

ESTEEM INDUSTRIES INC.

CEMENT / CONCRETE TESTING EQUIPMENT

CEMENT AUTOCLAVE(LABORATORY)



ESTA-CA101.CEMENT AUTOCLAVE

We are engaged in manufacturing and supply of quality laboratory cement autoclaves that are suitable for conducting accelerated soundness tests on cements or the autoclave expansion test. These tests require constant steam pressure with the correspondent constant pressure.

It comes with stainless steel (21 KG/CM.SQ. PRESSURE)

The autoclave is suitable for conducting accelerated soundness tests on cements or the autoclave expansion test requiring constant steam pressure with the correspondent constant pressure. It consists of a stainless steel cylinder with a welded heat insulated voer, mounted on a sturdy supporting frame, enclosed in a heat insulated metal housing, attractively finished. The attached control unit encloses a sensitive pressure regulator and pressure gauge, power switches and pilot lights for controlling the electric heating units. Inside Chamber Dimensions - 10.5cm diameter x 40.5cm height suitable for operation on 230 V, 50 Hz, Single Phase, A.C. supply. Supplied complete with Test bar holder, special rack to hold specimens above water level in the autoclave and in a vertical position to expose them in the same manner.

FEATURES :

The system is specially designed for conducting expansion tests on cements.

The autoclave consists of a high-pressure steam vessel with internal dimensions 154 mm dia. x 430 mm high to accept a rack for holding 10 specimens.

It is complete with pressure gauge, pressure regulator, temperature regulator, control switches, safety valve, and specimen rack.

The expansion measurement has to be performed with a suitable length comparator. See accessories.

- Heater: 2600 W
- Overall dimensions: 450x475x1080 mm

- The cement autoclave comprises of a stainless steel cylinder with a welded heat insulated voer, which is mounted on a sturdy supporting frame, confined in a heat insulated metal housing
- The attached control unit holds in a sensitive pressure regulator, pressure gauze, power switches and pilot lights that are used to control the electric heating units
- We offer laboratory cement autoclave complete with test bar holder, special rack to hold specimens above water level in the autoclave and in a vertical position to expose them in the same manner

TECHNICAL SPECIFICATIONS :

- Inside chamber dimensions are - 10.5cm diameter x 40.5cm height
- The device is suitable for operation on 230V, 50Hz, Single Phase A.C. supply

ESTA-BA 101 ESTEEM BLAINE'S APPARATUS



The ESTA-BA 101 Blaine's apparatus is used for determining the fineness of cement in terms of specific surface expressed as total surface area in square centimeters per gram of cement. This is a variable flow type air permeameter. It consists of a stainless steel cell, perforated disc and plunger.

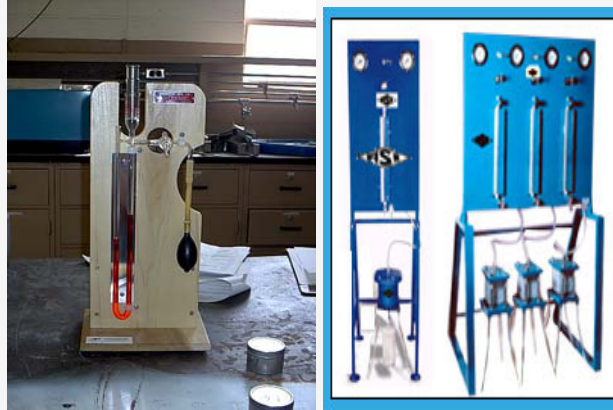
The ESTA-BA 101 Blaine apparatus is used to determine the specific surface area of cements, as well as to her powdery products. The Blaine value (or the specific surface are, unit: cm^2/g or m^2/kg) is related to the fineness of cement or other powders. The greater the Blaine value, the finer the cement. It is an index to evaluate the grinding effort in cement plant and the properties of cement in the. The method applied determine the fineness of cement or other products by measuring the elapsed time for a given quantity of air to pass through a compacted bed of cement. The accurate measuring of the elapsed item plays and important role in the test. Advantages of ESTA-BA 101: for the operator)- simplicity/user friendliness; no calculation needed no use of monograph, the machine do it for him; several using mode, simple, double and quadruple test; and possible to work with variable porosity an easy way; (for the manager) - totally conform to the standards: perfect repeatability and tractability of there result;

impression and RS232 exportation; code protected modes; the machine indicate when it is necessary to redo the calibration as requested in the standard automatic calculation of the temperature correction; and (for maintenance)- special diagnostic mode; and automatic calculation of the K for the calibration

SALIENT FEATURES

- **Specifications** : The apparatus consists one each of permeability cell 12.5mm I.D., Manometer 'U' type mounted on stand with a built in stop cock, Perforated disc, Plunger Rubber stopper, Rubber tube 30cm long. Packet of 12 filter paper discs and a bottle of 100cc dibutyiphthalate liquid.
Spares and Accessories:Punch to cut filter paper discs. Non-perforated disc. Suction bulb

AIR PERMEABILITY APPARATUS(CELL)



The design of concrete mix is aimed at maximum durability for the conditions prevailing at the site where it is to be used. Ability to resist the flow of water through, is one of the important durability characteristics. The permeability is determined on cement, mortar and concrete specimens, either cast in the laboratory or obtained by cutting out cores from existing structures.

