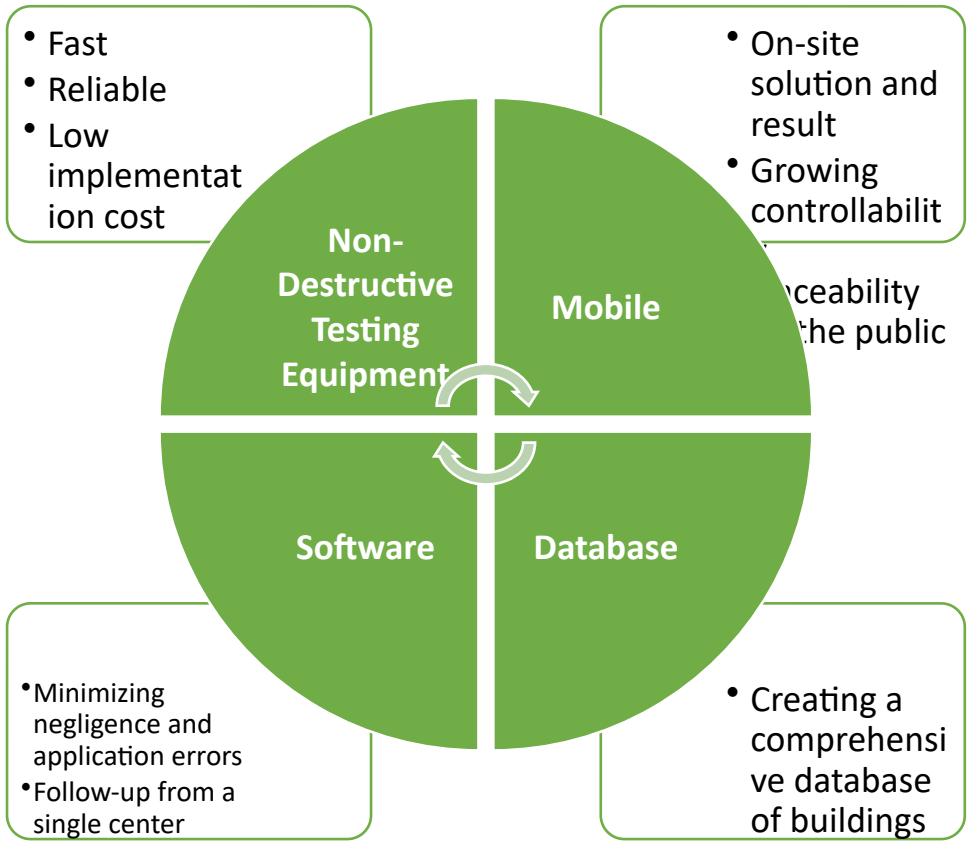
FORE CO.

