

TEST CENTER 2018

TURKEY

**LABORATORY AND TEST
MATERIALS**



TEST CENTER

QUALIFIED DEVICES , RELIABLE SOILS , THOUGH STRUCTURES



TESTCENTER, thanks to experience which was obtained throughout years accomplished becoming one of the best -leading and reliable companies manufacturing and supplying of test devices within TURKEY. Surely, giving importance to total quality management, manufacturing management, ethic and professional working concept, and manufacturing in accordance with both the world and national standards provided its accomplishment within this sector.

TESTCENTER is have been manufacturing, making modification and exporting test devices which are used within construction and structure sectors. The products which are manufactured by TESTCENTER are aggregate concrete, cement, soil, asphalt / bitumen, steel, isolation, lime and plaster test devices and mobile laboratories, construction machines and other main devices.

TESTCENTER that closely follows today's technology with its valid material testing equipment which are in accordance with TSE, EN, ASSTHO, N, BS, DIN and ASTM standards. We always will be dynamic and will try to find way out for your problems by developing new manufacturing programs.

TESTCENTER took place within both national and international markets which it had targeted with the staff who are expert and various - high quality of products that you want us to manufacture. It has always aimed to provide high customer satisfaction and on time performance.

Mission

In the sector that we serve, providing customer satisfaction and maximum benefit to our clients by manufacturing the World's best test devices with the best prices on time performance.

Vision

To become one of the best and leading manufacturer of the test devices which are used by structures, constructions and other related companies with in the world.

Our values

Being customer oriented

Manufacturing high quality products

Responsible

Reliability

Innovative



AGGREGATES

Aggregates are important materials which are used especially in construction sectors. They are used in concretes, bitum, plasters, roads and railways subgrades etc.

The different kinds of international standards including European standards are requiring many different checks on different features such as mechanical, physical, geometrical, kind of density, strength, degradability etc.





AGGREGATES

- DRYING OVEN
- POINT LOADING MACHINE
- SLAKE DURABILITY APPARATUS
- SPECIFIC GRAVITY FRAME
- MUFFLE FURNACE 1100° C
- JAR MILL
- STICK SIEVES
- FLAKINESS SIEVES
- HIGH CAPACITY SIEVE SHAKER
- SIEVE SHAKER
- SAMPLE SIPLITTER
- GAUGES
- LOS ANGELES ABRASION MACHINE
- MICRO DEVAL MACHINE
- NORDIC ABRASION MACHINE
- SLIDING AND FRICTION RESISTANCE DETERMINATION TEST DEVICE
- GRID SIEVES SET
- LARGE CAPACITY SAMPLE SIPLITTER
- CRUSHING RESISTANCE DETERMINATION MACHINE
- ABRASION TESTER FOR NATURAL STONES AND CONCRETE MACHINE
- SAND EQUIVALENT TEST SET
- SAND EQUIVALAENT SHAKER
- MOISTURE METER
- MILL AND GRINDERS
- BLUE MTHYLENE TEST SET
- AGREGATES CRUSHING VALUE MEASUREMENT APPARATUS
- BOHME ABRASION MACHINE
- SIEVES
- BOTTLE ROLLER
- NORDIC ABRASION TESTER
- ACCELERATED POLISHING MACHINE
- JAW CRUSHER
- FREEZING AND THAVING CLIMATIC CHAMBER
- ALCALI SILICA REACTION TEST EQUIPMENT



AGGREGATES

(TC-A022) - MUFFLE FURNACE 1100 °C

STANDARDS : TS EN 196-2, 196-21,459-2

Including the large capacity range of furnaces, we have introduced, standard range Testcenter Chamber Furnaces cover a range from 1100 °C to 1600 °C, all of which are front loading for easy operation and double skin construction to maintain a cooler outer case. Up to 1300 °C, open wire based models are produced where the elements are supported on ceramic tubes. Important advantage of these models is that element change is very easy and economic. Low thermal mass insulation leads to a very impressive heat up rate as well as efficient insulation.

For furnaces starting from 1400 °C Cantal Globar series Silicon Carbide heating elements are employed, maintaining a very long service life.

Temperature control provided either by PID or Programmable controls depending on customer requirements. Chamber exhaust vent is a standard till 1300 °C and should be specially required for furnaces over 1400 °C. A vertical counter balanced door, keeps the hot insulation away from operator, while opening upwards. There is always a safety switch which isolates power when door is opened.



(TC-A075) - LOS ANGELES ABRASION MACHINE

STANDARDS: TS EN 1097-2, ASTM C131

It is used for measuring the abrasion resistance of aggregates. The machine has a steel frame that supports the drum. 1 hp electric motor and speed reducer turn the drum at 30-33 rpm. Abrasion balls should be ordered separately (according to the standard size and weight). Galvanized steel tray is for the collection of material. The electronic control panel consists of main switch, start/stop button and programmable 5 digit revolution counter (according to the defined rotation number, machine stops automatically).

Power: 220 V, 50 Hz, single phase, 750 W.

Dimensions: 1100 x 1000 x 1140 (h) mm.

Weight: 320 kg





NORDIC ABRASION MACHINE

STANDARTS : EN 1097-9

The device used for the purpose of determination of the resistance to wear caused by studded tires. Try to 11.2mm in the 16mm range broken or unbroken will apply in natural and artificial aggregates.

The steel balls aggregates range in a steel drum, and is based on the principle of rotating together with water.

Drum 206.5mm diameter, 335mm length and thickness 6mm is made of steel. It is mounted on the inner surface of the drum 3 enables intimate mixing of aggregates flap and ball. Percent of the aggregate abrasion loss is calculated after the specified number of the drum rotated standards.

Power: 220V, 50-60 Hz, 1 ph.

Weight: 95 kg.



ACCELERATED POLISHING MACHINE

STANDARTS : EN 1097-8; EN 1341; EN 1342; EN 1343

It is Used to measure the resistance of road stone to the polishing action of vehicle tires on a road surface.

The machine consists of road wheel rotating in the speed of between 315 and 325 rpm.

The electric motor of the machine is 370W and fan-cooled. Machine supplied complete with road wheel, side plate, rubber rings, abrasive feed mechanism, corn emery, flour emery, set of 4 specimen molds and 2 molds plates.

Power : 230 V, 50 Hz, 1 ph

Dimensions: 740 x 720 x 1520 mm.

Weight: 175 Kg.





TC-A078 MICRO DEVAL

STANDARTS: TS EN 1097-1, NF P18-572

This machine is used to determine resistance of aggregates against abrasion.

The machine comprises durable steel frame on which four stainless steel cylinders dia. 200x154 mm are mounted.

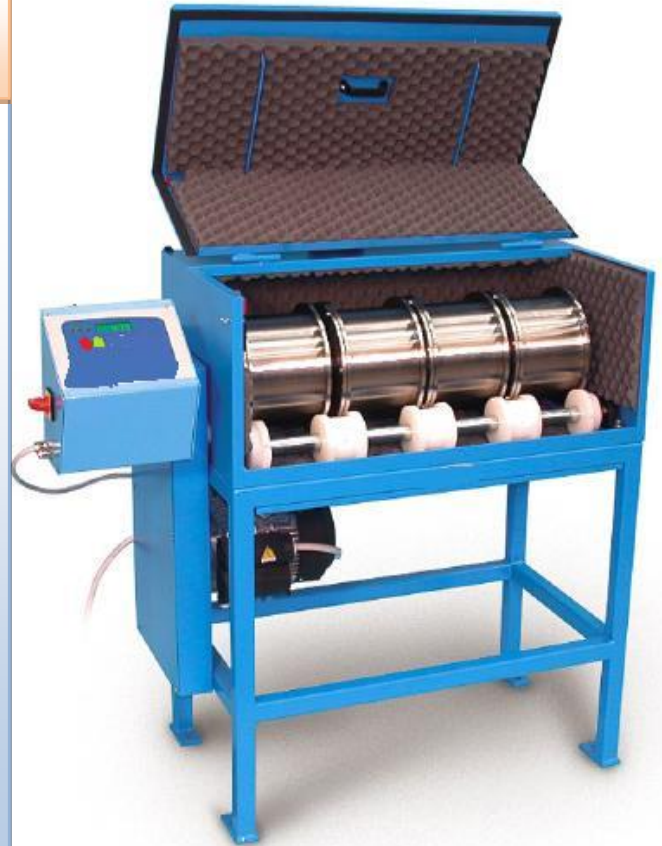
Electric control panel consist of programmable 5 digit digital numerator with automatic start / stop button (According to the defined rotation number, machine stops automatically).

20 kg of stainless steel spheres dia. 10 mm is given with the machine

Power: 220 V, 50 Hz, single phase, 750 W.

Dimensions: 1500 x 500 x 650 (h) mm.

Weight: 140 kg.



(TC-B022) - BOTTLE ROLLER

To rotate one up to three bottles or jars simultaneously about their longitudinal axis with rotation speed adjustable from 0 up to 85 rpm.

Power supply: 230 V 50 Hz 1ph

Dimensions: 385x295x160 mm

Weight: 10 Kg





(TC-A011) DRYING OVEN

STANDARTS : TS 1900, TSE EN 932-5, 1097-5, ASTM C127, C136

- Temperature range : +5°C / 250°C
- Ideal design for dry weather sterilization, drying and heating
- Programmable PID microprocessor control system
- Digital indicators for heat and time, user friendly easy use of control panel
- Durable against the most of chemicals and cleanable stainless steel compartment
- Excellent uniformity and stability of temperature by triple insulation and air jacketed heating system.
- It is provided natural air circulation for homogeneous temperature dispersion.
- Very low temperature loss by means of the door pressing firmly and tightly on the chamber gasket.
- Adjustable ventilation flap
- Safety thermostat



(TC-A060) SIEVE SHAKER MACHINES

STANDARTS: TS 1900, TSE EN 932-5, 1097-5, ASTM

- The sieve shaker is activated by engine. It can catch 8 pieces with 200 mm dia or 8" sieves. Additionally, it can hold pan and lid and also it can be performed for wet sieving tests.
- Timer can be adjusted between 0- 60 min
- Power: 220 – 240v 0.18 kw 3000 rpm
- Dimensions: 340 x 340 x 1200
- Weight : 20 kg





(TC-A061) HIGH CAPACITY SIEVE SHAKER

STANDARTS: TS 1900, TSE EN 932-5, 1097-5, ASTM C127, C136

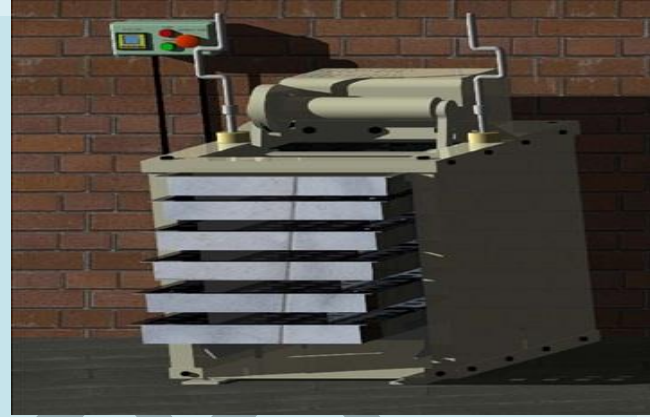
This machine was designed to sieve high amount every kind of materials.

The screen shaker accepts up to 60- 70 kg samples.

It was manufactured though and durable material. The structure of the machine had been adjusted to hold 5 screen trays and dust pan.

The screen trays should be ordered separately.

Timer can be adjusted between 0- 60 min.



(TC-A112) ABRASION TESTER FOR NATURAL STONES AND CONCRETE

STANDARTS: EN 1338-1239-1340-1341-1342-1344

It is used for determining abrasion resistance of the natural stones and concrete construction elements. The abrasion wheel is 70 mm thick and rotates at a speed of 75 rpm. The machine is equipped with a digital counter which stops the machine at the end of a preset number of revolutions.

Disk speed is controlled electronically

Supplied with machine : 5 kg of white corundum

Disc: 70 mm thick

Max. sample dimensions: 100 x 100 x 60 mm

Power supply: 230V 50Hz 1PH 800 W

Dimensions: 530 x 480 x 830 mm

Weight: 70 Kg

Max sample dimensions: 100 x 100 x 100

Power: 230 V 50Hz 1 PH 800 W

Dimensions: 530 x 480 x 830 mm

Weight : 70 kg





(TC-S158) SAND EQUIVALENT TEST SET

STANDARTS: *TS EN 933-8, NF XP18-598*

It is used to determine the relevant proportions of clay-like or plastic fines and dusts in granular soils and fine aggregates

The apparatus consists of 4 graduated plastic cylinders, rubber stopper, irrigation tube, weighted foot assembly, syphon assembly, rubber tubing, measuring tin, funnel and bottle of special concentrated solution (250 ml)



(TC-S160) SAND EQUIVALENT SHAKER TABLE

STANDARTS: *TS EN 933-8, NF XP18-598*

The device provides a constant uniform shaking with automatic cycle test.

Oscillating excursion is 200 ± 10 mm at 180 stroke/min rate.

It completes with timer that automatically stops the shaker at the end of the test.

Power supply: 220-240V 1ph 50 Hz 250 W

Dimensions: 850 x 300 x 380 mm

Weight: 30 kg.





(TC-A049) AGREGA CRUSHING VALUE MEASUREMENT APPARATUS

It is used for aggregates that pass from 12.7 mm and retained by 9.52 mm sieves

It is covered by a galvanization against corrosion

It comprises 150 mm nominal diameter steel cylinder, plunger, base plate, stirring rod and measure 115 mm diameter x 180 mm deep.

Total weight: 20 Kg



(TC-A021) JAR MILL

It was designed for making cement, rock, hard materials 5 mm granules. There are 3 types of this test device according to their capacities. These are 0.3 lt 1 lt – 1.5 lt. Jar is in prokorund material with relevant hard porcelain spheres.

Noise reduction steel cabinet and micro switch to 89/392/ CE directives.

Built in timer. It is supplied complete.

Rpm: about 400

Power supply: 220-240 V 50 Hz 1ph 750W

Dimensions: 350 x 710 x 410 mm

Weight: 60 Kg





TC-A048 GRID SIEVES SET

STANDARTS: TS EN 933-3

Frame was made thick aluminum.

The sticks are stainless steel between 5 and 15 mm dia. according to slot width.

Dimensions of the sieves, slot width tolerances and stick bar dia. are controlled complying with EN 933 standards.



JAW CRUSHER

STANDARTS :UNE 83120

This Jaw Crusher is used for the rapid, gentle crushing and pre-crushing of medium-hard, hard, brittle and tough materials.

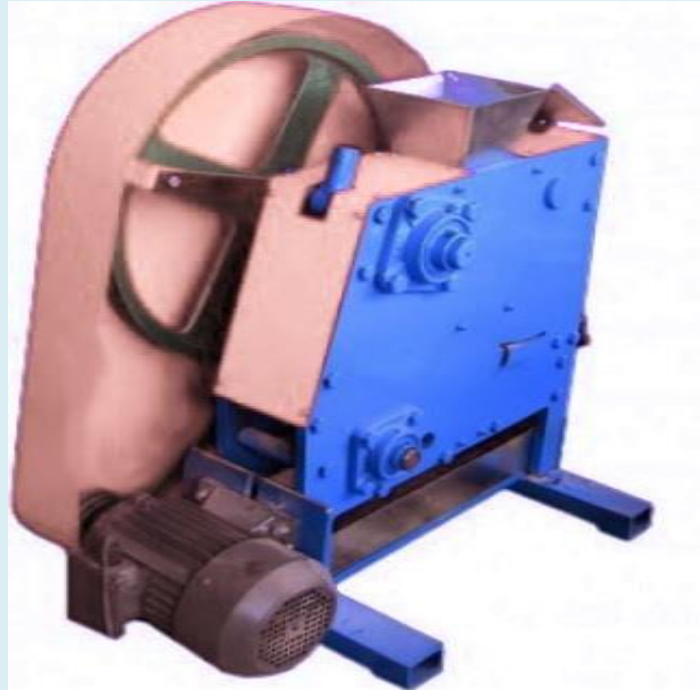
Its variety of materials offered including heavy-metal free steel, its efficiency and safety.

Application Examples

Alloys, basalt, cement clinker, ceramics, chamotte, coal, coke, construction materials, feldspar, glass granite, minerals, ores, oxide ceramics, quartz, rocks, silicon, slag.

Features

Material feed size*	< 50 mm
Final fineness*	< 4 mm
Material of grinding tools	manganese steel, stainless steel, tungsten carbide, steel 1.1750 (for heavy-metal free grinding)
Jaw width	60 x 60 mm
Gap width setting	0 - 20 mm
Gap width display	scale
Zero point adjustment	yes
Hinged hopper	yes
Dust extraction unit	yes
Collector capacity	2 l
Drive	1-phase motor / 3-phase motor
Drive power	0.75 kW
Electrical supply data	different voltages
Power connection	1-phase / 3-phase
W x H x D closed	320 x 960 x 800 mm
Net weight	~ 137 kg
Remark weight (without 0.75 kW whopper etc.)	



TC-A101 FREEZING AND THAWING CLIMATIC CHAMBER

STANDARTS :TS 3449

This is used to determine resistance to freezing and thawing. It provides freezing / thawing in air and also freezing in air / thawing in water.

The chamber equipped with programmer for 9 programs in 9 steps for each program.

Time can be arranged to 360 hours or 360 minutes for each step of program.

Temperature range for cabinet is -25°C to $+60^{\circ}\text{C}$.

The control unit is electronic and equipped with digital display with $0,1^{\circ}\text{C}$ temperature accuracy.

The temperature distribution accuracy in the cabinet is not higher than 2°C .

Cabinet provides heating from -25°C to $+25^{\circ}\text{C}$ in 60 minutes.

230 V, 50 Hz, 1 ph.





(TC-S012) SLIDING AND FRICTION RESISTANCE DETERMINATION TEST DEVICE

STANDARTS: EN 1097-8 / EN 1338, 1341, 1342 / EN 13036-4 / ASTM E303 / BS 812:114 / CNR N. 105, 140 / NF P18-578, P18-575 / NLT 174

It measures road asphalt's surface friction and resistance of sliding.

It is used for polished rock value tests on aggregates.

The slider lifting device is incorporated in the pendulum base assuring accurate adjustment operations

The skid tester is also suitable to perform tests on:

- Natural Stones conforming to EN 1341, 1342
- Concrete block pavers conforming to EN 1338

Product is given together with:

- Additional incorporated scale for tests on polished Stone value specimens

-Carrying case

Rule plexi glasses made, for sliding length verification.

-Bristle, wash bottle, stool, tool set for machine use.

Thermometer range : - 10 to + 110° C



(TC-A085) SPECIFIC GRAVITY FRAME

STANDARTS: EN 12390-7, BS 812-2, 1881-114

It is used for specific gravity determination of concrete and aggregates.

It must be utilized with a suitable electronic balance.

There is robust steel frame made.

It incorporates on its lower part a platform that is adjustable in height, holding a water container, and allowing the specific gravity test.

Dimensions: 510 x 510 x 1150 mm

Weight: 50 Kg





(TC-A049) FLAKINESS SIEVES

STANDARTS: BS 812

It is manufactured parallel stainless steel which its diameters are between 5 mm and 15 mm. There are different kinds of dimensions and measurements for these sieves are suitable with the standards

It is used for determining aggregates 'geometric features and grain shape



(TC-A071) - LENGTH GAUGE

It is used to measure aggregates' length. It is placed on a hardwood base.

Weight : 1 Kg



(TC-A070-72) GAUGES

STANDARTS: TS EN 933-8, NF XP18-598

Flatness Index Measurement Template

Standart: BS 812

Product Code Number : TC-A070

It controls flatness of aggregate. For example: If its thick is smaller than 0.6 then it is normal. It is manufactured though stainless steel sheet

Weight : 600 g





SHAPE GAUGE

Standarts: TS EN 933-4, DIN 4226, ISO 3310-1-2

Product Code Number: TC-A072

It is used to measure length / thickness ratio of aggregates



(TC-S157) AGREGA IMPACT VALUE MACHINE

STANDARTS: BS 812NF P18-574

It is used to determine impact resistance value of aggregates. It is manufactured from tough durable stainless steel against abrasion and deterioration. Internal counter displays falling number automatically.

Cylindrical mound and compaction stick is included.

Cylinder mound 100 x 50 mm

Compaction stick 75 x 50 mm cylindrical measure

Wight : 10 kg



(TC-A081-01) CRUSHING RESISTANCE DETERMINATION

STANDARTS: TS EN 13055-1

This apparatus is for the determination of the crushing resistance of lightweight aggregate. It is composed by ring with adjustable height, upper and lower cylinder piston, base .It is made of steel, plated against corrosion.

Dimensions: 180 mm dia. by 260 mm height

Weight: 16 kg.





(TC-A068) SAMPLE SPLITTER

STANDARTS: EN 932/1, BS 1377, ASTM C702, ASTM C136, D271-D421

It is used for the rapid preparation of representative samples and made of sheet metal. Each sample splitter is supplied with two metal containers



(TC-A068-01) LARGE CAPACITY SAMPLE SPLITTER

STANDARTS: EN 932/1, BS 1377, ASTM C702, ASTM C136, D271-D421

This machine is designed for the reduction of test samples which are too large in volume to be conveniently handled. It handles any material from sand sizes up to dia. 108 mm. Each slot is 12 mm wide so that it can be adjusted to 12-24-36-48-60-72-84-96-108 mm are possible. Each sample splitter are giving with 2 collecting molds.

Clam shell hopper: 30 liters capacity



(TC-S157) METHYLENE BLUE TEST SET

STANDARTS: EN933-9

Electric stirrer adjustable from 400 to 700 rpm, complete with 70 mm dia.

propeller. 200-240 V 1ph 50 Hz

Support base for stirrer

Burette 50 x 0,1 ml with stopcock

Support base for burette

Pan 200 x 150 x 80 mm

Filter paper (pack of 100)

Glass rod dia. Beaker

Methylene blue, 100 g

Kaolinite, 500 g

Total Weight: 10 Kg





(TC-A023) MOISTURE METER

STANDARTS: ASTM D4944, BS 6576, AASHTO T217

This electronic tester measures and visualizes directly on the display the moisture percentage and temperature of sand and fine aggregates up to max. dia. of 10 mm by simply inserting the crucible tip.

It is suitable for both site and laboratory tests.





(TC-C129) BOHME ABRASION MACHINE

STANDARTS: TS 2824 EN 1338, EN 1339, 1340, 13892-3 / DIN 52108

The instrument measures a volume loss in a specimen under abrasion test and it's used in tests such as:

- Paving Stones
- Concrete slabs
- Slabs made of natural rocks
- natural stone slabs

The test is performed by positioning a specimen to be verified in a abrasion tester. Bohme apparatus on the test track on which has been spread normalized abrasive

The grinding wheel it's made rotate and the specimen submitted to the abrasive load of 294 N for a certain number of cycles.

Before doing a test, establish the specimen's bulk density by measuring weight and thickness. Perform the test for 16 cycles composed of 22 turn each, calculating at the end a worn as a average loss in volume and weight.

The apparatus is basically composed of:

- Cast iron horizontal disc with a speed of 30 rpm and a diameter of 750 mm furnished of a 200 mm test track to position a specimen.
- Control panel with digital revolutions counter with automatic stop after preset revolutions
- Specimen's holder

Power supply: 230V 50Hz 1PH 800 W

Dimension: 1500 x 1000 h 850 mm

Weight: 250 Kg





(TC-A130) – SLAKE DURABILITY APPARATUS

STANDARTLAR: ASTM D4644

This equipment has been developed to assess the durability of rock to weakening and disintegration when subjected to the simulated effects of climatic slaking.

The rock samples are dried and then submitted to wear stress inside a drum which is rotated into water.

The test is performed different times and the wear is given by the loss in weight of the sample.

The system incorporates a motor drive unit mounted on a baseplate which revolves two (or up to four) stainless steel drums manufactured from 2 mm mesh, 140 mm dia. x 100 mm long.

A digital timer automatically stops the motor after the preset time.

The equipment is supplied complete with two drums with tanks, and it can accept two additional drums (see accessory).

Power supply: 230V 1ph 50Hz 250W

Dimensions: 350x740x300 mm approx.

