

PRIMA100

LIGHT WEIGHT DEFLECTOMETER (LWD)



WHERE TO USE PRIMA100

- Unbound constructions in general
- Road constructions
- Rail constructions and crossings
- Airport areas
- Industrial floors
- Freight terminals and packing areas

GET RELIABLE RESULTS

- Compaction control
- Control of bearing capacity

PRIMA100 LWD COMPLIES WITH

- ASTM E2583
- CEN ICS 93.020
- U.K. Interim Advice Note 73/06 Revision 1 (2009)
- Italy: UNI11531-1
- NCHRP 10-84
- TPF 5(285)
- Minnesota and Indiana DOT specifications

PRIMA 100

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PRIMA100 LWD IS THE INDUSTRY LEADING TOOL FOR ASSESSING FOUNDATION LAYERS AND IS FULLY COMPLIANT WITH THE UK HIGHWAYS AGENCY DESIGN MANUAL ROADS & BRIDGES: DYNAMIC PLATE TEST AND OTHER INTERNATIONAL GUIDES.



Assessment of foundations during construction is quicker and easier with PRIMA100 LWD. It is lightweight and can be operated and transported around site by one member of staff. It has an integrated load cell to measure the applied load pulse and a geophone to directly measure the resultant deflection pulse. The software on the Bluetooth connected Smartphone displays the load and deflection pulses graphically, then reports the surface modulus.

This enables the user to review the results as the data is being collected and highlight any issues identified with the performance of the foundation materials.

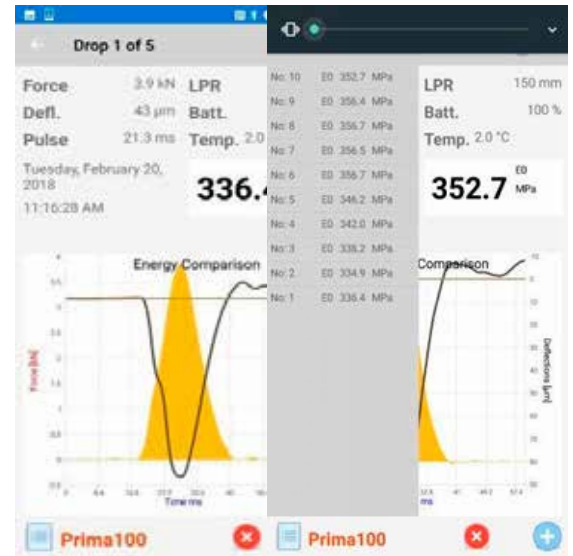
The calibration of PRIMA100 LWD is referenced back to international standards and is developed in Sweco's SHRP (Strategic Highways Research Programme) accredited centre (AASHTO) the first of its kind in Europe.

PRIMA100 LWD is considered the industry's equipment of choice and is widely used by testing organisations and laboratories through out the World. Launched in 1997, PRIMA100 LWD has been in use since on local authority roads, trunk roads, car parks, trench reinstatements and other areas where it is required to confirm the stiffness of soil and the constructed foundation layers.

Connected by Bluetooth, the Smartphone of PRIMA100 LWD displays your results immediately, storing them automatically in its database. The testing information is collated along with GPS coordinates and chainage so that the results can be reported effectively.

PRIMA100 LWD FEATURES:

- Lightweight and mobile
- Customised transport trolley
- Integrated load cell and geophone
- Touch screen Smartphone data collection software
- GPS and chainage location
- Review of individual drops
- Review of each test location
- Review of complete section tested
- Data export to Microsoft Excel or third party reporting software
- Can be extended to have three geophones
- Ruggedized transport case available
- Calibration referenced to International Standards
- Additional weights
- Long-lasting lithium batteries



PRIMA100 LWD PACKAGE

PRIMA100 LWD includes 100mm, 200 mm (optional) and 300mm loading plates, a 10kg weight, pole and clip and a core unit (which includes integrated load cell, geophone, buffers and control unit with integrated Bluetooth). Sweco also provides an Android Smartphone (rugged) with the package.



PRIMA100 LWD DATA REVIEW

Information can be reviewed by individual drop, by location or as an overall reading on the entire length tested. Analysis can be carried out throughout the assessment or on completion. The data can then be exported to a standard plain text ASCII file and imported into Microsoft Excel or a reporting software for issue to the client.

Using PRIMA100 LWD is considerably quicker than the comparable methods. The rapid results from PRIMA100 LWD allows the user to assess various foundation layers as they are constructed. This means that variation in material performance or compaction is identified as soon as possible. The required drops can also be completed in one to two minutes at each location. Tabular results are then displayed immediately on a coloured graph. Two additional geophones can be included for a more detailed assessment.

MEASUREMENTS IN THE FIELD

PRIMA100 LWD, with an integrated load cell and geophone, can measure applied load and the resultant deflection from which the surface modulus is calculated. The drop height can be varied to obtain accurate stress application and to comply with the requirements of IAN 73/06 Rev and other international standards.

This also allows the user to assess the stress sensitivity of the foundation materials easily. PRIMA100 LWD can be used to assess the effect of soft layers below capping or sub-base; particularly useful when there is a water ingress or drainage problem. This can be identified by changes in the deflection time history, load pulse time or reduction in surface modulus in these areas. PRIMA100 LWD records the complete time history of the load pulse and resultant deflection which can then be analysed at a later stage.



Transport PRIMA100 LWD safely between measuring sites in a tailor-made transport box



Easy to move about PRIMA100 LWD onsite with a trolley

CONTACTS:

BJARNE BYLOV JENSEN

Head of Sales & Market Dept.

T: +45 8228 1435

M: +45 2723 1435

E: Bjarnebylov.jensen@sweco.dk

YENNI MUNK ANDERSEN

Customer Service Coordinator

T: +45 8228 1565

M: +45 5372 1435

E: Yennimunk.andersen@sweco.dk

HENNY SCHØLER

Sales Support Coordinator

T: +45 8228 1481

M: +45 9137 7125

E: Henny.scholer@sweco.dk

SWECO DANMARK A/S

Kokbjerg 5

DK-6000 Kolding

T +45 8228 1400

E: pmcsale@sweco.dk

www.pavement-consultants.com