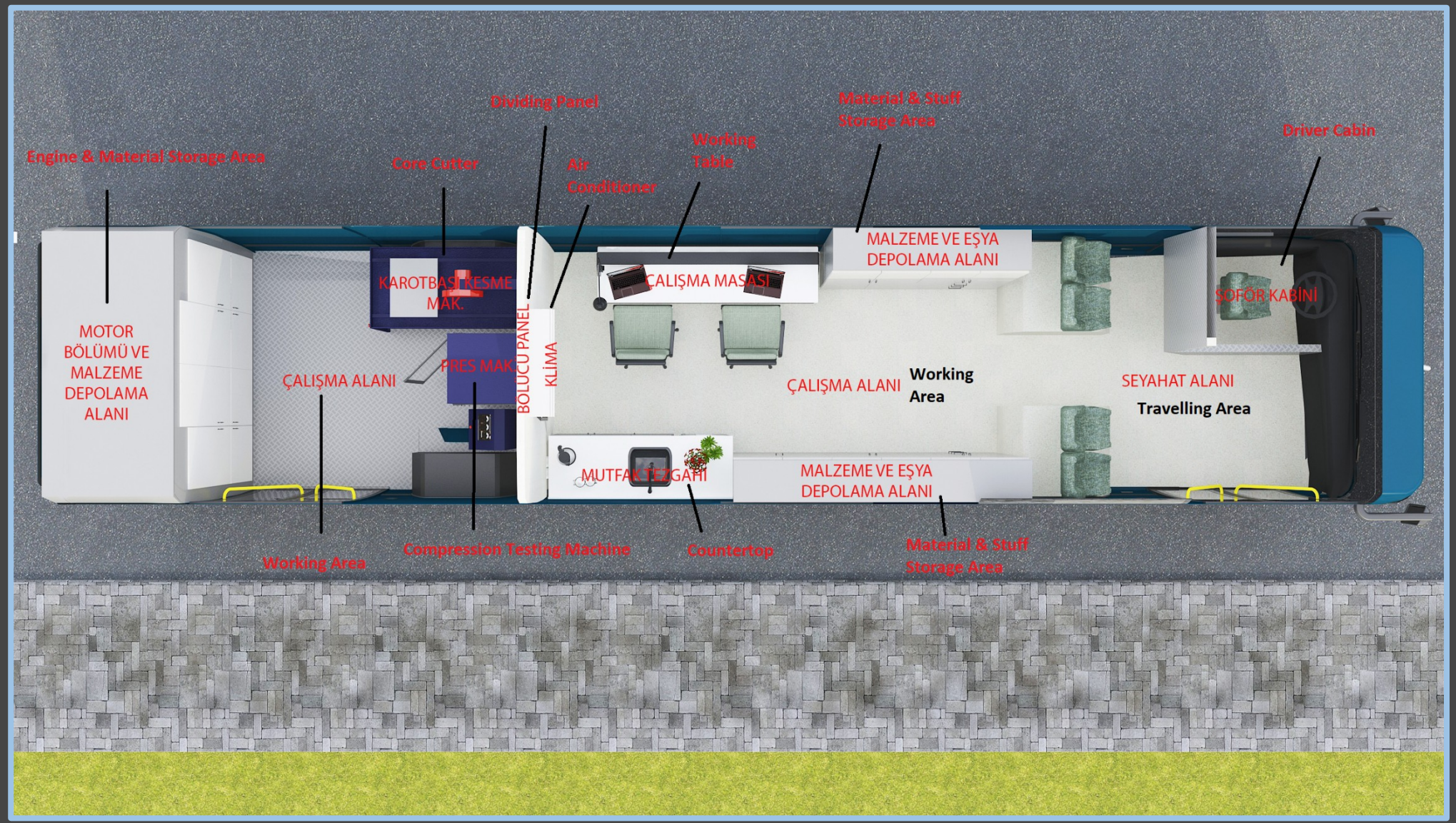
Mobile Concrete and Construction Non-Destructive-Cement Test Laboratory Project For Performance Analysis