CONCRETE PERMEABILITY THREE CELL MODEL

The permeability is determined on cement, mortar and concrete specimens, either cast in the laboratory or obtained by cutting out cores from existing structures. Each cell is made of steel and provided with a top plate and funnel at the bottom having gasket seals held in position through bolts and nuts. Each test stall has its own control system, operating pressure gauges and valves. The multi-unit Permeameter are so designed that all tests can be performed at the same time using either the same head or varying head pressure as each test stall is provided with its own pressure regulator and control. The control instruments are mounted on a sturdy welded structural stand. All multi - units are provided with end pressure gauges. Each unit is provided with chamber pressure gauges of 0-20 kg/cm² and test pressure gauge of 0-15 kg/cm². Pressures are applied using any available pressure line at the site or a 150PSI Electric Air Compressor. The Air Compressor is Suitable for operation on 220V, 1Ph, 50Hz AC Supply.

SALIENT FEATURES

- The apparatus consists of brass or gun metal cell of squares cross-section mounted on a stand.
- A pressure chamber is connected to the cell through copper tubing and a T-connector is mounted on the stand with sleeve packed valve and rubber hose pipe with end connections.
- The entire cell unit consists of one base plate, one metal funnel and one top plate.
- There is a pressure chamber, which is fitted with a pressure regulator that helps in regulating the pressure from 0 to 15 kg/sq. cm. n There is a gauge for indicating the pressure in the cell.
- The apparatus is supplied with a foot pump and a pressure tube to develop pressure in the chamber.
- Also provided with a measuring cylinder of volume 500cc to measure percolated quantity of water. Pressure can also be applied by a pressure air line or by a compressor.

ACCESSORIES :

- Compressor with pressure gauge 0-20 kg/cm sq. with automatic pressure valve and pressure rubber hose.

Suitable for 440 volts A.C. three phase.

Specimen casting mould C.I. for 100 mm dia x 100mm high cylinders.

Specimen casting mould C.I. for 150mm dia x 150mm high cylinders.

Specimen casting mould C.I. for 150mm cubes.

Blow stove 1/2 litre capacity.

Resin

Bees wax

Wire brush

Chissel

Spare glass cylinder 500 cc capacity.

AIR ENTRAINMENT METER



ESTA-AM101 ESTEEM AIR ENTRAINMENT METER

As Entertainment of air in limited percentage improves durability of concrete and very low percentages deteriorate it, measurement of air entrapped in freshly mixed concrete becomes important. The use of chemical additices to increase workability of concrete requires an air content check to be made. Air Entertainment meters are used to determine air entertained in freshly mixed concrete by pressure method.

SALIENT FEATURES

SPECIFICATIONS :

The apparatus consists of a pressure tight flanged cylindrical measuring bowl of 0.005 cubic meter capacity for maximum size of aggregate 38mm. The bowl is fitted with a removable flanged conical cover assembly with the help of a seal. The conical cover has an air valve and a pet cock for bleeding off the water. A transparent cylindrical stand pipe which is graduated in air content is fixed to the conical cover assembly. Pressure is applied to the specimen with the help of a pressure bulb and the pressure is recorded on the pressure gauge which is mounted on the stand pipe. The whole assembly is mounted on a flat base. The instrument is supplied complete with one each following accessories. Calibration cylinder with spring clamp, Trowel, Tamping rod, Straight edge, Rubber mallet and measure.

CAPPING SET VERTICAL



ESTA-CS101 ESTEEM CEMENT CAPPING SET

For capping compression cylinder specimens. This apparatus can be used both in the laboratory and in the field. The specimens capped in this apparatus have plane parallel faces.

• SPECIFICATIONS

For cylinders 150mm dia x 300mm long. Consists of a base with an upright. The upright serves as a guide for positioning the capping plate and the cylinder. The 19mm thick capping plate is machined accurately. There is a recess in the plate for keeping the molten capping compound and to position cylinder. Complete with cylinder carrier and ladle.

CYLINDER CARRIER : For carrying the concrete cylinders in the laboratory and in the field. Double handles make it easy to hold the cylinder during capping operations. Complete with snap clamp and cushioning lining. Can be used both for 15cm dia and 10cm dia cylinders.

CAPPING MOULD : For capping the concrete cylinders, it consists of an accurately machined plate with a recess for 15mm dia specimen.

WARMER : An electrically heated and thermostatically controlled bath for melting the capping compound. Supplied with cover and handle. Suitable for operation on 230 Volts A.C. single phase.

CAPPING COMPOUND : Used for Capping the ends of concrete cylinders to be tested.
Available in packs of 5 kg.

BOWL & LADLE : Metallic bowl is used to carry the capping compound and ladle is used to pour molten capping compound into the grooves between specimen and capping plate.
Supplied as set.

CEMENT SAMPLER



This is a brass tube approximately 53cm long and 2.8cm I.D. with a wooden handle. Total length approximately 73cm. The tube has the sharp angular edge which conveniently pierces cement bags. An air hole of approximately 3mm dia is drilled on the near handle. Total sample collected at one time is 300cm³ approximately.

SALIENT FEATURES

- It consists of two brass concentric tubes with slots.
- The inner slot rotates to close the slot and collect sample.
- The sampler is approximately 53 cm long and 2.8 cm wide provided with a wooden handle.
- The tube has a sharp angular edge, which easily pierces cement bags.
- An air hole of approximately 3 mm diameter is drilled near the handle.
- The total sample collected at a time is approximately 3 litres.
- The sampler has diameter of 40 x 1500 mm and its weight is 5 kg.

