FORE
TESTING EQUIPMENT
MANUFACTURING IND.
And INTERNATIONAL CO.INC.
“Advanced Testing Technologies & R-D”

MOBILE
ROAD & HIGHWAY
Asphalt, Soil And NDT Concrete
RESEARCH LABORATORY

Device / System ORIGINS:
The technologies belongs to Turkey, USA and European Countries…

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MOBILE LABORATORY TESTING SYSTEM

Mobile Laboratory Systems are manufactured to get involved onsite by Fore Testing Equipments Inc. Our mobile labs are designed to allow users to experiment comfortably. The devices which are inside of labs are stored and used safely.

MOBILE LABORATORY – FORE MBL-LAB 01 (MERCEDES SPRINTER 516 BLUE TECH)

Mobile labs are designed to test in distant worksites for soil, water, concrete, and etc. The laboratory which is equipped with the necessary equipments can operate in full capacity independently and efficiently.
MOBILE LABORATORY – FORE MBL-LAB 02 (PANELVAN)

In applications where experiments and/or observations are needed at different points, the panelvan which is with requested equipments is designed and equipped by Fore Testing Equipments Inc. Below are some examples.
The products are delivered to the end user with closed trucks.

MOBILE LABORATORY – FORE MBL-LAB 01 (MERCEDES SPRINTER 516 BLUE TECH)
LABORATORY INTERIOR TECHNICAL EQUIPMENTS

- Bottom side of the left wall of the laboratory furnishes with a cupboard and the top is shelf.
- Interior lighting is provided with 4 accessories from the ceiling.
- The top of counter is resistant to chemicals (20 mm special coating).
- Lower part of the cupboard has 4 drawers.
- There is a material box apparatus inside the cupboard.
- There is an office desk and a chair.
- There are 2 extra stools.
- There is a pure water system.
- There is a sink and a faucet on the counter.
- There are power outlets on the counter and on the work table.
- There is a 100 liters water tank.
- The floor is covered with PVC Laminated Floor Material (8 mm).
- There is a separated cooling and heated air conditioner.
- There are 2 special fire extinguishers.
- There is a mini refrigerator in lower part of the counter.
- There is a first aid kit.
- There is a 5 Kv portable generator and 50 Mt connection cable.
- There is an ambient temperature meter and humidity meter.
- There is a GPS system for vehicle tracking.
Light Weight Deflectometer (LWD) “TERRATEST 5000 BLU” is the most intelligent Light Falling Weight Deflectometer in the world and the world’s first operating via Bluetooth + Android App and voice navigation.

TERRATEST 5000 BLU” revolutionises the testing of soil compaction because it is the world’s first LWD which operates wirelessly. Measurements are transmitted via Bluetooth from load plate to measuring computer, smartphone or tablet. This is a huge advantage on the construction site because the measuring computer does not have to be put directly next to the mechanics. No wire will cross your test procedure anymore.

“TERRATEST 5000 BLU” dynamic plate load test is particularly suitable for the use in foreign countries. Thanks to its wireless operation, repairs of the “Achilles’ heel” of Light Weight Deflectometers, the socket of the load plate, are being avoided. NO CABLE – NO PROBLEM!

As the first manufacturer in the world TERRATEST® offers a smartphone app for the control of their Light Weight Deflectometer. "TERRATEST 5000 BLU" transfers the test data via Bluetooth® from the load plate to a smartphone. The advantage is obvious: during the test the measurement electronics do no longer need to be placed next to the mechanics. Thus, the user has both hands free for the handling of the device. In continuous measuring mode the test is being controlled solely by the LED of the load plate, without having to handle the smartphone. The phone can comfortably remain inside the jacket pocket. Measurements with the smartphone can
be transmitted via email as PDF file in real time to the client or the office. Texts as client, construction site etc. can be entered via the smartphone. Thanks to the camera function of the smartphone it is possible to directly insert pictures of the test point into the protocol.

