of the cell under the loading..



The fixed ring consolidation cells are manufactured from corrosion-resistant materials and conform to the requirements of the relevant standards. An integral water reservoir is incorporated in the cell which allows the specimen to be inundated when required. All cells are supplied complete with the upper and lower porous disc, pressure pad and cutting (specimen) ring

Consolidation apparatus**BS 1377:5; ASTM D2435; D3877; D4546; AASHTO T216**

The Front-Loading Oedometer (consolidation) set comes complete with, cast aluminium frame, the lever arm incorporates 9:1, 10:1 and 11:1 beam ratios. Consolidation cell, dial gauge or displacement transducer and data logger, bench, weights, apparatuses for prepare consolidation samples and calibration disc.

TECHNICAL**SPECIFICATIONS:**

Dimensions	750x850x1400 mm
Weight (approx.)	180 kg

ORDERING:**SL 0772**

Front Loading Oedometer (consolidation), cast aluminum frame, the lever arm incorporates 9:1, 10:1 and 11:1 beam ratios.

SL 0773

Consolidation cell for high pressure, 50 mm specimen dia., complete with upper and lower porous disc, cutter ring and cylinder wall.

SL 0774

Consolidation cell for high pressure ASTM, 63.50 mm (2.5") specimen dia., complete with upper and lower porous disc, cutter ring and cylinder wall.

SL 0775

Consolidation cell for high pressure BS/EN, 75 mm specimen dia., complete with upper and lower porous disc, cutter ring and cylinder wall.

SL 0776

Bench for consolidation with 3 oedometer capacity

SL 0777

Calibration disc for 50 mm dia. consolidation cell, stainless steel

SL 0778

Calibration disc for 63.5 mm dia. consolidation cell, stainless steel

SL 0779

Calibration disc for 75 mm dia. consolidation cell, stainless steel

SL 0780

Set of Weights for consolidation, 16 kg

SL 0781

Set of Weights for consolidation, 32 kg

ACCESSORIES:**SL 0772-1**

Set of Weights for consolidation, 50 kg

SL 0772-2

Set of Weights for consolidation, 64 kg

SL 0772-3

Set of Weights for consolidation, 80 kg

SL 0772-4

Dial gauge

SL 0772-5

Digital Dial gauge

SL 0772-6

Displacement transducer

SL 0772-7

Data logger 4 Channel type.

SL 0772-8

Data logger 8 Channel type.



Direct Residual Shear Apparatus

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

DESCRIPTION:

The Digital Residual Direct Shear Apparatus is used for determination of the direct shear strength of soils specimen. The process is known as a shear failure and occurs when shear stresses set up in the soil mass exceed the maximum shear resistance which the soil can offer, i.e. its shear strength.

The Automatic Direct Residual Shear Testing Machine comes complete with, Digital control of speed and data acquisition unit, infinitely variable speed drive from 0.00001 - 9.000000 mm/min via servo motor, wide-screen TFT control unit, 1/9, 1/10, 1/11 loading ratios, complete with a 5 kN load cell, a 25 x 0.001 mm linear potentiometric displacement transducer (for horizontal displacement), a 10 x 0.001 mm linear potentiometric displacement transducer (for vertical displacement). Supplied complete with Geotechnical software. Shear box assembly, slotted weight set, specimen cutter and extrusion dolly.

TECHNICAL

SPECIFICATIONS:

Maximum shear force	5 kN
Maximum vertical force	5 kN or 50 kN using 10:1 cantilever
Maximum horizontal travel	150 mm
Test speed	from 0.00001 to 9.99999 mm/min
Sample type and size	up to 100 mm square or round
Overall dimensions	1040 x 350 x 1200 mm (l x d x h)
Multivoltage	230 V, 50 Hz, 60Hz or 110 V, 60 Hz
Weight	130 Kg



MAIN FEATURES:

- Display of both speed and displacement with high resolution.
- Box group mounted on ball track with high quality antifriction system.
- Read value results are immediate and of extreme accuracy
- Extremely easy and practical use .

ORDERING:

SL 0782

Digital Residual Direct Shear Apparatus

ACCESSORIES:

SL 0782-1

Square Shear Box Assembly, 60x60 mm

SL 0782-2

Square Shear Box Assembly, 100x100 mm

SL 0782-3

Square Shear Box Assembly, Ø 2.5 inch

SL 0782-4

Circular Shear Box Assembly, 60x60 mm dia.

SL 0782-5

Circular Shear Box Assembly, 100x100 mm dia.

SL 0782-6

Circular Shear Box Assembly, Ø 2.5 inch dia.

SL 0782-7

Set of Weights for consolidation, 16 kg

SL 0782-8

Set of Weights for consolidation, 32 kg

SL 0782-9

Set of Weights for consolidation, 50 kg

SL 0782-10

Set of Weights for consolidation, 64 kg

SL 0782-11

Set of Weights for consolidation, 80 kg

Automatic Soil Compactor

ASTM D558, D559, D560, D698, D1557, D1883;
EN 13286 2, 13286-47; BS 1377:4 AASHTO T99, T134,
T135, T136, T180, T193; NLT 107/98, 108/91, 111/87

DESCRIPTION:

Automatic Soil Compactor is designed to compact specimens automatically and uniformly, assuring conformity with the above listed international standards.

The principle of the design is to allow the hammer to drop the required height into the soil in the mould which rotates circularly to distribute the blows uniformly over the surface of the specimen in the mold.

The Compactor is equipped with a programmable digital counter which allows the machine to stop at the preset numbers of blows. The height and weight of the rammer are adjustable to suit test requirements.

The drop weight is adjustable to 300 mm drop height and is also adjustable to 450 mm drop height.

The rammer is circular faced with a 50 mm diameter and is adjustable to 2.5 kg. or 4.5 kg.

An automatic blow pattern ensures effective compaction for each layer of soil and the rammer travels across the mould.

The table rotates the mould in equal steps and the number of blows per layer can be set at the beginning of the test by the digital counter.

The Automatic Soil Compactor is supplied complete with: Programmable digital counter, adjustable falling height (300 mm, 305 mm, 450 mm, 457 mm) and adjustable weight (2.5 kg, 4.5 kg). ASTM/AASH TO /EN/BS rammer.

TECHNICAL SPECIFICATIONS:

Drop Height	300 mm, 305 mm,
Rammer Weight	2.5 kg, 4.5 kg
Dimensions	640 x 340 x 1506 mm (w x l x h)
Power	220 V, 50-60 Hz, 1 ph
Weight (approx.)	135 kg

ORDERING:

SL 0783

Automatic Soil Compactor

ACCESSORIES:

SL 0783-1

Rammer BS/EN, 50 mm dia, adjustable to 2.5 kg or 4.5 kg weight

SL 0783-2

Rammer ASTM, 2 in dia, adjustable to 5.5 lb (2.5 kg) or 10 lb (4.5 kg)



Dry Density, Moisture Relationship, Standard and Modified Proctor Mold

BS1377-4,1924-2,1997-2; ASTM D558,559,560, 698,1557; AASHTO T99, T134 T135, T136



DESCRIPTION:

Moulds and rammers are used for determining the relationship between the moisture content and density of compacted soil.

Made of plated steel, includes collar, mould body and base plate.

The Rammers are used to compact the soil sample in the Proctor Moulds and made of plated steel. Different models are available conforming to the relevant standards.

TECHNICAL SPECIFICATIONS:

Description	Internal Dia	Body Height	Weight
Proctor Mold ASTM/AASHTO			
Standard Proctor Mould	101.6 ± 0.4 mm	116.4 ± 0.5 mm	7 kg
Modified Proctor Mould	152.4 ± 0.7 mm	116.4 ± 0.5 mm	9 kg
Proctor Mold EN			
A Type Proctor Mould EN (Standard)	100 ± 1 mm	120± 1 mm	5 kg
B Type Proctor Mould EN (Modified)	150 ± 1 mm	120± 1 mm	8.9 kg
Proctor Mold BS			
1liter Mould (Standard Proctor) BS,TS-1900-1	105 ± 0.5 mm	115,5 ± 0,5 mm	5 kg
CBR Type Mould BS (Modified Proctor) / Vibrating Hammer Mould BS, EN, TS-1900-1	152 ± 0.5 mm	127 ± 1 mm	7.3 kg

Description	Rammer Dia.	Free Fall Height	Mass of Rammer	Weight
Proctor Rammer ASTM/AASHTO				
Standard Proctor Compaction Rammer	50.8	304.8± 1	2495 ± 23 g	4.5
Modified Proctor Compaction Rammer	50.8	457 ± 1.3	4540 ± 10 g	8
Proctor Rammer EN				
A Type Rammer EN (Low Energy-Standard)	50 ± 0.5	305 ± 3	2500 ± 20 g	8
B Type Rammer EN (Medium Energy-Modified)	50 ± 0.5	457 ± 3	4500 ± 40 g	4.5
Proctor Rammer BS				
2.5 kg Compaction Rammer BS	50 ± 0.5	300 ± 3	2500 ± 25 g	4.5
4.5 kg Compaction Rammer BS	50 ± 0.5	450 ± 4	4500 ± 50 g	8

ORDERING:

SL 0784

Standard Proctor mold, ASTM/AASHTO.

SL 0785

Modified Proctor mold, ASTM/AASHTO.

SL 0786

A Type Proctor Mould EN (Standard)

SL 0787

B Type Proctor Mould EN (Modified)

SL 0788

1liter Mould (Standard Proctor) BS,TS-1900-1

SL 0789

CBR Type Mould BS (Modified Proctor) / Vibrating Hammer Mould BS, EN, TS-1900-1

SL 0790

Standard compaction rammer, ASTM/AASHTO.

SL 0791

Modified compaction rammer, ASTM/AASHTO.

SL 0792

A Type Rammer EN

SL 0793

B Type Rammer EN

SL 0794

Compaction Rammer BS

SL 0795

4.5 kg Compaction Rammer BS

CBR Test Machine with Load Ring

EN 13286-47; BS 1377:4; ASTM D1883; AASHTO T193; NF P94-078; UNI CNR 10009

DESCRIPTION:

The CBR Test Machine with Load Ring is designed for performing laboratory evaluation of the CBR value of highway sub-bases and subgrade and for the determination of the strength of cohesive materials which have maximum particle sizes less than 19 mm (3/4").

The CBR Test Machine with 50kN load ring and dial gauge is designed to load the penetration piston into the soil sample at a constant rate to measure the applied load and piston penetration at predetermined intervals.

The machine has a load ring and two dial gauges one for reading penetration and one for the load ring.

The machine is designed to be mounted on a suitable bench and comprises of a robust and compact two column frame with the adjustable upper cross beam. The frame has 50 kN capacity. Two test speeds are provided 1.0 mm/min for BS, EN and 1.27 mm/min. for ASTM/EN/AASHTO tests.

This main feature allows the user to perform tests complying to BS, EN or ASTM/EN/AASHTO standards with the same machine. Loading and unloading are down from the front panel by UP/DOWN buttons. Unloading speed is adjusted 5 mm/min for easy re-testing.

The CBR Test Machine is supplied complete with; Load Ring, 50 kN with a dial gauge. Digital Gauge with Connection Part, 25x0.01 mm Penetration Piston

TECHNICAL SPECIFICATIONS:

Dimensions	480x650x1150 mm
Weight (approx.)	110 kg
Power	370 W

ORDERING:

SL 0796

CBR Test Machine with Load Ring complete set. 50 kN capacity.

ACCESSORIES:

SL 0796-1

Penetration Piston.

SL 0796-2

Penetration Dial Gauge BS, 25 mm x 0.01 mm divisions.

SL 0796-3

Load Ring, 50 KN complete.



CBR Test Machine with Digital Readout Unit

EN 13286-47; BS 1377:4; ASTM D1883; AASHTO T193;
NF P94-078; UNI CNR 10009

DESCRIPTION:

The CBR Test Machine with Digital Readout Unit is designed for performing laboratory evaluation of the CBR value of highway sub-bases, subgrade and for the determination of the strength of cohesive materials which have a maximum particle sizes less than 19 mm.

The CBR Test Machine with Digital Readout is designed to load the penetration piston into the soil sample at a constant rate to measure the applied load and piston penetration at predetermined intervals. The Machine has 2 digital readout units for load and displacement.

The machine is designed to be mounted on a suitable bench and comprises of a robust and compact two column frame with the adjustable upper cross beam.

The frame has a capacity of 50 kN. Two test speeds are provided 1.0 mm/min for BS and 1.27 mm/min. for EN ASTM/EN/AASHTO tests.

This main feature allows the user to perform tests complying to BS or ASTM/EN/AASHTO standards with the same machine.

Automatic loading and unloading are down from the front panel by UP/DOWN buttons. Unloading speed is adjusted 5 mm/min for easy re-testing.

The CBR Test Machine is supplied complete with:

Load Cell, 50 kN Linear Potentiometric Displacement Transducer with Connection Part, 25x0.001 mm Penetration Piston

TECHNICAL SPECIFICATIONS:

Dimensions	480x650x1150 mm
Weight (approx.)	110 kg
Power	370 W

ORDERING:

SL 0797

CBR Test machine with digital readout 50 kN.

ACCESSORIES:

SL 0797-1

Penetration Piston.

SL 0797-2

Load Cell, 50 kN

SL 0797-3

Linear Potentiometric Displacement Transducer with Connection Part, 25x0.001 mm



Digital Computerized CBR

EN 13286-47; BS 1377-4; ASTM D1883; AASHTO T193; NF P94-078; UNI CNR 10009

DESCRIPTION:

The Digital Computerized CBR Test Machine is designed for performing laboratory evaluation of the CBR value of highway sub-bases and sub-grade, and determination of the strength of cohesive materials which have maximum particle sizes less than 19 mm (3/4").

The machine is designed to load the penetration piston into the soil sample at a constant rate to measure the applied load and piston penetration at predetermined intervals. The machine has a digital readout unit on its front panel connected to 50 kN load cell, linear potentiometric displacement transducer (25 mm x 0.001 mm), computer software and connection cable.

The Digital Graphic Display Data Acquisition and Control Unit are designed to control the machine and processing of data from load-cells, pressure transducers or displacement transducers which are fitted to the machine.

All the operations are controlled from the front panel touch screen. It displays all menu option listings simultaneously, allowing the operator to access the required option in a seems less manner.

The Digital Graphic display can draw real-time "Load vs. Time", "Load vs. Displacement" or "Stress vs. Time" graphics.

The digital computerized CBR Test Machine is supplied with:

- Digital Touch Screen
- Load Cell, 50 kN
- Penetration Piston
- Linear Potentiometric Displacement Transducer
- Computer Software
- Connection Cable

ORDERING:

SL 0798
Digital Computerized
CBR Test Machine

ACCESSORIES:

- SL 0798-1**
Digital Touch Screen
- SL 0798-2**
Load Cell
- SL 0798-3**
Penetration Piston
- SL 0798-4**
Linear Potentiometric
Displacement Transducer
- SL 0798-5**
Computer software
- SL 0798-6**
Computer Cable



TECHNICAL SPECIFICATIONS:

Dimensions	480x650x1150 mm
Weight (approx.)	110 kg
Power	370 W

In-situ CBR Test Apparatus

BS 1377:9; 1924:2; ASTM D4429; ASTM D1883, AASHTO T193; EN 13286-47

DESCRIPTION:

The in-situ California Bearing Ratio is used for the evaluation of the bearing capacity of soil from a vehicle on-site immediately and with less delay.

Rigid and stable frame, made from corrosion-proof steel.

The set consists of:

- 50 kN capacity mechanical jack with ball seating
- 50 kN capacity load ring
- Analogue penetration dial gauge (30 mm travel x 0.01 mm)
- Adjustable dial gauge holder
- CBR Penetration piston
- Set of extension rods (2 pcs. 102 mm, 1 pcs. 305 mm and 1 pcs. 610 mm length)
- Datum bar assembly with two stands
- 4.5 kg annular surcharge weight
- 4.5 Kg slotted surcharge weight
- 9 kg slotted surcharge weight
- Vehicle bracket and wooden carrying case

The Conversion Frame is used to convert the In-situ CBR test to a mechanical laboratory CBR test machine.

The system is easily assembled onto the conversion frame with the addition of some of the accessories included.

ORDERING:

SL 0799

In-situ CBR Test Machine with Load Ring complete set.

ACCESSORIES:

SL 0799-1

Conversion frame

SL 0799-2

Mechanical Jack

SL 0799-3

Load ring

SL 0799-4

Penetration dial gauge

SL 0799-5

Dial gauge holder

SL 0799-6

Penetration piston

SL 0799-7

Extension rods

SL 0799-8

Datum bar assembly

SL 0799-9

Annular surcharge weight

SL 0799-10

4.5 Kg Slotted surcharge weight

SL 0799-11

9 kg slotted surcharge weight

SL 0799-12

Vehicle Bracket



TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
240x1630x230 mm (case)	50 kg
380x270x1180 mm	26 kg

Expansion Swell Test Equipment

BS 1377:2

DESCRIPTION:

The Swell Test Equipment is placed on top of the soil sample to enable monitoring of swelling.

The swell test consists of a perforated plate with the adjustable stem (swell plate) dial gauge tripod and dial gauge.

TECHNICAL SPECIFICATIONS:

Dimensions	500x700x400 mm
Weight (approx.)	3 kg



ORDERING:

SL 0800

Swell Plate with adjustable stem

SL 0801

Swell Tripod for mounting Swell dial gauge on the CBR mould collar

SL 0802

Dial Gauge 20mm x 0.01 mm

CBR Moulds and Accessories

DESCRIPTION:

The range of moulds and accessories specifically designed to meet the requirements of the relevant standards.

The range of moulds and accessories specifically designed to meet the requirements of the relevant standards.

The moulds and accessories are manufactured from high quality, long-lasting material and with proper maintenance will give years of satisfactory performance.



ORDERING:

EN CBR Moulds and Accessories

Product code	Description	Specifications	Weight
SL 0803	Proctor/CBR mould	With collar and solid base plate. Plated steel. 150 mm dia., 120 mm height	8.9 kg
SL 0804	Proctor/CBR mould, split version	With collar and solid base plate. Plated steel. 150 mm dia., 120 mm height	8.9 kg
SL 0805	Perforated base plate	Plated steel	1 kg
SL 0806	Filter screen	Stainless steel woven mesh, No.100 (150 µm), 144 mm dia.	0.05 kg
SL 0807	Compaction rammer	2" (50.8 mm) dia. rammer face, 457.2 mm fall, 4.54 kg weight	5.3 kg
SL 0808	Anular surcharge	Plated steel, 2 kg	2 kg
SL 0809	Split surcharge	Plated steel, 2 kg	2 kg
SL 0810	Straight edge	3x30x300 mm	0.3 kg
SL 0811	Filter paper	No.1x150 mm dia. Pack of 100	0.3 kg
SL 0812	Swell plate	Perforated with adjustable stem	1 kg
SL 0813	Gauge tripod	Non corrodible alloy	0.3 kg
SL 0814	Dial gauge	10 mm travel, 0.01 mm divisions	0.1 kg
SL 0815	Dial gauge	30 mm travel, 0.01 mm divisions	0.1 kg
SL 0816	Soaking tank	Plastic, ID 680x490x540 mm	9.1 kg
SL 0817	Proctor/CBR mould	With collar and solid base plate Plated steel. 250 mm dia.	16 kg
SL 0818	Steel plate (large)	249.5 mm dia.	2 kg
SL 0819	Proctor rammer, high energy	15 kg falling weight	17 kg

**ASTM D1883; AASHTO T193; UNE 103-502; UNI 10009
BS 1377:4; BS 1924:2 NF P94-093; NF P94-078; NF P98-231-1
EN 13286-47**

ASTM,AASHTO, UNE,UNI CBR Moulds and Accessories

Product code	Description	Specifications	Weight
SL 0820	CBR mould body	With collar and perf. base plate - plated steel. 6" dia. (152.4 mm), 7" (177.8 mm) body height	7.8 kg
SL 0821	Split CBR mould	Split longitudinally on one side	8.5 kg
SL 0822	Filter screen	Stainless steel woven mesh, No.100 (150 µm), 144 mm dia.	0.05 kg
SL 0823	Compaction rammer	2" (50.8 mm) dia. rammer face, 457.2 mm fall, 4.54 kg weight	5.3 kg
SL 0824	Sliding weight rammer	2" (50.8 mm) diameter rammer face, 457.2 mm fall, 4.54 kg weight	8 kg
SL 0825	Spacer disc with "T" handle	515/16" dia. (150.8 mm)x 2.416" (61.4 mm) high. Plated steel	7.5 kg
SL 0826	UNE Spacer disc	150.8 mm dia. x 36 mm high. Plated steel	7.5 kg
SL 0827	Anular surcharge	Plated steel, 2.27 kg	2.27 kg
SL 0828	Slotted surcharge	Plated steel, 2.27 kg	2.27 kg
SL 0829	Cutting edge	Plated steel	0.5 kg
SL 0830	Straight edge	3x30x300 mm	0.3 kg
SL 0831	Solid CBR base	Plated steel	1 kg
SL 0832	Filter paper	No.1x150 mm dia. Pack of 100	0.3 kg
SL 0833	Swell plate	With adjustable stem	1 kg
SL 0834	Gauge tripod	Non corrodible alloy	0.3 kg
SL 0835	82- Dial gauge	10 mm travel, 0.01 mm divisions	0.1 kg
SL 0836	82- Dial gauge	30 mm travel, 0.01 mm divisions	0.1 kg
SL 0837	Universal extruder	For 100 to 152.4 mm dia. samples	25 kg
SL 0838	Soaking tank	Plastic, ID 680x490x540 mm	9.1 kg

BS CBR Moulds and Accessories

Product code	Description	Specifications	Weight
SL 0839	CBR mould body	Plated steel with both ends threaded to fit the base or collar. 152 mm ID.x127 mm high	3 kg
SL 0840	Extension collar	152 mm ID. X 50 mm high	1 kg
SL 0841	Perf. base plate	Plated steel	1.8 kg
SL 0842	Solid base/ top plate	Plated steel	1.8 kg
SL 0843	Cutting collar	Plated steel	1 kg
SL 0844	"C" spanner	To mount and dismount the collar from the mould body. Two required	1 kg
SL 0845	Tool for base plate	To remove or mount the solid or perf. base plate from the mould	1 kg
SL 0846	Compaction plug with handle	150 mm dia. x 50 mm high	7.2 kg
SL 0847	Compaction rammer	50 mm dia rammer face, 450 mm fall, 4.5 kg weight	5.3 kg
SL 0848	Anular weight	Plated steel, 2 kg	2 kg
SL 0849	Split weight	Plated steel, 2 kg	2 kg
SL 0850	Tamping bar	12.7 mm dia. x380 mm long	
SL 0851	Straight edge	3x30x300 mm	0.3 kg
SL 0852	Steel rule	500 mm long	0.1 kg
SL 0853	Filter paper	No.1x150 mm dia. Pack of 100	0.3 kg
SL 0854	Swell plate	With adjustable stem	1 kg
SL 0855	Gauge tripod	Non corrodible alloy	0.3 kg
SL 0856	82- Dial gauge	10 mm travel, 0.01 mm divisions	0.1 kg
SL 0857	82- Dial gauge	30 mm travel, 0.01 mm divisions	0.1 kg
SL 0858	Universal extruder	For 100 to 152.4 mm dia. samples	25 kg
SL 0859	Soaking tank	Plastic, ID 680x490x540 mm	9.1 kg



NF CBR Moulds and Accessories

Product code	Description	Specifications	Weight
SL 0860	NF CBR mould	Complete with collar and Perforated base plate. Plated steel. 152 dia. x 152 mm body height	9 kg
SL 0861	Split NF CBR mould	Split longitudinally on one side	9 kg
SL 0862	Modified compaction hammer	Rammer face 50 mm dia., fall height 457.2 mm, weight 4.54 kg	5.3 kg
SL 0863	Filter paper	No. 1 x 150 mm dia. Pack of 100	0.3 kg
SL 0864	Spacer disc	Plated steel, 25.4 mm high	3.8 kg
SL 0865	Anular surcharge weight	Plated steel, 2.3 kg	2.3 kg
SL 0866	Split surcharge weight	Plated steel, 2.3 kg	2.3 kg
SL 0867	Cutting edge	Plated steel	0.5 kg
SL 0868	Straightedge	3x30x300 mm	0.3 kg
SL 0869	Swell plate	Plastic with 3 mm dia. holes	0.3 kg
SL 0870	Dial gauge	10 mm travel x 0.01 mm	0.1 kg
SL 0871	Dial gauge	30 mm travel x 0.01 mm	0.1 kg
SL 0872	Gauge tripod	Non corrodible alloy	0.3 kg
SL 0873	Soaking tank	Plastic with supporting base, ID 680x490x540 mm	9.1 kg
SL 0874	Universal extruder	For 100 to 152.4 mm dia. specimens	25 kg

Triaxial Testing Apparatus

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



DESCRIPTION:

In a Triaxial Shear test, stress is applied to a sample of the material being tested in a way, which results in stresses along one axis being different from the stresses in perpendicular directions.

This is typically achieved by placing the sample between two parallel platens, which apply stress in one (usually vertical) direction and applying fluid pressure to the specimen to apply stress in the perpendicular directions.

This is done by our testing apparatus which allows the application of different levels of stress in each of three orthogonal directions X, Y, Z-Axis are discussed below, under "True Triaxial test").

The application of different compressive stresses in the test apparatus causes shear stress to develop in the sample; the loads can be increased and deflections monitored until failure of the sample.

From the Triaxial Test data, it is possible to extract fundamental material parameters about the sample, including its angle of shearing resistance, apparent cohesion, and dilatancy angle.

These parameters are then used in computer models to predict how the material will behave in a larger-scale engineering application. An example would be to predict the stability of the soil on a slope, whether the slope will collapse or whether the soil will support the shear stresses of the slope and remain in place.

TECHNICAL SPECIFICATIONS:

Product Code	Dimension	Description	Weight	Power
SL 0875	550x650x1100 mm	Triaxial Universal Electromechanic Test Machine	95 kg	750 W

Product Code	Description
SL 0876	Multispeed Electromechanic Test Machine Frame only, 50 kN capacity, used for making uniaxial, CBR and Marshall tests. Two testing speed can be set. Digital display data acquisition and controls system, Supplied complete with a 50 kN load cell and a 25mm x 0.001mm linear potentiometric displacement transducer. 220-240V, 50-60Hz, 1ph

There are several variations of the Triaxial test:

Consolidated Drained (CD)

In a 'consolidated drained' test the sample is consolidated and sheared in compression slowly to allow pore pressures built up by the shearing to dissipate. The rate of axial deformation is kept constant, i.e., the strain is controlled. The idea is that the test allows the sample and the pore pressures to fully consolidate (i.e., adjust) to the surrounding stresses. The test may take a long time to allow the sample to adjust, in particular, low permeability samples need a long time to drain and adjust strain to stress levels.

Consolidated Undrained (CU)

In a 'consolidated undrained' test the sample is not allowed to drain. The shear characteristics are measured under undrained conditions and the sample is assumed to be fully saturated. Measuring the pore pressures in the sample (sometimes called Cupp) allows approximating the consolidated-drained strength. Shear speed is often calculated based on the rate of consolidation under a specific confining pressure (whilst saturated). Confining pressures can vary anywhere from 1 psi to 100 psi or greater, sometimes requiring special load cells capable of handling higher pressures.



TECHNICAL SPECIFICATIONS:

Product code	Description
SL 0877	Software to Perform CU-CD Triaxial Tests
SL 0877-1	Software to Perform UU Triaxial Tests

Unconsolidated Undrained (UU)

In an 'unconsolidated undrained' test the loads are applied quickly, and the sample is not allowed to consolidate during the test. The sample is compressed at a constant rate (strain-controlled).

Our Triaxial Test System provides automated triaxial compression tests on cylindrical undisturbed and remoulded soil samples. Unconsolidated undrained (UU), consolidated drained (CD) and consolidated undrained (CU) compression tests can be automatically run, controlled and reported using this apparatus.

The Triaxial Testing Apparatus consists of a 50 KN capacity Load Frame, Platen adaptors, dial gauge or digital transducer assembly, Triaxial Cell, Base and pressure system.

The Triaxial Testing Apparatus provides variable speed from 0.399999" (9.99999 mm) per minute to as low as 0.000001" (0.00001 mm) per minute.

An electronic control system with touch-sensitive keypad for precise setting, control and viewing of all load frame functions.

The Data Acquisition and Controls System (DA/CS) for automated data acquisition and recording of test parameters supplied with a complete set of Electronic Measurement, Transducers for load, displacement, pressure and volume change.

The Triaxial Software for recording, analysis and report generation, master control panel and de-aired water tank system for precise applications of confining, back and saturation pressures.

Oil and Water Constant Pressure System

The Oil and Water Constant Pressure Unit is extremely versatile and can be used in conjunction with a wide range of test equipment. The unit provides continuous variable pressure up to 1700kPa. The pressure is increased or decreased simply by turning a control knob.

The Unit is used for providing cell/backpressure in triaxial tests. The apparatus is supplied without a gauge for those customers who have suitable pressure monitoring equipment.

As optional equipment for monitoring the pressure:

- The Digital Pressure Gauge
- The pressure transducer

The machine features a clear hydraulic/water interface reservoir and up to 1-litre capacity of water is available under pressure.

Supplied complete with 2 litres of No.46 regular hydraulic oil.



TECHNICAL SPECIFICATIONS:

Product Code	Dimension	Description	Weight
SL 0878	300x250x250 mm	Oil and Water Constant Pressure Unit	7.5 kg
SL 0879	150x150x100 mm	Digital Vacuum and Pressure Gauge	0.6 kg

Automatic Volume Change Unit

The Unit consists of a piston connected to a 25 mm travel linear transducer which is sealed against a precision machined calibration chamber so that the linear movement of the piston is exactly proportional to the volume of water in the calibration chamber.

The apparatus creates an electrical signal proportional to the volume of water flowing through the unit. By connecting it to the data acquisition system the measured volume change will be used by software during the test and in the final report.

Capacity : 100 cm³

Transducer Input : up to 12 V DC

Accuracy : ± 0.1 ml

TECHNICAL SPECIFICATIONS:

Description	Automatic Volume Change Unit
Product code	SL 0880
Dimensions	260x260x400 mm
Weight	5 kg



Pressure Transducer and Block for Triaxial Test Cells

The Pressure Transducer is used for the measurement of cell or back or pore pressure of water in triaxial test systems and also should be used with a Control Unit or a data logger

The Block for triaxial test cells is used for connection of the pressure transducers and de-airing in the water hoses.



TECHNICAL SPECIFICATIONS:

Product Code	Description
SL 0881	Pressure Transducer, 2000 kPa
SL 0882	Block with One Connection Line for Triaxial Test
SL 0883	Block with Three Connection Line for Triaxial Test

De-Airing Water Systems

The De-Airing Water Apparatus is compact and self-contained equipment which can de-air water quickly and efficiently down to levels of dissolved oxygen acceptable for geotechnical test methods. The apparatus used in conjunction with the de-airing tank. Air is removed from the water by a vacuum system. The de-airing tank should be ordered separately.

The first option for de-airing water;

- De-Airing Water Apparatus
- De-Airing Water Tank
- Vacuum Control and Water Connection Panel with Regulator and Vacuum Gage Manometer or Connection Panel for Vacuum and Water with Vacuum Gage (These panels are optional)
- Plastic Hose



The second option for de-airing water:

- Vacuum Pump
- Filter Flask or Air Drying Unit / Water Trap
- De-Airing Water Tank
- Vacuum Control and Water Connection Panel with Regulator and Vacuum Gage Manometer or Connection Panel for Vacuum and Water with Vacuum Gage (These panels are optional)
- Plastic Hose



By using Vacuum Control and Water Connection Panel, vacuum pressure degree can be regulated.

By using de-airing water equipment can be used without repeated assembling the hoses.

TECHNICAL SPECIFICATIONS:

Product code	Description	Dimensions	Weight (approx.)
SL 0884	De-Airing Water Apparatus	465x240x340 mm	15 kg
SL 0885	Vacuum Control and Water Connection Panel with Regulator and Vacuum Gage Manometer	450x150x500 mm	7 kg
SL 0886	De-Airing Water Tank, 7 L.	250x250x250 mm	2.7 kg
SL 0887	Vacuum Pump 51 L/min. Capacity	300x150x240 mm	8.5 kg
SL 0888	Air Drying Unit / Water Trap, Vacuum Type	70x80x170 mm	0.5 kg

TECHNICAL SPECIFICATIONS:

Product Code	Description	UU	UU-CU-CD
SL 0875	Triaxial Universal Electromechanic Test Machine	1	1
SL 0891	Load Cell 5 kN	1	1
SL 0889	Triaxial cell for 38 mm and 50 mm samples	1	1
SL 0890	Triaxial cell for 70 mm and 100 mm samples	1	1
SL 0882	Block with one connection line for triaxial test cells	1	-
SL 0883	Block with 3 connection lines for triaxial test cells	-	1
SL 0881	Pressure transducer	1	3
SL 0878	Oil and water constant pressure system	1	2
SL 0880	Automatic volume change unit	-	1
SL 0892	Static unilogger 4 channels	-	1
SL 0877	Software to perform UU triaxial tests	1	1
SL 0876	Software to perform CU-CD triaxial tests	-	1
SL 0886	De-Airing water tank, 7L. and hose	1	1

Triaxial Cells

The cell has been designed and treated to minimize corrosion. Particular attention has been paid to the quality of finish between the piston and the head. Final assembly includes the fitting of an O-ring seal and the use of a special lubricant to reduce friction to a minimum and eliminate water leakage. The piston load capacity is designed to accept high axial loads which may be present during the final stages of a test.

Each cell has five take-off positions drilled in the base for top drainage/back pressure, pore water pressure and bottom drainage. Three no volume change valves and anvil for displacement transducer are supplied complete with the cell.

Each cell will accept a range of base adaptors and various accessories for testing a wide range of specimens.



For cell accessories and sample preparation accessories see next page.

The cell capacity is designed to tolerate confining pressures as high as 1700 kPa which is enough for simulating most in-situ conditions.

TECHNICAL SPECIFICATIONS:

Product Code	Dimension	Description	Weight
SL 0889	160x160x400 mm	Triaxial cell for 38 mm and 50 mm samples	4.5 kg
SL 0890	210x210x550 mm	Triaxial cell for 70 mm and 100 mm samples	12 kg

Sample Preparation Accessories

Sample Diameter	38 mm	50 mm	70 mm	100 mm
Split Sand Former	SL 0893	SL 0894	SL 0895	SL 0896
Split Mould	SL 0897	SL 0898	SL 0899	SL 0900
Cutter	SL 0901	SL 0902	SL 0903	SL 0904
Aluminium Dolly	SL 0905	SL 0906	SL 0907	SL 0908

For cell accessories see next page.

Cell Accessories

Sample Diameter(mm)	38	50	70	100	UUtest	CU CD test
Base Adaptor	SL 0909	SL 0910	SL 0911	SL 0912	YES	YES
Porous Top Cap	SL 0913	SL 0914	SL 0915	SL 0916	YES	YES
Nylon Tubing for Drainage	SL 0917	SL 0918	SL 0919	SL 0920	-	YES
Pair of Porous Discs	SL 0921	SL 0922	SL 0923	SL 0924	-	YES
Rubber Membrane	SL 0925	SL 0926	SL 0927	SL 0928	YES	YES
Membrane Placing Tool (Strecher)	SL 0929	SL 0930	SL 0931	SL 0932	YES	YES
O Ring (10pcs.)	SL 0933	SL 0934	SL 0935	SL 0936	YES	YES
O Ring Placing Tool	SL 0937	SL 0938	SL 0939	SL 0940	YES	YES
Filter Drain Paper (50 pcs.)	SL 0941	SL 0942	SL 0943	SL 0944	-	YES
Filter Paper Discs (100 pcs.)	SL 0945	SL 0946	SL 0947	SL 0948	-	YES
Plastic Discs (2 pcs.)	SL 0949	SL 0950	SL 0951	SL 0952	YES	-

Soil Lathe / Trimmer and Extruder

DESCRIPTION:

The Soil Lathe, Trimmer and Extruder is used to extrude and trim soil samples from 35 mm to 100 mm diameter to reduce samples.

