

# PRODUCT CATALOGUE CEMENT



PRIS CEMENT  
INSTRUMENTS  
(PTY) LTD.

# Meet our Team

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# **PRIS CEMENT** **INSTRUMENTS (PTY) LTD.**

## **COMPANY PROFILE** **PRIS CEMENT INSTRUMENTS (PTY) LTD.**

*Peter Rassloff Instruments & Services (Cape) (Pty) LTD was found in 1976 in Johannesburg, South Africa, as a service orientated company, servicing and repairing instruments used in the Wheat and Maize Milling Industry. The company progressed rapidly into sales of laboratory / testing equipment needed in that industry, as well as into selected other analytical products.*

*By 1989 the company moved Head Office to Cape Town and branched out into sales and service of equipment used in the cement / lime factories and subsequently started manufacturing instruments required in these laboratories.*

*We have established a Johannesburg branch in 2005. In 2015 we have re-located from Cape Town to Johannesburg. In 2009 we have changed the name for the Cement Instruments to PRIS CEMENT INSTRUMENTS (PTY) LTD.*

*Meantime PRIS has successfully introduced their locally manufactured instruments in that industry in most countries in Southern Africa. Besides the local manufactured products, we also import high quality equipment from our suppliers in Europe.*

*PRIS has established a high reputation for quality products, as well as reliable service and repair capability throughout South Africa, Zambia, Zimbabwe, Malawi, Mozambique, Tanzania, Botswana, Eswatini and Lesotho, then we are also involved in Nigeria and Kenya.*

*Our Service Technicians travel these countries frequently either on fixed pre-arranged service / calibration contracts, fully equipped with required spares to be fitted on site, as well as often have special call outs for breakdown repairs.*

*Our qualified Sales Engineer travels these countries at least twice a year to give advice and information on latest equipment available and / or product training. In house sales and co-ordinating staff is highly trained and competent in all aspects of product requirements (e.g. EN / ASTM specifications) as well as of shipping and document requirements when export / importing.*

**FOR ANY PRODUCTS OR EQUIPMENT NOT LISTED IN**  
**OUR CATALOGUE PLEASE DON'T HESITATE TO**  
**CONTACT US**



## **6 STATION AUTOMATIC VICAT, VICATRON RX6**

Six Station Automatic Control Data System Direct Computer Controlled System  
EN 196-3, 13279-2, 480-2 | ASTM, C191, C187.

The Computer-controlled, VICATRONX 6 can be used to determine the initial and final setting time of cement, mortar pastes and gypsum. This six-station apparatus automatically monitors the setting process and provides output curves of the process. The test sequence is programmable, and tests can be performed in air or in the water test kit. With programmed test sequences, the unit provides automatic registration of initial set and final set times, as well as providing setting plots of the entire sequence.

The automatic VICATRONX 6 apparatus is a last generation equipment, which enables automatic execution of tests according to the following standard methods:

VICATRONX 6 is to be supplied complete with EN Initial and Final needles.

VICATRONX 6 for setting time test on cement/mortar/gypsum. VICATRONX 6 must execute the test program using a fully automatic test cycle.

With Firmware in the unit which enables (min) five user test profiles to be established.

Unlimited storage of test results. The unit should include an RS232 serial port for connection to PC which, when used in conjunction with the supplied software, enables users to manage test data including graphing and report generation.

The timed cycle of events is to be operator-selectable and penetrations can be selectable at intervals of 30 seconds, 1, 5, 15 or 30 minutes.

Fully automatic controlled directly from PC as no need to use digital screen. Test procedures can be customized and stored to match user-defined requirements. Large test space with easy accessibility.

Auto calculation of initial and final setting time at programmable penetration depth

### **ADVANTAGES:**

- Direct PC controlling saving time for storage or print out
- Easy programming of customized test profiles, re-callable for future tests, including:
- Adjustable test start delays
- Penetration points positions
- Manual or automatic penetration rate
- Free or driven dropping mode
- Holding intervals inside the sample
- Automatic end- test detection
- Automatic measurement of initial and final setting time
- Test data: test number, operator, client, date, hour, cement type, delay
- Easy calibration menu
- Clock calendar
- Multi-language
- Penetration measurement by encoder

### **ACCESSORIES:**

- Samsung Laptop PC
- VICATRON X6 Software
- VICABATH System for VICATRON X6
- Final Needle
- Initial Needle
- Glass Plate
- Vicat Mould - EN or ASTM
- Cylindrical probe for consistency test
- Additional weight 700 g
- Base Plate for in-water testing kit
- Power: 220 V, 50 Hz, 1 phase
- Dimensions: 450 x 1400 x 950 mm (L x W x H)
- Weight approx.: 125 kg
- 12-station model available, please call.



## **FULLY AUTOMATIC VICAT TESTING SYSTEM, 12-STATION, VICATRON RX12**

Same as mod. RECX6, but the system is 12-STATION

Weight: 168 kg

## Automatic Vicat

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.

### **Accessories:**

- 1 Consistency plunger
- 2 Initial needle, 1.13 mm dia EN
- 3 Final needle, 1.13 mm dia EN
- 4 Initial needle, 1.13 mm dia ASTM
- 5 Final needle, 1.13 mm dia ASTM
- 6 Needle cleaning Device
- 7 Windows Software and RS232 Cable
- 8 Printer Paper rolls, pack of 10
- 9 Mold Tank
- 10 Thermostatically-controlled heating/cooling system, for testing samples under water as per EN 196-3



## Manual Vicat

Vicat Apparatus is used for determining the setting time and consistency of cement by the Vicat Method.

The Vicat Apparatus set is complete with Initial Set Needle, Final Set Needle, Vicat mold, Vicat Thermometer, Glass Plate and a consistency Plunger.

### **Accessories:**

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



## MANUAL VICAT TEST APPARATUS (RSA)

The Manual Vicat is supplied with a Plunger, and an Initial and Final setting time needle.

## THERMOSTATICALLY VICAT BATH, DIGITAL

The apparatus heats water from room temperature to 20 +/- 0,1°C. The unit consists of a stainless-steel water bath 10 liters capacity with wool insulation, immersion heater with digital thermostat, motor pump, inlet/outlet system to circulate the water into the tank, cooling coil device current water operated, to maintain a constant temperature of the bath when room temperature is slightly higher.

Can be used simultaneously for "TWO" VicatronX

Power supply: 230V 1ph 50Hz 1050W

Dimensions: 375x335x420 mm

Weight: 16 kg





## **Automatic Blaine**

The Automatic Blaine Apparatus provides more accuracy and precision than provided by the manual Blaine apparatus. Calibration of this unit is done using a cement sample reference, such as NIST 114q.

To obtain the most accurate results, the test should be performed in a temperature-controlled environment. The unit includes the unit with an electric pump and time registration:  
filter papers ( 12.8mm, 1000pk; fill oil (50ml); Plug; thermometer; brush and funnel

## **Manual Blaine**

The Fineness Blaine Air Apparatus is used to determine the particle size of Portland cement, limes and similar powders expressed in terms of their specific surface.

It comprises of a stainless steel cell, perforated disc, and plunger. A U-tube glass manometer is fitted to the steel stand. Manometer Liquid, 250 ml.

The set is complete with rubber aspirator and a pack of 100 pcs filter paper.

### **Accessories:**

- 1 Manometer Liquid, 250 ml
- 2 Test Stand
- 3 Rubber Aspirator
- 4 Cell with Perforated Disc and Plunger
- 5 Plastic Funnel
- 6 Filter Paper, 100 pcs.
- 7 U Manometer Tube



## **Reference material cement: Blaine apparatus SN 2c (Q114)**

This reference material cement is used for the calibration of Blaine test Conditioning, For each test, you need maximum 5 gr, so S.N.L proposes to do box of 20 bottles of 5 gr with a sealed with a secure screw cap. Physico-chemical properties of the sample are stable until the bottle is closed and the cap untouched. The certificate of analysis is produced by l'ATILH paris la défense as following:

I – Participation and execution of tests Each year the “Association Technique de l'Industrie des Liants Hydrauliques” (ATILH) organizes an interlaboratory test campaign involving in particular the participation of the cement production industry laboratories, the cement end-user laboratories and Research and Inspection Centers within the construction materials sector.

This participation is compulsory for laboratories accredited by COFRAC for cement testing. The tests are carried out in accordance with standardized methods where latter exist, otherwise according to everyday traditional methods.

II – Statistical analysis of the results Outliers are eliminated via the STUDENT's test with a confidence level of 98 %. A reiteration is set at this threshold in order to keep only those values which are related to the “Normal or Gaussian” distribution, the latter being entirely defined by 2 parameters: mean and standard deviation. The coefficient of variation symbolized by “V” is the ratio between the standard deviation “ $\sigma$ ” and the mean value X.

III – Specific surface and particle size analysis For the calibration of the Blaine permeability apparatus, follow the requirements of the EN 196-6 standard, paying particular attention to the temperature corrections, if any. To determine the volume of the compacted layer, it is not essential to use the Reference Material (but ensure that enough is taken so that the mass of the mercury does not modify the compaction of the powder layer).

Reference Material should be used systematically:

- a) after 1000 tests.
- b) when using another type of manometric liquid, another type of filter paper, a new manometer tube or a new perforated disc.
- c) If discrepancies are systematic with the secondary reference cement.