APPLICATIONS

- Cement plants
- Concrete industry
- Mineralogical analysis of lab samples
- Research & development

BALL MILL



This is a very useful equipment designed to grind and mix wet or dry cement or ceramic materials. Having wide applications in various industries, the ball mill is easy to use. Ball Mill is used to pulverize, grind and mix wet or dry ceramic, cement or any other materials.

SALIENT FEATURES

- Complete with guard, motor and built-in motor switch, the unit is safe, self-contained and easy to use.
- Ball mills have a capacity up to two one-gallon jars. The ball permits easy production of studio batches and study of industrial techniques.
- There are rollers that are rubber-covered for their entire 24" length, quiet, smooth running.
- There are special hard porcelain jar mills that rotate smoothly on rollers, thus providing even blending.

APPLICATIONS

- Grinding Ores
- Pharmaceutical Industry
- Chemical Industry
- Cosmetics Industry
- Ceramic Industry
- Color Industry
- Dyestuff Industry
- Food Products
- Pesticides
- Fertilizers
- Spices
- Detergents
- Insecticides
- Plastic Industry
- Resins Industry

CEMENT TENSILE TESTING MACHINE



Available in both hand-operated and electrical types, the equipment is commonly used in construction industry for testing the tensile strength of cement. The machine is mainly used to conduct **tensile strength** examination of **cement**. The tensile testing method allows tensile strength determination of a hydraulic cement mortar by casting and testing cement briquette specimens.

TYPES

Cement tensile testing machines are mainly of two types depending on their mode of operation :

- Hand operated Tensile Strength Tester
- Electrically operated Tensile Strength Tester

SALIENT FEATURES

- The hand operated cement tensile testing machine has automatic loading system by lead shots.
- The machine is suitable for tensile test of cement up to 540 kg.
- The equipment is provided with a Brass briquette mould with base plate and lead shots.
- The hand operated machine is also supplied with two calibrated scales.
- Electrically operated tensile tester uses an accurate, friction free, double lever loading system. The load is applied by means of sliding weight on the top lever.
- The capacity of the unit is 900 kilograms.
- Provided with a micro-switch, which stops the machine immediately on failure of the briquette.
- The equipment can be used for subsequent tests only after the sliding weight is adjusted to its zero position.
- The machine is suitable for operation on 230 volts, 50 cycles, single phase A.C. supply.

APPLICATIONS

- Cement Plants
- Construction Industry
- Conducting tensile test of Veneer
- Conducting tensile test of asphalt waterproof material
- Rubber Industry

COMPACTION FACTOR APPARATUS



An extremely useful instrument used in cement plants, ceramic industry, mining etc, for testing concrete mixes of very low workability. Compaction Factor Apparatus is a useful tool for testing concrete mixes of very low workability such as those normally used when concrete is to be compacted by vibration. The apparatus is used for determining the workability of fresh concrete, provided the maximum size of the aggregate does not exceed 38 mm.

SALIENT FEATURES

- The apparatus consists of two rigid conical hoppers and a cylinder installed on a rigid metal frame.
- Provided with a circular metal plate to cover the top of the cylinder.
- The lower opening of the hoppers are fitted with hinged trap-doors having quick release catches.
- The apparatus is supplied complete with one plaster's trowel and one tamping rod, whose one end is rounded.
- The inside surfaces of the apparatus are machined smooth.
- The whole apparatus is furnished in hammertone spray.

APPLICATIONS

- Cement Industry
- Ceramic Industry
- Construction (Roads, Bridges, Buildings, Dams, etc.)
- Mining
- Research & Development

COMPRESSION TESTING MACHINES



Available in hand-operated and electrical types, the machine is very useful for carrying out compression tests on concrete specimen of various diameter. The machine is used to conduct compression tests on concrete specimen up to 20 cm diameter and 30 cm height, by applying some load on it. One of the very important aspect that needs to be considered during construction is the strength of concrete. Strength of concrete is determined by crushing the specimen in the form of cubes or cylinders. Concrete is carefully designed for a particular compressive strength by engineers and specimen is tested in a compression testing machine.

TYPES

Compressing testing machines are mainly of two types :

- Hand Operated
- Electrically cum Hand Operated

SALIENT FEATURES

- Generally, a compression testing machine consists of a load frame with suitable platens and a pumping unit with pressure gauge, either hand operated or electrically-cum-hand operated.
- Load Frame and pumping unit are connected by pressure pipes.
- There are different models of compression testing machines available in the market.
- Hand operated machine is a compact and self contained, designed for portability, operating convenience and accuracy.
- Portable unit is ideally suited for mobile and field laboratories.
- The electrically operated machine has a hydraulic jack that is fixed to base.
- It is provided with a motorized driving unit.
- The electrically operated machine is fitted with a hand wheel control, which enables the rate of application of load to be varied. The machine is equipped with facilities for hand pumping in case of power failure.
- Generally, the machine meets the essential requirements of various Indian, British & American standards for compression tests.

