GEOTECHNICAL
TESTING EQUIPMENT

THE BEST IN TEST

CEMENT

CATALOGUE 2019

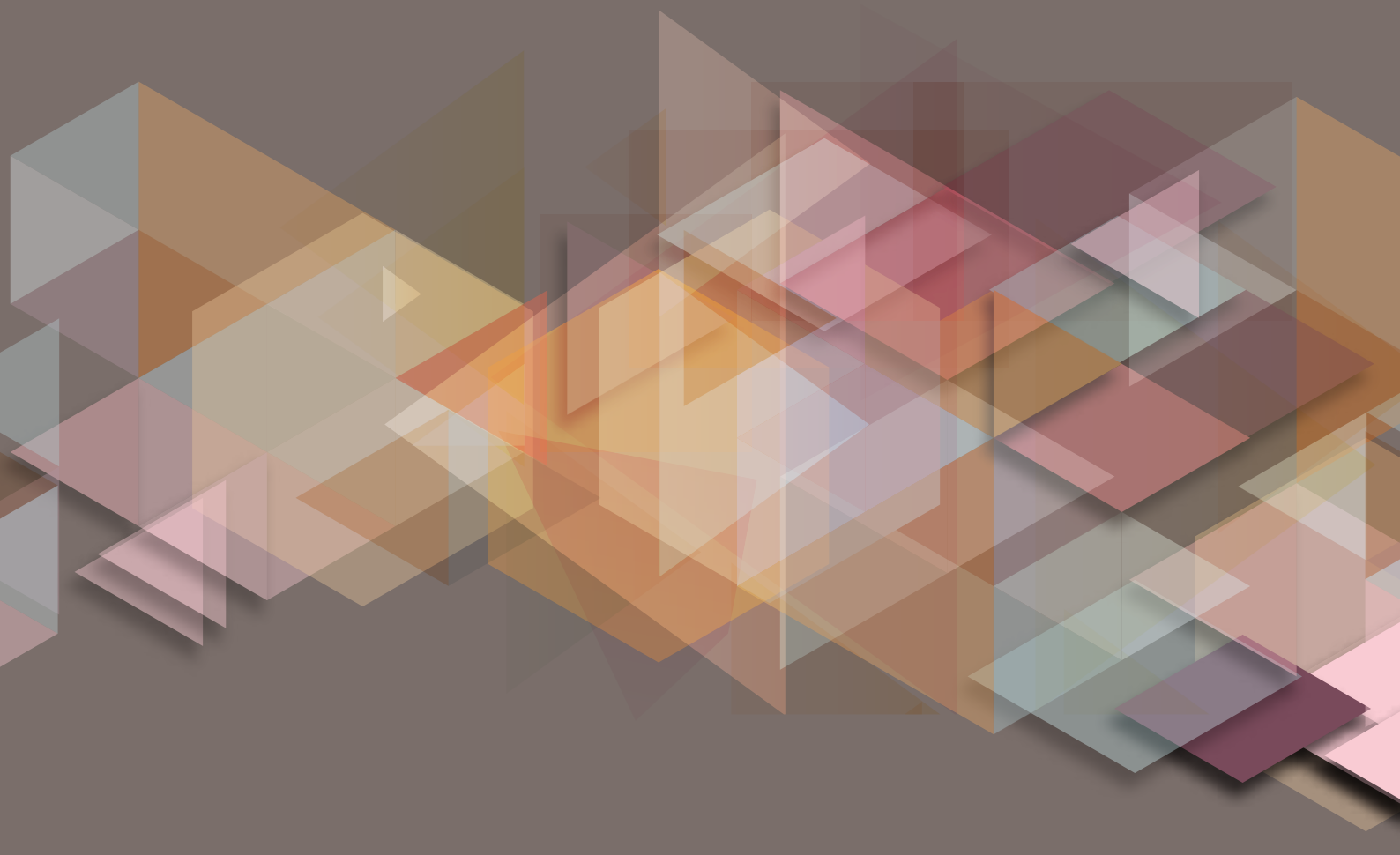
Cement

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, waterproofers, 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

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

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

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

TECHNICAL SPECIFICATIONS

Dimensions	220x170x470 mm
Weight (approx.)	8 kg

Automatic Blaine Apparatus

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

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.

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.

TECHNICAL SPECIFICATIONS

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

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

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

TECHNICAL SPECIFICATIONS

	Weight (approx.)
Le chatelier mold	0.9 kg

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 insulted 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

ORDERING:

CM 0107
Le Chatelier Water Bath

ACCESSORIES:

CM 0107-1
Removable rack

CM 0107-2
Stainless Steel cover

TECHNICAL SPECIFICATIONS

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

Le Chatelier Flask, Specific Gravity

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

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).

ORDERING:

CM 0108
Specific Gravity le Chatelier Flask

TECHNICAL SPECIFICATIONS

Dimensions	100x100x300 mm
Weight (approx.)	0.1 kg

Cement Flow Table

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

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.

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

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

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

ORDERING:

CM 0113
Vicat Apparatus complete set.