Wire Saw, Trimming Knife, Porcelain Mortar with Pestle. The Rubber Headed Pestle can be ordered separately.

TECHNICAL SPECIFICATIONS:

Specimen Lathe	35x70 mm to 100x200 mm
Specimen Trimming and Extrusion	35x70 mm to 50x100 mm
Vertical Daylight	260 mm

Dimensions	220x300x450 mm
Weight	15 kg



BS1377-7, BS1377-8

ORDERING:

SL 0953
Soil Lathe / Trimmer and Extruder

ACCESSORIES:

- SL 0953-1**
Wire Saw
- SL 0953-2**
Trimming Knife
- SL 0953-3**
Porcelain Mortar with Pestle 130 mm dia
- SL 0953-4**
Rubber Headed Pestle

Microspear, Moisture and Temperature

DESCRIPTION:

The instrument measures moisture and temperature of minerals and building materials at depths up to six feet (nearly 2 meters) – simply by insertion. The digital readings are shown instantly. It has a built-in computer which gives it the flexibility to handle a wide range of materials and water contents.

This instrument will give you quick results and an alternative for sampling and testing using balances or ovens.

Any environment where minerals or building materials are being shipped, stored or processed.



TECHNICAL SPECIFICATIONS:

Measurement Response	2 seconds
Moisture Range	0-25%
Moisture Resolution	±0.1%
Moisture Accuracy	±0.5% of reading
Temperature Range	-20°C to 60°C
Temperature Resolution	0.1°C
Temperature Accuracy	<0.5°C
Weight	1500g
Material Selections	6 (user configurable)
Power Requirements	4 x 1.5v AA alkaline cells (or equivalent)
Shaft Colour Options	Grey / Orange / Yellow / Blue

BS1377-7, BS1377-8

ORDERING:

- SL 0954**
Microspear, 1 meter long
- SL 0955**
Microspear, 2 meter long

Soil Resistivity Meter

DESCRIPTION:

The Soil Resistivity Meter is determined to find soil resistivity for a variety of applications, including pipelines, tanks, wells, etc.....

It is used in the field or in the lab with the optional Soil Box, that is made of strong plastic resins allowing for rugged field use. Material is clear for easy visual inspection and cleaning.

Soil Resistivity Meter ASTM G57, G187 comes complete with
 Soilbox
 Brass connectors
 Banana plug leads, Red
 Banana plug leads, Black

Soil Resistivity Meter AASHTO T 288 comes complete with
 Soil box
 Electrode plates, ss
 Electrode hardware, ss
 Leads with clamps

TECHNICAL SPECIFICATIONS:

Product code	Dimensions
SL 0956-1	4x6x23.75cm
SL 0956-2	38x101.5x152.3 mm
SL 0956/SL 0957	273x 273x 165 mm
Weight approx.	4 Kg



ASTM G 57, ASTM G 187, AASHTO T288

MAIN FEATURES:

- Display of both speed and displacement with high resolution.
- Box group mounted on ball track with high antrifriction system.
- Read value results are immediate and of extreme accuracy
- Extremely easy and practical use.

ORDERING:

- SL 0956**
Soil Resistivity Meter
ASTM G57, G187
complete
- SL 0957**
Soil Resistivity Meter
AASHTO T 288
complete

ACCESSORIES:

- SL 0956-1**
Soil box ASTM G57,
G187
- SL 0956-2**
Soil box AASHTO T 288
- SL 0956-3**
Brass connectors
- SL 0956-4**
Banana plug leads, Red
- SL 0956-5**
Banana plug leads,
Black
- SL 0956-6**
Electrode plates, ss
- SL 0956-7**
Electrode hardware, ss
- SL 0956-8**
Leads with clamps

Portable Soil Conductivity Meter

ASTM D5334; ASTM D5930; IEEE 442-1981

DESCRIPTION:

The Soil Conductivity Meter is a portable thermal conductivity meter used to measure thermal conductivity and thermal resistivity. Perfect for testing the thermal conductivity of soil, polymers, viscous liquids, and other soft materials; as well as testing the thermal conductivity of concrete, rock, stone, or other hard materials. Tests can be performed with the push of a button. The collected data is automatically analyzed and results are displayed immediately.

The Transient Line Source follows ASTM D5334. The sensor needle consists of a thin heating wire and temperature sensor sealed in a 100 or 50 mm steel tube.

The sensor is completely inserted into the sample to be tested. Heat is delivered to the sample using a constant current source (q) and the temperature rise is recorded over a defined period. The slope (a) from a plot of temperature rise versus the logarithm of time is used in the calculation of thermal conductivity (k). The higher the thermal conductivity of a sample, the lower the slope. For samples of low thermal conductivity, the higher the slope.

MAIN FEATURES:

- Portable, Economical, and Accurate
- Easy to use
- Standard 100 mm sensor for soft materials
- Optional 50 mm sensor for hard materials
- Soil Conductivity Meter

ORDERING:

SL 0958
Soil Conductivity Meter complete

ACCESSORIES:

SL 0958-1
Thin heating wire

SL 0958-2
Temperature sensor sealed 50 mm

SL 0958-3
Temperature sensor sealed 100 mm

TECHNICAL SPECIFICATIONS:

Materials	Soil, Rock, Concrete, & Polymers
Measurement Capabilities	Bulk Properties
Thermal Conductivity	0.1 to 5 W/mK
Thermal Resistivity	0.2 to 10 mK/W
Measurement Time	3 min. (100mm) / 5 min. (50mm)
Reproducibility	Typically better than 2%
Accuracy	Typically better than 5%
Temperature Range	-40 to 100°C
Smallest Sample (100 mm)	50 mm (diameter or square)x100 mm
Smallest Sample (50 mm)	50 mm (diameter or square)x50 mm
Largest Sample Size	Unlimited



Relative Density Test of Soil

ASTM C31, ASTM C192, ASTM C293, AASHTO T23, AASHTO T97, ASTM D4253-14, ASTM, D4254-14

DESCRIPTION:

This test covers the determination of the maximum dry density and the water content (humidity/density ratio) of cohesionless mixtures to be used in road construction, and where the max density by the impact method is lower than the vibratory method.

The relative density set is proposed in two versions according to EN or ASTM specifications.

Cushioned impact vibrating table with a load capacity of 300 lbs. (136.1kg) is used to vibrate products and soil specimens. Table deck is (508 x 508 mm). Table vibrates at 360 vpm. Amplitude or power of vibration is regulated by means of a rheostat in the electrical control circuit.

Relative density mold set, 0.1ft³ (3L) or 0.50.1 ft³ (14L)

Computing volume change of granular soils. The moulds are made of cast aluminium and equipped with carrying handles and guide brackets and come complete with detachable guide sleeve with clamp assembly, surcharge base plate with removable handle, and surcharge weight with a handle.

Relative Density Gauge Set

Measures distance from the top of the mould to the top of the base plate after densification (to compute volume change).

Set includes:

a 2in (50.8mm) Dial Indicator with 2in (50.8mm) travel and 0.001in (0.025mm) graduations, a special holder to fit moulds, and 3x12x1/8in (76x305x3.2mm) metal calibration bar.

Relative Density Pouring Funnel Set

Required for loose placement of 3/8in (9.5mm) and finer granular soils, The Funnel Set includes two 6in (152mm) diameter x 12in (305mm) long metal cylinders, each with funnel and 6in (152mm) long delivery spout attached to one end. Spouts are 1in (25.4mm) and 1/2in (12.7mm) in diameter.



TECHNICAL SPECIFICATIONS:

Product code	Dimensions	Weight
SL 0959	1400x760x570 mm	135 kg
SL 0959-1	390x390x490 mm	130 kg
SL 0959-2	240x240x490 mm	45 kg
SL 0959-3	100x100x320 mm	1,8 kg
SL 0959-4	170x170x530 mm	8 kg
SL 0959-5	2100x1850x400 mm	95 kg

SL 0959-4
Pouring Funnel Set, for Relative Density Test.

SL 0959-5
Compass Crane with Electric Motor

SL 0959-6
Equipment for Calibration of Amplitude of Vibrating Table

ORDERING:

SL 0959
Relative Density Test Set, ASTM, 380V 50Hz, 3ph.

ACCESSORIES:

SL 0959-1
Relative Density Mould Set, ASTM, 0.5 ft³

SL 0959-2
Relative Density Mould Set, ASTM, 0.1 ft³

SL 0959-3
Relative Density Gauge Set, ASTM



GEOTECHNICAL

TESTING EQUIPMENT

THE BEST IN TEST

CEMENT



Cement

Cement is one of the ancient raw materials used in construction. It is uncertain where it was first discovered that a combination of hydrated non-hydraulic lime and a pozzolan produces a hydraulic mixture (e.g., Portland cement) harden because of hydration chemical reactions that occur independently of the mixture's water content; they can harden even underwater or when constantly exposed to wet weather.

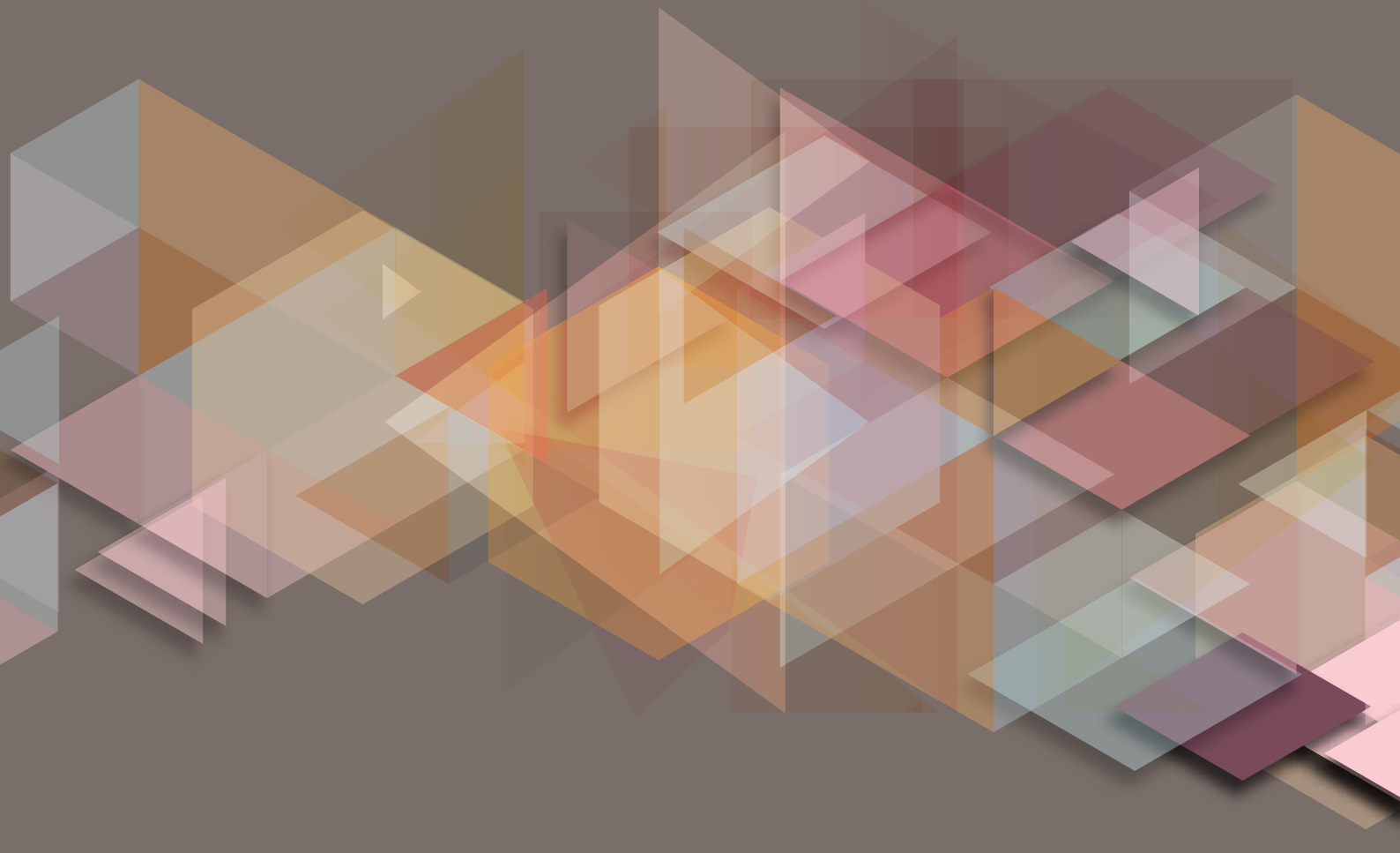
Cement is essentially a binder that binds other materials together, Modern cements are manufactured by a chemical process.

Raw materials are crushed, ground and blended before being heated in a rotary kiln until they combine chemically.

The clinker from the kiln is then ground with gypsum to form Portland cement.

Different types of cement with different strengths and characteristics can be produced depending on the composition and quality of clinker, fly ash, silica fume, retarders, waterproofer, colouring agents and other additives used in the mix.

It is essential to test the physical and chemical parameters of each cement batch produced and to identify the unique characteristics of each composition. Such parameters include specific surface and gravity of cement articles, consistency, soundness, setting time, the heat of hydration, inorganic chemical analysis, loss on ignition, air content and strength.



Blaine Apparatus

DESCRIPTION:

The Blaine apparatus is used to determine the particle size of Portland cement, limes and similar powders, expressed as a function of their specific surface area.

It includes a stainless steel cell, a perforated disc and a piston. A U-tube glass manometer is mounted on the Manometer liquid steel support, 250 ml.

The set is complete with:

a rubber vacuum cleaner and a pack of 100 filter papers



TECHNICAL SPECIFICATIONS

Dimensions	220x170x470 mm
Weight (approx.)	8 kg

BS 1377:2; EN 196-6; 459-2; 13286-44;
BS 4359-2; ASTM C204

ORDERING:

CM 0101

Blaine Apparatus complete

ACCESSORIES:

CM 0101-1

Liquid manometer, 250 ml

CM 0101-2

Test bench

CM 0101-3

Rubber vacuum cleaner

CM 0101-4

Cell with perforated disc piston

CM 0101-5

Plastic funnel

CM 0101-6

Filter paper, 100pcs

CM 0101-7

U-tube manometer

Automatic Blaine Apparatus

DESCRIPTION:

The automatic Blaine device provides more precision and accuracy than manual bluish devices. Calibration of this unit is performed using a sample reference, such as an NSIT.



TECHNICAL SPECIFICATIONS

Dimensions	170x300x410 mm
Weight (approx.)	4.6 kg
Unit runs at	230 V/50 Hz

EN 196; DIN 1164; BS 4550; ASTM C 204

To obtain the most accurate results, the test must be performed in a temperature controlled environment.

The unit includes the unit with an electric pump and time recording; filter papers (12.8 mm, 1000, filling oil (50 ml), stopper, thermometer, brush, and funnel.

ORDERING:

CM 0102

Automatic Blaine Apparatus with Pc control

CM 0103

Semi-automatic Blaine Apparatus

Le Chatelier Mold

BS 6463; EN 196-3, 459-2, EN ISO 9597

DESCRIPTION:

Le Chatelier Mold is used to determine the expansion of the cement. the mold consists of a split cylinder stretched by a 30 mm internal diameter spring and 30 mm high, with two indicator rods whose rods measure 165 mm from the center points of the cylinder axis and the O-ring.

Two or three molds are needed for each test. To perform the test, a water bath is also required.

The kit includes all the accessories to carry out the test and check the conformity of the molds



TECHNICAL SPECIFICATIONS

	Weight (approx.)
Le chatelier mold	0.9 kg

ORDERING:

- CM 0104**
Le Chatelier Mold
- CM 0105**
Le Chatelier Mold, pack of 6 pcs
- CM 0106**
Le Chatelier sound kit

ACCESSORIES:

- CM 0104-1**
Glass plate , 50 mm sq.
- CM 0104-2**
100 g weight

Le Chatelier Water Bath

EN 196-3, 450-1, 459-2; EN ISO 9597

DESCRIPTION:

The Le Chatelier water bath is used with the Chatelier mold to determine the strength of fly ash in cement paste for concrete and lime.

The inner chamber and the insulated outer casing of the bathtub are made of stainless steel. The bath is able to reach the boiling point in 30 minutes using two heating units. There is a timer on the Chatelier water bath that is used to set the time needed to reach the boiling point.

After this time, the water temperature is regulated using a heating unit to convert energy.

Comes complete with:

A removable rack that can hold up to 10 molds. A cover is provided as standard



MAIN FEATURES:

- Precise temperature control
- Made of high-quality stainless steel

TECHNICAL SPECIFICATIONS

Dimensions	210x470x290 mm
Weight (approx.)	8 kg
Power	1250 W

ORDERING:

- CM 0107**
Le Chatelier Water Bath

ACCESSORIES:

- CM 0107-1**
Removable rack
- CM 0107-2**
Stainless Steel cover

Le Chatelier Flask, Specific Gravity

DESCRIPTION:

The chatelier Flask is used to determine the specific gravity of hydraulic cement, dust sand and other fine materials. The body holds approximately 250 ml. The oval bulb in the neck contains 17 ml

The volume below the bulb is graduated from 0 to 1.0ml in 0.1ml subdivisions, with an additional 0.1 subdivision below the 0 and above the 1.0 ml mark.

The neck is graduated from 18 to 24 ml in 0.1 ml subdivisions above the bulb (white graduations).

EN 196-6, 450-1, 15617-1; ASTM C110, C128, C188; C989; AASHTO T133



ORDERING:

CM 0108
Specific Gravity le Chatelier Flask

TECHNICAL SPECIFICATIONS

Dimensions	100x100x300 mm
Weight (approx.)	0.1 kg

Cement Flow Table

DESCRIPTION:

There are two models of Flow Table, both are used to determine the consistency of mortar, lime and cement samples.

The manual hand operated model is fitted with a hand wheel. While the motor operated model is driven by a motor speed reducer through a mechanical coupling at the rate of 1 revolution per second. The number of drops is prest on a counter and the machine stops automatically at the end of the cycle.

Two models are available. EN or ASTM model each is manufactured to standard specifications.

ASTM C230; EN 459-2, 1015-3, 1015-9, 13395-1; BS 4551-1, 3892-1

MAIN FEATURES:

- The models are made of high quality brass

ORDERING:

CM 0109
Cement Flow Table ASTM
CM 0110
Motorized Cement Flow Table ASTM, 220-240 V 50 Hz
CM 0111
Cement Flow Table EN
CM 0112
Motorized Cement Flow Table EN 220-240 V 50 HZ

ACCESSORIES:

CM 0109-1
Cement Flow Mold ASTM
CM 0109-2
Tamper ASTM
CM 0109-3
Cement Flow Mold EN
CM 0109-4
Tamper EN



TECHNICAL SPECIFICATIONS:

Product code	CM 0109 / CM 0110	CM 0111 / CM 0112
Table diameter	254 mm	500 mm
Cone base/top diameter	100.0 mm / 70.0 mm	100.0 mm / 70.0 mm
Cone Height	50.0 mm	50.0 mm
Drop Height	12.7 mm	12.7 mm
Dimensions	260x260x270 mm	470x360x350 mm
Weight (approx.)	13 kg	36 kg
Power	180 W (Motorized)	180 W (Motorized)

Vicat Apparatus

DESCRIPTION:

Vicat apparatus is used for determining the setting time and consistency of cement by the vicat method.

The Vicat Apparatus set complete with: Initial set needle, final set needle, Vicat mold, thermometer, glass plate, and consistency plunger

TECHNICAL SPECIFICATIONS:

Dimensions	150x220x318 mm
Weight	3 kg



EN 196-3; 13454-2; ASTM C187; C191; AASHTO T129; T131

ORDERING:

CM 0113
Vicat Apparatus complete set.

CM 0113-4
Vicat Mold, EN

ACCESSORIES:

CM 0113-5
Vicat Mold, ASTM

CM 0113-1
Initial Set Needle 1.13 mm dia., EN

CM 0113-6
Vicat Thermometer

CM 0113-2
Final Set Needle 1.13 mm dia., EN

CM 0113-7
Glass Plate

CM 0113-3
Initial Set Needle 1 mm dia., ASTM

CM 0113-8
Consistency Plunger

Automatic Vicat Apparatus

DESCRIPTION:

The automatic Vicat Apparatus is used to determine the setting time and consistency of the cement mortar by using the Vicat method. The penetration depth is measured by a sensor with a 0.1mm resolution.

Along with hardening process development, the penetration depth decreases when it matches some thresholds pre-defined by standards initial and final setting times are measured and recorded.

The entire test is made in a fully automatic cycle and provides precise and repeatable results. The results are then printed on the integrated printer.

The Automatic Vicat Apparatus consists of:

Windows Software and RS232 Cable, consistency plunger, initial needle, final needle, and mold.

TECHNICAL SPECIFICATIONS:

Dimensions	300x555x610 mm
Weight (approx.)	10 kg
Power	200 W

EN 196-3; 13454-2; ASTM C187; C191; AASHTO T129; T131



MAIN FEATURES:

- Transfer each single control or function of the Vicat on the PC
- Verify in real time each phase of the test
- Automatically download the final results

Automatic Vicat Apparatus

EN 196-3; 13454-2; ASTM C187; C191; AASHTO T129; T131

ORDERING:

CM 0114

Automatic Vicat Apparatus complete set

ACCESSORIES:

CM 0114-1

Consistency plunger

CM 0114-2

Initial needle, 1.13 mm dia EN

CM 0114-3

Final needle, 1.13 mm dia EN

CM 0114-4

Initial needle, 1.13 mm dia ASTM

CM 0114-5

Final needle, 1.13 mm dia ASTM

CM 0114-6

Needle cleaning Device

CM 0114-7

Windows Software and RS232 Cable

CM 0114-8

Printer Paper rolls, pack of 10

CM 0114-9

Mold

CM 0114-10

Thermostatically-controlled heating/cooling system, for testing samples under water as per EN 196-3

Plunger Penetration Apparatus

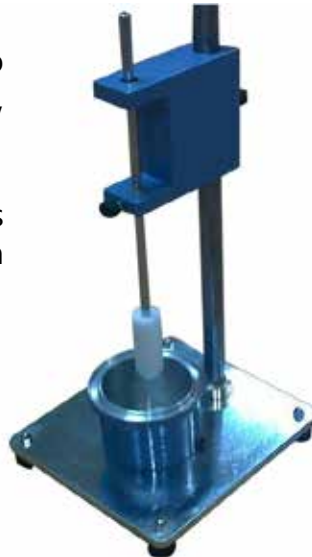
EN 413-2; 459-2; 1015-4; DIN 4211

DESCRIPTION:

The Plunger Penetration Apparatus is used to determine the consistency of fresh mortar, lime and masonry cement.

The Plunger penetration apparatus consists of a steel base, test cup, vertical column holding the penetration plunger assembly. The height of the plunger assembly is 90g.

Supplied complete with: test cup and tamper, both made from an iodized aluminum.



ORDERING:

CM 0115

Plunger Penetration Apparatus complete

ACCESSORIES:

CM 0115-1

Test cup

CM 0115-2

Tamper

TECHNICAL SPECIFICATIONS:

Dimensions	200x200x700 mm
Weight	6 kg

Gillmore Apparatus

ASTM C91; C141; C266; C1398; AASHTO T154

DESCRIPTION:

The Gillmore Apparatus is used to determine the setting time of cement.

The apparatus consists of two horizontal arms that carry two-weight steel needles that are calibrated to meet the specifications.

The initial needle has 2.12mm dia and a weight of 113g, while the final setting needle has 1.06mm dia. and weight of 453.6g.

TECHNICAL SPECIFICATIONS:

Dimension	Weight (approx.)
200x50x250 mm	2.5 kg



ORDERING:

CM 0116

Gillmore Apparatus

Dropping Ball Apparatus

BS 4551; 6463-4

DESCRIPTION:

Dropping ball apparatus is used to measure the consistency of cement mortars, this allows a 25mm diameter acrylic ball to fall freely from standard height of 250mm into a brass ring mold containing a mortar specimen with a carefully-prepared surface.

The Depth of ball penetration into the mortar gives the specimen consistency.

The apparatus consists of :
a dropping device mounted on a stand, acrylic ball and a 100mm diameter x 25mm deep mold. The base of the stand is machined with a chrome finish.



ORDERING:

CM 0117

Dropping Ball apparatus

CM 0118

Ball Penetration measuring device with dial gauge 25x0.01mm

TECHNICAL SPECIFICATIONS:

Weight (approx.)	6 kg
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Cement Shrinkage Apparatus

EN 1367-4, 12617-4, 12808-4; ASTM C151, C157, C227, C311, C341, C342, C441, C452, C490, C531, C596, C806, C878; BS 1881:5, 6073

DESCRIPTION:

Cement Shrinkage Test Machine Length Comparators are used to determine the length changes on different type of cement prism.

The set consists of a length measuring frame with measuring device attached to it. There are 2 models available either with dial gauge or with transducer and data logger.

Cement Shrinkage test set comprise of main apparatus, and reference rods.

Steel inserts, Reference rod and molds should be ordered separately according to standard.



TECHNICAL SPECIFICATIONS:

Dimensions	250x250x450 mm
Weight (approx.)	8 kg

ORDERING:

CM 0119

Cement Shrinkage Test Set with dial gauge

CM 0120

Cement Shrinkage Test Set with transducer

ACCESSORIES:

CM 0119-1

Digital Dial gauge
0.001 mm x 20 mm

CM 0119-2

Reference Rod 160 mm
EN 12617-4

CM 0119-3

Reference Rod
205 mm EN1367-4

CM 0119-4

Reference Rod 305 mm
ASTM C490

CM 0119-5

Three gang Prism mold
40x40x160 mm EN 12617-4

CM 0119-6

Three gang Prism
mold 50X50X200mm

CM 0119-7

Two gang Prism mold
25x25x285 mm to ASTM C490

CM 0119-8

Steel inserts, 10 pieces

CM 0119-9

Transducer, 20mm

CM 0119-10

Data logger

Water Retention Apparatus

DESCRIPTION:

Used for determining the water retention value of cement and lime.

Two Models available:

One fitted with aspirator pump and analog vacuum gauge with regulator

The other with a portable vacuum pump and digital vacuum gauge with regulator.



ASTM C91; ASTM C110

ORDERING:

CM 0121

Water Retention Apparatus with aspirator pump vacuum regulator.

CM 0122

Water Retention Apparatus with vacuum pump digital vacuum regulator .

TECHNICAL SPECIFICATIONS:

Weight	8 kg
	230 V/50-60Hz/1ph

Bulk Density of Cement

DESCRIPTION:

Used to determine the Bulk Density of cement powder and non-cohesive materials.

It consists of:

a sieve funnel with tripod, a unit weight measure 1 liter capacity, spatulas, straightedge and aluminum scoop.



ORDERING:

CM 0123

Bulk Density of Cement Apparatus

TECHNICAL SPECIFICATIONS:

Overall Dimensions	350x350x520 mm
Weight (approx.)	3 kg

Autoclave Apparatus

DESCRIPTION:

The Autoclave Apparatus is used to perform expansion tests on cement specimens caused by hydration of CaO and MgO

This is done by determining the volume constancy of mortar prism samples.

Test bars are exposed to high pressure steam compartment, which accept a sample holder for 10 specimens.

The specimens can be tested cementanlisly at a maximum pressure of 360 psi (25bar) and a max temperature of (250°C)



ASTM C151; ASTM C141; AASHTO T107

MAIN FEATURES:

- Pressure gauge 0 - 25 Bar
- Specimen rack 10 samples max.
- Digital temperature regulator 0 – 225 C

ORDERING:

CM 0124

Autoclave Apparatus complete

ACCESSORIES:

CM 0124-1

O-ring lid sealing gasket

CM 0124-2

Specimen Rack

CM 0124-3

Lid sealing gasket

TECHNICAL SPECIFICATIONS:

	Dimensions	Pressure
Steam chamber	114 mmID X 406.4 mm	up to 25 bar
Overall Weight	55 Kg	

www.Geotechnical-equipment.com Tel: +441908 766 400, 401

Heat of Hydration Apparatus

BS 4550; ASTM C186; BS 1370; EN 196-8

**MAIN FEATURES:**

- Resolution 0.001°C
- Displays saves and prints Delta T min max and mean value
- PT100 probe measuring range -40 to +300°C

ORDERING:**CM 0125**

Heat of Hydration Apparatus complete.

ACCESSORIES:**CM 0125-1**

Beckman centesimal glass mercury thermometer

CM 0125-2

Digital Thermometer. Resolution: 0,01°C. Complete with probe

CM 0125-3

Digital Thermometer. Resolution: 0,001°C.

- Memory for 10000 readings
- Displays, stores and prints: min, max, mean values, delta T
- Alarm if limit values are exceeded
- Battery operated

CM 0125-4

Propeller conforming to ASTM C186 Specifications

CM 0125-5

Propeller, conforming to EN 196-8 Specifications.

CM 0125-6

Paraffin wax with melting point 55°C to coat the glass parts which are in contact with the hydrofluoric acid.

CM 0125-7

Dewar flask

CM 0125-8

Filler glass funnel

DESCRIPTION:

This Apparatus is used to determine the heat of hydration of low heat cement as expressed in calories per gram. When Portland or hydraulic cement is mixed with water, heat is generated as a result of an exothermic reaction.

The heat generated by cement's hydration raises the temperature of concrete and this temperature rise causes expansion while concrete is hardening.

The apparatus consists of:

a Dewar flask housed in an insulated box, an electric stirrer, a filler funnel and a high resolution thermometer.

TECHNICAL SPECIFICATIONS:

Dimensions	300x200x650 mm
Weight (approx.)	13 kg

Langavant calorimeter for heat of hydration of cement

EN 196-9

DESCRIPTION:

Langavant method consists of introducing a fresh cement specimen into an isolated Dewar Flak and monitoring the temperature changes within the specimen during the first early days. After a certain time, the heat of hydration of the cement content in the sample is equal to the sum of the heat accumulated in the flask and the heat emitted to the environment during the test period.

The temperature of the mortar is compared with the temperature of an inert sample placed in a reference calorimeter flask.

The amount of heat achieved by the cement mortar is mainly dependent on nature thereof and may reach values between 100C and 500C. The amount of heat is expressed in joules per gram of cement.

ORDERING:

CM 0126

Langavant calorimeter for heat of hydration of cement complete set

ACCESSORIES:

CM 0126-1

Set of 2 isolated calorimeter bottles

CM 0126-2

Set of 2 temperature probes type Pt-100, with 3 threads.

CM 0126-3

Set of 50 disposable mortar box.

CM 0126-4

Electronic console, with 4 measuring channels, and RS232 output interface for connecting up to 4 calorimeter bottles to the PC.



TECHNICAL SPECIFICATIONS:

Dimensions	300x200x650 mm
Weight (approx.)	13 kg

It consist of:

2 isolated calorimeter bottles set 2 temperature probes type PT-100 set with 3 threads, 50 disposable mortar box set and an electronics console with 4 measuring channels, and RS232 output interface for connecting up to 4 calorimeter bottles to the PC.

Manual Mortar Mixer

DESCRIPTION:

The manual mortar mixer is designed to mix mortar and cement paste to the required standard.

The mixer is controlled by ON/OFF switch, it has two different speeds. The mixing paddle revolves at a rate of 140 rpm. with a planetary motion of 62 rpm, in low speed.

In high speed, the paddle revolves at the rate of 285 rpm. with a planetary motion of 125 rpm. The user can choose the speeds easily by using the switch fitted to the machine.

The Manual Mortar Mixer comes complete with:
Stainless steel bowl and mixing paddle.

EN 196-1, 196-3, 413-2, 459-2, 480-1, 1015-2, 12617-4
ASTM C187, C305, AASHTO T129, T131, T162



MAIN FEATURES:

- It can operate on 2 different speeds
- It comes in 5ltrs / 10ltrs capacity

SPECIFICATIONS:

Dimensions	300x555x610 mm
Weight (approx.)	54 kg
Power	200 W

ORDERING:

CM 0127
Manual Mortar Mixer 5ltr

CM 0128
Manual Mortar Mixer 10ltr

Automatic Mortar Mixer

DESCRIPTION:

The Automatic Mortar Mixer is used to combine mortars and cement pastes to the requirement of standards. The mixing paddle has a planetary motion and is operated by a motor. The motor has microprocessor-based speed and preset programs to meet all listed EN and ASTM standards, custom-designed programs or manual mode.

The machine has a mode button, which the operator can use to switch between programs. The mixing paddle has a revolving rate of 140 r.p.m at low speed. In high speed the revolving rate of the paddle increases to 285 r.p.m and has a planetary motion of 125 r.p.m

The mixer is supplied complete with: an automatic sand dispenser; After 30 seconds, the sand is automatically released. The operator can choose between 6 different programs, where the sand dispenser position, mortar speed and duration of the mix can all be set differently. The mixing time is shown on the display.

TECHNICAL SPECIFICATIONS:

Dimensions	300x555x610 mm
Weight (approx.)	56 kg
Power	200 W



EN 196-1, 196-3, 413-2, 459-2, 480-1, 1015-2, 12617-4; ASTM C187, C305; AASHTO T129, T131, T162

ORDERING:

CM 0129
Automatic Mortar Mixer 5ltr complete set

CM 0130
Automatic Mortar Mixer 10ltr complete set

ACCESSORIES:

CM 0129-1
Automatic sand dispenser

CM 0129-2
Mixing Bowl 5ltr

CM 0129-3
Mixing Bowl 10ltr, stainless steel complies with EN 196

CM 0129-4
Paddle, 5 Hv

CM 0129-5
Paddle, 10 Hv

CM 0129-6
Scraper

Flame photometer

DESCRIPTION:

The Flame Photometer is a device is used in inorganic chemical analysis to determine the concentration of certain metal Ions, among them Sodium, Potassium, Lithium, Barium, and Calcium.

In principle, it is a controlled flame test with the intensity of the flame color quantified by photoelectric circuitry.

The instrument is fitted with: automatic flame failure detection for user safety, making it ideal for use in laboratory, industrial sites, and educational applications.

TECHNICAL SPECIFICATIONS:

Dimensions	420x360x300 mm
Weight (approx.)	8 kg



MAIN FEATURES:

- Designed for industrial analysis
- Supplied with Na, K, Li, Ba and Ca filters
- Low temperature, single channel
- Flame failure safety system
- Operates with propane, butane, natural gas or LPG

ORDERING:

CM 0131

Flame Photometer supplied complete with Na, K, Ba, Ca and Li filters, connecting hoses and clips, compressor plug and drain trap.

ACCESSORIES:

CM 0131-1

Calcium filter

CM 0131-2

Lithium filter

CM 0131-3

Barium filter

Muffle Furnace

DESCRIPTION:

The Muffle Furnaces are widely used for determining various properties of construction materials such as the loss of ignition.

Vertical lift door directs heat away from the user and saves counter space. A safety interlock switch disconnects power when the door is open.

Vertical lift door directs heat away from the user and saves counter space. A safety interlock switch disconnects power when the door is open.

Vertical lift door has maximum access with minimum headroom for easy loading and unloading.