Recommended Project Model

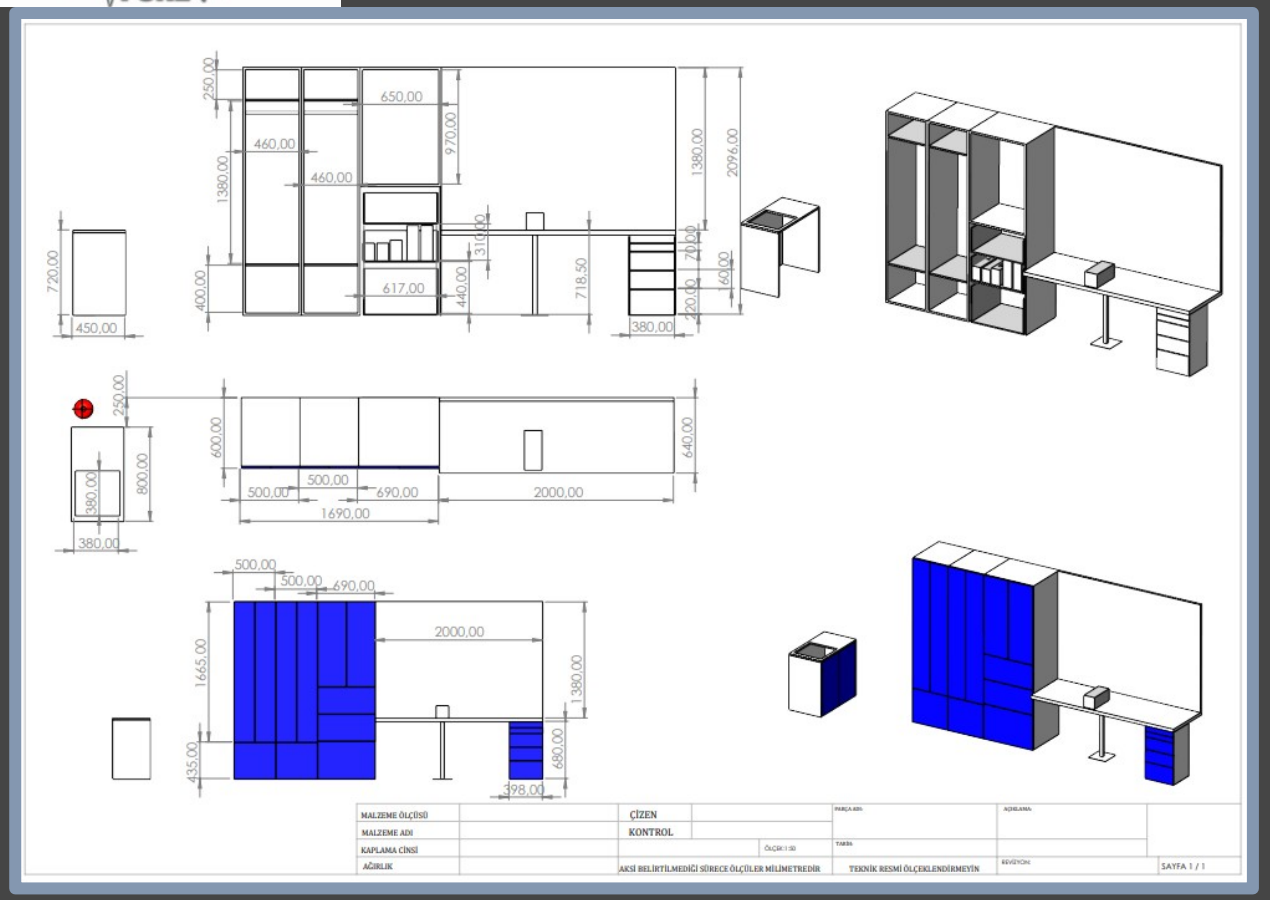


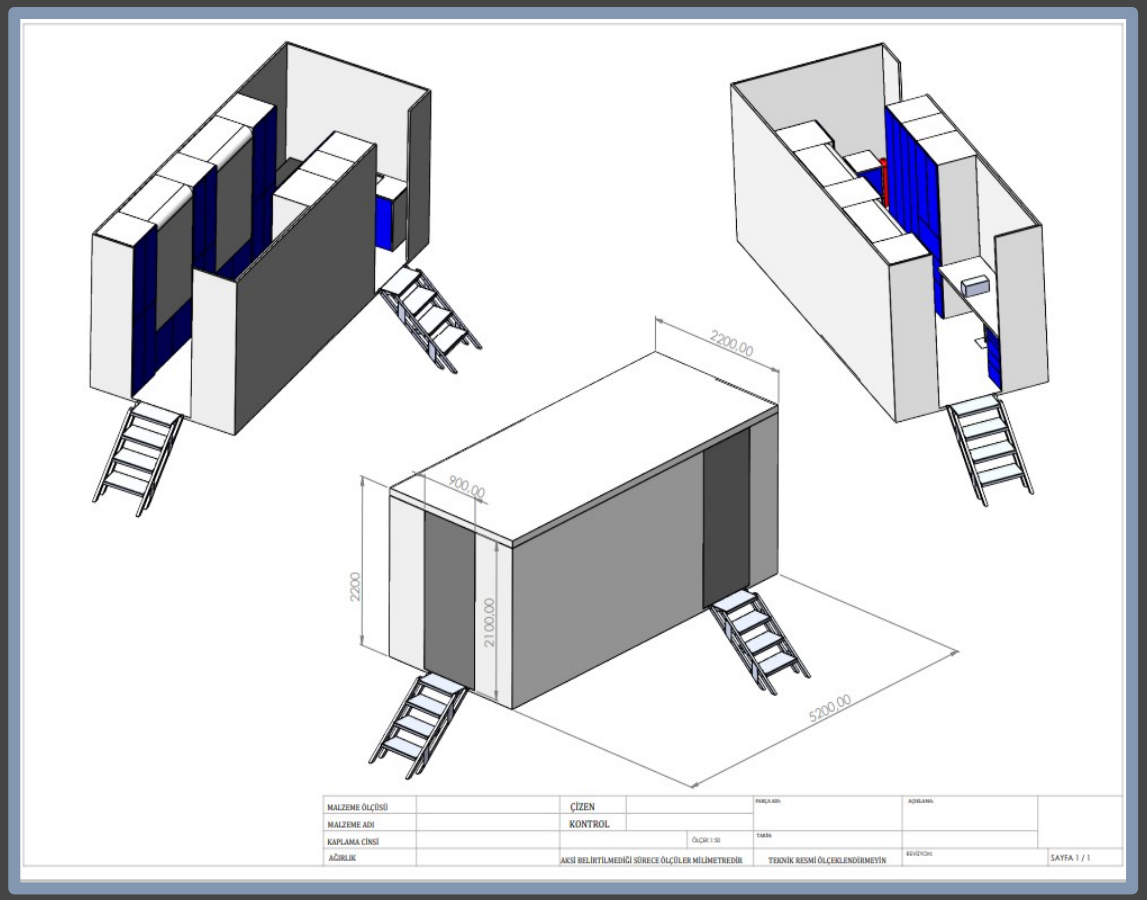
Mobile Concrete and Non-Destructive,Cement, Test Laboratory