Weight: 30 kg approx.



(TC-S157) DIGITAL POINT LOAD TESTER

STANDARTS: ASTM D5731

It is used to determine the strength values of a rock and concrete specimen both in the field and in the laboratory. It consists of a load frame for applying loads up to 50 KN, on which a manual hydraulic jack is mounted.

The instrument accepts core specimens up to 4" (101,6 mm) diameter which are loaded by two cones haped points. A graduated scale indicates the distance between the conical points. The applied load is measured by a pressure. Transducer with a digital display unit range 0-50kN,





(TC-A100) ALCALI SILICA REACTION TEST EQUIPMENT

STANDARTS : ASTM C 1293

Concrete samples are conserved between % 20 °C and % 70 °C with % 100 relative moisture within ASR test cabin. Temperature deviation is more sensitive than 0.5 K. ASR sample container is made of stainless steel with a thickness of 2 mm and internal dimensions of 280 x 130 x 400 (height - at - height) cm d.

System is supplied with a high pressure pump and a stainless steel nozzle.

1.2 liters / hour capacity



(TC-B101) SOLVENT RECYCLING TEST DEVICE

Capacity: 10 liters / hour & 20 liter / hour.

Stainless steel interior cup.

Thanks to digital control, the desired temperature adjust can be done with ease and precise.-

It has water cooling system.

Dual tank system for dirty and clean solvent.

It has a level indicator without opening door of it to see total amount of solvent within reservoir.

There are 2 extra thermometer at the level indicator.

Stainless steel cover system has a clips on both sides of it and prevents escaping of solvent which is vapour to external environment .

Carrying handles.

Power: 220 V 1 pH 50-60 Hz.

Weight: 25 kg





(TC-A009-01) Los Angeles Abrasion Balls

STANDARTS: ASTM C131

The set consists of 12 pieces abrasion balls.

Balls dia 47.6 mm or 46 mm



(TC-A004-01) DISK MILL

Disk Dia : Min 15 cm

Material feed size < 50 mm.

Discs:(%16-18 manganese) +1.5 Cr.

The distance between discs could be adjusted.

Hopper and below collection container.

Complete with electronic motor.





ASPHALT- BITUM

Bitumen materials are mostly used in construction and road sectors. Asphalt is also called as Bitumen. Eternal variation is composed as a result of mixing of aggregate and other linkers. Because of this reason, with determining softness point and different kind of test methods; linking contents , internal friction, consistency, compatibility, viscosity, quality of aggregate , percentage of void, Marshall test and other many parameters and equipment which are at this chapter are prepared to meet with these test procedures .





ASPHALT TEST DEVICES

- **CENTRIFUGE EXTRACTOR**
- **CONSTANT EXTRACTOR**
- **REFLUX EXTRACTOR**
- **VACUUM PICHNOMETER**
- **AUTOMATIC MARSHALL COMPACTOR**
- **MANUEL MARSHALL COMPACTOR**
- **MARSHALL MOULD**
- **KINEMATIC VISCOSITY**
- **UNIVERSAL SAMPLE EXTRUDER**
- **MARSHALL STABILITY TEST MACHINE**
- **ASPHALT CORE DRILLING MACHINE(ELECTRIC MOTOR)**
- **EMULSIFIED ASPHALT DISTILLATION TESTING MACHINE**
- **ROLLING THIN FILM OVEN**
- **ASPHALT MIXER**
- **HYDROLIC SAMPLE EXTRUDER**
- **MARSHALL WATER BATH**
- **PENETROMETER**
- **ASPHALT DUCTILITY MACHINE**
- **RING AND BALL SOFTENING POINT DETERMINATION APPARATUS**
- **REDWOOD VISCOMETER**
- **FLASH POINT DETERMINATION MACHINE**
- **SAYBOLT VISCOMETER**
- **BENKELMAN BEAM DEVICE**
- **REDWOOD VISCOMETER**
- **PRESSURIZED AGING CABINET**
- **ADHESION TEST APPARATUS (VIALIT PLATE)**
- **PAVEMENT CORE DRILLING MACHINE WITH TRAILER**
- **TRAVELING BEAM DEVICE (ELECTRICAL)**
- **HYDRAULIC EXTRUDER**



(TC-B010) CENTRIFUGE EXTRACTOR
STANDARTS: ASTM D21172,AASTHO T164

It is used for the determination of bitumen percentage in bituminous mixtures. It functions conveniently according to standards. The electronic pot drives the bowl speed rotation ramp from 0 to 3000 rpm. Bowl stops automatically at the end of the test. The machine is together with 100 pieces filter paper.

Power supply: 220-240 V 1ph 50/60 Hz 250W

Dimensions: 580 x 300 x 480 mm

Weight: 50 Kg



TC-B014 CONTINUOUS EXTRACTOR
STANDARTS: EN 12697-1,EN13108,DIN 1996,ASTM D1856

It is designed for quick filter less separation of filler from binder solution or other mixtures containing sediments (cement, soil, clay), in suspension. The solution is poured into the top funnel and falls into the rotating test container dia. 70x200 mm. The rotation speed is 11500 rpm, with automatic ramp and preset speed control. Extraction capacity is up to 100 g. of filler per test.

Power supply: 220-240 V 1ph 50 Hz 600 W

Dimensions: 350x600x720 mm.

Weight: 60 Kg





(TC-B019) REFLUX EXTRACTOR

STANDARTS: ASTM D2172, AASHTO T164B

This apparatus consists of sieves which are put in glass jar, heater plates and cooling. Maximum capacity is 100 g. The asphalt sample (max. quantity 4000 g) is placed inside the wire basket, the solvent is poured inside the jar. Now the wire basket is inserted into the jar which is covered by the metal condenser connected to a water supply.

The apparatus is placed on a hot plate and the boiling solvent drips into the basket dissolving out the bitumen. Heater plate is ordered separately.

Dimensions: dia. 160 x 335 mm

Weight: 5 Kg



(TC-B033) AUTOMATIC MARHALL COMPACTOR

STANDARTLAR: EN 12697-10, EN 12697-30, ASTM D1559, AASHTO T245, BS 598, DIN 1996

This ruggedly constructed apparatus automatically compacts the bituminous sample and stops off the motor after the preset number of blows has been completed on the automatic digital display counter. The mound is held in position by a fast clamping device. The compactor includes a vibrated concrete base where a laminate hardwood block is mounted. The machine is equipped with safety door, conforming to CE safety directives. When the door is opened; it stops automatically. All moving parts are quickly/easily accessible for maintenance.

Sliding mass weight: 4535 ± 15 g

Free fall height: 457 ± 5 mm

Blow frequency: 50 blows in 55/60 seconds

Power : 220-240 V 1 ph 50 Hz 750 W

Dimensions: 500 x 500 x 1890 mm

Weight: 220 Kg





(TC-B033-01) MANUEL MARHALL COMPACTOR

Knocker according to the standard of bituminous mixtures used to compress manually.

Mallet system consist of special wooden pedestal in conformity consists of the transport mechanism with the hammer and mallet.

Dimensions: 550 x 550 x 1950 mm.

Weight: 50 kg.



(TC-B033-02) MARSHALL MOULDS

STANDARTS: ASTM D 6926 - EN 12697-10

Internal dia.101,6 mm (4").

It is made from steel.

Weight: 3 kg



(TC-B091) KINEMATIC VISKOSITY

STANDARTLAR: ASTM 2170,AASHTO T201,EN 12595

The temperature, from room temperature to 135°C, remains constant within $\pm 0.1^\circ\text{C}$.

Electric stirrer, electric heater and cooling (COIL) system.

Digital read-out and regulation of temperature

Power supply: 220 V, 50 Hz, single phase, 1700 Watts

Dimensions: 300 x 300 x 500 (h) mm.

Weight: 12 kg.





(TC-B067) VACUUM PICNOMETER

STANDARTS : EN 12697-5, EN 13108, ASTM D2041, AASTHO T209, T283

It is transparent Plexiglas mad and complete with push/ pull valves and vacuum manometer.

It is utilized for a rapid determination of asphalt content, bulk specific gravity of aggregates, the max.

Theoretic specific gravity of bituminous un compacted road mixtures and the percent air voids in compacted mixtures.

Dimensions: dia. 300 x 450 mm

Weight: 10 Kg



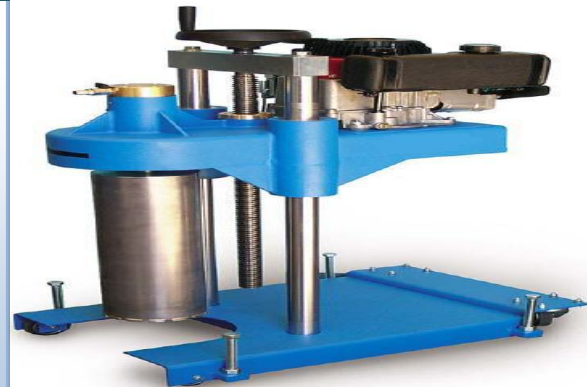
(TC-B319) ASPHALT CORE DRILLING MACHINE

This rugged, compact and portable machine with vertical screw feed, is used for pavement core sampling where there is not easy to get electrical power.

Petrol engine 5 HP power, 4-cycle Briggs & Stratton model.

Dimensions: 850 x 580 x1230 mm

Weight: 135 Kg



(TC-B069) ASPHALT DISTILLATION MACHINE

STANDARTS: ASTM D402, AASHTO T78, NF T66-003, UNE

This machine is used for the determination of cut-back asphaltic materials by the distillation test.

The set is formed by: aluminum still container, glass connectors including condenser, stands, graduated cylinder, two thermometers ASTM 7C range -2 to +300°C, Bunsen burner with gas stop valve controlled by a flame sensor to CE safety directive.

Weight: 12 Kg





(TC-B011) ROLLING THIN FILM OVEN (RTFO)

STANDARTS: *ASTM D2872-AASHTO T240- CNR NO 54*

It is used to measure impact of asphaltic half on a moving film of solid material on air and heat.

The outer body and the inner surface is made of stainless steel and is insulated with fiberglass middle part.

The door is covered with a wide CAs for observation devices.

Power: 220-240 V, 1 phase, 50 Hz, 1300 W

Dimensions: 620 x 620 x 910 mm

Weight: 55 kg



(TC-S114) UNIVERSAL EXTRUDER

It is hand operated, actuated by a 5 tons hydraulic jack. It is designed to extrude samples having dia. 4" and 6". It can therefore extrude Marshall, CBR, Standard and Modified Proctor specimens.

Dimensions: 300x500x450 mm

Weight: 30 Kg



TC-B042 DIGITAL MARSHALL STABILITY TESTER

STANDARTS: *EN 12697-34 / ASTM D1559 / AASHTOT245 / BS 598:107 /NF P98-251-2*

Ruggedly constructed with frame to encompass the strain and loads, easy to use, it is designed to operate with the minimum of maintenance. The unit is supplied complete with load cell 50 kN capacity, stability mold flow meter with mechanical dial gauge.

Max. vertical span: 645 mm

Horizontal span: 275 mm.

Cylinder stroke: 60 mm.

Power: 220-240 V 1 ph 50 Hz 750 W

Dimensions: 520 x 550 x 1450 (h) mm.





(TC-E094) ASPHALT MIXER

STANDARTS: EN 196-1,196-3,1015-2,413-2,459-2-EN 12687-35,ASTM C305

This mixer has been designed to mix bituminous samples for compaction tests and for other tests where uniformity is required. The stainless pot has 5 liter capacity.

The mixer is covered with steel and it has double doors in accordance with CE directives.

One of them is on pot is assembled under of it and other is safety wires

Pallet speeds : 62 and 125 Rpm clockwise

Mixer speeds : 140 and 285 Rpm (anticlockwise)

Power supply: 400 V 50 Hz 3 ph 0,5 HP (230V 1 ph on request)

Dimensions: 260 x 760 x 860 mm

Weight: 160 Kg



TC-B054) MARSHALL WATER BATH

STANDARTS: ASTM D1559,AASHTO T245,BS 598-108,NF P98-251-2,DIN 1996

The internal tank and over are stainless steel made. The outside box is from painted steel sheet with wool insulation. The specimens are held by a stainless steel perforated shelf spaced from the bottom.

The bath has a capacity of 46 liters and is designed to hold up to 20 Marshall Specimens.

Temperature range: from ambient to 95°C. Inside dimensions: 160 x 510 mm

Outside dimension: 160 x 510

Weight: 18 kg





(TC-B057) ASPALT PENETROMETER

STANDARTS: ASTM D 5 EN 1426 AASHTO T 49 BS 2000 CNR 24

It is used to determine the consistency of a bituminous sample under fixed conditions of load, time and temperature. The penetration is expressed in distance of tenths of millimeters vertically penetrated by a standard needle. The penetrometer is ruggedly constructed, with a base table in light alloy with leveling screws, plated vertical rod, and micrometric vertical adjustment device.

The slider is brass made with free fall. The comparator is calibrated to 0,1 mm.

The penetrometer is supplied with stop and release push button, automatic zero set, micrometer adjustment, set of weights 50 and 100 g.

Two sample cups dia. 55 x 35 mm and 70 x 45 mm.

Dimensions: 220 x 170 x 410 mm

Weight: 11 Kg



TC-B054 DUCTILITY MACHINE

STANDARTS : EN 13398 ASTM D 113 AASHTO T 51

The ductility of bituminous materials is determined by measuring the elongation before failure of a sample subjected to tensile stress in pre-determined conditions of speed and temperature (50 mm/min.; 25 °C).

The apparatus is stainless steel made. It consist of cooling unit, water circulating pump, thermostat ($\pm 0.1^{\circ}\text{C}$), digital display, gear reduction unit for mound feed, manual tensile stress carriage. Suitable for testing 3 samples simultaneously.

Electric motor: 0.25 hp. graduated scale.

Standard carriage stroke: 1500 mm . It is together with 3 mounds and 3 mounds plates.

Power supply: 220 V, 50 Hz, single phase, 850 W.

Dimensions: 2000 x 300 x 400 (h) mm.

Weight: 60 kg





TC-B072 RING AND BALL SOFTENING POINT APPARATUS

STANDARTS : ASTM D36,AASHTO T53,NF T66 008,BS 2000,UNI4161,UNI 7111,CNRN35,EN 1427

It is used for determining the softening point.

The equipment consists of:

- A set of two balls dia. 3/8", 2 rings, 2 centering collars.
- Two-gang framework to support rings, collars and balls and for thermometer insertion.
- Pyrex beaker diameter 85 x 130 mm for the immersion of the frame and samples



TC-B086 FLASH POINT TESTER

STANDARTS :EN 22592,ASTM D92,BS4689,AASHTO T48,CNR 72

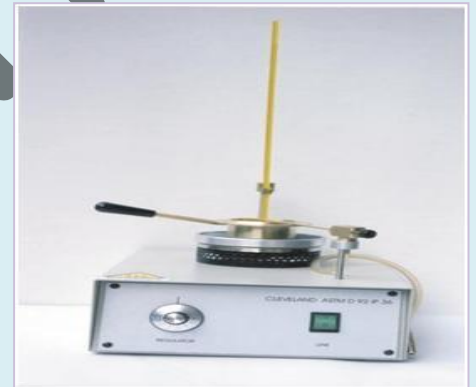
It determines the "open-cup", flash and fire points of oil products with a flash point above 80°C. Calibrated cup. Gas or liquid gas lighting device is above the cup.

There are 550 W electric thermostatic heaters.

Power supply: 220-240 V 1ph 50 Hz 550 W

Dimensions: 220 x 220 x 450 (h) mm.

Weight: 11 Kg



TC-B087 SAYBOLT VISKOMETER

STANDARTS :ASTM D88-D244.AASHTO T72

It is used to determine the viscosity of petroleum products at specified temperatures between 70 to 210 °F. It is made as a stainless steel. The saybolt viscometer is supplied complete with two interchangeable orifices "Furol" and "Universal", oil bath, electric heater with digital thermoregulatory, stirrer, cooling coil, and viscosity flask.

Thermometers are not included and must be ordered separately.

Power supply: 220-240 V 1 ph 50 Hz 500W

Dimensions: 270x270x550 mm

Weight: 12 kg





TC-B100 BENKELMAN BEAM TEST MACHINE

STANDARDS: AASTHO T256-77, CNR N141

It is made from aluminum alloy made, complete with dial indicator and accessories. it is utilized to measure the deflection of the road surface when loaded by the wheels of vehicles.

The beam is put in contact with the pavement under test between the tires of the vehicle.

The measurement of the deflection is performed when the vehicle passes over the test area.

Length of the Benkelman beam is 250 cm.

Beam fulcrum ratio 4:1

It is supplied complete with wooden carrying case.

Weight: 15 Kg



(TC-B319-01) - PAVEMENT CORE DRILLING MACHINE WITH TRAILER

STANDARDS: EN 12697-27

The device is with trailer.

This rugged, compact and portable machine with vertical screw feed, is used for pavement core sampling where it is not easy to get electrical power.

Petrol engine 5 HP power, 4-cycle Briggs & Stratton model.

Dimensions: 850x580x1230 mm

Weight: 135 Kg





(TC-B098) TRAVELING BEAM DEVICE (ELECTRIC POWERED)

The 3 meter long Travelling Beam Device is used to check for any irregularities in both concrete and bituminous road surfaces. A sensing unit comprising a Wheel connected to an indicator provides a magnification of 4:1. Deviation of the surface from a straight-line on a scale calibrated in increments of 2 mm up to 10 mm and 5 mm up to 25 mm. A dye-marker is fitted which may be used to identify suspect areas. Outrigger wheels provide mobility on site.

The device is supplied as three sub-assemblies which are quickly assembled on site. The Travelling Beam is supplied fitted with an autographic recorder providing a permanent record of the surface profile. Records up to 1 kilometer can be recorded on the special chart paper rolls used.



(TC-S111) - HYDRAULIC EXTRUDER

This extruder is used for a smooth and rapid extrusion of soil samples from tubes also of thin walls with minimum disturbance. The unit extrudes samples from dia. 35 up to 101,6 mm with max. stroke of 900 mm. The hydraulic piston is equipped of speed adjuster and can be stopped in any excursion's position.

Max. load: 30 kN The extruded sample is held in place by a receiving table adjustable in height and easily lowered alongside the machine to save space. Complete with adaptors (ring + tamper) to extrude samples having dia. 38, 83, 100 mm

Power supply: 220-240 V 1ph 50/60 Hz 1300 W





PRESSURIZED AGING CABINET

PAV, according to Strategic Highway Research Program (SHRP) instruction it simulates the ageing the service oxidation ageing of asphalt compound materials It is according to ASTM standard D6521 And AASHTO standard method R28.

PAV system complete with ASME – code stainless steel box comprising heater , stainless steel pressure cabin ,sensible sample holder capable to hold 10 pcs sample simultaneously , 1 set totally 10 pcs TFOT sample tray, pressure controller , pressure and temperature measure unit , sample placing and take out spatula.

Technical specifications:

Construction; desk top type , with internal pressure cabin and heater.

Sample capacity ; 10 (TFOT sample trays included).

Vertical loading and fixture; 0.05 mm parallelism.

Front panel screen; 4 rows , 20 characters , lightened, LCD screen , 4 function button, 4 way button and enter/ cancel button.

Optional battery system: min.4 h.

Test Parameters:

Working pressure; 2.10 ± 0.05 Mpa (21 bar).

Temperature interval; $90^{\circ}\text{C} _ 110^{\circ}\text{C}$.

Temperature control; platinum RTD, microprocessor based.

Temperature control accuracy; $\pm 0.1^{\circ}\text{C}$.

Test temperature distribution ; $\pm 0.5^{\circ}\text{C}$.

Reach time to preconditioning temperature; 3 h (at ambience temperature).

Excess temperature control; internal high temperature alarm(135°C) thermal closing key (170°C).





(TC-B083) - REDWOOD VISCOMETER

STANDARTS : *EN 12846, EN 13357, IP184, NF T66-005, BS 2000*

This is used to determine the viscosity of cut-back bitumen and road oil. The instrument consists of a stainless steel bath (tank), agitator, rheostat, immersion electric heater with digital thermostat to take the water to the desired temperature, cooling coil for water supply connection. Supplied with control glass thermometer IP 8C, range 0 - 45°C., subd. 0,2°C., graduated glass cylinder 100ml capacity.

Supplied "without" Cup, Go/not go gauge, ball valve to be ordered separately (see accessories).

Power supply: 230V 50/60Hz 1ph 300W

Dimensions: 265 x 270 x 550 mm

Weight: 12 kg



ADHESION TEST APPARATUS

STANDARTS: *EN 12272-3; NF P98-274-1*

JAS- 017 Adhesion Test Apparatus "Vialit Plate"

"Vialit plate" adhesion test apparatus is used to assess the adhesion property of aggregates to bitumen.

The apparatus consists of a metal basement with three vertical pointed rods to hold the test plate; vertical rod 50 cm high with a shot at the upper end for the steel ball to drop; a 512 g steel ball; 6 metal test plates, hand operated rubber lined roller with lead shots ballast.

Weight: 40 kg.





(TC-AS024-01) AUTOMATIC RING AND BALL SOFTENING POINT APPARATUS

ASTM D36, AASHTO T53, NF T66 008, BS 2000, UNI4161, UNI 7111, CNRN35, EN 1427

It is used for at the materials which are bituminous and asphalt .
It measures softening point automatically .

With glass ceramic heating plate and magnetic stirring motor with variable speed range below.

Operation by use of a touch panel.

The microprocessor controlled system provides a temperature rise of 5 K/min. as per standard with continuous temperature measurement inside the glass beaker.

The ring and ball values are automatically registered by two photoelectric cells right and left with digital display of results and difference. Two test option 30 to 80° C for water and 80 to 150° C for glycerole are provided.

Supplied with glass beaker 600 ml, stirring rod as well as a test frame with two rings, two balls and two ball centring

Supports. 230 V, 50 Hz, 1 kW.



(TC- AS037) MARSHALL

It is manufactured as a 4' or 6' according to demand





(TC-AS038) AUTOMATIC DIGITAL PENETROMETER

STANDARTS : EN 1426 | ASTM D5 | BS 2000 | NF T66-004 | NTL 124
| AASHTO T49 | UNI 4162 | UNE 7013 | CNR N° 24

Compact instrument using latest electronics and software technology: digital keyboard, microprocessor, LCD alphanumeric display, interactive software (permanent dialogue with operator).

Step by step motorized vertical displacements with 4 speeds, among them 3 downward and one upward. The slowest moves every 0.01 mm.

Penetration time to be set and programmed between 0 and 999 min 59 sec.

Pause time to be elapsed prior to test start to be set and programmed between 0 and 999 min 59 sec.

Parameters are saved in a non volatile memory (no erasure even if instrument disconnected).

4 moving device remarkable positions are saved in memory to shorten approach and leveling attempts.

Automated approach and leveling system for conductive samples.

Limit parameters can be entered. When test falls out of those preset limits visible and audible signal is actuated.

Anodised aluminum base plate with leveling screws and spirit level, sample containers centering guide, magnifying glass and low voltage illuminator mounted on flexible arms.

Depth penetration display in units and tenth of unit (0.01 mm).

Optoelectronic detection of depth penetration.





CONCRETE

Concrete is a composite material composed mainly of water, aggregate, and cement. Often, additives and reinforcements (such as rebar) are included in the mixture to achieve the desired physical properties of the finished material. When these ingredients are mixed together, they form a fluid mass that is easily molded into shape. Over time, the cement forms a hard matrix which binds the rest of the ingredients together into a durable stone-like material with much use.

The accurate and satisfactory test of fresh and hardened concrete are essential elements for any type of building realization. The final quality of the concrete utilized in the structure depends from many variables like: workability, consistency, setting, time, volumic mass, air content, compressive strength, temperature, linear variations, corrosion etc.