Mean value X

Dispersion characteristics Reproducibility V (%)

Particle density (g/cm<sup>3</sup>) with pycnometer method 3,15 0,02 0,66

Blaine Specific Area (cm<sup>2</sup>/g) with EN 196-6 4206 74 1,75



## **CEN EN-196.1 STANDARD SAND**

EN 196 Standard Norm Sand. (Sachets of 1350g) Test of Cement to be used in stainless steel boiling bath. Pre-packed certified sand to be used in EN prism The aim is to measure the expansion of the moulds. (Cement-Sand-Water) This sand is also Cement after having been for 24 hrs. Steam rising in used for standard setting time test. This sand is used to determine the strength in Laboratory tests.

**PRIS Cement is the Sole agent for Southern Africa**



## **DIGITAL MORTAR MIXER, 5 LITERS**

EN 196-3 | EN 459-2 | EN 413-2 | EN 196-1 | EN ISO 679 | ASTM C305 | EN 480-1 | ASTM C451

The mixer has been designed to mix mortars and cement pastes primarily to the requirements of standards. The mixing paddle has a planetary motion and is driven by a motor with a microprocessor-based speed and preset programs to meet all listed EN and ASTM standards, custom designed programs or manual mode. The mode button is used for the fast selection of different programs. 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 Digital Mortar Mixer is supplied complete with; Stainless Steel Mixing Bowl, 5 lt (approx.) & Stainless Steel Beater.

Dimension: 300 x 555 x 610 mm

Power Supply: 220 V 1 Ph 50 Hz

Weight (approx.): 56 kg

## **Fully Automatic Mortar mixer (GERMAN MODEL)**

for production of cement-mortar and cement glue acc. to DIN 1164 parts 5+7, EN 196 parts 1+3 (ISO R/679, ASTM C 305, BS 450) with automatic sand intake with protective cover 2 mixing speeds 140 + 285 (1/min) 5 liter stainless steel stirrer electrical connections: 400 V/50 Hz; 1,0 kW  
Measurements: W/D/H 630 x 300 x 800 mm weight: approx. 93 kg

### **Accessories**

Automatic Water Dispenser conforming with EN 196

### **OPTIONAL**

Automatic Water Dispenser conforming with EN 196



## **EN 196 Vibration Table (GERMAN MODEL)**

This machine comprises a 450 x 450 mm table, mounted on a supporting framework. The electro-magnetic vibrator is tuned to provide the correct amplitude to meet the compaction characteristics of the Jolting table.

The prism mould is attached securely to the table using a swing bolt clamp arrangement. The machine is supplied with a separate wall mounting control panel incorporating an isolator timer, relay and push button emergency stop.



## **Jolting Apparatus**

The Jolting Apparatus is designed for the standard-compliant compaction of cement mortar and other binding material in molds. The Jolting Apparatus consists of a mold table seated on a rotating cam driven at 60 revolutions per minute. The Jolting Table is a 15.0 mm 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.

Feed Hopper is used for filling Three Gang Molds placed on Jolting Table. Three Gang Mold, Feed Hopper and Soundproof Safety Cabinet should be ordered separately.

## **Technical Specifications**

1050x350x500 mm

Weight (approx.) 55 kg

Motor Speed 60 r.p.m

Drop Height 15 mm

Power 250 W



## **Vibrating Machine**

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





## Humidity Curing Cabinet

The Humidity Curing Cabinet is used for curing cement test samples.

The curing cabinet provides from -25°C to +70°C temperature and up to 98% humidity of cement specimens by an immersion heater and refrigerator unit 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.

|  |   |
|--|---|
| Temperature range  | -25/+70°C / 0/70°C  |
| Temperature fluctuation  | ±0.1 C  |
| Humidity data Humidity range                                     | 10 to 98 % RH   |
| Humidity fluctuation   | ≤ 3 ± % RH  |
| Controller data  |   |
| Controller Cycle monitoring touch screen programmer              |   |
| Program  | 1   |
| Step   | 20  |
| Structure and insulation data                                    |   |
| 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     |   |
| Shelf grill Removable and height adjustable plastic-coated steel |   |

## **CEMENT HUMIDITY CURING CABINET**

CABINET, 120 LITERS/ CABINET, 250 LITERS / CABINET, 500 LITERS / CABINET, 750 LITERS / CABINET, 1000 LITERS

Rantek Curing Cabinets are designed to stimulate real climate conditions by controlling temperature, humidity, day and night light cycles. The temperature and humidity control range of the test cabinets allows many tests to be performed in different sectors. However, stability, artificial aging, storage and shelf life tests can also be done easily. Designed for use in many industries. In order to ensure maximum durability and reliability, the most appropriate materials for internal and external construction are used.

The cell is made of Stainless Steel and the outer body is made of epoxy-painted galvanized steel to be unaffected by high humidity. The power lamps inside the door, protected by heat and refractory glass, provide daylight to the specimens. Glass Metal door allows observation of samples without affecting the humidity and temperature values in the cell. When cold and hot test temperatures are considered, insulation is of great importance for product efficiency. The isolation of the Test Cabinet devices is achieved by injection of high-density polyurethane. Humidity is provided by a humidity generator and is measured by the humidity sensor inside the cell.

At this point, it is ensured that the nudge is measured in the most sensitive way.

The temperature is controlled by PID, humidification and cooling proportional control system.

In addition to the diagnostic system, there is an adjustable safety thermostat for heating.

There is a 128 x 64 pixel touch screen on the user panel of the device. Strong air circulation provides stability with very good temperature and humidity distribution even at low temperatures.

After the door is opened and closed, there is a rapid recovery period. Test Cabinets are equipped with an advanced microprocessor control system.



## **CEMENT HUMIDITY CABINET (GERMAN)**

For the standardized storage of cement and mortar samples in triple molds according to EN 196.

The samples produced are stored in a moisture storage cabinet, protected against drying out, until the test date. The relative humidity in the humidity chamber is 95% and the temperature is + 20 ° C.

Our storage cabinets are made entirely of stainless steel and the innovative differential pull-outs allow the molds to be stored easily.

Our product meets the standard requirements for moisture storage cabinets according to EN 196.



## **CEMENT HUMIDITY CURING CABINET (RSA)**

To hold 3 gang moulds under conditions as specified under EN 196 specifications. You therefore have a pre-set constant temperature and a pre-set constant humidity. Electronic Temperature control with Refrigerated water circulation 15.0°C to 35.0°C Electronic Humidification up to 93% relative humidity at 20°C 400-litre capacity with 4 stainless steel shelves to hold  $\pm 20 \times 3$  gang moulds 40, 0 x 40, 1 x 160mm (EN 196)

## **TEMPERATURE CONTROLLED CURING BATH**

For Cement prism of 40, 0 x 40, 1 x 160 mm. The Bath holds 4 stainless steel racks to accommodate 120 specimens. The water in the Bath is circulated at a digital set constant temperature, e.g. 20°C. The Bath has refrigeration cooling as well as a heating element which is thermostatically controlled, thus specimens are always cured at the same temperature before the breaking strength test is done. (Compression Testing)



## **TEMPERATURE CONTROLLED CURING BATH (GERMAN)**

For standard-compliant, standing or lying storage of cement and mortar samples according to EN 196. The demolded specimens are stored in a static water bath on PVC grids until the test date. Our product has electronic temperature monitoring so that the water temperature is constantly regulated to + 20 ° C. Our intelligent system is equipped with the option for automatic water change. The water level is drained by 50% and completely refilled with fresh water.

Our product meets the standard requirements for wet storage basins according to EN 196.



## **TEMPERATUR CONTROLLED CURING BATH**

DOUBLE FLOOR | CIRCULATION SYSTEM

EN 196-1/ASTM C 150

160 Prism Sample Capacity .Cement Curing Pool Systems are made of complex stainless steel and meet the needs of the actual temperature values at the desired set temperatures thanks to the microprocessor controlled digital unit.

The easily cleaned complex stainless-steel inner and outer reservoir consist of specially designed stainless steel shelves, cooling units, heating units, water circulation pump systems for placing prism samples. It can be operated between +20 C and +60 C temperature range.

Thermometer Reading Resolution: 0.1 C Special production is made in desired sizes.

Dimensions. (w x d x h) = 1000 x 750 x 1500 mm

Approximate weight. 160 kg





## **Air Jet Apparatus (RSA)**

Vacuum Sieving Apparatus for residues of below 90 microns (Replaces "wet" sieving method). Uses 200 mm round standard sieves.

Fast and accurate.

Easy accessible maintenance drawer at the bottom.

## **VARIOUS STAINLESS STEEL LABORATORY TEST SIEVES ARE AVAILABLE.**



## **STAINLESS STEEL LABORATORY TEST SIEVES**

EN 933-2 | ISO 565, 3310-1, 3310-2 | ASTM E11 | BS 410-2

- All Sieves provided with into special carton box
- Material is Stainless Steel 304

• Test sieving has been used for particle measurement for generations in the Agricultural, Bio-Industry, Chemical, Cosmetics, General, Industrial, Fertilizer, Foods, Minerals, Pharmaceuticals, Plastics and Metal, Products industries. Total quality

control and ensures the sieves we produce are all manufactured with their exact apertures, right in the middle of the correct tolerance band. All Test Sieves are serialized to meet the highest grade quality assurance systems for traceability of measurement devices. The serial number is etched on each sieve and contained serial number information. Clean your sieves with a specialized cleaning brush.