APPLICATIONS

- Cement & Concrete Testing
- Compression testing of large pipes
- Compression testing of mattresses
- Compression testing of car seats
- Compression testing of packing crates
- Construction industry

CONCRETE TEST HAMMER1



It is a hand-held equipment for conducting the non-destructive quality testing of hardened concrete and other structural components. The **concrete** test hammer is the most widely used method globally for non-destructive testing of concrete and structural components. It is a hand held equipment for testing the quality of hardened concrete in a structure. On newly built structures, the equipment is used to give an indication of the gain in concrete strength, once the concrete has hardened. It can be used on existing structures to get an estimate of the uniformity of the concrete. Test hammer is available in **Small** as well as **Big** size. A digital concrete test hammer is also available

SALIENT FEATURES

- The small size test hammer consists of a barrel. The barrel has a hammer fitted within it, which in turn is attached to an impact spring that slides on a guide bar.
- There is a plunger attached to the guide bar that is pressed against the surface to be tested.
- Provided with a rider on a calibrated scale, which indicates the extent of rebound of the hammer mass, on reaching the compressive strength.
- There is a lock button fixed on the body of the hammer that locks the rider in place and the rider can also be reset to zero position by using this button.
- The instrument is supplied with a grinding stone for polishing the test surface and the entire instrument comes in a carrying case.

- The big size test hammer is mainly used for testing concrete with bigger size aggregates and for concrete roads testing.
- The instrument is provided with two handles, which can be attached to the body of the test hammer for easy conduction of the test.
- The plunger of the bigger concrete test hammer is wider.

WORKING PRINCIPLE

The test hammer works on the principle that the rebound of an elastic mass that impacts on a surface is a function of the hardness of the surface itself. Hence the harder the surface, the greater is the rebound impact.

APPLICATIONS

- Concrete Testing
- Construction (bridges, buildings, etc.)
- Testing of slabs, beams, columns, etc.

CONCRETE TEST HAMMER.2



ESTA-CT101 ESTEEM CONCRETE TEST HAMMER

The concrete test hammer is an instrument which is easy to use, for quick and approximate measurement of the resistance to pressure of manufactured concrete products. The principles on which it works are based on the rebound impact of a hammer on a piston which rests against the surface of the concrete products. The Greater the resistance of the concrete, greater is the rebounded impact. By reading this rebound impact on a scale and relating it to curves on graphs supplied with the instrument, the resistance to compression in MPa or PSI can be found, with 20% of actual.

SALIENT FEATURES

Specifications : Consists of a barrel in which is housed a hammer mass attached to an impact spring which slides on a guide bar. A plunger is attached to the guide bar which is pressed against the surface to be tested. As the piston is pressed against the surface to be tested, on reaching the compressive strength, the hammer mass is released and rebounds to a certain extent (according to the strength of the surface) which is indicated by a rider on a calibrated scale. A lock button fixed on the body of the hammer locks the rider in place and the rider can be recared to zero position by using the same button. The equivalent compressive strength can be computed from the chart supplied. Each hammer is calibrated against at standard test hammer, and is suitable for specimen of compressive strengths 100 - 700 kg/cm. The instrument, complete with a grinding stone for polishing the test surface, is supplied in carrying case.

CUBE MOULDS



Available in various sizes, these moulds are employed to examine the strength of ordinary and fast hardening Portland cement, low heat Portland cement and some classes of lime. **Cube moulds** are used to determine soundness of ordinary and rapid hardening Portland cement, low heat Portland cement and class A limes. They are mainly used for molding purposes.

SALIENT FEATURES

- Moulds are available in different size and are made according to Indian and British standards.
- For the metric size cube moulds, the faces are machined flat to 0.02mm accuracy and finished to within 0.02mm.
- For the inch size moulds, the faces are machined flat to 0.01 inches and finished to within 0.01 inches.
- All types of moulds are supplied complete with base plate.

Moulds are generally made of :

- Cast Iron
- Mild Steel

AVAILABLE SIZES

Different sizes of cube moulds available with their specifications are:

- Steel Cube Mould of size 7.06 cm for vibrating machine complete with base plate.
- Cast Iron Mould of size 7.06 cm, complete with base plate.
- Cast Iron Cube Moulds complete with base plate Size 5cm x 5cm x 5cm.
- Cast Iron Cube Moulds complete with base plate Size 10cm x 10cm x 10cm.
- Cast Iron Cube Moulds complete with base plate Size 15cm x 15cm x 15cm.
- Cast Iron Cube Moulds complete with base plate Size 20cm x 20cm x 20cm.
- Mould gunmetal, for 50mm, Cube

APPLICATIONS

- Cement & Concrete industry
- Lime industry
- Construction (Buildings, dams, bridges, etc.)
- Calibration laboratories/ Test houses
- Mining

DENSITY BASKET



It is a bucket shaped container made of brass. The apparatus is designed for measuring the specific gravity of aggregates, bituminous mixtures and other materials. **Density basket** is a container that is used for measuring the specific gravity of aggregates as well as compacted and uncompacted bituminous mixtures and aggregates; and other materials. The basket can also be used to conduct density test on aggregates.

SALIENT FEATURES

- Generally, density basket is made of brass and is provided with stainless steel wire mesh.
- The apparatus is ruggedly constructed with wire mesh arrangement and have approximately 20 cm diameter and height 20 cm.
- The basket is provided with a handle.

APPLICATIONS

- Construction (Roads, bridges, buildings, dams, etc.)
- Cement Industry
- Ceramic Industry
- Agriculture
- Mining
- Research & Development
- Calibration Laboratories

FLEXURE TESTING MACHINE



The machine finds wide application

in almost all type of construction work and is mainly used for testing the flexural strength of mortar and concrete specimens. The machine is used to test the flexural strength of mortar and concrete specimens. Testing flexural strength of concrete beams is very important during all types of construction.