- **Mobile Concrete and Non-Destructive Test Laboratories are designed for easy on-site intervention and immediate solution. In addition, in our mobile laboratories, users are provided with an environment where they can safely store the devices used in the laboratory and make tests easily.**



The plan of the mobile caravan shown above is an example; the final decision will be made according to the mutually agreed project.





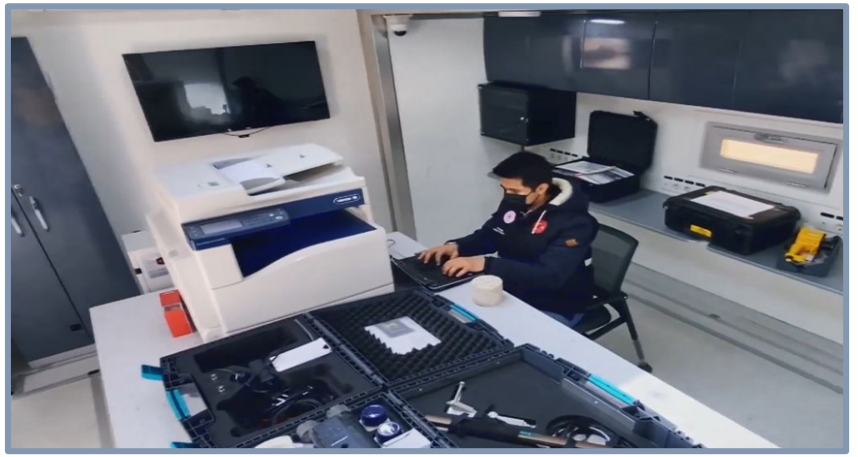
The plan of the mobile caravan shown above is an example; the final decision will be made according to the mutually agreed project.

Mobile Laboratory

- The ability to provide fast and transparent service on-site
- Instant information transfer and efficient working opportunity with computer, software, hardware and basis
- The perception of trust in the public by providing visibility in the work carried out
- Traceability of the mobile laboratory

Support and Database Activities

- Collection of measurements / results without neglect, error
- Viewing and tracking the collected results live in a single center
- Instant tracking of project progress
- Recording the status and data of the tested and controlled structures and making them accessible to the public if deemed appropriate
- Creating inventory by doing database activities in buildings



Project Implementation Request

- Pilot study based on the area where the mobile non-destructive test laboratory is used in field measurements to be made in earthquake performance analysis
- Making technical / time / cost comparisons with similar field-based studies using destructive methods
- Dissemination of mobile non-destructive methods, which are observed to be more reliable, faster and less costly, in earthquake investigation of public buildings throughout the country, primarily in Country

Non-Destructive Building Test Systems

- In Turkey, one of the destructive test methods which is called as core sampling test method give a huge damage to the load bearings (column, beam, slab, etc.) in reinforced concrete buildings. Core sampling test method creates a serious problem in bearing elements that are very tightly reinforced. Smaller diameter core samples are taken by decreasing the core diameter in the load bearing elements with very dense reinforcement. However, this time the sampling disturbance is increasing. Meanwhile, the accuracy of the compressive strength results also reduce. For the accuracy of the results in small diameter cores, the number of core samples should increase. For this reason, it is very important to apply non-destructive test methods in reinforced concrete buildings.