## **DRY SIEVING PAN & LID**



## **Vibratory Screeners**

The Circular Vibratory Screeners are designed for sieving bulk materials according to particle size classes.

The operating principle of the Circular Vibratory Screeners is similar to the operating principle of the analyzer, except that supply of the material to be sieved and discharge of the separate classes from the surface of the sieve and tray are continuous.

## **ADVANTAGES OF CIRCULAR VIBRATORY SCREENERS UNITS:**

The distance traveled by the material particles during screening exceeds the diameter of the sieves installed, which improves sieving efficiency;  
Dust discharge is eliminated;  
The Circular Vibratory Screeners is equipped with corrugated discharge hoses and plastic receiving containers;  
Efficient screening using reciprocating helical vibrations of platform;  
Supply of elastic discharge hoses that do not distort the vibrations, for connecting pipes to receiving containers.



## ULTRASONIC CLEANING BATH

Tank capacity : 1 Liter to 100 Liter  
 Power Supply voltage : 220V 50/60 Hz  
 Heating Power: 300 Watt  
 Generator Power: 45 Watt  
 Total Power: 345 Watt  
 Thermostat: 30-90 C  
 Operating frequency: 32 khz + -5  
 Completely Stainless / Inox made  
 Accessories to be supplied with the device;  
 Weight: 3.5 kg



## Le Chatelier Flask

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

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 1.0ml mark.

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



## Fly Ash Apparatus: Micro Sieving (RSA)

A major requirement for Fly Ash is consistency of fineness.

Two test methods are described. EN 451 requires fineness to be determined using a wet sieving technique and a 45µm sieve, this is the definitive method. A quick yet accurate method for daily production control has been developed using vacuum sieving and a 45 µm sieve mesh. This technique has the advantage of speed and can readily be correlated to the reference method.

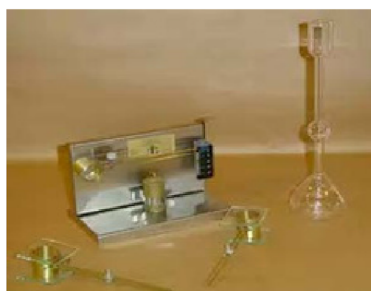


## Le Chatelier Expansion Tester

This apparatus measures the flexibility of the Le Chatelier Moulds in mm, to ensure that they are still in prescribed tolerance.



## Le Chatelier Expansion Tester (RSA)



## LE CHATELIER MOULD + GLASS PLATE

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

Used for determining the expansion of cement. The mould consists of a spring tensioned split cylinder 30 mm internal diameter, 30 mm high with two indicator stems which measure 165 mm from the points of the center line of the cylinder.

The Le Chatelier Mould is supplied complete with;  
 Le Chatelier Mould. 50x50 mm Glass Plate. 100 gr Weight, 1 pcs.  
 Weight (approx.): 0.3 kg



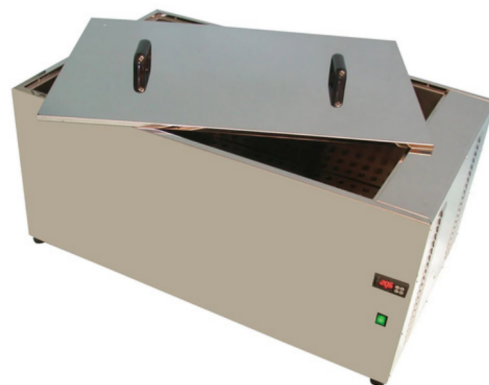
## Le Chatelier Boiling Water Bath

Le Chatelier Water Bath is used with Le Chatelier molds for the determination of the soundness of cement paste fly ash for concrete and lime.

The internal chamber and the insulated exterior case of the bath are manufactured from stainless steel.

The Bath is capable of reaching a boiling point in 30 minutes by using two heater units. There is a timer on Chatelier Water Bath which is used to set the time for reaching the boiling point. After that time the temperature of the water is regulated by using one heater unit to conserve energy.

Supplied complete with a removable rack to hold up to 10 molds. A cover is also supplied as standard.



## LE CHATELIER WATER BATH (GERMAN)

In the Le Chatelier water bath, cement samples are under the influence the standardized temperature of 100 ° C prepared for the subsequent material test.

Our system heats the specified amount of water to 100 ° C within 30 minutes and keeps it constant. After the prescribed time has elapsed, the device switches off automatically. The temperature is permanently displayed as a target / actual comparison on the digital display.

Our product meets the standard requirements for Le Chatelier testing according to EN 196-3.

## WET SIEVING APPARATUS

EN 451-2 | ASTM C430

The set, brass made, consists of:

Sieve dia. 50 mm with stainless steel mesh opening 0.045 mm

Spray nozzle 17.5 mm ID with 17 holes dia. 0.5 mm Pressure

gauge dia. 80 mm range 0-160 kPa, div. 5 kPa,

Fittings and connectors.

Weight: 3 kg



## MEASURER 400 ML

AASHTO T137 | ASTM C185

Designed to determine the air content of freshly mixed mortars by the density method.

Steel made, internal diameter 76.2 x 88.1 mm height.



## **SAMPLE SPLITTERS / RIFFLE BOXES**

EN 932-2 | ASTM C702 | BS 812:1, 1377:1, 1924:1

Riffle boxes are used for dividing aggregates into 2 equal homogeneous quantity for testing. The Riffle Box is electrostatically painted and manufactured to meet the relevant International standard both in the slot width and number of slots.

Riffle Box; 7 mm slot width, complete w/2 containers.

Riffle Box; 13 mm slot width, complete w/2 containers.

Riffle Box; 19 mm slot width, complete w/2 containers.

Riffle Box; 25 mm slot width, complete w/2 containers.

Riffle Box; 31,5 mm slot width, complete w/2 containers.

Riffle Box; 37,5 mm slot width, complete w/2 containers.

Riffle Box; 50 mm slot width, complete w/2 containers.

Riffle Box; 63,5 mm slot width, complete w/2 containers.

Riffle Box; 75 mm slot width, complete w/2 containers.



## **Spinning/Vibration Riffles–Various Capacities**



## **Micro sample splitting**



These very accurate sample splitters have 10 sample containers which are mounted on a speed adjustable turn table. The sample to be split is placed into a stainless steel hopper which is mounted above an adjustable vibration chute feeder, which separates the sample finely into the rotating containers. Sizes / Capacities available: Micro Spinning Riffler: 1.5 kg. Capacity – 9 x glass jar containers 5 kg. capacity – 10 stainless steel containers 15 kg. capacity – 10 stainless steel containers 50 kg. capacity – 8 stainless steel containers.

## **DRY POWDER MIXER**

Dry Spiral Mixer can mix all types different material. The conical shape of both ends enables uniform mixing and easy discharge.

The Double Cone Mixer is an efficient and versatile machine for mixing dry powder and granules homogeneously. The upper inlet is used for material feeding and material is concentrated and removed at the lower outlet. The mixing barrel can be tilted freely at the angle of degrees for discharging and cleaning purpose.

Cleaning the machine is convenient and fast without adhesion.

The mixer is manufactured from Stainless Steel.

The volume of the mixer is 40lt and works on 220V single phase power supply.

Supplied with variable speed drive and timer.



## **LOS ANGELES ABRASION BALL SET**

ASTM

5 pcs. 47.6 mm nominal dia. (440 g each), 7 pcs. 46 mm nominal diameter. (400 g each) stainless steel, set of 12.

## **LOS ANGELES ABRASION BALL SET**

EN

47.6 mm nominal diameter. approximately 440 g stainless steel, set of 11.



## **LOS ANGELES ABRASION TESTER**

ASTM C131 | ASTM C535 | AASHTO T96 | CNR No.36

The Los Angeles Abrasion machine is used to determine the resistance of aggregates to abrasion. The filling aperture is provided with a cover and a safety stop button is prominently positioned.

The machine is fitted with a revolution counter and steel tray for specimen unloading. Heavy steel cylinder and base frame. Safety Stop button. Full length opening with dust-proof cover plate. Includes steel tray for specimen unloading.

Designed to determine the resistance of aggregates to abrasion, the Los Angeles Abrasion Machine consists of a closed hollow cylindrical steel drum rotating around its horizontal axis on ball bearing units mounted on a sturdy base framework. Drum internal diameter of 711 mm. Drum 508 mm in length.

The drum is driven at a speed of between 30-33 rpm via an enclosed drive system. The controls located on the side are placed at a convenient height and consist of prominent. Start and Stop buttons along with a subtracting revolution counter system.

The steel tray for sample removal is located on the frame under the drum.

Los Angeles Abrasive Balls has to be ordered separately.