TYPES

There are mainly two types of Flexural Testing Machines :

- Hand operated
- Electrically operated

SALIENT FEATURES

- The hand operated flexural testing machine consists of a hand operated load frame.
- There are two rollers in the lower platen, the distance between whom can be adjusted.
- The center to center difference between the two rollers varies according to size of the beam.
- There is a pressure gauge fixed on the load frame to indicate load.
- There is also a small pumping unit attached to the load frame.

- The hand operated machine is light weight and can also be used in field laboratory.
- The electrically operated machine has a separate electrically cum hand operated pumping unit housed in a cabinet.
- The machine has a motorised load frame, with a constant rate of strain to supply load on the specimen.
- In the electrically operated machine, there is a pressure gauge, an on/off switch and a slow/fast level to control rate of loading. All these are attached to the front panel of the pumping unit.
- A micro switch and relay are also attached inside the pressure gauge to protect the unit from over loading.

APPLICATIONS

- Road Construction
- Building Construction
- Ceramic Industry
- Concrete Industry
- Flexural testing of Polymers
- Flexural testing of Wood composites
- Chemical Plants

FLOW TABLE



It is a multi-purpose table designed for determining the flow of concrete cement. It is also available as hand-operated and electrically operated types. **Flow tables** are used for different purposes. They can be used to determine the flow of cement and concrete. They can also be used to determine the workability of building limes and for measuring the consistency of Pozzolanas and also cement mortar and hydrated lime.

TYPES

Depending on their working principle, Flow Tables are generally of two types:

- **HAND OPERATED FLOW TABLE**

- This type consists of finely machined brass or steel table top of about 30 inch diameter.
- There are integral cast ribs designed for support and strength of table top.
- The stand of the table is fabricated out of cast iron and is of sturdy construction.
- There are holes for mounting in foundations that are drilled in the base plate.
- There is a ground and hardened steel cam, which is designed to lift and drop the table by 12.5 mm.
- Provided with hand wheel, which makes operation of the table simple and easy.
- Provided with one conical mould with handles of different specifications.
- Also provided with a tamping rod.

- **MOTORIZED FLOW TABLE**

Specifications of the motorised flow table are same as that of hand operated. But this type is fitted with a electric motor, which is connected to the cam shaft through a reduction gear to give approximately 100 rpm. It is electrically operated to raise and drop the table top approximately 15 times in 15 seconds. It is suitable for operation on 230 Volts, 50 cycles A.C. supply.

APPLICATIONS

- Cement Plants
- Building Construction
- Bridge Construction
- Aggregate & Concrete Testing
- Mining

LE CHATELIER FLASK



It is a glass flask meant for determining the specific gravity of powdered materials like lime, slag and hydraulic cement. The apparatus is widely used in construction, for aggregate testing, etc. Used for finding specific gravity of Hydraulic Cement. Made from Borosil glass. The flask is 243mm in total height, having a bulb of 90 mm dia of 250ml approximate capacity. The long neck of the flask has at top a funnel of 50mm dia in which fits a ground glass stopper. The neck has over-all 11mm I.D. upper portion is graduated from 18 ml to 24ml with 0.1ml graduation. Just at the bottom of the neck 1ml capacity is marked in between there is 17ml capacity bulb.

This apparatus is used to determine **specific gravity** of powdered materials like limes, slag and hydraulic cement. This flask can be used to find out bulk and apparent specific gravity of limes, cement, etc. It can also be used to find absorption of fine aggregates.

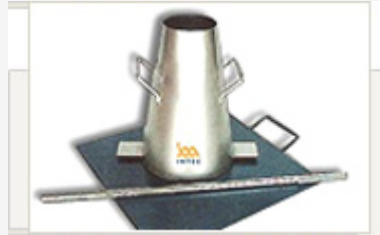
SALIENT FEATURES

- The flask is made from Borosil glass.
- The flask has a total height of 243 mm, having a bulb of diameter 90 mm. Its approximate capacity is 250 ml.
- The long neck of the flask has a funnel at top of diameter 50 mm, which is fitted with a ground glass stopper.
- Neck of the flask is graduated from 0 to 1 ml and from 18 to 24 ml. The flask is accurate to 0.05 ml.
- The bulk specific gravity is determined on the basis of weight of saturated surface-dry aggregates.
- Just at the bottom of the neck where 1 ml capacity is marked, there is a bulb in between of capacity 17 ml.

APPLICATIONS

- Cement & concrete industry
- Construction industry
- Test houses
- Aggregate testing
- Research & development

SLUMP CONE TEST APPARATUS



The apparatus consists of a slump cone, with handles and foot pieces. It is a useful equipment of construction industry for determining the compactness of freshly mixed concrete. The apparatus is used to determine the compactness of freshly mixed concrete. Slump test is conducted on concrete mixes, where the maximum size of aggregates does not exceed 38 mm.

SALIENT FEATURES

- The apparatus comprises of a slump cone along with handles and foot pieces.
- There is a octagonal shaped base plate having two clamps, to which is attached the foot pieces.
- The base plate is provided with lifting handles for ease of transportation.
- Provided with a chrome plated steel tamping rod, which is long and rounded off at one end. The rod is graduated in millimeters.

ACCESSORIES

Consists of a slump cone of upper diameter 10 cm, bottom diameter 20 cm and a height of 30 cm.

APPLICATIONS

- Ceramic Industry
- Concrete Testing
- Construction (Buildings, dams, bridges, roads, etc.)
- Cement Industry

VIBRATING TABLE



It is a motor-driven equipment used to compact cylinders and cubes. The machine is perfect for compacting cement concrete during casting specimens for compression testing. **Vibrating table** is used for compacting cylinders and cubes. Proper compaction of cement concrete is very important while casting specimens for compression testing to achieve a better and more consistent mixture. Vibrating table is ideally suited for this purpose.