EN 196-2; EN 459-2; BS 1016:4;
ASTM D2361; D 2795

MAIN FEATURES:

- It is front loading for easy operation
- Double skin constructed to maintain a cool outer case.
- Temperature control by a PID digital system.
- Available in several sizes.

ORDERING:

CM 0132

Muffle furnace, 1100°C, 3L

CM 0133

Muffle furnace, 1100°C, 8.2L

CM 0134

Muffle furnace, 1100°C, 13L

CM 0135

Muffle furnace, 1100°C, 22L

CM 0136

Muffle furnace, 1100°C, 39L

CM 0137

Muffle furnace, 1300°C, 8.6L

Muffle Furnace

EN 196-2; EN 459-2; BS 1016:4; ASTM D2361; D 2795

TECHNICAL SPECIFICATIONS:

	CM 0132	CM 0133	CM 0134
Internal Dimensions	125x200x115 mm	200x300x133 mm	225x360x183 mm
External Dimensions	340x470x430 mm	440x620x510 mm	500x890x610 mm
Weight (approx.)	20 kg	28 kg	58 kg
Power	1.8 KW	1.8 KW	1.8 KW
Temperature controller	Digital	Digital	Digital
Max. Temperature	1100 °C	1100 °C	1100 °C
Temperature deviation at set point	± 2°C	± 2°C	± 2°C
Heat Up time to Max. temperature	50 min	65 min	50 min
Internal Volume	3 L	8.2 L	13 L
Phase	1	1	1

	CM 0135	CM 0136	CM 0137
Internal Dimensions	275x500x155 mm	315x515x225 mm	180x310x155 mm
External Dimensions	600x890x610 mm	650x550x580 mm	510x750x640 mm
Weight (approx.)	58 kg	74 kg	39 kg
Power	3 KW	6 KW	2.9 KW
Temperature controller	Digital	Digital	Digital
Max. Temperature	1100 °C	1100 °C	1300 °C
Temperature deviation at set point	± 2°C	± 2°C	± 2°C
Heat Up time to Max. temperature	50 min	75 min	50 min
Internal Volume	22 L	39 L	8.6 L
Phase	1	3	3

Vibrating machine

BS 4550

DESCRIPTION:

The Vibrating Machine is used for the preparation and compaction of 70.7mm mortar cube specimens.

The mold table is mounted on four springs attached to an eccentric shaft which allows each sample to be vibrated at 12000 cycles per minute. There is a timer on it to preset time and it stops automatically in every 120 seconds.

TECHNICAL SPECIFICATIONS:

Dimensions	450x650x850 mm
Weight (approx.)	80 kg
Eccentric Shaft Rotation	12000 r.p.m
Power	1100 W



MAIN FEATURES:

- The simple design of the machine facilitates easy assembly and dismantling of the cube molds.

ORDERING:

CM 0138
Vibrating Machine

ACCESSORIES:

CM 0138-1
Set of springs

CM 0138-2
Cube Mold 70.7 mm

Jolting Table Apparatus

BS 3892; EN 196-1

DESCRIPTION:

Jolting Table Apparatus is used for compacting cement specimens in a 40x40x160mm prism mold.

The Jolting Apparatus consists of a mold table seated on a rotating cam driven at 60 revolutions per minute.

The Jolting Table is a 15.0mm drop equipped with a counter which provides automatic shut off at end of preset drop numbers. Rapid mold lock and release system allows easy and quick operation.

The supporting frame of the machine has been designed to ensure precise dimensions, table flatness, correct centering of the three gang mold on the table.

The motor and gearbox assembly is enclosed in a protective housing, which promotes user safety (the moving parts are inaccessible) and long life for the gearbox. The feed hopper is used for filling Three Gang Mold, Feed Hopper and soundproof Safety Cabinet should be ordered separately.

MAIN FEATURES:

- The simple design of the machine facilitates easy assembly and dismantling of the prim molds.

ORDERING:

CM 0139

Jolting Table Apparatus

ACCESSORIES:

CM 0139-1

Prism mold 40x40x160 mm

CM 0139-2

Feed hopper

CM 0139-3

Glass plate

CM 0139-4

Sound proof safety cabinet

CM 0139-5

Standard reference sand. EN 196-1 , 1350 gram per bag

	CM 0139
Dimensions	1050x350x500 mm
Weight (approx.)	55 kg
Motor Speed	60 r.p.m
Drop Height	15 mm
Power	250 W

TECHNICAL SPECIFICATIONS:



Prism Mold

BS 3892-1; 4551-1; EN 196-1; 413-2; 459-2;
1744-1; 1015-10,11; 13454-2

DESCRIPTION:

The Prism Mold is manufactured of steel with hardness over HV400 the surface is heat-treated to comply with the related standards

TECHNICAL

SPECIFICATIONS:

	Dimensions	Weight
CM 0140	40x40x160 mm	12.5 Kg
CM 0141	50x50x200 mm	8 Kg
CM 0142	25x25x250 mm	6 Kg
CM 0143	75x75x254 mm	9 Kg
CM 0144	25x25x285 mm	6 Kg



ORDERING:

CM 0140

Prism mold 3 Gangs, 40x40x160mm

CM 0141

Prism mold 3 Gangs, 50x50x200mm

CM 0142

Prism mold 2 Gangs, 25x25x250mm

CM 0143

Prism mold 2 Gangs, 75x75x254mm

CM 0144

Prism mold 2 Gangs, 25x25x285mm

ACCESSORIES:

CM 0140-1

Steel inserts 6pcs

CM 0140-2

Feed hopper

CM 0140-3

Standard reference sand. EN 196-1 2006, 1350 gram per bag

Three Gang Cube Mold 50x50x50

DESCRIPTION:

The Three Gang Cube Mold is manufactured of cast iron all internal surfaces are machined. All the dimensions and specifications comply with the related standards.

CM 0145 This case iron three gang mold is diagonal arrangement 50mm mortar cube, molds with a detachable brass base plate.

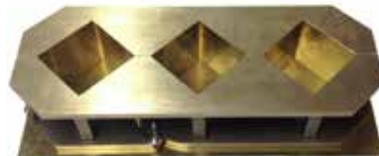
Wingnut clamp locks the mold to the base white stainless steel thumbscrews secure the halves tightly together.

The large screed of upper surface area makes this mold a preferred choice.

TECHNICAL

SPECIFICATIONS:

	CM 0145
Dimensions	110x230x60 mm
Weight	3 Kg



BS 1881-131; ASTM C109; EN 196-1

ORDERING:

CM 0145

Three Gang Cube Mold 50x50x50 Brass

CM 0146

Three gang Cube Mold 50x50x50 stainless steel

Briquette Mold

BS 4450

DESCRIPTION:

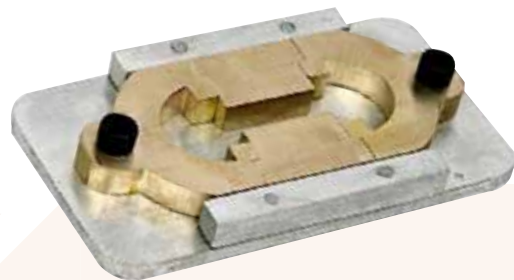
The briquette mold is used for casting cement briquettes for tensile strength testing. Manufactures of brass it is a two-part split mold with thumbscrews for quick assembly and dismantling of the mold.

The minimum cross-section of the briquettes cast is 25.4mm x 25.4mm. Supplied complete with a steel base plate.

TECHNICAL

SPECIFICATIONS:

Product code	CM 0147
Dimensions	25.4x25.4 mm
Weight	2 Kg



ORDERING:

CM 0147

Briquette Mold

Cube Mold 70.7 mm

EN 196-1; ASTM C109; BS 4550

DESCRIPTION:

The 70.7 molds have been manufactured from steel all internal surfaces are machined.

Supplied complete with the baseplate. All dimensions and specifications comply with the related standards



ORDERING:

CM 0148

70.7mm Cube Mold

CM 0149

Three Gangs, 70.7mm Cube Mold

TECHNICAL SPECIFICATIONS:

	CM 0148	CM 0149
Dimensions	75x75X75 mm	100x125X90 mm
Weight (approx.)	0.5 kg	3.5 kg

Air Content Meter for Mortar, Masonry Cement and Lime

EN 459-2; EN 413-2; EN 1015-7

DESCRIPTION:

The Air content Meter for mortar is designed to determine the air content in cement mortar, cement paste, and lime mortar.

Made from cast aluminum, the test pot one-liter capacity and the upper part air-tight sealed using two quick action spring clamps.

The whole is connected to a dial gauge directly indicating the air entrainment in percentage, with range 0-50%.

A built-in operated air pump is also included. The push-buttons TEST and CORRECTION are arranged to perform the test in a simple and quick system.

TECHNICAL SPECIFICATIONS:

Dimensions	320 mm high, 20 mm dia.
Weight (approx.)	3.5 kg



ORDERING:

CM 0150

Mortar, Manual Air Content Meter 1 ltr.

CM 0151

Motorized Mortar Air Content Meter, 1 ltr. With an electric mini-compressor to keep the air pressure constant.

CM 0152

Motorized Mortar Air Content Meter, 0.75 ltr. With an electric mini-compressor to keep the air pressure constant.

ACCESSORIES:

CM 0150-1

Mini Compressor

Humidity Curing Cabinet

DESCRIPTION:

The humidity curing cabinet is used for curing cement test samples.

The curing cabinet provides from -25C to +70C temperature and up to 98% humidity of cement specimens by immersion heater and refrigerator units which are supplied complete with the cabinet.

The internal chamber and racks are made of stainless steel.

The cabinet is equipped with a digital control unit to monitor the temperature and humidity and recording chart.



EN 196-1, 1367-1, 12390-2, 12371, 13383-2, 1324, 12004, 1348, 1346, 1308, 12002; ASTM 2247-11, ASTM C581-03, ASTM D 2247-11, ASTM E 104-02

MAIN FEATURES:

- Product Control relative Humidity 10% to 98% ±3%
- Temperature stability of ±0.1°C
- Programmable model available

ORDERING:

CM 0153
Constant Climate Chamber PRO Series 130 ltr with digital control unit

CM 0154
Constant Climate Chamber limited series 130 ltr

CM 0155
Constant Climate Chamber PRO Series 370 ltr

CM 0156
Constant Climate Chamber limited series 370 ltr

TECHNICAL SPECIFICATIONS:

Net Interior volume	130 L	370 L
Net weight of the unit	70 kg	95 kg
Interior Dimension		
Width	450 mm	500 mm
Depth	535 mm	580 mm
Height	520 mm	1250 mm
Shelve Dimension		
Width	400 mm	460 mm
Depth	500 mm	570 mm
Number of Interior Shelves	2	5
Main door	1	1
Energy consumption at 37 °C	1.55 kWh/h	1.92 kWh/h

Temperature range	-25/+70°C / 0/+70°C
Temperature fluctuation	±0.1 C
Humidity range	10 to 98 % RH
Humidity fluctuation	≤ 3 ± % RH
Controller data	
Controller	Cycle monitoring touch screen programmer
Program	1
Steps	20
Exterior and interior structure	White plastic coated galvanized steel or Stainless steel AISI 304
Insulation	CFC and HCFC free
Door	Reversible self closing door with magnetic gaskets plug
Grids	Removable and height adjustable plastic-coated steel
Type alarm	Audio-visual
Alarm parameter	Hot temperature
Security device	Safety device with manual reset class 1 (DIN 12880)

Cement Compression and Flexural Machine

DESCRIPTION:

The Cement Compression and Flexural Machine 25/250 kN is Fully Automatic and has been designed for testing the compression on the 50x50x50mm cube molds, 40x40mm and the flexural on the 40.1x40x160 mm prism molds according to the related standards.

The machine consists of a very rigid two column frame with a double test chamber, automatic closed-loop controlled hydraulic power pack and an LCD graphic digital control readout unit. The very silent power pack can load a specimen between 1 kN/sec to 20 kN/sec.

On the dual-stage pump, a high delivery low-pressure pump is used for a rapid approach and low delivery high-pressure radial piston pump is used for test execution.

On all power packs, the maximum pressure valve is used to avoid machine overloading.

On both frames, the load is measured by the load cell to get accurate test results. The machine is supplied with safety doors and can test samples up to 250kN.

EN 196-1, 196-3, 459-2, 1015-11, 13454-2, ASTM C109, C348, C349, C305, BS 3892-1, 455-1,

MAIN FEATURES:

- Can control 2 frames
- Real time display of test graph.
- Multi-language support
- Different unit system selection; kN, Ton and lb
- Test result visualization and memory management interface

The LCD graphics data acquisition and controls system is designed to control the machine and processing of data from load cells.

The digital graphic display allows real-time load vs time graph. At the end of the test cycle, the results can be stored in memory (up to 250 test results) or downloaded to a PC using the software format.

TECHNICAL SPECIFICATIONS:

Product Code	CM 0157	CM 0158
Test Type	Full-Auto compression	Semi-Auto compression
Capacity	250 kN	250 kN
Class 1 Measuring range	25 to 250 kN	25 to 250 kN
The roughness value for texture of loading and auxiliary platens	≤ 3.2 μm	≤ 3.2 μm
Lower Platen dimensions	165 mm	165 mm
Upper Platen dimensions	165 mm	165 mm
Maximum vertical clearance between platens	263 mm	263 mm
Piston diameter	160 mm	160 mm
Maximum piston movement	50 mm	50 mm
Horizontal clearance	300 mm	300 mm
Power	550 W	550 W
Oil capacity	20 L	20 L
Maximum working pressure	125 bar	125 bar
Rapid approach rate	50 mm/min	50 mm/min
Dimensions	760x500x1650 mm	760x500x1650 mm
Weight	395 kg	250 kg



Cement Compression and Flexural Machine

EN 196-1, 196-3, 459-2, 1015-11, 13454-2,
ASTM C109, C348, C349, C305, BS 3892-1, 455-1,

TECHNICAL SPECIFICATIONS:

Product Code	CM 0159	CM 0160
Test Type	Full-Auto compression	Semi-Auto compression
Capacity	250/25 kN	250/25 kN
Class 1 Measuring range	2.5-25 kN / 25-250 kN	2.5-25 kN / 25-250 kN
The roughness value for texture of loading and auxiliary platens	≤ 3.2 μm	≤ 3.2 μm
Lower Platen dimensions	165 mm	165 mm
Upper Platen dimensions	165 mm	165 mm
Maximum vertical clearance between platens	263 mm	263 mm
Piston diameter	160 mm	160 mm
Maximum piston movement	50 mm	50 mm
Horizontal clearance	300 mm	300 mm
Power	550 W	550 W
Oil capacity	20 L	20 L
Maximum working pressure	30 bar / 125 bar	30 bar / 125 bar
Rapid approach rate	50 mm/min / 80 mm/min	50 mm/min / 80 mm/min
Dimensions	1050x500x1650 mm	1050x500x1650 mm
Weight	410 kg	250 Kg

ORDERING:

CM 0157

Full Automatic Cement Compression Testing Machines 250 kN

CM 0158

Semi Automatic Cement Compression Testing Machines 250 kN

CM 0159

Full Automatic Cement Compression & Flexural Testing Machines 250/25 kN

CM 0160

Semi Automatic Cement Compression & Flexural Testing Machines 250/25 kN

ACCESSORIES:

CM 0157-1

Flexural jig assembly 40x40x160 mm EN 196-1

CM 0157-2

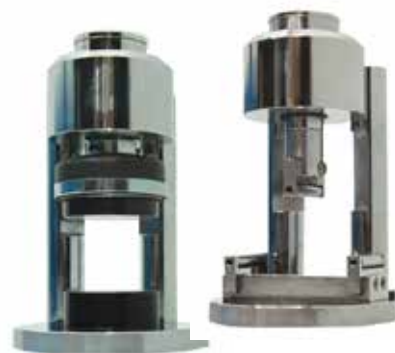
Flexural jig assembly 40x40x160 mm ASTM C109

CM 0157-3

Compression jig assembly for EN 196-1

CM 0157-4

Compression jig assembly for ASTM C109





GEOTECHNICAL

TESTING EQUIPMENT

THE BEST IN TEST

ASPHALT

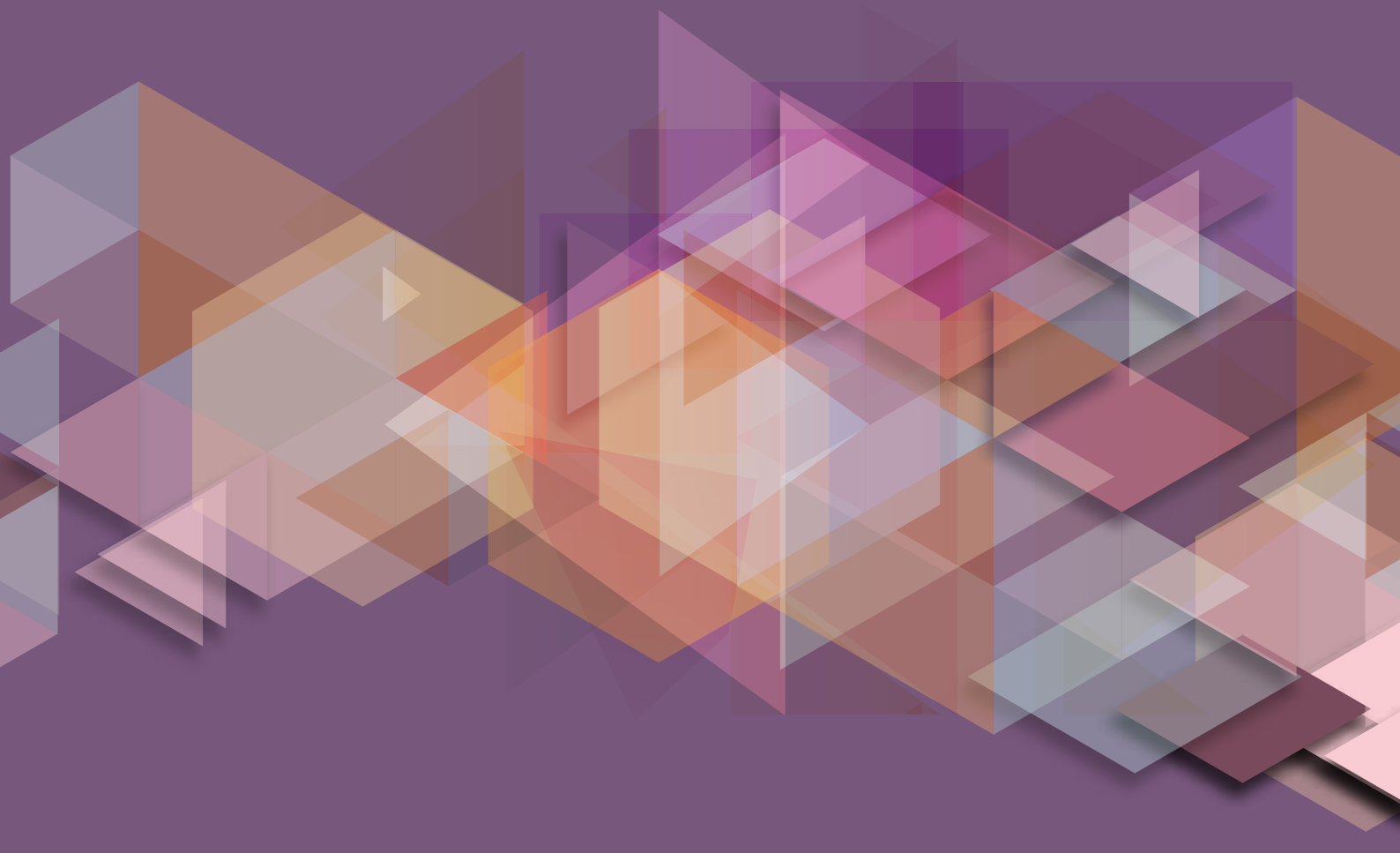


Asphalt

Asphalt is a sticky, black and highly viscous liquid or semi-solid that is present in most crude petroleum. It is most commonly used in road construction.

The material consists essentially of two ingredients, aggregate and bitumen which is the binder. A number of technologies allow this simple mix to have an almost infinite number of mixtures which may either be specified or designed to suit a particular engineering requirement.

It is therefore important that equipment and test methods are used to determine the different physical and chemical properties of any given asphalt mix. Such parameters include binder content, binder percentage, aggregate grading, void content, resilient modulus, indirect tensile fatigue cracking, creep, softening point, flash and fire point, water content, loss in mass, elongation, elasticity, viscosity and adhesion.



Reflux Extractor

DESCRIPTION:

The Reflux Extractor is used for the quantitative determination of bitumen in hot-mixed paving mixtures and pavement samples.

The bitumen content is calculated by the difference from the weight of extracted aggregates, moisture content, and ash from an aliquot part of the extract.

Two models available: 1 and 4 liters capacity. The extractors have to be used with a suitable hot plate with an aluminum disk for better heat distribution

The Reflux Extraction Test Set consist of

- Cylindrical Glass
- Extractor Jar Two Wire Mesh Cones
- Interlocking Frames
- Water Condenser with Inlet/Outlet Tubes
- Filter Paper, 50pcs.
- Hot Plate
- Iron Wire Gauze



TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)	Capacity
465x150 mm	3 kg	1000 gr
510x265 mm	9 kg	4000 gr

ASTM D2172; AASHTO T164 B

ORDERING:

- AS 0101**
Reflux Extractor 1000 gr complete
- AS 0102**
Reflux Extractor 4000 gr complete

ACCESSORIES:

- AS 0101-1**
Filter Paper for the 1000 gr (pack of 50)
- AS 0102-1**
Filter Paper for the 4000 gr (pack of 50)
- AS 0101-2**
Replacement glass for the 1000 gr
- AS 0102-2**
Replacement glass for the 4000 gr

Centrifuge Extractor

DESCRIPTION:

The Centrifuge extractor is used for the determination of bitumen percentage in bituminous mixtures.

All models comprise a removable precision-machined rotor bowl housed in a cylindrical aluminum box. They are driven by an electric motor fitted with an AC drive (inverter) with the double function of speed control up to 3600 r.p.m.

The control panel includes the Start/Stop button, speed control knob, and digital display.

The centrifuge extractor is complete with filter paper and bowl.

TECHNICAL SPECIFICATIONS:

AC drive motor (inverter)	550 W
Overall dimensions	539x406x509 mm
Weight approx.	54 kg



EN 12697-1; AASHTO T164 A; ASTM D2172 A

MAIN FEATURES:

- Speed control up to 3600 r.p.m.
- Supplied complete with filter discs

ORDERING:

- AS 0103**
Centrifuge Extractor 1500 gr
- AS 0104**
Centrifuge Extractor 3000 gr

ACCESSORIES:

- AS 0103-1**
Filter Paper for the 1500 gr model (pack of 100)
- AS 0104-1**
Filter Paper for the 3000 gr model (pack of 100)
- AS 0103-2**
Replacement bowl for the 1500 gr
- AS 0104-2**
Replacement bowl for the 3000 gr

Asphalt Mixer

EN 12697-35; BS 598-107

DESCRIPTION:

The Asphalt Mixer is designed for mixing Asphalt samples that can be used for mechanical tests as for example compaction, indirect tensile, Marshall, etc.

The bituminous mix must be prepared at a prescribed temperature for this reason the mixer can be equipped with a thermostatically controlled heater.

The mixing head rotates at different speed positions depending on the size of the mixer and the mixer. Mixer size available: 5L, 7L, 10L, 20L, 30L.

The asphalt mixer includes a hook, a mixing blade, a whisk and a stainless steel bowl.

MAIN FEATURES:

- Multiple speed settings.
- Heavy duty all gear transmission.
- Microswitch for bowl position and safety guard.
- Fitted with reset switch to prevent accidentally overloads.



TECHNICAL SPECIFICATIONS:

	AS 0105	AS 0106
Speed Setting	Variable	Variable
Dimensions	20 x 240 x 420 mm	20 x 240 x 420 mm
Weight	16 Kg	16 Kg
Capacity in ltr.	5 ltr.	7 ltr.
Capacity in kg	2 Kg	3 Kg

	AS 0107	AS 0108	AS 0109
Speed Setting	3 speed settings: 91, 200 and 300 rp.	3 speeds: 97, 220 and 316 rp	3 speed settings: 93, 167 and 285 rp.
Dimensions	485 x 410 x 635 mm	500 x 600 x 780 mm	550 x 600 x 1115 mm
Weight	75 Kg	107 Kg	204 Kg
Capacity in ltr.	10 ltr.	20 ltr.	30 ltr.
Capacity in kg	4 Kg	8 Kg	12 Kg

ORDERING:

AS 0105
Asphalt Mixer 5ltr complete with all accessories

AS 0106
Asphalt Mixer 7ltr complete with all accessories

AS 0107
Asphalt Mixer 10ltr complete with all accessories

AS 0108
Asphalt Mixer 20ltr complete with all accessories

AS 0109
Asphalt Mixer 30ltr complete with all accessories

ACCESSORIES:

AS 0105-1
Stainless steel bowl 5 ltr.

AS 0106-1
Stainless steel bowl 7 ltr.

AS 0107-1
Stainless steel bowl 10 ltr.

AS 0108-1
Stainless steel bowl 20 ltr.

AS 0109-1
Stainless steel bowl 30 ltr.

AS 0105-2
Hook for 5 ltr.

AS 0106-2
Hook for 7 ltr.

AS 0107-2
Hook for 10 ltr.

AS 0108-2
Hook for 20 ltr.

AS 0109-2
Hook for 30 ltr.

AS 0105-3
Mixing paddle 5 ltr.

AS 0106-3
Mixing paddle 7 ltr.

AS 0107-3
Mixing paddle 10 ltr.

AS 0108-3
Mixing paddle 20 ltr.

AS 0109-3
Mixing paddle 30 ltr.

AS 0105-4
Whisk for 5 ltr.

AS 0106-4
Whisk for 7 ltr.

AS 0107-4
Whisk for 10 ltr.

AS 0108-4
Whisk for 20 ltr.

AS 0109-4
Whisk for 30 ltr.

Isomantle Heater

DESCRIPTION:

The Isomantle heater is used to heat the bowl of the asphalt mixer. It is equipped with an electronic temperature controller and can be easily installed on the mixer.



TECHNICAL SPECIFICATIONS:

Bowl. Max. temperature	180 °C
Voltage	230V
Capacity in ltr.	Capacity 5; 7; 10; 20; 30
Dimensions	220 x 220 x 170 cm
Weight	1.5 kg

MAIN FEATURES:

- "Cool-to-touch" outer casing
- Element temperatures up to 450°C
- Indicator lamps for power and heater operation
- Replaceable insulated heater cartridge
- Rugged, easy to clean powder-coated aluminum casing

ORDERING:

- AS 0110**
Isomantle Heater 5ltrs cap
- AS 0111**
Isomantle Heater 7ltrs cap
- AS 0112**
Isomantle Heater 10ltrs cap
- AS 0113**
Isomantle Heater 20ltrs cap
- AS 0114**
Isomantle Heater 30ltrs cap

Manual Marshall Compaction

DESCRIPTION:

Marshall manual assemblies are used to compact Marshall samples manually.

Compaction assemblies include a Marshall compacting hammer and a wood compaction pedestal. The pedestal is supplied with a plate, a mold holder and a hammer guide.

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
350x400x1600 mm	70 kg

EN 12697-30, 12697-10, 12687-12; ASTM D 1559 D 6926, D 5581; AASHTO T245



ORDERING:

- AS 0115**
Manual Marshal Compactor complete with all accessories.
- AS 0123**
Marshall Compaction Mold 4"
- AS 0124**
Marshall Compaction Mold 6"

ACCESSORIES:

- AS 0115-1**
Compacting Hammer, BS 598
- AS 0115-2**
Compaction Pedestal, BS 598 comprising a 300 mm sq x 25 mm thick steel plate.
- AS 0115-3**
Compaction Pedestal comprising a 12 inch square x 1 inch thick steel plate, ASTM
- AS 0115-4**
Paper Discs. 99 mm diameter pack of 100.

Automatic Marshall Compactor

EN 12697-30, 12697-10, 12687-12; ASTM D 1559 D 6926, D 5581; AASHTO T245

DESCRIPTION:

The Automatic Compactor is made of rugged construction to stand work.

It provides a consistent and even degree of compaction. The Compactor comprises of a compaction pedestal, automatic control system, the secure base of 300 mm square x 25 mm thick steel plate.

After setting the required number of blows the Automatic Compactor lifts the 4535g ±20g hammer and releases it at the desired height of 457mm ±3mm.

The control system comprises of operating light, start/stop switch and a reading counter used to set the desired number of blows.



TECHNICAL SPECIFICATIONS:

Falling Height	457 ± 5mm
Hammer Weight	4535 ± 15 g
Tamping Face Dia.	98,5 mm
Concrete Base Dimension	450x450x200 mm
Laminated Hard work Block Dimensions	200x200x450 mm
Blows Frequency	50 blows in 55 s to 60 s
Dimensions (EN)	550x500x1950 mm
Weight (approx.) (EN)	275 kg
Power	370 W
Dimension (ASTM)	550x550x1950 mm
Weight (approx.) (ASTM)	135 kg

MAIN FEATURES:

- Accurate counter
- Heavy-duty robust built
- Jam-free design
- The easy mold clamp system

ORDERING:

AS 0116

Automatic Marshall Impact Compactor with Wooden Pedestal, EN.

AS 0117

Automatic Marshall Impact Compactor with Wooden Pedestal and Soundproof Safety Cabinet.

AS 0118

Automatic Marshall Impact Compactor with Wooden Pedestal, ASTM.

AS 0119

Automatic Marshall Impact Compactor with Wooden Pedestal and Soundproof Safety Cabinet.

ACCESSORIES:

AS 0116-1

Marshall Steel Block, Ø102 and 50 mm height

AS 0123

Marshall Compaction Mold 4"

AS 0124

Marshall Compaction Mold 6"

Marshall Stability Machine

EN 12697-12; EN 1269-23; EN 12697-34; ASTM D1559
ASTM D5581; ASTM D6927; AASHTO T245

DESCRIPTION:

The Marshall Stability Machine is used to determine the load and flow values of bituminous mixtures.

The Marshall is composed by a robust and compact two-column frame with adjustable upper cross beam driven by an electro-mechanical ram with a maximum capacity of 50 KN and a data acquisition and processing system.

The Marshall Stability Machine can be hand operated by a lateral hand wheel for calibration purposes. The mechanical jack raises the lower cross beam at a constant speed of 50.8 mm/min.

The limit switches are provided for both, bottom and top limit of travel.

The Automatic measuring system consists of a 50KN capacity strain gauge load cell that is fitted to the upper cross beam to read stability values and 25 mm x 0.001 mm displacement transducer fitted to Break Head.

The Manual measuring system consists of a 50 KN capacity load ring and dial gauge graduated 0.01 mm with 25 mm travel.

The Marshall Stability Machine comes complete with a lateral hand wheel for calibration purposes and a 100 mm breaking head.

MAIN FEATURES:

- 3 models are available, charging ring, digital and computerized
- High resolution graphic display

ORDERING:

AS 0120

Marshall Stability Machine complete with load ring

AS 0121

Digital Marshall Stability Machine complete with digital gauge

AS 0122

Digital computerized Marshall Stability Machine complete with touch screen and software

ACCESSORIES:

AS 0120-1

Breaking Head 100 mm

AS 0120-2

Breaking Head 150 mm

AS 0120-3

Load Ring assembly complete with dia gauge, 50KN

AS 0120-4

S-type load cell 50KN

AS 0120-5

Flow Transducer

AS 0120-6

Data Acquisition and Control System

TECHNICAL SPECIFICATIONS:

Dimensions	550 x 700 x 1200 mm
Power	1100 W
Weight (approx.)	103 kg



Marshall Compaction Mold

EN 12697-30; ASTM D1559, D6926, D5581 AASHTO T245

DESCRIPTION:

The Marshall Compaction Molds are used to produce the Marshall specimens with automatic or manual compactors.

The molds are manufactured using galvanized steel. The Compaction Molds consist of a base plate, mold body, and a collar.



TECHNICAL SPECIFICATIONS:

	Dimensions	Weight (approx.)
AS 0123	120x170 mm	3.5 kg
AS 0124	75x210 mm	6 kg

ORDERING:

AS 0123

Marshall Compaction Mold 4"

AS 0124

Marshall Compaction Mold 6"

ACCESSORIES:

AS 0123-1

Filter paper Mold 4' pack of 100

AS 0124-1

Filter paper Mold 6' pack of 100

Marshall Sample Extruder

EN 12697-30, 13286-2, 13286-47; AASTHO T245; ASTM D1559, D698, D1557, D1883; BS 598-107, 1377-4, 1924-2

DESCRIPTION:

The Specimen Extruder is designed to easily extrude specimens from Marshall and CBR molds. The capacity of the extruder is 30 kN.

Supplied complete with a manual hydraulic jack and 2 pcs. adaptor to extrude samples from 100mm (4"), 150 mm (6") inner diameter Marshall and CBR molds

TECHNICAL SPECIFICATIONS:

Ram Travel	230 mm
Screw Travel	90 mm
Dimensions	280x280x520 mm
Weight (approx.)	28 kg



MAIN FEATURES:

- Robust design
- Heavy duty
- Multiple adapters

ORDERING:

AS 0125

Marshall-CBR-Proctor Specimen Extruder, 30 kN Capacity

ACCESSORIES:

AS 0125-1

Adaptor to extrude samples from 100mm (4")Mold

AS 0125-2

Adaptor to extrude samples from 150mm (6")Mold

Binder Recovery Apparatus

BS 598-102; BS 5284; EN 12697-1

DESCRIPTION:

The Binder Recovery Apparatus is used to remove the solvent from the binder/solvent solution in order to determine directly the total content binder in the aggregate/binder mixtures.

The apparatus consists of a power operated vacuum pump, fit with vacuum regulator, producing a vacuum down to 200 mbar, a thermostatically controlled water bath, and two flat-bottomed flasks 250 ml capacity with rubber bungs and connections, All necessary fittings and connections complete the set.

The water bath can be used for other application as well



ORDERING:

AS 0126
Binder Recovery Apparatus

ACCESSORIES:

- AS 0126-1**
Flat bottom flask
- AS 0126-2**
Rubber bungs
- AS 0126-3**
Vacuum regulator
- AS 0126-4**
Vacuum pump
- AS 0126-5**
Water bath

TECHNICAL

SPECIFICATIONS:

Power rating	1380 W
Weight approx.	23 kg

Hubbard-Carmick Specific Gravity Bottles

ASTM D-70, D-1429, D-115

DESCRIPTION:

The Hubbard-Carmick Specific Gravity Bottles used with viscous fluids, semi-solid bitumen, and emulsions. Made of Borosilicate Glass they come in two shapes.

MAIN FEATURES:

- Designed for use with viscous fluids, semi-solid bitumens, and emulsions
- 24/12 Standard Taper Stopper

TECHNICAL

SPECIFICATIONS:

Capacity	25 mL / 24 mL
Bottle style	Hubbard-Carmick Specific Gravity
Neck style	Wide-mouth
Top style	Standard Taper Joint
Stopper style	Standard Taper Stopper
Stopper material	Solid Glass
Bottle shape	Cylindrical
Standard Taper size	24/12
Bottle feature	Heavy wall



ORDERING:

- AS 0127**
Hubbard-Carmick Specific Gravity Bottle conical 25ml
- AS 0128**
Hubbard-Carmick Specific Gravity Bottle conical 24ml

Bacon Sampler

ASTM D140; AASHTO T40

DESCRIPTION:

The Bacon Sampler is used to obtain bitumen or concrete samples at various levels from several containers.