Power Supply: 220 V, 1 phase, 50Hz

Dimensions: 1000 x 800 x 1000 mm

Weight (approx.): 400 kg



## **PRO CABINET FOR L.A. ABRASION**

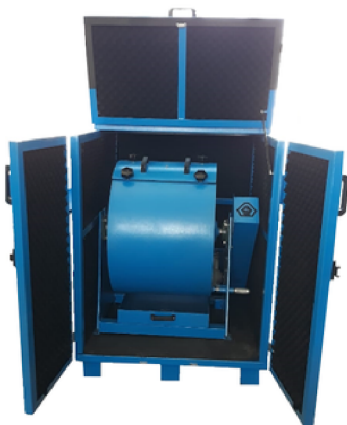
The Security Cabinet, manufactured from Heavy Duty Electrostatic Painted Steel made, internally lined with sound-proofing material for noise reduction, conforming to CE Safety directive.

The cabinet must be ordered with the Los Angeles machine if required, as the electronic control unit will be installed on the safety cabinet at the time of manufacture.

The cabinet is equipped with an electric safety device which automatically stops the rotation of the drum when the door is opened, conforming to CE directives.

Dimensions: 1100 x 1180 x 1250 mm

Weight: 260 kg approx.



## **STD CABINET FOR L.A. ABRASION ' DOUBLE DOOR '**

The Soundproof & Security Cabinet, manufactured from Heavy Duty Electrostatic Painted Steel made, internally lined with sound-proofing material for noise reduction, conforming to CE Safety Directive.

The cabinet must be ordered with the Los Angeles machine if required, as the electronic control unit will be installed on the safety cabinet at the time of manufacture.

The cabinet is equipped with an electric safety device which automatically stops the rotation of the drum when the door is opened, conforming to CE directives.

Weight (approx.): 170 kg

## **BULK CEMENT SAMPLER**

ASTM C183 | AASHTO T127 | EN 196-7

Bulk Cement Sampler, Ø35x1500 mm Bulk Cement Sampler is used to collect cement samples from bulk storage or bulk shipments.

Weight: 1.5 kg



## **PACKAGED CEMENT TUBE SAMPLER**

ASTM C183 | AASHTO T127 | EN 196-7

Packaged Cement Tube Sampler, Ø38 x 580 mm

Packaged Cement Tube Sampler is made of brass and used for collecting cement samples from packages.

Weight: 2.5 kg



## **BULK DENSITY OF LIME**

EN 459-2 | DIN 1060

The apparatus allows a sample to fall from a known height into a volumetric container. Consisting of a hopper, one liter cylindrical container and spring loaded trap.

Weight: 5 Kg approx.



## **BULK DENSITY OF CEMENT**

Used to determine the bulk density of cement as specified by the "Commission des méthodes d'essai des matériaux de construction". It consists of a sieve funnel, an unit weight measure 1 liter capacity, a tripod, and straightedge.

Overall dimensions: 350 x 350 x 520 mm

Weight approx.: 3 kg



## **FLOW CONE TEST APPARATUS**

Used for determining the flow properties of mortars, grouts, muds and many other type of fluid materials. The apparatus comprises a metal stand supporting the stainless steel cone having inside dimensions of 150 mm inside upper dia. x 280 mm height. When fit with the 10 mm nozzle the total height is 350 mm. The apparatus, as prescribed by EN445, is supplied complete with 150 mm dia. sieve 1.5 mm opening, 10 mm dia. nozzle with fitting bush and 1 liter cap. cup. It can also be fit with other nozzles 8, 9, 11, and 13 mm int. dia.

Weight approx.: 10 kg





## **VARIOUS DRYING OVEN SIZES (RSA)**

Digital temperature setting and control "Scientec RSA" With forced convection fan and stainless steel racks.

Temperature adjustable from 5°C above ambient to 160°C  
Various sizes / Digital or Analogue Control / Electronically

## **VACUUM OVEN**



## **VACUUM CHAMBER FURNACES**



## **MUFFLE FURNACE**



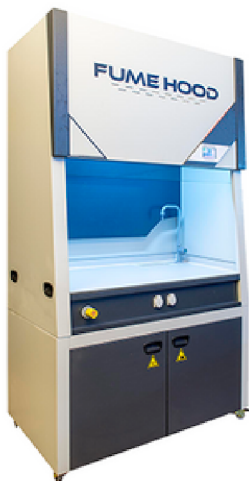
## **ASHING FURNACE**



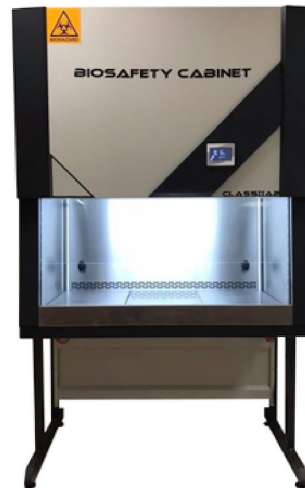
## **BENCH TOP FUME HOOD**



**FLOOR STANDING FUME HOOD**



**STAND FLOORING BIOSAFETY CABINET**



**BENCH TOP BIOSAFETY CABINET**



**LAMINAR FLOW CABINET**



**CHEMICAL CABINET**



**FLAMMABLE STORAGE CABINET**



## **GROUT FLOW CONE APPARATUS**

Grout Flow Cones measure the flowability of hydraulic grout used in preplaced aggregate concrete. Flowability is measured by time of discharge of a 1.725L sample of grout through the 0.5in (12.7mm) ID discharge tube orifice from the cone. Constructed of cast aluminum, the Grout Flow Cone has 7in (178mm) top ID and comes with an adjustable point gauge assembly to indicate initial sample level.



## **Lime Reactivity Tester (RSA)**

When Lime is mixed with water it will immediately release kinetic energy. The instrument works fully automatically and consists of a stainless-steel stand on which the reactivity vessel can be clamped, which also has a built in stirrer @ 2000 rpm and a "K" type temperature probe. The control unit records the increase in temperature and time of the water/lime mix from 20°C to 60°C



## **REACTIVITY TEST APPARATUS OF LIME**

EN 459-2 | NF P98-102

This apparatus is used for determining the reactivity on slaking of ground quicklime. The equipment consists of a Dewar vessel 1000 ml capacity complete with cover, electric stirrer 300 rpm. complete with stirring paddle (propeller), base with stand and digital thermometer range -50 +300°C. approx. readability, 0.1°C., accessories.



## **SLAKING VESSEL**

EN 459-2

YIELD OF LIME-BUILDING LIME. This insulated vessel is used to determine the yield of lime by leaving the lime sample to slake into. Stainless steel made, double walled insulated with glass fibers, the cylinder has inside dimensions Ø 113 by 140 mm deep.

Supplied complete with cover.

Weight: 4 kg approx.



## **WATER RETENTION APPARATUS**

ASTM C91 | ASTM C110

Used to determine the water retention value of cement and lime putty.

The unit comprises: water aspirator, mercury column manometer, three-way stopcock, metal perforated dish, glass funnel, mercury valve, pack of filter paper, 1 kg of mercury, accessories: the whole assembled on stand.



## **CEMENT AIR METER 1 LITER**

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 by means of 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.



## **Water Distillation (RSA)**

All Glass 4 litres per hour –Water distillation unit 4 or 8 litre per hour, complete with low level Wall mounted, simple robust unit, with easy water cut out device, pressure regulator and exchangeable heating element. 20 litre storage tank which switches unit off when full.

## **Automatic Adjustable Water Dispenser 5 – 60 ml**



## **AUTOMATIC WATER DISTILLER**

Devices: chemical, pharmaceutical, food, textile industry research and quality control laboratories, medical laboratories, hospitals and clinics operating rooms are used to obtain pure water. In the automatic water distiller, the boiling and condensation tubes are next to each other and the boiling section also has a lid for cleaning. There is a presorted and electrode level control system which allows the device to operate according to the network pressure. All parts in contact with water and water vapor are made of stainless steel. The heater switches off automatically when the water level in the boiling tank drops below normal. In the devices, the inlet water pressure is observed with the manometer on the panel. The device can be used on the laboratory bench or hung on the wall if desired.



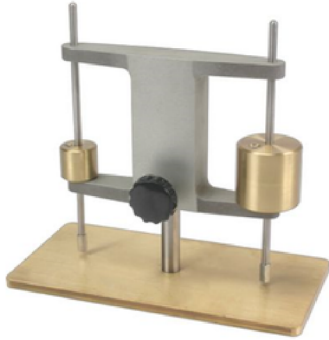
## **GILLMORE TEST APPARATUS**

ASTM C91 | ASTM C141 | ASTM C266 | AASHTO T154 | ASTM C1398

Use to determine the setting time of cement.

The apparatus consists of two horizontal arms which carry two weighted steel needles precisely machined to meet the requirement. The initial needle 2.12 mm dia., weighs 113 g and the final needle 1.06 mm dia., weighs 453,6 g.

Weight approx.: 2.5 kg



## **FUNNEL GROOVE APPARATUS**

EN 13395-2 | UNI 8997

CONSISTENCY OF GROUTS

Used to determine the consistency of the expansion premixed cement mortars for anchorages, mixed with water classified of super-fluid type. It consists of a metal groove with a funnel fixed on the end.

Supplied complete with graduated rule, spirit level and feet.

Dimensions: 960 x 210 x 400 mm



## **HIGH PRESSURE CEMENT AUTOCLAVE**

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

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

Test bars are exposed to the high-pressure steam compartment, which accepts a sample holder for 10 specimens

The specimens can be tested simultaneously at a maximum pressure of 360 psi (25 bar) and a max temperature of 482°F (250°C).