Testcenter proposes a complete range of testing and research equipment on concrete to satisfy practically all the above quality variables, in compliance with the EN, ASTM and the most known International standards





CONCRETE TEST DEVICES

CONCRETE TEST PRESSING MACHINE

CUBE –CYLINDIR AND BIMS SAMPLE MOULDS

CONCRETE AND MARBLE CUTTING MACHINE

CORE DRILLING MACHINE (ELECTRIC POWERED)

MELTING POT

CURE TANK GALVANIZED STEEL

PLASTIC CURE TANK

CONCRETE TEST HAMMERS

SLUMP CONE SET

PULL OUT TESTING APPARATUS

KELLY BALL TEST APPRATUS

CONCRETE BENDING /FLEXURAL TESTING MACHINE

TESTING ANVIL FOR CONCRETE TEST HAMMER

PEAK LOAD RESISTANCE TESTING MACHINE

UNIT WEIGHT MEASURE CONTAINERS

WATER IMPERMEABILITY TESTER 3 UNIT

SPECIMEN GRINDING MACHINE

BRICK TEST PRESS MACHINE

PAN TYPE MIXER MANUAL

WATER IMPERMEABLITY TESTER 6 UNIT

PAN TYPE MIXER AUTOMATIC

FLOW TEST MEAURING T50 TIME

CONCRETE TEST HAMMER

V FUNNEL MEASURING FLOW TIME

DIGITAL CONCRETE TEST HAMMER

L SHAPE BOX TEST

J – RING TEST

SLUPM TEST SET

VEBE CONSISTOMETER

COMPACTING FACTOR APPRATUS

CONCRETE FLOW TABLE

CONCRETE AIR CONTENT METER

HEATER PLATES

CONCRETE SPLITTING TENSILE TEST DEVICE

SPLITTING TENSILE TEST DEVICE FOR CYLINDIRS

VIBRATION TABLE

DRUM TYPE CONCRETE MIXER



(TC-B064) CONCRETE TEST PRESS MACHINE

STANDARTS : TS EN 12390-4, BS 1881, ASTM C78, DIN 51302

Control unit: Digital or computer supported full automatic.

Speed rate control: Motor speed control unit

Load meter: 450 bar pressure transducer.

Oil flow control: 24 valve solenoid valve.

Compression planets diameter: 300mm.

Max ram travel: 50 mm.

Power: 220V-50Hz-1.1kw.

Dimensions: 600 x 1000 x 1185 mm

Weight: 900 kg



(TC-B090) - TILE-CERAMIC-BEAM FLEXURAL TESTER

STANDARTS : TS EN 12390-5, BS 1881-118, ASTM C78, DIN 51302

Device is used in bending tests of samples such as ceramics, tile and beams.

This test device, two different model options including semi-automatic and fully automatic are available.

This tester 100kN - 150kN - 200kN - types of 300K capacity is available.

The device is automatically installed by fully automatic models available at the speed control system allows loading contained in the standard rate of the instrument and test ends automatically.

In the semi-automatic version control device by means of an integrated system with hand pump made installation and testing is completed by hand.

Load reading system in both systems are read via a pressure sensor and displayed.

All data is checked with a computer model of the device can be fully automated output could be saved on the computer.

Semi-automatic models available on the graph is displayed and details of the tests can be recorded on the LCD screen in their system.

Power: 220 V 50 Hz.

Dimensions: 1250x1200x1200 mm

Weight: 300 kg. (About)





DRUM TYPE CONCRETE MIXER

Mixing Capacity 135 liter

At field conditions it is suitable for mixing the concrete mix in medium hardness.

- Side-loading
- 2-3 m³ per hour efficiency

Power 0.75 kW

220 V, 2-phase, 50 Hz, with work

Weight: 90 kg

Dimensions: 800 x 1320 x 1450 mm

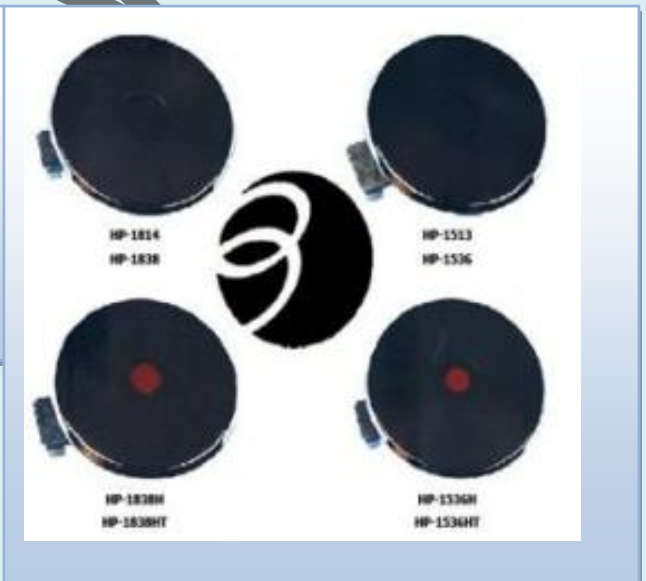


(TC-C187) - HEATER PLATES

Safety Thermostat

Temperature Range : Ambient Temperature +5°C / 250°C

Power : 220-240 V 1 pH 50/60 Hz





(TC-B064) - COMPRESSION TESTING MACHINE 3000 KN + FLEXURAL TESTING MACHINE 200 KN

STANDARDS : *TS EN 12390-4, BS 1881, ASTM C78, DIN 51302, ASTM C39, E4-UNI 6686-AASHTO T22, T71-NF P18-411 BS 1610 GRADE 1.0-UNE 7242, 83304*

Body should be steel and has a high mechanical strength in order to provide minimum deformation and is also suitable for continuous use. It has 4 composed of columns (diameter of at least 100 mm)

Closed-circuit hydraulic pump, capped top and can begin to try to play by pressing a single button.

Play with the top cap core samples quickly closes the gap between and after the pre-stress of the sample automatically switches to the breaking speed.

Maximum load capacity of 3030 kN is.

In the calibration of the device and result from 10% of the maximum capacity of the capacity of the device meets the Class 1 criteria.

Press 20x20x20, 15x15x15, 10x10x10, test samples in the 7x7x7 and 5x5x5 cm.

6 mm shear test result in calibration and measurement values in oblique compression test, meets the tolerances in the standard 12390-4.

Push Tray and discharge values in the title:

Diameter of 300 mm and the thickness of the plate is at least 50 mm in height. Download section of the press is shielded to prevent the pieces after the jump break.

Press is both automatic and manually operated. As you can speed PID control

4 and 2 load displacement input can read a total of 6 channels.

Optionally you can read in conjunction with the load displacement. Speed control with multi-turn potentiometer can be done manually. Setup and calibration menu is protected with a password.

Company name in the Computer Software, laboratory name, experiment definition, user information can be entered

There are sample identification and information entries. Force - time graph outputted.

The system is able to be installed vertical and lateral deformation control.

The maximum piston movement of the press 65 mm and can be controlled by piston movement limit switch.

Strain rate tensile press computer controlled according to the speed entered in the computer (0.5 - 1 MPa / sec) as downloading and sets this data automatically in accordance with the loading speed.

Automatic speed measurement values, force measurement, which provided up to a maximum of 10% of the capacity of $\pm 5\%$ accuracy in the field.

Implemented loading speed kN / s and MPa / s in the control unit and can be followed.

The selective forces from the System menu, as the unit could kgf or kN. Accordingly, the strength values in MPa or kN / mm² or kgf / mm².

Pressure sensors 2 mV / v it works with the working principles. Calibrated sensor is used.

Press has a electronic control module and the module has the code to enter the property.

The test presses can be used without a computer using the electronic control modules.

Calibration adjustment can be made in more than one measurement point settings as needed. (At least 3 points). Press the calibration information is stored in the electronic module, and so there is no need to re-calibrate the event of a computer malfunction.

Transducer sensitivity is under load $\pm 0.5\%$ d.

Graphical output, set the output of the results, the test report is printed out.

There is automatic calibration and zero adjustment. Computer control and data transfer can be done with existing software.

The information in the memory has the ability to transfer to a PC via RS232.

Graphics can be displayed on the device via the LCD screen and can record information about the test in the system



The software can calculate the break at the end of the test load and strength automatically.

Fields are also calculated according to the physical size of the can itself features.

Standard samples are available in the physical size of the device.

The graphic scale pressure force applied to the sample in proportion to the time change automatically.

Test period considered. Menu cube shape of the samples and / or has the ability to choose the cylinder.

It has the ability to choose printing or bending over the menu

Test is capable of feature information stored in memory with the graphics.





TC-B094 UNIT WEIGHT MEASURE

STANDARTS :-TS EN 12350-6,EN 1097-3,ASTM C29-C138,ASSHTO T19,BS 812-1881

It is made from heavy steel sheet, protected against corrosion
They are used to determine the weight per cubic meter of freshly mixed and compacted concrete, and also the air content of fresh concrete
It is also used for the determination of loose bulk density and voids of aggregates.



TC- B099) CONCRETE PIPE TESTING MACHINE

STANDARTS: TS 821,EN 1916

Control unit: Digital or computerized controlled full automatic.
Load measure bending: 200 bar pressure transducer
Turn on / off : 24 selenoid valve
Maximum vertical clearance between 2 braces : 1500 mm
Maximum horizontal clearance: 2500 mm
Brace : 20 x 50 mm or 20 x 100
Stiffened braces: 50 IRDH ±5
Power: 220 – 240 V 1 hp 50 Hz 1, 1 KW
Dimensions: 1000 x 1000 x 2700 mm
Weight: 1750 kg



TC-B162 PAN TYPE MIXER

STANDARTS :-TS EN 12390-2

It can be moved by rubber wheel.
The Mixing pan is removable and tils"135 °" for mixing operation.
Gearbox is designed as parallel to floor, in this way the motor is protected from load.
Capacity : 56 lt.
Power : 220-240 V AC, 50 Hz 3 KW
Weight : 120 kg





TC-B163 AUTOMATIC PAN TYPE MIXER

STANDARTS :DIN 459,DIN 1044

It is manufactured as a special and capacity is 90 lt, working capacity is 60 lt.

Rotation speed can be adjusted from 1-35 rpm show the real transfer speed control unit can be run at the desired speed.

It is with semi-automatic unloading unit.

It provides ease to user.

All precautions are taken with safety switches.

Power: 380 V kW

Dimensions: 1100 x 1100 x 1650 mm



TC-B170 FLOW TEST T50 TIME MEASUREMENT

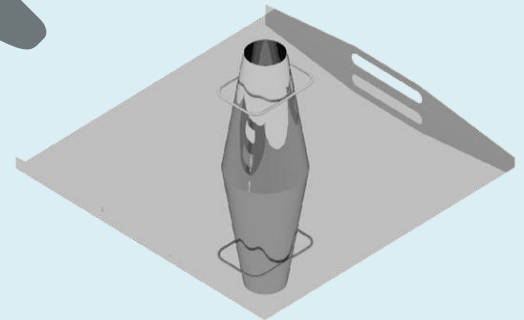
STANDARTS :EN 11041

Funnel, galvanized sheet are shaped according to the EN 12350

Base plate, galvanized steel,

Dimensions 800 x 800 mm,

two drew circle diameters 200 and 500 mm



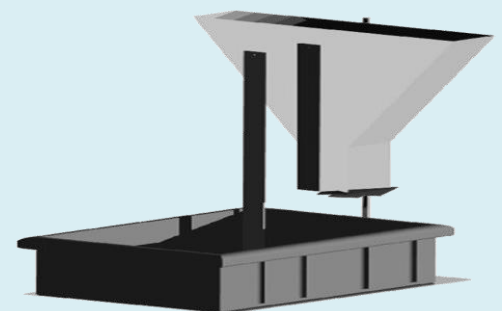
TC-B171 V FUNNEL FLOW TIME MEASUREMENT

STANDARTS :EN 11042

V – Funnel manufactured stainless steel , 10 lt capacity, lean attached.

Rectangle stick length is 900 mm

Box is made from plastic.





TC-B172 L SHAPE BOX TEST

STANDARTS :EN 11043

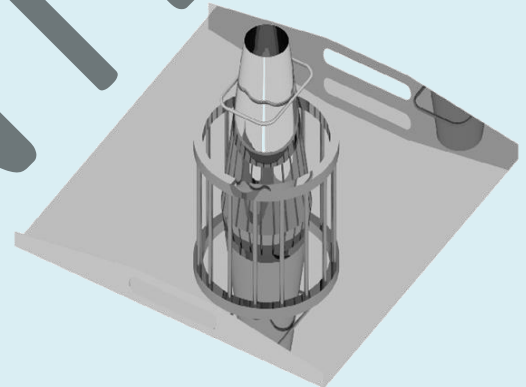
L-Box , made from stainless steel
 Container inside is constant surface.
 Barrier, three vertical bars of 16 mm diameter,
 38 mm free pass.
 The door is in the for of guillotine.



TC-B174 J RING TEST

STANDARTS :EN 11044

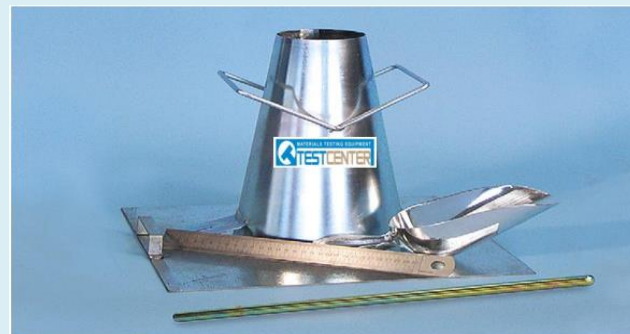
J-RING, galvanized steel, rectangular section 30 x 25 mm and median diameter of 300 mm, rings bars dia. 10 x 100 mm,
 The bars have distance of 48 mm cone mold,
 Galvanized steel square base plate, galvanized steel,
 Dimensions 800 x 800 mm



TC-B180 SLUMP SET

STANDARTS :TS EN 12390-2,BS 1881-102,AASHTO T112,ASTM C143

Slump cone, galvanized steel
 Tamping rod, galvanized dia. 16 x 600
 Cone funnel, galvanized steel covered
 Base plate, galvanized steel covered
 Steel rule length is 300 mm
 Scoop, galvanized covered.





TC-B183 VEBE MACHINE

STANDARTS :TS EN 12390-2,BS 1881-104,ASTM C170-91

Vibration time can be adjustable

complete set includes:

Vibration table

Cylindrical container

Slump cone,

Scale bar

Graduated rod Cone funnel,

Fiber Base plate

Power supply 220 V, 50 Hz, 1 ph

Dimensions: 400 x 250 x 690 mm.



TC-B192 CONCRETE FLOW TABLE

STANDARTS :TS EN 12350-5,BS 1881-105,DIN 1048

Galvanized steel conical mold dia.130 x 130 x (h) 200 mm

Double-sided table top made of galvanized sheet steel coated upper plate

Clamping bar : 40 x 40 x 200(h) mm

The top table has a square surface of 700 x 700 mm

Weight : 30 kg



TC-B198 CONCRETE AIR ENTRAINMENT METER

STANDARTS :EN 12350-7,BS 1881-106,ASTM C231

It is manufactured of cast aluminum chamber and lid

it has 3 units that can move easily clump

Direct pressure gage reading

Measurement scale: 0-100 (0.1%)

Weight:12 kg





TC-B203 CONCRETE SPLITTING TENSILE MACHINE

STANDARTS :TS EN 12390-6,ASTM C496,BS 1881-17

- Maximum test load 500 KN
- Upper edge is movable
- Max test chamber height: 160 mm
- Min test chamber height : 120 mm
- Test chamber width 200 mm
- Hard fibers strip : 4 x 10 x 350



TC-B203-01 CONCRETE SPLITTING TENSILE MACHINE FOR CYLINDERS

STANDARTS :TS EN 12390-6,ASTM C496,BS 1881-17

It is for the splitting and indirect tensile testing ("Brazilian" test) of concrete cylinders with diameters 100, 150 to 160 mm.

- Max. test load: 500 kN
- Max test chamber height: 320 mm
- Min. test chamber height: 100 mm



TC-B278 VIBRATION TABLE

STANDARTS :TS EN 12390-2,TS EN 12390-4,BS 1881-108

- Capacity: Up to 136 kg
- Desk: flat steel; 600 x 400 mm
- Vibrator Engine: High-speed 3,000 rpm
- Control Panel. ; includes operating switch, and digital timer
- Wave amplitude. 1.58 mm linear vibration.
- Weight: 60 kg





TC-B302 PLASTIC CURE TANK

STANDARTS: TS EN 12390-2, ASTM C31, C192, C511, AASHTO T23, BS 1881-111, EN 1340, TS 2824, EN 1338

It has a digital thermostat heating system. It is made from extremely robust and stable plastic. It is given with complete with galvanized base rack.

Submersible water circulating pump, also used for an easy water discharge from the tank

Power supply: 220-240 V 1 ph 50 Hz

In Dimension: 800 x 1500 x 800 mm

Weight: 50 Kg



TC-B303 CURING TANK GALVANIZED STEEL

STANDARTLAR : TS EN 12390-2, ASTM C31, C192, C511, AASHTO T23, BS 1881-111, EN 1340, TS 2824, EN 1338

This device has a digital thermostat heating. It is made of solid material; and made from galvanized steel. Above there is stainless steel lid. It prevents heat loss. It is supplied with galvanized steel shelf.

The device has a circulation pump for circulating the water in the pool.

Power: 220-240V 50 Hz, 1 ph

Internal Dimensions: 800 x 1500 x 800 mm



(TC-C130) COMPRESSOMETRE

STANDARTS: ASTM C469-UNI 6556

Precision: 0.001 mm

For molds : 150 x 300 , 160 x 320 mm or 6 x 12"





TC-B435 WATER IMPERMEABILITY TESTER 3 UNIT

STANDARTS :TS EN 12390-8,EN 12364,DIN 1048,ISO 7031

This machine determines the depth of penetration of the water into the concrete (impermeability) under known time and pressure at 3 point.

The unit accepts up to 3 concrete cubic, cylindrical or prismatic specimens having max. dimensions of 200 x 200 x 200 mm

The specimen is put into the test chamber, clamped with suitable flanges and gaskets, and then a known water pressure is applied on the specimen's surface for a time as requested by standard, by using a suitable air compressor (accessory) having at least 5 or 20 bar pressure capacity.

The water penetrated is measured by breaking the specimen, or by reading the water permeated through the graduated burette fixed on the front panel

Dimension: 1290 x 450 x 1280 mm

Weight:120 kg



TC-A106 MELTING POT

This machine is used to melt wax and other materials.

It maintains heat from room temperature to max. 150°C, with accuracy $\pm 1,5^{\circ}\text{C}$. it is complete with adjustable thermostat and pilot lamp fully isolated to CE requirements.

Capacity: 3 liters

Dimensions: 200 x 160 mm.

Power supply: 220-240 V 50 Hz 1ph 800W

Weight: 3 Kg





TC-E142 PULL OFF TEST MACHINE

STANDARTS: *EN 1452, EN 12399, EN 12618-2, EN 13279-2, BS 1881-207, EN 13678-1*

- *This machine is used for determining the power of pulling and breaking such as plaster, lime by adhering
- *Compact, light (3,5 Kg.), stand-alone.
- *Load is applied by turning the crank.
- *The reading is achieved through a digital display or a dial indicator's pointer which becomes blocked at the peak level of the testing.
- *Models of different capacities are available
- *Adhesion metal discs having dia. 20 and 50 mm can be used, depending to the expected pull force.
- *The instrument is supplied without accessories so they should be ordered separately.
- * To carry out the test a common electric drill is required.



TC-C380 CONCRETE TEST HAMMER

STANDARTS : *TS EN 12504-2, BS 1881:202, ASTM C805*

- It is N type
- Strength range: 10-70 N/mm²
- Crush Impact Energy : 2.207 Joule (0,225 m kg)
- Impact value is shown on the hammer
- Aluminum body
- It is supplied complete with corrosion stone and carrying case
- Weight : 1.2 kg





POCKET SIZED PENETROMETER

STANDARTS : ASTM. C430

It is used in determining the initial set of concrete

Penetration Piston Area: 32mm²

Penetration Piston Height: 25,4mm²

Dimensions: 25mm diameter, 210mm length

Net Weight: 400g



(TC-C381) TESTING ANVIL FOR CONCRETE TEST

HAMMER

STANDARTS: EN 12504

It is used for calibration of concrete test hammers .

This product is made from special steel.

Dimensions: 155 x 155 (h)

Weight: 17 kg (approx.)



(TC-B348)CONCRETE AND MARBLE CUTTING MACHINE

The machine accepts blades up to dia. 350 mm

The blade can be oriented for cuts at 45

Useful cutting height: 110 mm

Dimensions of the sliding table: 500 x 450 mm

Power : 220-240 V 1 ph 50 Hz,3 HP

Dimensions: 700 x 1100 x 680 mm

Weight : 80 kg





TC-CUBE -CYLINDER-BIMS SAMPLE MOULDS

STANDARTS: EN 12390/1, EN 12390/2 - BS 1881:108, 109, 110 - ASTM C192, C31 - AASHTO T23 - NF P18-400 - UNI 6130 - UNE 7240

CYLINDER MOULDS

Model	Dimensions	Weight
C258	100 x 200 mm	8
C258-01	112,8 x 220 mm	8
C258-02	150 x 300 mm	15
C258-03	6" x 12"	15
C258-04	160 x 320 mm	17
C258-05	250 x 500 mm	80
C258-06	150 x 150 mm	10

MODELS

- C247** Cube mould, 100 mm. Weight: 6 Kg
- C247-01** Cube mould, 150 mm Weight : 13 Kg
- C247-02** Cube mould, 200 mm. Weight: 25 Kg
- C247-03** Cube mould, 300 mm. Weight: 90 Kg
- C248** Cube mould, 100 mm. 2 sections Weight: 11 Kg
- C248-01** Cube mould, 150 mm. 2sections Weight: 30 Kg
- C248-02** Cube mould, 200 mm. 2 sections Weight: 53 Kg
- C248-03** Cube mould, 100 mm. 3 sections Weight : 17 Kg
- C248-04** Cube mould, 140 mm. 3 sections Weight : 30 Kg
- C248-** Cube mould, 150 mm. 3sections Weight: 38 Kg
- C249** Cube mould, 100 mm. 4 sections Weight: 20 Kg
- C249-01** Cube mould, 150 mm. 4 sections Weight: 45 Kg
- C254** Bims mould 100x100x400 mm. Weight: 20 Kg
- C254-01** Bims mould 100x100x500 mm.Weight: 23 Kg
- C254-02** Bims mould 150x150x600 mm. Weight: 44 Kg
- C254-03** Bims mould 150x150x750 mm.Weight: 47 Kg
- C254-04** Bims mould 200x200x800 mm.Weight: 86 Kg





TC-B322 CORE DRILLING MACHINE (ELECTRIC POWERED)

STANDARTS:EN 12504-1

Moving angle: 360°

Electric motor at three speeds: 670, 1140, 1590 rpm.

All working and moving parts are cadmium plated for rust protection.

The drilling excursion is 550 mm and the machine can drill cores up to 200 mm dia.

The sliding group is rectified so as to assure a very soft and accurate drilling movement.

Power: 220-240 V 1ph 50 Hz 2400 W

Weights: 85 kg



(TC-E143) PULL OUT TESTING MACHINE

It is used for steel tests.

Single acting hydraulic cylinder hole spring return : 100 mm

Double and single acting hydraulic hand pump: 700 bar

Hydraulic Cyclone : 2 m 100 mm

Optional : Digital or mechanic manometer.

