



# ZORN ZFG 3.1

## Light Weight Deflectometer (LWD)

according to ASTM E2835 and TP BF-StB Part B 8.3  
calibrated according to TP BF-StB Part B 8.4



## DETAILS

- **Load device with 10 kg drop weight**  
210 mm, 1.140 mm, 15 kg  
(Width, height, total weight)
- **Base plate**  
300 mm, 15 kg  
(Diameter, weight)
- **Electronics box**  
120 mm, 90 mm, 0,5 kg  
(Width, height, weight)

- Integrated WIFI transmitter for wireless, fast and secure transmission of measurement data from ZFG to Smartphone, Tablet or PC
  - High-precision GPS/GNSS receiver
  - Automatic calculation of deflection,  $s/v$  value and deformation modulus  $E_{vd}$

- Load device with 10 kg drop weight, impact load 7.07 kN, measuring range  $E_{vd}$  15-70 MPa (MN/m<sup>2</sup>)
  - Ready for optional load device with 15 kg drop weight and 1.5 times impact load (10.605 kN); measuring range  $E_{vd}$  70-105 MPa (MN/m<sup>2</sup>)

Light Weight Deflectometer ZFG 3.1 is used to determine the dynamic deformation modulus  $E_{vd}$  in MPa [MN/m<sup>2</sup>] by means of the dynamic plate load test. Test results provide conclusions on the bearing capacity and compaction quality of soils.

The main field of application for LWDs is earthworks in transport infrastructure construction. Further applications are soil investigation and landscaping.

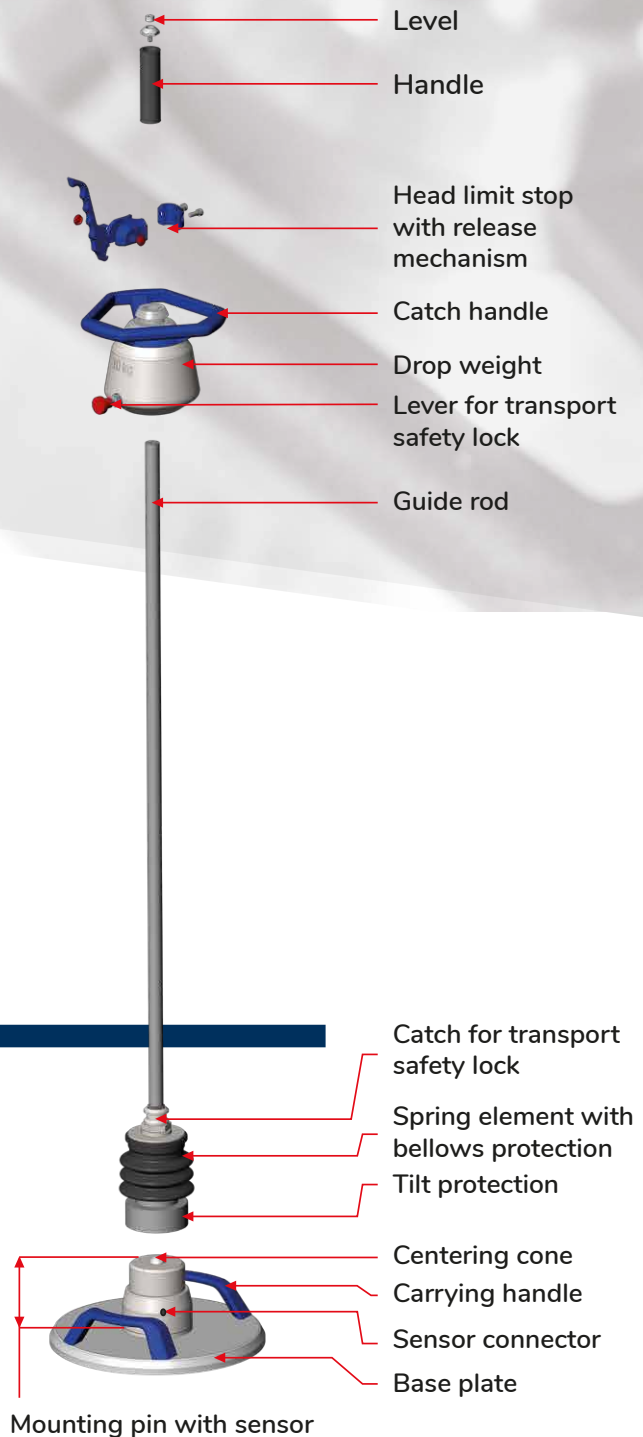
**3**

- 300 mm base plate with acceleration sensor (MEMS), max. ground pressure 0.1 MPa (MN/m<sup>2</sup>)
- Max. measuring depth/depth of influence: ca. 600 mm
- Sensor housing ready for dynamic CBR and 150 mm base plate accessory
- Ergonomic, triangular catch handle with anti-slip powder coating
- All metal parts with corrosion protection and suitable for use at construction sites
- Handheld electronics box (data logger) in robust, weatherproof full leather case
- Automatic calculation of deflection mean, s/v value and modulus ( $E_{vd}$ )
- Multilingual, backlit and graphics-capable display, display of deflection graphs
- Internal memory and SD-card for up to 10.000 measurements, automatic storage
- Sensor self-test (2G) and integrated calibration memory
- Preloading impacts can be switched off
- Power supply: four standard R6 batteries (Mignon type / AA) for ca. 1.500 tests (included)
- Thermo printer interface
- Preloading impacts can be switched off
- ZORN FG-Web App (web-based protocol software)
- Quick starter manual und calibration protocol QR Code (protocol available online)
- Detailed user manual online available



First LWD with integrated WiFi transmitter as standard

Simple wireless connection to MS Windows computers and Android/iOS mobile devices



Subject to change without prior notice. | Status: 03/2025



ZORN INSTRUMENTS GmbH & Co. KG  
Benzstraße 1 | 39576 Stendal | Germany

Telefon: +49 3931 / 25 27 3-0  
Telefax: +49 3931 / 25 27 3-10

eMail: [info@zorn-instruments.com](mailto:info@zorn-instruments.com)  
Web: [www.zorn-instruments.com](http://www.zorn-instruments.com)