- World innovation Bluetooth: no cable disturbs your test
- World innovation Android app: control your Light Weight Deflectometer via smartphone or tablet
- World innovation voice navigation: voice instructions guide you through the measuring process
- Weatherproof due to large glass lid
- GPS system with satellite photo illustration
- Integrated printer for immediate printout
- USB flash drive for convenient data transfer to PC
- Internal memory for automatic test storage
- New PC software “TERRATEST 2.0” for analysis and management of results and data
- 1 year manufacturer’s warranty
Asphalt Density – Non-Nuclear Soil Density Gauge Designed For Quality Control of Asphalt Pavement

ASTM D 7930

Non-Nuclear Soil Density Gauge is used for detecting density of Soil specimens with non nuclear type. FR-GL ASD is fully equipped with a touch screen and user friendly graphical menu interface, running Microsoft Windows silently in the background for flawless operation, easy software are upgrades and enhanced user support.

The instruments general specifications are;

Full colour graphics driven interface, 480 x 640 VGA touch screen display with LED backlight for easy visibility.

Displays GPS status, available battery voltage, low battery and date/time,

Rugged case design made from aluminum, powder-coated gloss black with orange reflective vinyl graphics increasing driver awareness to road workers at night

Data Management Feature, quickly access, can be downloaded and deleted project data,

Required files can be downloaded to FR-GL ASD via. USB,

Fast, reliable, accurate, and repeatable in real time, User Friendly, in-process, cost effective tool for any user,

The most important point is; Non-Nuclear means no Badges or Licenses and no storage or transport concerns.

Operational Features

Display: Full color graphics driven user interface, 480x640 VGA touch screen display with LED backlight for easy visibility in daylight or dark situations.
Status Bar: Displays GPS status, Data Save status, battery voltage, low battery and date and time

Project Details: Stores up to 20 projects with details,

Material Details: Stores up to 20 materials, details include Material Name, Description, Max Dry Density, Opt. Moisture, Dry Density Offset, % Moisture Offset, % Greater than 3", % Greater than 3/4", % Gravel, % Sand, % Fines, PL, LL, Cu and Cc

Data Logging: Ability to store all measurements

Reports: Easily download data to be imported into Excel

GPS Control: When activated will display latitude and longitude positions, number of satellites the gauge is connected to as well as the UTC date and time, also available in UTM format. GPS information will store with each measurement when Data Save and GPS feature is enabled, (Status Bar Icon)

Update Software: One touch upload of new software using a USB memory stick

Data Management: Quickly access, download or delete your project data

Set Time & Date: Quick time and date setup, MM/DD/YY and DD/MM/YY formats

Units: Interchangeable settings for Density (kg/m³, lb/ft³), Temp (°C, °F)

Standardization: While gauge is still in the case, a quick one touch measurement will insure the gauge is still in proper working mode
**Vacuum Pyknometer SET**

Large Size Heavy Duty Vacuum Pyknometer (10 lt)
Vacuum Pump, 51 lt/min Capacity, 220-240 V 50-60 Hz, 1ph

**Reflux Extractor Glass 3000 g Capacity**

Reflux Extractor is used in hot coating mixtures and coating samples under the conditions of the bitumen content. Bitumen content is calculated from the difference between sample weight and the agreement weight and moisture content extracted from the detail. The Reflux Extraction Experiment Set is supplied with the following.

- Cylindrical Reflux Extractor Glass
- Reflux Extractor Conical Wire Basket, 2 pcs
- Reflux Extractor Concentrator with connection hoses-Aluminium
- Filter paper pack of 50, Electric heater
Semi Automatic Asphalt Penetrometer

EN 1426; ASTM D5; AASHTO T49 Semi-Automatic Digital Bitumen Penetrometer is used to determine the penetration of bituminous samples under constant load, time and temperature. The Penetrometer consists of a cast iron base with coarse and fine levelling screws, a digital penetration measurement gauge 0.01 mm readability and a penetration timer unit. Start button of the penetration timer unit is used to release the plunger fitted with the needle to start the 5 seconds test.

