



HUMBOLDT

HD-4129.3F Lightweight Deflectometer



LIGHTWEIGHT Deflectometer Fast, accurate and easy compaction control!

Areas of application:

- Quality control in road and railway construction
- Quality assurance in earth works and canal construction
- Compaction monitoring in pipe trenches and cable ducts
- Testing of pavement bedding, foundation backfill

Lightweight Deflectometers

ASTM E2835-11; TP BF-StB B8.3; TB 10102-2004

Lightweight Deflectometers (LWDs) are increasingly being used to determine overall compaction quality of all types of earthworks through their use as a QC/QA field test. LWDs provide a rapid determination of elastic modulus, which is an essential factor in mechanistic design and can be used as an accurate assessment of compaction. An LWD is used for measuring the bearing capacity (deflection) of subgrade/subsoils and unbound base layers, granular layers and backfilling materials, according to ASTM E2835-11. Based on the static plate load test requiring a load vehicle, the LWD provides a simple, fast and repeatable test providing an accurate assessment of compaction parameters. Applications for this non destructive method of testing include bearing capacity and compaction include road construction, pipeline

HD-4129.3F



and cable backfill, railway track beds, airport runway/taxiways, dam construction, embankments, foundations and other earthworks.

Humboldt offers two models of Lightweight Deflectometers from HMP— a deluxe model, the HD-4129.3F and a basic unit, the HD-4130.3F.

Both units are the same mechanism and differ only in the controller used with each one.

The HD-4129.3F features a deluxe controller that includes:

- A large, 3.5" colorful display
- Light sensor-controlled backlighting that provides the optimum readability even in bright sunlight

- Easy menu navigation
- Integrated GPS
- Integrated WIFI-enabled
- Interface for a thermal printer and USB
- Help function
- Efficient and fast 32-bit processor

The graphic interface of the HD-4129.3F provides an intuitive menu, which guides the user through the testing procedure and provides real-time test results. Measured data is presented in tabular, as well as curve formats with date, time and GPS location clearly depicted.

HD-4129.3F Lightweight Deflectometer



HD-4130.3F



HD-4129.05A



HD-4129.01A

This data can be exported from the control unit via USB or wirelessly directly into the Cloud or to your PC for archiving and further processing. This allows personnel in any office to have access to data while you are still on site testing. It is also possible to print out results to a small portable printer on site. Use of the web-based evaluation software: HMPReport, provides the ability to produce professional reports for each measuring point, which can include your logo and contact details. This software allows you to work with your data from theCloud or your PC. The software also enables you to store the data in a database with easy-to-use

search and editing options.

Units include:

The LWD; magnetic base plate; portable printer (USB); GPS; PC Software and Android App (HD-4129.3F and HD-4159.3F only) Units are 120/220V 50/60Hz

Light Weight Deflectometer, 10kg, Deluxe
HD-4129.3F

Light Weight Deflectometer, 10kg, Standard
HD-4130.3F

Light Weight Deflectometer, 15kg, Deluxe
HD-4159.3F

Light Weight Deflectometer, 15kg, Standard
HD-4149.3F

Shipping wt. 127lbs (57.6kg)

Transport Cart

Cart allows for easy moving of LWD.

Transport Cart HD-4129.01A
Shipping wt. 20 lbs (9kg)

Transport Case

Wooden case for storage and transport

Transport Case HD-4129.05A
Shipping wt. 157 lbs (6.8kg)

Printer Paper

Replacement paper for use with Plate Load Tester and LWD.

Printer Paper HD-4129.5
Shipping wt. 2 lbs (0.9kg)

Lightweight Deflectometers	HD-4129.3F HD-4159.3F	HD-4130.3F HD-4149.3F
Electronic settlement measuring instrument:		
Settlement measuring range 0.1 bis 2.0 mm ± 0.02 mm	✓	✓
Measuring range E _{vd} < 225 MN/m ²	✓	✓
Temperature range 0 to 40 °C	✓	✓
Very robust, splash-water proof, connection cable with high-quality LEMO connectors	✓	✓
Graphic display in mm	56 x 73	38 x 68
Colorful, light sensor-controlled and illuminated	✓	
Black/white		✓
Help function	✓	
Fast, efficient 32-bit processor	✓	
WIFI-enabled, USB, thermal printer interface	✓	✓
GPS	✓	✓
Dimensions	210 x 100 x 31mm	211 x 100 x 26mm
Storage capacity, internal in measurement series	1000	500

Lightweight Deflectometers	HD-4129.3F HD-4159.3F	HD-4130.3F HD-4149.3F
Power supply:		
High-performance rechargeable lithium-polymer-battery 3.7 V, 6300 mAh	✓	
(4) R6 Batteries		✓
Menu navigation (18 languages available)	✓	✓
Loading Mechanism		
Total weight: 15kg (HD-4129 & HD-4130)		
Drop weight: 10kg (HD-4129 & HD-4130)		
Total weight: 20kg (HD-4159 & HD-4149)		
Drop weight: 15kg (HD-4159 & HD-4149)		
Max. impact force 7.07 kN	✓	✓
Duration of impact 17.0 ± 1.5 ms	✓	✓
Material: zinc coated/hard-chrome plated steel	✓	✓
Spring element 17 disk springs	✓	✓
Load plate		
Diameter 300 mm, Plate thickness 20.0 mm	✓	✓
Total weight 15kg Material: zinc coated steel	✓	✓



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