SALIENT FEATURES

- The table top usually has a measurement of 500 mm x 500 mm and has stops along its edges to prevent moulds from sliding off the table during operation.
- The apparatus consists of a motor fitted with pulley of variable pitch that is mounted housed in a closet.
- Vibrations are imparted in the table by means of off-balance masses that rotates on a shaft of a vibrator clamped to the underside of the table top.
- Provided with a adjustable cross arm on a vertical rod at the center of the table to hol

the moulds while operating the table.

- The variable pitch pulley arrangement permits the frequency to vary consistently between a maximum of 3600 vibrations per minute.
- Provided with a speed regulation handle for increasing or decreasing the frequency.
- A switch is also provided for starting the motor.
- It is suitable for operation on 440 volts, 3 phase, 50 cycles, A.C. supply.
- The table is designed for carrying a load of 140 kg.

APPLICATIONS

- Densification of Bulk Materials
- Vibration or Fatigue Testing
- Shake Outs
- Unloading Materials
- Food Processing
- Consumer Products
- Concrete & Aggregate
- Steel
- Plastics
- Foundry
- Chemicals
- Aerospace
- Construction

VICAT NEEDLE APPARATUS



It is an important instrument of cement and concrete industry designed for testing the normal consistency and setting time of cement and high grade limes. **Vicat needle apparatus** is used for determining the normal consistency and setting times of cement and top grade limes. This instrument is must in any cement testing laboratory as it establishes an alternative method for determining initial and final set of cement paste.

SALIENT FEATURES

- The instrument comprises of a metallic frame, which has a freely movable rod with a cap mounted at its top.
- The apparatus is provided with a split type vicat mould of 70 mm diameter at the base, 50 mm at the top and 40 mm high, a glass base plate; a consistency plunger and a set of one each initial and final needles.

APPLICATIONS

- Cement Testing
- Concrete Testing
- Highway Material Testing

DEMOUNTABLE MECHANICAL STRAIN GAUGE



ESTA-DM101-ESTEEM DEMOUNTABLE MECHANICAL STRAIN GAUGE

The ESTA-DM101 demountable mechanical strain gauge (DEMEC) was developed to enable strain measurements to be made at different parts of a structure using a single instrument. The ESTA-DM101 DEMEC consists of a standard or a digital dial gauge attached to an Invar bar. 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. The pivoting movement of this second conical point is measured by the dial gauge.

SALIENT FEATURES

- **Specifications** : This portable gauge is designed for a gauge length of 20cm. of the reference pins. The deformation is indicated by a 0.002 x 10mm dial gauge attached to the instrument. Complete with two standard bars for 20cm gauge length supplied in a wooden-case.

Accessories : Reference pins in packet of 10 Nos.

FLEXURE TESTING MACHINE (MOTORISED) RILEM - CEMBUREAU TEST



ESTEEM FT101 ESTEEM FLEXURE TESTING MACHINE

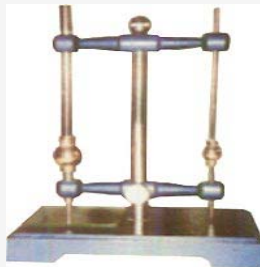
It is used for testing 40mm x 40mm x 160mm mortar specimens for flexural strength. (Rilem Cembureau Test) by single point loading. It is a motorized, mechanical unit. The speed is adjusted so that the load increase on the specimen is between 4 to 6 kg/sec. A flexure test attachment for keeping the specimen in position is also supplied. This consists of two rollers 10mm. diameter and spaced 100mm apart, and a third roller of the same diameter equidistant from the first two and for transmitting the applied load to the opposite face of the prism. The unit is for operation on 230 Volts, single phase, 50 cycles A.C. supply. Loads are measured on a proving ring fitted with a sensitive dial gauge. Supplied without proving ring.

Accessories: Proving ring, capacity 500 kN. It is used for testing 40mm x 40mm x 160mm mortar specimens for flexural strength. (Rilem Cembureau Test) by single point loading.

SALIENT FEATURES

Specifications : It is a motorized, mechanical unit. The speed is adjusted so that the load increase on the specimen is between 4 to 6 kg/sec. A flexure test attachment for keeping the specimen in position is also supplied. This consists of two rollers 10mm. diameter and spaced 100mm apart, and a third roller of the same diameter equidistant from the first two and for transmitting the applied load to the opposite face of the prism. The unit is for operation on 230 Volts, single phase, 50 cycles A.C. supply. Loads are measured on a proving ring fitted with a sensitive dial gauge. Supplied without proving ring.

GILLMORE NEEDLE APPARATUS



This instrument is used for determining the time setting of hydraulic cement.

SALIENT FEATURES

- **Specifications** : A base with a vertical shaft and two horizontal arms. The lower arm is adjustable for height. 1 No. Initial Needle 1/12 inch dia 1/4 lb.wt. 1No. Final Needle 1/12 inch dia. 1lb.wt. 1No. Glass base plate. Complete as above.

KELLEY BALL PENETRATION APPARATUS



The apparatus is used to determine the workability of Portland cement concrete. The Kelly Ball test is considered to be simple and much faster than the slump test. Twice the Kelly Ball reading approximately equals the slump.

