ADVANCED PAVEMENTS TESTING

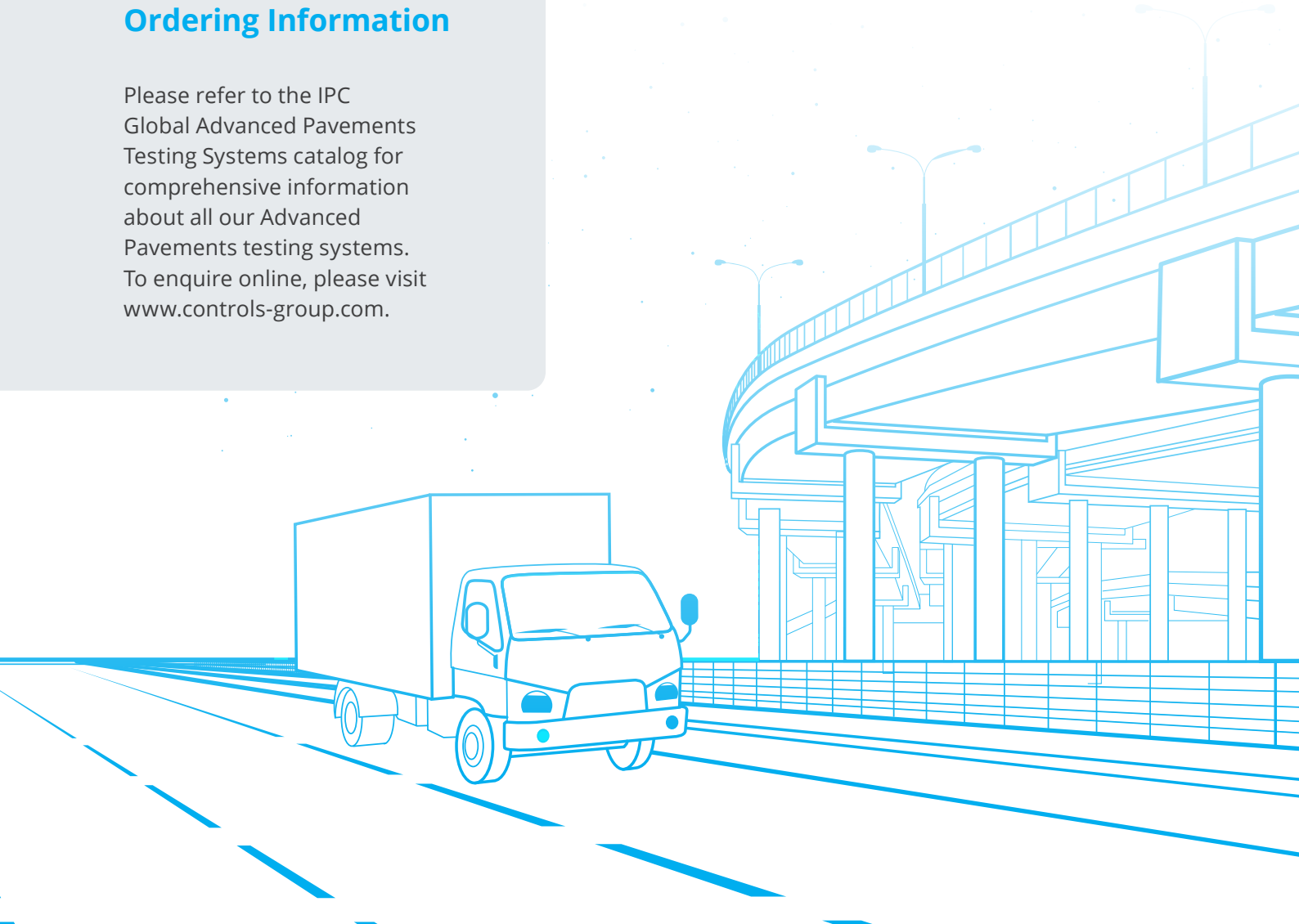
Product Overview

The first choice for Advanced Pavements Testing Systems.

Global leader in the design, manufacturing and supply of Advanced Dynamic Testing equipment for pavements materials for almost 30 years, IPC Global and CONTROLS Group have joined forces to offer the widest and most unique range including static and dynamic testing machines and cover all the applications needed by the most demanding laboratories.

Ordering Information

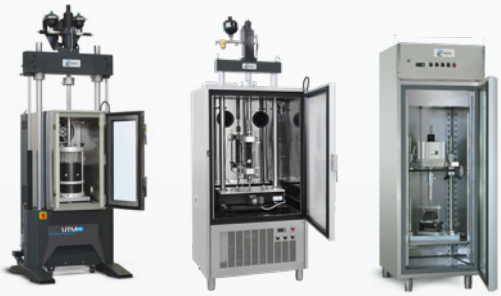
Please refer to the IPC Global Advanced Pavements Testing Systems catalog for comprehensive information about all our Advanced Pavements testing systems. To enquire online, please visit www.controls-group.com.