Non-Destructive Devices

- 2 Windsor® Probe – For in-place strength testing of normal and high performance concrete
- 2 V-Meter MK IV™ - Ultrasonic pulse velocity system for finding voidsand cracks, and determining other material properties
- 1 Windsor® Pin Test System For Strength Test of Concrete, Brick and MortarFeatures Special Chuck for Mortar Joints
- **2 -James Bond Test ™**For Testing Tensile Strength of Overlays, and Overlayments

  1- Rebarscope® - Advanced system for rebar location and bar size determination
- 4 Manual Test Hammer - For the quick and easy determination of the strength of concrete

2-Windsor® Probe

- Measures the compressive strength of concrete accurately and effectively, on-site in the field. The Windsor® HP Probe system rapidly and accurately determines the concrete compressive strength of a structure by driving a probe into the concrete with a known amount of force. Improved and enhanced over thirty years, this modern system is capable of measuring concrete with a maximum compressive strength of 17,000 PSI (110MPA). It has been ruggedized for use in the construction environment, yet refined to provide the user with a simpler system to operate. An electronic measuring unit has been added to help ensure proper test results which can be recorded for later review or uploading to a personal computer. **ASTM C-803, ACI 228.1R-03, ACI 228.2R-98, ANSI A.10-3, BS 1881 Section 207, and TS 13537 standards**

T.C.Ministry of Environment and Urbanisation Staff in Elazığ &Maraş European University of Lefke in Cyprus

Windsor® Probe Testing Training

Department of Earthquake Risk Management and Urban Improvement

1-Windsor® Pin System™

- **Windsor® Pin Test System**
- For Strength Testing of Concrete, Brick and Mortar
- Features Special Chuck for Mortar Joints
- Hardened Steel Pins for Windsor® Pin System
- Free Shipping
- A unique instrument for measuring the strength of new or existing concrete, mortar and other construction materials in the field utilizing the established principle of resistance to penetration. A unique chuck allows testing of mortar joints compressive strength in the field. **Conforms to ASTM C-803.**

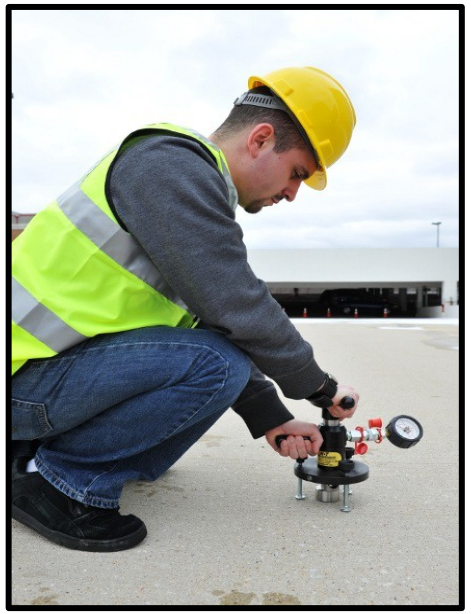
2-Bond Test System™

- James Bond Test™James Bond Test™ MK IV in use on Concrete
- The James Bond Tester™ MK IV 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

The James Bond Tester™ MK IV has been successfully used to verify the quality of existing materials, determine the adhesion strength of shotcrete, tile, epoxies, paint and other repair materials or coatings. **ASTM Standard 1583-13**



2-V Meter MK IV™

- 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. **ISO 4624, EN 1015-12, EN 1348, BS 1881 Section 207, ASTM C-1583, ASTM D-4541, ACI 548-30, DIN 1048 Section 2, and ASTM D-7234 standard**

1-Rebarscope®Ferroscan

- 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.

Manual Test Hammer

- The W-M-250 Manual Test Hammer is the traditional in- strument used for the non-destructive testing of hardened concrete. This easy-to-use instrument provides a quick and simple test for obtaining an immediate indication of con- crete strength in various parts of a structure. The minimum verifiable strength is 1400 PSI (10 MPa) to approximately 9000 PSI (62 MPa). All concrete test hammers measure the surface hardness of the material they are testing; this is then correlated to concrete compressive strength.