Single acting hydraulic cylinder hole spring return

Capacity: 25 Tons

Maximum working pressure: 700 Bar

Hole diameter of 26 mm

Stroke: 80 mm

Closed length. 170 mm

Outer diameter: 100 mm

Oil Volume 318 cm³

Weight: 7.78 kg





(TC-B065) - COMPRESSION TESTING MACHINE, SEMI AUTOMATIC

STANDARDS : *TS EN 12390-4, BS 1881, ASTM C78, DIN 51302*

Control Unit : Digital and/or Computer Semi-Automatic

Speed Control: Manuel with handle

Load Measure : 400 Bar Pressure Transducer

Oil Flow Control : Manuel with handle

Max vertical daylight : 310 mm

Compression planets dia.: 300 mm

Compression Plate Hardened : 58 HRC

Max ram travel : 50 mm

Power : 220-240 V 1 ph 50 Hz

Dimension: 450 x 800 x 1185 mm

Weight:700 kg



(TC-B093) - CONCRETE PIPE TESTING MACHINE

STANDARDS : *TS 821,EN 1916*

Control Unit : Digital and/or Computer, Full Automatic

Load Measure Flexure: 200 Bar Pressure Transducer Oil Flow Control : 24 V Solenoid Valve Max vertical daylight : 2000 mm

Max. horizontal daylight : 1500 mm

Max. Length of upper roller: 2500 mm

Rollers : 20 x 50 mm or 20 x 100

Rollers Hardened : 50 IRHD \pm 5 IRHD, Made of elastomeric materials

Power : 220-240 V 1 ph 50 Hz

Dimension: 1000 x 1000 x 2700 mm

Weight : 1750 kg





(TC-B062) BRICK TEST PRESS

STANDARTS : EN 772-1

Control Unit : Digital and/or Computer, Full Automatic
 Speed Rate Control: Motor Speed Control Unit
 Load Measure : 400 Bar Pressure Transducer
 Oil Flow Control : 24 V Solenoid Valve
 Max vertical daylight : 336 mm
 Compression planets : 310 x 520 mm
 Compress. Plate Hardened : 60 HRC
 Max ram travel : 50 mm
 Power : 220-240 V 1 ph 50 Hz 1.1 KW
 Dimension: 550 x 1000 x 1500 mm
 Weight : 1200 kg



(TC-B111) KELLY BALL APPARATUS

The apparatus consists of 14 kg cylindrical weight stirrup and a handle graduated by 1/4 inch



TC-C190) - SPECIMEN GRINDING MACHINE

The specimens are fixed to the table by proper bolts, ensuring perfect coupling and blocking. The two-speed revolving abrasive head moves in the two directions. The column is completely protected against the abrasive dust. The vertical movement of the grinding head has an accuracy of 0,05 mm. The machine base, from rugged plate, comprises a large room for the tools with key locking.

The grinding machine is supplied complete with a collecting and water decantation tank (50 liters capacity), a motor pump, a large protection waterproof carter, eight abrasive charges, set of locking stirrups for cube specimen's 100-110-150-200 mm side.





(TC-B016) Water Impermeability Tester (6 UNIT)

STANDARTS : TS EN 12390-8,EN 12364,DIN 1048,ISO 7031

Apparatus at 3or 6 points to determine the depth of penetration of the water into the concrete (impermeability) under known time and pressure The unit accepts up to 6 concrete cubic, cylindrical or prismatic specimens having max. dimensions of 200x200x200 mm The specimen is put into the test chamber, clamped with suitable flanges and gaskets, and then a known water pressure is applied on the specimen's surface for a time as requested by Standard, by using a suitable air compressor (accessory) having at least 5 or 20 bar pressure capacity The water penetrated is measured by breaking the specimen, or by reading the water permeated through the graduated burette fixed on the front panel

Dimension : 1770 x 750 x 1920 mm

Weight :180 kg (app.)



(TC-C380-01) - DIGITAL CONCRETE TEST HAMMER

STANDARTS : TS EN 12504-2, BS 1881:202, ASTM C805

N Type

Strength range: 10-120 N/mm²

LCD Display *It consists of a key controlled test hammer with a digital expansion which enables date and hour of test session to be input (as well as impact angle and required unit of downloading of data to a PC via an RS 232 interface with special cable.

Up to 20,000 rebound values may be stored and a battery backup ensures data are not lost even when instrument is turned off

Autonomy: 60 hours

It is supplied complete with carborundum stone and carrying case

Weight : 3.2 kg



(TC-B185) COMPACTING FACTOR APPARATUS

STANDARDS : TS EN 12390-3,BS 1881-103

This apparatus is designed to undertake a more precise and sensitive test procedure than the simple slump test. The apparatus consists of two conical hoppers mounted on a cylinder. It is galvanized double steel sheet flow table with top plate.

The compacting factor is the ratio between the weight of the partially compacted concrete and the weight of the fully compacted concrete.

It is supplied complete with tamping rod dia. mm 16x600 long.

Dimensions: 500 x 400 x 1510 mm .weight 55 KG

Weight: 55 Kg





(TC-B186) – PREPACT FLOW CONE

Volume: 1.725 cc

Material : Aluminum

Size : 177.8 × 12.7 × 190.5 mm

Stand : Steel



(TC-B173) - U BOX

STANDARDS: EN 11044

U-BOX, “stainless steel” made, with inside smooth walls, foreseen of a flow obstacle, formed by vertical reinforcement bars. The bar’s diameter and their distance can be modified as requested by Standards.

A gate in guillotine form splits the vertical portion of the box from the horizontal one.

Dimensions: 280 x 200 x 680 mm

Weight : 20 kg approx.



COMPRESSIBILITY SCALE TEST DEVICE

STANDARTS : TS EN 12350-4, EN 12354

Carrying handles, stainless steel

Fresh concrete, using a trowel, without creating any compression effect during filling, carefully placed inside the container.

After the container is completely filled it will be stripped from the mold of the projecting portion of the concrete. Then, the concrete is compressed and compacted concrete surface of the vibrator within the vessel, the distance to the upper surface of the mold is determined as the degree of compressibility.

Dimensions: 200 x 200 x 400 mm

Weight : approx. 5 kg





(TC-B028) - Splitting Tensile Test Device

STANDARTS : TS EN 12390-6,ASTM C496,BS 1881-17

Maximum test load 500 KN Upper edge is movable Max test chamber height 160 mm Min test chamber height 120 mm Test chamber width 200 mm Hard fibres strip 4 x 10 x 350



(TC-B042) CYLINDER CAPPING EQUIPMENT

STANDARTS : EN12390-3, ASTM C31, C192, C617, AASHTO T23

It is for cylinder samples and is used to ensure that the planed end surfaces are perpendicular to the axis of the cylinder during the capping process. The frame comprises vertical supports mounted on a steel base. All three type of samples can be capped with this single unit.

75, 100 and 150 mm dia. cylinder specimen



(TC-B185) COMPACTING FACTOR APPARATUS

STANDARDS : TS EN 12390-3,BS 1881-103

It is used for determining the cracks on concrete;

adjustable lighting system

Sensitive measurement (10 mm / 0.001 mm)

Focusing system





(TC-B054) REBAR LOCATOR

Rebar Locator
 Function GW50(+)
 Rebar diameter range(mm) Φ 6- Φ 50
 Maximum error of cover thickness +/- 1
 Cover thickness range(mm)
 First range(mm) 6-90
 Second range(mm) 7-180
 Maximum error of cover thickness
 First range(mm) Second range(mm)
 6-59 7-79 +/- 1
 60-69 80-119 +/- 2
 70-90 120-180 +/- 4
 Environmental requirement
 Working temperature -10~40C
 Relative humidity < 90%
 Power source Alkaline cellX6, > 30 hours



(TC-B055) CORE MACHINE(DIAMOND CORING TOOL)

POWER : 2200 W
 VOLTAGE : 230 V
 NUMBERS OF GEARS : 3
 WEIGHT OF COMPLETE SYSTEM : 16 KG
 DIMENSIONS : 450 x 195 x 315 mm



(TC-B056) PORTABLE HARDNESS TESTER

Portable hardness tester (the total concentration of calcium and magnesium ions)
 Include:
 Measuring electrode
 Reference electrode
 Temperature probe
 Change the measuring head





(TC-B057) CONCRETE TEST HAMMER (MANUEL)

This type test hammer is used to test the concrete compressive strength of construction and bridge..

Specifications :

Test range : 10-60 Mpa

Impact energy : 2.207 J (0.225 kgf.m)

Impact stroke : 75 mm

Friction of slider : 0.5 - 0.8 N

Spherical radius of impact pole : 25 +/-1 mm

Calibration value on test anvil : 80 +/- 2

Dimension : 278 * D54 mm

Weight : 1 kg



(TC-B059) PARQUET KERB BEAM TEST PRESS

Full automatic parquet kerb beam test press , concrete beam samples and border samples , is designed to perform tests for direct shear test.

200 Kn capacity.

Value is measured by a load cell 200 tons.

It is measured with the keys on the control panel.

Reporting of test results and graphs can be output.



(TC-B060) DETERMINATION OF WATER ABSORPTION COEFFICIENT DUE TO CAPILLARY ACTION

This apparatus is designed to undertake a more precise and sensitive test procedure than the simple slump test. The apparatus consists of two conical hoppers mounted on a cylinder. It is galvanized double steel sheet flow table with top plate.

The compacting factor is the ratio between the weight of the partially compacted concrete and the weight of the fully compacted concrete.

It is supplied complete with tamping rod dia. mm 16x600 long.

Dimensions: 500 x 400 x 1510 mm .weight 55 KG

Weight: 55 Kg

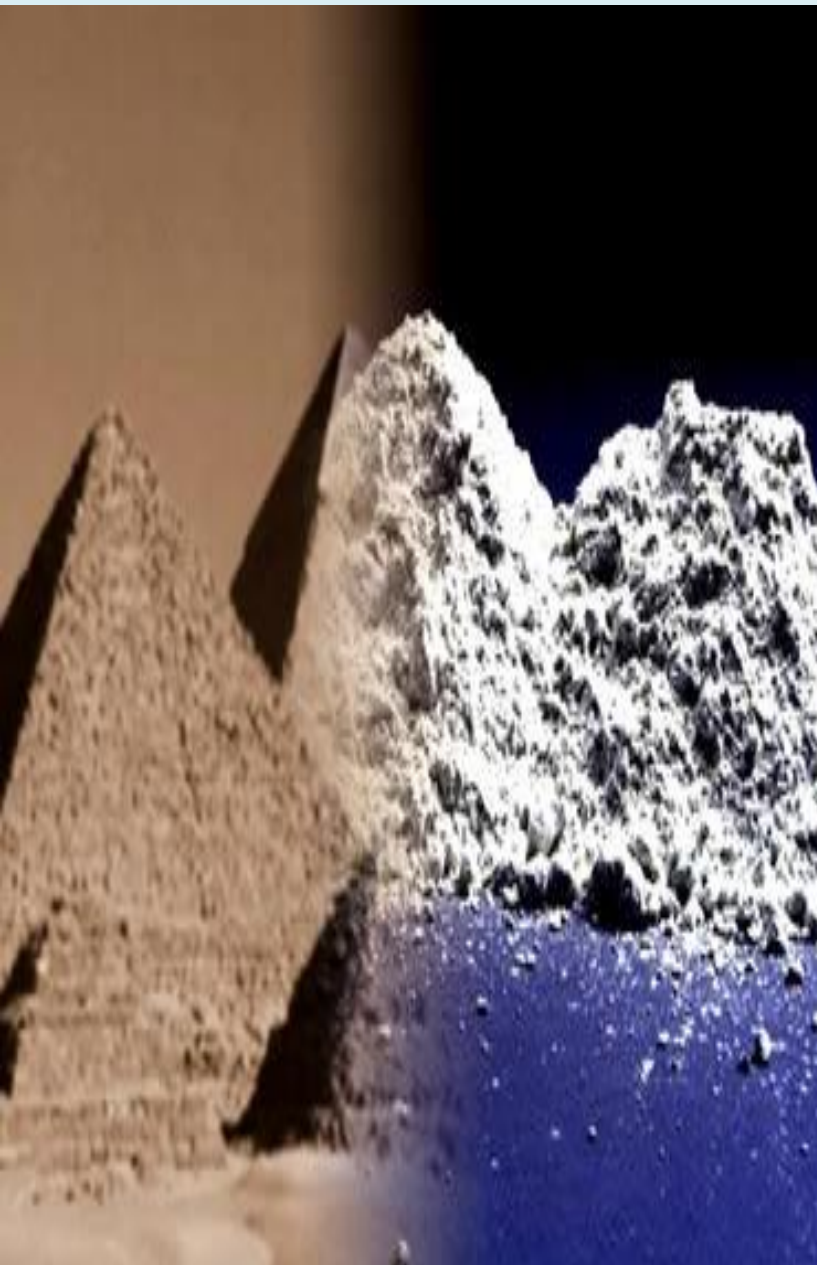




CEMENT TEST DEVICES

CEMENT The raw materials like: limestone, chalk, shale, clay etc., mixed with water, are crushed, ground and blended. They are now submitted to a chemical process in a rotary kiln until they combine into clinker. From the clinker opportunely mixed with gypsum, the cement factories obtain the modern Portland cement that may be modified in more and more sophisticated binders like expansive mortars, pre-mixed cements etc. In section “Cement & Mortars”

TESTCENTER proposes a complete range of equipment for: Fineness, Consistency, Setting-time, Workability, Soundness, Flow, Fly Ash, Chemical Tests etc.; and for Mixing, Moulding, Curing and Strength Tests, to satisfy all the above quality variables, in compliance with the EN, ASTM and the most known International Standards.





CEMENT TEST DEVICES

BLAINE AIR PERMEABILITY DEVICE (MANUAL)

BLAINE AIR PERMEABILITY DEVICE (AUTOMATIC)

FINENESS OF AS FLY ASH BY WET SIEVING

CEMENT AIR CONTENT METER

BULK DENSITY

FLOW CONE

MANUEL VICAT MACHINE

AUTOMATIC VICAT MACHINE

CEMENT MOULDS

LENGTH COMPARATOR

LE CHATELIER WATER BATH

PENETRATION VALUE MEASUREMENT MACHINE

LEVER SUPPORT

FLOW TABLES

CEMENT MIXER

PULL OFF TEST MACHINE

SHAKING TABLE

CEMENT COMPRESSION AND FLEXURAL TEST PRESS

CURE CABINET





TC-E009 BIAINE AIR PERMEABILITY MACHINE

STANDARTS :EN 196-6,ASTM C204,AASHTO T153

The device is used to determine the fineness of Portland cement in terms of the specific surface expressed as total surface area in square centimeters per gram of cement. The apparatus is supplied complete with glass U-tube manometer with valve, steel stand, test cell with disk and plunger all in stainless steel, rubber aspirator bulb, 1000 filter paper disks, mono metric liquid, accessories.

Dimensions: 200 x 10 x 400 mm

Weight: 9 Kg



TC-E017 FINENESS OF FLY ASH AND WET SIEVEING MACHINE

STANDARTS :EN 451-2,ASTM C430

The test set, brass made: Consisting of spray nozzle 17,5 mm dia. with 17 holes as specified in EN 451-2,

A vacuum pressure gauge, 160 k Pa graduated at 5 k Pa divisions and fittings to attach the apparatus to a standard domestic water supply.

Stainless steel mesh 0.045 mm

Weight: 3 Kg



TC-E127 CEMENT AIR CONTENT METER

STANDARTS :EN 196-1,413-2,459-2,BS 3892,ISO 679

The machine is designed to determine the air content in cement mortar, cement paste and lime mortar. It is made from cast aluminum.

The test pot one liter capacity and the upper part are 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.





TC-E091 BULK DENSITY MACHINE

STANDARTS :EN 459-2

It consists of a 1 liter capacity cylindrical container, filling ring with opening and hopper with spring-loaded trap.

Dimensions: 150 x 150 x 400 mm.

Weight: 5.5 kg



TC- FLOW CONE

STANDARTS:EN 445-NF P18-358,P18 507

Flow cone is used for viscosity and fluidity determinations of mortars, muds, grouts, fluid materials, etc.

Mortar fluidity is considered suitable when the flow time of 1000 cc of mortar is comprised between 17 to 25 seconds.

It is entirely brass made and supplied complete with four interchangeable nozzles dia.8 -9 -10 -11 mm.

Stand and plastic graduated cup are given together with the flow cone.

Cone top dia. is 155 mm, height 290 mm, Capacity 1700 gr.

Weight:10 Kg



LE CHATELIER FLASK

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

Le Chatelier Flask is used to determine the density of hydraulic cement, ground granulated blast-furnace slag and fly ash for concrete, filler aggregates and lime.

The glass flask has a 250ml capacity. The neck is graduated from 0 to 1 ml and from 18 to 24 mL in 0.1-mL graduations.

Dimensions: 100 x 100 x 300

Weight approx. : 0.1 kg





TC-E055 MANUEL VICAT MACHINE

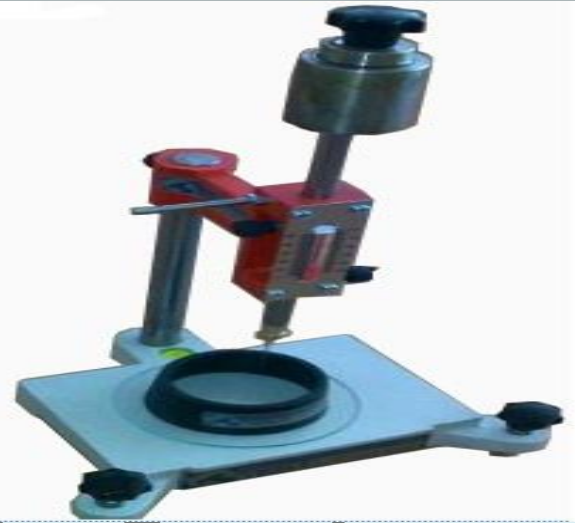
STANDARTS :EN 196-3,ASTM C187-C191,AASHTO T129-T131,BS

Manuel vicat is used for determining the amount of water required to produce a cement paste of standard consistency and the setting time. The frame is supplied complete with a 300 g consistency plunger (dia. 10 mm). The measurement of the movement is given by an indicator which moves along a scale graduated in millimeters.

The apparatus is supplied complete with glass plate and EN needle and mould.

Dimensions: 260 x 250 x 450 (h) mm.

Weight: 4 kg



TC-E100 CEMENT MOULDS

MODEL	DIMENSION	WEIGHT
E100	40 X 40 X 160	9
E102	40,1 X 40 X 160	9
E103	40,1 X 40 X 160	9
E104	40,1 X 40 X 160	12
E110	50 X 50 X 50	12
E111	BRIQUET MOULD	5
E112	70 X 70 X280	17
E133	70, 7 X 70, 7 X 70, 7	6

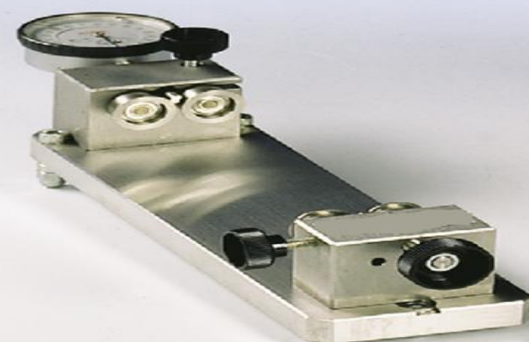


TC-E077 LENGTH COMPARATOR

This sensitive machine is used for measuring length changes. It consists of steel base with levelling feet; chrome plated columns, and two stainless steel contact points.

Dial indicator and references must be ordered separately according to specific standards.

Weight: 8 k





TC-E064 LE CHATELIER WATER BATH

STANDARTS :EN 196-3

It is manufactured as stainless steel. It contains up to 12 moulds which are maintained at a height of approx. 50 mm above water level. A device is located beneath the lid prevents condensation from falling onto specimens.

Two heating elements, 800 W and 200 W, guarantee that the water reaches boiling point within approx. 30 minute. It is supplied complete with 12 Le Chatelier capacity removable rack.

Le Chatelier mould should be ordered separately.

Power: 220 V, 50 Hz, single phase

Dimensions: 390 x 180 x 320 (h) mm.

Weight: 7 kg



TC-E083 PENETRATION VALUE MEASUREMENT TEST

APPARATUS

STANDARTS :EN 413-2,EN 459-2,EN 1015-4

This apparatus is used for determining the consistency of fresh mortar, lime and cement mortar.

The machine consists of base in vertical support, measurement stick which it is dia. 25 mm, plunger, test container that is 80 x 70 mm and hammer that's dia. is 40 mm.

Dimensions: 260 x 250 x 450 (h) mm.

Weight: 5 kg



TC-E200 LEVER SUPPORT MACHINE

STANDARTS :EN 13294,TS EN 1015-9

Lever supported(Drill-Holder Type)

It is complete with washer and penetration rod brass made, clamp and locking support.

The machine is used for the determination of processing and rectifying of fresh mortar's duration.

Dimensions: 380 x 300 x (h)500 mm

Weight: approx. 12 kg





TC-E086 CEMENT FLOW TABLE

STANDARTS :EN 459-2,EN 1015-3,ASTM C230-BS 4551-1

Cement flow table is used for determining the flow of mortar and building lime.

To perform this test; a specimen contained in a cone mould is placed on a metal surface which is then raised and dropped from a known height, after releasing the specimen from the mound.

The equipment consists of a circular top table with spindle, tripod, bronze flow mound, filling hopper and tamper.

Weight: 20-25 Kg



TC-E094 AUTOMATIC CEMENT MIXER(5 SPEED AND 5 LT CAPACITY)

STANDARTS :EN 196-1,196-3,1015-2,413-2,459-2-EN 12687-

Pallet speeds : 62 and 125 rpm (clockwise)

Beater ranges :140 and 285 rpm (anticlockwise).

The stainless bowl has a 5 Liter capacity and quickly engaging clasps ensure that it is easy to secure to or remove from the mixer.

The beater is in polished stainless steel.

It is equipped with double safety doors as required by CE directives.

One, on the bowl that is mounted under its and the other is on the upper safety wires.

Power : 220 -240 V,1 ph 50 Hz,

Voltage: 400 W

Dimensions: 370 x 500 x 540 (h) mm

Weight: 33 kg



TC-E130 SHAKING TEST MACHINE

STANDARTS :EN 196-1,413-2,459-2,BS 3892,ISO 679

The shaking machine is used to compact cement mounds which their dimensions is 40x40x160 mm , as requested by the above standards. The device consists of a table holding the mound seated on a rotating cam driven at 60 revolutions per minute.

The jolting group is connected to the table by bayonet joints for quick checking of the weights.

The drop height 15,0 mm is adjustable to keep it correct also after intensive uses. The apparatus is supplied with control panel including main switch, automatic digital drop counter, start/stop push button

Power: 220-240 V, 1 faz, 50 Hz, 500 W

Dimensions: 1000 x 380 x 420 mm

Weight: 60 kg





TC-E181 CEMENT COMPRESSION AND FLEXURAL TEST PRESS

STANDARTS :EN 196-1,ASTM C109,BS 3892,DIN 1164

It performs a fully automatic test procedure, there are speed rate adjustment and software for the test report.

Upper and lower plates dia. : 165 mm

Vertical gap between plates: 189 mm

Dual loading chamber :

0 - 250 kN (for compression tests)

0 - 15 kN (for flexure tests)

The low capacity piston (15kN) permits very accurate tests on specimens having low strength (both in compression and in flexure).

Max piston's movement: 35 mm approx. Safety guards to CE directives, polycarbonate made with hinges.

Two columns rigid frame fitted on a steel base,

Calibration and Accuracy: Grade 1.0

The machine is supplied complete with lower compression platen and coupling piece to easily fix the compression / flexural devices.

Power supply: 220-240V 1ph 50z 750W

Dimensions: 700 x 400 x 1500 (h) mm

Weight : 310 kg approx.



(TC-E300) - MORTAR PERMEABILITY 3 UNITS

It was designed to determine the water impermeability under pressure of cement mortar sample

The sample cup is 100 mm in diameter and 50 mm height.

The container is placed between the water chamber and the lower plate.

Compressor pressure vessel and for making the test are available.

Digital pressure indicator is available to indicate the pressure applied during the test.

The water cell is made of corrosion-resistant material.

Connecting line between the cell with the water container is made of non-corrosive material.

Air cylinders are provided with those connections.





(TC-E083) - PLUNGER PENETRATION APPARATUS

STANDARDS: EN 413-2, EN 459-2, EN 1015-4

It is used to determine the consistency of fresh mortar, lime and masonry cement. This apparatus consists in a base, a vertical support, a graduated rod with 25 mm dia. plunger, a test cup dia. 80 mm x 70 mm deep and a 40 mm dia. tamper. Drop height is 100 mm. Overall weight of plunger assembly is 90 g.

Dimensions: 260 x 250 x 450 (h) mm.