Dynamic

UTM SYSTEMS

SUPERIOR UNIVERSAL TESTING MACHINES



Versatile servo-hydraulic and servo-pneumatic Universal Testing Machines (UTM) are designed to meet the needs of laboratories for a wide range of advanced cyclic and static tests on asphalt, unbound granular, soils or other construction materials.

Supported by the world class IMACS2 digital controller, UTS software and extensive range of accessories for performing tests to international standards.

Servo-hydraulic Universal Testing Machines are available in 250kN, 130kN and 30kN standard capacities. Our Servo-pneumatic Universal Testing Machine is available in 16kN capacity.

ASPHALTQUBE PRO

MODULAR ELECTROMECHANICAL ASPHALT AND UNBOUND MATERIAL TESTER

Designed around the third generation Integrated Multi-Axis Control System (IMACS2) controller, AsphaltQubePro EmS is a welcome addition to the current IPC Global range of modular testing systems. The new 30kN capacity dynamic actuator benefits from the revolutionary Electromechanical Servoactuation Technology (EmS) allowing to perform an infinite range of tests.

ASPHALTQUBE

MODULAR ELECTROMECHANICAL SERVOACTUATION ASPHALT TESTER

The fully Electromechanical, AsphaltQube® performs all the most important dynamic asphalt mixture tests in one compact, modular, easy-to-use machine.

The innovative design is totally flexible allowing new test modules to be added to the base system as needs arise.

AMPT PRO

NEXT GENERATION ASPHALT MIXTURE PERFORMANCE TESTER

Now, perform all the main SuperPave performance tests with significantly improved capabilities and innovative new features such as:

- New hydraulics system with 19kN capacity
- Increased temperature range to -10°C
- Rapid cooling to +4°C
- Ergonomic design with all-in-one touchscreen computer
- Easy and versatile interchangeable transducers and load cells.

AMPTQUBE EmS

ELECTROMECHANICAL SERVOACTUATION SUPERPAVE QC TESTING SYSTEM

Utilizing IPC Global's unique and innovative Electromechanical Servoactuation (EmS) Technology, AMPTQube has been developed to democratize important dynamic SuperPave Performance Tests that were previously only available to high-end research laboratories. Fully integrated and compact in design, it is the perfect solution for both Static and Mobile Testing facilities.

SERVO-PNEUMATIC 4PB

STAND-ALONE PNEUMATIC FOUR POINT BEND APPARATUS

A stand-alone system for four-point flexural stiffness and fatigue life testing of asphalt beams subjected to repeated flexural bending with excellent wave shapes.

The beam cradle has been designed for backlash free rotation and horizontal translation of all load and reaction points.

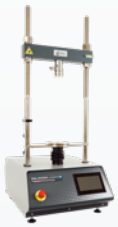
IMACS 2 Controller and UTS Neutron Software

All IPC Global dynamic testing machines come equipped with either the original tried and trusted IMACS Integrated Multi-Axis Control System or the new IMACS2 with world leading specification and functionality. Coupled to this are the companion UTS Software drawing upon over 25 years of advanced material testing experience or the new UTS Neutron, the most advanced, easy and versatile dynamic materials testing and analysis software for performance and ultimate flexibility.

Static

BALANCEDLOADER EmS

50KN AUTOMATIC ELECTROMECHANICAL BMD TESTER



The Balanced Loader is the latest addition to the range of IPC Global universal automatic testers. The machine can automatically perform most of the tests included into the Balanced Mix Design procedures, from the IDEAL-CT, IDEAL-RT, Indirect Tensile Strength to the Semi-Circular Bend test and many more. The inbuilt stepper motor grants unparalleled precision of the applied test speed.

BITUMAX PRO

ASPHALT BINDER ANALYZER BY IGNITION METHOD

BITUMAX Pro is an ignition oven with a continuous weighing system that monitors weight reduction of asphalt mixture and determines the binder content and percentage.

The highly efficient heating system with additional after burner provides complete combustion of exhaust fumes, conforming to CE requirements, while reducing test time to 30-40 minutes.

PReSBOX®

ASPHALT PRISM SHEARBOX COMPACTOR

PReSBOX provides the latest in asphalt specimen preparation and mix evaluation technology.