Capacity	1 L
Weight	1.5 kg
Diameter	80 mm
Length (English)	300 mm

TECHNICAL SPECIFICATIONS:



ORDERING:

AS 0129
Bacon Sampler

Semi Automatic Bitumen Penetrometer EN 1426, BS 2000-49, ASTM D5, AASHTO T49

DESCRIPTION:

The Semi-Automatic Bitumen Penetrometer is used to determine the penetration of bituminous samples under constant load, time and heat. The Penetrometers are intended for measuring the consistency of bituminous materials. Penetration readings are quickly taken from a measuring precision gauge.

The Penetrometer consists of a cast iron base with leveling screws, digital penetration measurement gauge 0.01 mm precision Release button - Automatic zeroing. Needle, transfer dish and penetration molds.

TECHNICAL SPECIFICATIONS:

Dimensions	200x300x500 mm
Weight (approx.)	16 kg
Power supply	110/240 V, 50/60 Hz
Measure range:	0-300 penetration units
Resolution	0.01 mm
Test Load	100 g (plunger 97.5 g + 2.5 g penetration needle)
Test time	5 sec (adjustable from 0.1 to 3000 seconds)

ORDERING:

AS 0130
Semi Automatic Bitumen Penetrometer

ACCESSORIES

- AS 0130-1**
Penetration Needle, hardened steel verification certificate. For testing to BS 2000-49 and ASTM D5
- AS 0130-2**
Penetration Needle (unverified)
- AS 0130-3**
Penetration Tin for penetrations between 200 and 350
- AS 0130-4**
Penetration Tin for penetrations below 200



Automatic Digital Bitumen Penetrometer

EN 1426, BS 2000-49, ASTM D5, AASHTO T49

DESCRIPTION:

The Automatic Digital Bitumen Penetrometer is used for determination of the needle penetration according to EN 1426, ASTM D5 and AASHTO T49 standards.

The penetration depth of the needle is determined with a pulse type electronic measuring system, which is separated from the plunger during the test, this allows the free guidance of the plunger which virtually eliminates friction during the test.

Before each start of the test, the measuring system automatically resets, and then the penetration needle moves down to the sample by using the electric drive, the needle position can be finely adjusted by using the joystick located on the front panel.

A magnifying glass and an ultra-bright LED lamp are supplied to assist the operator; the plunger is then automatically released onto the sample and raised automatically after the testing period.

The test result is displayed on the digital display. The plunger can easily be removed to calibrate its weight.

The Automatic Electronic Penetrometer is supplied complete with;

- Penetration Needle, 2 pcs
- Transfer Dish
- Sample Cup, Ø 55x35 mm, 2 pieces, stainless steel

TECHNICAL SPECIFICATIONS:

Measuring range	0-300 penetration units
Resolution	0.01 mm
Test load	100 g (plunger 97.5 g + 2.5 g penetration needle)
Test time	5 sec (adjustable from 0.1 to 3000 seconds)
Dimensions	27x48x75 cm
Weight	24 kg
Power supply	110/240 V, 50/60 Hz

ORDERING:

AS 0131
Automatic Digital Bitumen Penetrometer

ACCESSORIES

AS 0131-1
Transfer Dish

AS 0131-2
Sample Cup, Ø 55x35 mm, stainless steel

AS 0131-3
Sample Cup, Ø 70x45 mm, stainless steel

AS 0131-4
Penetration Needle, 2,5 g



Ring and Ball Test Apparatus

EN 1427; ASTM D36 AASHTO E53; ASTM D2172

DESCRIPTION:

The Ring and Ball method of determining the softening point bituminous materials.

The softening point is considered to the temperature of the fluid when the ball penetrates the specimens and touches the lower plate.

This test method covers the determination of the softening point of bitumen in the range from 30 to 1570C immersed in the distilled water, USP glycerin, or ethylene glycol.



TECHNICAL SPECIFICATIONS:

Power Supply	600 W, 220 /110 V, 50/60 Hz
Dimensions	125x205x545 mm
Weight	1.5 kg

ORDERING:

AS 0132

Softening Point (Ring and Ball) Apparatus complete with all accessories.

ACCESSORIES:

AS 0132-1

Rings with collars, pack of 2

AS 0132-2

Thermometer ASTM 150C IP 600C

AS 0132-3

Thermometer ASTM 160C IP 610C

AS 0132-4

Balls, pack of 50

AS 0132-5

Pyrex Glass Jar, 600ml

Cleveland, Flash and Fire Point, Open Cup

ASTM D92, DIN 51376 ISO 2592

DESCRIPTION:

The Cleveland test method describes the determination of the flash and fire point of petroleum products such as bituminous material with flashpoints above 790C and below 4000C

Electrically heated by an electronic regulator, mounted on a case painted with anti-acid epoxides products.

Calibrated brass cup, gas ignition device fitted with a pivot manually passing through the cup. Fitted with pincers for the thermometer.

TECHNICAL SPECIFICATIONS:

Dimensions	250x300x250 mm
Weight	5 kg



ORDERING:

AS 0133

Cleveland, Flash and Fire point complete.

ACCESSORIES:

AS 0133-1

Rubber Tube Joint and Tube, 5 meter

AS 0133-2

Thermometer ASTM 110C IP 280C

AS 0133-3

Gas Ignition Device

AS 0133-4

Calibrated Brass Cup.

Asphalt Binder Analyser

DESCRIPTION:

The Asphalt Binder Analyser consists essentially of a high precision apparatus combining an ignition oven to a continuous weighing system to monitor the loss of weight of the asphalt sample and to automatically determine, at the end of the test, the binder content and percentage.

An independently controlled auxiliary afterburner chamber significantly reduces the furnace emissions.

The Analyser is supplied complete with: Double sample basket/safety cover, extraction fork and 3 meters of the metal exhaust pipe.

TECHNICAL SPECIFICATIONS:

Max temp	750°C
Dimensions: Internal	220x350x450 mm
Dimensions: External	980x600x775 mm
Configuration	Bench-top
Thermocouple type	K
Weight (kg)	120 kg
Max power	8000 W



AASHTO T 308-10; ASTM D6307-10;
BSEN 12697-39:2012

MAIN FEATURES:

- Highly efficient heating system with afterburner for total combustion of fumes
- No need for filter or hoods
- Sample size up to 4500 g

ORDERING:

AS 0134
Asphalt Binder Analyser

ACCESSORIES:

- AS 0134-1**
Floor stand
- AS 0134-2**
Sample cooling stand
- AS 0134-3**
Sample baskets
- AS 0134-4**
Metal waste gas extraction pipe
- AS 0134-5**
Heat protection gloves
- AS 0134-6**
Face shield

Loss On Heating Oven (TFOT)

DESCRIPTION:

The Loss on Heat Oven test method is used for determining the loss in mass, the effect of heat and air on a film of semi-solid bituminous materials.

Completely made from stainless steel, natural ventilation, internal support rotating at 5-6rpm controlled by a geared motor located on the oven top, digital thermoregulator PID with over-temperature alarm and probe, double-wall locking door with toughened glass window.

The Loss on Heat Oven supplied complete with: a Rotating shelf with 9 sample containers dia. 55x35 mm and thermometer ASTM 13C, +155 to +170°C, 0.5°C divisions. Conforming to all standards.

EN 12607-2; EN 13303; ASTM D6; ASTM D1754;
AASHTO T47; AASHTO T179; BS 2000

MAIN FEATURES:

- Digital control
- Independent overheat thermostat
- Mains switch
- ON/OFF switch for turntable motor
- Indicator lamps

Loss On Heating oven (TFOT)

EN 12607-2; EN 13303; ASTM D6; ASTM D1754;
AASHTO T47; AASHTO T179; BS 2000



TECHNICAL SPECIFICATIONS:

Dimensions	57x87x63 cm
Weight (approx.)	50 kg
Temperature	200 C

ORDERING:

AS 0135

Loss on Heat Oven complete set.

ACCESSORIES:

AS 0135-1

Rotating shelf 316mm dia

AS 0135-2

thermometer ASTM 13C, +155 to +170°C, 0.5°C divisions.

AS 0135-3

9 containers dia. 55x35 mm

Rolling Thin Film Oven(RTFO)

BS 2000, EN 12607-1, ASTM D2872

DESCRIPTION:

The Rolling Thin Film Oven provides simulated short term aged asphalt binder for physical property testing.

Asphalt binder is exposed to elevated temperatures to simulate manufacturing and placement aging. It also provides a quantitative measure of the volatiles lost during the aging process.

Supplied complete with:

- Forced ventilation flowmeter with a regulator valve
- Aluminum carriage rotating at 15rpm - 8 heat resistant glass containers
- Internal fan controlled by a motor
- Copper coil with nozzle preheating the air containers
- Digital thermometer and regulator

MAIN FEATURES:

- Double-wall stainless steel construction
- The easily removable bottom tray allows for a quick change of elements or spill clean-up



The oven must be connected to a compressed air source supplying 2 bar minimum pressure

ORDERING:

AS 0136

Rolling Thin Film Oven RTFO complete

ACCESSORIES

AS 0136-1

Glass Sample Containers, 8 pcs

AS 0136-2

ASTM 13C Thermometer, +155 to +170°C, 0.5° divisions

AS 0136-3

Air compressor

TECHNICAL SPECIFICATIONS:

	Rolling Thin Film Oven
Dimensions	750x750x910
Weight (approx.)	65 kg
Power supply	220 V, 50-60 Hz, 1 ph

Ductility Testing Machine

EN 13398; EN 13589, 13703; ASTM D113, D6084; AASHTO T51, AASHTO T300



DESCRIPTION:

The Ductility Testing Machine used for determining the ductility of bituminous materials by measuring the elongation of briquette mold with molten bitumen in it which is pulled apart at a specified speed and at a specified temperature.

The test shall be made at a temperature of 25 + 0.5°C with a speed of 5 cm/min + 5.0%.

Digital thermoregulator with over-temperature alarm and probe, cooling coil, traction carriage holding molds, circulation pump for stirring the water.

The Ductility Testing Machine with Cooling Unit has the same specifications as the ductility Testing Machine but with an additional cooling unit for better temperature control

The Force Ductility Testing Machine has 3 load cells and variable speeds. The accuracy of load cells is ±0,1N with a maximum capacity of 300 N. It has a cooling unit and digital graphic display, automatic control and Data Acquisition Unit, load-displacement curves and software.

The speed can be set and load-displacement curves are drawn through the software.

TECHNICAL SPECIFICATIONS:

Temperature Range	5° to 25°C ±0.5° (41° to 77°F ±0.9°)
Electrical	1000W Heater, 500W Cooler
Product Dimensions	1,880 x 360 x 680 mm
Estimated Shipping Weight	117.03 kg

MAIN FEATURES:

- Able to test three specimens simultaneously
- Heating and cooling circulator digitally regulates temperatures
- Vibration-free operation
- Direct-drive motor maintains a constant speed
- Force ductility comes with adjustable speed

ORDERING:

AS 0137
Ductility Testing Machine without cooling unit

AS 0138
Ductility Testing Machine with cooling unit

AS 0139
Force ductility Testing Machine with cooling unit

ACCESSORIES:

- AS 0137-1**
Ductility Briquette Mould.
- AS 0137-2**
Ductility Mould Base Plate

Emulsified Asphalts Apparatus

DESCRIPTION:

The Emulsified Asphalt test methods and practices cover the examination of asphalt emulsions composed principally of a semisolid or liquid asphaltic base, water, and an emulsifying agent.

Used for determining the cutback of asphalt material by distillation method.

The Emulsified Asphalt comprises Aluminum boiler container, connection glass tube with protection shield, glass condenser for water circulation, 2 thermometers ASTM 7C range -2 to +300°C, gas ring burner with gas stop valve controlled by a flame sensor. 100ml graduated cylinder, supporting ring, bases with rods.



ASTM D244, D6997; EN 1431; ASHTO T59

ORDERING:

AS 0140

Emulsified Asphalt Apparatus

ACCESSORIES:

AS 0140-1

Thermometer ASTM 7°C pack of 2

TECHNICAL SPECIFICATIONS:

Weight (Approx.)

9 kg

Dean and Stark Apparatus

DESCRIPTION:

The Dean and Stark Apparatus 3 places test method covers the determination of water in the range from 0 to 25% volume in petroleum products, tars, and other bituminous materials by the distillation method.

The Dean and Stark Apparatus consist of: Mantle heater with a steel rod and clamp, 500ml flask, condenser and graduated 10ml receiver.



TECHNICAL SPECIFICATIONS:

Power	Weight (approx.)
250W	4 kg

ASTM D95

ORDERING:

AS 0141

Dean and Stark apparatus complete

ACCESSORIES:

AS 0141-1

Flask, 500ml tampered joint 24/40, pack of 3

Distillation of Cut-Back Asphaltic (Bituminous) Product

ASTM D402 ASHTO T78

DESCRIPTION:

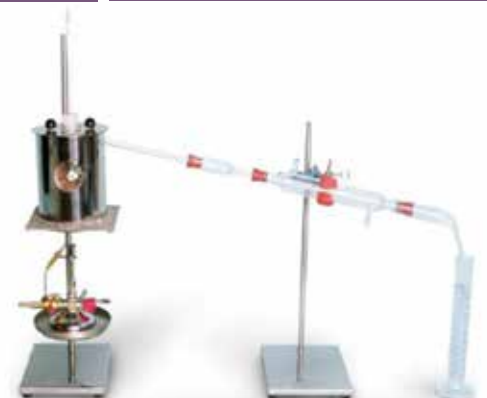
This apparatus is used for the examination of the amount of the more volatile constituents in cutback asphaltic products.

It consists of:

Distillation flask, Condenser, Adapter, Shield, Shield and flask support, Electric heater with thermoregulator, Cylinder receiver, Thermometer -2 +400°C

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
300x300x600 mm	6 kg



ORDERING:

AS 0142

Gas Distillation of Cut Back Asphaltic Apparatus

ACCESSORIES:

AS 0142-1

Low distillation thermometer, ASTM 7C, -2 +300°C

AS 0142-2

Crow receiver 25 ml cap.

AS 0142-3

Crow receiver 50 ml cap.

AS 0142-4

Crow receiver 100 ml cap.

AS 0142-5

Distillation flask

AS 0142-6

High distillation thermometer, ASTM 8 C, -2 +400°C, subdivisions 1°Cs

MAIN FEATURES:

- Adjustable platform
- Supported on height

Digital Viscometer Bath

DESCRIPTION:

The Digital Viscometer Bath is used for measuring oils viscosity by Cannon-Fenske, Ubbelohde, and similar capillary.

Working temperature from ambient to 150°C ±0.1°. Borosilicate tank, cover with 5 holes 50.8mm, stainless steel control box on the cover.

Digital thermoregulator PID with over-temperature alarm and probe, cooling coil for improved control near to ambient temperature, stainless steel heater, motor stirrer, with stand-by stainless steel covers, protection Lexan jacket

The Large Digital Viscometer Bath Structure is made of stainless steel, cover with 5 holes or 7 holes, 50.8mm, temperature control by digital thermoregulator PID stability ±0.02°C and display resolution 0.01°, adjustable high and low-temperature cut-out, low-level liquid alarm, cooling coil, stand-by stainless steel covers, light.

TECHNICAL SPECIFICATIONS:

	AS 0143	AS 0144
Power supply	220 V 50/60 Hz	220 V 50/60 Hz
Dimensions	50×60 cm	45×60×60 cm
Weight	12 kg	25 kg

ASTM D88; AASHTO T72; ASTM D7496; D445, D446, D2270

MAIN FEATURES:

- Working temperature from ambient to +70°C
- Transparent tank
- Cover with 5 or 7 holes 51 mm

ORDERING:

AS 0143
The digital viscometer bath

AS 0144
The large digital viscometer bath

ACCESSORIES:

AS 0143-1
Silicone oil – Kinematic viscosity 50 mm²/s at 25°C, can of 25 liters

AS 0143-2
Viscometer holders PTFE for Cannon-Fenske, pack of 5 pcs.

AS 0143-3
Viscometer holders in metal for Ubbelohde pack of 5.



AS 0143-4
Digital stopwatch

Digital Saybolt Viscometer

DESCRIPTION:

The Digital Saybolt Viscometer a device used to measure the viscosity of a fluid such as an asphalt. Calibrated brass oil cup with stainless steel flowing orifice, polished and calibrated 1.76mm dia Universal and 3.15mm dia Furol.

Digital thermoregulator PID with Over-temperature alarm and PT 100A probe, stirrer, cooling coil, 18/8 stainless steel water bath, insulated double wall and front opened jacket.

Monitoring the time required for the flow of specific volume to fill a 60cc container flask. The time recorded in seconds at three different temperatures. It has 2 sample testing capacity with a digital display.

ASTM D88 E102, AASHTO T72

ORDERING:

AS 0145
Digital Saybolt Viscometer, 2 places

AS 0146
Digital Saybolt Viscometer, 3 places

AS 0147
Digital Saybolt Viscometer, 4 places

ACCESSORIES:

AS 0145-1
Saybolt Viscosity Flask 60 ml

AS 0145-2
Set of Glass Thermometers 6 pcs

AS 0145-3
Filter funnel With stainless steel wire mesh

TECHNICAL SPECIFICATIONS:

Power supply	220 Vac ±10%, 50 Hz
Max. power consumption	1200W
Operating range	21°C to 99°
Precision	0.05°C
Dimensions	260x260x530 mm.
Weight	4 kg
Working temperature	0 to 50°C
Storage temperature	-10 to 70°C
Ambient relative humidity	<90% rH not condensing



Water Bath

EN 12697-34, 23; ASTM D1559; ASTM D5581; AASHTO T245; EN 12697-12

DESCRIPTION:

The Water Bath is Used to condition Marshall specimens and other materials in water.

The water baths are available in different dimensions: 30, 56 and 110 liters capacity. Digital thermoregulatory and temperature display, internal and external outer case in stainless steel. Complete with perforated base shelf and cover.

Our Water Bath can be fitted with cooling unit



TECHNICAL SPECIFICATIONS:

Product Code	AS 0148 / AS 0149	AS 0152 / AS 0153	AS 0154/ AS 0155
Recirculation	yes	yes	yes
Capacity	30 liters	56 liters	110 liters
Marshall specimen capacity	12	20	30 (4") 12 (6")
Temperature range: ambient to	60°C	60°C	95°C
Accuracy	±1°C	±1°C	±1°C
Resolution	0.1°C	0.1°C	0.1°C
Power	1200 W	1200 W	2500 W
Inside dim. (mm)	500x300x185(h)	610x500x185(h)	600x500x280(h)
Outside dim. (mm)	640x340x240(h)	650x540x240(h)	816x547x600(h)
Weight approx.	9.5 kg	20 kg	30 kg

MAIN FEATURES:

- Ideal for conditioning asphalt specimens
- Water conditioning up to 60°
- wide internal area to accommodate several specimens

ORDERING:

AS 0148

Digital water bath, 30 ltr. Cap. 230V, 50-60 Hz, 1 ph

AS 0149

Digital water bath, 30 ltr. Cap. 230V, 50-60 Hz, 1 ph with cooling device

AS 0150

Digital water bath, 48 ltr. Cap. 230V, 50-60 Hz, 1 ph

AS 0151

Digital water bath, 48 ltr. Cap. 230V, 50-60 Hz, 1 ph with cooling device

AS 0152

Digital water bath, 56 ltrs. Cap.

AS 0153

Digital water bath, 56 ltrs. Cap. with cooling device

AS 0154

Digital water bath 110 ltr.

AS 0155

Digital water bath 110 ltr. with Cooling Device.

Rate of Spread Balance

DESCRIPTION:

The Rate of Spread Balance determines the spread of coated chippings. This is determined using the calibrated spring balance and the rate of spread of tray. The spring load balance will accept rates of the spread between 4 and 16kg/m².

Comprises:

Rate of Spread Tray, manufactured from aluminum, 300mm square complete with four chains and lifting eye attached to a spring balance



BS 598-108, EN 12272-1

ORDERING:

AS 0156

Rate of spread complete

ACCESSORIES:

AS 0156-1

Spring Balance

AS 0156-2

Tray and Four Chains

TECHNICAL SPECIFICATIONS:

Weight (Approx.)

850g

Rice Test Vibrating Apparatus

DESCRIPTION:

The Rice Vibrating Apparatus is designed to be used in maximum specific gravity (rice test) and density determinations of bituminous paving mixtures with maximum accurate size up to 19.1 mm (3/4 inch).

The material de signification that entraps air is virtually eliminated through the shaking process, resulting in more accurate and uniform test results.

The equipment comes complete with clip mounting and removal clamp for the pycnometer. There are several models of Pycnometer to choose from depending on the standard.

The Vacuum pump, vacuum pressure gauge, and connecting tubes are ordered separately.

**EN 22592; ASTM D92; AASHTO T48
ASTM D2041, D854, C 128 AASHTO T209, T283**

MAIN FEATURES:

- Reduces operator errors improving accuracy and repeatability.

ORDERING:

AS 0157
Rice Test Vibrating Apparatus complete

ACCESSORIES:

- AS 0157-1**
Filter flask, 1L
- AS 0157-2**
Filter flask, 2L
- AS 0157-3**
Filter flask, 4L
- AS 0157-4**
Vacuum pressure gauge and connecting tube.
- AS 0157-5**
Vacuum pump.



TECHNICAL SPECIFICATIONS:

Dimensions	495x30 mm
Weight	5.5 kg

Vacuum Pycnometer

DESCRIPTION:

The Vacuum Pycnometer is used in the Rice Test to determine the maximum specific gravity of bituminous.

There are 3 models available of the Vacuum Pycnometer

Vacuum Pycnometer 2000gr. aluminum with transparent cover for easy observation of sample testing connected with pressure gauge.

Vacuum Pycnometer 4000gr. aluminum with transparent cover for easy observation of sample testing connected with pressure gauge.

Vacuum Pycnometer 6000gr., 10 ltr capacity made from hard plastic fitted with pressure gauge and connecting tubes.

ASTM D2041, EN 12697- 5, AASHTO T209, T283

MAIN FEATURES:

- Optimal for mixes with aggregates
- O-Ring design seal prevents leakage
- Complete user control of water level with adjustable valve

ORDERING:

- AS 0158**
Vacuum Pycnometer, 2000 gr. aluminum.
- AS 0159**
Vacuum Pycnometer, 4000 gr. aluminum.
- AS 0160**
Vacuum Pycnometer, 6000 g plastic.

ACCESSORIES:

- AS 0158-1**
Vacuum Pressure gauge and connecting tubes



TECHNICAL SPECIFICATIONS:

	Dimensions	Weight
Plastic 6000 gr.	(273 mm) x (406 mm) h.	3.6 kg
Aluminum 2000 gr.	(191x152mm)	5.4 kg
Aluminum 4000 gr.	(191x229mm)	7.8 kg

Percentage Refusal Density (PRD)

EN 12697-10-9-32; EN 13286-4 BS 1924:2 BS 1377:4

DESCRIPTION:

The Vibrating compaction hammer is mainly used for the P.R.D. Percentage refusal density test as well as the compaction of Proctor, CBR soil specimens. as it provides an alternative method for the compaction of soil samples in the determination of dry density/moisture content relation.

The set comes complete with: the vibrating hammer, supporting frame, 2 sizes tamping foot (Small, 102 mm dia. Large, 146 mm dia.). extension shank 300mm. P.R.D. Split mold and baseplate, 1 pcs.



TECHNICAL SPECIFICATIONS:

Overall dimensions	105x430x270 mm
Weight approx.	7 kg

MAIN FEATURES:

- Constant speed with variable speed control
- Durable aluminum housing
- Soft grip and shock-absorbing handle
- Easy to change tool by the single-step holder
- Functional and robust design

ORDERING:

AS 0161
Percentage Refusal Density complete with accessories

ACCESSORIES:

AS 0161-1
Holding frame

AS 0161-2
Split Mold and Baseplate

AS 0161-3
Vibrating Hammer

AS 0161-4
Small Tamping Foot 102 mm dia

AS 0161-5
Large Tamping Foot 146 mm Dia

AS 0161-6
300mm Shank, For Tamping foot

Solvent Recovery Unit

DESCRIPTION:

Used to recover the solvent liquid after its use for the extraction tests. This unit has been designed to recover non-flammable solvents and consists of two stainless steel chambers, one for dirty solvent and the other for the cleaned solvent. An electric heater in the left-hand chamber distills the solvent, which then passes through a water cooling system and drops into the second chamber ready for re-use in a new test. Once the process is completed, a temperature switch automatically stops the heating elements.

Supplied complete with: 10 m plastic tube, tube clamps, sieve insert 0.6 mm opening and one lid. Particularly useful to recover solvent used with the Paper filter extractor, Wire mesh extractor, Kumagawa extractor, Reflux extractors, Filterless centrifuge binder extractors.

TECHNICAL SPECIFICATIONS:

Max. temperature	150°C
Power	1200 W
Overall dimensions	400x320x650 mm
Weight approx.	17 kg



ORDERING:

AS 0162
Solvent recovery unit, 10 l/h.
230 V, 50-60 Hz, 1 ph

Vialit Plate, Adhesion Test Apparatus

EN 12272-3

DESCRIPTION:

The Vialit Plate Apparatus is used to assess the adhesion property of aggregates to bitumen.

Supplied complete with a metal basement with three vertical pointed rods to hold the flat steel plate, 50 cm. high vertical rod with a slot at the upper end for the steel ball to drop, a 512 g steel ball, 6 metal test plates and a hand-operated rubber wheel roller.



ORDERING:

AS 0163
Vialit Plate

ACCESSORIES:

- AS 0163-1**
Steel Ball, 512gr
- AS 0163-2**
Mechanic Aggregate Deployment
- AS 0163-3**
6 Metal test plates

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
400x1400x400 mm	45 kg

Benkelman Beam Apparatus

AASHTO T256

DESCRIPTION:

The Benkelman Beam Apparatus is designed to determine the deflection of a flexible pavement or road surface under moving wheel loads.

The Benkelman Beam Apparatus Comprises:
The equipment is lightweight and made of aluminum for easy portability and use at any test location, the length of the Benkelman beam is 250cm One end of the beam rests at a point under investigation while the beam is pivoted in the center.

The free end carries a dial gauge to record the deflections while the other end is kept on a stable platform.



ORDERING:

AS 0164
Benkelman Beam Apparatus

TECHNICAL SPECIFICATIONS:

Main Body	1397 mm long
Probe Beam	Aluminum, 2.4 m long
Open Length	3.7 m
Weigth	15.9 kg

Traveling Beam Device

EN 1426, BS 2000-49, ASTM D5, AASHTO T 49

DESCRIPTION:

The Travelling Beam Device is used for detecting surface irregularities in both concrete and asphalt pavement.

The apparatus comprises of a 3-meter length beam with rigid wheels at the extremes and the middle, which can detect any vertical deviation of the surface from a straight-line between the two wheels at the ends of the machine.

Measuring the capacity of the device is ± 25 mm with 5mm increments. It comprises manual dye marker which can mark irregular surfaces of the road.

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
720x1600x500 mm	55 kg



ORDERING:

AS 0165
Traveling Beam Device complete

ACCESSORIES:

AS 0165-1
Autographic Recorder.

AS 0165-2
Charts for Autographic Recorder. Pack of 10 rolls

AS 0165-3
Fibre-tipped Pen

Rolling Straightedge Apparatus

AASHTO T256 BS EN 292

DESCRIPTION:

The Rolling Straightedge measures depressions on the pavement surface on analog scale 0-12mm + 0.25mm. The straightedge also has an odometer for accurate determination of distance traveled in units of 1 meter.

The Rolling Straightedge is pushed at 1-2km/h and the number of irregularities, their length, and distance from the start, are recorded.

The national specifications for surface regularity are then compared and the pavement accepted or rejected and or remedial work undertaken.

The Rolling Straightedge simulates a 3m rigid straightedge sliding along the road surface, and consists of a rigid frame supported on rubber-tired wheels arranged in two parallel rows, with the centers of the wheels in one row opposite the gaps between the two parallel rows of supporting wheels, is free to move such that it detects vertical movements of this wheel which are then transmitted to a pointer and scale, on the instrument head.

ORDERING:

AS 0166
Rolling Straightedge Apparatus



TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
1300x500x450 mm	112 kg



GEOTECHNICAL

TESTING EQUIPMENT

THE BEST IN TEST

CONCRETE



Concrete

Concrete is used more than any other man-made material in the world, it is a composite construction material composed of cement (commonly Portland cement), coarse aggregates, sand, water and chemical admixtures.

The word concrete comes from the Latin word "concretus" (meaning compact or condensed) hence, concrete solidifies and hardens after mixing with water and placement due to a chemical process known as hydration.

The water reacts with the cement, which bonds the other components together, eventually creating a robust stone-like material that can be moulded in any shape we desire.

The quality of concrete is important if structures formed from this versatile material are to be safe and serve the purpose for which they were constructed therefore, several tests are conducted to identify the characteristics and parameters of concrete.

The testing equipment described in this section are special selected to test the physical parameters of concrete for consistency, degree of compaction, workability, setting time, segregation resistance, confined flowability, air content, bulk density, specific gravity, adhesion, water permeability and strength.



Slump Cone Test set

EN 12350-2 ASTM C143 ASTM C143 M AASHTO T119 BS1881

DESCRIPTION:

Slump Cone test set is used for the determination of the consistency and workability of fresh concrete. The Concrete Slump Test Set is supplied complete with: Slump Cone, Slump Funnel, Base Plate, Tamping Rod, Rubber mallet, Steel ruler

TECHNICAL SPECIFICATIONS:

	Dimensions
CN 0101-2	500x500x60 mm
CN 0101-4	Ø 16x600 mm
CN 0101-6	300x1 mm

	CN 0101-1
Top	100 ±2 mm Dia
Base	200 ±2 mm Dia
Height	300 ±2 mm Dia
Dimensions	550x600x250 mm
Weight	6 kg



MAIN FEATURES:

- Heavy duty
- Made of thick galvanized steel

ORDERING:

CN 0101
Slump Cone test complete

ACCESSORIES:

CN 0101-1
Slump Cone
CN 0101-2
Base Plate
CN 0101-3
Slump Funnel
CN 0101-4
Tamping Rod
CN 0101-5
Rubber Mallet
CN 0101-6
Steel Ruler

Concrete Flow Table

EN 12350-5, BS 1881-105

DESCRIPTION:

The test set is used for concrete mixes of high workability and determines the flow index as an arithmetic means of the diameter of the specimen after working on a flow table. The apparatus consists of a double steel table, an upper table measuring 700x700 mm and hinged at one side to the lower table.

The top table is inscribed and all parts are protected against corrosion. The stainless steel cone has a 130 ±2 mm top diameter, 200 ±2 mm base diameter and 200 ±2 mm height and 1.5 mm thickness.

The Concrete Flow Table Set is complete with flow cone and wooden tamper

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
700x850x300 mm	40 kg

MAIN FEATURES:

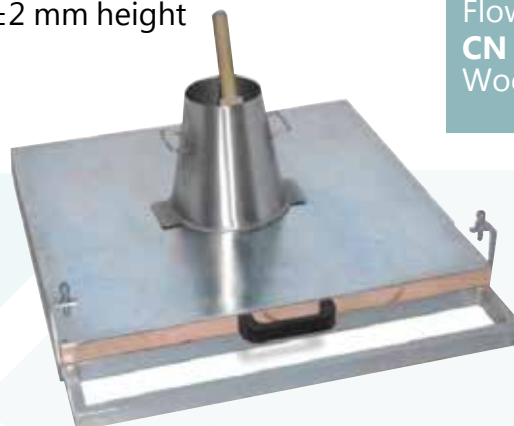
- High workability
- The apparatus consists of a double steel table
- All parts are protected against corrosion

ORDERING:

CN 0102
Concrete Flow Table Set

ACCESSORIES:

CN 0102-1
Flow Cone
CN 0102-2
Wooden Tamper



J-ring, narrow gap

EN 12350-12; ASTM C1621; ASTM C1611

DESCRIPTION:

The J-RING test, in conjunction with the Slump-flow test, is one way to determine the passing ability of SCC, defined as the ability of the concrete to flow under its weight to fill all spaces within the formwork.

The J-RING test set includes the J-RING, Modified Slump Cone, Strike-off bar and a plastic base plate with convenient cut-out carrying handles.

TECHNICAL SPECIFICATIONS:

	CN 0103
Dimensions	350x350x140 mm
Weight (approx.)	10 kg



MAIN FEATURES:

- Manufactured from stainless steel.
- Protected against corrosion

ORDERING:

CN 0103

J Ring test set complete

ACCESSORIES:

CN 0103-1

J Ring

CN 0103-2

Slump Cone

CN 0103-3

Base Plate

Waltz Container

EN 12350-4

DESCRIPTION:

The Waltz Container is used to measure the degree of compact ability of fresh concrete.

It consists of a 200x200x400 mm metal container with two carrying handles. Coated against corrosion.

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
200x200x400 mm	5 kg



MAIN FEATURES:

- The apparatus consists of a metal box with handles.

ORDERING:

CN 0104

Waltz Container

Water Cement Analyser

DESCRIPTION:

Precise measurement of the water content of fresh concrete mixtures. As a user, you will obtain not only the percent moisture value but also the water content in liter per m³ by considering the mass density entered by hand inside the measurement device.

Determination of the radar-based electrical conductivity which allows an evaluation of the used cement type. As a user, you can thus quickly see what is going on concerning the used cement type and if this value corresponds to the expected exposure class.

Simply place the innovative lance probe model 1 inside the fresh concrete. After 4 to 5 single measurements with the measuring device, an automatic averaging ensures precise results within 1 to 2 minutes – directly on site.

The Water Cement Analyser is delivered with a universal calibration that provides reliable results for most used concrete types. It is possible to adjust the measuring device with a correction value for measuring special concrete types like fiber concrete.

MAIN FEATURES:

- Easy to handle

ORDERING:

CN 0105
Water cement analyser
CN 0105-1
Measuring device

TECHNICAL SPECIFICATIONS:

Probe dimension sensor	154 x 60mm
Battery capacity	4.8V-DC, 2000mAh
Approximate field expansion measurement	40 - 80 mm



Plasticity Meter

DESCRIPTION:

The Plasticity Meter is used for quick and easy determination of the plasticity of a specimen, especially concrete, in order to easily detect a possible excess of water.

The measurement is related to shear concrete applied by a finned rod on the specimen. It is possible to measure plasticity at different points, immediately in the test tube, with several controls. The results can be compared with the values obtained by the cone of Abrams.

ORDERING:

CN 0106
Plasticity Meter

TECHNICAL SPECIFICATIONS:

Dimensions	130x180 mm
Weight (approx.)	2 kg



Bulk Unit Weight Measures

EN 12350-6 ASTM C29 C138

DESCRIPTION:

The Bulk Density Measures are used to determine the weight per cubic meter of freshly mixed and compacted concrete.

Manufactured from heavy gauge steel complying with the related standard.

Available in 1, 3, 5, 7, 10, 15, 20 and 28 ltr. capacity models according to the requirements of different standards. Coated against corrosion.

TECHNICAL

SPECIFICATIONS:

Product code	Dimensions	Weight (approx.)
CN 0107	100x170x150 mm	2.8 kg
CN 0108	150x210x210 mm	3.7 kg
CN 0109	170x240x250 mm	5.0 kg
CN 0110	190x260x270 mm	6.3 kg
CN 0111	210x290x310 mm	7.7 kg
CN 0112	250x340x330 mm	10 kg
CN 0113	270x370x380 mm	12 kg
CN 0114	310x410x430 mm	20 kg

MAIN FEATURES:

- Bulk Unit Weight measures is made from heavy steel sheet protected against corrosion

ORDERING:

- CN 0107**
Bulk Unit 1 ltr
- CN 0108**
Bulk Unit 3 ltr
- CN 0109**
Bulk Unit 5 ltr
- CN 0110**
Bulk Unit 7 ltr
- CN 0111**
Bulk Unit 10 ltr
- CN 0112**
Bulk Unit 15 ltr
- CN 0113**
Bulk Unit 20 ltr
- CN 0114**
Bulk Unit 28 ltr



Vebe Consistometer

EN 12350-3 ASTM C1170 C1176

DESCRIPTION:

The Vebe Consistometer is used to determine the consistency of fresh concrete by subjecting the concrete specimen 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 indicates concrete consistency.

