

**DATASHEET**

# BALANCEDLOADER **EmS**

## 50kN Automatic Electromechanical Universal 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.

### Wide Two-column Frame

The Balanced Loader features a wide two-column frame fitted with an upper crossbeam that can be set at various heights depending on the accessories used. A brushless motor, housed in an ergonomic cabinet, drives the 50kN capacity jack granting load control accuracy and a wide range of applicable test speeds. In addition, the closed-loop control ensures reliable test execution both with displacement and load applications.

### Automatic Sample

If not strictly required by the standards, there is no need for an external transducer to measure displacement. The machine will detect a sample failure automatically which will immediately stop the test. This feature can also be disabled, and a travel or time limit can be set instead.

### Pre-set Test Methods

This machine comes loaded with many pre-set test procedures guiding the operator through each test with ease, accuracy and reliability.

### Intuitive Graphical Display

This model is equipped with adjustable limit switches that are mounted on one column. The operator can set the speed/load and travel/load limits, data format download and graph settings using the 7" capacitive color touchscreen display.

All test graphs and transducer data are displayed in real-time on the touchscreen. At the end of the test, you can save the results directly on the integrated 16GB internal memory, a USB pen drive or download them using a LAN communication port. Please note that all accessories must be ordered separately.

### Balanced Loader at a glance

- Stand-alone automatic 50kN digital load frame
- Universal machine suitable for a wide range of tests, including BMD tests
- Closed-loop displacement/load rate control
- Automatic failure detection
- Integrated transducer calibration facility
- Brushless motor granting infinitely variable speed from 0.01 to 65 mm/min and load rate from 1 to 9999 N/s
- 7" touchscreen capacitive color display for viewing real-time graph and test data
- Fully automatic test control facility
- Adjustable travel limit devices
- Remote control from PC by using optional software
- CE Emergency Stop button

# Technical Information

## Specifications

**Data download:** Ethernet, RS232 and USB ports

**Memory:** 16GB internal memory

**No. of channels:** 7 (1 for actuator displacement, 2 for load and 4 for displacement)

**Channel resolution:** 24 bit

**Sampling frequency:** up to 100Hz

**Test speed:** from 0.01 to 65 mm/min

**Load rate:** from 1 to 9999 N/s

**Type of control:** Displacement or load

**Max ram travel:** 100 mm

**Max vertical span:** 800 mm

**Max horizontal span:** 380 mm

**Overall dimensions:** 550 x 670 x 1300 mm (W x D x H)

**Weight approx:** 110 kg



Adjustable mechanical limit switch

Detail of the 7" touchscreen display



## Standards

### Marshall

ASTM D6925 / AASHTO T245  
EN 12697-34

### Splitting Tensile/TSR

ASTM D6931 / AASHTO T283  
EN 12697-23

### Indirect Tensile - Italian method CNR 134

### Semi-Circular Bend SCB

IFIT - AASHTO T393/TP124  
ASTM D8044  
EN 12697-44

### IDEAL-CT ASTM D8225

### IDEAL-RT ASTM WK71466

### Direct Shear

ISS - AASHTO TP114  
Leutner - prEN 12697-48

### CBR

ASTM D1883 / AASHTO T193  
EN 13286-47

### Unconfined Compression EN ISO 17892-7

## Ordering Information

### 76-PV1282

BALANCE LOADER EmS , 50kN automatic electromechanical universal tester, 230V/50-60Hz/1Ph

### 76-PV1284

Same as above, but 110V/60Hz/1Ph

## CONTROLS

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