Weight : 5 kg



(TC-E054) - AUTOMATIC VICAT

STANDARDS : EN 196-3, ASTM C187-C191, AASHTO T129-T131, BS 4550

Movements along X Y Z axes

- Up to 30 different test types may be programmed and over 1000 tests may be memorized. PC Port
- Initial and final setting time (in 0.1 mm)
- Automatic cleaning of the needle
- Automatic stop and storage of measurements for up to 50 tests
- Plunger for initial consistency
- Thermostatic baths (optional)
- Display for data input and diagram/test report
- Printer for final test report and diagram
- RS 232 serial port for PC connection
- Moulds and further needles have to be ordered separately, according to the various standards
- Power supply: 220 V, 50 Hz, single phase
- Dimensions: 355 x 620 x 580 mm

Weight: 40 kg





(TC-E142-01) – AUTOMATIC PULL OFF TEST MACHINE 5KN

STANDARTS : EN 1452,EN 12399,EN 12618-2,EN 13279-2,BS 1881-207,EN 13678-1

This dynamometer provides you with information on both the adhesive force and the tensile strength of two layers of materials: lime, facing plasters, mortars, building plasters, cements, concrete and resistance of anchoring studs.

Compact, light (3,5 Kg.), stand-alone.

Load is applied by turning the crank.

The reading is achieved through a digital display or a dial indicator's pointer which becomes blocked at the peak level of the testing.

Models of different capacities are available and adhesion

Metal discs having dia. 20 and 50 mm can be used, depending to the expected pull force.

The instrument is supplied without accessories to be ordered separately.

To carry out the test a common electric drill is required



(TC-E070) - AUTOCLAVE

STANDARTS: ASTM C151,C141

It consists of a high pressure boiler made from stainless steel, inside dia. mm. 154x430 high, receiving a holding rack for 10 cement specimens. The heating system is achieved by electric resistances. The control panel encloses: "digital thermometer" to visualize the boiler temperature, pressure gauge scale 0 - 600 psi with built in pressure regulator and power switches. Supplied complete with safety valves, rack for holding the specimens. Power supply: 230 V 1ph 50/60 Hz 3500 W 295 psi

Dimensions: 450 x 475 x 1080 mm

Weight: 75 Kg





(TC-E187) - VIBRATING MACHINE 70,7 CUBE



Cube moulds should be ordered separately.

Power supply: 230V 1ph 50 Hz 250 W

Weight: 100 Kg

(TC-E078) - LENGTH COMPARATOR

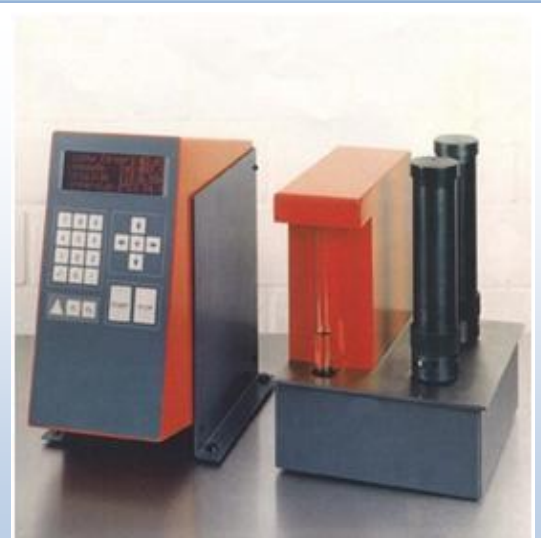
STANDARTS: ASTM C480-BS 1881 - NF P15-401 - D.M. 3/6/68



It is used to measure the length variations of mortar specimens after autoclave soundness tests.

Weight: 10 kg

(TC-E010) - AUTOMATIC BLAINE AIR PERMEABILITY APPARATUS



An automatic, microprocessor-controlled analyzer for measurement of the specific surface (Blaine value) of powders.

This device operates with 1 or 2 measuring cells. After entry of test-specific sample data into the controller, the test is completely automatically carried out and evaluated. The device has an interface for a generally commercially available printer. Scope of equipment delivered: automatic air permeability tester, 1 bottle of fill oil, 500 ea. round filters (diam. 41 mm), 100 ea. dust filters (diam. 13 mm), 1 ea. Tamper

Dimensions: 200 x 160 x 400 mm

Weight: 12 Kg



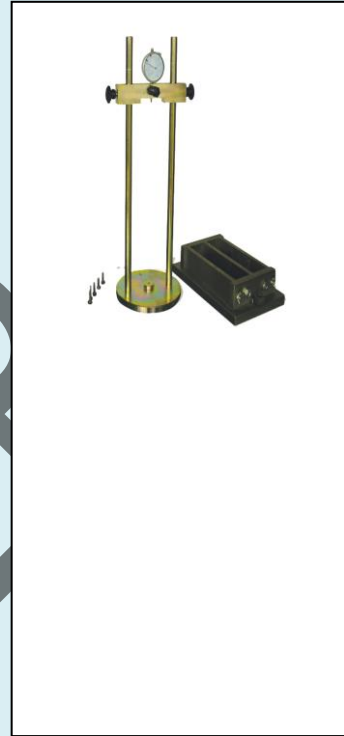
(TC-E135) - CEMENT SHRINKAGE TEST SET

STANDARTS: EN 1367-4, EN 12617-4, ASTM C151, C490, BS 1881:5,6073

The set consists of length measuring frame, two or three gang steel mould according to the related standard, steel inserts for moulds and reference rod.

Technic features

Product code		Dimensions (mm)	Weight (kg)
TC-135-01	Analog Shrinkage Test Set		
TC-135-02	Digital Shrinkage Test Set		
TC-135-03	Analog Length Measuring Frame	180x180x410	5,3
TC-135-04	Digital Length Measuring Frame	180x180x410	5,3
TC-135-05	Mould	25x25x285	7
TC-135-06	10 Pcs Steel Inserts		
TC-135-07	Reference Rod	160	



(TC-E038) - FLOW CONE

STANDARTS : EN 445-NF P18-358,P18 507

It is used for viscosity and fluidity determinations of mortars, muds, grouts, fluid materials, etc.

Mortar fluidity is considered suitable when the flow time of 1000 cc of mortar is comprised between 17 to 25 seconds.

It is entirely brass made

It is supplied complete with four interchangeable nozzles dia.8 -9 -10 -11 mm.

Stand adjustable in height, plastic graduated cup.

Cone top dia. is 155 mm,

Total length 290 mm,

Capacity 1700 cc.

Weight:10 Kg





(TC-E125) – MUD BALANCE



Mud balance provides to detect mud's density as a simple way to assess.

Metal-grade body

Carrying case.

Weight: 5 kg

TC- E190 CURE CABINET

The unit is PLC controlled test device used in the curing of concrete and cement samples.

Device 120 -, 250 - 500 - 750 - 1000 - and the room dimensions 300x300x250 is produced. The device temperature can be adjusted between 0-90 degrees. The device produces over 95% humidity. Device outer coating of DKP and coated with electrostatic powder paint. The device is available volume of 304 K is manufactured from stainless steel.

The device is controlled by a PLC controller is optional transfer data to a PC. The device is set automatically from the water network. The device has a stainless steel 4 shelves. There are 4 wheel brake device. The device operates with 220V 50Hz of her energy.





(TC-C014) Flow Table

STANDARDS: EN 459-2, EN 1015-3, ASTM C230-BS 4551-1

Used for determining the flow of mortar and building lime. To perform this test, a specimen contained in a cone mould is placed on a metal surface which is then raised and dropped from a known height, after releasing the specimen from the mould. The equipment consists of a circular top table with spindle, tripod, bronze flow mould, filling hopper and tamper.

Weight: 20-25 Kg



(TC-C027) - Cement Compression Apparatus

Standards : ASTM C109

Cement compression apparatus for dia. 4 x 4 x 4 cm, 5 x 5 x 5 cm



(TC-C027) - Cement Compression Apparatus

Standards : ASTM C109

It is used for mixing portland cement.

it is together with DC engine which is 120 rpm , mechanic counter and glass bulb that is 500 ml.

Dimensions : 150 x 150 x 300 mm

Weight : 3 kg





(TC-C033) CEMENT SOUNDNESS TEST APPARATUS

STANDARTS : TS EN 459

It is used for soundness tes of fresh cement mortar. 3 moulds are necessary for making test.



(TC-C032) CEMENT SHOCK TABLE

STANDARTS: EN 12390-6. ASTM C496

It is used for placing mortar to the sample containers which it is measure 4 x 4 16 cm

it has digital counter .

power :220 V 50 Hz



(TC-C027) - Cement Compression Apparatus

Standards : ASTM C109

This filter press is the most effective means for determining the filtration properties of drilling muds and cement slurries. The filter press consists of a mud reservoir mounted in a frame , a pressure source .





SOIL

For the realization of civil engineering structures, the engineer during the design stage must base his calculations according to the soil properties where the structure will have to integrate. This section studies and analyses a soil sample to evaluate and to know its characteristics, by proposing a complete range of testing equipment for: sampling, preparation, classification, consolidation, shear strength, triaxle, compaction, penetration, bearing capacity, permeability, density, geotechnical and chemical tests, in compliance with the EN, ASTM, BS and the most known International standards.





SOIL TEST DEVICES

SURFACE SOIL SAMPLER

KIT SET FOR SOIL SURVEYS AND SAMPLING

AUTOMATIC CBR/PROCTOR COMPACTOR

MOISTURE AND DENSITY GAUGE

UNIVERSAL SAMPLE EXTRACTOR

AUTOMATIC SAMPLE EXTRACTOR

SHRINKAGE LIMIT

DIGITAL WATER BATH

LIQUID LIMIT CONIC PENETROMETER

BLUE MTHYLENE

SAND EQUIVALENT SHAKE TABLE

SAND EQUIVALENT TEST SET

LIQUID LIMIT CASAGRANDE

DENSITY AND WATER CONTENT DETERMINATION (COMPACTING WITH PROCTOR)

SOIL COMPACTOR

CBR MOULD AND ACCESORRIES

TERRAIN CBR JACK

CBR STABILITY TEST MACHINE

SAND CONE

RUBBER BALLOON TEST MACHINE

CONSTANT HEAD PERMEAMETER

FALLING HEAD PERMEAMETER

ONE WAY CONSOLIDATION DEVICE

DIRECT SHEAR MACHINE

PLATE LOADING

JOLTY BULK DENSITY DEVICE





TC-S198 AUTOMATIC CBR/PROCTOR COMPACTOR

STANDARTS : TS 1900-1, BS 1377, 1924, ASTM D558, D560, D698, D1557, AASTHO T99, T134, T136, T180

It provides compression stroke at predetermined order. Solid state is checked for durability and continuity. It tests automatic digital counter reset an the number of the strokes

Adjustable rammer drop height is between 300-450 mm.

Rammer weight is adjustable between 2.5-4.5 kg.

Preset number of blows per layer by thumb wheel control

Rammer :

- BS Circular faced, 50 mm dia., adjustable to 2.5 kg or 4.5 kg weight

-ASTM Circular faced 2" (50.8 mm dia., adjustable to 5.5 lb (2.5 kg) dia., or 10 lb (4.5 kg) weight

Drop height : BS Adjustable to 300 mm or 450 mm ASTM Adjustable to 12" (305 mm) or 18" (457 mm)

Dimensions: 430 x 250 x 1400 mm.

Weight: 180 Kg



TC-S211 CBR STABILITY TEST MACHINE 50 KN CAPACITY

STANDARTS : TS 1900-2, ASTM D1883, D3668, BS 1377-4, 1924, AASTHO T193

Machine frame was ruggedly constructed to measure load and deformation. It is designed to operate with the minimum of maintenance. Plates increasing rates are 1.27-1 mm/minute. There is engine protection against overloading. The applied load is measured by a precision load cell 50 kN capacity and max load flow are shown on the display.

Max movement and mound are controlled by safety switch .cylinder stroke while controlling stability measuring instrument and mound.

The unit is supplied complete with load cell 50 kN capacity and penetration piston.

Max. vertical span: 645 mm

Horizontal span: 275 mm.

Cylinder stroke: 60 mm.

Power: 220-240 V 1 ph 50 Hz 750 W

Dimensions: 520 x 550 x 1450 (h) mm.

Weight: 155 Kg





TC-S085 SURFACE SOIL SAMPLER

STANDARDS : TS 1900-1, ASTM D2937, BS 1377/9

It is used to take field samples of compacted fill or undisturbed soils and to evaluate density of compaction samples as the ground surface.

The set consists of a drop hammer (10 kg) sliding on the drive rod and falling on the drive head where the sampling tube (dia 100 mm) is hold.

Galvanized covered against corrosion.

Weight: 15 Kg



TC-S090 KIT SET FOR SOIL SURVEYS AND SAMPLING

This set is used to take samples from wells up to 150 mm of the following selected materials.

The kit consists of:

1 Soil auger 100 mm Diameter 1 pc 1 Soil Soil auger 150 mm Diameter

1 Dutch Auger 50 mm Diameter

1 Auger for gravel 150 mm Diameter

10 Extension Rods Each 1 m long

2 Stillson wrenches

1 Chisel

10 Sample tubes 38 mm Dia. x 230 mm long

2 Adaptors

1 Jarring Link



TC-S114 UNIVERSAL SAMPLE EXTRUDER

It is hand operated; it is activated by a 5 tons hydraulic jack. It is designed to extract samples having dia. 4" and 6".

Therefore, It can extract Marshall, CBR, standard and modified specimens.

Dimensions: 300 x 500 X 450 mm

Weight: 30 Kg





(TC-S060) - NUCLEAR MOISTURE DENSITY GAUGE

STANDARTS :ASTM D2922,D2950,D3017,AASTHO T310

- Density measurement range : 1120 to 2720 Kg/m³ (70 to 170 lb/ft³)
- Moisture measurement range : 0 to 640 Kg/m³ (0 to 40 lb/ft³)
- Density source : Cesium 137
- Moisture source : Americium 241: Beryllium
- Density source activity : 370 Mbq, (10 mCi)
- Moisture source activity : 1.48 Gbq, (40 mCi)
- BS precision at 2000 Kg/m³,(125 lb/ft³) : 7.8 Kg/m³ (0.49 lb/ft³)
- Direct transmission precision at 2000 Kg/m³ (125 lb/ft³) : 3.5 Kg/m³ (0.22 lb/ft³)
- Moisture precision at 240 Kg/m³ (15 Lb/ft³) : 4.42 Kg/m³ (0.28 Lb/ft³)
- Composition Error BS : 22.4 Kq/m³ (1.4 Lb/ft³)
- Rectfying errors : 22.4 Kg/m³ (1.4 lb/fB)
- Surface error BS : 48 Kg/m³ (3 lb/ft³)
- Surface error 150 mm (6") depth : 16 kg/m³ (1 lb/ft³)
- Backlight display : Yes
- Internal temperature monitoring : Yes
- Shielding materials : Lead, tungsten and cadmium
- Top shell : UV Stabilized plastic
- Base and tower : Aluminum
- Source rod and handle : Stainless steel
- Index rod : Stainless steel
- Operating temperature (ambient) : -10 to 70 C (14 to 158 F)_
- Surface temperature : 170 C (338 F)
- Gauge size : H 58.4 cm X L 30,8cm X W
- Shipping Weight : 42 Kg (94 lb)



TC-S179 SHRINKING LIMIT SET

STANDARTS :TS 1900-1,BS 1377-2,ASTM D427,AASTHO T92

It is used to determine the maximum water content when there is absence shrinkage after soil samples dry

The set comprises:

- TC-S179-01 Shrinkage pot, dia. 45x12,7 mm (2 pieces)
- TC-S179-02 Crystallizing pot, dia. 57x32 mm
- TC-S179-03 Shrinkage prong plate, made from fiberglass material with three metal prongs
- TC-S179-04 Glass evaporating pot, dia. 120 mm flat bottom
- TC-S179-05 Graduated cylinder 25 ml. Capacity
- TC-S179-06 Flexible spatula, 100 mm. blade





(TC- S179) SHRINKING / ROTRE TEST SET

STANDARTLAR: ASTM D427 / ASTM T92 / UNI 10014 / UNE 103-108 / NF P94-060 / BS 1377:2

At the time the shrinkage in drying soil samples max. it is used to determine the moisture content. It includes;

- Shrinkage limit pot / diameter: 45 x 12.7 mm (2 pieces)
- Crystalline container / diameter: 57 x 32 mm
- Shrink disc plate
- Petri Container / Diameter: 120 mm
- Graduated glass graduated cylinder / 25 ml capacity
- Spatula
- 1.5 kg



SHRINKING / ROTRE LIMIT MOULD

STANDARTS: ASTM D4318 / AASHTO T90 / BS 1377:2 / UNI 10014 / UNE 103-104 / NF P94-051

140 mm. length x 12.5. mm radius

This experiment shows the linear shrinkage determination of the properties of plastic and low clay content in the soil.

Weight: 500 g



(TC-S116) LIQUID LIMIT CONIC PENETROMETER

STANDARTS : TS 1900-1, BS 1377-2

It has timed electronic release mechanism.

Power supply: 220-240 V 1ph 50 Hz

Dimensions: 220 x 170 x 410 mm.

Weight: 9 Kg





(TC-S158) SAND EQUIVALENT TEST SET

STANDARTS :TS EN 933-8,NF XP18-598

It determines the proportions of dust, clay or plastic fines within aggregate and granular soils.

The apparatus consists of 4 graduated plastic cylinders, rubber bung, irrigator tube, weight shoe, syphon, rubber tube, measuring tin, funnel and plastic bottle and special concentrated solution (250 ml)



(TC-S160) SAND EQUIVALENT SHAKE DESK

STANDARTS :TS EN 933-8,NF XP18-598

The unit provides a constant uniform shaking with automatic cycle test. Oscillating excursion is 200 ± 10 mm at 180 strokes/min rate. It is complete with digital timer that automatically stops the shaker at the end of predefined time.

Power supply: 220-240V 1ph 50 Hz 250 W

Dimensions: 850 x 300 x 380 mm

Weight: 30 kg.



(TC-S172) LIQUID LIMIT CASSAGRANDE

STANDARTS:TS 1900-1, ASTM D 4318, AASHTO T 89, BS 1377

It is together with ebonite base and adaptable brass cup.

The height of drop of the cup may be adjusted via the hand crank mechanism.

A built-in blow counter is supplied as standard.

Grooving tool is not supplied and must be ordered separately.

Dimensions: 150 x 150 x 120 (h) mm.

Weight: 3 Kg





(TC-S210)HAND OPERATION CBR LOADING MACHINE

Load is applied through a mechanical jack and hand wheel.
 Upper beam can be adjusted in height.
 It can be used in place which CBR test is made
 The machine is supplied complete with:
 -Load ring 50 kN capacity
 -Penetration piston
 -Dial gauge with dial gauge holder
 Dimensions: 430 x 380 x 1180 mm
 Weight: 80 Kg



(TC-S202) ABRAHAM FUNNEL AND HAMMER
STANDARTS: EN 1097-6 | BS 812 | ASTM C 128 | AASHTO T84

Particle density of fine aggregates and It is used for water absorption test of particle density of fine aggregates .The funnel is provided as a set together with the hammer.



TC-S238 SAND CONE
STANDARTS :ASTM D1556,AASTHO T191

This device detects the dry unit weight of soil compacted fine-grained.
 It consists of
 -Valve steel double metal conic
 -Plastic bin that is capacity 5 liter
 -Metal tray which is perforated





(TC-S230) DETERMINATION DRY UNIT WEIGHT OF SOIL IN PLACE (BALOON METHOD)

STANDARTS :TS 1900-1,ASTM D2167,AASTHO T205

It is used to determine density of soil that is either fine grained compacted or stucked.

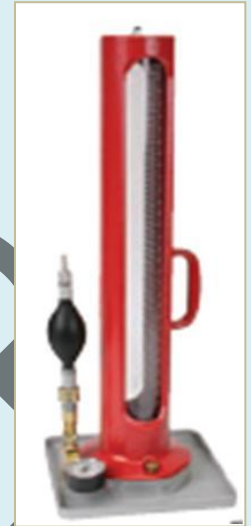
The device is placed over the hole dug in the soil and water is pumped into a rubber balloon and forced into the hole provided

The amount of water displaced in the balloon is measured through the graduations on the scale.

Device is placed on the aluminum alloy casting.it consists of plexi glass cylinder which its capacity is 1600 ml, rubber pump with stop valve, density plate and 12 rubber balloon .

Dimensions: 250 x 240 x 680 mm

Weight: 6.5 kg



(TC-S245) CONSTANT HEAD PERMAMETER

STANDARTS :BS 1377:5 - ASTM D2434 - AASHTO T215

The device is used to measure the permeability of gravel, sand, soils etc. The water that is taken from the water tank is passed through the cell.

The permeability cell has pressure points at different levels which are connected to the manometer tubes fixed on a stand with graduated scale.

Two constant head permeability cells are available: 75 mm and 114 mm diameter.



(TC-S245) FALLING HEAD PERMEAMETER

STANDARTS :BS 1377:5 - ASTM D2434 - AASHTO T215

it is used to measure the permeability of materials such as grand, sand

There are two different permeability cells 75-114 mm in diameter.



(TC-S261) ONE WAY CONSOLIDATION DEVICE

STANDARTS :TS 1900-2. ASTM D2435. D3877. D4546 / BS 1377:5

The device is made as a strong cast aluminum frame for high precision under load.

Cargo bridge groups with high sensitivity are self-aligning slot. Beams 9: 1, 10: 1 and 11: 1 provides three loading rate and the desired amount of beam section including weight can be hung. Slot the max. load 150 kg.

The odometer accepts cells up to 100 cm². Consolidation cell, weights, dial gauge, the table must be ordered separately.

Weight: 23 kg



TC-S226 PLATE BEARING LOADING

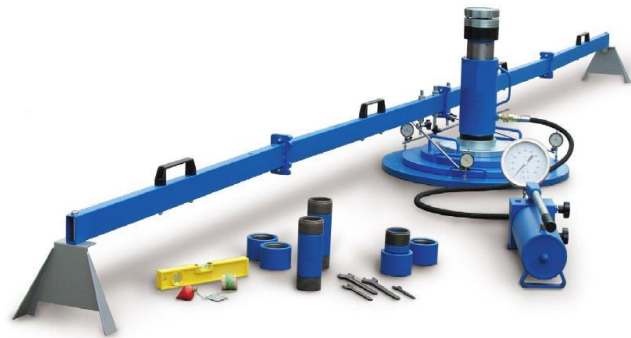
STANDARTS :CNR N° 146, Method "B" - BS 1377:9

Hydraulic Jack that is capacity is 500 KN

Pressure gauges 'precision is 0.2 KN

Carrying cases.

Weight approx. : 110kg

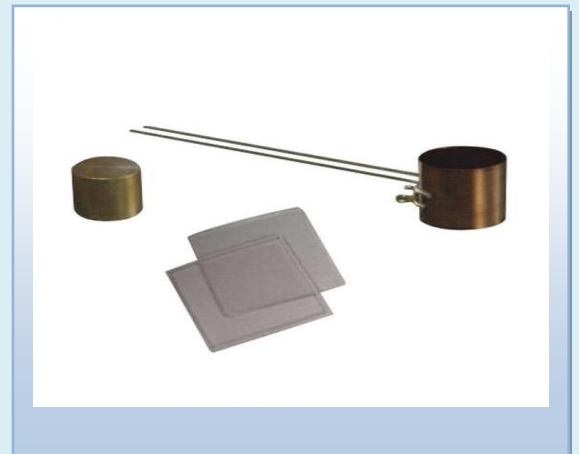


(TC-E063) LE CHATELIER TEST SET

STANDARTS: EN 1367,1; ASTM C671; BS 812,124

The set is used for stability testing of cement volumes. It has 30 mm diameter, 30 mm height and 150 mm in length from a special alloy material is produced by combining the two rods. It is together with standard weight and glass plate.

Weight: 0.3 kg





TC-S001 DIRECT SHEAR TESTING MACHINE

STANDARTS : *TS 1900-2, ASTM D3080, BS 1377-7, AASHTO T236, NF P094 071-1/2*

The System is capable of performing the consolidation and shearing phases of a standard direct shear and residual shear test under full automatic control.

The system consists of a computer-controlled unit that utilizes micro-stepper motors to apply the vertical and horizontal loads to the soil specimen. The system is capable of doing a consolidation process at 32 phase automatically.