The set consists of a vibrating table, slump cone, graduated rod with transparent plate, filling cone and tamping rod.

TECHNICAL

SPECIFICATIONS:

	CN 0115
Power	170 W
Dimensions	570x460x670 mm
Weight (approx.)	87 kg

MAIN FEATURES:

- Heavy duty

ORDERING:

- CN 0115**
Vebe Consistometer complete

ACCESSORIES:

- CN 0115-1**
Slump Cone
- CN 0115-2**
Filling cone
- CN 0115-3**
Transparent plate
- CN 0115-4**
Tamping rod.



Pocket Penetrometer

EN 12350-5 BS 1881-105 ASTM C403- ASHTO T197

DESCRIPTION:

The Pocket Penetrometer is designed for the determination of setting time of fresh concrete for field and laboratory use.

The stainless steel plunger has a 32.3 mm² (1/20 in²) area and 0-5 MPa measuring range.

TECHNICAL SPECIFICATIONS:

Total length	155 mm
Maximum diameter	20 mm
Diameter of the tip	6.35 mm (1/4")
Penetration of the tip	6.35 mm
Cross section of the tip	0.3165 cm ²
Net weight	0.150 kg
Force required to read 3 kg/cm ²	5.10 ± 0.25 kgf
Force required to read 4.5 kg/cm ²	7.71 ± 0.28 kgf
Compression of the spring for 4.5 kg/cm ²	35.6 mm
Nominal calibration factor of the spring	0.2166 ± 0.01 kg/cm ²

MAIN FEATURES:

- Can be directly read from the scale of the instrument

ORDERING:

CN 0116
Pocket Penetrometer



Concrete Mortar Penetrometer

ASTM C403; AASHTO T197

DESCRIPTION:

The Concrete Mortar Penetrometer consists of a cylindrical spring housing with a plunger attached to the top of the spring. Penetration needle is attached to the other end of the spring housing.

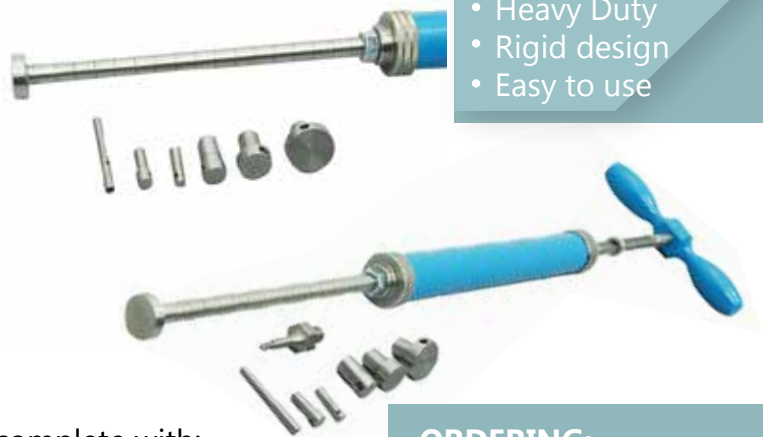
The plunger is graduated in 1 kg divisions, to a maximum capacity of 60 kg, which can be read concerning the top end of the spring housing.

A set of six needle points with areas of 645, 323, 161, 65, 32 and 16 mm² are provided.

The Concrete Mortar Penetrometer is supplied complete with: Set of interchangeable needle points of 645, 323, 161, 65, 32, 16 mm area

MAIN FEATURES:

- Heavy Duty
- Rigid design
- Easy to use



ORDERING:

CN 0117
Concrete Mortar Penetrometer complete

ACCESSORIES:

CN 0117-1
Set of points needles
CN 0117-8
Carrying case

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
540x260x60 mm (packed)	5 kg

	Needle Pos.	Face areas
CN 0117-2	11	16 mm ² (1/40 inch ²)
CN 0117-3	12	32 mm ² (1/20 inch ²)
CN 0117-4	12	65 mm ² (1/10 inch ²)
CN 0117-5	12	161 mm ² (1/4 inch ²)
CN 0117-6	12	323 mm ² (1/2 inch ²)
CN 0117-7	12	645 mm ² (1 inch ²)

V-Funnel Apparatus

DESCRIPTION:

The V-Funnel Apparatus is used to evaluate the segregation resistance of freshly mixed self-compacting concrete by observing the flowing speed due to the difference of samples remaining period in the funnel.

The test set consists of a stainless steel funnel placed vertically on a supporting stand. The discharge orifice is equipped with a lid, which can be momentarily opened.

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
525x300x1040 mm	18 kg



EN 12350-9

MAIN FEATURES:

- Stainless steel funnel

ORDERING:

CN 0118
V-Funnel Apparatus

ACCESSORIES:

CN 0118-1
Filling Hopper
CN 0118-2
Base

U Shape Box Apparatus

DESCRIPTION:

The U shape Box is used to determine the confined (flowability) and the capacity of SCC concrete to flow within confined spaces.

The box is made of a galvanized steel frame consisting of four 10 mm diameter and three 13 mm diameter bars.

The U Shape box is mounted on a frame with a fixing mechanism.

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
650x650x1100 mm	20 kg



UNI 11044

MAIN FEATURES:

- Stainless steel funnel

ORDERING:

CN 0119
U Shape Box
Apparatus

ACCESSORIES:

CN 0119-1
Filling Hopper
CN 0119-2
Base

Compacting Factor Apparatus

DESCRIPTION:

The Apparatus enables a check to be made on the weight of concrete when it falls from fixed heights into a cylindrical container of standard capacity.

The apparatus consists of two conical hoppers each with a hinged trap with a quick-release mechanism to allow free flow of the concrete sample.

A cylindrical mold is fitted beneath the hoppers.



BS 1881-103 5075

MAIN FEATURES:

- Heavy duty
- Made to last

ORDERING:

CN 0120
Compacting
Factor Apparatus

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
300x400x1300 mm	41 kg

L Shape Apparatus

EN 12350-9

DESCRIPTION:

The L Shape Box is used for evaluation of self compact ability (confined flowability) of freshly mixed self-compacting concrete.

The box allows evaluating different properties, such as filling ability, passing ability and resistance to segregation.

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
300x1000x1350 mm	35 kg



MAIN FEATURES:

- L shape box apparatus has resistance to segregation.

ORDERING:

CN 0121

L Shape Box apparatus

ACCESSORIES:

CN 0121-1

Filling Hopper

CN 0121-2

Base

Air Entrainment Meter

EN 12350-7 ASTM C231 AASHTO T152

DESCRIPTION:

The Air Entrainment Meter is used to determine the air content of fresh concrete. Our air entrainment meter is one of the most precise air content measuring devices available in the market. With heat-treated cast aluminum construction and cast in handles on the base, it is heavy-duty, yet lightweight, and easy to handle.

Our unit utilizes the best clamping system available, with large stainless steel clamp levers and a holding capacity of about 7 ltr each. This clamping system provides an easy, dependable operation.

Employing the use of a superior high volume Ultra Pump, this system makes operation efficient yet rapid.

This includes a larger more accurate pressure gauge with safety glass and bold color dial face. Color-coded for entrapped and entrained air readings.

Our equipment comes complete:

B pressure meter Calibrated Vessel, Calibration Outside Tube, Calibration Inside Tube, Strike-Off Bar, Tamping Rod rounded to a hemispherical tip at both ends, Bulb Syringe, Rubber Mallet, carrying case



MAIN FEATURES:

- Superior meter
- Reliable device
- Quickly and easily
- Durability and effective

ORDERING:

CN 0122

The Air Entrainment Meter set

ACCESSORIES:

CN 0122-1

B pressure meter Calibrated Vessel

CN 0122-2

Calibration Outside Tube

CN 0122-3

Strike Off Bar

CN 0122-4

Tamping Rod

CN 0122-5

Bulb Syringe

CN 0122-6

Rubber Mallet

CN 0122-7

Carrying case

TECHNICAL SPECIFICATIONS:

Capacity	7ltr
air content range	0-22%
Dimensions	700x300x500 mm
Weight (approx.)	18 kg

Specific Gravity Frame

EN 1097-6, 12390-7, BS 1881:114

DESCRIPTION:

Specific Gravity Frame is used in conjunction with electronic balance for specific gravity or density determination of hardened concrete and aggregates.

Consisting of a purpose-built robust frame designed to support the electronic balance. The lower part of the frame incorporates a moving platform, which carries the water tank allowing the test specimens to be weighed in both air and water.

There are 3 choices of balances to choose from with different capacities.

Supplied complete with Cradle, Density Basket, hook and water tank.

TECHNICAL SPECIFICATIONS:

Dimensions	600x500x1100 mm
Weight (approx.)	25 kg



MAIN FEATURES:

- Under-bench weighing facility
- Robust frame

ORDERING:

CN 0123
Specific Gravity Frame supplied complete

ACCESSORIES:

CN 0123-1
Cradle and suspension hook

CN 0123-2
Water Tank

CN 0123-3
Density Basket

CN 0123-4
Buoyancy Balance, 15kg x 0.5g

CN 0123-5
Buoyancy Balance, 6kg x 0.01g

CN 0123-6
Buoyancy Balance, 32kg x 1 g

Grout Flow Cones and Sets

ASTM C939

DESCRIPTION:

Grout Flow Cones measure the flowability of hydraulic grout used in preplaced aggregate concrete. Flowability is measured by the time of discharge of a 1.725L sample of grout through a 12.7mm dia. discharge tube orifice from the cone. The cast aluminum Flow Cones all come with an adjustable point gauge assembly to indicate initial sample level.

Grout Flow Cone Set has a 12.7mm dia Orifice already installed, and a 3-Legged Steel Support Stand, and 2L stainless steel Beaker for use as a receiving container.

Grout Flow Cone Set has a 19mm Orifice to be used with alternate test methods.

TECHNICAL SPECIFICATIONS:

Dimensions	178mm dia for top 76mm
Cone section	190mm
Discharge Tube	38.1mm
Grout volume	1,725 ±5ml



ORDERING:

CN 0124
The Grout Flow Cone

ACCESSORIES:

CN 0124-1
12.7mm Orifice

CN 0124-2
19 mm Orifice

CN 0124-3
Steel Stand

Pan Concrete Mixer

EN 1766



DESCRIPTION:

The Concrete Mixer is designed for laboratory use to give efficient mixing of both wet and dry materials.

The mixing pan is rotated by a turntable driven by an electric motor by a reduction gearbox. It has easily adjustable blades to fit different types and volumes of material to be mixed.

TECHNICAL SPECIFICATIONS:

	CN 0125	CN 0126
Dimensions	950x1050x1250 mm	950x1050x1270 mm
Weight (approx.)	255 kg	285 kg
Power	1500 W	3800 W
Mixing capacity	56 ltr YIELD 42 ltr	100 ltr YIELD 80 ltr

ORDERING:

CN 0125
Pan concrete Mixer type 56 ltr

CN 0126
Pan concrete Mixer type 100 ltr

MAIN FEATURES:

- Dry and wet materials mixer.
- Adjustable blades
- The mixing pan can be tilted and removed.

Drum Concrete Mixer

EN 12390-7, 1097-6, BS 1881:114

DESCRIPTION:

The Mixer is used for the efficient mixing of concrete, plaster, and mortars.

The Concrete Drum Mixer comes complete with Drum, Lightweight mixer, Stand, rubber Wheels which provide high portability and a motor.



MAIN FEATURES:

- This model comes both in electric and diesel
- Available in different capacity

ORDERING:

- CN 0127**
Drum concrete Mixer 110 ltr
- CN 0128**
Drum concrete Mixer 190 ltr
- CN 0129**
Drum concrete Mixer 242 ltr
- CN 0130**
Drum concrete Mixer 312 ltr
- CN 0131**
Drum concrete Mixer 355 ltr

TECHNICAL SPECIFICATIONS:

Product code	Dimensions	Weight (approx.)	Drum Capacity
CN 0127	145 x 80 x 125 mm	95 kg	110 ltr.
CN 0128	165 x 80 x 135 mm	120 kg	190 ltr.
CN 0129	175 x 96 x 145 mm	170 kg	242 ltr.
CN 0130	198 x 100 x 150 mm	220 kg	312 ltr.
CN 0131	200 x 100 x 150 mm	355 kg	355 ltr.

Cylinder Molds



DESCRIPTION:

The Cylinder Molds are designed to produce accurate specimens while avoiding distortion over the length of the mold.

Made from a reinforced steel construction for added rigidity and long service life.

The edge of the rim is of accurate finish to insure clean specimen results. Each mold is tested for conformity, supplied with an individual certificate.

Several models and sizes available 100X200, 150X300, 160X320mm, available in ring or clamp type.

EN 12390-1; ASTM C78, C293, C39,192

MAIN FEATURES:

- Durable, corrosion resistant and easy to clean.

ORDERING:

CN 0132
Cylinder mold steel ring type 100x200mm

CN 0133
Cylinder mold steel ring type 150x300mm

CN 0134
Cylinder mold steel ring type 160x320mm

CN 0135
Cylinder mold steel clamp type 100x200mm

CN 0136
Cylinder mold steel clamp type 150x300mm

CN 0137
Cylinder mold steel clamp type 160x320mm

TECHNICAL SPECIFICATIONS:

	Dimensions
CN 0132 / CN 0135	200x100 mm
CN 0133 / CN 0136	300x150 mm
CN 0134 / CN 0137	360x160 mm

Plastic Molds

DESCRIPTION:

Our Plastic Cube and Cylinder Mold is manufactured from rigid high-quality plastic that is weather-resistant and has an unlimited shelf life. Cured specimens can easily be molded from the mold.

TECHNICAL SPECIFICATIONS:

	Dimensions
CN 0142	100x200 mm
CN 0143	150x300mm.
CN 0144	

160x320mm.

	Dimensions
CN 0138	160x160 mm
CN 0139	160x160 mm
CN 0140	110x220 mm
CN 0141	160x160 mm

ORDERING:

CN 0138
Plastic Cube Mold 150mm 1gang-standard density g. 1,200

CN 0139
Plastic Cube Mold 150mm 1gang - high density g. 1,700

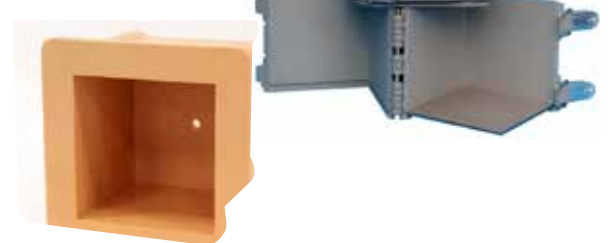
CN 0140
Plastic Cube Mold 100mm. 2 gang

CN 0141
Plastic Cube Mold 150mm with steel base and handle

EN 12390-1; ASTM C78, C293, C39,192

MAIN FEATURES:

- Heavy duty
- Easy to clean



CN 0142
Plastic Cylindrical Mold 150x300mm.

CN 0143
Plastic Cylindrical Mold 160x320mm.

CN 0144
Plastic Cylindrical Mold 100x200mm.

Beam Molds

EN 12390-1-2, ASTM C39, 192, AASHTO T23, T126

DESCRIPTION:

Steel beam molds are manufactured by dimensions and tolerances stated in the related standards.

There are two types of either heavy-duty plastic or steel.

The steel beam molds are made of Two-part and clamp attached base plate steel molds are designed to be durable, resistant and easy to clean.

The heavy-duty plastic beam mold which is much lighter is built to last a long time.



MAIN FEATURES:

- Heavy duty

ORDERING:

CN 0145 Steel Beam Mold 100X100X400mm	CN 0149 Plastic Beam Mold 100X100X400mm
CN 0146 Steel Beam Mold 100x100x500mm	CN 0150 Plastic Beam Mold 100x100x500mm
CN 0147 Steel Beam Mold 150x150x600mm	CN 0151 Plastic Beam Mold 150x150x600mm
CN 0148 Steel Beam Mold 150x150x750mm	CN 0152 Plastic Beam Mold 150x150x750mm

TECHNICAL SPECIFICATIONS:

	Dimensions
CN 0145 / CN 0149	100x100x400 mm
CN 0146 / CN 0150	100x100x500 mm
CN 0147 / CN 0151	150x150x600 mm
CN 0148 / CN 0152	150x150x750 mm

Cube Molds and Tamping Rods

EN 12390-2; BS 1881-108; ASTM C157; ASTM C192

DESCRIPTION:

The cast iron steel cube molds are manufactured from heavy-duty durable material and per the dimensions and tolerances acceptable by the standard.

Each mold is numbered and tested for conformity, supplied with an individual certificate. There are several models and sizes available, 2 parts and 4 parts, 100mm, 150mm, and 200mm.

The Tamping Rod for compacting concrete into cube molds. This rod is made of steel bar it is 25 mm square face x 380 mm long with round side handle

MAIN FEATURES:

- Durable, resistant and easy to clean.

ORDERING:

CN 0153 Cube Mold 100mm 2 parts
CN 0154 Cube Mold 100mm 4 parts
CN 0155 Cube Mold 150mm 2 parts
CN 0156 Cube Mold 150mm 4 parts
CN 0157 Cube Mold 200mm 2 parts
CN 0158 Cube Mold 200mm 4 parts
CN 0159 Concrete Tamping Rod
CN 0160 Concrete Tamping Bar



TECHNICAL SPECIFICATIONS:

	Dimensions	Parts
CN 0153	100 mm	2
CN 0154	100 mm	4
CN 0155	150 mm	2
CN 0156	150 mm	4
CN 0157	200 mm	2
CN 0158	200 mm	4

Dimensions 25 mm dia. x 380 mm long.

Curing Tank

DESCRIPTION:

The Curing Tanks are designed for curing concrete cubes, beams, and cylinders.

The temperature can be adjusted and can be set and maintained to the required value by an electric resistance incorporating as thermoregulator which maintains set temperature between ambient and 65 °C with ± 1 °C accuracy.

The tank is also supplied with a submersible circulator pump to assure good temperature uniformity and a bottom rack.



TECHNICAL SPECIFICATIONS:

Product Code	Dimensions	Capacity	Weight approx.
CN 0161	660 mm x 480 mm x 510 mm	12 x 150 mm cubes	20 kg
CN 0162	970 mm x 610 mm x 610 mm	24 x 150 mm cubes	25 kg
CN 0163	1130 mmx1130 mmx760 mm	36 mm cubes	60 kg
CN 0164	1550 mmx805 mmx820 mm	64 mm cubes	110 kg

EN 12390-2; ASTM C31, C192, C511

MAIN FEATURES:

- Manufactured from rigid material.
- Adjustable temperature
- Circulating pump for temp uniformity.

ORDERING:

CN 0161
Small Curing Tank complete

CN 0162
Medium Curing Tank complete

CN 0163
Large Curing Tank complete

CN 0164
Extra Large Curing Tank complete

ACCESSORIES:

CN 0161-1
Circulating Pump

CN 0161-2
Heater

Melting pot

DESCRIPTION:

The Melting Pot is mainly used for the melting capping compound.

The apparatus consists of an aluminum container in a well-lagged steel jacket, lid cover and a thermostatic control heater to adjust the temperature constant as required.

TECHNICAL SPECIFICATIONS:

Product code	CN 0165
Dimensions	350 x 320 x 290 mm
Weight (approx.)	9 kg
Power	600 W



EN 12390-7, 1097-6, BS 1881:114

MAIN FEATURES:

- Adjustable thermostat
- Complete with cover.

ORDERING:

CN 0165
Melting Pot 2.5 ltr

CN 0166
Melting Pot 5 ltr

CN 0167
Melting Pot 9 ltr

Capping Compound

ASTM C307, C321, C386, C579, C617; D71

DESCRIPTION:

100 kg bag of sulfur-based, flake-form capping compound melts and sets within minutes. The silica-filled compound has 150 psi bond strength, 9000 psi compressible strength, and 605 psi tensile strength. Compound pours between 129 and 143°C. Over-heated material's viscosity is reinstated by decreasing temperature.



ORDERING:

CN 0168
Capping Compound

TECHNICAL SPECIFICATIONS:

Strength Compressive	Strength Tensile	Compound pours	Weight approx.
9000 psi	605 psi	265 and 290°F (129 to 143°C)	22.5 kg

Cylinder Capping Equipment

EN 12390-3 AASHTO T23 AASHTO T126 ASTM C31
ASTM C192 ASTM C617

DESCRIPTION:

The Cylinder Capping Frame is used to assure plane and surfaces perpendicular to the axis of the cylinder during the capping.

Built to last the frame comprising vertical supports mounted on a steel base that can be disassembled for easy machining.

The Cylinder Capping is used in conjunction with flake capping compound and melting pot.

The equipment comes complete with: capping frame with one size capping flat to choose from.

MAIN FEATURES:

- Made from steel, accurately machined.
- Protected against corrosion.

ORDERING:

CN 0169

Cylinder Capping equipment complete with one size capping plate

ACCESSORIES:

CN 0169-1

Capping plate 75mm dia

CN 0169-2

Capping plate 100mm dia

CN 0169-3

Capping plate 150mm dia specimens

CN 0169-4

Capping plate 160mm dia

CN 0169-5

Flake Capping compound pack of 100kg



TECHNICAL SPECIFICATIONS:

Product	Dimensions
Cylinder carriers	50 mm (6"x12"9 and 160x320 mm sizes
Melting pot	internal 200 mm dia.160 mm depth external 285 mm dia.x 275 mm high
Capping plate for concrete blocks	500x300 mm, 20 mm thick
Weight	13 kg

Steel Retainer Set

DESCRIPTION:

Steel Retainer Set is used with neoprene pads (sold separately) in unbounded capping for compressive strength testing of Concrete Cylinders.

They hold and confine the neoprene pads, which are placed at each end of the concrete cylinder before testing.

Steel Retainers are constructed of alloy steel, precisely machined to specified dimensions and are plated inside out to resist corrosion.

Bearing surfaces are plane to within 0.002 in (0.05mm). Sold in sets of 2.

TECHNICAL SPECIFICATIONS:

Specimen Diameter	165 mm
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ASTM C1231; ASHTO T22

MAIN FEATURES:

- Rugged alloy steel construction
- Corrosion-resistant plating inside and out
- Plane bearing surfaces

ORDERING:

- CN 0170**
Steel Retainer Set 100mm
- CN 0171**
Steel Retainer Set 150mm
- CN 0172**
Steel Retainer Set 160mm

Neoprene Pads

DESCRIPTION:

Neoprene Pads are available in 50, 60, or 70 durometers for compressive strength testing of concrete cylinders, and meet requirements of ASTM C1231 and AASHTO T 22.

These thick pads flow during compression to fill irregularities in-cylinder ends and assure uniform load distribution.

Two pads are required for testing. Pads are reusable in up to 100 tests and are sold as a pair

TECHNICAL SPECIFICATIONS:

Specimen Diameter	100X20mm/ 150x20mm/160x20mm
Duro Strength	50 Duro: 1,500-6,000 psi (10-40 mPa)
	60 Duro: 2,500-7,000 psi (17-50 mPa)
	70 Duro: 4,000-7,000psi (28-50 mPa)



AASHTO T 22,ASTM C1231, AASHTO T22,T851

MAIN FEATURES:

- Available in three different durometer ratings
- Can be used up to 100 times before replacing

ORDERING:

- CN 0173**
Neoprene Pad in 50 Duro
100X20mm
- CN 0174**
Neoprene Pad in 60 Duro
100X20mm
- CN 0175**
Neoprene Pad in 70 Duro
100X20mm
- CN 0176**
Neoprene Pad in 50 Duro
150X20mm
- CN 0177**
Neoprene Pad in 60 Duro
150X20mm
- CN 0178**
Neoprene Pad in 70 Duro
150X20mm
- CN 0179**
Neoprene Pad in 50
Duro160X20mm
- CN 0180**
Neoprene Pad in 60
Duro160X20mm
- CN 0181**
Neoprene Pad in 70
Duro 160X20mm

Concrete bleed water tester

DESCRIPTION:

Concrete bleed water tester is used for the determination of the relative quantity of mixing water that will bleed from a sample of freshly mixed concrete.

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
290x255x350 mm	6 kg



ASTM C 232 EN 480-4

MAIN FEATURES:

- Heavy Duty material.

ORDERING:

CN 0182
Concrete bleed water tester

Concrete electric masonry saw



MAIN FEATURES:

- Delta motor starter
- Long life and easy cleaning
- High cutting performance
- Heavy duty water pump, High flow to improve blade cooling

DESCRIPTION:

The Concrete Masonry Saws is ideal for trimming concrete, asphalt and other specimens to the desired size preparing a sample for testing.

It is designed to work in different cutting length and depth which allows cutting pre-cast concrete and blocks very easy and simple.

The Blade can be adjusted to suit several cutting heights in a single pass.

The equipment comes with a heavy duty belt driven by a high efficiency electric motor mounted on robust chassis and re-enforced based frame.

It comes complete with heavy duty water pump for wet cutting and blade cooling, automatic starter, slide rolling conveyor and movable wheels.

Motor Voltage	230 V	230 V	230 V
Max. cutting depth	200 mm	270 mm	420 mm
Net weight	89 kg	128 kg	303 kg
Packaging Dimensions	1214x839x1374 mm	1543x851x1571 mm	1982x1207x1549 mm

TECHNICAL SPECIFICATIONS:

ORDERING:

CN 0183
Concrete electric masonry saw, max 200
CN 0184
Concrete electric masonry saw, max 270
CN 0185
Concrete electric masonry saw, max 420

ACCESSORIES:

CN 0183-1
Saw Blade 200
CN 0183-2
Saw Blade 270
CN 0183-3
Saw Blade 420

Specimen Grinding machine

EN 12390-2, ASTM D4543

DESCRIPTION:

The Grinding machine is used to grind and polish rock and concrete specimens, natural stones, ceramic materials, etc.

The cube and cylinder specimens can be easily locked on the table and the grinding head, 330 mm dia., can be radially moved either manually or automatically in both directions so, the only manual operation requested is the lowering of the grinding head by the top handwheel.

The machine is supplied complete with a safety chip guard that, when removed, stop automatically the machine, with coolant tank, motor pump and one set of abrasive sectors.

Diamond grinding sectors are available on request.

The machine is supplied complete with a clamping element for 100, 150 and 200 mm cubes. Clamping devices for cylinders and device for the dry grinding procedure is also available on request

The Core face preparation jigs can be easily fitted by the clamping element supplied with the machine.

MAIN FEATURES:

- To grind concrete specimens, natural stones, tiles, block pavers, ceramic materials etc.
- Large base table for grinding contemporaneously up to three 100 mm cubes, or three 150 mm cubes, or two 200 mm cubes and concrete/tile blocks of various sizes.
- Suitable for cubes up to 200 mm and cylinders up to dia. 160x320 mm

ORDERING:

CN 0186

Specimen Grinding Machine, standard model

CN 0187

Specimen Grinding Machine, automatic model

ACCESSORIES:

CN 0186-1

Set of 10 diamond impregnated sectors.

CN 0186-2

Accessory to connect an aspirator for drying grinding procedure.

CN 0186-3

Clamping device for concrete cylinders from dia. 100x200 mm to 160x320 mm.

CN 0186-4

Device for clamping one additional cylindrical specimen from 100 up to 160mm dia

TECHNICAL SPECIFICATIONS:

Table dimension	775x280 mm
Grinding wheel dia	330 mm
Max vertical daylight	350 mm
Min vertical daylight	145 mm
Max specimen size cubes	200 mm
Max specimen size cylinders	160x320 mm
Grinding head stroke	205 mm
N of grinding segments	10
Grinding wheel speed	1400 r.p.m.
Overall dimensions	1200x1020x1640 mm
Overall weight approx.	350 kg
Automatic cross feed in both directions	
Safety guard with door locking switch conforming to CE	

There are two models available:

Standard model in which the radial displacement of the grinding head is motor operated and actuated by a push-button.

Automatic model in which the radial displacement is fully automatic and controlled by travel limit switches



CN 0186-5

Clamping device for concrete cylinders from 50 to 100 mm dia.

CN 0186-6

Large base table for grinding contemporaneously up to three 100 mm cubes, or three 150 mm cubes, or two 200 mm cubes and concrete/tile blocks of various sizes.

Poker Vibrator

EN 12390-2 ASTM C31 C192 AASHTO T23 T126

DESCRIPTION:

The Concrete Poker Vibrator removes air bubbles and settles concrete quickly and effectively. It's designed to be used in freshly poured concrete, such as slabs, footings, small columns, and masonry blocks.

The powerful vibrations from this compact machine force air bubble out of the concrete, settling it as you watch.

The concrete vibrator can be used vertically, horizontally or at an angle. The 1.5m shaft and rotatable base make it easy to reach the required areas without excessive bending or stooping.

It operates with minimal noise, so you won't need protection during use.

TECHNICAL SPECIFICATIONS:

Concrete Vibrator	with 35mm dia Vibrating Poker and 1.5m Hose
Item Weight	6.46 Kg
Package Dimensions	70 x 25.4 x 8 cm.

MAIN FEATURES:

- Easy to use
- lightweight
- Ergonomically designed

ORDERING:

CN 0188
Vibrating Poker Complete



Vibrating Table of Concrete

EN 12390-2

DESCRIPTION:

The Vibrating Table is used to compact concrete materials inside cubes, cylinders and beam molds.

It can deliver the vibrating movement controls by Vibro compacting motor with fixed amplitude.

Vibrating tables consist of vibrating motor, control unit, and clamping assembly.

The table is available in two sizes: 610 x 380 mm and 1260 x 620 mm.



MAIN FEATURES:

- Achieves maximum density of concrete mixture.
- Manufactured to operate with minimum noise level.

ORDERING:

CN 0189
Small Vibrating table
CN 0190
Large Vibrating table

TECHNICAL SPECIFICATIONS:

Product Code	Dimensions	Weight approx.	Power
CN 0189	380x610x800 mm	52 kg	170 W
CN 0190	620x1260x1200 mm	135 kg	170 W

Water Absorption

EN 12390-8

DESCRIPTION:

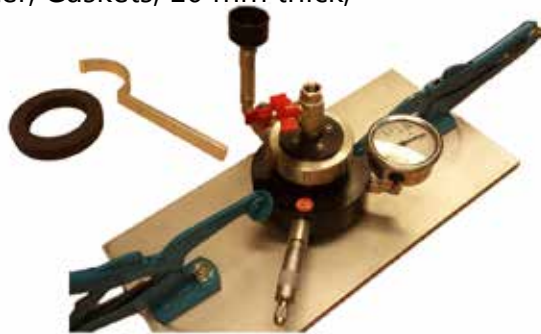
The Water Absorption set measures the penetration of water into the test surface under applied pressure, can be used to determine the water penetration characteristics of alternative concrete mixtures or surface sealers and also for in-place testing to demonstrate the characteristics of the concrete level of permeation.

The water absorption kit comes complete with :

Pressure chamber unit with 0-1.5 bar* gauge Wrench for pressure lid, Extra 0-6.0, bar gauge, Water filling cup, Adjustable clamping suppliers, Set of anchoring tools, Wrenches: 14 and 17 mm, Sealant tape, Bottles with boiled water, Gaskets, 10 mm thick, Gaskets, 15 mm thick.

TECHNICAL SPECIFICATIONS:

Wrenches	14 and 17 mm
Pressure chamber unit	0-1.5 bar
Weight	3 kg



MAIN FEATURES:

- The Water Absorption set is used for on-site evaluation
- Effectiveness of water proofing membranes

ORDERING:

CN 0191
Water Absorption Kit

ACCESSORIES:

CN 0191-1
Pressure chamber unit with 0-1.5 bar* gauge

CN 0191-2
Wrench for pressure lid

CN 0191-3
Extra 0-6.0 bar gauge

Initial Absorption

BS 1881-208

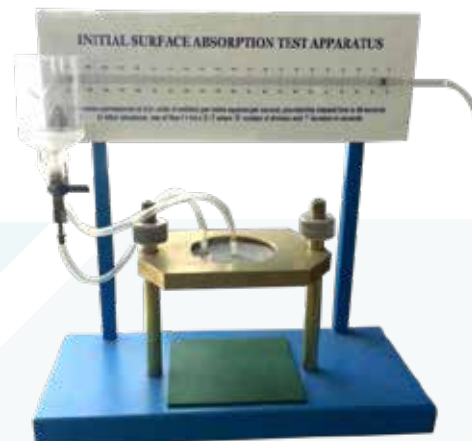
DESCRIPTION:

This apparatus is used to assess the surface absorption characteristics of concrete. The rate of flow of water per unit area into a concrete surface when subjected to a constant head of 200 mm is measured.

The unit consists of a capillary tube mounted on a scale, a water reservoir & connecting tubes.

TECHNICAL SPECIFICATIONS:

Size	200 mm
Material for Construction	Stainless steel, Plastic
Accuracy	+/- 1%



MAIN FEATURES:

- Easy to use
- Mounted on a stand.

ORDERING:

CN 0192
Initial Absorption Kit

Concrete Water Impermeability

EN 12390-8

DESCRIPTION:

The Concrete Impermeability Apparatus is used for the determining of the depth of penetration of water to hardened concrete specimens under pressure. 3 and 6 specimen capacity models are available.

The system can test 150x150x150 mm, 200x200x200 mm cube or 150x300 mm cylinder specimens. The pressure to the sample, up to 10 bar with 0,2 bar precision is generated by way of compressed air applied to the integral water tank and controlled by a pressure regulator; with a pressure gauge.

The penetration of water is measured through the buttresses supplied complete with the system.

There are two main models available, It can be with or without quantitative measure. The quantitative model allows you to measure water penetration through individual burettes. The system comprises impermeability gaskets for every cell. The measurement apparatus is supplied as standard either in a 3 or 6 sample model.

MAIN FEATURES:

- Quantitative measurements of water penetration.
- Without quantitative measurements of water penetration.
- Accurate readings.
- High performance clamping system.

ORDERING:

CN 0193

Concrete impermeability apparatus with quantitative measure, for 3 places

CN 0194

Concrete impermeability, Without quantitative measure, for 3 places

CN 0195

Concrete impermeability, with quantitative measure, for 6 places

CN 0196

Concrete water impermeability, Without quantitative measure, for 6 places

ACCESSORIES:

CN 0193-1

Laboratory Air Compressor 15 bar, 380 V 50HZ



TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
1400x750x1850 mm	430 Kg

Crack Detection Microscope

EN 12390-7 1097-6 BS 1881:114

DESCRIPTION:

The Crack Detection Microscope is a precision apparatus, used for measuring cracks in concrete.

It has its adjustable light source for darkened conditions.

The image is focused by turning a knurled knob on the side and the eyepiece scale can be rotated through 360 degrees to align with the crack under examination.

The 4mm range of measurement is divided into 0.02mm divisions.

The Crack Detection Microscope comes complete with a wooden box

MAIN FEATURES:

- It has its own adjustable light source for darkened conditions.

ORDERING:

CN 0197
Crack Detection
Microscope

Magnification	40 x
Measuring Range	4 mm
Subdivision	0.02 mm
Dimensions	150x80x45 mm
Weight approx	550 g

TECHNICAL SPECIFICATIONS:



Ultrasonic Apparatus, Pundit Lab

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



DESCRIPTION:

An essential tool for investigating the structural integrity of a wide range of materials. This new generation Concrete Ultrasonic can be used in the laboratory or on-site to investigate uniformity; cavities, cracks, fire/frost damage, delamination, deterioration, and strength.