Destructive Devices

- **2000 kN Automatic Compression Testing Machine**
- **Core Cutter**
- **Core Drilling Machine**
- **Extra test lab.equipment**

MOBILE laboratory

PROFESSIONAL FIELD USE SUPPORT SET

3 Profos. Heavy-duty, wheeled, special Pelican transport set suitable for harsh field conditions. 2 tablets for heavy field conditions. 1 x 2.2 kW silent Honda generator. 1 x Bosch cordless breaker and drill set. 1 x Bosch cordless cutting tool. 2 x cordless special projectors. 1 x portable ladder. 1 x special first aid kit. 1 Prof.120 piece special tool kit. 1 sensor installation kit bag. 2 sets (helmet-safety goggles-earmuffs-gloves) 1 special metal fuel tank. 1 set of safety warning accessories.

International Technical Standards

ULUSLARARASI VE TÜRKİYE TAHRIBATSIZ TEST STANDARTLARI	GENEL AÇIKLAMA BAŞLIK	ULUSLAR ARASI DİĞER KARŞILIKLAR	ICS KOD
TS 12504-4	Beton deneyleri - Bölüm 4: Ultrasonik atımlı dalga hızının tayini Bu standard, ultrasonik boyuna dalga atımlarının sertleşmiş beton içindeki ilerleme hızının tayini için kullanılan bir yöntemi kapsar. Bu yöntem çok çeşitli amaçlarla kullanılmaktadır.	EN 12504-4	91.100.30 Beton ve Beton Ürünleri
TS 13537	Sertleşmiş betonun batma direncinin tayini için deney yöntemi...Bu standard, sertleşmiş betonun batma direncinin bir çelik sonda veya pimle tayini ile ilgili deney yöntemini kapsar.	ASTM C803:2003 ACI 228.1R-2003 BS 1881-201:1986 BS 1881-207:1992	91.100.30 Beton ve Beton Ürünleri
TS 13539	Darbe-Yankı yöntemi kullanarak beton tabaka kalınlığı ve p-Dalgası hızının ölçümü için standard deney yöntemi.Bu standard, darbe-yankı yöntemi kullanarak beton döşemeler, kaplamalar, köprü tabliyeleri, duvarlar veya diğer plak benzeri yapıların kalınlıklarının tayini işlemini kapsar.	ASTM C1383:2010	91.100.30 Beton ve Beton Ürünleri
EN 1015-12:	Kagir harcı- Deney metotları- Sertleşmiş sıva ve örgü harcının alt tabakaya yapışma dayanımının tayini.Methods of test of mortar for masory- Part 12: Determination of adhesive strength of hardened rendering and plastering mortars on substrates. Kapsam :Bu standard, sıva ve örgü harçları ile alt tabaka arasındaki yapışma dayanımının tayini metodunu kapsar.	EN 1015-12:2000 EQV--; BS EN 1015-12:2000	91.100.10 Çimento, Kireç, Harç
EN 1348	Çimentolu yapıştırıcılarda çekme yapışma mukavemetinin tayini.Adhesives for tiles-Determination of tensile adhsion strength for cementitious adhesives Bu standard, çimentolu yapıştırıcılarının çekme yapışma mukavementinin tayininde kullanılacak deney metodunu kapsar. Kapsam (İng) :This standard specifies a method for the determination of tensile adhesion strength of cemetitious ceramic tile adhesives	EN 1348.1997--; DIN EN 1348:97, EQV--; EN 1348.1997-	83.180 Yapıştırıcılar; 91.100.10 Çimento, Kireç, Harç; 91.100.50 Bağlayıcılar,
BS 1881-207	Testing concrete — Part 207: Recommendations for the assessment of concrete strength by near-to-surface tests.Dahili kırılma, çekme, çekme, penetrasyon direnci, kopma testleri ve sonuçların kullanımı için prosedürler..Beton yüzeyinin yüzeye yakın testlerle değerlendirilmesi için öneriler	ASTM C1383:2010	91.100.30 Beton ve Beton Ürünleri

ASTM D4541 - 17	Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers..Taşınabilir Yapışma Test Cihazları Kullanarak Kaplamaların Çekme Dayanımı için Standart Test Yöntemi		91.100.30 Beton ve Beton Ürünleri
ASTM D7234-12	Standard Test Method For Pull-Off Adhesion Strength Of Coatings On Concrete Using Portable Pull-Off Adhesion Testers..Taşınabilir Pull-Off Yapışma Test Cihazları Kullanarak Beton Kaplamaların Yapışma Dayanımı İçin Standart Test Yöntemi		91.100.30 Beton ve Beton Ürünleri
BS 1881-204:1988	Testing concrete. Recommendations on the use of electromagnetic covermeters..Beton testi Elektromanyetik tarama kullanımı ve kullanımıyla ilgili öneriler..Ferrous metals, Reinforced concrete, Calibration, Electromagnetic induction, Test equipment, Concretes, Detectors, Electromagnetically-operated devices, Reinforcement, Meters, Thickness measurement, Testing conditions, Measuring instruments	BS 1881:Part 201, BS 6100:Part 6	91.100.30 Beton ve Beton Ürünleri
ASTM C803 / C803M	Standard Test Method for Penetration Resistance of Hardened Concrete..Sertleşmiş betonun batma direncinin tayini için deney yöntemi.		91.100.30 Beton ve Beton Ürünleri