## **HEAT OF HYDRATION APPARATUS**

The Heat of Hydration 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 the 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.

## **LANGAVANT CALORIMETER**

Langavant calorimeter for the heat of hydration of the cement method consists of introducing a fresh cement specimen into an isolated Dewar flask and monitoring the temperature changes within the specimen during the first early days.

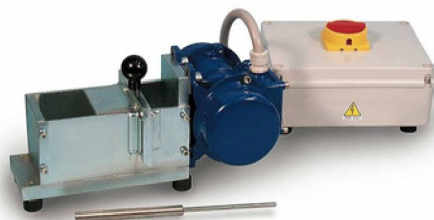
After a certain time, the heat of hydration of the cement content in the sample is equal to the sum of the heat accumulated in the flask and the heat emitted to the environment during the test period.

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 10 ° C and 50 ° C.

The amount of heat is expressed in joules per gram of cement.

It consists of 2 isolated calorimeter bottles set 2 temperature probes to 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.



## **MORTAR WORKABILITY APPARATUS**

Designed to test concrete mortar for dynamic workability and also to ensure optimum proportioning of mortar constituents (sand, water, cement, as well as cement/sand and water/cement ratios) compatible with given application.

Suitable also for checking possible improvement when admixing a plastifier, or for comparing two mortar types.

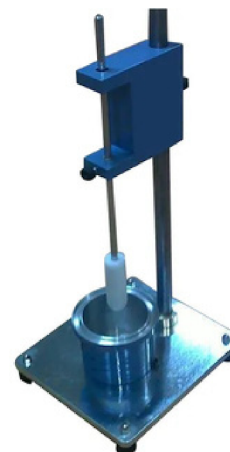
The unit consists of a prismatic receiver divided into two unequal volumes by a removable partition, and by an electric vibrator. The fresh mortar is poured in the large volume place, the separating partition is removed and the vibrator starts automatically. As a result of vibrations, mortar flows from the large volume to the small one, in a time which is a function of the workability of the mortar.

## **PLUNGER PENETROMETER**

The plunger penetration apparatus is used to determine the consistency of fresh mortar, lime and masonry cement.

The plunger penetration apparatus consists of steel base, test cut, vertical column holding the penetration plunger assembly. The height of the drop is 100mm and the weight of the plunger assembly is 90g.

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



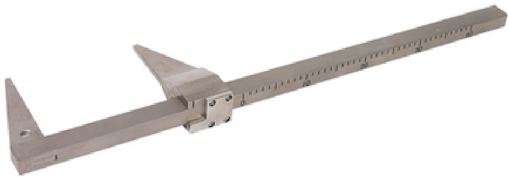
## **WORKABLE LIFE AND STIFFENING TIME**

EN1015-9 | EN 13294

The apparatus is used for determining the stiffening time of repair products and systems comprising hydraulic based mortar and concrete (CC), including those modified by the addition of polymers (PCC) and workable life of fresh mortar after the mixing procedures. The apparatus includes a vertical loading pillar complete with penetration rod, sample container and electronic balance 30 kg cap., 0.5 g resolution. Weight approx.: 10 kg

## **CALSIMETER DIETRICH FRÜHLING**

**CALCIMETER CARBONATE CONTENT  $\text{CaCO}_3$  IN LIMESTONE AND LIME MARL**  
Used for the determination of calcium carbonate ( $\text{CaCO}_3$ ) in certain products such as limestone and lime marl. It mainly consists of a glass container in which the reaction between the calcium carbonate present in the product and a solution of hydrochloric acid takes place. The gased product is collected and measured by a device connected to the container. As the volume of the produced gas ( $\text{CO}_2$ ) is in relation to the  $\text{CaCO}_3$  amount contained in the material, it is possible to calculate the percentage of  $\text{CaCO}_3$ .



## **CEMENT FLOW CALIPER**

Percent Flow Caliper for Flow Tables  
ASTM C87, C185, C230 | AASHTO M152, T71, T137.  
Used to measure mortar diameter and indicate percentage of flow.  
The Percent Flow Caliper has special scale to give the average flow directly by adding four readings.

## **HAND OPERATED CEMENT FLOW TABLE**

ASTM C230 | EN 459-2 | EN 1015-3  
The Hand Operated Cement Flow Tables are used for determining the consistency of mortar, lime and cement specimens.  
Digital Motorized models are available. The Hand Operated Cement Flow Table is fitted with a hand wheel.  
ASTM Model: the table is manufactured from brass and has 254 mm diameter.  
The conical mould is made of brass has dimensions of 100 mm base dia. x 70 mm top dia. x 50 mm height.  
The Cement Flow Tables are supplied complete with brass flow mould and tamper.



## **AUTOMATIC CEMENT FLOW TABLE (German)**

ASTM C230 | EN 459-2 | EN 1015-3  
The Automatic Cement Flow Tables are used for determining the consistency of mortar, lime and cement specimens.  
ASTM Model: the table is manufactured from brass and has 254 mm diameter.  
The Cement Flow Tables are supplied complete with brass flow mould and tamper.

## **Compression and Bending Testing Machine MEGA 100-200-10 DM1-S**

- accuracy according to DIN EN ISO 7500-1, class 1
- for compression and flexure strength tests according to EN 196, EN 1015, EN 13892-2 with options also acc. EN 12504-1 and EN 993-5
- automatic load increase by digital controller DIGIMAXX® C40 with servo valve in closed loop system with nominal-actual value comparison.

### Technical Data – Compression Test

- test load max.: 200 kN
- working pressure max.: 192.55 bar
- piston stroke: 50 mm
- upper pressure plate: 40 mm
- lower pressure plate: 40 mm
- hardness of pressure plates: 58-62 HRC > 600 HV
- test area height: 50 mm
- inner width of test frame: 226 mm
- measuring range: 2.00 ... 200 kN
- display area: 0 ... 200 kN

### Technical Data – Bending Test

- test load max.: 10 kN
- working pressure max.: 79,57 bar
- piston stroke: 50 mm
- test area height: 50 mm
- length of bending roller: 50 mm
- bending roller Ø: 10 mm
- bending roller distance: 100 mm
- measuring range: 0.2 ... 10 kN
- display area: 0 ... 10 kN
- force measurement via electronic load cell which is insensitive to shear force
- voltage: 3x 400 Volt, 50 Hz, 3.0 kW
- weight: appr. 450 kg



## **Cement Compression and Flexural Machine 25/250 KN**

The Cement Compression and Flexural Machine 25/250 KN is Fully Automatic and has been designed for testing the compression on the 50x50x50 mm cube molds, 40x40mm and the flexural on the 40.1x40 x160 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 and 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.

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.



## **Compression and Flexural Jig (German)**

With our compression / bending device you can determine the compressive and flexural strength of your cement and mortar samples. Reliable testing with precise measurement results is only possible with a functioning device.

With our wide range of devices, our product covers the test areas for compressive, flexural and tensile strength.

Our product complies with the standard requirements for devices according to EN 196-1, EN1015-11, EN13279.2, EN13813 and ASTM C 349.

**2 GANG PRISM MOULD**  
**25 X 25 X 250 MM**



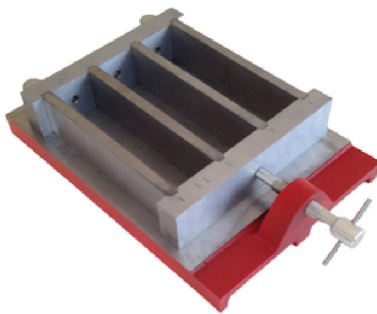
**SINGLE PRISM MOULD**  
**75 X 75 X 285 MM**



**SINGLE PRISM MOULD**  
**75 X 75 X 285 MM**



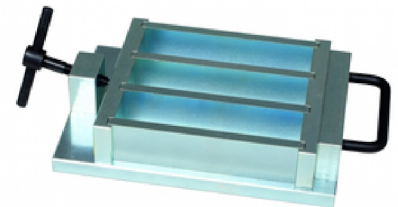
**PRO 3 GANG PRISM MOULD 40.1 X 40 X 160 MM**



**PVC 3 GANG BEAM MOULD**  
**40 X 40 X 160 MM**



**STD 3 GANG BEAM MOULD**  
**40 X 40 X 160 MM**



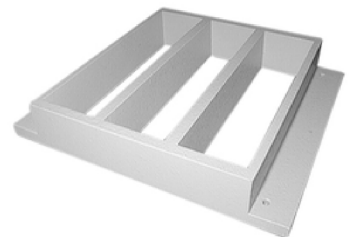
**PRO 3 GANG BEAM MOULD 40 X 40 X 160 MM**



**DERLIN / STEEL 3 GANG CUBE MOULD 50 MM**



**AL. FILLING FUNNEL FOR 40 X 40 X 160 MM**



**PVC CEMENT CUBE MOULD 70.7 MM**

EN12390-1, 12390-2 | BS 1881

**Interior Dimension:**

70.7 x 70.7 x 70.7 mm

Weight(approx.): 1800gr

## **PVC CONCRETE CUBE MOULD, 100 MM**

EN 12390-1, 12390-2 | BS 1881

Interior Dimension: 100 x 100 x 100 mm (Double Gang)