High quality asphalt prisms are produced, from which beams and cylinders with excellent air voids distribution, homogeneity and particle orientation can be cut. With minimal operator involvement PReSBOX allows rapid and repeatable production of asphalt specimens in the laboratory.

AUTOSAW 2

ADVANCED AUTOMATED ASPHALT SAW

The new and improved Autosaw II is the most advanced and versatile asphalt saw available and is the perfect solution for safe and clean preparation of a wide variety of asphalt specimens.

MULTI CORE-DRILL

ADVANCED ASPHALT CORE DRILL

The Multi Core-Drill is a superior laboratory asphalt core drill whose robust and rigid design provides precise coring of asphalt prisms, cylindrical and slab samples to the highest quality.

PAVELAB50 PRO

AUTOMATIC CLOSED-SYSTEM ASPHALT ANALYZER

Pavelab50 Pro is a safe closed extraction system that allows for the complete analysis of an asphalt mixture sample. Binder extraction and recovery are both important for determining asphalt properties and by using a rotary evaporator, a representative sample can be used to perform other tests such as penetration, softening point, etc. Aggregates, including filler, are separated and then available for sample grading.

BITUMIX

AUTOMATIC LABORATORY MIXER

BITUMIX Automatic Laboratory Mixer prepares asphalt samples for mix design. The stainless steel mixing container with a helical mixing shaft is thermally insulated and complete with heating element and probe sensor to provide uniform temperature control. A motorized tilting system provides safe and easy unloading of the sample.

GALILEO
GALILEO RESEARCH

ADVANCED RESEARCH GYRATORY COMPACTORS

The new flagship gyratory compactor that incorporates innovative Electromechanical Servoactuation and patented Orbital gyratory motion system.

GYROCOMP EmS

GYRATORY COMPACTOR

The ideal solution for on-site and mobile laboratories that fully conforms to ASTM, AASHTO and EN Standards and approved by the SUPERPAVE™ CENTRE (USA).

DWT

DOUBLE WHEEL TRACKER

IPC Global's three DWT models satisfy the two test methods specified by AASHTO T324 and EN 12697-22.

MULTISIZE SLAB COMPACTOR

A range of slab compactors that meets international standards and compacts asphalt slabs to target densities by applying loads that correspond to those of pavement construction rollers. Available in two series with different levels of sophistication and performance.

Binder

DUCTIMETER

DUCTILITY TESTING MACHINES

Ductility Testing Machines are used to determine the ductility of bituminous materials by measuring the elongation before breaking when two ends of briquette specimens are pulled apart at a specified speed and temperature.

AUTOMATIC RING AND BALL TESTER

AUTOMATIC DETERMINATION OF BINDER SOFTENING POINT

The apparatus automatically applies the temperature gradient and detects the specimen position with light barriers, recording the softening point. The 7" color touchscreen display, with multiple preset and custom testing procedures, allows realtime display of the temperature / time graph on display. The inbuilt cooling fan, automatically enabled at the end of the test, reduced the beaker cooling time.

AutoBBR

DETERMINATION OF ASPHALT BINDER'S RHEOLOGICAL PROPERTIES

The AutoBBR is engineered to perform flexural tests on asphalt binder and similar specimens per ASTM D6648, AASHTO T313/TP125 and EN 14771.

These tests consist of a constant force being applied to a specimen in a chilled bath in order to derive specific rates of deformation at various temperatures.

PIVOT

PIVOT FULLY AUTOMATIC PENETROMETER

A fully automatic and compact instrument using the latest technologies and programming tools to determine material hardness.

The instrument reaches the test start point automatically with vertical movement performed by a high precision stepper motor and measured by a contactless displacement transducer.

VDO

VACUUM DEGASSING OVEN

An essential accessory to perform tests conforming to International Standards, the Vacuum Degassing Oven (VDO) is a safe, and accurate system designed to remove air bubbles created during accelerated oxidative aging of asphalt binder by the PAV. This final conditioning makes the aged binder suitable for further tests such as BBR, DSR, penetration, ductility, softening point and many more.

PAV

PRESSURE AGING VESSEL

Developed to simulate in-service aging of asphalt binder after five to 10 years, the CE and ASME certified IPC Global pressure vessel is ideal for long term aging conditioning of asphalt binder. Its user-friendly software allows the operator to view in real time vessel temperature and pressure on the 6" color touch screen display.

RTFO

ROLLING THIN-FILM OVEN

Used for measuring the effect of heat and air on a moving film of semi-solid bituminous materials, RFTO fully conforms to temperatures specifications indicated by the Standards. Its robust internal chamber is made from stainless steel, insulated with fiberglass for ultimate results. Its exacting safety features ensures that IPC Global's RFTO fully conform to CE requirements.

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