Horizontal shearing can be applied at a specified rate of deformation or at a specified rate of horizontal force change, or at a specified set of force steps of a specified duration.

The system is capable of displaying the current status of a test and graphically portraying the progress of the test in real time. The system includes the capability for the operator to alter the test process and conditions at any stage of the test.

Capacity is 2.5, 5, or 10 kN

VERTICAL Engine Stepper engine with built-in controls for vertical load

Horizontal engine stepper motor with built-in controls for horizontal load

SPEED RANGE 0.00003 to 15 mm per min.

HORIZONTAL TRAVEL +125 mm

VERTICAL TRAVEL 12.5 mm

Power supply: 220-240 V 1 ph 50 Hz 750 W

Dimensions: 228 x 560 x 762 mm

Weight: 63 Kg





(TC-S001-01) - HIGH CAPACITY DIRECT SHEAR TESTING MACHINE (AUTOMATIC)

STANDARTS : *ASTM D 3080, TS 1900-2, BS 1377-7, AASHTO T236, NF P094 071-1/2*

It can be used for samples such as 30 cm x 30 cm x 15 cm . (Cut box optionally be produced in a suitable size.)

Horizontal and vertical loads are given fully automatically via stepper motor.

Cutting speed of 0.2-9.99 mm / min. Among through digital control unit can be selected fully automatically.

Shear load and vertical load of 10 tons (100 kN) is capable of applying.

Horizontal and vertical loads on horizontal movements through the data acquisition unit, all calculations are done through software.

Shear box cell is made of stainless metal.

Test frame, the engine is combined with body and stand.

Digital control unit is designed for easy use.

The unit is fully automatic.

Optionally with the device under any load carried out sample consolidated by cutting.

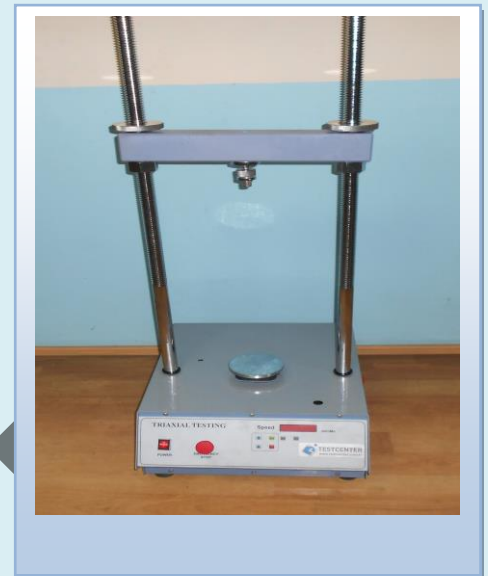




(TC-S301-01) - TRIAXIAL TESTING SYSTEM 50 KN

STANDARDS: BS-1377 : 7 ve 8. ASTM D-2850

- Maximum load capacity : 50kN
- Infinitesimal testing speed : 0,00001-6 mm. min .
- Speed accuracy : $\pm\%$ 0,5
- PC connection : RS 232 port
- Vertical daylight : 0-790 mm. (0-530 mm.)
- Distance between columns : 360 mm
- Base diameter : 158 mm
- Power supply : 220-240 V 1 50 Hz 750 W
- Weight : 105 Kg



(TC-S238) - SAND DENSITY CONE APPARATUS

STANDARTS : ASTM D1556,AASTHO T191

It is used to determine the in-situ density of fine grained compacted soil. The apparatus consists of a steel double metal cone with valve, plastic 5 liter jars, metal base with center hole.

Weight: 5 Kg



(TC-S239) - SAND REPLACEMENT TEST SET

STANDARTS : BS 1377:9 ; BS 1924:2

For the on site determination of the degree of compaction
Complete set consists of pouring cylinder, calibration container and tray. The sand pouring cylinder is made of cast aluminum and precisely machined; the calibration container and tray are made of plated sheet steel. The test set is available in three different sizes.

- TC-S239 - Sand Replacement Test Set 100 mm
- TC-S239-01 - Sand Replacement Test Set 150 mm
- TC-S239-02 - Sand Replacement Test Set 200 mm





(TC-S117) – PROCTOR PENETROMETER

STANDARTS: ASTM D 1558

This proctor is used to determine in field the moisture penetration resistance relationship of fine grained soils.
 Spring load scale 0-55 Kg, subdivided.
 1 kg, with direct max. value reading in kg. on the sliding rod.
 Complete with 9 interchangeable stainless steel needles dia. 4,52 5,23 - 6,40 - 9,07 - 12,83 - 16,54 - 20,22 - 24,79 - 28,55 mm.
 Accessories : carrying case.
 Weight: 8 Kg



(TC-S172) - LIKID LIMIT CASAGRANDE

STANDARTS : TS 1900-1, ASTM D 4318, AASHTO T 89, BS 1377

It is with ebonite base and removable brass cup. The height of drop of the cup may be adjusted via the hand crank mechanism.
 A built-in blow counter is supplied as standard.
 Grooving tool is not supplied and must be ordered separately.
 Dimensions: 150 x 150 x 120 (h) mm.
 Weight: 3 Kg



(TC-S199) - VIBRATING COMPACTION HAMMER

STANDARTS: ASTM D 7382-08

These test methods cover the determination of the maximum dry unit weight and water content range for effective compaction of granular soils. A vibrating hammer is used to impart a surcharge and compactive effort to the soil specimen.
 Device is with stand, vibration Hammer and mold.
 Dimensions: 270 x 400 x 1160(h) mm





(TC-S200) - HYDROMETER TEST KIT

STANDARTS: ASTM D422 / AASHTO T88 / UNE 103,102

This equipment is used to determine the quantitative distribution of very fine particle size in soils such as clay and silt.

Accessories:

- High Speed Stirrer: 10.000 rpm, complete with cup, paddle, anti-splash baffle, for dispersing soil particles in water. 220V 1PH 50Hz 1000 Watt
- Glass Water Tank Heater / 600x300x380 mm
- Glass Measuring Cylinders / 6 pieces
- Soil Hydrometer in / 151H / 0.995 to 1038 g / ml - 0001 precision
- 250 ml Beaker
- Glass Thermometer
- Weight: 60 kg



(TC-S240) - PLASTIC LIMIT TEST SET

STANDARTS: ASTM D4318 / AASHTO T90 / BS 1377:2 / UNI 10014 / UNE 103-104 / NF P94-051

This set is used to determine the lowest moisture content of a soil, by which a sample can be rolled into threads dia.

3 mm without breaking the same neither longitudinally or transversely.

Accessories:

- Glass plate 300 x 300 x 10 mm
- Rod caliper / diameter 3 mm
- Flexible spatula
- Mixing porcelain Dish
- Aluminum moisture Tins / dia. 55x35 mm / 6 pieces
- Weight: 6 kg





(TC- S302)RELATIVE DENSITY TEST SET
STANDARTS: ASTM D4253,D4252

Vibration Table 765x765 mm size
Like 3600 rpm Vibration Severity
Adjustable vibrator.
0.1 And 0.5 cu. ft the owner Volume
Two mold bottom plate-locking mechanism holder and weight.
Comparator clock and holding mechanism.
Power: 220-240V 50Hz 1PH



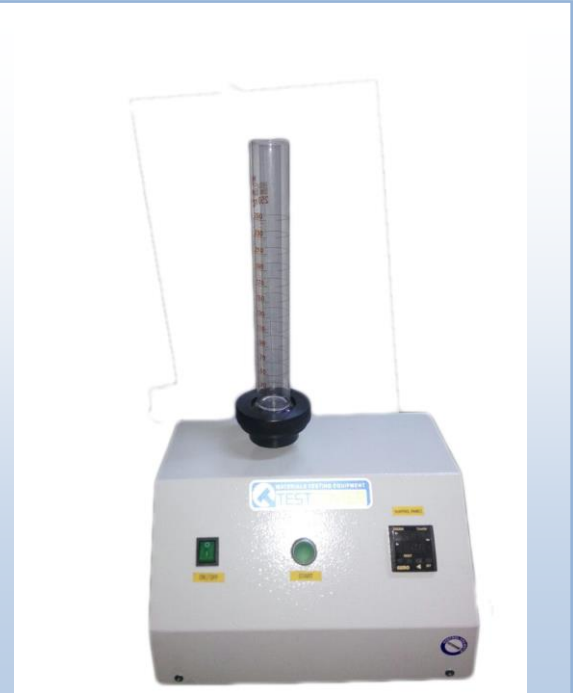
(TC-S300)PINHOLE TESTER
STANDARTS : TS 1900-2: 2006 / T1: 2007, ASTM D 4647

This test technique allows simple classification of soil samples and the determination of such soil quality.
Pinhole tester, used for the determination of the determination of the corrosion tendencies with ground water flow.



(TC-E099) JOLTY BULK DENSITY DEVICE
STANDARTS: DIN ISO 787, ISO 3953, ASTM B 527-93, TS 2328

Eccentric speed: 250 rpm \pm 15 rpm
Single-phase AC motor and capacitor
Noise level acc. DIN 45 635: approx. 80 dB (A) Standard voltage: 230 V / 50 Hz (available on special voltages on request)
Net weight: 9 kg
Dimensions: 290 x 330 x 180 mm (without measuring cylinder) Dimensions: 290 x 330 x 500 mm (250 mL measuring cylinder)





TC-S CBR MOULDS AND OTHER ACCESSORIES

STANDARTS :TS 1900-2,ASTM D1883,D3668,AASTHO T193,NF P94-078,P94-093,BS 1377-4,1924-2

CBR Moulds ve Accessories / CBR Kalıpları ve Aksesuarları
Models / Modeller

Description	Standards	Standards	Standards
CBR mould complete with collar and perforated base: Dia. 6" (152,4 mm) x 7" (177,8 mm) height Dia. 152 mm x 152 mm height Dia. 152 mm x 127 mm height	ASTM AASHTO	NF P94-078 NF P94-093	BS 1377:4 BS 1924:2
TC-\$200-01		TC-\$201	TC-\$202
Split CBR mould with collar and perforated base: Dia. 6" (152,4 mm) x 7" (177,8 mm) height Dia. 152 mm x 152 mm height	TC-\$200-13	TC-\$201-01	
Solid base plate for CBR mould Perforated base plate for CBR mould	TC-\$200-12	TC-\$201-12	
Filter screen, stainless steel dia. 149 mm mesh 0,150mm (ASTM n° 100)	TC-\$200-02	TC-\$200-02	TC-\$200-02
Spacer disc with "T" handle : Dia. 5 15/16" (150,8 mm) x 2,416" (61,4 mm) height. Dia. 151 x 25,4 mm height Dia. 151x36 mm height Dia. 150x50 mm height	TC-\$202-03	TC-\$201-02 TC-\$201-06	TC-\$202-07
Perforated (sweet) plate with adjustable stem	TC-\$200-04	TC-\$200-04	TC-\$200-04
Tripod (dial gauge support)	TC-\$200-05	TC-\$200-05	TC-\$200-05
Dial gauge 10 mm range, 0,01 mm subd Dial gauge 25 mm range, 0,01 mm subd	TC-\$376	TC-\$377	TC-\$377
Annular surcharge weight 2270 g Annular surcharge weight 2300 g Annular surcharge weight 2000 g	TC-\$200-07	TC-\$200-07	TC-\$202-08
Slotted surcharge weight 2270 g Split surcharge weight 2300 g Split surcharge weight 2000 g	TC-\$200-08	TC-\$200-04	TC-\$202-09
Cutting	TC-\$200-09	TC-\$200-09	TC-\$200-09
Compaction rammer: Ø 50,8 mm fall height 457,2 mm, weight 4,54 Kg Ø 50, mm fall height 457,2 mm, weight 4,54 Kg Ø 50, mm fall height 450 mm, weight 4,5 Kg	TC-\$188	TC-\$188-01	TC-\$193
Straight edge 300x30x3 mm	TC-\$200-11	TC-\$200-11	TC-\$200-11
Filter paper dia. 150 mm (pack of	TC-\$200-14	TC-\$200-14	TC-\$200-14
Soaking tank 600x400x400 mm	TC-\$201-05	TC-\$201-05	TC-\$201-05

The CBR equipment is cadmium plated against corrosion.



(TC-Z013) CONSOLIDATION TESTING MACHINE

STANDARDS : TS 1900-2, ASTM D2435, D3877, D4546 / BS 1377:5 AASHTO T216 / NF P94 090-1, P094 091

Rigidly manufactured from aluminium alloy casting to provide a high degree of accuracy with any frame distortion under load. The load bridge group is supported in high accuracy self-aligning seat balls. T

he beam provides three loading ratio: 9:1 10:1 11:1 and the beam assembly is fitted with an adjustable counterbalance weight.

Maximun load: 150 kg of slotted weights.

The oedometer accepts cells up to 100 cm².

Supplied without: consolidation cell, weights, dial gauge , holding bench which have to be ordered separately.

∅ Weight: 23 Kg



(TC-Z025) Marsh Funnel Set

Standards : ISO 2431

It is used to determine the viscosity of liquid substances.

Mouth Opening: 4.7 mm

Sieve Mesh Size: 2 mm

Weight: 1 kg



(TC-Z031) DYNAMIC CONIC PENETROMETER

Standards : DIN 4094; BS 1377:9

It is used to establish the thickness of different strata, when testing compaction works and to determine the relative density of fills and naturally deposited non-cohesive soils.

In general if the ground is not too compact, penetration tests can be carried of about 8 to 12 metres.





(TC-Z033) LIGHT WEIGHT DEFLECTOMETER

Standarts : ASTM E 2835 - 11

The Light Weight Deflectometer is used for the determination of the Dynamic Deformation Modulus (Evd), Dynamic Field CBR, Bearing Capacities and compaction control of sub-soils, subgrade, unbound base layers, granular layers, backfilling materials, soil stabilization, cold in-place recycling etc. Includes Integrated Printer for printing of field test data, data download for computerized printing of reports and Integrated GPS for recording test location coordinates.

Light weight Deflectometers (LWDs) are increasingly being used to determine overall compaction quality of all types of earthworks through their use as a QC/QA field test. LWDs provide a rapid determination of elastic modulus, which is an essential factor in mechanistic design and can be used as an accurate assessment of compaction.

Based on the static plate load test requiring a load vehicle, the LWD provides a simple, fast and repeatable test providing an accurate assessment of compaction parameters. Applications for this non destructive method of testing bearing capacity and compaction include road construction, pipeline and cable backfill, railway track beds, airport runway/taxiways, dam construction, embankments, foundations and other earthworks.



(TC-Z037) PIPET METHOD OF SEDIMENTATION ANALYSIS

Standart: BS 1377:2

The method is used for determining the particle size distribution of very fine soils.

Basic items to perform the test are Andreasen pipette which is hold by the pipette stand for raising or lowering precisely the pipette to the required level without disturbing the suspension under test. Sedimentation cylinder is submerged in the Constant temperature water bath.

Soil Hydrometer

Thermostat, circulation unit , thermometer

Power : 220-240 V 1 faz 50 Hz 1000W





(TC-Z038) PROVING RING PENETROMETER

Standarts : TS 1900-1;ASTM D2937

It is used to determine the bearing capacity of subgrades, or to measure soil compaction. Light and easy to handle in the field. A rapid means of determining the penetration resistance of soil in shallow exploration surveys. Includes: 30°, 1 sq. in. (6.45 sq cm) cone; 250 lb. (1.1kN) capacity proving ring; brake type dial indicator, holds final reading until manually released; 3/4" (19mm) dia. shaft, graduated at 6", (152mm) intervals; 3/4" (19mm) dia. extension rod, graduated at 6" (152mm) intervals; cast aluminum T-handle.



(TC-Z040) SOIL LATHE

STANDARTS: DIN ISO 787, ISO 3953, ASTM B 527-93, TS 2328

- Designed to reduce by trimming the diameter of a soil sample unit reaching the desired diameter size by using a wire saw.
- The lathe is hand-operated, the height is adjustable up to 230 mm and it accepts samples from dia.38 to 110 mm.
- Supplied a wire saw.





(TC-Z036) SPEEDY MOISTURE TESTER

STANDARDS: ASTM D4944; AASHTO T217

The Speedy is widely accepted for rapid, accurate, and reliable moisture tests on all kinds of materials-sand, aggregates, ores, coal, soils, ceramics, abrasives, and other powders. Units are portable, easy to use and do not require a power supply. Samples can be tested on-site, eliminating risk of moisture loss during transport.

LA-3406 is the standard size Speedy vessel, 0-10%mc measurement range, 12 grams sample. It is used for sand, grains, clays and fine powders.

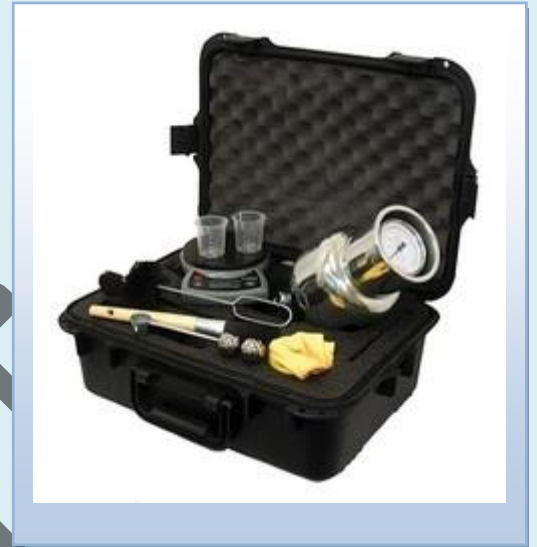
The unit has a die-cast polished aluminum body (pressure chamber) with integral dial. Place weighed sample in the tester with measured quantity of calcium carbide reagent and seal with cap. Upon agitation, free moisture in test sample reacts with calcium carbonate to form acetylene gas. Pressure gauge reads directly in percent moisture by weight within 1-3 minutes.

The Kit includes an electronic digital balance, reagent measuring scoop, one can of reagent, brush, cleaning cloth, and instructions in a heavy-duty, waterproof plastic case.

Approximate weight: 12.1lb (5.5Kg)

Meets ASTM D4944, AASHTO T217 BS 6576

Note: Calcium carbide reagent not included.





STEEL

Steels are alloys of iron and carbon, widely used in construction and other applications because of their high tensile strengths and low costs. Carbon, other elements, and inclusions within iron act as hardening agents that prevent the movement of dislocations that otherwise occur in the crystal lattices of iron atoms.

In this section Testcenter proposes a wide range of universal electromechanical and hydraulic machines to perform tensile, elongation, flexural, bending, resilience tests on metallic materials, with the possibility to extend these test applications on plastics, rubber, composed materials, wires, ropes, paper, textiles etc. This range of machines satisfies both control tests on steel bars for reinforced concrete, and quality tests in the iron metallurgy, metals, plastics etc.

STEEL TEST DEVICES





TORSION TESTER 300 NM

UNIVERSAL TENSILE TESTING MACHINE 600 KN

SAMPLE PREPARATION DEVICE FOR HARPY TEST (MANUAL)

AUTOMATIC SAMPLE PREPARATION DEVICE FOR CHARPY TEST

COOLING BATH FOR CHARPY TEST

CHARPY IZOD IMPACT TESTER (AUTOMATIC)

CHARPY IZOD IMPACT TESTER (MANUAL)

PLIERS FOR CHARPY TEST

SAMPLE PREPARATION COMPRESSION FOR IRON AND STEEL

DRY ICE MAKER

TENSILE MACHINE

SPOON SAMPLE PREPARATION PRESS

TESTCENTER



TC-H070 TORSION TESTER 300

This device is intended for determining the torsional rigidity of the metal material.

The device can be designed according to different capacity. Including 100-200-300-400-500-750-1000-2000-3000 Nm 9 different models are available.

The device consists of the main part of them located below;

One fixed and one movable, including two holders

0.1 degree of precision encoder

Tork cell vary according to capacity.

Automatic color touch screen control panel.

Maximum speed of 3 rpm, like the use of which is all set to

silent running dual action group and frame

Dimensions : 760 x 1100 x 1060 mm

Weight : 150 kg





(TC- H003) UNIVERSAL TESTING MACHINE 600 KN

Tensile tests can be performed by this machine

Main body of its is resting on four columns and a hydraulic jaw.

Device is fully automated and computer controlled.

Special high-strength steel is finished with set jaw and chin bodies.

It has the ability to make as a measurement as a high-precision laboratory type

Preferred choice of two sensors are available.

It digitally allows the calibration of two different values.

* Strain gauge, load cell, and potentiometric transducer output (pressure, strain, flow, etc.) To work with the feature is available.

There is Membrane operator panel.

Manual and automatic reset feature.

Maximum (peak) value has the ability to hold in memory.

It has the ability to connect to the computer.

Supply voltage is 220V AC

Manual and is suitable for automatic use.

Valve and inverter are monitoring capabilities.

Microcontroller-based design has.

Capacity: 600k & 1000 Kn

Load measurement accuracy: + 1%

Strain measurement accuracy: 0.01 mm (10 micron)

Vertical test distance. : 60 mm. max. 360 mm

The distance between the jaws can be adjusted prior to the experiment.
(Electric motor)

The piston movement distance: 300 mm

Load Cell sensitivity: 0.02%





Ø 8 - 32 mm is able to draw from. (OPTIONAL Ø 8 - Ø 46 mm)

* Computer equipment is provided testing program.

The program can be obtained load-elongation curve can be obtained with this program. Max. load, max. it is able to provide the calculations such as elongation, breaking load, young's modulus, yield and so on.

The device is able to provide information and graphics, and the test report consisting of the test results.

Chin Head Holder: Hydraulic or pneumatic control options

Max. moving head movement: 120 mm

Max. chin holders distance: 420 mm

Compression plates distance: 320 mm

Load reading: Precision load cell

Resolution: 0.01

Stability: Class 1 EN 10002/2

Required height: 3000 mm

Frame weight: 2600 kg approx.

Power: 220V 1PH 50 H





(TC – H061 – 01) AUTOMATIC SAMPLE PREPARATION DEVICE FOR CHARPY TEST

Automatic designed.
It is used to make notching on impact test bars for resilience tests.
The piston with rack grants a correct alignment of the broach to the specimen and a perfect axial thrust.



SPOON SAMPLE PREPARATION PRESS

STANDARTS: DIN EN ISO 6892-1

It is hydraulic control for a pre-test sample to prepare spoon press.
It is used to cut sheet metal up to 0.7 mm to 3 mm. thick according to standards that is required.
With these 3 molds, this process can be done can between the sheet intervals.
The fully automated device can be controlled by a foot pedal.
It is a device with safety.
Weight about 700 kg.
Power: 220 V, 50 Hz
We also can design according to different sheet thicknesses.



(TC –H062) COOLING BATH FOR CHARPY TESTS

This apparatus is meant for charpy tests to be carried out at low temperatures.
It is made from double chambered stainless steel with isolating cavity wall from foamed polyurethane, 65 mm thick.
It is with double chambered cover and specimen rack.
Internal dimensions: 125 x 125 x (h) 180 mm
Weight : 12 kg





(TC-H060-01) - CHARPY IZOD IMPACT TESTER (AUTOMATIC)

Instruments from the Impact family are used to perform impact tests to evaluate the energy necessary to break a Charpy or Izod specimen.

Main features:

- Lifting of the hammer is performed by a motorized system that automatically resets the instrument at the end of each test, An automatic brake is fitted as standard for digital versions.
- Manual specimen loading is done from outside of the machine, with a suitable device that provides centering on the support.
- The digital console is complete with back-lit LCD display and a membrane keyboard displaying the obtained results.
- The control unit allows selection of language, test type, reference standard, and the results to be displayed in sequence.
- The results can be printed or handled by dedicated software.
- The hammer can be instrumented for dynamic analysis of absorbed energy during specimen impact.
- The instrument is provided with transparent perimetral integral protection, with an electrically interlocked access door that can be opened only when the pendulum hammer is stopped and in its rest position.



TC-CE014 AUTOMATIC HYDRAULIC SAMPLE CUTTING PRESS

This device is 10 ton capacity and automatic model. It used to prepare membran samples . It can be control with electronic .





(TC-H060) CHARPY IZOD IMPACT TESTER (MANUAL)

STANDARTS : ASTM E23,EN 7-55,UNI4432-4714,ISO TC/7

The tester is equipped with a falling pendulum hammer, able to break, with a single blow, a sample carved in the middle and positioned on two supports

The test is carried out on a CHARPY sample in order to check the energy absorbed during the impact, which is measured in JOULE.