Semi-Automatic Digital Penetrometer is supplied complete with;

- Penetration Needle, 2.5g, 1 piece
- Transfer Dish, 1 piece
- Sample Cup Ø 55x35 mm

Marshall Stability Testing Machine

EN 12697-34, 12697-23, 12697-12 (Method A); ASTM D1559, D5581, D 6927; AASHTO T24550 kN Capacity Automatic Marshall Stability Test Machine is used to determine the maximum load and flow values of bituminous mixtures. The machine comprises of a robust and compact two column frame with adjustable upper cross beam. The unit is a bench mounted compression frame with motor and worm gear housed within the base unit. The mechanical jack raises the lower platen at a constant speed of 50.8 mm/min as required in the relevant standard. For safety, the up and down travel of the lower platen is limited the use of limit switches. Rapid adjustment of the platen is controlled using the up and down buttons on the front panel of the machine. The measuring system consists of a 50 kN capacity strain gauge load cell fitted to the upper cross beam to read stability values, the 25 x 0.01 mm dial fitted to the Breaking Head.
Water Bath 30 Ltr.

Digital display control.

Stainless steel inside material and isolation cabinet, covering pan.

Temperature range: +3to +95°C., accuracy ± 1°C.Capacity: 30 litres

Asphalt Mixer 5 Liter Capacity With Heater

5 litre capacity Laboratory Mixer is designed for mixing of soil and asphalt samples to be used for mechanical tests such as compaction, indirect tensile, Marshall etc. The mixing head rotates at speeds of 140 to 240 rpm. The user can adjust rotation speed between given values easily by using a control knob fitted to the front panel.

Heating Mantle EN 12697-35The bituminous mixture must be prepared at the prescribed temperature according to the EN standard. For this reason the mixer can be equipped with thermostatically controlled heater.
**Marshall Impact Compactor & Mould (Manuel) Sample Extruder**

ASTM D6926, D5581; AASTHO T245, BS-598 Marshall Manual Assemblies are used to prepare Marshall specimens manually. The Compaction Assemblies consist of a Marshall Compaction Hammer and a Wooden Compaction Pedestal. The Pedestals are supplied complete with a steel plate, a mould holder and a hammer guide. This version of Marshall compactor is for compacting specimens by hand and consists of a wooden compaction pedestal, a support rod to hold the hammer in a perpendicular position, a compaction hammer and mould holder.

**Asphalt Core Drilling Machine on Trailer**

EN 12697-27, ASTM D 536

Portable Drilling Machine is designed to cut cores up to 150 mm diameter from concrete, asphalt and similar hard construction materials.

The machine comprises a vertical support column which carries the drill head/motor assembly. The motor assembly comprises a 6.5 hp petrol engine.

A ball screw mechanism enables close control of the drilling pressure and rapid return when drilling is completed. A water spraying assembly is mounted on the machine. The drilling machine is installed in a trailer for fast and precise sampling on-site. 100 litre water tank provides continuous lubrication during drilling to save time.

The two-wheeler taut liner trailer is fully equipped with brake lamps/hazard lashers/retro reflectors conforming to road traffic regulations.
Ring and Ball Test Sets

Hot plate with magnetic stirrer which works conforming to EN and ASTM standards. The hot plates include an immersion type temperature sensor with its holder and a stirring bar. The hot plates which are supplied with an immersion type temperature sensor with its holder and a stirring bar should be ordered separately. Two Rings Assembly for Ring and Ball Test, ENDigital Hot Plate with Magnetic Stirrer Glass Griffin Beaker, 800 ml Glass Thermometer Max. 110°C Glass Thermometer Max. 250°C

Solubility Test Set for Bitumen Bituminous Binders

Solubility Test Set for bitumen and bituminous binders, EN. Consist of a filter flask, a sintered glass crucible, a funnel, 100g powdered glass, a rubber ring and a rubber stopper. Solubility Test Set for Bitumen and Bituminous Binders
Cleveland Flash Tester

EN 22592; ASTM D92. Cleveland Flash Tester is used for determining the flash and fire point of petroleum products. It consists of a brass cup mounted on an electric heater with a temperature controller and a thermometer (-6 C to +40 C). Conforming to the CE European