ASTM D7234 - 12 ASTM D7234 - 05	Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers.Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers		91.100.30 Beton ve Beton Ürünleri
BS EN 12504 - 4:2004	Testing concrete in structures - Part 4: Determination of ultrasonic pulse velocity..Beton deneyleri - Bölüm 4: Ultrasonik atımlı dalga hızının tayiniBu standard, ultrasonik boyuna dalga atımlarının sertleşmiş beton içindeki ilerleme hızının tayini için kullanılan bir yöntemi kapsar. Bu yöntem çok çeşitli amaçlarla kullanılmaktadır.	EN 12504-4-EQV; DIN EN 12504-4	91.100.30 Beton ve Beton Ürünleri
ASTM D2845-08	Standard Test Method For Laboratory Determination Of Pulse Velocities And Ultrasonic Elastic Constants Of Rock		91.100.30 Beton ve Beton Ürünleri
ASTM E494 - 10	Standard Practice for Measuring Ultrasonic Velocity in Materials.		
ASTM C1583 / C1583M - 13	Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method)		91.100.30 Beton ve Beton Ürünleri

ASTM C876 - 15	Standard Test Method for Corrosion Potentials of Uncoated Reinforcing Steel in Concrete..Betonda Donatı Çeliği Korozyon Potansiyeli için Standart Test Yöntemi		91.100.30 Beton ve Beton Ürünleri
ASTM C1383 - 15	Standard Test Method for Measuring the P-Wave Speed and the Thickness of Concrete Plates Using the Impact-Echo Method..Impact-Echo Metodu Kullanarak P-Dalga Hızını ve Beton Plakaların Kalınlığını Ölçmek İçin Standart Test Yöntemi		91.100.30 Beton ve Beton Ürünleri
ISO 1920-7:2004	Testing of concrete — Part 7: Non-destructive tests on hardened concreteISO 1920-7:2004 specifies non-destructive test methods for use on hardened concrete.The methods included are: a) determination of rebound number; b) determination of ultrasonic pulse velocity; and c) determination of pull-out force.		91.100.30 Beton ve Beton Ürünleri
ACI 228.2	Report on Nondestructive Test Methods for Evaluation of Concrete in Structures		91.100.30 Beton ve Beton Ürünleri
ACI 318 Building Code Portal	ACI 318, “Building Code Requirements for Structural Concrete and Commentary,” is the document that presents the code requirements for design and construction of structural concrete that are necessary to ensure public safety. The ACI 318 is a must-have standard for all professionals engaged in concrete design, construction, and inspection.		91.100.30 Beton ve Beton Ürünleri

Polymer-Modified Concrete ACI 548 . 3 R-03 Reported by ACI Committee 548	ACI Committee Reports, Guides, Standard Practices, and Commentaries are intended for guidance in planning, designing, executing, and inspecting construction. This document is intended for the use of individuals who are competent to evaluate the significance and limitations of its content and recommendations and who will accept responsibility for the application of the material it contains. The American Concrete Institute disclaims any and all responsibility for the stated principles. The Institute shall not be liable for any loss or damage arising therefrom. Reference to this document shall not be made in contract documents. If items found in this document are desired by the Architect/Engineer to be a part of the contract documents, they shall be restated in mandatory language for incorporation by the Architect/Engineer. This report covers concrete made with organic polymers in combination with hydraulic cement and discusses the polymer systems used to produce polymer-modified concrete, including their composition and physical properties.		
TS EN ISO 4624	Yapışma için çekme deneyi.Pull-off test for adhesion (ISO 4624:2016)Bu standard, tek katlı veya çok katlı olarak kaplanmış ilgili ürün sistemlerinde, çekme deneyi ile yapışmanın tayini yöntemini kapsar.		

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