SALIENT FEATURES

Specifications : It consists of a cylinder with a ball-shaped bottom and handle, together weighing 15 kg. A strip frame, guides the handle and serves as a reference for measuring the depth of penetration. The handle is graduated in MM. Penetration can be recorded to the nearest 0.5mm.

LABORATORY CONCRETE MIXER



Concrete mixer laboratory type, electrically operated. Designed to remove the burden- some work of hand mixing. Uniform thoroughly mixed batches can be produced. The counter balanced drum is easy to tilt 1.1/2 to 2cu.ft.mix. The total drum volume is however 3cu.ft. Mounted on a sturdy rubber tyred stand, and the drum is mounted for end discharge and equipped with end towing pole. Equipped with 1/2 h.p. electric motor. Suitable for operation on 220/230 volts A.C. single phase.

LATERAL EXTENSOMETER



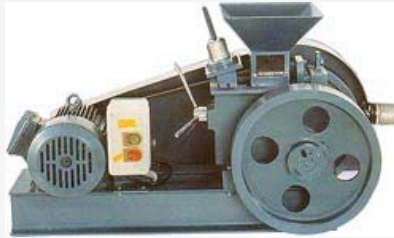
This is for determining the lateral extension of 15cms dia x 30cm high cement concrete cylinders while testing them under compression. The extensometer consists of two movable frames pivoted at one end. A dial gauge measures the lateral extension, and a removable spacer strip is for the initial setting of the dial gauge. Mounting extensometer on the specimen is with help of screws. Supplied complete, with a dial gauge 0.002mm x 10mm in a wooden case.

Esteem lateral extensometer is described by which the lateral strain occurring in a cylindrical rock specimen subjected to a linear axial compressive load in a compression test, can be read or recorded continuously up to the point of fracture of the specimen. The lateral extensometer has been designed to operate in conjunction with a compressometer (described in a previous article) which measures the axial strain occurring in the specimen. The measuring element used in the lateral extensometer is a linear variable differential transformer and deformations of the specimen of the order of 1 μ m. can be measured. The instrument has been designed in such a way that it suffers no physical damage when the specimen, to which it is attached, fractures.

SALIENT FEATURES

Specifications : The unit consists of two movable frames pivoted at one end. The extensometer is fixed to the specimen with the help of tightening screws. The lateral extension is indicated on a dial gauge of 0.002mm x 12mm travel. The extension is magnified 2.5 times and the dial gauge readings are to be divided by 2.5 to get the exact readings. A spacer strip is provided to initially set the dial gauge, and can be removed after initial setting. Supplied in a wooden carrying case.

LABORATORY JAW CRUSHER



The laboratory Jaw Crusher is designed for fast crushing of Aggregates, Ores, Minerals, Coal, Coke, Chemicals and other similar materials. It is compact and of rugged construction for general laboratory or small pilot plant operations. Two jaws of manganese steel are provided in this laboratory Jaw Crusher. The moveable jaw produces two blows for every revolution, thus reducing over sizing to a minimum. A combination of forward and downward strokes with a rocking action exerts pressure on the coarser material, yet permits the finished material to pass through the jaws.

LONGITUDINAL COMPRESSOMETER



It is designed for finding out the deformation and strains on 15cms. diameter and 30 cms. high cement concrete cylinders when subjected to compressive loads. To test the strain and deformation quality of cement concrete.

SALIENT FEATURES

- **Specifications** : Consists of a frame with a bottom ring and a top ring with tightening screws to firmly clamp the compressometer over the cylinder. A dial gauge 0.002mm x 12mm is mounted on the upper ring and the tip of the dial gauge rests on an anvil. The zero of the dial gauge can be set by adjusting the anvil screw. Supplied in a wooden carrying case.

PULVERISER



The Laboratory Pulveriser is a disc type grinder, designed to grind virtually any material to produce a fine mesh sample in one operation. The instrument is useful for assaying, mining and for metallurgical, quarrying, aggregate processing, chemical, geological and industrial laboratories. It is a self contained grinder, with a rotary disc, having a planetary movement in a vertical plane. This feature gives added life to the moving parts and produces a sample of uniform fineness.

SALIENT FEATURES

- Grinding is done between two discs-one stationary and the other revolving eccentrically at high speed. The discs are made from heat treated mehanite metal. With the help of a convenient hand wheel, the size of the final product can be adjusted. This can be done, even while the machine is in operation. A self locking device holds the hinged grinding chamber in place and affords easy and quick access to it, for removal of ground samples and for cleaning. The Pulveriser has a capacity of reducing about half of a kg. of a quartz type sample to 100 mesh in about a minute. The Pulveriser is supplied complete with a 3 H.P. motor, a starter, a "V" belt pulley drive and mounting. Wired for 400 v, 3 Ph, 50 Hz.

Disc Diameter-----175mm.

Maximum Feed size-----6mm.

Yield-----250 gms./min.

Size of Finished Product-----100 mesh.

TILE ABRASION TESTING MACHINE



This is used for determination of resistance to wear for cement concrete flooring tiles. Tiles specimen of size 7.06 cm x 7.06 cm is pressed face-wise under specific load on a grinding path and abrasive powder is evenly spread on the rotating grinding path and after specific number of revolution of the grinding disc the second parallel side of the tile is subjected to wear for similar number of rotations. The wear of the tile is measured on a thickness gauge specifically made for the purpose. The machine consists of a disc rotating at a speed of 30 rpm in a circular tray. A bracket is provided to hold the specimen. A counter balance lever loads the specimen. Load applied is 30 kgf. A funnel is fitted to evenly spread abrasive powder on the grinding path. A pre-set counter automatically stops the machine after 22 revolutions. This counter is re-adjustable. The machine works on 440 volts A.C., three phase electrical supply. On request machine to operate on 230 Volts A.C. supply can also be supplied.