Digital Plate Load Test Comp. Set 30 Ton

Used to determine the bearing capacity of soil layers in road constructions, foundations, highways, airport and subgrades and sub-layers of soil. Includes a hydraulic loading device, digital indicator, a manual pump, datum bar, dial holder and two dial indicators. The equipment is used to determine the bearing capacity of soil layers in road constructions, foundations, highways, airport and subgrades and sub-layers of soil. Hydraulic Loading, Dial Manometer, Manuel Pump, Set of Plates (2ea) 30 cm and 45 cm diameter Datum digital Holder (3ea), Dial 0,01 mm (3ea)

Liquid Limit Set Manual

Liquid Limit Apparatus (Casagrande) are used to determine the moisture content at which clay soils pass from plastic to liquid state.

The Devices consist of an adjustable crank and cam mechanism, a blow counter and a removable brass cup fitted on the base.
**Plastic Limit Set**

Plate: Dimensions 300x300x10 mm. // Rod, 3 mm dia. // Mixing dish: 120 mm dia. // Flexible spatula, blade - 100 mm. // Moisture tins, 55x30 mm; qty – 6 pcs

**Shrinkage Limit Test Set**

ASTM D427; AASHTO T92; UNE 103-108; UNI 10014. When the water content of a fine-grained cohesive soil is reduced below the plastic limit, shrinkage of the soil mass continues until the shrinkage limit is reached. This method of test covers the determination of the shrinkage limit, shrinkage ratio, volumetric shrinkage and linear shrinkage.

Prong Plate Moisture Content Tin with Lid, aluminum, Ø:45 mm h:10 mm, 2 pcs. Moisture Content Tin with Lid, aluminum, Ø:55 mm h:35 mm. Porcelain Dish, 120 mm dia. Spatula, 100 mm Graduated Glass Cylinder, 25 ml

**Dynamic Cone Penetrometer**

Dynamic Cone Penetrometer is used for the rapid, in situ measurement of structural properties of existing road pavement constructed with unbound materials. The design of the DCP is similar to that described by Kleyn, Maree and Savage (1982); it incorporates an 8 kg weight dropping through a height of 575 mm and 60° cone having a diameter of 20 mm. With the standard DCP measurements can be made down to a depth of approximately 850 mm or when extension shafts are used to a recommended maximum depth of 2 m. A hammer assembly, Penetration rod, 2 piece 60° cone, Metal plate coupling for ruler, Segmented adaptor for extension rods, Segmented upper extension rod.
Aquaprobe™ Advanced Microwave Soil Moisture Meter For Professional Use

A microwave meter for rapid determination of moisture content in different types of soils.

- Highway and Road Contractors..Geotechnical Engineering
- Foundation Engineering.Earth Moving Works

The James Aquaprobe™ represents a break-through in modern moisture measurement technology. By utilizing the latest microwave and microprocessor technology, the Aquaprobe™ can determine the soil moisture content of different types of soils and other fine aggregate. Simply insert the five prongs in the soil to be measured and review the percentage moisture on display. A special guide is supplied to assist the user with inserting the prongs in particularly dense soil. The Aquaprobe™ Microwave Soil Moisture Meter uses a five prong sensor to measure the complex dielectric constant of the material encompassed by the outer four prongs. As the dielectric constant of water is four to eight times greater than most natural soil types, changes in water content directly affect the sensor output. This output is then converted by the integrated microprocessor and moisture content is displayed directly as a percentage of dry weight. An average of five to ten readings is normally taken in order to ensure a valid reading, especially as water does not distribute itself evenly for many types of materials.

- Fast and easy to use.No hazardous chemicals.