The value stands for the impact strength of the material (resilience).

Cast iron frame

Pendulum with hardened knife

Brake device to stop the pendulum Ø Impact energy 300J with 2J

Graduation

Falling angle: 140°

Real weight Kg. 21,300

Impact speed: 5,182 m/s

Dimensions : 400 x 850 x 1360 mm

Weight: 470 Kg



(TC- H063) PLIERS FOR CHARPY TESTS

This tool is used to place the cooled samples directly into the pendulum away from the bathroom.

Special-shaped



(TC – H061) SAMPLE PREPARATION DEVICE FOR CHARPY (TEST MANUAL)

It is used to make notching on impact test bars for resilience tests.

The piston with rack grants a correct alignment of the broach to the specimen and a perfect axial thrust.





(TC-H071) - SAMPLE PREPARATION COMPRESSION 1000 KN

It is used to take the test sample with 0.30 to 3 mm with stainless steel or steel sheet.

Molds can also be ordered.

450 bar operating pressure

Safety valve

Up and down control button or foot pedal.

Feed back unit.

Power: 220 volts, 50 Hz 1 ph

Dimensions: 1000 x 1200 x 500mm

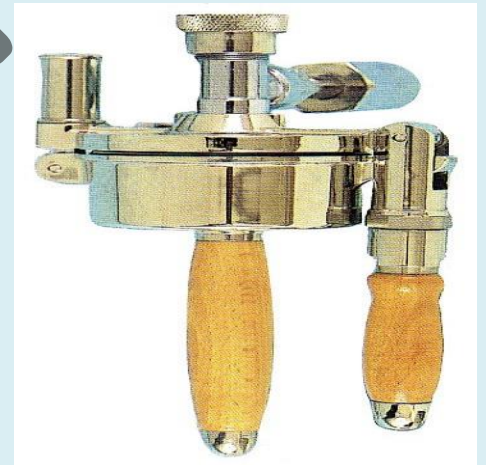


(TC-H064) - DRY ICE MAKER

This device instantaneously produces the quantity of dry ice (solid CO₂) required to reach temperatures down to -80 °C.

The dry-ice maker must be connected to a liquid CO₂ bottle with connecting pipe and it produces 100 g. dry-ice tablets, having mm. 75 diameters and mm. 25 thickness.

Weight: 3 Kg



(TC-H073) - TENSILE MACHINE (TERRAIN TYPE)

,Dimensions: 1250 x 600 x 1200 mm

Weight: 350 kg





ISOLATION

Isolation means that using any insulating material, the reduction of the energy flow out of the media. They are located in many of the large tools such as furnaces, coolers, freezers and water heaters in. In most cases, It serves to prevent the loss of heat to the insulating environment. In other cases, it provides protection against heat from the environment.

As for bituminous waterproofing membranes, exposed structural elements, and it can be applicable to surface water on the side where the water came "Surface Water Isolation" is based on the method. As for bituminous waterproofing membrane can be applied to many details of the roof of the main structure, both in the developed countries, in water and in our country are the most commonly used insulation material.





ISOLATION TEST DEVICES

ADHESION TEST DEVICE

WATER PERMEABILITY TESTE

VACUUM MACHINE

IMPACT RESISTANCE TESTER

FLATNESS DESK

ELECTRO MECHANIC TESTING MACHINE (10-25-30-50 N
CAPACITIES)

COMPACTING TESTER

STATIC LOAD APPLICATION TESTER

TESTCENTER



(TC-Y020) - WATER PERMEABILITY TESTER

It is made of aluminum metal the cell.dia:150mm
 Manuel pressure pump
 Glass plates
 Digital pressure sensor and pressure gauge 0-103 kpa.
 Dimensions: 600 x 380 x 350 mm
 Weight: 20 kg



(TC-Y030) - VACUUM MACHINE

Vacuum chamber made of brass material the cell dia:120 mm.
 There is 100 mm dia. Plexiglas material on the cell.
 There is 20 mm dia.
 Plexiglas tube under the cell.
 Digital pressure sensor and pressure gauge 0-103 kpa.
 The flow rate of vacuum pumps 3m3/time.
 The vacuum pumping capacity 150milibar





(TC-Y040) - ADHESION TEST DEVICE

This test device is used to make the abrasive adhesion tests on bituminous membranes with insulating material.

Load applied on the test sample with 25 newton. The polyamide through the brush in the quality specified in the standard 6.6 mm square area of 4000 results 55 again applies.

The test result, the test specimen before and after the Experiments weighted with a weight of 12:01 grams weighing precision is the result.

There are counter indicator, safety sensors for door and on-off button on the device.

Performance / power: 1 hp 220 volt 50 kHz

Dimensions:850x300x300mm

Weight : 45 kg





(TC-Y050) - IMPACT RESISTANCE TESTER

25 X 25 mm size wood + profile body guiding profile.

Scaling is scaled with polystyrene and aluminum.

10 mm diameter and 40 mm long as weight falling piston.

50 HRC hardness of 12.7 mm diameter drill bit

Height of drop: 200 mm - 2000 mm controllable.

200 mm - 500 mm; 50 mm accuracy.

500 mm to 100 mm to 1000 mm precision.

Concrete plate : 50x400x400 mm.

Dimensions : 450x600x2550 mm.

Weight (app.) : 70 kg



(TC-Y060) - FLATNESS DESK

1000X2000 mm in size of double glazing insulating materials used in the determination of dimensional stability

X and Y coordinates of the measuring accuracy of 1 mm,

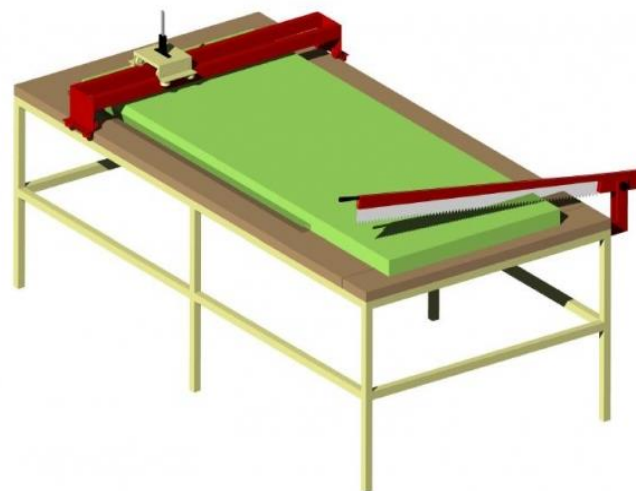
Measurement accuracy in the Z axis is calculated as 0.5 mm.

It is 50 mm thick MDF wooden table surface.

Material cutting scissors must be subsequently added external order.

Dimensions : 1500 X 2500 X 1000 mm

Weight: 120 kg



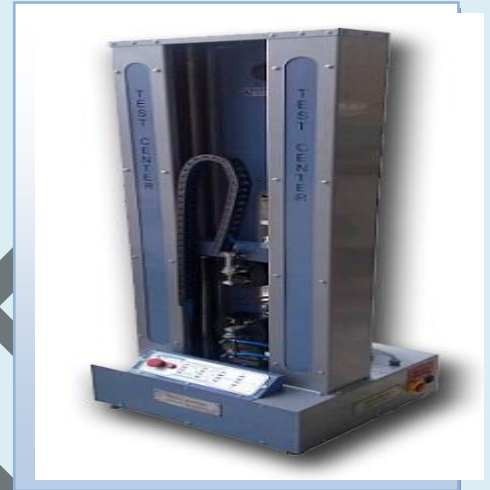


(TC-Y010) - ELECTRO MECHANIC TESTING MACHINE (10-25-30-50 KN CAPACITIES)

STANDARDS : TS EN 12730

The tester is metal or non-metal materials. It is used for tensile and flexural tests.

There are models of the device different capacity, Apparatus, data reading and evaluation unit and software



(TC-Y070) - COMPACTING TESTER

Manual, semi-automatic and fully automatic motorized models are available.

At Manual model, the load variation is turning on the crankshaft. (The amount of load and indentation depth of the indicator dial clock with 100 mm stroke length manually read and recorded) At automatic model, load-time, - load deformation by drawing graphs of all data is automatically read and recorded.

Capacity 10 KN to 100 KN is manufactured on request.

Data to the computer device complete with recording capability and ease of use.

220 volts, 50 Hz

Dimensions----varies by model.

Weight----varies by model.





(TC-Y080) - STATIC LOAD APPLICATION TESTER

The machine is used for implement to vertical load on the sample
The distance between the Weight on the sample and loading ball: 40mm
Loading bar and puncturing ball be calibrated to 2 kg
Loading disks; 1 pcs 3kg, 3 pcs 5kg
Diameter of puncturing ball:10 mm Hardness of puncturing ball : 50 HRC
Polystyrene material (dimensions: 50x500x500mm) implement to method A
Concrete plate (dimensions: 300x300x30mm) implement to method B
Dimensions: 700 x 700 x 550 mm
Weight : 50 kg (app.)

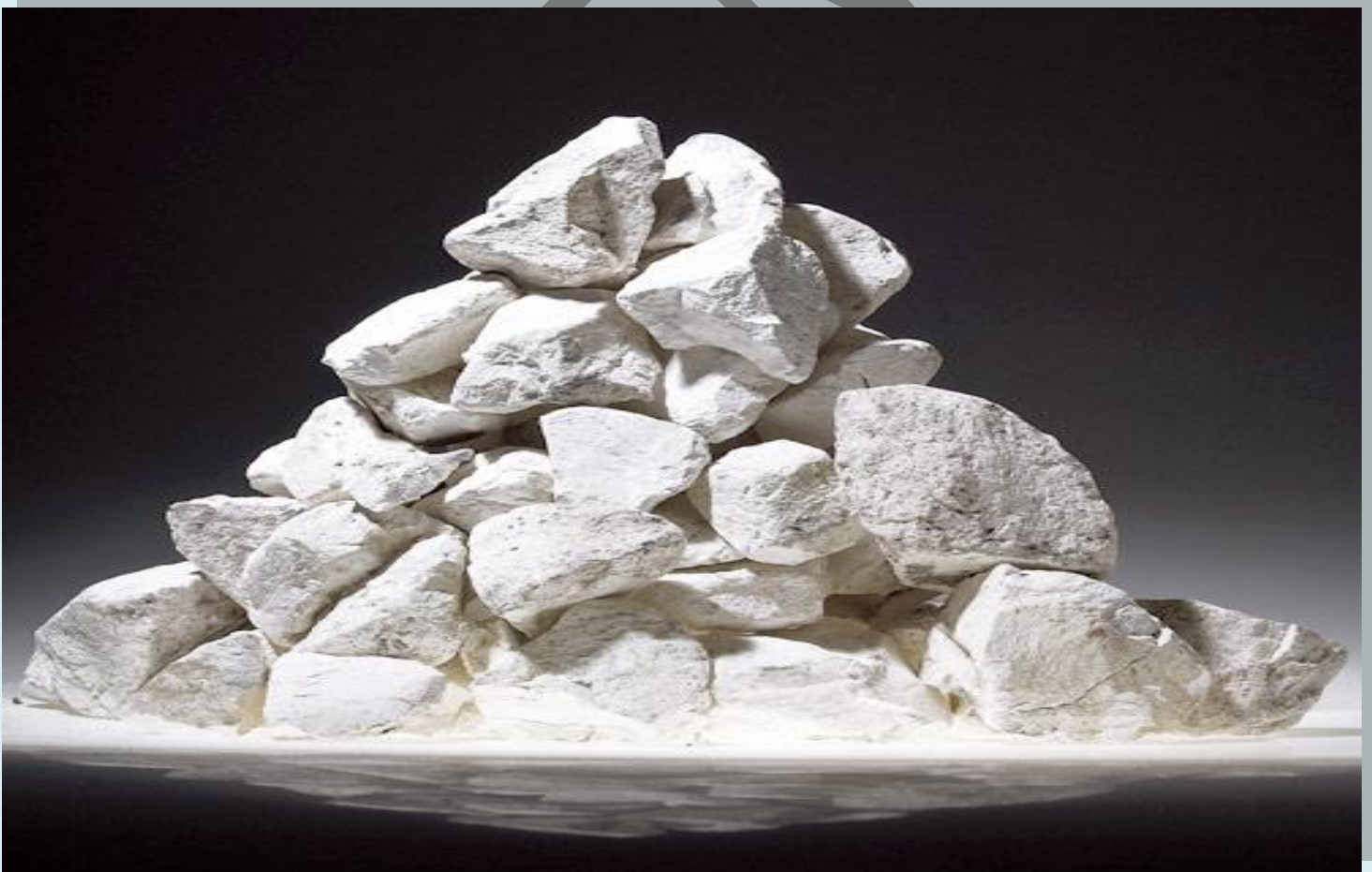




LIME

Lime and limestone/dolomite are materials often used in a large number of industries, among them the water treatment as well as steel and ferro-alloy production industries. Lime is obtained by calcining limestone and its quality must be controlled in order to satisfy customer expectations. Two industry-accepted tests are normally conducted on unslaked lime to ensure its compliance with specifications, namely the available lime content determination according to SABS standard method 8241 and the reactivity test described in a German DIN procedure contained in the European Norm 12485 of 1996.

The reliability of the industry accepted method for measuring lime reactivity was established within the prescribed parameters of the method. Possible sources of error when not using the prescribed particle sizes and correct amounts of water and lime were investigated and their influences established.





LIME TEST DEVICES

- WATER VAPOUR BATH
- LIME MOULD AND PISTONS
- CALCIMETER
- CLEINE APPARATUS
- COMPRESSION TESTING MACHINE (MANUAL)
- SLAKING VESSEL
- LIME MOULD AND ACCESSORIES
- LIME

(TC-E234) – WATER VAPOUR BATH

STANDARTS : EN 459-2

In stainless steel.

It contains up to 12 molds which are maintained at a height of approx. 50 mm above water level.

A device located beneath the lid prevents condensation from falling onto specimens. Two heating elements, 800 W and 200 W, guarantee that the water reaches boiling point within approx. 30 minute .

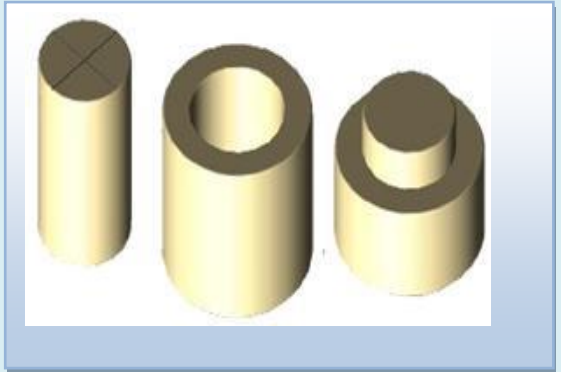
Power supply: 220-240 V 1ph 50 Hz

Dimensions: 390 x 180 x 350 mm





(TC-E033) - LIME MOULD AND PISTON



(TC-E105) - CALCIMETER

It is for determining the CaCO_3 in limestone and lime marl. It comprises a glass container and connected gas-holder.

A reaction in the glass container between the sample calcium carbonate and a solution of diluted hydrochloric acid produces carbon dioxide which is subsequently measured in the gas-holder.

This volume can be used to calculate the CaCO_3 content of the sample.

Dimensions: 275 x 200 x 1100 (h) mm

Weight: 12 kg



(TC-E032) - KLEINE APPARATUS

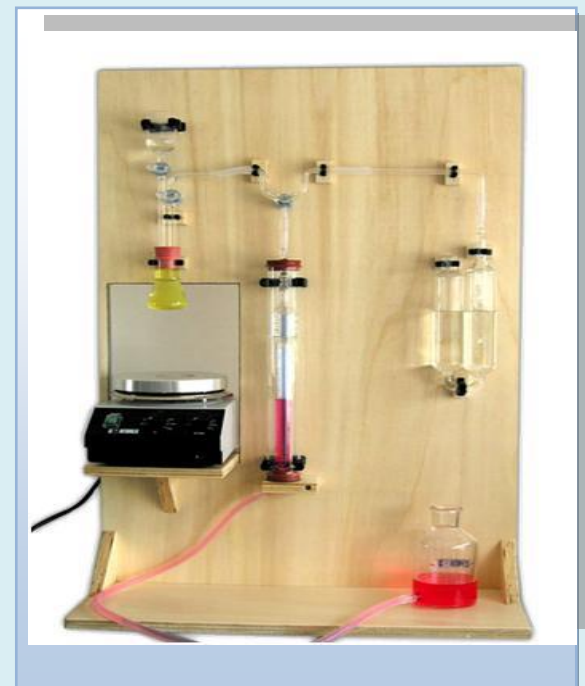
STANDARTS : TS 32,EN 459-2

It is used for the determination of the carbon dioxide in lime.

It consists essentially of a decomposition flask 50 ml cap., of an absorption vessel to contain the potassium hydroxide solution, a measuring burette, funnel stopcocks, connections and wooden stand

To perform the test a hot plate with magnetic stirrer and a suitable adjustable support may be useful.

They are not included and have to be ordered separately





(TC-E046) – COMPRESSION TESTING MACHINE (MANUEL)

Capacity : 3 ton

The test device is used for compression to lime samples.

The machine is complete with load cell, reading unit, loading piston and frame.

Power : 220 V, 50 hz

Dimensions : 500 x 250 x 1000 mm

Weight : 40 kg. (app.)



(TC-E035) – SLAKING VESSEL

STANDARTS : EN 459-2

This insulated vessel is used to determine the yield of lime by leaving the lime sample to slake into.

It is stainless steel made, double walled insulated with glass fibers.

The cylinder has inside dimensions dia. 113 by 140 mm deep.

Supplied complete with cover

Dimensions: 150 x 150 x 400 mm.

Weight: 4 kg





(TC-E034) - LIME MOULD AND ACCESSORIES

CBR Moulds ve Accessories / CBR Kalipları ve Aksesuarları

Models / Modeller

Description	Standards	Standards	Standards
	ASTM	NF P94-078	BS 1377-4
	AASHTO	NF P94-093	BS 1924-2
CBR mould complete with collar and perforated base: Dia. 6" (152,4 mm) x 7" (177,8 mm) height Dia. 152 mm x 152 mm height Dia. 152 mm x 127 mm height	TC-S200-01	TC-S201	TC-S202
Split CBR mould with collar and perforated base: Dia. 6" (152,4 mm) x 7" (177,8 mm) height Dia. 152 mm x 152 mm height	TC-S200-13	TC-S201-01	
Solid base plate for CBR mould Perforated base plate for CBR mould	TC-S200-12	TC-S201-12	
Filter screen, stainless steel dia. 149 mm mesh 0,150mm (ASTM# 100)	TC-S200-02	TC-S200-02	TC-S200-02
Spacer disc with "T" handle : Dia. 5 15/16" (150,8 mm) x 2,416" (61,4 mm) height. Dia. 151 x 25,4 mm height Dia. 151 x 36 mm height Dia. 150 x 50 mm height	TC-S202-03	TC-S201-02	TC-S201-06
Perforated (sweet) plate with adjustable stem	TC-S200-04	TC-S200-04	TC-S200-04
Trirod (dial gauge support)	TC-S200-05	TC-S200-05	TC-S200-05
Dial gauge 10 mm range, 0,01 mm subd Dial gauge 25 mm range, 0,01 mm subd	TC-S376	TC-S377	TC-S377
Annular surcharge weight 2270 g Annular surcharge weight 2300 g Annular surcharge weight 2000 g	TC-S200-07	TC-S200-07	TC-S202-08
Slotted surcharge weight 2270 g Split surcharge weight 2300 g Split surcharge weight 2000 g	TC-S200-08	TC-S200-04	TC-S202-09
Cutting	TC-S200-09	TC-S200-09	TC-S200-09
Compaction rammer: Ø 50,8 mm fall height 457,2 mm, weight 4,54 Kg Ø 50, mm fall height 457,2 mm, weight 4,54 Kg Ø 50, mm fall height 450 mm, weight 4,5 Kg	TC-S188	TC-S188-01	TC-S193
Straight edge 300x30x3 mm	TC-S200-11	TC-S200-11	TC-S200-11
Filter paper dia. 150 mm (pack of	TC-S200-14	TC-S200-14	TC-S200-14
Soaking tank 600x400x400 mm	TC-S201-05	TC-S201-05	TC-S201-05

The CBR equipment is cadmium plated against corrosion.



MOBILE LABORATORIES

- MOBILE CONCRETE LABORATORIES
- MOBILE SOIL LABORATORIES
- MOBILE ASPHALT LABORATORIES

MOBILE CONCRETE LABORATORIES

3 different types of mobile laboratories options are available:

1. Container type

2. Trey - Retractable type

3. Van type

OPTINONAL FEATURES :

- Office / bedroom split.
- Lighting and electrical installations.
- Electricity generator.
- Water tank and
- supplies.
- WC and waste tank.

MOBILE CONCRETE LABORATORY DEVICE AND EQUIPMENT LIST

- | | |
|------------------------------------|--|
| 1- 200 TONS OF CONCRETE TEST PRESS | 9. CONCRETE TEST HAMMER |
| 2- CURE TANK 550 LT DIGITAL | 10-DIGITAL THERMOMETER |
| 3 DRAYING OVEN 120 LT | 11-MEZ CAM (250, 500 and 1000 ml) |
| 4 SIEVE SHAKER | 12-pycnometer (250, 500 and 1000cc) |
| 5- CONCRETE SIEVES SET | 13-flask (250, 500 and 1000 ml) |
| 6. SLUMP TEST SET | 14-DIGITAL CALIPER |
| 7. CONCRETE AIR CONTENT METER | 15-SPECIFIC GRAVITY TEST SET AND SCALE |
| 8- PLASTIC MOULDS CUBE (24 PCS) | 16-CORE CUTTING MACHINE |



MOBILE SOIL LABORATORY DEVICE AND EQUIPMENT LIST

1- CBR & MARSHALL TESTER

2- MARSHALL SOIL COMPACTOR

3- CBR WATER TANK

4- FLOOR SCREEN SET

5- DRYING OVEN 120 LT

6. SIEVE SHAKER

7. STANDART PROCTOR MOULD AND PESTLE

8- MODIFIED PROCTOR MOULD AND PESTLE

17-FLASK (250, 500 and 1000 ml)

9- STANDART PENETROMETER

10-SAND CONE TEST SET 6 "

11-PLASTIC LIMIT SET

12-LIQUID LIMIT DEVICE (CASAGRANDE)

13-CONSOLIDATION TEST SET (SINGLE)

14-JACK SAMPLE CLEANERS

15-MEZ CAM (250, 500 and 1000 ml)

16-PYCNOMETER (250, 500 and 1000cc)



MOBILE ASPHALT LABORATORIES

MOBILE ASPHALT LABORATORY DEVICE AND EQUIPMENT LIST

- | | |
|-------------------------------------|---|
| 1- MARSHALL STABILITY TEST DEVICE | 7- DIGITAL ASPHALT METER |
| 2- MARSHALL COMPACTOR | 8 -CENTRIFUGE EXTRACTOR 3.000 g. |
| 3- MARSHALL MOULD | 9- SOKSILET DEVICE |
| 4- SYBOLT VISCOMETER | 10-SOFTENING POINT TESTER |
| 5- DUCTULIMETER | 11-ASPHALT SET SCREEN |
| 6 SAMPLE CLEANERS JACKS | 12 -SIEVE SHAKER MACHINE |
| 14-PYCNOMETER (250, 500 and 1000cc) | 13-GRADUATED GLASS (250, 500 and 1000 ml) |
| 15-FLASK (250, 500 and 1000 ml) | |





GENERAL MATERIALS

CORE DRILLING MACHINE

STANDARTS : EN 12504 -1

Water spray apparatus is available. Lightweight is and easy to use.

Wheels are easy to carry through.

Drive is optional retractable models.

Moving parts of the device are cadmium-plated to prevent rusting.