ESTEEM PH METERS



EST-PH 101 ESTEEM PH METER(DIGITAL)



EST-PH101 PH meter is a device used for potentiometric pH measurements. pH can be measured using either pH indicators (like phenolphthaleine) - in form of solution or pH strips - or using potentiometric method. Strips are very useful when all you need is 0.5-1 pH unit accuracy. When you need higher precision, pH meter is the only way to go. In potentiometric methods you measure potential difference between known reference electrode and the measuring pH electrode. The latter depends on the activities of ions you want to measure. This dependence is described by Nernst equation, thus once the potential has been measured you can calculate the activity. pH meter is nothing else but precise voltmeter, connected to the pH electrode, and scaled in such a way that it displays not the measured potential, but ready pH value.

EST-PH101 PH meter digital ph meter is direct reading, two point calibration instrument. And is useful where temperature compensation is needed and is mainly used in measuring acidity or alkalinity of a solution. It is adopted in numerous other industries like chemical, pharmaceutical, sugar, food, cosmetic and other industries where ph monitoring is required. They are suitable for potentiometric measurement with appropriate electrode. Its technical specifications are as follows: Display: Digital 12 mm Red LED Range; pH: 0.000 to 14.00pH mV: 0to±1999mV. Accuracy: 0.01 pH, ± 1mV, ±1 Count Slope Adjustment: 80 to 120% at 25°C. Temp. Compensation: • Manually adjustable setting on Calibrated dial between 0°C to100°C. Input Impedance: 1012 Electrode Connector: BNC type for combined pH electrode. Dimension: 180Wx180Dx80mmH

FEATURES :

- Field mountable IP-65 enclosure
- Compatible for any pH Electrode
- Economical, Simple to operate
 - Local LED Display

SPECIFICATION :

- Range : 0.00 to 14.00 pH
- Resolution : 0.01pH
- Accuracy : ± 0.02pH ±1 digit (Without Electrode)
 - Operating temp : 0 to 50 °C
- Operating Humidity : 10 to 90% RH

VISIT US : WWW.ESTEEM.IND.IN

PAYMENT TERMS COMMON FOR ALL THE ABOVE MENTIONED MODELS

**PAYMENT
TERMS :**

Who are our Bankers and what are our Banking particulars?

Who are our Bankers and what are our Banking particulars?

Our Bankers are:

Union Bank Of India,
SCF-3, Sector 21-C, Chandigarh,
UT, INDIA.
SWIFT CODE: UBININBBCHA

Esteem Industries INC. A/C No.: 398905010050309

May you like to Transfer Payment (T/T) to us, then depending upon the currency of remittance kindly choose one of the following methods:

PAYMENT PROCEDURE FOR USD \$

PAYMENT PROCEDURE : For making SWIFT Transfer payment of US\$ _____, please give the following information to your bank:

Intermediary Banks:

1. Citibank. New York ,Swift code: CITIUS33
2. Bank of America. New York, Swift code: BOFAUS3N
3. Bank of New York. New York, Swift code: IRUTUS3N
4. Standard Chartered Bank. New York, Swift code: SCBLUS33
5. JP Morgan Chase Bank. New York, Swift code: CHASUS33
6. American Express Bank. New York, Swift code: AEIBUS33

Beneficiary Bank:

Union Bank Of India,
SCF-3, Sector 21-C, Chandigarh,
UT, INDIA.
Swift Code: UBININBBCHA
Beneficiary: Esteem Industries INC

Account No. 398905010050309

Bank charges (fees) would be shared by buyer. Please fax us a copy of Transfer advice so that we can track payment.

PAYMENT PROCEDURE FOR GBP £

PAYMENT PROCEDURE : For making payment of Sterling Pound £ _____, please give the following information to your bank:

Intermediary Banks:

1. National Westminster Bank. London, Swift code: NWBKGB2L
2. HSBC London (Midlands), Swift code: MIDLGB22

Beneficiary Bank: Union Bank Of India,
SCF-3, Sector 21-C, Chandigarh,
UT, INDIA.

Swift Code: UBININBBCHA
Beneficiary: **Esteem Industries INC**

Account No. 398905010050309

Bank charges (fees) would be shared by buyer. Please fax us a copy of Transfer advice so that we can track payment.

PAYMENT PROCEDURE FOR EURO

PAYMENT PROCEDURE : For making payment of Euro_____, please give the following information to your bank:

Intermediary Bank:

1. Commorz Bank Dusseldorf Germany, Swift code: COBADEDD
2. Bank commercial Italiana, Swift code: BCITITMM
3. Societe Generale Paris, Swift code: SOGEFRPP
4. ABN Amro Bank. Amsterdam, Swift code: ABNANL2A

Beneficiary Bank: Union Bank Of India,
SCF-3, Sector 21-C, Chandigarh,
UT, INDIA.

Swift Code: UBININBBCHA
Beneficiary: **Esteem Industries INC**
Account No. 398905010050309

Bank charges (fees) would be shared by buyer. Please fax us a copy of Transfer advice so that we can track payment.

Note: Please make sure we are INFORMED before and after sending any payment to our Bank Account.

E-MAIL : INFO@ESTEEM.IND.IN