The basic unit comes pre-calibrated for Lean Clay, Silt, Sand (Ottawa Sand and SP sand) and general type of Silty Sandy soil. These soils represent the most commonly found types. This makes the basic unit the economical choice when evaluating soil moisture levels. The complete system includes equipment to create custom calibration curves for different types of soil. The instrument can be programmed with up to ten different materials by the user. For highest accuracy, the unit should be programmed for the material being tested. Simple to use Windows™ software is provided for calibrating the unit to the various materials. Finally, the Aquaprobe™ instrumentation unit can store over 150 readings. Storage is complete with the time and date for future reference.
**Aggrameter® For instantaneous determination of the moisture content of sand, fine aggregate and coarse aggregate using a unique microwave sensor**

For instantaneous determination of the moisture content of sand, fine aggregate and coarse aggregate using a unique microwave sensor

A Microwave meter for rapid determination of moisture content in sand and other fine and coarse aggregates. The Aggrameter® T-T-100 utilizes the latest microwave and microprocessor technology to measure moisture content in various fine and coarse-grained materials. The prongs of the probe are inserted into the material to be tested and the percentage of moisture content is instantaneously shown on the easy to read display. An average of five to ten readings is normally taken in order to ensure a valid result. This output is converted by the integrated microprocessor and the moisture content is displayed directly as a percentage of dry weight. The Aggrameter® comes calibrated for both sand and aggregate, and can be programmed by the user with up to ten different materials. The maximum aggregate particle size to be tested is

The Aggrameter® can store more than 150 readings - complete with time and date for future reference. Data can be recalled via USB interface to a personal computer. Fast and easy to use; simply insert the prongs into the sand or aggregate being tested. Accurate & Instantaneous. Extension Pole for Less Fatigue. Completely Portable. Customizable for Different Materials. Easy to Read Display

The Aggralinx® software will allow connection of the instrument to a Windows 7, 8 or 10 personal computer. All the data stored by the unit can be uploaded to the personal computer for inclusion in quality control reports or any other form for later analysis. The software will also allow the user to ‘customize’ the Aggrameter® to a specific material. This will dramatically increase the accuracy of the unit.

**Note:** The T-T-100 Aggrameter® is for use only with sand and aggregates, for soils please review the Aquaprobe
**Densimeter Penetration Static Action**

Densitometer B-1 is intended for the operational control of the degree of compaction (compaction coefficient) of soils during the construction of road and rail roads, airfields and other soil structures. Densitometer is used to measure the degree of compaction of sandy and clay soils with no more than 15% of inclusions larger than 10 mm in them and with soil moisture permitted by SNNIP 2.05.02 "Roads". The device provides reliable measurements that meet the requirements of SNN 3.06.03 "Roads", in the 0.9-1.0 range from the maximum standard density, determined according to GOST 22733 "Soils. The method of laboratory determination of maximum density

**Sample Ring Kit Model C, Ø 53 mm**

Soil sampling above groundwater table

- Soil sampling below groundwater table
- Soil physical laboratory research
- pF determination in the lab
- Laboratory soil density measurements
- Undisturbed sampling

Connection: Screwthread – Maximum sample depth: 2 m. Sample diameter: 50 mm – Sample length: 5 cm. Sample specification: Undisturbed – Sample stored in: Ring. Package size: 117 x 27 x 23 cm – Weight: 20 kg
The most advanced ultra-sonic test system for accurately identifying basic characteristics of coarse grained materials such as concrete, wood, masonry, ceramic, graphite and more. S-wave velocity. The unit can also calculate modulus of elasticity of material using.

Locate Honey Combs and Voids in Concrete,

- Locate Cracks in Concrete, Ceramics, Masonry or Stone,
- Determine Fire Damage Extent in Concrete or Masonry,
- Crack Depth Determination,
- Determining Young's Modulus (with optional Shear Wave Transducers),
- Find Hidden Areas of Rotting Wood.

Features & Benefits

- System has a direct digital read-out of transit time, and read out of wave form on daylight display, back lit LCD and light weight with both rechargeable battery and standard A-C power.
- Includes a signal and trigger output for use with external oscilloscope or other data input device. Digital calibration means no special bar required. Trigger levels and signal amplification can be digitally adjusted.
- Conforms to ASTM C-597, BS 1881-203 and other international standards.
- USB interface for computer control. Veelinx™ software allows complete control of the
system as well as data upload to a PC and data analysis. Direct reading of calculated P-wave velocity and S-wave velocity. A large range of Accessory and Ultrasonic Transducers available. Standard Transducers available from 24KHz to 500 KHz enable the unit to test ceramics, graphite, mass concrete pores, and wood. Exponential Transducers for rough surfaces, as well as underwater transducers are also available. Finally a Pre-Amplifier is available for help with long distances or highly attenuative materials.