Electric sliding coring device group linearity is full, so the coring action is comfortable and very soft



ANALITIC BALANCE

Rechargeable Battery

Automatic zero setting when opening balance

Auto zero tracking

Weighing, number and percentage features

Operating Temperature 0 ° C ~ + 40 ° C

Relative humidity ≤ 85%

Bottom lighting system

Original gravity weighing system

Original certified precision balances

6000 GR GR 0,1 - 0,5 GR GR 30000 precision and types ..

Tare full capacity until Specialty

External weight calibration system with external Calibrated

Original Rs 232 computer output



WEIGHING MACHINE

It has desired precision weighing scale

ELWA is included which can be used to scale up to 40 hours for your convenience rechargeable battery.

There is tare function.

There is an automatic reset feature.

Weight has collection. Scales has red led indicator light display.

Bright and easily readable figures are given the quality of the display.

The keypad is a button keypad.

Installation is very easy





VACUUM PUMP

Laboratory Type.
220 V, 50-60 Hz, 1 ph



COMPRESSOR

It has a portable feature and it can be assembled to devices on demand.



DIGITAL THERMOMETER

It is used at the laboratory and food business.
It has appropriate timer (Countdown), set-temp, voice alert function.



DESICATOR

Calcium chloride in the base (CaCl_2) and so on.
Desiccant is a matter of series for very low humidity and they are special containers that can be tightly closed and mouth.

Desiccators are both moist substances (solid) "dried them" and that the dried chemical. In trust "stored away from moisture" goal can be used with.





GLASS AND PLASTIC TAPE

Plastic tapes are;

It is printed and pale scale and hexagonal base.

Heat-resistant is max 135 °C

Glass tapes are printed and i made of solid glass. Hexagonal based.



SAMPLE MOULDS

It is manufactured from aluminum. There are different sizes. From 100 g to 3000 g containers are available.



SAMPLE TRAYS

Sample trays can be made of galvanized steel or stainless steel upon request.

Number. 1 - 18.5 x 28 x 4.5 cm

Number.2 - 33.5 x 23.5 x 4.5 cm

Number. 3 - 38.5 x 25.5 x 4.5 cm

Number.4 - 28,5 43.5 x 4.5 cm

Also can be manufactured in desired

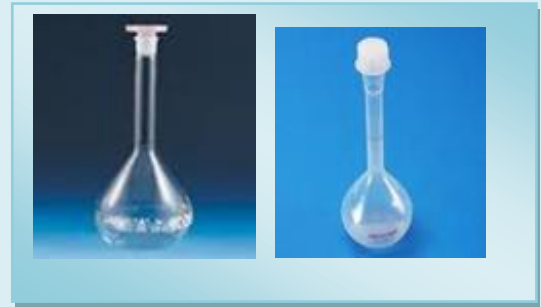




GLASS AND PLASTIC FLASK

Plastic flask; 50 cc and 100cc sizes.

Glass flask; has a desired dimension.



GLASS AND PLASTIC BEAKERS

Beakers is printed and embossed.

It is a round-bottomed and durable. It has the desired size.



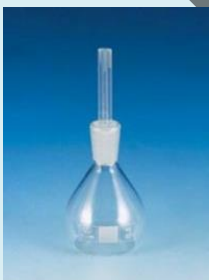
TROLLEY



GAS TUBE CONCRETE DRYING FURNACE



PYCNOMETER



GLASS THERMOMETER



DEFLECTION METER





ASBESTOS GLOVE



NITRYL GLOVE



GEOLOGIST HAMMER



PORCELAIN MORTAR



STEEL RULOR



SPATULA



WIRE BRUSH



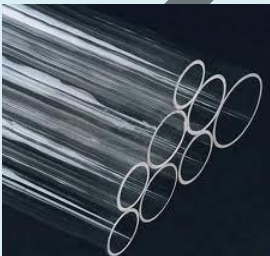
BRISTLE BRUSH



SASULA



CAM BAGET



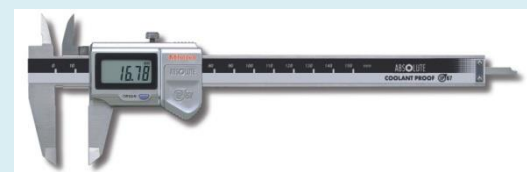
FLAME...



PETRI PLATES / LID



RUBBER MALLET





BALLOON HEATER

Max. heating .450 C

There are different kind of models are available

100 ml , 250 ml, 500 ml, 1000 ml , 2000 ml, 4000 ml ,5000 ml , 6000 ml , 10000 ml , 20000 ml



AUTOMATIC PIPETTE STAND

Automatic pipette stand

Horizontal for 6 pipette



INCUBATOR

Dimensions :40*40 cm or 40*60 cm or 49 liter

Heat range : RT +5 ~ 65 °C or RT +5 ~ 80 °C

Heat sensivity $\pm 0,2$

PID Programme

Digital control panel

Stainless steel shelves

2 year warranty





WATER DISTILLERS


ND 4	8	ND 12	24
Distilled Water Capacity (lt/hr)	4	8	12
Storage Tank Capacity, liters	8	16	24
Cooling Water Consumption (lt/hr)	40	80	120
Power Supply	400 V, 50/60 Hz, 3 Phases + N +G		
Power Consumption	3 x 1000 W	3 x 2000 W	3 x 3000 W
Internal Material	Stainless steel		
External Material	Epoxy-polyester powder coated aluminum		
Overall Dimensions (WxDxH)	770x400x600		



SEDIMENTATION PIPETTE APPARATUS

Graduated 500cc glass cylinder (0-20 cm) with a ground tapered neck (to NS 29-37), special stopper, two way tap and capillary suitable for transferring sediments of grain size smaller than 60 microns.

SPECIFICATIONS:  Dimensions: 180x100x600 mm

 Weight: 1 kg

To accomplish this test the following products are required

- 1- ANDREASEN PIPETTE (10 mm)
- 2-ANDREASEN PIPETTE STAND



SPEKTROFOTOMETER

Wave length range : 190-1100 nm

Spektral band width : 2 nm

Capacity : 8 channel

(5 nm , 4 nm , 1 nm according to the demand)

Screen :6" Lcd

Dedector : sylicon foto - diyot

Pc controlled Double Beam





(TC-Z013) CONSOLIDATION TESTING MACHINE

STANDARDS : TS 1900-2, ASTM D2435, D3877, D4546 / BS 1377:5 AASHTO T216 / NF P94 090-1, P094 091

Rigidly manufactured from aluminium alloy casting to provide a high degree of accuracy with any frame distortion under load. The load bridge group is supported in high accuracy self-aligning seat balls. T

he beam provides three loading ratio: 9:1 10:1 11:1 and the beam assembly is fitted with an adjustable counterbalance weight.

Maximun load: 150 kg of slotted weights.

The oedometer accepts cells up to 100 cm².

Supplied without: consolidation cell, weights, dial gauge , holding bench which have to be ordered separately.

∅ Weight: 23 Kg



(TC-Z031) DYNAMIC CONIC PENETROMETER

LCD screen

Automati glass

9 progressive

Gas and water tap

Fan engine that is durable

Cupboard Type

Electric plug

2 year warranty

There are different kind of fume hoods . These are as follows

1000/1000X750X2200 mm

1200/1200X800X2200 mm

1500/1500X800X2200 mm

1800/1800X800X2200 mm





PORTABLE TERMO HIGROMETER

HT 380 PORTABLE TERMO HIGROMETER

Heat : 40 / + 85 C

0 /100 % moisture

9 V Batary



MECHANIC STIRRER

DC 50 W geared engine

20 L Stirring capacity

Shank dia : 10 mm

2 year warranty



(TC-Z031) DYNAMIC CONIC PENETROMETER

It is used for the gripping of the samples that will be tested

Jaws grip are designed complying with whole universal devices according to demand.

The distance between holders are designed according to specifications of samples.



Hydrometer Graduated Glass Shaker Device

It provides homogeneous of graduated glasses that are used at the hydrometer experiment .

Power :220 V 50 Hz





DIGITAL VACUUM RESERVOIR

Vacuum reservoir operating pressure can be adjusted between 2.0 kpa and 20 kpa necessary.

Water is supplied from the ground , the velocity of water over a period of 15 min adjusted to keep the specimen in water.

Water into the vacuum reservoir while maintaining the vacuum and can be used also .

The pressure in the vacuum container can be adjusted to remain constant for 24 hours when the reservoir reaches the desired level of pressure in the low pressure swithc.



Corrosion Mapping System

This instrument permits the measurement of spontaness electric potentials in structures in reinforced concrete so that areas in which the steel is prone to corrosion can be identified. The contained dimensions and battery operation enable the instrument to be used on site. The complete system comprises :

- electronic voltmeter with
- adaptor plate
- two 15 ' electrode extensions
- surfactant reservoir with electrode
- test wire
- copper sulphate
- anti-freeze
- concertrated surfactant solutions



SIX MAGNETIC STIRRER

100-1500 Rpm

480 W

Max. temperature : 380 C⁰

Ceramic coating , aluminium platform

150 x 150 mm platform





TEMPERATURE AND HUMIDITY TRANSMITTER

TEMPERATURE

Sensor : Pt 100 DIN 1/3

Sensor working space : - 50 ... + 200 C⁰

Sensibility : ± 0.25 C⁰

HUMIDITY

Measuring range : 0 ...100 RH %

Sensor working temperature : - 50 + 150 C⁰

Dew point TD : - 50 + 100 C⁰

Absolute humidity : 0.....600 g/m³

Sensibility : ± 1.5 RH (0..... 90 % RH)



PH ELECTRODES

PH - ELEKTRODE BLUELINE 23 PH

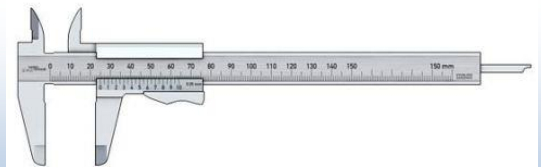
PH 0...14 / - 5 ... 80 C⁰ / Gel



MECHANIC CALIPER

According to demand ;

150 mm , 300 mm



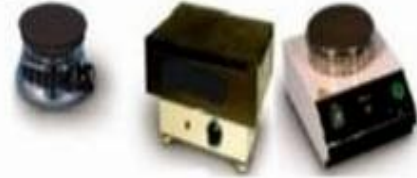


Hot Plates, Vacuum Pump, PH Meters

Isıtıcılar - Vakum Pompası - pH Metreler - Kimyasallar
Hot Plates - Vacuum Pump - pH Meters - Chemicals

Isıtıcı Plaka ve Manyetik Karıştırıcılar / Hot Plates and Magnetic stirrer/heater

Model	Açıklama
TCV200	Yuvarlak / Round Çap 185 mm- 1500 W
TC-G200-02	Yuvarlak / Round Çap 220 mm - 2000 W
TC-B074	Yuvarlak / Round Çap 160 mm- 1000 W
TC-G200-01	Dikdörtgen / Rectangular 200x300 mm - 1500 W
TC-G200-03	Dikdörtgen / Rectangular 300x400 mm - 2400 W
TC-G200-05	Dikdörtgen / Rectangular 400x500 mm - 3400 W
TC-B073-01	Manyetik Karıştırıcı / Magnetic stirrer/heater - 400 W



Kül Fırınları / Muffle Furnaces

Model	Isı Aralığı	İç Hacim	kW
TC-A021	1100 °C	15 x 21 x 20	1.5
TC-A021-01	1200 °C	14 x 18 x 20	2
TC-A021-02	1300 °C	14 x 20 x 25	2
TC-A021-03	1400 °C	14 x 15 x 25	3
TC-A021-04	1500 °C	14 x 15 x 25	3.5
TC-A021-05	1600 °C	14 x 15 x 24	4.9



Vakum Pompası / Vacuum Pump

TC-G203	Dağıtım (l/dk): 15
TC-G204	Dağıtım (l/dk): 22



Hava Kompresörü / Air Compressor

TC-G205	100 lt / 8 bar
TC-G206	150 lt / 15 bar



Sıcak Hava Kurutucu

Warm air dryer
TC-G201



Su Arıtma Cihazı / Water Still

TC-G205	4 litre / saat
TC-G206	8 litre / saat



pH Metre / pH Meter

TC-G214	0- 14 pH -50 +150 °C
TC-G215	0- 14 pH 0 +60 °C



El Arabası / Trolley

TC-G224
PlaTCorn : 600x400 mm
TC-G225
Çift PlaTCorn : 800x450 mm





Metal Containers And Tools

Numunen Kapları / Sample Containers

Model	Çap mm	Malzeme
TC-G122	55x36	alüminyum
TC-G122-01	55x65	alüminyum
TC-G122-02	75x50	alüminyum
TC-G122-05	55x35	princ
TC-G122-06	70x45	princ



Numune Kapları / Tins

Model	Kapasite lt
TC-G125	1.5
TC-G125-01	1
TC-G125-02	3
TC-G125-03	5
TC-G125-04	10



Numune Tepsileri / Trays, Paslanmaz Çelik

Model	Ebat cm
TC-G182-14	21x32x5
TC-G182-15	25x37x5
TC-G182-16	27x45x5



Bakkal Kürekleri / Scoops, Çelik

Model	Ölçü mm	Kapasite ml
TC-G183	245x80	325
TC-G184	260x90	500
TC-G184-01	335x120	1000
TC-G184-02	380x145	1550
TC-G184-03	420x160	2600



Spatula / Spatulas

Model	Bıçak mm
TC-G192	100
TC-G192-01	150
TC-G192-02	200
TC-G192-03	300



Fıçalar / Brushes

Model	Açıklama
TC-G178	Yumuşak Fırça, Elek için / Soft Brush
TC-G178-01	İnce Telli fırça / FINE WIRE BRUSH
TC-G178-03	Şişe Fırça / BOTTLE BRUSH
TC-G179	BRISTLE, round, 35 mm. dia. soft hair
TC-G179-01	Kıl Fırça, BRISTLE , yassı
TC-G179-02	Elek Fırçası, SIEVE BRUSH , çift taraflı, naylon
TC-G179-03	Elek Fırçası, SIEVE BRUSH , çift taraflı, sert naylon
TC-G179-04	Elek Fırçası, SIEVE BRUSH , çift taraflı, ince princ
TC-G179-05	Yumuşak Saç Fırçası / SOFT HAIR BRUSH
TC-G179-06	Kalın sert fırça / BRISTLE , yatay, naylon

Eldivenler / Gloves

Model	Açıklama
V177	Yanmaz Eldiven / Heat Resistant
V177-01	Lastik eldiven / Neoprene Gloves



Alet Edavatlar / Tools

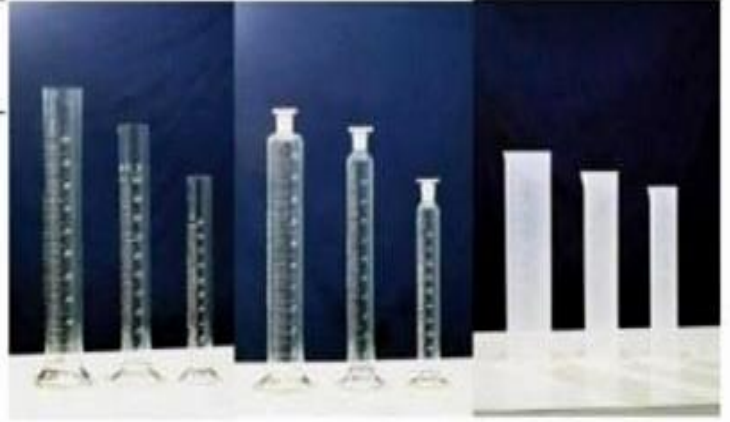
Model	Açıklama
TC-G186	Numune Kaşığı / SAMPLING SPOON
TC-G186-01	Kepçe / Ladle



Laboratory Glassware-1

Ölçülü Silindirler (Measuring cylinders)

Kapasite	cam kapağı ile birlikte	opak plastik oluk ağızlı	şeffaf cam oluk ağızlı
10 ml.	TC-G099	TC-G100	TC-G101
25 ml.	TC-G099-01	TC-G100-01	TC-G101-01
50 ml.	TC-G099-02	TC-G100-02	TC-G101-02
100 ml.	TC-G099-03	TC-G100-03	TC-G101-03
250 ml.	TC-G099-04	TC-G100-04	TC-G101-04
500 ml.	TC-G099-05	TC-G100-05	TC-G101-05
1000 ml.	TC-G099-06	TC-G100-06	TC-G101-06
2000 ml.	TC-G099-07	TC-G100-07	TC-G101-07



Piknometre Pyknometers, pyrex cam, delikli kapağı ile birlikte

Kapasite	Ağız 29 mm	Geniş Ağızlı 50 mm
250 ml	V105-03	=
500 ml	V105	V105-04
1000 ml	V105-01	V105-05
2000 ml	V105-02	V105-06
STANDARD:		
EN1097-6		
500 ml	V103	
1000 ml	V103-01	



Beherler Beakers, pyrex cam

Model	Kapasite
TC-G104	25 ml.
TC-G104-01	50 ml.
TC-G104-02	100 ml.
TC-G104-03	250 ml.
TC-G104-04	500 ml.
TC-G104-05	1000 ml.
TC-G104-06	2000 ml.
TC-G104-	5000 ml.



Balon Joje Volumetric flask, cam, kapağı ile birlikte

Model	Kapasite
V109	100 ml.
V109-01	250 ml.
V109-02	500 ml.
V109-03	1000 ml.





Laboratory Glassware-2

Ölçekli Test Şişeleri *Graduated impurities test bottles, cam*

Model	Kapasite
TF-S132-01	500 ml
TF-S132-03	1000 ml



Karıştırma Çubuğu / *Stirring rod, cam*

TC-G147-01 8X250 mm



Markalama Kalemi / *Marking Pen*

TC-G147-01 8X250 mm

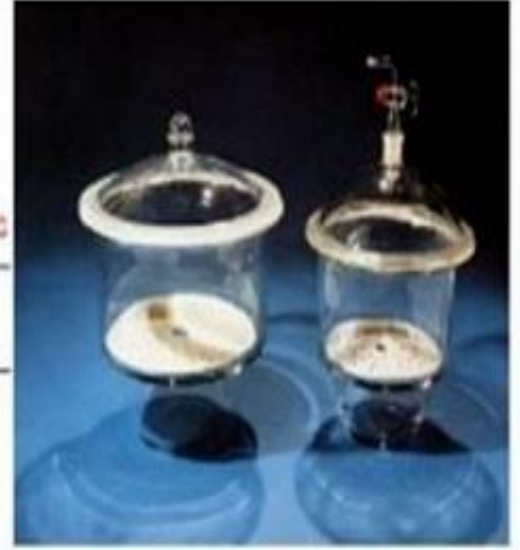


Desiccators / *Desikatorler, cam*

Model	Kapasite
TF-A035	200 mm
TF-A036	250 mm
TF-A036-01	300 mm

Vakum Tip / *Vacuum type desicc*

Model	Kapasite
TF-A039	200 mm
TF-A040	250 mm
TF-A040-01	300 mm



Dereceli Pipet / *Graduated pipettes, soda cam*

Model	Kapasite	Bölüm
V142	1 ml	0,01 ml
V142-01	5 ml	0,1 ml
V142-02	10 ml	0,1 ml
V142-03	25 ml	0,1 ml
V142-04	50 ml	0,1 ml
V142-05	100 ml	0,2 ml



Dereceli Büret / *Graduated burettes, soda cam*

Model	Kapasite	Bölüm
V143	1 ml	0,01 ml
V143-01	5 ml	0,1 ml
V143-02	10 ml	0,1 ml





Chemicals, Sand Bath, Filter Paper, Metal Stand

TC-G300-01	Hidroklonik asit / Hydrochloric acid
TC-G300-02	Hidroflorik asit / Hydrofluoridric acid
TC-G300-03	Nitrik asit / Nitric acid
TC-G300-04	Sülfürik asit / Sulfuric acid
TC-G300-05	Damıtık su / Distilled water
TC-G300-06	Hidrojen peroksit / Hydrogen peroxide
TC-G300-07	Ferric alum, indicator solution
TC-G300-08	Amonyak / Ammonia
TC-G300-09	Amonyum karb. / Ammonium carb.
TC-G300-10	Amonyum Klorid / Ammonium chloride
TC-G300-11	Anhidrit fosforik / Anhydride phosphoric
TC-G300-15	Silika jel / Silica gel
TC-G300-15	Silika jel / Silica gel
TC-G300-16	Gliserin / Glycerine
TC-G300-17	Cıva / Mercury (pure)
TC-G300-18	Vazelin / Vaseline oil
TC-G300-19	Parafin / Paraffin wax
TC-G300-20	Potasyum bikarbonat / Potassium bichromate
TC-G300-21	Sodyum karbonat / Sodium carbonate
TC-G300-22	Sodyum klorid / Sodium chloride

TC-G300-23	Sodyum hekzameta / Sodium hexametaphosphate
TC-G300-24	Sodyum hidroksit / Sodium hydroxide
TC-G300-25	Sodyum sülfat / Sodium sulfate
TC-G300-26	Trikloretilen / Trichloroethylene
TC-G300-27	Çinko klorid / Zinc chloride
TC-G300-28	Metilen mavisi / Blue of methylene
TC-G300-29	Kaolin / Kaolinite
TC-G300-30	İyon deęiřtiricili reçine / Ion exchange resin



Filtre Kağıdı /

Filter Paper

Model	Çap mm
TC-G218-01	1 x 110
TC-G218-02	1 x 150
TC-G218-03	2 x 110
TC-G218-04	5 x 150
TC-G218-05	40 x 150
TC-G218-06	44 x 150
TC-G218-07	44 x 110

Kum Banyosu / Sand bath

TC-G241

İç Ölçü : 300 x 240 x 90



Metal stand / Metal Stand

TC-G219 165 x 140 mm, çubuk çapı 10x500

Lastik Hortum / Rubber Tubing

TC-G230	Çap : 5, 5 mt
TC-G231	Çap : 6.5, 5 mt
TC-G232	Çap : 8, 5 mt





Porcelain, Plastic, Thermometer, Hydrometer Products

PORSELEN-PLASTİK-TERMOMETRE VE HİDROMETRE ÜRÜNLER

Porselen, Plastik, Termometre, Hidrometre Ürünler
Porcelain, Plastic, Thermometer, Hydrometer Products

Havan ve Tokmak / Mortar and Pestle, porselen

Model	Çap	Derinlik
TC-G112	100 mm	60 mm
TC-G112-01	125 mm	65 mm
TC-G112-02	150 mm	76 mm
TC-G112-03	180 mm	92 mm
TC-G112-04	200 mm	100 mm



TC-G113 Rubber heated pestle

Porselen Kroze / Porcelain Crucible

Model	Kapasite
TC-G117	30 ml
TC-G117-01	30 ml için kapak
TC-G117-02	50 ml
TC-G117-03	50 ml için kapak
TC-G117-04	Platinyum kroze 25 ml
TC-G140	Buchner hunisi



Huni / Funnels, plastik

Model	Kapsite
TC-G135	100 mm
TC-G135-01	140 mm
TC-G135-02	210mm



Kova-Bidon / Bucket-Bottles, plastik

Model	Kapsite
TC-G128	9 lt
TC-G128-01	12 lt
TC-G128-02	15 lt
TC-G121	5 lt



Porselen Pota / Evaporating dishes, porselen

Model	Çap
TC-G114	60 mm
TC-G114-01	80 mm
TC-G114-02	100 mm
TC-G114-03	120 mm
TC-G114-04	160 mm
TC-G114-05	210mm
TC-G114-06	245 mm



Piset / Wash bottles, plastik

Model	Kapsite
TC-G120	100 ml.
TC-G120-01	250 ml.
TC-G120-02	500 ml.
TC-G120-03	1000 ml.



Numune Torbası / Sample Bags, Plastik

Model	Kapsite
TC-G135	100 mm
TC-G135-01	140 mm



Dijital Termometre / Digital Thermometers

Model	Isı Aralığı	Hassasiyet	Çözünürlük	Prop Uzunluk
TC-G150-50	+150 °C	1	0.1	265 mm
TC-G151-50	+300 °C	1	0.1	133 mm
TC-G152-50	+300 °C	1	0.1	1 mt haricli



Cam Termometre / Glass Thermometer

Model	Isı Aralığı	Bölüntü
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Metal Termometre / Bimetal Thermometer

Model	Isı Aralığı	Bölüntü
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