It has memory storage of up to 100 sets of readings and a built-in RS232 serial port for download of data.

MAIN FEATURES:

- Measurement performance
- Integrated waveform display
- On-line data acquisition
- USB interface and data analysis software

ORDERING:

CN 0198
Ultrasonic Apparatus, Pundit Lab

ACCESSORIES:

CN 0198-1
Transducer 24 kHz (Two required for operation)

CN 0198-2
Transducer 54 kHz (Two required for operation)

CN 0198-3
Transducer 150 kHz (Two required for operation)

Supplied with a simple software download utility kit and does not require a reference bar as calibration is done by 'zeroing'. It can calculate and display additional parameters – velocity, pathlength, and Young's Modulus. It can be set to any pulse repetition frequency from 1 to 100 and has a pulse delay mode which allows the user to take readings at specified intervals from 1 per second up to 99 hours.

Pundit Lab consisting of Display unit, 2 transducers (54kHz), 2 BNC cables 1.5 m, couplant, calibration rod, battery charger with USB-cable, 4x AA(LR6) batteries, data carrier with software, documentation and carrying case.

Construction Scan

DESCRIPTION:

The Construction Scan is used for Detection and location of different defects in reinforced concrete such as Cells, cavities Foreign inclusions, Cracks, layering, it determines the reinforcement specifications such as Size Occurrence depth, Degree of corrosion, detect the buried wiring, cables and communications lines, the plastic and metal pipelines, the heterogeneities, anomalies and other buried in solid environment (which wood, brick, reinforced concrete, building constructions, soil, etc). It also Discovers the ventilation and communication channels and Detects shelters and covered-up holes.

Construction Scan includes a control processing unit, LCD display, the antenna unit and a power supply unit in one enclosure. The control processing unit provides processing, displaying and saving of the scanning results. The apparatus accumulates information in the internal 2 GB Flash memory card and transfers it to the PC via the USB interface. There is a special marking rug with a bar code for precision 3D scanning of objects.

ArmScan 3D

Specialized software ArmScan is a new solution for automated location of reinforcement, cables, pipes. The software allows users to build the utilities (reinforcement, pipes, etc) in 3D. the user can locate defects, different anomalies, and other objects.

MAIN FEATURES:

- All-in-one GPR system
- 5" colour display
- 3D visualization
- Built-in USB interface
- Internal 2 GB Flash memory card
- Detachable SD-card
- Guiding laser
- Data collection grids (3D system)
- Built-in bar code reader
- Quickly-detachable Li-io battery 15V

ORDERING:

CN 0199

Construction scan model 1

CN 0200

Construction scan model 2



TECHNICAL SPECIFICATIONS:

	Model 1	Model 2
Maximum Penetration depth	1 m	0.6 m
Maximum Resolution	3 cm	2 cm
Minimum diameter of detected semiconductor	0.3 mm	0.2 mm
Maximum Rate of penetration	1m/sec	1m/sec
Antenna central frequency	1700MHz	2500MHz
Weight	1.5 kg	1.5 kg
Dimensions	22x17x14 cm	22x17x14 cm
Running time	4 hours	4 hours

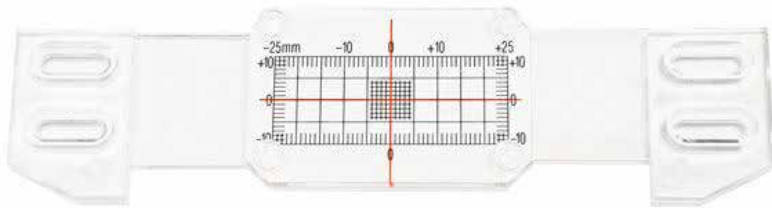
Crack Meter Angular and Linear

DESCRIPTION:

Crack meters are used to monitor the progress of surface cracks in structural components and buildings caused by subsidence or mechanical failure.

They are composed of two transparent acrylic resin plates, overlapping and able to move relative to each other.

The upper plate is engraved with a reference cross, while the underlying one is marked with a grid in millimeters, both horizontal and vertical, which can be zeroed along its axes.



MAIN FEATURES:

- Static monitoring of cracks
- Low risk applications

ORDERING:

CN 0201

Linear crack meters

CN 0202

Angular crack meters

TECHNICAL SPECIFICATIONS:

Linear crack meters quantity	10 pcs
Angular crack meters	5 pcs

Profoscope

DESCRIPTION:

The Profoscope uses electromagnetic pulse induction technology to detect rebars. Coils in the probe are periodically charged by current pulses and thus generate a magnetic field.

The Profoscope uses different coil arrangements to generate several magnetic fields.

Advanced signal processing allows

1. Localization of a rebar
2. Localization of the mid-point between rebars.
3. Determination of the cover
4. Estimation of the bar diameter

TECHNICAL SPECIFICATIONS:

Measuring Range	Up to 185 mm
Cover Measuring Accuracy	± 1 to 4 mm, depending on cover
Diameter Measuring Range	Up to 63 mm
Diameter Measuring Accuracy	± 1 rebar size

BS1881 part 204

MAIN FEATURES:

- Designed for single handed operation
- Intuitive icon-based interface for fast operation
- Rugged water-proof construction

ORDERING:

CN 0203

Profoscope



Profometer 630

BS 1881, Part 204; DIN 1045; SN 505262; SS 78-B4; BS 1881-204



MAIN FEATURES:

- All features available on the touchscreen unit are also implemented on the PC
- Create custom reports with exported graphs and charts
- Support for the merging of several corrosion scans into a single graph
- Picture and table export (csv files)

ORDERING:

CN 0204
Profometer 630 complete

DESCRIPTION:

The Profometer 630 is the all-in-one solution for rebar assessment and corrosion analysis which increases productivity for civil engineers and inspection companies in charge of assessing the conformity of concrete cover of a new structure (quality check and fire resistance assessment) or dealing with corrosion analysis on Large elements.

Profometer Link PC tool is included with all Profometer Cover Meter and Corrosion units. It is based on an integrated suite enabling the user to process the data coming from rebar detection / concrete cover as well as corrosion potential measurement. The Profometer units can be connected to the PC via USB and the software is fully compatible

Consisting of Profometer touchscreen, universal probe with ruggedized scan cart, probe cable 1.5 m (5 ft), power supply, USB cable, chalk, DVD with software, documentation, carrying strap and carrying case

TECHNICAL SPECIFICATIONS:

Cover measuring range	up to 185 mm
Cover measuring accuracy	± 1 to 4 mm, depending on cover
Path measuring accuracy on smooth surface	0.5 to 1.0 % of measured length
Diameter measuring range	Up to 63 mm
Diameter measuring accuracy	± 1 rebar size
Memory Internal	8 GB flash memory

Resipod Resistivity Meter

AASHTO T 358 Provisional Standard TP 95-11

DESCRIPTION:

Surface resistivity measurement provides extremely useful information about the state of a concrete structure. Not only has it been proven to be directly linked to the likelihood of corrosion and the corrosion rate, but recent studies have also shown that there is a direct correlation between resistivity and chloride diffusion rate.

ResiPod is a fully integrated 4-point Wenner probe, designed to perform concrete resistivity measurement in a completely non-destructive test. It is the most accurate instrument available, extremely fast and stable and packaged in a robust, waterproof housing designed to operate in a demanding site environment.

Resipod Concrete Resistivity Meter has probe spacing fixed at 38mm as required in AASHTO T 358. or 50mm probe spacing. The wider spacing allows a greater sampling size, but is still narrow enough to avoid interference from reinforcing steel in most cases.



TECHNICAL SPECIFICATIONS:

Range	0–1000 kΩcm (depending on probe spacing)
Resolution (nominal current 200μA)	±0.2 kΩcm or ±1% (whichever is greater)
Resolution (nominal current 50μA)	±2 kΩcm or ±5% (whichever is greater)
Frequency	40 Hz
Memory Non volatile	500 measured values
Power Supply	> 50 hours autonomy
Charger connection	USB type B, (5V, 100mA)
Dimensions	197 x 53 x 69.7 mm
Weight	318 g
Operating temperature	0° to 50°C
Storage temperature	-10° to 70°C

MAIN FEATURES:

- Easy to use, little training required
- Delivers fast, accurate measurement results
- Wide range of resistance measurement, 1 to 1000 kΩcm
- Dedicated Windows-based software
- Charger connects to standard USB computer or laptop ports

ORDERING:

CN 0205

Resipod resistivity meter complete 38mm Probe Spacing

CN 0206

Resipod resistivity meter complete 50mm Probe Spacing

ACCESSORIES:

CN 0205-1

Geometric Accessory (4-Probe Wenner Array Attachment) with adjustable spacing for testing different types of concrete samples and mix designs

CN 0205-2

Replacement Foam Contact Pads

CN 0205-3

Bulk Resistivity Accessory for measuring resistivity 100 x 200mm concrete cylinders

CN 0205-4

Resipod Test Strip to verify performance

Ultrasonic Pulse Velocity

DESCRIPTION:

The Velocity of the Ultrasonic waves in concrete is affected by elastic property or strength.

The equipment applies a high voltage and sends it to transit transducer to generate ultrasonic waves. This ultrasonic wave reaches the receive transducer through concrete. When elastic property or strength of concrete is high, the transit time is short. On the other hand, when the materials are contrary, the velocity is low.

The instrument measures the ultrasonic transit time accurately so it makes it possible to evaluate a material or find elastic properties non-destructively to investigate uniformity, cavities, cracks, fire/frost damage, declamation, deterioration, and strength.

It uses 54 kHz concrete transducers which were designed to send and receive ultrasonic signals effectively in highly attentive materials, including concrete, wood, stone, and plastic.

The Ultrasonic equipment contains:

The main machine

A pair of 54 kHz UT Transducer

RG 58 cable with BNC to XTR-9 Connector

Ultrasonic Couplant

Reference Block

Instruction Manual

Portable Aluminum Bag



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

MAIN FEATURES:

- Excellent accuracy
- Color LCD background changes according to measurement mode
- Perfect in thick and attentive materials
- It is possible to connect 2 to 16 transducers
- Rugged Aluminium case

ORDERING:

CN 0207

Ultrasonic Pulse Velocity

ACCESSORIES:

CN 0207-1

A pair of 54 kHz UT Transducer

CN 0207-2

RG 58 cable with BNC to XTR-9 Connector

CN 0207-3

Ultrasonic Couplant

CN 0207-4

Reference Block



Mechanical Strain Gauge

BS 1881-206

DESCRIPTION:

The mechanical strain gauge allows strain measurement to be made at different parts of a structure using a single instrument that comes with a digital gauge.

A fixed conical point is mounted at one end of the bar, and a moving conical point is mounted on a knife-edge pivot at the opposite end. A setting out bar is used to position pre-drilled stainless steel discs which are attached to the structure using a suitable adhesive.

The mechanical strain gauge is available in several sizes 100, 150 200, 250 and 300 mm.

MAIN FEATURES:

- Manual single axis measurement of change in cracks
- Able to measure distance between two measurement points to a precision of 1 micron.

ORDERING:

CN 0208

Mechanical strain gauge
100 mm

CN 0209

Mechanical strain gauge
150mm

CN 0210

Mechanical strain gauge
200mm

CN 0211

Mechanical strain gauge
250mm

CN 0212

Mechanical strain gauge
300mm

TECHNICAL SPECIFICATIONS:

Accuracy	Repeatability
0,001 mm type M 0,01 mm series C	0,001 mm e 0,01 mm



Concrete Test Hammer

EN 12 504-2; ENV 206; DIN 1048-2; BS 188-202;
ASTM C 805; NFP 18-417; B 15-225

DESCRIPTION:

The Concrete Test Hammer is the traditional instrument used for the non-destructive testing of hardened concrete. This easy-to-use instrument provides a quick and simple test for obtaining an immediate indication of concrete strength in various parts of a structure.

The verifiable strength is between 5 and 120N/mm²

There are four models available:

- Concrete test hammer normal type complete with carrying case, PSI curve, and carborundum stone.
- Concrete test hammer new shape comes complete with carrying case, PSI curve carborundum stone, Plastic grid 30x30 cm, Pencil, Fenolftaleina 100ml, Paper note, Operating manual and Calibration report
- Concrete test hammer digital type comes complete with Abrasion stone, Plastic case for stone, Plastic grid 30x30 cm, Pencil, Fenolftaleina 100ml, Paper note, Operating manual, Calibration report, Rechargeable feeder, Rigid case IP67, Mini portable printer (optional), Android application. Rock test hammer comes complete with Abrasion stone, Plastic case for stone, Plastic grid 30x30 cm, Pencil, Paper note, Operating manual, Calibration report, Rigid case IP67

ORDERING:

CN 0213

New Shape Concrete Hammer

CN 0214

Rock Concrete Hammer

CN 0215

Normal Concrete Hammer

CN 0216

Digital Concrete Hammer

CN 0217

Calibration anvil



TECHNICAL SPECIFICATIONS:

	Range of Measurement	Impact energy
Rock	10-200 N/mm ²	0,735 Nm
Normal	5-120 N/mm ²	2,207 Nm
Digital	5-120 N/mm ²	2,207 Nm

The test Anvil, on the other hand, is an essential semi-spherical steel block made of hard steel C45 with a diameter of about 150 mm and 150 mm in height. A semi-spherical shape which mirrors the rebound hammer strike piston surface has been created on one of the two flat surfaces.



The shaped surface where the impact occurs is characterized by a surface hardness no less than 52 HRC, the weight of this cylinder is 16Kg ±0.5 in full compliance with reference standards

Covermeter

DESCRIPTION:

The covermeter provides rebar location, sizing and cover measurement in a single weather-resistant instrument. For immediate results on-site, the onscreen gauge and audio feedback rapidly pin-point rebar location and orientation.

The Micro Covermeter is a developed model with a newly designed probe believed to incorporate the most accurate depth and bar size determination routines available.

Combined with extremely good resolution of multiple bars, sets the unit apart from others and sets the benchmark for covermeter surveying.

The Covermeter kit comes complete with:

- Probe with integral cable
- Battery charger
- Spare probe sole-plate
- Certificate of Conformity
- Light & tough equipment bag



MAIN FEATURES:

- Fast, accurate measurement of concrete cover
- Quick, clear indication of rebar location
- Automatic measurement of bar size
- Rapid area scanning for low-cover
- Built-in data logging

ORDERING:

CN 0218

Standard Covermeter kit

ACCESSORIES:

CN 0218-1

Probe with integral cable

CN 0218-2

Battery charger

CN 0218-3

Spare probe sole-plate

CN 0218-4

Light & tough equipment bag

TECHNICAL SPECIFICATIONS:

	Cover Range	Accuracy
Cover measurement	5 mm – 185 mm	± 1 mm up to 60 mm depth ± 2 mm up to 120 mm depth ± 3 mm up to 160 mm depth ± 4 mm over 160 mm depth
Operating Parameters		
Operating Weight (instrument+probe+cable)	800 g	
Battery Operation	20 hrs	

Rapid Chloride Permeability

ASTM C1202; ASTM C1760; ASTM C1556;
AASHTO TP 64 AASHTO T 277



DESCRIPTION:

The Rapid Chloride Permeability apparatus is a laboratory test device for the measurement of the electrical resistance of concrete against the penetration of chloride (RCPT) according to the standard methods such as ASTM C1202, AASHTO T277, and ASTM C1760.

The measurement data can be used to estimate the chloride diffusion coefficient of concrete for the service life prediction and design of concrete structures as well as the durability-based quality control of the concrete.

In concrete materials, the DC electrical resistance of concrete is correlated with important durability parameters of concrete such as chloride diffusion coefficient and the chloride migration coefficient that are used for the durability design or service life design of concrete structures.

The set comes complete with:
4 set of test cells ,
4 set of temperature sensors
4 pairs of test cables
Power cord
USB cable
User manual
Standard Sample Preparation Package.

MAIN FEATURES:

- Digital Readout and logging system
- Stand alone operation
- Easy-to-assemble
- Accurate (± 0.1 mA)
- Flexible logging interval time (1 to 10 min)
- Four measurement channels

ORDERING:

CN 0219
Rapid Chloride Permeability test set

ACCESSORIES:

CN 0219-1
Test Cell
CN 0219-2
Stainless Steel Mesh - Pair
CN 0219-3
Sample Prep Package
CN 0219-4
Rubber Gasket Cast – Pair
CN 0219-5
Test Cable Set
CN 0219-6
Temperature Sensor

TECHNICAL SPECIFICATIONS:

Testing up to	4 cells simultaneously
Voltage settings in 5 V increments	5 to 60 VDC

Carbonation Depth Determination

EN 13295 ; UNI 9944

DESCRIPTION:

Carbonation is a precursory condition for corrosion, which will take place when there are oxygen and water present. Preventing carbonation is the only possible way of preventing the decay of a reinforced concrete structure. therefore carbonation test is used to establish the depth of carbonation.

The test is based on collecting the powder, after analysis of the powder, making use of the chemical color change of phenolphthalein.

TECHNICAL SPECIFICATIONS:

Hole Depth	40 cm
Hole Diameter	10 mm
Phenolphthalein: Sensitivity	pH 8.3 to pH 10.0
Dimensions	390x340x140 mm
Weight approx.	3 Kg

Kit is complete with:

- 1 no. picker to collect the powder.
- 25 no. test tubes
- 1 no. measuring ruler
- 1 no. bottle of 1% solution of phenolphthalein
- 1 no. Pasteur pipette
- 1 no. cartridge
- 1 no. block of survey sheets



MAIN FEATURES:

- Innovative, easy to use and portable.

ORDERING:

CN 0220
Carbonation Depth Determination kit.

ACCESSORIES:

- CN 0220-1**
1 no. picker to collect the powder.
- CN 0220-2**
25 no. test tubes
- CN 0220-3**
1 no. bottle of 1% solution of phenolphthalein
- CN 0220-4**
1 no. Pasteur pipette
- CN 0220-5**
1 no. cartridge
- CN 0220-6**
1 no. block of survey sheets

Rebar Pull Out Force Test

ASTM C1583/D4541/D7234/D7522, ISO 4624/16276-1, BS EN 12004-2, AS/NZS 1580.408.5

DESCRIPTION:

The Apparatus is used for determining the bond strength between anchored reinforcing steel bar (rebar) and concrete and for checking anchorage performance in-situ.

Digital Readout Unit connected to a 30 tons capacity hydraulic jack and hand pump provides 1 % sensitive load or tensional strength value readings.

The Digital Rebar Pull-Out Force Tester has a steel hydraulic cylinder. For ease of handling.

The apparatus is supplied complete with three different jaw sets which allow the user to test anchorage rebar with different diameters. These jaws are made of high strength steel. The three-jaw sets are for 4-8 mm, 10-20mm and 20-32mm dia. rebars.

ORDERING:

CN 0221
Rebar Pull Out Force Test complete

ACCESSORIES:

CN 0221-1
Jaw set

Rebar Pull Out Force Test

ASTM C1583/D4541/D7234/D7522, ISO 4624/16276-1, BS EN 12004-2, AS/NZS 1580.408.5



TECHNICAL SPECIFICATIONS:

Working ability	30 tons
Rebar diameters can be tested	Up to 32 mm
Tension journey (stroke)	50 mm
Dimensions	205x175x175 mm
Weight (approx.)	28 kg



Bond Strength/Pull Off Test Digital

ASTM C1583/D4541/D7234/D7522, ISO 4624/16276-1, BS EN 12004-2, AS/NZS 1580.408.5

DESCRIPTION:

Bond Strength Pull off tester is used to measure the adhesion of coatings to metal, wood, concrete.

It measures the force required to pull a specified test diameter of coating away from its substrate using hydraulic pressure.

The pressure is displayed on a precision digital indicator and can be related to the strength of adhesion to the substrate.

There are 2 models available Manual Hydraulic pump with:
Digital Read-out, Automatic Electronically controlled Hydraulic pump with Digital Read-out

MAIN FEATURES:

- Portable requires no external power source
- Can be used in any position
- Self-aligning dolly enables accurate measurements on smooth or uneven surfaces
- Sealed USB port for fast, simple connection to a PC



Bond strenght/pull off test digital

ASTM C1583/D4541/D7234/D7522, ISO 4624/16276-1, BS EN 12004-2, AS/NZS 1580.408.5

The Bond Strenght Pull off tester comes complete with all accessories.

Ordering guide	50 mm Kit	50 x 50 mm Tile Kit (BS EN 12004-2)	50 mm C1533 Kit (ASTM C1583)
Typical application	Lower bond strength coatings on wood, concrete and plastic	Cementitious adhesive for tiles	Concrete surfaces and overlays
Manual model with protective case	0.4 – 3.3 MPa 50 – 480 psi	0.4 – 2.585 MPa 50 – 375 psi	0.4 – 3.3 MPa 50 – 480 psi
Automatic Models with protective case	0.4 – 3.8 MPa 50 – 560 psi 100 – 7550 N	0.4 – 3.033 MPa 50 – 440 psi 100 – 7550 N	0.4 – 3.8 MPa 50 – 560 psi 100 – 7550 N
Typical Application	Lower bond strength coatings on wood, concrete and plastic	Cementitious adhesive for tiles	Concrete surfaces and overlays
Included Dollies	Ø50 mm (qty 8) Aluminum	50 x 50 mm Plate (qty 4) with threaded post Steel	Ø50 mm (qty 4) with >25 mm thickness Steel
Cutting Tool	50 mm hole saw	-----	50 mm diamond grit hole saw with arbor
Adhesive	ResinLab EP11HT 2-Part Epoxy	ResinLab EP11HT 2-Part Epoxy	ResinLab EP11HT 2-Part Epoxy

ORDERING:

CN 0222

Adhesion Tester Manual Model 50 mm kit

CN 0223

Adhesion tester Automatic Model 50 mm kit

CN 0224

Adhesion Tester Manual Model 50X50 mm (BS EN 12004-2)Tile Kit

CN 0225

Adhesion Tester Automatic Model 50X50 mm (BS EN 12004-2)Tile Kit

CN 0226

Adhesion Tester Manual Model 50 mm C1533 Kit

CN 0227

Adhesion Tester Automatic Model 50 mm C1533 Kit

ACCESSORIES:

CN 0222-1

Dollies Ø50 mm

Column Load cell

ASTM E74 CLASS A EN 10002-3 CLASS 2

DESCRIPTION:

The high accuracy column load cell is designed for use in applications where precise compression measurement of mid to high loads and forces is required.

The majority of high accuracy canister load cells that we manufacture are used as reference standards for the calibration or verification of other force transducers and testing machines such as compression testers.

The high accuracy column load cell can be supplied with a calibration certificate issued by a UKAS laboratory or the National Physical Laboratory (NPL) if required.



MAIN FEATURES:

Capacities 500 KN to 3000 KN

ORDERING:

CN 0228

Column Load Cell 500

CN 0229

Column Load Cell 1000

CN 0230

Column Load Cell 2000

CN 0231

Column Load Cell 3000

TECHNICAL SPECIFICATIONS:

Weight (approx.)

3kg

Handheld Load Cell Indicator

DESCRIPTION:

The handheld load cell indicator is a high-resolution handheld load cell indicator designed to work with all types of load cell and strain gauge based transducer.

The handheld load cell indicator's dual-range facility allows for calibration in two different engineering units, i.e. Newton and kg. Alternatively, it is possible to calibrate two separate load cells or sensors with a single handheld load cell indicator display.

TECHNICAL SPECIFICATIONS:

	Weight	Depth	Height
Dimensions	90 mm	34 mm	152 mm



MAIN FEATURES:

- Portable for On-Site Monitoring
- Simple to Use
- Calibrate 2 Individual Load Cells

ORDERING:

- CN 0232**
The Handheld Load Cell Indicator
- CN 0233**
The Wireless Handheld Load Cell Indicator

Compressometer

DESCRIPTION:

Concrete Compressometers are used to determine the deformation (both axial and diametrical) of concrete cylinder specimens during the compression test.

There are 4 different models available for Ø4"x8" or Ø100x200 mm cylinders, Ø6"x12" or Ø150x300 mm.

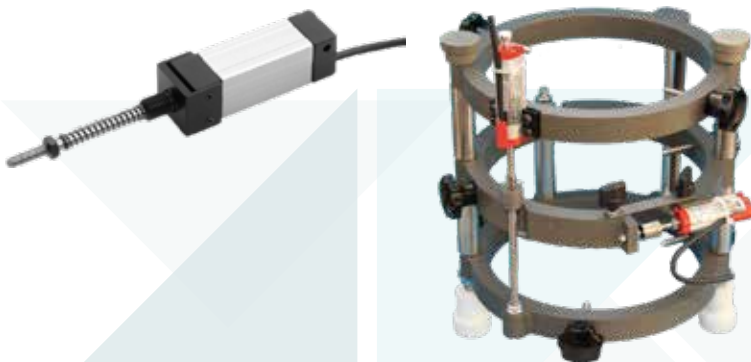
The apparatus work in conjunction with a Data Logger ordered separately.

Compressometer Ø4"x8" or Ø100x200 mm cylinders comes complete with 2 transducers.

Compressometer Ø6"x12" or Ø150x300 mm cylinders comes complete with 2 transducers.

Compressometer Ø4"x8" or Ø100x200 mm cylinders comes complete with 2 dial gauge.

Compressometer Ø6"x12" or Ø150x300 mm cylinders comes complete with 2 dial gauge.



TECHNICAL SPECIFICATIONS:

Weight (approx.)	1kg
------------------	-----

ASTM C469

ORDERING:

- CN 0234**
Compressometer Ø100x200 mm with 2 transducers.
- CN 0235**
Compressometer Ø150x300 mm cylinders with 2 transducers.
- CN 0236**
Compressometer Ø100x200 mm cylinders with 2 dial gauge.
- CN 0237**
Compressometer Ø150x300 mm cylinders with 2 dial gauge.

ACCESSORIES:

- CN 0234-1**
Digital dial Gauge
- CN 0234-2**
LVDT displacement and position transducer
- CN 0234-3**
Data Acquisition 4 Channels
- CN 0234-4**
Data Acquisition 8 Channels
- CN 0234-5**
Connection wires

Concrete Embedded Strain Gauge

DESCRIPTION:

The Concrete-embedded Strain Gauge is designed to measure shrinkage and stress of cement and concrete materials.

The Strain Gauge is connected to the Datalogger using the thermocouple wire.

There are several forms and shapes of a strain gauge that can be ordered, please consult with our sales team for available options.

MAIN FEATURES:

- Strain Gauge for Static and Dynamic Applications
- Very Flexible, Mechanically Strong
- Broad Temperature Range

ORDERING:

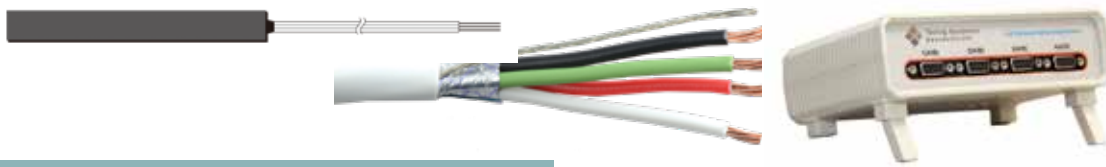
CN 0238

Concrete-embedded Strain Gauge

ACCESSORIES:

CN 0238-1

Thermocouple wire



Compression Testing Machine

EN 12390-3, 4, 5,6; EN 12504-1, 1354, 1521, 13161, 1338, 1340, 196, 772-1, -6, 13286-41, BS 1881 3892-3, 187, 6073-1, 6717 ASTM C39

DESCRIPTION:

The Compression Testing Machine is a very common testing method that is used to establish the compressive force or crush resistance of a material and the ability of the material to recover after a specified compressive force is applied and even held over a defined period of time by measuring fundamental variables, such as, strain, stress, and deformation.

There are several models and capacities available for the compression test machine designed to meet the need for reliable and consistent testing of concrete samples.

Ranging from Full automatic or Semi-automatic, hydraulic controlled or servo-controlled. Designed to meet all standards requirements, BE, EN, ASTM.

Our range of compression machines vary from 1500 KN up to 5000 KN compression capacity.

The compression frame can be purchased separately or with a hydraulic or servo-controlled power pack.

The Control Power Pack, in turn, can be connected to another frame, such as a flexural machine or another compression machine. Additional accessories such as distance pieces, Printer connection, software, block testing assembly, rail.

MAIN FEATURES:

- Designed for reliable and consistent testing of a wide range of specimens.
- User-friendly design enable an inexperienced operator to perform the test.



Compression Testing Machine

EN 12390-3, 4, 5,6; EN 12504-1, 1354, 1521, 13161, 1338, 1340, 196, 772-1, -6, 13286-41, BS 1881 3892-3, 187, 6073-1, 6717 ASTM C39

TECHNICAL SPECIFICATIONS:

Product Code	CN 0239-CN 0249	CN 0240-CN 0250	CN 0241-CN 0251	CN 0242-CN 0252	CN 0243-CN 0253
Capacity	1500 kN	2000 kN	3000 kN	4000 kN	5000 kN
Standard	EN 12390-4	EN 12390-4	EN 12390-4	EN 12390-4	EN 12390-4
Lower Platens Dimensions	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm
Upper Platens	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm
Maximum vertical clearance between platens	340 mm	340 mm	340 mm	520 mm	520 mm
Piston Diameter	300 mm	300 mm	350 mm	400 mm	420 mm
Maximum piston movement	50 mm	50 mm	50 mm	100 mm	120 mm
Horizontal Clearance	385 mm	385 mm	445 mm	495 mm	515 mm
Maximum working pressure	280 Bar	280 Bar	310 Bar	315 Bar	350 Bar
Frame	CN 0259	CN 0260	CN 0261	CN 0262	CN 0263
Power Pack	CN 0269/ CN 0270	CN 0269/ CN 0270	CN 0269/ CN 0270	CN 0269/ CN 0270	CN 0269/ CN 0270
Dimensions Frame	630x660x1090 mm	630x660x1090 mm	735x670x1140 mm	805x710x1370 mm	865x640x1555 mm
Dimensions Power Pack	370x400x920 mm	370x400x920 mm	370x400x920 mm	605x455x1015 mm	605x455x1015 mm
Weight Frame	1030 kg	1030 kg	1800 kg	2350 kg	3150 kg
Weight Power Pack	85 kg	85 kg	85 kg	150 kg	150 kg
Product Code	CN 0244-CN 0254	CN 0245-CN 0255	CN 0246-CN 0256	CN 0247-CN 0257	CN 0248-CN 0258
Capacity	1500 kN	2000 kN	3000 kN	4000 kN	5000 kN
Standard	ASTM C39	ASTM C39	ASTM C39	ASTM C39	ASTM C39
Lower Platens Dimensions	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm
Upper Platens	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm	Ø300 mm
Maximum vertical clearance between platens	370 mm	370 mm	370 mm	520 mm	520 mm
Piston Diameter	300 mm	300 mm	350 mm	400 mm	420 mm
Maximum piston movement	50 mm	50 mm	50 mm	100 mm	120 mm
Horizontal Clearance	385 mm	385 mm	445 mm	495 mm	515 mm
Maximum working pressure	280 Bar	280 Bar	310 Bar	315 Bar	350 Bar
Frame	CN 0264	CN 0265	CN 0266	CN 0267	CN 0268
Power Pack	CN 0269/ CN 0270	CN 0269/ CN 0270	CN 0269/ CN 0270	CN 0269/ CN 0270	CN 0269/ CN 0270
Dimensions Frame	630x660x1090 mm	630x660x1090 mm	735x670x1140 mm	805x710x1370 mm	865x640x1555 mm
Dimensions Power Pack	370x400x920 mm	370x400x920 mm	370x400x920 mm	605x455x1015 mm	605x455x1015 mm
Weight Frame	1030 kg	1030 kg	1800 kg	2350 kg	3150 kg
Weight Power Pack	85 kg	85 kg	85 kg	150 kg	150 kg

The full automatic models come with a complete automatic test cycle, a closed-loop digital readout unit. Once the specimen parameters have been introduced, it is sufficient to press the START button to complete the test.

Full automatic compression machines consist of their main parts: Frame, power pack and data acquisition control system.

The compression machines consist of a heavy-duty frame, 4 columns or welded type, depending on the standard required. connected to the automatic hydraulic power pack with data acquisition and digital control system.

The digital control system Button type or touch screen models are also available, depending on the user preference.

The Full automatic compression machine can be fully controlled and operated from a PC connected directly to the machine. A small printer's connection is also available for a quick printout.



Compression Testing Machine

EN 12390-3, 4, 5,6; EN 12504-1, 1354, 1521, 13161, 1338, 1340, 196, 772-1, -6, 13286-41, BS 1881 3892-3, 187, 6073-1, 6717 ASTM C39

DESCRIPTION:

The dual stage power pack which controlled by the control system is designed to supply the required oil pressure to the frame.

The Semi-automatic models come with a complete valve controlled test cycle, There are two valves on the oil tank. One valve is the pacing rate control valve. It is used for controlling the pacing rate. When you push it forward, the pacing rate increases fast.

To make fine-tuning, the top valve is turned clockwise to increase the load in a small amount or counter-clockwise direction to decrease.

The Semi-automatic compression machines consist of their main parts: Frame, power pack with valve control and digital readout unit.

The valve control power pack is designed to supply the required oil pressure to the frame. The very silent power pack can load specimens between 1KN/sec to 20KN/sec. On all power packs, the maximum pressure valve is used to avoid machine overloading.

The very silent power pack can load specimens between 1KN/sec to 20KN/sec. On the dual-stage pump, a high delivery low-pressure pump is used for rapid approach and delivery high-pressure radial piston pump is used for test execution. On all power packs, the maximum pressure valve is used to avoid machine overloading.

The Servo controlled hydraulic pack is an advanced system that can very accurately control the speed loading rate.

The user has full control of the load cycle before or during the test. In a way that you can set the machine preplanned cycle or change speed, even hold the load during the test cycle for a period of time.

The servo-controlled hydraulic system comes complete with a digital touch screen control system and data acquisition that can send the result either by blue tooth, email, printout or save.



Compression Testing Machine

EN 12390-3, 4, 5,6; EN 12504-1, 1354, 1521, 13161, 1338, 1340, 196, 772-1, -6, 13286-41, BS 1881 3892-3, 187, 6073-1, 6717 ASTM C39

MAIN FEATURES:

- Pace rate control from 0.01 kN/s to 100kN/s (depend on the specimen stiffness)
- Extra channels for displacement transducers, extensometers, etc. built in the system as an addition to frame loadcell (pressure transducer) or displacement transducer
- Ethernet port for connecting to computer
- 240x320 pixel LCD digital display, Touchscreen operator panel, Can control 2 frames
- Can execute load, displacement or strain controlled tests.
- Free of charge PC software for test control and advanced report printout
- Multiple language support
- Real time clock/date

ORDERING:

CN 0239

Full Auto Compression Machine, 1500KN, EN

CN 0240

Full Auto Compression Machine, 2000KN, EN

CN 0241

Full Auto Compression Machine, 3000KN, EN

CN 0242

Full Auto Compression Machine, 4000KN, EN

CN 0243

Full Auto Compression Machine, 5000KN, EN

CN 0244

Full Auto Compression Machine, 1500KN, ASTM

CN 0245

Full Auto Compression Machine 2000KN, ASTM

CN 0246

Full Auto Compression Machine, 3000KN, ASTM

CN 0247

Full Auto Compression Machine, 4000KN, ASTM

CN 0248

Full Auto Compression Machine, 5000KN, ASTM

CN 0249

Semi Automatic Compression Machine, 1500KN, EN

CN 0250

Semi Automatic Compression Machine, 2000KN, EN

CN 0251

Semi Automatic Compression Machine, 3000KN, EN

CN 0252

Semi Automatic Compression Machine, 4000KN, EN

CN 0253

Semi Automatic Compression Machine, 5000KN, EN

CN 0254

Semi Automatic Compression Machine, 1500KN, ASTM

CN 0255

Semi Automatic Compression Machine, 2000KN, ASTM

CN 0256

Semi Automatic Compression Machine, 3000KN, ASTM

CN 0257

Semi Automatic Compression Machine, 4000KN, ASTM

CN 0258

Semi Automatic Compression Machine, 5000KN, ASTM

CN 0259

Frame 1500KN, EN

CN 0260

Frame 2000KN, EN

CN 0261

Frame 3000KN, EN

CN 0262

Frame 4000KN, EN

CN 0263

Frame 5000KN, EN

CN 0264

Frame 1500KN, ASTM

CN 0265

Frame 2000KN, ASTM

CN 0266

Frame 3000KN, ASTM

CN 0267

Frame 4000KN, ASTM

CN 0268

Frame 5000KN, ASTM

CN 0269

Full Automatic Hydraulic Power Pack, Rapid approach pump, data acquisition and control system, Digital display, pressure transducers sensors. The unit can be used for 2 frames.