Concrete: The V-Meter MK IV™ is widely used and accepted for quality control and inspection of concrete. It can measure and correlate concrete strength to standard strength measurement, permitting non-destructive testing of complete structures. It will identify honeycombs, voids, frozen concrete, cracks and other non-homogenous conditions in concrete. Ultrasonic testing can be applied to new and old structures, slabs, columns, walls, fire damaged areas, hydroelectric structures, pipe, prefab and pre-stressed beams, cylinders and other concrete forms. A wide range of transducers are available. The instrument has an easy to view display (320 by 240 pixels). The backlight for daylight use, makes field work easier and faster, since the operator can identify good results in seconds without the problems related with the sun light reflection on the screen. The signals can be recorded in the instrument for review on the screen or for transfer to a PC. Typically, the 54 KHZ transducers are used for concrete testing - the signal wavelength is about 75mm (3 inches). Finer materials require higher frequencies for optimum resolution. The basic V-Meter MK IV™ contains a transmitter, a receiver and a very accurate high speed electronic clock. The transmitter generates an electrical pulse which when applied to a transmitting transducer, converts the electrical energy into a pulse of ultrasonic mechanical vibration. This vibration is coupled with the specimen under test by placing the transducer in contact with the specimen. At another selected point on the specimen another receiving transducer is coupled by mechanical contact. Each transmitted pulse of energy registers on the high speed clock. The first energy wave reaching the receiving transducer is converted back to an electrical signal and turns off the clock. The elapsed time is displayed on the LCD in 0.1 microsecond increments. The unit can also display and store the resulting waveform. This ensures the operator that a proper acoustic contact has been made with the surface of the material under test.
Rebarscope® Advanced System for Rebar Location and Bar Size Determination with Special Scan Cart

The James Rebarscope® is the digital version of a classic rebar locator, rebar finder which enables the user to not only locate reinforcement bars but also determine rebar depth and the rebar size. The Rebarscope® rebar locator is also capable of locating non ferrous metals as well such as copper, aluminium, some stainless steels, wire, and more.

- Structural Engineers..Rebar Mapping  Rebar Network Analysis  Utility Mapping
  Eddy current sensor design for greater accuracy with built in temperature compensation, no need to zero the sensor.

- Single sensor for all depth ranges…Separate sensor and main instrumentation unit to scan difficult to access area's.Locates rebar, post tension cable, conduit,and copper pipe…Rugged and splash resistant case. Daylight visible display.. Scan Cart logs distance data as well as the location of rebar.

- Locates up to 8" (200 mm) deep. Determines bar size up to 4.5" (115 mm) deep.

- Conforms to ACI 318, BS 1881 Part 204, DIN 1045, CP 110, EC 2, SIA< 162, DGZfP B2.
James Instruments™ digital test hammers are an advanced, completely automated system for estimating concrete compressive strength. Its calculation, memory and recording functions allow for quick, easy and accurate test results. Discard values for multiple test results can be set; the mean, median and compressive strength can also be calculated. The addition of modern microprocessor technology allows the data to be stored, printed and transferred to a personal computer for further analysis, or inclusion in your reports. The unit comes with an integrated alpha-numeric digital display, and control panel. You can switch between standard or metric units. The field printer mounts on the belt for ease of use. USB Connection to a personal computer is via the USB interface. The concrete rebound hammer is an instrument which is easy to use, for quick and approximate measurement of the resistance to pressure of manufactured concrete products. The principles on which it works are based on the rebound impact of a hammer on a piston which rests against the surface of the concrete under test: the greater resistance of the concrete, the greater the rebound impact. By reading this rebound impact on a scale and relating it to curves on graphs supplied with the instrument, the resistance to compression in MPa or PSI can be found. The test hammer may be used for nondestructive control on cement during the normal construction of factories and bridges. The test makes it possible to learn the strength of impact, which depends on the resistance of the agglomerate in the absence of large inert lumps or clusters of sand or gravel. From the force of the impact the resistance of the agglomerate surface can be deduced and subsequently the resistance of the concrete. With the aid of the test hammer the quality of the concrete in every part of a construction can quickly be examined, and in this time the hardening of the various castings can be followed.

