



ADVANCED PAVEMENTS TESTING SYSTEMS

# 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 catalogue for comprehensive information about all our Advanced Pavements testing systems. To enquire online, please visit [www.controls-group.com/ipcglobal](http://www.controls-group.com/ipcglobal)



## 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 IMACS 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.

## 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 -5°C
- Rapid cooling to +4°C
- Ergonomic design with all-in-one touchscreen computer
- Easy and versatile interchangeable transducers and load cells.

## AMPTQube® EMS TECH

### 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.



## Asphalt Standards Tester Pro

### Modular Servo-Hydraulic Asphalt Tester

Perform the most popular asphalt standards such as AASHTO, ASTM, EN, Austroads, AS & more in one compact, modular, easy-to-use machine.

AST Pro is capable of performing: Permanent Deformation, Cyclic Compression, Flexural Stiffness, Indirect Tensile Stiffness, Flexural Fatigue, Indirect Tensile Fatigue, Crack Propagation, Dynamic Modulus, Overlay and Uniaxial Fatigue.



## 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.



## AsphaltQube® EMS TECH

### 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.

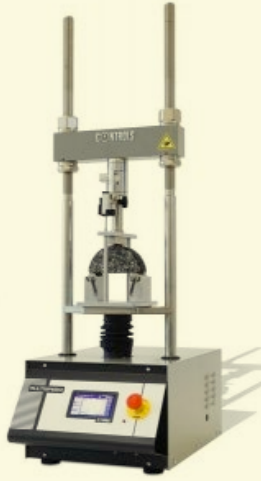


## IMACS Controller and UTS Software

Our Dynamic Testing range of machines comes equipped with IPC Global's Integrated Multi-Axis Control System (IMACS) and world renowned UTS Software draw upon over 25 years of advanced material testing experience.

Whilst UTS Software is known for its simplicity in use, clarity of results and analytical power, the IMACS Digital Controller provides leading-edge performance, unparalleled levels of control for the ultimate in flexible data acquisition.





### Stand-alone Semi Circular Bend SCB tester

The stand-alone SCB Tester is designed to perform the simple yet effective, rapid, and affordable Semi Circular Bending (SCB) fracture test to predict the cracking resistance and ductility of asphalt mixtures. Capable of running a variety of tests including AASHTO TP124 (Illinois SCB) – Fracture Potential Using the Flexibility Index Test (FIT) and ASTM D8044 (LSU SCB) – SCB Cracking Resistance Test at Intermediate Temperature.

### Pavelab 50 Automatic Asphalt Analyzer



Pavelab 50 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.

### BITUMAX

Asphalt Binder Analyzer by Ignition Method

BITUMAX 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.



### 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.



### 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.

### Servopac & Galileo / Galileo Research Advanced Research Gyrotory Compactors

**Servopac** – World renowned fully automated, servo-controlled gyrotory compactor.

**Galileo/Galileo Research** – The new flagship gyrotory compactor that incorporates innovative Electromechanical Servoactuation and patented Orbital gyrotory motion system.



### Gyrocomp – Gyrotory Compactor

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

### Autosaw II

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.

### DWT

Double Wheel Tracker

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



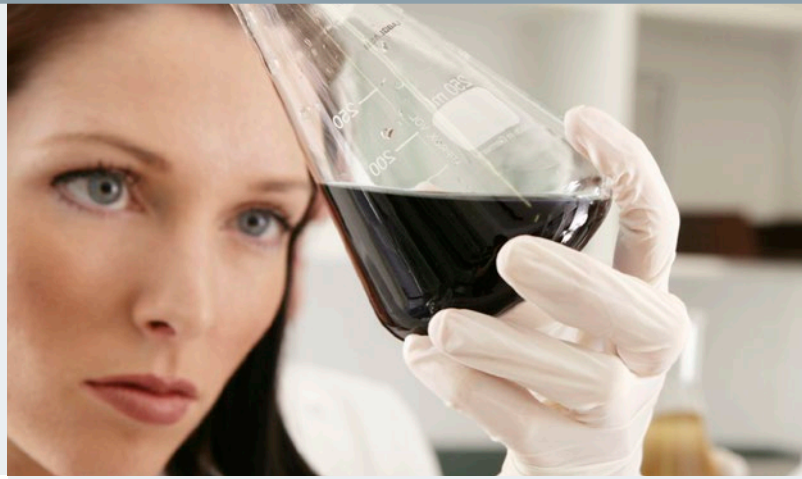
### Multi-Size Electromechanical Slab Compactor

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.



**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 Apparatus**  
Fully Automatic Tester

Advanced microprocessor controlled automatic tester that determines the softening point of bitumen using water or glycerol as heating fluid.

With its large graphic display, RS232 port for PC & printer and excellent safety features, the IPC Global Automatic Ring and Ball Apparatus is one of the most accurate, reliable and user-friendly system available on the market.



**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.



**Dynamic Shear Rheometer**  
Determination of Asphalt Binder's Rheological Properties

Designed specifically for Asphalt Testing and optimized for high throughput, the Dynamic Shear Rheometer exceeds AASHTO T315 and all ASTM requirements.

User-friendly, this integrated compact unit, delivers precise and stable temperature control (patented). Its dedicated AASHTO specification software will ensure that you obtain accurate results every time.



**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.



**RFTO**  
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.