Weight (approx.): 2500gr



## **PVC CONCRETE CUBE MOULD 150 MM**

Interior Dimension: 15 x 150 x 150 mm

Weight (approx.): 2800 gr



## **PVC CONCRETE CYLINDER MOULD 100 X 200 MM**



## **PVC CONCRETE CYLINDER MOULD 150 X 300 MM**



## **PVC CONCRETE CYLINDER MOULD 150 X 300 MM**



## **PVC CONCRETE BEAM MOULD 10 X 10 X 40 CM**



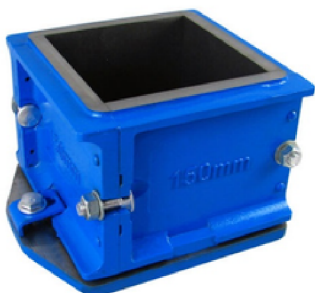
## **PVC CONCRETE BEAM MOULD 15 X 15 X 60 CM**



## **STEEL CONCRETE CUBE MOULDS**



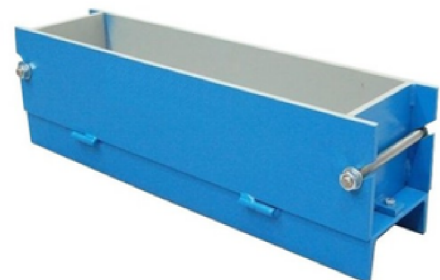
## **CAST IRON CONCRETE CUBE MOULDS**



## **STEEL CONCRETE CYLINDER MOULDS**



## **STEEL CONCRETE BEAM MOULDS**



## **ANALOG MANUEL TABLET/PELLET PRESS 30 TONS**

The Mortar Grinder can mix and homogenize powders, suspension and pastes, even for samples with high viscosity. The RAM 300 is suitable for the proper and reproducible sample preparation to analytical fineness. Application Examples ashes, cement clinker, chemical products, coal, cocoa nibs, coke, drugs, food, homeopathic materials, nuts, oil seeds, pharmaceutical materials, plant materials, salts, silicates, slag, soils, spices, tiles, yeast cells, ...

Solid, high-quality pellets are an important precondition for reliable and meaningful XRF analysis.

The RAM600 is a compact benchtop unit with particularly simple and safe operation.

With a pressure force of 30 t it is ideally suited for the preparation of solid samples for XRF analysis.

The pellets produced are of high quality and are characterized by their high degree of stability.

The piston pressure can be read off from the clearly visible manometer scale.

The dies for the Pellet Press RAM 600 are available in several diameters and can be evacuated completely.



## **DIGITAL MANUEL TABLET/PELLET PRESS 30 TONS**

Same as mod. RAM600, but reading values with DIGITAL MANOMETER



## **RTP AUTOMATIC TABLET/PELLET PRESS 40 TONS CAPACITY**

TFT TOUCH SCREEN DATA ACQUISITION SYSTEM

RANTEK Automatic Tablet Press RTP, program controlled for x-ray fluorescence analysis offers all the advantages of sample preparation. Pelletizing with RANTEK RTP significantly increases the reproducibility and accuracy of the sample preparation process. Hydraulic system and automatic and fully programmable system. It is suitable for producing pellet samples for XRF, IR, and other analytical techniques.

RTP Tablet Press is a high quality, precise engineering with compact dimensions Product. Ideal for laboratory requirements.

The RANTEK Hydraulic RTP press produces high-quality compressed tablets with a surface similar to the one required for the best XRF results. It achieves the desired homogeneity and stability for each tablet with maximum reproducibility.

The spinning head makes the filling and cleaning of the molds fast, simple and safe.

### **PRECISION TFT TOUCH CONTROL**

The palletization process of RTP is controlled by the PLC program. This means that the sample leads to a significant improvement in the reproducibility of the preparation and therefore to a more precise analysis.

Total pressure, such as increasing pressure increase and decrease parameters as well as the pressure holding time can be preset in the TFT panel.

The pressure increase and decrease during palletization are controlled so that the internal stresses in the sample are reduced.

- 30 pieces of Stainless-Steel Pelletizing Capsule will be supplied free of charge with the device.
- Typical pressing cycle is less than two minutes.
- Fully automatic, programmable system.
- Safe with safety lock and automatic pump shut-off safety valve provides the possibility to work.
- Automatic pellet mould unloading system.
- Perform the entire pressing cycle at the touch of a button.
- 220 V, 50-60 Hz, 1 pH
- Weight: 165 kg



PAN TYPE MIXER 25 LT



PAN TYPE MIXER 56 LT



PAN TYPE MIXER XL



DRUM TYPE CONCRETE MIXER



STEEL CONCRETE CURING TANK



CONCRETE CURING TANK, PVC





## Flame Photometer

The Flame Photometer is a device 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 colour 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.

### **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



## Dropping Ball Apparatus

The 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 the 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

## Shrinkage Test Machine

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

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 rod.

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

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



## Compression Testing Machine ALPHA 3-3000 SD

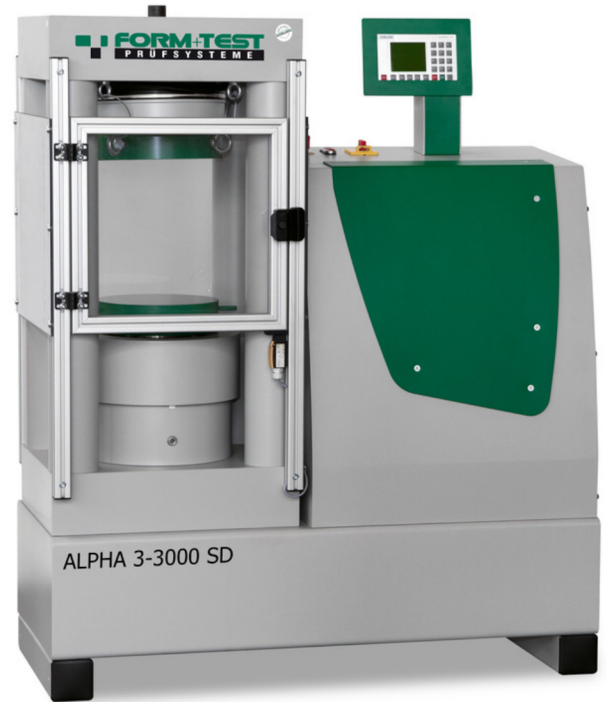
- accuracy acc. to DIN EN ISO 7500-1, class 1 acc. to EN 12390-4 strain test execution
- for compressive strength tests on material samples especially acc. to EN 12390-3, EN 12504-1, EN 206
- automatic load increase by digital controller DIGIMAXX® C-40 with servo valve in closed loop system with nominal-actual value comparison.

### Technical Data – Compression Test

- test load max.: 3,000 kN
- piston stroke: 100 mm
- upper pressure plate: Ø 320 mm
- lower pressure plate: Ø 300 mm
- hardness of pressure plates: 53 HRC
- test area height: 340 mm
- inner width of test frame: 355 x 255 mm
- measuring range: 60 ... 3,000 kN
- display area: 0 ... 3,000 kN
- force measurement via electronic liquid pressure transducer Compact Base UB 02-C40
- machine base with lateral housing for the display / controller / hydraulics
- modular design for the extension up to 4 machine frames
- electric multi-piston hydraulic pump mounted in the oil tank
- microfilter with mechanic dust indication
- servo valve
- pressure control valve
- liquid pressure transducer (DMS)
- electrical control

### Technical Data - Pump Aggregate

- pump delivery rate: 1.5 l/min.
- oil tank capacity: 20 ltr.
- viscosity of hydraulic oil: 68 cstk / 40
- oil filtration: 3 micron
- electric supply: 3 x 400 V, 50 Hz, 3.0 kW
- dimensions approx. (width x depth x height): 1,360 x 580 x 1,600 mm
- weight: approx. 1,780 kg



## Compression and Bending Testing Machine MEGA 6-3000-100 SD

- accuracy acc. to DIN EN ISO 7500-1, EN 12390-4, class 1 – straintest execution
- for compressive strength tests on material samples especially acc. to EN 12390-3, EN 12504-2, EN 206
- for bending strength tests on material samples especially acc. to EN 12390-5, EN 1339, EN 1341
- with accessories / options also for tests acc. to EN 1340, EN 1343 as well as compressive strength tests on cement and mortar acc. to EN 196 / EN 1015
- Compact Base UB 03-C40
- machine base with lateral housing for the display / controller for 2 test cylinders
- modular design for the extension up to 4 machine frames
- electric multi-piston hydraulic pump mounted in the oil tank
- microfilter
- servo valve
- pressure control valve
- electrical control
- electric supply: 3x 400 V, 50 Hz, 2.2 kW
- automatic load increase by digital controller DIGIMAXX® C-40 with servo valve in closed loop system with permanent nominal-actual value comparison

### Technical Data – Compression Test

- test load max.: 3000 kN
- piston stroke: 100 mm
- upper pressure plate: Ø 320 mm
- lower pressure plate: Ø 300 mm
- hardness of pressure plates: 53 HRC
- test area height: 340 mm
- inner width of test frame: 355 x 255 mm
- measuring range: 60.00 ... 3000 kN
- display area: 0 ... 3000 kN
- force measurement via electronic liquid pressure transducer



## **AUTO COMPRESSION MACHINE, TOUCH SCREEN**

HIGH STABILITY WELDED SOLID FRAME

NEW GENERATION TFT AUTOMATIC DATA ACQUISITION SYSTEM

A Class Sensitive Testing

EN 12390-3, EN 12390-4, BS 1881, ISO EN 7500.