CN 0270

Semi Automatic Power pack, variable output pump, Rapid approach pump, pressure transducer, digital readout unit.

CN 0271

Full Automatic Servo Hydraulic Power Pack, Rapid approach pump, data acquisition and control system, Digital display, pressure transducers sensors. The unit can be used for 4 frames.

ACCESSORIES:

CN 0239-1

Distance Piece 20mm

CN 0239-2

Distance Piece 30mm

CN 0239-3

Distance Piece 50mm

CN 0239-4

Distance Piece 90mm

CN 0239-5

Distance Piece 100mm

Block Test Platens Sliding

EN 772-1, 12390-4, BS 6073-1

DESCRIPTION:

The Block Platens 460x280x65 mm with Sliding Rail Assembly are installed on the compression testing machines for testing concrete blocks and other structural materials. The Sliding Rail Assembly allows the platens to be easily installed without removing the existing compression platens. This assembly should be factory installed.

Block Platen Lifting Assembly is used for easy removal of the lower platen and easy replacement of the distance pieces between the piston and the lower platen without lifting the heavy platform or causing injury.

TECHNICAL SPECIFICATIONS:

Dimensions	Weight (approx.)
500x300x150 mm	175 kg



ORDERING:

- CN 0272**
Block Test Platens
- CN 0273**
Block Test Platens Sliding Rail Assembly
- CN 0274**
Lifting mechanism

Splitting Tensile Device

EN 1338, EN 12390-6, ASTM C 496

DESCRIPTION:

The Splitting Tensile Device consists of two column steel frame with a self-centering base specimen holder and an upper load beam suspended with springs for easy adjustment of the specimen. The devices can be easily placed on the lower platen of the compression tester using suitable distance pieces to adjust the vertical daylight. The device have to be completed with the packing strips to be inserted between the specimen and the load beams.

CN 0275 is used for splitting tensile tests on cylindrical specimens. CN 0276 is used for splitting tensile tests on concrete block pavers and concrete cubes.

For both models, the max total height is 370 mm. The 370 mm vertical daylight can easily obtain removing the lower platen of the compression tester.

TECHNICAL SPECIFICATIONS:

	Dimensions
Cylindrical Specimens	Ø150x300 mm / Ø160x320 mm
Concrete Block Pavers	60-150x220 mm
Concrete Cubes	150x150 mm

ORDERING:

- CN 0275**
Splitting Tensile Test Device for cylinders, Ø150x300 mm and Ø160x320 mm
- Splitting Tensile Test Device for Concrete Block Pavers , 60-150 mm height x 220 mm length
- CN 0277**
Splitting Tensile Test Device for Cubes, 150x150 mm



Flexural Test Equipment

EN 1338, 1339, 1340, 1341, 1343, 13748-1, 13748-2, 12390-5, 12390-6; BS 1881; ASTM C78, C293, C496

DESCRIPTION:

The Flexural test equipment is used to test flexural strength of concrete beams, kerbs, interlocking pavers, flagstones and blocks of different sizes.

The flexural test equipment ranges from 100 kN to 300 kN capacity, it has been designed for reliable and consistent testing due to its heavy steel fabrication and design.

The flexural test equipment comes in two types of frames, the U type and the C type frame. Both very rigid design is ideal either for a conventional flexural test or for more sophisticated tests such as deformability and ductility index.

MAIN FEATURES:

- 2 different designs
- 4 different capacities
- Safety limit switch for 100 or 120 mm piston stroke
- High accuracy load measurement with strain gauge load cells
- Accept a wide range of assemblies to satisfy all tests
- Can be connected to compression machine or power pack

The Flexural machines feature the complete automatic test cycle with a closed-loop digital readout. Once the specimen parameter has been introduced, it is sufficient to press the START button to complete the test.

The Flexural Frame can be connected to any Geotechnical compression machine as a second frame or can be used individually with any power pack as an independent Flexural Machine.

Flexural test assemblies should be ordered separately.

- Bearers for flexure test on flagstones and kerbs to EN 1339 and 1340. Consist of two lower rollers of 20 mm dia. x 600 mm length and upper load point of 40 mm dia with ball seating
- Bearers for flexural test on concrete blocks Consist of two lower rollers and one upper roller of 20 mm dia. x 600 mm length
- Bearers for flexural test on concrete beams of 100x100x400-500 mm, 150x150x600-750 mm. Consist of two upper rollers and two lower rollers of 40 dia and 160 mm length. Complying to EN 12390-5 and ASTM C78.

The distance of the lower bearers can be adjusted between 100mm and 800mm. The distance between upper bearers can be set to 100mm or 150 mm.

During the 3 point Flexural testing one of the bearers can be removed and the other placed in the centre.

TECHNICAL SPECIFICATIONS:

Max. Vertical Clearance	425 mm (without accessories)
Max. Horizontal Clearance	650 mm
Max. Clearance Between Lower Rollers	900 mm
The Distance Between The Center of The Piston to The Side of The Frame	320 mm
Overall Dimensions	1000x950x1250 mm
Weight (approx.)	425 kg

Flexural Test Equipment



EN 1338, 1339, 1340, 1341, 1343, 13748-1, 13748-2, 12390-5, 12390-6; BS 1881; ASTM C78, C293, C496

ORDERING:

CN 0278

Flexural Testing Machine, 100 kN capacity U Type Frame

CN 0279

Flexural Testing Machine, 150 kN capacity U Type Frame

CN 0280

Flexural Testing Machine, 200 kN capacity U Type Frame

CN 0281

Flexural Testing Machine, 300 kN capacity U Type Frame

CN 0282

Flexural Testing Machine, 100 kN capacity C Type Frame

CN 0283

Flexural Testing Machine, 150 kN capacity C Type Frame

CN 0284

Flexural Testing Machine, 200 kN capacity C Type Frame

CN 0285

Flexural Testing Machine, 300 kN capacity C Type Frame

CN 0269

Full Automatic Hydraulic Power Pack, Rapid approach pump, data acquisition and control system, Digital display, pressure transducers sensors. The unit can be used for 2 frames.

CN 0270

Semi Automatic Power pack, variable output pump, Rapid approach pump, pressure transducer, digital readout unit.

CN 0271

Full Automatic Servo Hydraulic Power Pack, Rapid approach pump, data acquisition and control system, Digital display, pressure transducers sensors. The unit can be used for 4 frames.

ACCESSORIES:

CN 0278-1

Bearers for flexure test on flagstones and kerbs

CN 0278-2

Bearers for flexure test on concrete blocks

CN 0278-3

Flexural Test assembly on Concrete Beams



GEOTECHNICAL

TESTING EQUIPMENT

THE BEST IN TEST

AGGREGATE



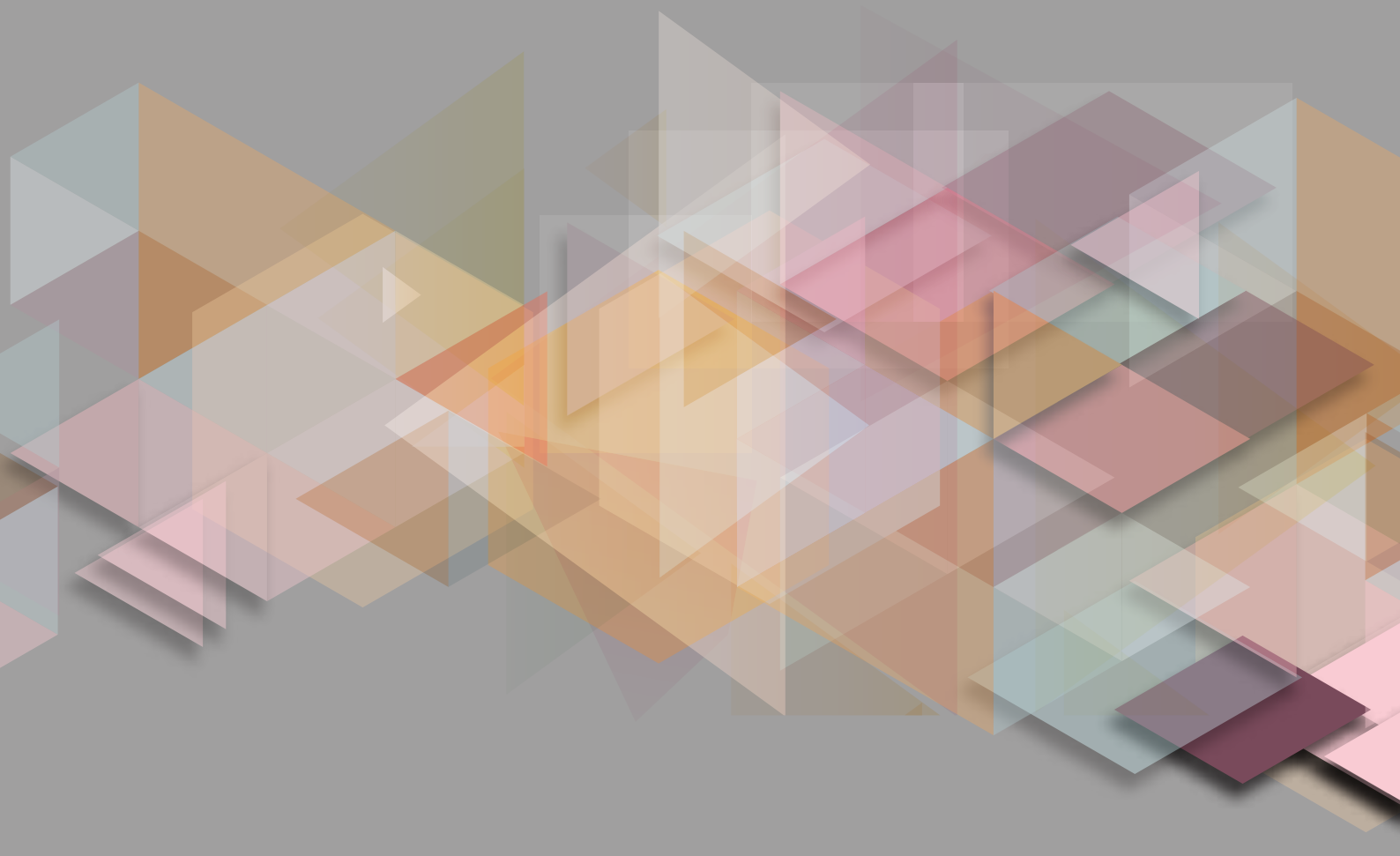
Aggregate

Aggregate is a component of a composite material used to resist compressive stress and provide bulk to the composite material.

For efficient filling, aggregate should be much smaller than the finished item, but have a wide variety of sizes.

It is vastly used in most combination of construction material such as concrete and asphalt technology to which aggregates may either be specified or designed to suit a particular engineering requirement while not suiting another.

The properties of aggregates can vary and hence affect the final construction material. Therefore it is important to test the different parameters such as resistance to polishing, particle size, shape and texture, relative, bulk density, crushing value, impact value, organic impurities, compacted densities, specific gravity, soundness and abrasion resistance.



Flakiness Sieves

BS 812-105.1

DESCRIPTION:

Flakiness Sieves are used to determine particle size shape or geometrical characteristics of the aggregates. Aggregate particles are considered as flaky when their thickness is less than 0.6 of their mean sieve size.

Aggregate to be classified is separated into seven sieve fractions from 6.3 to 63 mm and each fraction is examined separately. The dimensions of each sieve comply with the relevant International Standard, manufactured from heavy gauge steel sheet and coated with electrostatic paint. The accuracy of the slot size is better than 0.1 mm.

MAIN FEATURES:

- Made of Heavy gauge steel sheets.
- Coated with electrostatic paint.

ORDERING:

AG 0101
Flakiness Index Sieve Set consists of 7 sieves.

TECHNICAL SPECIFICATIONS:

	Slot size	Weight (approx.)	Dimensions
AG 0101-1	4.9x30 mm	1.5 kg	300x220x80 mm
AG 0101-2	7.2x40 mm	1.6 kg	320x240x80 mm
AG 0101-3	10.2x50 mm	1.9 kg	300x220x80 mm
AG 0101-4	14.4x60 mm	2.0 kg	360x260x80 mm
AG 0101-5	19.7x80 mm	2.2 kg	390x280x80 mm
AG 0101-6	26.3x90 mm	2.6 kg	420x300x80 mm
AG 0101-7	33.9x100 mm	2.9 kg	470x320x80 mm



Grid Sieves

EN 933-1; EN 933-3; NF P18-561; UNI 8520-18; NLT 354

DESCRIPTION:

Used for the determination of the flakiness index of the aggregate.

Consisting of an electrostatically painted frame and 5 mm diameter stainless steel bars with apertures state below.

MAIN FEATURES:

- Made of electrostatic steel frame.
- Stainless steel bars.

ORDERING:

AG 0102
Grid Sieves Set

TECHNICAL SPECIFICATIONS:

	Aperture	Weight (approx.)	Dimensions
AG 0102-1	2.5 mm	3.3 kg	340x320x80 mm
AG 0102-2	3.15 mm	3.3 kg	340x320x80 mm
AG 0102-3	4 mm	3.8 kg	340x320x80 mm
AG 0102-4	5 mm	3.8 kg	340x320x80 mm
AG 0102-5	6.3 mm	3.7 kg	340x320x80 mm
AG 0102-6	8 mm	3.6 kg	340x320x80 mm
AG 0102-7	10 mm	3.4 kg	340x320x80 mm
AG 0102-8	12.5 mm	3.2 kg	340x320x80 mm
AG 0102-9	16 mm	4 kg	340x320x80 mm
AG 0102-10	20 mm	3.2 kg	340x320x80 mm
AG 0102-11	25 mm	3.2 kg	340x320x80 mm
AG 0102-12	31.5 mm	2.9 kg	340x320x80 mm
AG 0102-13	40 mm	2.7 kg	340x320x80 mm



Flakiness and Thickness Gauge

BS 812-105.1

DESCRIPTION:

Flakiness Gauge is used to determine if the aggregate particles are to be considered as flaky, i.e. their thickness is less than 0.6 of their nominal size.

Length Gauge classifies aggregate elongation by measuring the length of individual particles.

Aggregate particles are considered elongated when their length is more than 1.8 of their nominal size. Length Gauge test is not applicable to material retained on 63.0 mm BS test sieve.



MAIN FEATURES:

- Stainless steel.

ORDERING:

AG 0103
Flakiness Gauge
AG 0104
Length Gauge

TECHNICAL SPECIFICATIONS:

Product code	Weight	Dimensions
AG 0103	0.4 Kg	310x130x10 mm
AG 0104	0.82 Kg	370x70x70 mm

Shape Index Gauge

EN 933-4

DESCRIPTION:

Shape Index Gauge is used to determine the shape factor of individual aggregates by comparing the ration of length to width.

TECHNICAL SPECIFICATIONS:

Dimensions	450x150x50 mm
Weight (approx.)	0,4 kg



MAIN FEATURES:

- Stainless steel.

ORDERING:

AG 0105
Shape Index Gauge

Particle Density Specific Gravity and Water Absorption (Sand Absorption Cone and Tamping Rod)

EN 1097-6; 12697-6; BS 812-2; UNI 8520-13-16; ASTM C128-C127; NLT 154; DIN 12039; AASHTO T85,T84

DESCRIPTION:

The Sand Absorption Abraham Cone Set is used in determining the specific gravity and water absorption of fine aggregates smaller than 10 mm.

The apparatus is manufactured from plated steel for protection against corrosion.



MAIN FEATURES:

- Plated steel.

ORDERING:

AG 0106
Sand Absorption Cone and Tamping Rod complete set

ACCESSORIES:

AG 0106-1
Sand Absorption Cone
AG 0106-2
Tamping Rod

TECHNICAL SPECIFICATIONS:

Dimensions	90x90x180 mm
Weight (approx.)	0,5 kg

Quantab Chloride and Sulfate Content Instant Test Strips

EN 1097-6; 12697-6; BS 812-2; UNI 8520-13-16;
ASTM C128-C127; NLT 154; DIN 12039; AASHTO T85,T84

DESCRIPTION:

Quantab chloride titrators can be used for estimating the chloride content of aqueous solutions.

They are suitable for site testing and quality control of aggregates requiring less than 30 minutes to obtain a result.

The determination is based on the reaction of the silver dichromate strip with the chloride in the sample solution, and the proportional content of chloride in the sample is indicated by the calibration chart which is supplied complete with the test kit.



MAIN FEATURES:

- Easy to use, disposable, and inexpensive
- A great way to obtain quick, quantitative answers in the field or in the lab

ORDERING:

AG 0107

Quantab Chloride Titrator strips. Type 1175 titration range 0.005% to 0.1% (30 to 600ppm) NaCl. Pack of 50

AG 0108

Quantab chloride titrator strips. Type 1176 titration range 0.05% to 0.1% (300 to 6000ppm) NaCl. Pack of 40
A qualitative or semi-quantitative test is recommended for determining sulfate ions in aqueous solutions. Sulfate test strips are convenient measuring devices for sulfate content.

AG 0109

Sulfate Test Strips detection range 200 to 900 mg/l. Pack of 100.

TECHNICAL SPECIFICATIONS:

Number of tests	40	50	100
Parameter	Chloride - as Cl-	Chloride - as Cl-	Sulfate
Platform	Test Strip	Test Strip	Test Strip
Range	300 - 6000 Cl-	30 - 600 Cl-	200 to 900 mg/l.
Ship Wt. (lbs)	0.2	0.2	
Smallest Increment Steps	10-20 ppm increments	10-20 ppm increments	

Organic Impurities in Fine Aggregate

ASTM C40; AASHTO T21

TECHNICAL SPECIFICATIONS:

Weight (approx.) 300g



DESCRIPTION:

If aggregate contains organic impurities it may not be suitable for inclusion in concrete. Organic impurities, usually tannic acid and its derivatives, may interfere with the chemical reactions of hydration. Impurities are more likely to be found in fine (sand) aggregate.

Organic Impurities complete Test Set, containing Graduated Bottle, Reference Color Comparison Chart (Sodium Hydroxide Reagent is not included with this kit and should be sourced locally)

MAIN FEATURES:

- Compact, robust and easily portable for site use

ORDERING:

AG 0110

Organic Impurities complete Test Set.

ACCESSORIES:

AG 0110-1

Graduated Bottle, 300 ml

AG 0110-2

Reference Color Comparison Chart

AG 0110-3

Sodium Hydroxide Solution

Aggregate Crushing Value and Ten Percent Finess Value (ACV/TFV)

812-110, 111

DESCRIPTION:

Aggregate Crushing Value provides a relative measure of the resistance of an aggregate to crushing under a gradually applied compressive load. Ten Percent Fines Value used for testing aggregate smaller than 10 mm.

Comprises:

150 mm or 75mm diameter steel cylinder, plunger, base plate, tamping rod and metal measure.



MAIN FEATURES:

- All parts are powder coated or galvanized.

ORDERING:

AG 0111

Aggregate Crushing Value Apparatus 150 mm dia.

AG 0112

Aggregate Crushing Value Apparatus, 75 mm dia.

ACCESSORIES:

AG 0111-1

Metal Measure 115 mm diameter x 180 mm deep.

AG 0111-2

Metal Measure 57 mm diameter x 90 mm deep.

AG 0111-3

Tamping Rod 8 mm diameter x 300 mm long

TECHNICAL SPECIFICATIONS:

	AG 0111	AG 0112
Dimensions	250x250x600 mm	120x120x350 mm
Weight approx.	29 Kg	6 Kg

Aggregates Impact Value

EN 812-112

DESCRIPTION:

The Aggregate Impact Value machine has been developed for determining the impact value of aggregates.

Manufactured from plated steel against corrosion, a counter fitted to the machine automatically records the number of blows delivered to the sample.

The AIV is supplied complete with: 75 mm diameter x 50 mm deep, cylindrical measure and steel tamping rod.

TECHNICAL SPECIFICATIONS:

Weight	Dimensions
52 Kg	450x350x850 mm

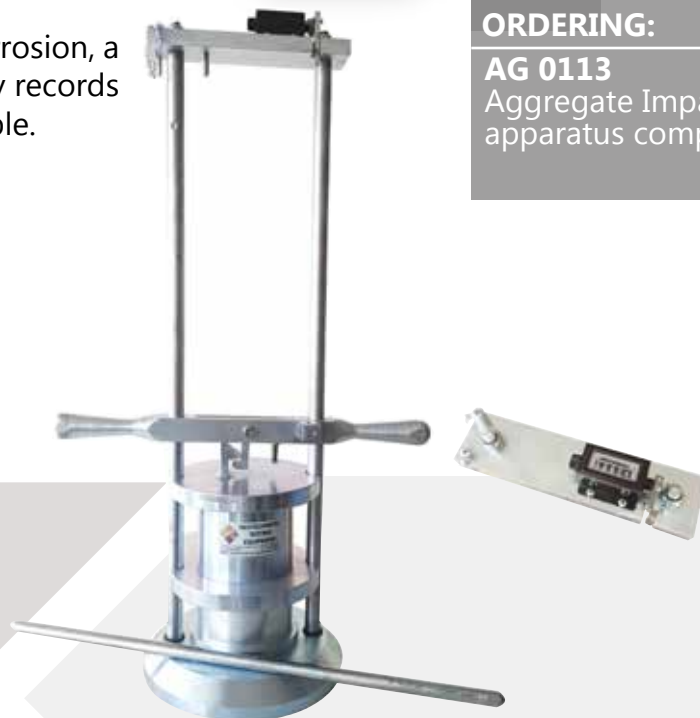
MAIN FEATURES:

- Cylindrical measure and steel tamping rod.

ORDERING:

AG 0113

Aggregate Impact Value apparatus complete.



Los Angeles Abrasion Machine

DESCRIPTION:

Los Angeles Abrasion Machine is used for the determination of aggregates resistance to fragmentation.

The machine consists of an electronic control unit and a rolled steel drum having an inside diameter of 711 mm and internal length 508 mm.

The drum is rotated at a speed of between 31 and 33r.p.m. The internal shelf is provided with the machine is conforming to ASTM and EN standards.

The machine is equipped with an automatic counter, which allows stopping when the preset number of revolutions is completed.

There is a steel tray supplied with machine for easy discharge of specimens.

Safety Cabinet model is installed with an electronic control unit and electric safety device which automatically stops the rotation of drum when the door is opened, conforming to CE directives.

TECHNICAL SPECIFICATIONS:

	AG 0114	AG 0115
Dimensions	850x1000x1100 mm	1100x1150x1250 mm
Weight(approx.)	350 kg	505 kg

EN 1097-2, 12697-17, 13450; ASTM C131, C535; AASHTO T96

MAIN FEATURES:

- A steel tray is supplied with the machine for easy discharge of specimen and abrasive charges.
- Equipped with an electric safety device which automatically stops the rotation

ORDERING:

AG 0114

Los Angeles Abrasion Machine
220V, 50-60 HZ

AG 0115

Los Angeles Abrasion Machine
with safety cabinet, 220V,
50-60 HZ

ACCESSORIES:

AG 0114-1

Set of 11 abrasive charges
conforming to EN

AG 0114-2

Set of 12 abrasive charges
conforming to ASTM



Abrasion Testing Machine

EN 1341, 1342, 1343

DESCRIPTION:

Abrasion Testing Machine is designed to determine the resistance to abrasion and wear of natural stones and concrete products.

The abrasion wheel is 70 mm thick and rotates with speed of 75 r.p.m.

The machine is equipped with a digital counter which stops the rotation at the preset number of revolutions.



MAIN FEATURES:

- Auto Digital Counter
- Complete with Abrasive Sand

ORDERING:

AG 0116
Abrasion Testing Machine

ACCESSORIES:

AG 0116-1
Abrasive Sand 25Kg

TECHNICAL SPECIFICATIONS:

Weight	Power
85 Kg	220 V, 50-60 Hz, 1 ph

Digital Point Load Apparatus

EN 1977-2, ASTM D-5731

DESCRIPTION:

The point tester is used to measure rock strength in the field or in the laboratory.

A load frame, hydraulic jack and digital display are mounted on the base of a carrying case.

With this point load tester, samples up to 4" (101.6mm) diameter can be tested on 2 conical points.

A graduated scale indicates distance between conical points and is also used to measure specimen diameter.

Applied load is digitally displayed to 0.001Kn ; accuracy is $\pm 1\%$; range is 0 to 56Kn. Display shows maximum load and will also read in lb and tons.

TECHNICAL SPECIFICATIONS:

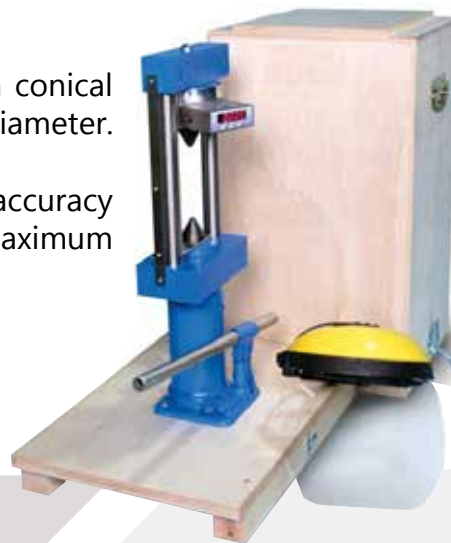
Load range	0-60 kN
Digital display	2x16 characters
Resolution	32.000 div.
Accuracy	$\pm 1\%$
Case dimensions	800 x 500 x 280 mm
Weight	15 kg

MAIN FEATURES:

- Complete Set Easy Operation
- Load measured in both kN and Mpa
- Serial port for PC connection

ORDERING:

AG 0117
Digital Point load apparatus



Nordic Abrasion Machine

EN 1097-1

DESCRIPTION:

Nordic Abrasion Machine has been developed for testing the resistance of aggregates to wear by abrasion from studded tires.

The test is performed on natural or artificial stones and aggregates between 11.2 mm and 16.0 mm.

It consists of a rotating aggregate in a drum containing steel abrasive balls and water.

The machine consists of an electronic control unit and a rolled stainless steel drum having an internal diameter of 206.5 mm, internal length of 335 mm and thickness of 6 mm.

The drum is rotated at a speed of 90 ± 3 r.p.m. 3 wings are installed inside of the drum to allow the balls and aggregates to be mixed properly.

The abrasion loss rate of aggregates is calculated after the specified number of revolutions stated in the relevant standard.

11,1 mm diameter steel balls (3.5 kg.) should be ordered separately.

MAIN FEATURES:

- Complete Set Easy Operation

ORDERING:

AG 0118
The Nordic Abrasion Machine

ACCESSORIES:

AG 0118-1
Steel Balls, Ø 11 mm, 3.5 kg



Dimensions	720x400x650 mm
Weight (approx.)	70 Kg
Power	600 W

TECHNICAL SPECIFICATIONS:

Aggregate Abrasion Value (AVV)

EN 1097-8; EN 1341, 1342, 1343; BS 812-113

DESCRIPTION:

The Abrasion Machine is used to determine the Aggregate Abrasion Value (AAV) by testing the measure of the resistance of aggregates to surface wear by abrasion.

The Abrasion Machine consists of a flat circular cast iron grinding lap wheel of 600 mm dia. which rotates in a horizontal plane at a speed of 28-31 r.p.m.

The abrasion sand is fed across the surface of the specimen sample through a special funnel.

The machine is supplied complete with two specimen moulds, two trays, two flat plates, weights and clamps.

MAIN FEATURES:

- Complete Set Easy Operation

ORDERING:

AG 0119
The Aggregate Abrasion Value (AAV) Machine

ACCESSORIES:

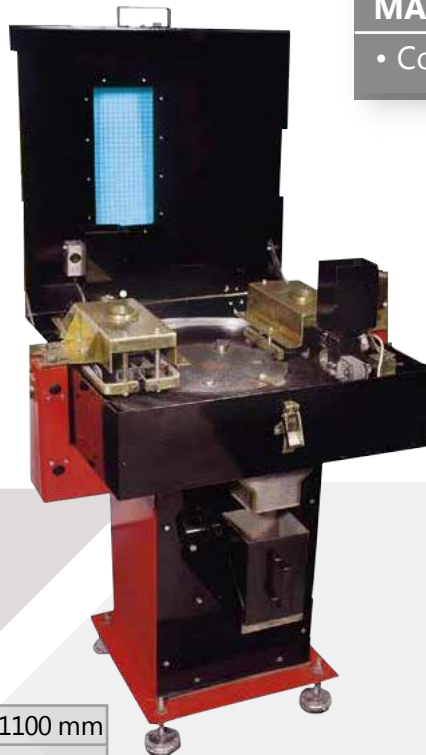
AG 0119-1
Specimen Molds, 2 units

AG 0119-2
Trays, 2 units

AG 0119-3
Flat Plates, 2 units

AG 0119-4
Weights

AG 0119-5
Clamps



Dimensions	800x700x1100 mm
Weight (approx.)	200 Kg
Power	370 W

TECHNICAL SPECIFICATIONS:

Accelerated Polishing Machine

EN 1097-8; EN 1341, 1342, 1343

DESCRIPTION:

Accelerated Polishing Machine is used to measure the resistance of road stone to the polishing action of vehicle tires on a road surface.

The machine consists of road wheel rotating in the speed of between 315 and 325 r.p.m.

The machine is supplied complete with road wheel, side plate, rubber rings, abrasive feed mechanism, corn emery, flour emery, set of 4 specimen mold and 2 mold plates.

MAIN FEATURES:

- Complete Set Easy Operation
- Heavy welded steel mainframe, standing in adjustable pads.

ORDERING:

AG 0120
Accelerated Polishing Machine



TECHNICAL SPECIFICATIONS:

Packed dimensions	820 x 820 x 1260 mm high
Packed weight	205 kg
Volume	0.79 cubic meters
Height - Frame	1230 mm
Height - Water tank	1550 mm
Electrical Supply	230 V/110 V 50/60 Hz 1 ph 13 amp

Micro-Deval Testing Machine

EN 1097-1

DESCRIPTION:

The Micro Deval Testing Machine used to determine the resistance of wear for 25-50mm size aggregates. The machine consists of a steel frame, four stainless steel cylinders, and 25kg of 10 mm diameter stainless steel spheres.

Fitted with an automatic digital counter that allows the machine to stop automatically at preset number of revolutions. Stainless steel 200x 154 drums rotates at speed of 100 (±5) r.p.m

MAIN FEATURES:

- Complete Set Easy Operation

ORDERING:

AG 0121
Micro-Deval Apparatus complete

ACCESSORIES:

AG 0121-1
Stainless Steel Drum 200x154 mm

AG 0121-2
Abrasion Charges, EN, 25kg of 10 mm dia

TECHNICAL SPECIFICATIONS:

Dimensions	1050x450x950 mm
Weight (approx.)	105 Kg
Power	550 W



Skid Resistance and Friction Tester

DESCRIPTION:

Used for the measurement of surface friction properties, the apparatus is suitable for both site and laboratory applications and for Polished Stone Value (PSV) using curved specimens from accelerated polishing tests.

Supplied complete with additional scale for tests on polished stone value specimens and 6 rubber sliders for site usage.

TECHNICAL SPECIFICATIONS:

	AG 0122
Dimensions	1100x1150x1250 mm
Weight(approx.)	505 kg
Power	750 W



EN 1341; EN 1342; EN 1338; EN 1097-8; ASTM E303; EN 13036-4; EN 1338

MAIN FEATURES:

- Low friction release mechanism
- Extremely light pointer
- Easy and reliable height adjusting system

ORDERING:

AG 0122

Skid resistance and friction test set

ACCESSORIES:

AG 0122-1

Mounted rubber slider, 32 mm

AG 0122-2

Mounted rubber slider, 76 mm

AG 0122-3

Metal base plate

High Capacity Screen Shaker

EN 933-1; EN 933-3; NF P18-561; UNI 8520-18; NLT 354

DESCRIPTION:

The High Capacity Screen Shaker is ideal for sizing large quantities of crushed stones, sand, gravel, slag, coal, coke, ores, pellets and similar materials.

The screen shaker has a capacity of about 30 kg of sample. For use with 457x660x75mm dimensions screens.

TECHNICAL SPECIFICATIONS:

Product	Dimensions	Weight (approx.)	Power
Screen Shaker	587x787x850 mm	170 kg	550 W
Screen Trays	667x452x67 mm	7 kg	

MAIN FEATURES:

- Made of electrostatic steel frame.
- Stainless steel bars.

ORDERING:

AG 0123

High capacity screen shaker

ACCESSORIES:

AG 0123-1

Set of Screen Shaker containing all sizes



Product Code	Aperture mm (in)
AG 0123-2	100 mm (4 in)
AG 0123-3	90 mm (3 ½ in)
AG 0123-4	75 mm (3 in)
AG 0123-5	50 mm (2 in)
AG 0123-6	45 mm (1 ¾ in)
AG 0123-7	37.5 mm (1 ½ in)
AG 0123-8	31.5 mm (1 ¼ in)
AG 0123-9	25 mm (1 in)
AG 0123-10	22.4 mm (7/8 in)
AG 0123-11	19 mm (¾ in)
AG 0123-12	16 mm (5/8 in)
AG 0123-13	12.5 mm (½ in)
AG 0123-14	11.2 mm (7/16 in)
AG 0123-15	9.5 mm (3/8 in)
AG 0123-16	8 mm (5/16 in)
AG 0123-17	6.3 mm (¼ in)
AG 0123-18	5.6 mm (No. 3 ½ in)
AG 0123-19	4.75 mm (No. 4 in)
AG 0123-20	4 mm (No. 5 in)

Slake Durability Apparatus

ASTM D4644

DESCRIPTION:

This test method has been developed for assessing the deterioration of rocks over a period of time when subjected to water immersion.

The apparatus consists of a motorized drive unit mounted on a base plate and connected to two drums which rotate at a speed of 20 r.p.m. as per standard.

The machine has a digital display for the visualization of the residual testing time (10 minutes for ASTM D4644). The tank assemblies are filled with water to a level marked on the tank.

The test drums are manufactured from 2.00 mm mesh, 140 mm dia. x 100 mm long. Two drums are already included.

The drums can be mounted or disassembled easily with the quick-release drive units.

The apparatus comes complete with transparent tanks, a basement, and a digital timer.