- Display: 2x16 inch
- Construction: All Aluminum for rugged construction environment
- Operating Temperature: 0° to 50° C (32° to 122° F)
The James Bond Tester™ MK III or pull off adhesion test measures the bond strength or tensile strength of concrete, asphalt, tile, concrete repair, or other overlay material by the direct tension or pull off method. By pulling a 50 mm (2 inch) steel disk attached to the material under the unit can, measure the near surface strength of a substrate in order to determine the substrates quality before applying an overlay. Determine the bond strength of a repair or overlay material after it is applied to the substrate. Determine the tensile strength of a repair, overlay or adhesive after the material is applied to the surface. Each System comes with 10, 50mm (2 inch) stainless steel disks. Accurate bond strength of repair mortars, epoxy resins, laminates, overlays, and other coatings. Calibrated gauge with maximum load indicator, mechanical damping. Ball Joint Design for rapid testing as well as assuring direct tensile loading. Adjustable alignment plate with built in leveling facility for both vertical and horizontal pulls. ISO 4624 Paints and varnishes -- Pull-off test for adhesion.


Adequate direct tensile strength between two layers is important if repairs to concrete structures or additional overlays on existing concrete are to be structurally sound. The James Bond Tester™ MK III involves bonding a circular steel disk to the surface by means of an epoxy resin adhesive. A controlled tensile force is then applied to the disk and failure will occur at the weakest point: either in the host material, or in the bond between overlay and host material.

Maximum Load Indicator
Mechanical Damping to Minimize Test Error

Alignment Plate showing both horizontal and vertical levels

Alignment plate showing vertical level detail
FR-GL 128 Prof. pH Test Kit

pH Meter (Bench Type with Heat Probe and Stand)

Bench type pH meter which is designed for quality control laboratory areas contains a large LCD and status reporting. It has all the features of technology. The user interface can be managed quite easily. In the range of ion concentration and mV, it adds measurement for Oxidation-Reduction Potential (ORP). For this tool there is also a reading stability indicator used during the calibration and measurement memory / memory recall function. The pH measurements for both instruments are compensated by the temperature probe, either manually or automatically. This meter is equipped with an easy-to-read LCD that shows both primary reading and °C. 0 to 50 °C (32 °F 122); RH max 95%.
Moisture analyzers are measuring devices specially designed for determination of moisture content of relatively small samples of various materials. Moisture content is measured with accuracy 0.01% (0.001% for samples up to 1.5g). Maximal drying temperature equals 160 degree C. Each moisture analyzer is equipped with aluminum weighing pan with dimensions ø 90mm. With a moisture analyzer and a special set it is possible to test permeability of water vapor through samples of different materials. 4 drying modes (standard, quick, step, mild).

Easy operation with backlit LCD display
Drying profiles (standard, moderate, step, fast)
End mode (manual, moisture stabilization, automatic, time defined
GLP / GMP outputs and reports
Standard and non-standard applications
Optimization study for halogen lamp mode
The maximum capacity is 50 g / 1 mg. Maximum drying temperature 160 °C (Humidity detector option up to 250 °C is available).