### **Technical Specifications:**

The system as standard 10 x 10 x 10 cm, 15 x 15 x 15 cm cube, 75 x 150 mm, 150 x 300 mm cylindrical specimens can be tested. When the machine first start speed is high and then when compression plate closer to the specimen automatically speed is lower for sensitive compression tests. Compression machine has windows Plexiglass into Aluminum frame

- Maximum Load Capacity: **2000 kN**
- Maximum vertical clearance: 340 mm
- Compression Piston diameter is 320 mm
- Compression Plate 55 HRC hardened in the degree,
- Testing according to the distances between the sample size is supplied with parts.

### **TFT TOUCH SCREEN AUTOMATIC DATA ACQUISITION SYSTEM**

- Up to 420 Bar with the hydraulic unit to read Screen Graphics display unit is located.
- Hydraulic Pump System is HAWE Brand / German Made
- Solenoid Valve is ARON Brand / Italian Made
- Pressure Transmitter is TRAFAG Brand / Swiss Made
- TFT Screen Unit test immediately graphics, loading speed, load and stress values can be monitored, such as.
- Supplied with PC Software
- Dot-matrix printer can be connected to an external unit.
- Program test samples, firms, laboratories and test stored can be entered.
- Load-time, stress-time graphs, test reports and sample reports can be obtained.
- There are sample centering lines on the additional load table.
- Additional loading table has a fast centering system for the sample.
- Press can be connected to the computer with com port output.
- Reading unit has special graphics and touch screen and appropriate reading.
- There is a transport hook to remove the press.
- Total Weight: 950 kg
- Power Supply: 220V, 50 Hz, 1ph



## **AUTO COMPRESSION MACHINE, BLUETOOTH**

HIGH STABILITY SOLID FRAME FULLY AUTOMATIC BLUETOOTH TABLET PC CONTROL SYSTEM A CLASS SENSITIVE TESTING

EN 12390-3, EN 12390-4 | BS 1881 | ISO EN 7500.

The system as standard 10 x 10 x 10 cm, 15 x 15 x 15 cm, 20 x 20 x 20 cm cube, 75 x 150 mm, 150 x 300 mm and 160 x 320 mm cylindrical specimens can be tested. When the machine first start speed is high and then when compression plate closer to the specimen automatically speed is lower for sensitive compression tests.

Compression machine has windows Plexiglass into Aluminum frame Maximum Load Capacity: **2000 kN**

Maximum vertical clearance: 340 mm

Compression Piston diameter is 320 mm

Compression Plate 55 HRC hardened in the degree,

Testing according to the distances between the sample size is supplied with parts.

### **AUTOMATIC BLUETOOTH DATA ACQUISITION SYSTEM**

Up to 420 Bar with the hydraulic unit to read Screen Graphics

display unit is located. Hydraulic Pump System complete REXROTH Brand /

German Made. Solenoid Valve is ARON Brand / Italian Made. Pressure

Transmitter is TRAFAG Brand / Swiss Made. TFT Screen Unit test immediately

graphics, loading speed, load and stress values can be monitored, such as.

Supplied with PC Software. Dot-matrix printer can be connected to an external

unit. Program test samples, firms, laboratories and test stored can be entered.

Load-time, stress-time graphs, test reports and sample reports can be obtained.

There are sample centering lines on the additional load table. Additional loading

table has a fast centering system for the sample. Press can be connected

to the computer with com port output. Reading unit has special graphics

and touch screen and appropriate reading.

There is a transport hook to remove the press.

Total Weight: 900 kg

Power Supply: 220V, 60 Hz, 1 phase



## **AUTO COMPRESSION MACHINE, 4-COLUMN HIGH STABILITY 4-COLUMN FRAME**

NEW GENERATION TFT AUTOMATIC DATA ACQUISITION SYSTEM

A Class Sensitive Testing

EN 12390-3, EN 12390-4, BS 1881, ISO EN 7500.

Technical Specifications: The system as standard 10 x 10 x 10 cm, 15 x 15 x 15 cm cube, 75 x 150 mm, 150 x 300 mm cylindrical specimens can be tested. When the machine first start speed is high and then when compression plate closer to the specimen automatically speed is lower for sensitive compression tests.

Compression machine has windows Plexiglass into Aluminum frame

- Maximum Load Capacity: 2000 kN
- Maximum vertical clearance: 340mm
- Compression Piston diameter is 320 mm
- Compression Plate 55 HRC hardened in the degree,
- Testing according to the distances between the sample size is supplied with parts.

TFT TOUCH SCREEN AUTOMATIC DATAACQUISITION SYSTEM

- Up to 420 Bar with the hydraulic unit to read Screen Graphics display unit is located.

- Hydraulic Pump System is HAWE Brand / German Made
- Solenoid Valve is ARON Brand /Italian Made
- Pressure Transmitter is TRAFAG Brand / Swiss Made
- TFT Screen Unit test immediately graphics, loading speed, load and stress values can be monitored, such as.
- Supplied with PC Software
- Dot-matrix printer can be connected to an external unit.
- Program test samples, firms, laboratories, and test stored can be entered.
- Load-time, stress-time graphs, test reports and sample reports can be obtained.
- There are sample centering lines on the additional load table.
- Additional loading table has a fast centering system for the sample.
- Press can be connected to the computer with com port output.
- Reading unit has special graphics and touch screen and appropriate reading.
- There is a transport hook to remove the press.
- Total Weight: 1100 kg
- Power Supply: 220V, 50 Hz, 1ph



## **AUTO FLEXURAL MACHINE, O FRAME**

Standards: ASTM C78, 293 /AASHTO T97 / BS 1881:118 / TS EN 1390-5

The Rantek Automatic range of 200kN capacity Flexural Testing Machines have been designed for reliable and consistent testing of flexural test on standard concrete beams, concrete or natural stone curbs, concrete paving flags, and natural stone slabs. Tests can be performed by either TFT Touch Screen Readout Unit or on a computer with using free Software. The Automatic Flexural Testing Machines allow inexperienced operators to perform the tests. Once the machine is switched on and the specimen is placed. The only required operations are: Setting test parameters, including pace rate Pressing the START button on the control unit.

The Rantek ranges of Flexural Machines have the accuracy of Class 1 Test assembly is used for 3 or 4point flexural tests on 100- or 150-mm Concrete Beams. The distance of lower bearers can be adjusted max. 800mm. The distance between upper bearers can be set with additional distance pieces set.

The Automatic Flexural Testing Machines consist of: Heavy Duty Welded Load Frame, Automatic Hydraulic Power Pack, TFT Touch Screen data acquisition& control system, Flexural test assembly. TFT Screen Unit test immediately graphics, loading speed, load and stress values can be monitored, such as.

Supplied with PC Software. Dot-matrix printer can be connected to an external unit. Program test samples, firms, laboratories, and test stored can be entered. Load-time, stress-time graphs, test reports and sample reports can be obtained. There are sample centering lines on the additional load table.

Additional loading table has a fast centering system for the sample.

Press can be connected to the computer with com port output.

Reading unit has special graphics and touch screen and appropriate reading.

There is a transport hook to remove the press.