ACCESSORIES:

CM 0113-1
Initial Set Needle 1.13 mm dia., EN
CM 0113-2
Final Set Needle 1.13 mm dia., EN
CM 0113-3
Initial Set Needle 1 mm dia., ASTM
CM 0113-4
Vicat Mold, EN
CM 0113-5
Vicat Mold, ASTM
CM 0113-6
Vicat Thermometer
CM 0113-7
Glass Plate
CM 0113-8
Concistency Plunger

Automatic Vicat Apparatus

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

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

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

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 seperatly 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 loger

Water Retention Apparatus

ASTM C91; ASTM C110

DESCRIPTION:

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

Two Models available:
One fitted with aspirator pump and analog vaccum gauge with regulator

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

ORDERING:

CM 0121
Water Retention Apparatus with aspirator pump vaccum regulator.

CM 0122
Water Retention Apparatus with vacuum pump digital vacuum regulator .

TECHNICAL SPECIFICATIONS:

Weight	8 kg
	230 V/50-6 0Hz/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 Aparatus

TECHNICAL SPECIFICATIONS:

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

Autoclave Apparatus

ASTM C151; ASTM C141; AASHTO T107

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 comparment, 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)

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	

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

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

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.

MAIN FEATURES:

- It can opperate 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

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

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

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

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

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.

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

TECHNICAL SPECIFICATIONS:

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

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

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

DESCRIPTION:

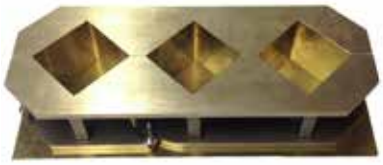
The Three Gang Cube Mold is manufactured of cast iron all internal surfaces are machined. All the dimensions and specifications comply with the related standards.

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



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

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

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.

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

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

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.

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

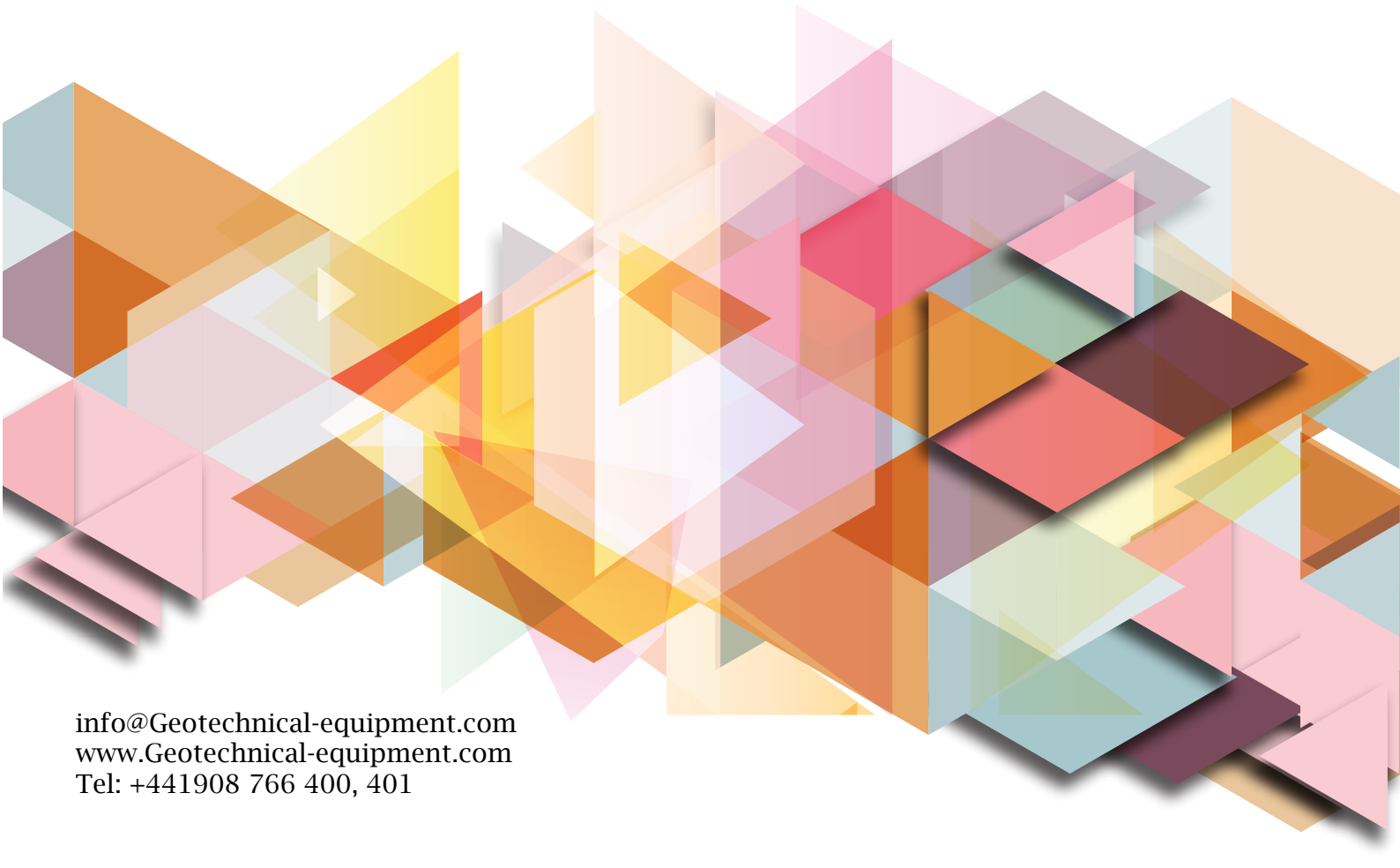
ACCESSORIES:

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



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