The moisture analyzer is equipped with an aluminum pan of ø 90mm diameter. It has the feature of determining the water vapor permeability with the specially designed kit.
Mobile Air Compressor – 25 Liter

5 KW Generator

Laptop

Colour Laser Printer

Air-Conditioner

Fire Alarm

Fire Extinguisher

Digital Balances Rechargeable 6kg-0,1g & 3kg-0,01g

Assembly Prof. Tool Set
Psychrometric Hygrometer  Digital Thermometer  Electronic Caliper

HILTI AG 125-A22 Angle Grinder  HILTI Rotary Hammer – TE 2
GRANULOMETRIC STRUCTURE OF SOIL

FR-GL107 Sieve Shaker

TS EN 932-5; ISO 565, 3310-1, 3310-2; ASTM E11, 323

The sieve shaker is frequency adjustable. The Sieve Shaker has a very effective clamping mechanism that allows the sieves to be firmly attached and removed and replaced quickly without overloading. The sieve time can be set up to 60 minutes. The Sieve Shaker is specially designed to operate at maximum sieve loading quantities specified in the relevant standards without loss of performance.

FR-GL 102 Sieve Set

ISO 3310-1 Woven Wire Cloth Sieves **Sieve Sizes: 20 cm x 5 cm, 30 cm x 7.5 cm**

125 mm, 100 mm (4"), 90 mm (3 ½"), 80 mm, 75 mm (3”), 63 mm (2 ¼”), 56 mm, 53 mm (2.12”), 50 mm (2”), 45 mm (1 ¾”), 40 mm, 37.5 mm (1-½”), 31.5 mm (1 ¼”), 26.5 mm (1.06”), 25 mm (1”), 22.4 mm (7/8”), 20 mm, 19 mm (¾”), 16 mm (5/8”), 13.2 mm (.530”), 12.5 mm (½”), 11.2 mm (7/16”), 10 mm, 9.5 mm (3/8”), 8 mm (5/16”), 6.7 mm (.265”), 6.3 mm (¼”), 5.6 mm (No. 3 ½), 5 mm, 4.75 mm (No.4), 4 mm (No.5), 3.35 mm (No. 6), 3.15 mm, 2.8 mm (No. 7), 2.5 mm, 2.36 mm (No.8), 2 mm (No.10), 1.7 mm (No. 12), 1.6 mm, 1.4 mm (No. 14), 1.25 mm, 1.18 mm (No.16), 1 mm (No. 18), 850 μm (No. 20), 800 μm, 710 μm (No. 25), 630 μm, 600 μm (No. 30), 500 μm (No. 35), 425 μm (No. 40), 400 μm, 355 μm (No. 45), 315 μm, 300 μm (No. 50), 250 μm (No. 60), 212 μm (No. 70), 200 μm, 180 μm (No. 80), 160 μm, 150 μm (No. 100), 125 μm (No. 120), 106 μm (No. 140), 100 μm, 90 μm (No. 170), 80 μm, 75 μm (No. 200), 63 μm (No. 230),
FR-Ö 87 Accessory Parts
- Tray (Stainless Steel)
- Specimen Scoop
- Brush
- Wire Brush
- Plastic Specimen Box

FR-GL 112 Soil Drying Oven
Digital soil drying oven with digital controlled and fan
Capacity: 50 liter, 200 °C
Interior Sizes: 50x50x50 cm
Steel Shelf: 2 pieces stainless steel

FR-GL Plastic Graduated Cylinders
1000 CC, 500 CC, 250 CC, 100 CC, 50 CC

FR-GL Plastic Beaker Kit
1000 CC, 500 CC, 250 CC, 100 CC, 50 CC

FR-GL Volumetric Flasks
1000 CC, 500 CC, 250 CC, 100 CC, 50 CC

FR-GL Digital Stopwatch
FR-GL Tin Containers
FR-GL Sampling Consumables
FR-GL Lyster Sacks
FR-GL Hot Plate
Reference Colours Glasses Set / Pocket Dial Penetrometer / Pocket pH Meter

EN 1744-1; ASTM C40

- 500 mL or 1000 mL Cylindrical Glass Bottle is used for determination of organic impurities as required in the EN standard.
- The Pocket Dial Penetrometer is ideal instruments to determine the penetration resistance of cohesive soil, especially when various range measurements are required. The Pocket Dial Penetrometer has 60 mm dial diameter and designed with Peak Hold Feature.
- Including pH 3, pH 7, and pH 14 solutions.