Total Weight: 600 kg

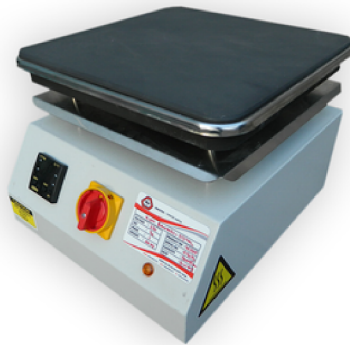
Power Supply: 220V, 60 Hz, 1 ph



DIGITAL RECTANGULAR HOT PLATE



DIGITAL SQUARE HOT PLATE



DIGITAL SAND BATH



GENERAL PURPOSE WATER BATH



DIGITAL WATER BATH, COOLING



LABORATORY OIL BATH

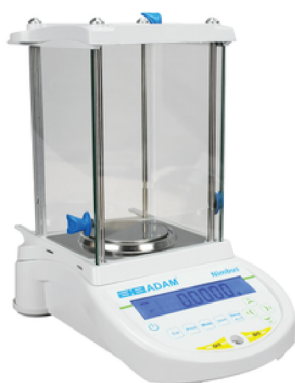


ORBITAL SHAKER



## **Analytical Balances**

Capacity 80g to 250g  
Readability 0.0001g



## **Solis Analytical and Semi-Micro Balances**

Capacity 120g to 510g  
Readability 0.01mg/ 0.1mg to 0.0001g



## **PMB Moisture Analyser**

Capacity 50g to 200g  
Readability 0.001g / 0.01% to 0.01g / 0.05%



## **CB Compact Balances**

Capacity 500g to 3000g  
Readability 0.1g to 1g



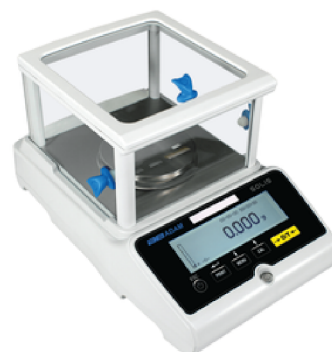
## **Portable Compact Balances**

Capacity 200g to 5000g  
Readability 0.01g to 1g



## **Solis Precision Balances**

Capacity 360g to 8200g  
Readability 0.001g to 0.01g



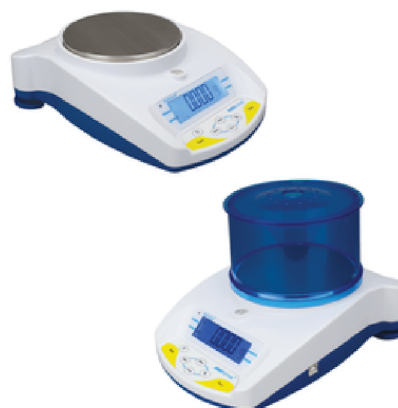
## **Precision Balances**

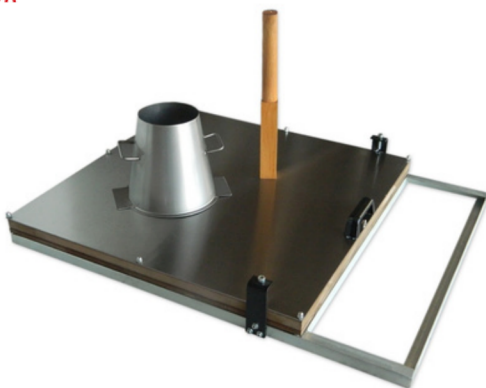
Capacity 220g to 22000g  
Readability 0.001g to 0.1g



## **Portable Precision Balances**

Capacity 120g to 3000g  
Readability 0.001g to 0.1g



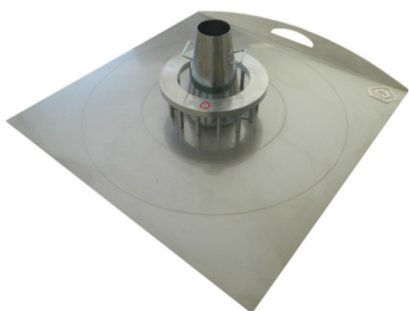


## **CONCRETE FLOW TABLE**

EN 12350-5

The test set is used for concrete mixes of high workability and determines flow index as an arithmetic mean of the diameter of the specimen after working on a flow table. The apparatus consists of a double steel table, an upper table measuring 700 x 700 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 is supplied complete with, Stainless Steel Flow Cone & Wooden Tamper  
Dimensions: 700 x 850 x 300 mm  
Weight (approx.) 35 kg

## **J-RING TEST SET**



## **L-BOX TEST APPARATUS**



## **SLUMP CONE TEST SET**

EN12350-2

The Slump test method is used for the determination of the consistency and workability of fresh concrete. The Slump Test Set is supplied galvanize coated to prevent corrosion.

The Slump Test Set are supplied complete with;

Slump Cone Top Dia: 100 ±2 mm /Base Dia: 200 ±2 mm / Height: 300 ±2 mm  
Slump Base Plate 500 x 500 x 60 mm with Handle Slump Funnel, Galvanized Steel Tamping Rod Ø 16 x 600 mm  
Rubber Mallet  
Steel Ruler 300 x 1 mm  
Dimensions: 550 x 600 x 250 mm (packed)  
Weight (approx.) 6 kg



## **PORTABLE SLUMP CONE SET**

ASTM C143 | AASHTO T119

The Slump test method is used for the determination of the consistency and workability of fresh concrete.

Slump Cone Funnel, made of seamless spun steel, should be ordered separately.

Slump Test Set are supplied complete with.

Slump Cone, Seamless spun metal,  
Aluminum Base Plate with clamps and measuring bridge

Tamping Rod, Graduated

Scoop, Stainless Steel 38 oz.

Dimensions: 550 x 600 x 250 mm

Weight (approx.): 10 kg

## COMPACTION FACTOR APPARATUS



## SPECIFIC GRAVITY/BOUYANCY SET



## MELTING POT



## ELECTRIC CORE DRILL MACHINE



## CONCRETE TEST HAMMER



## DIGITAL TEST HAMMER



## POCKET CONCRETE PENETROMETER



## UNIVERSAL CUTTING MACHINE

EN 12390-3, 12504-1 | ASTM C42, D4543

Universal Cutting Machine has been developed to cut and prepare concrete, rock or natural stone cores or other type test specimens. Special clamp assembly allows specimens to be held during cutting operation. The machine is supplied complete with "V" block clamp for Ø 100 mm specimens and a water circulation pump.

Included Ø 350 mm Cutting Blade & Special Clamp Assembly with the machine.

Max. Cutting Height: 110 mm

Max. Cutting Length: 400 mm

Power of Water Pump: 0.37 HP

Supplied complete with;

Diamond Blade dia. 350 mm

Special Clamp Assembly

Power supply: 220 V 1 ph 50/60 Hz

Weight (approx.): 117 kg



S.S. CALIBRATION WEIGHT  
F CLASS



S.S. CALIBRATION WEIGHT  
E CLASS



CAST CALIBRATION WEIGHT  
M1 CLASS



DESK TYPE PH METER



PORTABLE PH METER



POCKET TYPE PH METER



UNIVERSAL PH INDICATOR  
PAPER



DIGITAL ANEMOMETER



DIGITAL WEATHER  
STATION



DIGITAL THERMO  
HYGROMETER



TACHOMETER



ANALOG HYGROMETER



**INFRARED THERMOMETER**



**S.S. PROBE DIGITAL THERMOMETER**



**BIMETALLIC THERMOMETER**



**MAXIMUM MINIMUM THERMOMETER**



**ASTM THERMOMETERS**



**GLASS THERMOMETERS**



**DIGITAL CHRONOMETER**



**DIGITAL DIAL GAUGE**



**DIGITAL VERNIER CALIPER, STAINLESS S.**



**DESICCATOR CABINET**



**VACUUM DESICCATOR**



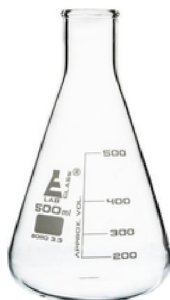
**NON VACUUM DESICCATOR**



**VACUUM FILTER FLASK**



**GLASS ERLERMAYER**



**GLASS BOILING FLASK**



**GLASS FUNNEL  
PYCNOMETER**



**GLASS PYCNOMETER**



**REAGENT BOTTLE**



**GLASS MEASURING  
CYLINDERS**



**PVC MEASURING  
CYLINDERS**



**GLASS BEAKER**



**PLASTIC BEAKER**



**PLASTIC VOLUMETRIC  
FLASK**



**GLASS VOLUMETRIC  
FLASK**



**PLASTIC WASHING  
BOTTLE**



**BURETTE STOPCOCK**



**GLASS GRADUATED  
PIPETTES**



**GLASS ROD**



**GLASS PETRI DISH**



**WATCH DISHES**



**PORCELAIN MORTAR AND  
PESTLE**



**PORCELAIN  
EVAPORATING DISHES**



**PORCELAIN CRUCIBLE**



**GOOCH CRUCIBLE FILTER  
PORCELAIN**



**BUCHNER FUNNEL**



**CRUCIBLE TONGS**



**BUNSEN BURNER WITH  
TRIPOD**



**ROUND HOT PLATE**



**ALUMINIUM MOISTURE TIN  
AND LID**



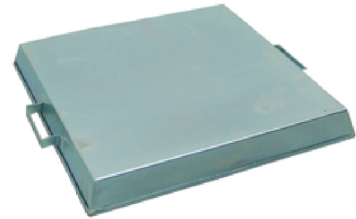
**STAINLESS STEEL MIXING  
BOWL**



**ALUMINIUM PAN**



**GALVANIZED STEEL PAN**



**STAINLESS STEEL PAN**



**GALVANIZED STEEL  
SCOOP**



**STAINLESS STEEL SCOOP**



**FLEXIBLE SPATULA,  
WOODEN HANDLE**



**RUBBER MALLET**



**LARGE SIZE S.S. SCOOP**



MINI AIR COMPRESSOR  
FOR DEMOULDING



VACUUM PUMPS



LABORATORY TROLLEY



LABORATORY REAGENTS



LABORATORY AIR COMPRESSOR



*Cement is a binding material used in construction that hardens and sets, binding other materials together. It is primarily made from limestone, clay, and other minerals, which are extracted from quarries and then crushed, ground, and heated in a kiln to produce a powdery substance known as clinker. This clinker is then mixed with a small amount of gypsum to produce cement.*

*Cement is used in a variety of construction applications, including building foundations, walls, roofs, and pavements, as well as in the production of concrete. It is a versatile material that can be molded into different shapes and sizes, making it an essential component of modern infrastructure.*

*There are several types of cement, including Portland cement, which is the most commonly used type, as well as blended cement, sulfate-resistant cement, and others. The choice of cement depends on the specific application and the requirements for strength, durability, and resistance to environmental conditions.*