MAIN FEATURES:

- Complete with digital display
- Transparent water tanks
- Compact machine
- Drums with quick-release

ORDERING:

AG 0124
Slake Durability Apparatus

ACCESSORIES:

AG 0124-1
Pair of mesh Drums

AG 0124-2
Pair of Transparent Tanks



TECHNICAL SPECIFICATIONS:

Dimensions	733x413x305 mm
Weight (approx.)	22.5 Kg



GEOTECHNICAL

TESTING EQUIPMENT

THE BEST IN TEST

GENERAL



General

Our general laboratory equipment are complementary equipment that are used in conjunction with our major equipment. To perform the different tests on all building materials: Aggregates, Cement, Concrete, Soil, Rock, asphalt etc.

We supply an extensive inventory of general laboratory product of the best quality and value ranging from balances and scales, thermometers, laboratory ovens, muffle furnaces, vacuum pumps, air compressor, core drills, laboratory glassware, water baths, pans, bowls, dishes, jars, trowels, brushes, shovels, spatulas, porcelain, scoops, containers, plasticware and general tools.

All items have been selected to suit the requirement of Standards and laboratory technicians.



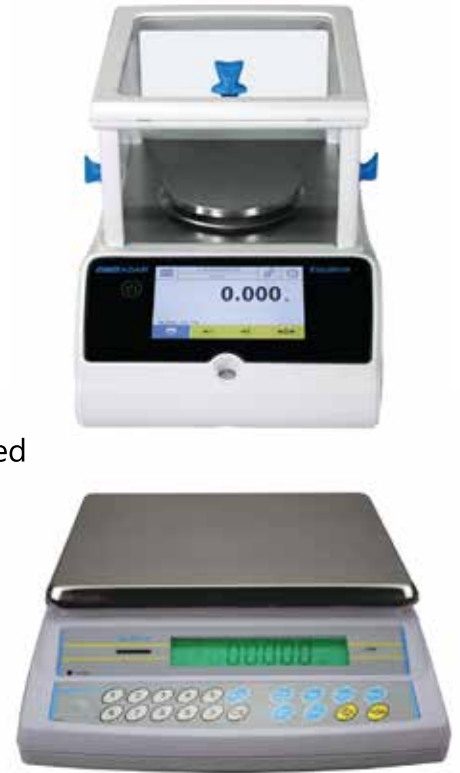
Laboratory Balances and Scales

DESCRIPTION:

Our range of balances are designed for the lab but have the rugged features needed for materials testing.

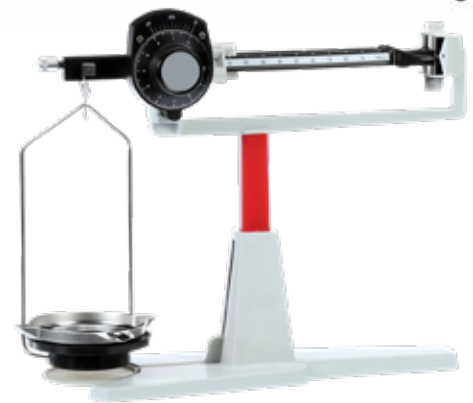
They include all metal chemical resistant die-cast housings. Compact and durable, these balances are the best choice for basic weighing and economy.

The tough durable ABS housing is designed to withstand field and laboratory environments, while being easy to clean and protected from accidental spills.



TECHNICAL SPECIFICATIONS:

Capacity		
GN 0101	Digital Balance 250 g	0.0001 g resolution
GN 0102	Digital Balance 250 g	0.001 g resolution
GN 0103	Digital Balance 450 g	0.001 g resolution
GN 0104	Digital Balance 750 g	0.001 g resolution
GN 0105	Digital Balance 1500 g	0.01 g resolution
GN 0106	Digital Balance 2500 g	0.01 g resolution
GN 0107	Digital Balance 4500 g	0.01 g resolution
GN 0108	Digital Balance 6000 g	0.1 g resolution
GN 0109	Digital Balance 8000 g	0.1 g resolution
GN 0110	Digital Balance 10 kg	0.1 g resolution
GN 0111	Digital Balance 20 kg	0.1 g resolution
GN 0112	Digital Balance 20 kg	1 g resolution
GN 0113	Digital Balance 32 kg	1 g resolution
GN 0114	Digital Balance 30 kg	5 g resolution
GN 0115	Digital Balance 48 kg	2 g resolution
GN 0116	Digital Balance 60 kg	5 g resolution
GN 0117	Digital Balance 75 kg	1 g resolution
GN 0118	Digital Balance 75 kg	5 g resolution
GN 0119	Digital Balance 150 kg	10 g resolution
GN 0120	Digital Balance 300 kg	20 g resolution



Mechanical Scales		
GN 0121	Harvard Trip Balance 2000g	0.1 g readability
GN 0122	Triple Beam Balance 2610g	0.1 g readability
GN 0123	Dial-O-Gram Balance 310g	0.1 g readability
GN 0124	Heavy Duty Solution Balance 311g	0.01 g readability



Multi-Purpose Drying Ovens

EN 932-5, 1097-5, ASTM C 127- C136-D558, D559, D560,D698, D1557, D1559 BS 1377:1-1924:11

DESCRIPTION:

The Geotechnical Laboratory Ovens offer a range of highly efficient, reliable, cost effective units to suit most drying, warming and general laboratory applications.

The exterior is constructed from sheet steel finished in an easy clean powder coated paint. The interior chamber is made from mild steel coated with aluminium (CLAD) with a stainless steel chamber available as an option.

Fitted with fixed shelf runners and removable chrome plated wire grid shelves. Heated by Incoloy sheathed elements positioned below the chamber floor for natural convection units and fitted around the fan on the back or side wall of the chamber for mechanical convection units.

The control system comprises of a Digital thermometer with thermostatically controlled units Microprocessor digital controller.



ORDERING:

- GN 0125**
Drying Ovens 30Ltr.
- GN 0126**
Drying Ovens 50Ltr.
- GN 0127**
Drying Ovens 120Ltr.
40-250C.
- GN 0128**
Drying Ovens 120Ltr.
40-300C
- GN 0129**
Drying Ovens 250Ltr.
40-250C.
- GN 0130**
Drying Ovens 250Ltr.
40-300C
- GN 0131**
Drying Ovens 500Ltr.
250C.
- GN 0132**
Drying Ovens 500Ltr.
300C
- GN 0133**
Drying Ovens 700Ltr.
250C.
- GN 0134**
Drying Ovens 700Ltr.
300C

ACCESSORIES:

- GN 0125-1**
Shelve for 30ltr oven
- GN 0126-1**
Shelve for 50ltr oven
- GN 0127-1**
Shelve for 120ltr oven
- GN 0129-1**
Shelve for 250ltr oven
- GN 0131-1**
Shelve for 500ltr oven
- GN 0133-1**
Shelve for 700ltr oven

TECHNICAL SPECIFICATIONS:

	Capacity ltr.	Int. Dimensions cm	Ext. Dimensions cm	Nbr. of Shelves	Weight kg	Max. working Temp. °C	Power Supply
GN 0125	30	32 x 32 x 32	47 x 47 x 60	2	17	250	220 V, 50-60 Hz, 1ph
GN 0126	50	38 x 38 x 38	55 x 61 x 71	2	20	250	220 V, 50-60 Hz, 1ph
GN 0127	120	57 x 44 x 49	80 x 72 x 67	2	70	250	220 V, 50-60 Hz, 1ph
GN 0128	120	57 x 44 x 49	80 x 72 x 67	2	70	300	220 V, 50-60 Hz, 1ph
GN 0129	250	57 x 56 x 80	80 x 85 x 104	3	100	250	220 V, 50-60 Hz, 1ph
GN 0130	250	57 x 56 x 80	80 x 85 x 104	3	100	300	220 V, 50-60 Hz, 1ph
GN 0131	500	57 x 80 x 110	80 x 108 x 133	4	140	250	220 V, 50-60 Hz, 3ph
GN 0132	500	57 x 80 x 110	80 x 108 x 133	4	140	300	220 V, 50-60 Hz, 3ph
GN 0133	700	57 x 89 x 148	80 x 127 x 182	4	170	250	220 V, 50-60 Hz, 3ph
GN 0134	700	57 x 89 x 148	80 x 127 x 182	4	170	300	220 V, 50-60 Hz, 3ph

Electric Core Drill

DESCRIPTION:

The Portable Core Drill electric powered engine is used for fast drilling into concrete or asphalt surfaces.

It can take up to 180mm core bit diameter capacity, Heavy duty, precision gear box – optimum gear ratio for fast and economical drilling. Power 1.6 HP, Weight 8 Kg.



EN 12697-27

ORDERING:

GN 0135

Handheld Core Drill with stand

GN 0136

Handheld Core Drill without stand

ACCESSORIES:

GN 0135-1

Core Bit, 50 mm dia

GN 0135-2

Core Bit, 100 mm dia

GN 0135-3

Core Bit, 150 mm dia

Petrol Core Drill

DESCRIPTION:

The Heavy Duty Core Drill Machine is designed to minimize time required for cutting cores up to 150 mm diameter from concrete, asphalt and similar hard construction material.

This Core Drill is capable of handling large and small hole with stable drilling platform and dependable performance while increasing the bit life. Heavy-duty, dual-precision ground columns and tenzalloy precision machined carriage assembly Smooth-precision ball feed screw system, accurate hole drilling positioning and easy alignment of drill platform.



EN 12697-27

ORDERING:

GN 0137

Core Drill with Platform, Petrol Engine 6 0 HP Weight 140Kg, complete with core bit

GN 0138

Core Drill with Platform, Petrol Engine 10 5 HP, Weight 160Kg, complete with core bit

ACCESSORIES:

GN 0137-1

Core Bit, 50 mm dia

GN 0137-2

Core Bit, 100 mm dia

GN 0137-3

Core Bit, 150 mm dia

Air Compressor

DESCRIPTION:

The Air Compressor is easy to use and to control the air manipulation.

The Cast Iron cylinder compressor pump is long lasting and with reliable performance. 1.3 HP comes with 25ltr or 50 ltr capacity.



ORDERING:

- GN 0139**
Air Compressor, 25 liters
- GN 0140**
Air Compressor, 50 liters

Vacuum Pump

DESCRIPTION:

The Vacuum Pump is ideal for laboratory use, it removes gas molecules from a sealed volume in order to leave behind a partial vacuum.

TECHNICAL SPECIFICATIONS:

Free Air displacement	Ultimate Vacuum
100 Ltr/Min.	0.01 (mbar) 220 V, 50-60 Hz, 1 ph



ORDERING:

- GN 0141**
Vacuum Pump
- ACCESSORIES:**
- GN 0141-1**
Rubber Tubing, 1 meter

Distilled Water Equipment

DESCRIPTION:

The Water Distillation unit gives high quality distilled water having an output of 4 liter/hr with a power input of 3 KW.

The unique features along with the safety provisions make it an ideal equipment to obtain pure distilled water for use in general laboratories and in numerous other end uses..



ORDERING:

- GN 0142**
Single Water Distillation Equipment 4 ltr.
- GN 0143**
Water Distillation Equipment 7 ltr.
- ACCESSORIES:**
- GN 0142-1**
Spare glass

Temperature, Hygrometer and Hydrometer Measurement

EN 1367-3

DESCRIPTION:

Selecting the correct thermometer for an application is very important, to achieve the maximum accuracy and repeatability of the temperature reading.

Our Thermocouple, thermometers and probes are fast to respond to changes in temperature, they also have a wide measurement range. Resistance temperature detector and more accurate. justifiably proud of the quality of both our products and service. To ensure recognition and maintenance of our quality standards we are registered to BS EN ISO 9001:2000. Original UKAS Certificates can be provided to proof that the instruments and probes have been calibrated against nationally approved standards.



MAIN FEATURES:

- Measurement range
- Resolution of the reading 1°C,
- 0.1°C or 0.01°C
- Desired accuracy
- Response time

ORDERING:

	Description	Temp Range	Temp Resolution	Accuracy
GN 0144	Digital Pocket Thermometer	-50 - +250°C	0.1°C	±0.4°C
GN 0145	Digital probe Thermometer	-49.9 to 199.9°C	0.1°C	±0.5°C
GN 0146	Digital probe Thermometer	-50 to 1000°C	1°C	±1°C
GN 0147	Digital probe Thermometer	-50 to 1000°C	0.1°C	±0.5°C
GN 0148	Thermocouple Wire 1 meter	-50 - +250°C	0.1°C	±0.5°C
GN 0149	K type Probe	-50 to 1000°C	1°C	±1°C
GN 0150	K type Probe	-50 - +250°C	0.1°C	±0.5°C

- GN 0151**
Thermal Data Loger, 1 channel
- GN 0152**
Thermal Data Loger, 2 channel
- GN 0153**
Thermal Data Loger, 3 channel





ORDERING:

Glass Thermometers				
	Description	Temp Range	Resolution	Accuracy
GN 0154	Glass Thermometers	-10 - +60°C	1.0 °C	±1°C
GN 0155	Glass Thermometers	10 - +110°C	1.0 °C	±1°C
GN 0156	Glass Thermometers	-10 - +160°C	1.0 °C	±1°C
GN 0157	Glass Thermometers	-10 - +250°C	1.0 °C	±1°C
GN 0158	Glass Thermometers	-10 - +310°C	1.0 °C	±1°C
GN 0159	Min-Max Thermometer	-20 to +50°C	1.0 °C	±1°C
GN 0160	Protected Thermometer	-15 to +60°C	1.0 °C	±1°C
GN 0161	Dial Surface Thermometers	0 to 160°C	1.0 °C	±1°C

Portable Dial Thermometers				
	Description	Temp Range	Resolution	Accuracy
GN 0162	Portable Dial Thermometers	-30 to +60	1.0 °C	±1°C
GN 0163	Portable Dial Thermometers	-30 to +250	1.0 °C	±1°C
GN 0164	Portable Dial Thermometers	0 to +250	1.0 °C	±1°C

IP Thermometers				
	Description	Temp Range	Resolution	Accuracy
GN 0165	IP24C Thermometers	+95 +103	0.1 °C	±0.1°C
GN 0166	IP28C Thermometers	-6 to +400	0.1 °C	±0.1°C
GN 0167	IP38C Thermometers	23 to 27	2.0 °C	±0.1°C
GN 0168	IP60C Thermometers	-2 to +80	0.2 °C	±0.1°C
GN 0169	IP61C Thermometers	30 to 200	0.5 °C	±0.1°C
GN 0170	IP89C Thermometers	-1 to +175	0.5 °C	±0.1°C

Hygrometer and Hydrometer	
GN 0171	Hydrometer, Range 0.995 to 1.030 densities (gms/cc) at 270C
GN 0172	Hydrometer, Range 0.995 to 1.030 densities (gms/cc) at 270C
GN 0173	Hygrometer, for humidity and temp, -10 to 60°C and 20 to 95% RH
GN 0174	Digital Barometer, Range 0 to 1300mbar (0 to 975mmHg)



Spatulas	
GN 0175	Spatula, 100 mm blade with wooden handle
GN 0176	Spatula, 150 mm blade with wooden handle
GN 0177	Spatula, 200 mm blade with wooden handle

Trowels	
GN 0178	Small Trowel
GN 0179	Large Trowel
GN 0180	Float. Plasterer's type

Sample Trays	
GN 0181	Sample Tray, galvanized steel, 17 x 27 x 4 cm
GN 0182	Sample Tray, galvanized steel, 27 x 46 x 4 cm
GN 0183	Sample Tray, galvanized steel, 40 x 40 x 5 cm
GN 0184	Sample Tray, galvanized steel, 60 x 60 x 6 cm
GN 0185	Sample Tray, galvanized steel, 90 x 90 x 7 cm
GN 0186	Sample Tray, galvanized steel, 120 x 120 x 5 cm

Sample Container	
GN 0187	Sample Container. Steel. Lever Lid, 0.5 litres
GN 0188	Sample Container. Steel. Lever Lid, 2.5 litres
GN 0189	Sample Container. Steel. Lever Lid, 5 litres
GN 0190	Sample Container. Steel. Lever Lid, 10 litres
GN 0191	Sample Container. Steel. Lever Lid, 15 litres

Wire Baskets	
GN 0192	Wire Basket, BS 812, EN 1367-2 65 mm dia x 80 mm deep
GN 0193	Wire Basket, BS 812, EN 1367-2 95 mm dia x 120 mm deep
GN 0194	Wire Basket, BS 812, EN 1367-2 120 mm dia x 120 mm deep

General Items	
GN 0195	Trimming Knife
GN 0196	Heat-resistant gloves
GN 0197	Rubber Gloves

Scoop	
GN 0198	Scoop Small 7 x 11 x 4 cm
GN 0199	Scoop Medium 12 x 19 x 7 cm
GN 0200	Scoop Large 25 x 31 x 11 cm

Beakers and Bowls	
GN 0201	Bowl. 2 liter capacity, stainless steel
GN 0202	Bowl. 6 liter capacity, stainless steel
GN 0203	Bowl. 9 liter capacity, stainless steel
GN 0204	Beaker. 250 ml capacity, aluminium
GN 0205	Beaker. 500 ml capacity, aluminium
GN 0206	Beaker. 1000 ml capacity, aluminium

General Laboratory Accessories

ORDERING:

Lab General Accessories				
	Description	Temp Range	Resolution	Accuracy
GN 0207	Vernier Caliper, 200 mm	0 to 200mm	0.1mm	±0.1mm
GN 0208	Vernier Caliper, 300 mm	0 to 300mm	0.1mm	±0.1mm
GN 0209	Digital Vernier Caliper, 200 mm	0 to 200mm	0.1mm	±0.1mm
GN 0210	Digital Vernier Caliper, 300 mm	0 to 300mm	0.1mm	±0.1mm
GN 0211	Infrared Thermometer	-20 to +350°C	1.0 °C	±1°C
GN 0212	Hot Air dryer	+150°C		
GN 0213	Timer Clock			
GN 0214	Stop Watch			

Hot Plates				
	Description	Temp Range	Resolution	Accuracy
GN 0215	Hot Plate	10cm dia	250 °C	±1°C
GN 0216	Hot Plate	15cm dia	250 °C	±1°C
GN 0217	Hot Plate	20cm dia	250 °C	±1°C

Laboratory Glassware			
	Description		Accuracy
GN 0218	Beaker 50 ml	GN 0227	Flask, 50 ml
GN 0219	Beaker 100 ml	GN 0228	Flask, 100 ml
GN 0220	Beaker 250 ml	GN 0229	Flask, 250 ml
GN 0221	Beaker 500 ml	GN 0230	Flask, 500 ml
GN 0222	Beaker 1000 ml	GN 0231	Flask, 1000 ml
GN 0223	Beaker 2000 ml	GN 0232	Conical Flask 100 ml
GN 0224	Conical Beaker 100 ml	GN 0233	Conical Flask 250 ml
GN 0225	Conical Beaker 250 ml	GN 0234	Conical Flask 500 ml
GN 0226	Conical Beaker 500 ml	GN 0235	Conical Flask 1000 ml



Measuring Cylinders

Measuring Cylinders	
GN 0236	Measuring Cylinder, Glass 50 ml
GN 0237	Measuring Cylinder, Glass 100 ml
GN 0238	Measuring Cylinder, Glass 250 ml
GN 0239	Measuring Cylinder, Glass 500 ml
GN 0240	Measuring Cylinder, Glass 1000 ml
GN 0241	Measuring Cylinder, Plastic 50 ml
GN 0242	Measuring Cylinder, Plastic 100 ml
GN 0243	Measuring Cylinder, Plastic 250 ml
GN 0244	Measuring Cylinder, Plastic 500 ml
GN 0245	Measuring Cylinder, Plastic 1000 ml



General Laboratory Hardware



Measuring Cylinders	
GN 0246	Evaporating Dish Ø10 cm
GN 0247	Evaporating Dish Ø12 cm
GN 0248	Evaporating Dish Ø14 cm
GN 0249	Porcelain Crucible 10 ml
GN 0250	Porcelain Crucible 15 ml
GN 0251	Porcelain Crucible 25 ml

Bottles	
GN 0252	Polythene Bottle, 1 ltr
GN 0253	Polythene Bottle, 2.5 ltr
GN 0254	Polythene Bottle, 5 ltr
GN 0255	Wash Bottle, 500 ml
GN 0256	Wash Bottle, 1000 ml

General Items	
GN 0257	Glass Stirring
GN 0258	Graduated Pipette, 0.10 ml sub-divisions
GN 0259	Graduated Pipette, 0.25 ml sub-divisions
GN 0260	Bosshead
GN 0261	Clamp
GN 0262	Straight edge

General Items	
GN 0263	Clamp Boss Load Ring 1 KN
GN 0264	Clamp Boss Load Ring 2 KN
GN 0265	Clamp Boss Load Ring 3 KN
GN 0266	Clamp Boss Load Ring 5 KN
GN 0267	Clamp Boss Load Ring 10 KN
GN 0268	Clamp Boss Load Ring 15 KN
GN 0269	Clamp Boss Load Ring 28 KN
GN 0270	Clamp Boss Load Ring 50 KN
GN 0271	Magnetic Base for Dial Gauge

Hot Plate Stirrers

DESCRIPTION:

Magnetic Hot Plate Stirrer

Heating temperature up to 280°C

Stainless steel with ceramic coated hotplate for high chemical resistance

Speed Range 100-1500rpm

Built-in plate temperature probe

External temperature sensor increases accuracy to $\pm 0.5^\circ\text{C}$

LED display of temperature and speed.

50°C HOT warning indicator for added safety (the indicator will still operate even after the unit is switched off).

ABS casing with fire retardant material, resistant to weak acid and alkali



340 Magnetic Hotplate Stirrer

In addition to the above, the 340H magnetic hotplate stirrer also features:

Heating temperature up to 340°C

Stainless Steel top plate

Speed Range 100-1500rpm

Easy-to-read backlit LCD display

PC control

TECHNICAL SPECIFICATIONS:

Product code	GN 0272	GN 0273	GN 0274	GN 0275	GN 0276
Max plate Temp	280°C	340°C	380°C	550°C	100°C
Plate size (Diameter)	135mm	135mm	140mm x 140mm	184mm x 184mm	180x450mm
Max H2O	3L	20L	5L	20L	0.4L per position
Plate material	Ceramic	Stainless Steel	Aluminium cover with ceramic coating	Ceramic	Stainless Steel & Silicone film
Max Length Stirrer Bar	50mm	80mm	50mm	80mm	40mm
Heat output	500W	500W	500W	1000W	470W
Dimensions	260x150x80mm	280x160x85mm	320x180x108mm	215x360x112mm	182x622x65mm

ORDERING:

GN 0272

280 Magnetic Hot Plate Stirrer

GN 0273

340 Magnetic Hotplate Stirrer

GN 0274

380 Magnetic Hotplate Stirrer

GN 0275

550H Magnetic Hotplate Stirrer

GN 0276

100H-10 Multi Position Magnetic Hotplate Stirrer

Moisture content tins and cans



ORDERING:

Moisture content tins

GN 0277

Moisture content tin 75 mm dia. x 30 mm

GN 0278

Moisture content tin 55 mm dia. x 35 mm, aluminium

GN 0279

Moisture content tin 55 mm dia. x 65 mm, aluminium

GN 0280

Moisture content tin 75 mm dia. x 50 mm, aluminium

Aluminium field cans

GN 0281

Aluminium field can, 3 liters capacity

GN 0282

Aluminium field can, 5 liters capacity

Lever lid tins

GN 0283

Lever lid tin, 0.5 liter capacity

GN 0284

Lever lid tin, 1 liter capacity

GN 0285

Lever lid tin, 2.5 liter capacity

GN 0286

Lever lid tin, 5 liter capacity

GN 0287

Lever lid tin, 10 liter capacity

GN 0288

Slip-on lid tin (biscuit)

GN 0289

Slip-on lid tin, 212x225x120 mm

Bottle Roller

UNI EN ISO 9001:2008

DESCRIPTION:

The Bottle Roller is suitable for maintain in rotation 6 bottles Ø 86 H.175 mm.

It is equipped with 4 anti-slip rolls. Electronic regulation of rotations: max 80 rpm.

Utilization by timer control for a preset period up to 0–99hours. It can contains nr. 1 bottle 5 Lt. - nr. 2 bottles 2 Lt. – nr. 2 bottles 1 Lt - nr. 6 bottles 0.5 Lt.

Outer casing in powdered painted steel acids resistant. Main switch bright.

TECHNICAL

SPECIFICATIONS:

Working surface dimensions n°4 rolls	n°3 lanes lenght 360 mm.
Overall dimensions	300x480x250 mm
Weight working load	6 Kg
Weight	20 Kg



ORDERING:

GN 0290

Bottle Roller

ACCESSORIES:

GN 0290-1

Bottle 5 Lt.

GN 0290-2

Bottles 2 Ltr.

GN 0290-3

Bottles 1 Ltr.

GN 0290-4

Bottles 0.5 Ltr.

CO2 Incubator

DESCRIPTION:

The CO2 Incubator have a fully sealed, electro-polished, one-piece, deep drawn chamber which is manufactured from the highest grade 316 stainless steel. The outer cabinet is manufactured from stainless steel and has an anti-bacterial powder coat paint finish.

This gives the CO2 incubator exceptional corrosion and contamination resistance. An inner glass viewing door closes positively onto an inert gasket (no VOC's) and allows a clear view of the chamber contents without disturbing the internal atmosphere.

The outer door has a magnetic gasket providing a good seal and magnetic door locks which engage once the 200°C sterilization cycle starts. A rear access port allows temperature monitoring probes to be inserted safely into the chamber.

MAIN FEATURES:

- Choice of 50 or 190 Liter capacity
- Drawn seamless inner chamber
- 200 °C dry-heat decontamination option

ORDERING:

GN 0291
CO2 Incubator



TECHNICAL SPECIFICATIONS:

	Temperature Management	CO ² Gas Management	O ² Management	Dimensions
Range	5°C above ambient to +60°C	Range 0% to 20%	1% to 19%	Chamber 632x686x440 mm
Control	0.1°C	Control ± 0.1%	± 0.1%	
Stability	± 0.1°C @ 37°C	± 0.2%	± 0.25%	External 765x862x734 mm
Uniformity	± 0.25°C @ 37°C	± 0.2%	± 0.25%	
CO ² Sensor		IR	Electrochemical	Shipping container 925x1080x850 mm



GEOTECHNICAL TESTING EQUIPMENT

THE BEST IN TEST

STEEL



Steel

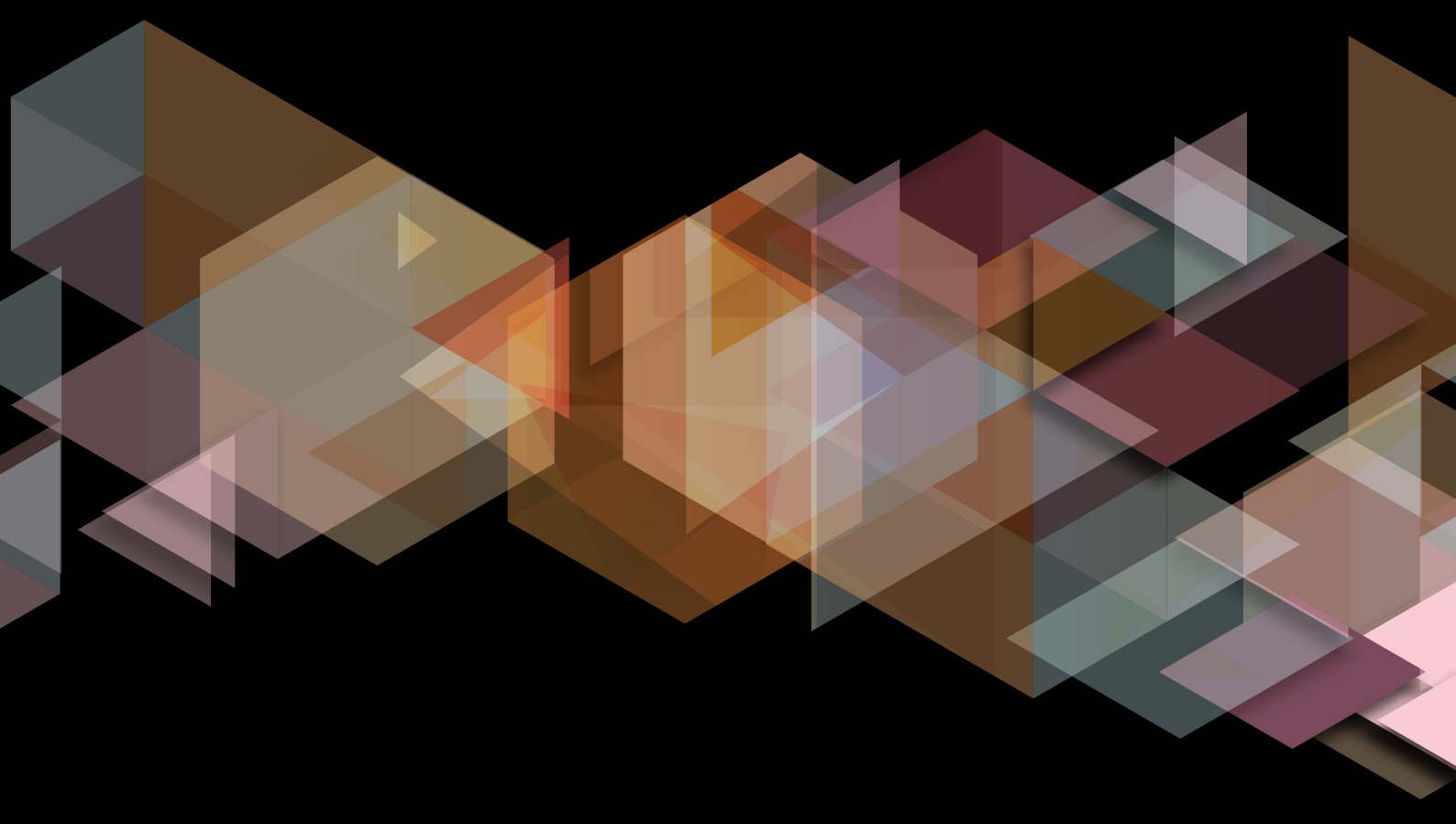
Construction Steel is an alloy element with a range of unique properties that controls their chemical and physical makeup.

There are several grades and specifications with different qualities include such things as the hardness, quenching behavior, need for annealing, tempering behavior, yield strength percentage of elongation., tensile strength and bending.

Steel was produced in bloomery furnaces for thousands of years, but its large-scale, industrial use began only after more efficient production methods were devised in the 17th century.

Rebar is most commonly manufactured in grades 40, 60, and 75 with higher strength readily available in grades 80, 100, 120 and 150.

Our products range for testing steel includes Universal Testing Machine (UTM), Flexural, Bending, Torsion, Hardness, Fatigue, Impact Pendulum Charpy and Density as well as different equipment for sample preparation.



Universal Hydraulic Tensile

EN ISO 15630-1, EN ISO 6892-1, EN ISO 7500-1

DESCRIPTION:

Universal Hydraulic Tensile Test Machine (600 kN capacity) is designed to test the ferrous materials for structural values such as yield strength and tensile strength. Apart from tensile tests, Universal Test Machines can also be used for compression tests up to the capacity of the machine.



MAIN FEATURES:

- Can make test with displacement control.
- Real time display of test graph.
- 2 analog channels (one for load cell, one for displacement transducer)
- 10 data per second sample rate for each channel
- Multi-language support
- 2 different unit system selection; SI and metric
- Real-time clock and date
- RS-232 serial port connection with the device
- Free of charge PC software for the test control and advanced report generation

Load cell is used to measure stress. Strain measurement is done by the electronic displacement transducer built in the machine.

Tests can be done fully automatic by digital control unit or computer. Machine complete the test with the set pace rate and turns to start position automatically.

The distance between the grips can be set by motor driven hand set system.

The system is controlled by a hand up/down system. With open front hydraulic wedge grips user can load specimen easily.

Hydraulic Grips

Hydraulically operated grips, completely stop the possibility of sample sliding from the grips enabling for correct and definite strain measurements.

Hydraulic Power Pack and Digital Data Acquisition & Control System

Hydraulic Power Pack

Hydraulic Power Unit is designed to control the machine and processing of data from load-cell and displacement transducers which are fitted to the machine. Controller unit has a simple and compact configuration.

TECHNICAL SPECIFICATIONS:

Capacity		600 kN	1000 kN
Test Speed		2mm/min - 18mm/min	2mm/min - 18mm/min
Load Measurement Accuracy		± %1	± %1
Displacement Measurement Resolution		0,01 mm	0,01 mm
Columns Diameter	Lower	50 mm	60 mm
	Upper	70 mm	80 mm
Vertical Test Distance	Tension	Minimum 70 mm Maximum 300 mm	Minimum 70 mm Maximum 320 mm
	Compression	Maximum 110 mm	Maximum 110 mm
Distance Between Columns		460 mm	480 mm
Piston Stroke		150 mm	200 mm
Max Pressure	Grips	400 bar	400 bar
	Load	200 bar	320 bar
Weight		1950 kg	2150 kg
Height		2600 mm	2600 mm
Max. stroke		2750 mm	2800 mm

Dual Pumps

The dual pumps are formed by two groups:

1. Grip pump with dual stage pump
2. Piston pump to make tensile and compression tests

Our tensile testing machine consist of two independent pumps working in one oil tank system. One pump is controlled with digital readout unit with 3 phase controlled with and inverter to make test, other runs with a pedal to supply pressure to the grips. Grip pump has dual stage pump inside.

Digital Data Acquisition & Control System

The unit is designed to control the machine and processing of data from load-cells and displacement transducers, which are fitted to the machine.

All the operations of the unit is controlled from the front panel consisting of a LCD display and function keys.

ORDERING:

ST 0101
Hydraulic UTM Machine
600kN

ST 0102
Hydraulic UTM Machine
1000kN

ST 0103
Hydraulic UTM Machine
2000kN

ST 0104
Servo UTM Machine
600kN

ST 0105
Servo UTM Machine
1000kN

ST 0106
Servo UTM Machine
2000kN

ACCESSORIES:

Product Code	
ST 0107	Hydraulic Power Pack and Digital Data Acquisition & Control System
ST 0107-1	Hydraulic Power Pack
ST 0108	Digital Data Acquisition & Control System
ST 0109	Software
ST 0110	Jaw faces for flat samples
ST 0111	Jaw faces for round samples
ST 0112	Computer & Printer

Extensometer

ISO 6892-1, 527-2, 527-4, 527-5, 10113; ASTM E8, E9, D3039, D638, A370, D3552, E517, E646

DESCRIPTION:

Extensometers used for measuring the extension of specimens in traction, particularly in the case of steel and brittle materials, are only able to detect strain during the first stage of the test, or rather, while the brittle materials conserve their elasticity as they have to be disconnected before failure. This simple and economic system fully satisfy these requirements because:

- It is applied directly to the specimen
- It remains connected until breakage
- It measures extensions with high precision of both elastic and plastic stage and with the appropriate simple adjustment, it is connectable to almost all testing machines.

The extensometers are basically made by 2 clamping devices and a middle tubular steel part determining the gauge length of 200 mm.

TECHNICAL SPECIFICATIONS:

Models	ST 0113	ST 0114	ST 0115
Measuring range dia. Min/Max	16 - 40	4 - 26	6.35 - 15.2
Base length	200 mm	200 mm	600 mm
Transducer travel	75 mm	50 mm	50 mm

MAIN FEATURES:

- Applied directly to the specimen up to the failure
- Measures extension of both elastic and plastic stage
- High precision electronic transducer
- 2 model dedicated to rebars
- 1 model dedicated to strands

ORDERING:

- ST 0113**
Coaxial electronic extensometer for round specimens from 16 to 40 mm dia.
- ST 0114**
Coaxial electronic extensometer for round specimens from 4 to 26 mm dia.
- ST 0115**
Coaxial electronic extensometer to measure the elongation of strand wires up to failure.



REPRESENTATIVE

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Line

