TERRATEST®

THE ONE AND ONLY – WITH BLUETOOTH® TECHNOLOGY
Bluetooth®
THE ORIGINAL
Bluetooth®

Light Weight Deflectometer TERRATEST 4000 STREAM

According to ASTM E2835-11 and German Standard TP BF-StB B8.3

NEW OPTION
STREAM
Your Test Results to
Smartphone

MADE IN GERMANY

CERTIFIED BY TÜV

The Time and Cost Saving Compaction Test

- Earthwork
- Civil Engineering
- Canal Construction
- Road Construction
- Pipeline Construction
- Gardening & Landscaping
- Railroad Construction

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Light Weight Deflectometer TERRATEST 4000 STREAM

According to ASTM E2835-11 and German Standard TP BF-StB B8.3

- ✓ Voice Navigation Guides the User through the Test Procedure
- ✓ Test Procedure Needs Only 2 Minutes
- ✓ First Choice for Earthwork, Canal, Road and Pipeline Construction, for Gardening and Landscaping
- ✓ Complete Equipment with Weatherproof Electronic Box and All Features
- ✓ Directly from German Manufacturer

Android APP

Send the results from TERRATEST to smartphone and tablet in realtime. Directly on Construction Site!

Measurements ready to be sent to office and customers in realtime.

Precision Acceleration Meter

Sensor Equipment Designed for Applications under Rough Environment Conditions

Inclined Load Plate Handles

Ergonomic Handling for Mobile Measuring System CARRELLO

Electroless Nickel Dispersion Coatings

Surface Extremely Resistant Against Influences to be Expected on Construction Sites

Active Transport Fix-System

Push-Pull Weight Fixing
Ensures Safe Transport of Load Plate Assembly

Catching Ring Easy-to-Handle

Hexagonal Handgrip with Chamfered Edges,
Makes carrying of Device easy

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Your Test Results to
Smartphone

COMPLETE EQUIPMENT

Extremely Reliable also in Harsh Environment

- **STREAMING** (USB STREAMING)
- Android App for Smartphone
- Weatherproof Electronic Box (IP53)
- Printer Integrated
- Rechargeable Battery
- Voice Navigation
- GPS System
- PC Software
- On-Site Instruction
- Directly from Manufacturer
- 2 Years Warranty

COMPLETE EQUIPMENT
Perfect for construction site

Rugged Display

Reliably Protecting Electronics,
Service by External Pushbutton

Integrated Printer

Print Results directly on the Construction Site,
For Permanent Compaction Proof

USB-Device

For Quick Data Transfer to PC.
All measurements Automatically Stored.

GPS System

Allows Legally Effective Identification
of Measuring Position

Rechargeable High-Duty Power Battery

Model with short charging times and a long lifetime
Sufficient for **2,000 Measurements/600 Printouts** when loaded

NEW FEATURE Voice Navigation

Voice-Navigation

Just Follow
Spoken Instructions

Easy-Fixx Connections

Rugged Plugs and Sockets,
Perfect for Use on Construction Sites

Backlit Graphic Display

Clear Visualization of Results,
Intuitive Menu Structure

Service by External Button

On-Touch Operation with No Need
to Open the Case in Dusty Environment

IP53

Weatherproof Electronic Box

The electronics are housed in a stable undestroyable case with external pushbutton. No damage by water, sand and dust to be expected.

The TERRATEST® measuring computer disposes of protection class IP 53, preventing penetration of dust and water.

Water-tight
Dust-tight · Shock-resistant

This is the wrong way:
The static load plate test with a counter weight, e.g. a loaded truck, consumes too much time and cost, and is often nearly impossible to perform, especially in pipeline construction or places difficult to reach. We have a better suggestion!

Recognized PROOF OF COMPACTION

Standard Values acc. to ZTV E-StB 2009 and ZTV A-StB 2012

ZTV E-StB 2009 specifies that:

„..... 4.5.2 Requirements with Respect to Modulus of Deformation
Requirements defined in the following refer to the 10% Minimum Fractile. For a road crust of construction classes I to IV, on anti-freeze basis or foundation a deformation modulus on the soil of at least to ***E_{v2} = 120 MN/m², or alternatively of E_{vd} = 65 MN/m²***
is necessary, for classes of construction V and VI of ***E_{v2} = 100 MN/m² or E_{vd} = 50 MN/m²****. Deformation modulus E_{v2} can be proven by static load plate test acc. to DIN 18134, and deformation modulus E_{vd} by dynamic load plate test acc. to TP-BF-StB part B8.3."*

Table: Standard values for assignment of static deformation modulus E_{v2} or dynamic deformation modulus E_{vd} to degree of compaction D_{pr} for coarse grained groups of soil

	Required deflection in different depths (ZTVT-StB 95*) (ZTVE-StB 94)	Based on benchmarks for the allocation to D_{pr} (ZTVE-StB 09)	Allocation of E_{vd} to E_{v2} (gem. ZTV-E StB 09)
Type of soil DIN 18 196	Degree of compaction D_{pr} in %	Deflection modulus E_{v2} in MN/m²	Deflection modulus E_{vd} in MN/m²
Gravels and sands with ≤ 7% by weight <0.063 mm[1]	≥ 103 ≥ 100 ≥ 98 ≥ 97	≥ 120 ≥ 100 ≥ 80 ≥ 70	≥ 65 ≥ 50 ≥ 40 ≥ 35
Gravels with narrow grain size distribution, sands with narrow, wide or intermittent grain size distribution	≥ 100 ≥ 98 ≥ 97	≥ 80 ≥ 70 ≥ 60	≥ 40 ≥ 35 ≥ 32
Mixed gravels and sands with 7-15% by weight n<0.063 mm[2]	≥ 100 ≥ 97	≥ 70 ≥ 45	≥ 35 ≥ 25

Dpr Ev2 Evd — Proctor — Static — Dynamical — ZTV E-StB 09 / ZTV A-StB 12

1) These reference values can be used as standard values for proof of obtained compaction acc. to ZTV E-StB 09 paragraph 14.3.5 resp. ZTV A-StB 12 between supplier and client. All information is supplied without warranty. ZTV E and ZTV A have to be consulted.

Quote from current edition of ZTV A-StB 2012:
„The dynamical load plate test is particularly qualified for pipeline trenches, as it enables tests to be performed at different levels within a minimum of time."

Furnish the compaction proof in an efficient and safe manner. The measuring principle of the light weight deflectometer TERRATEST 4000 STREAM represents an easier method: Quick and sure!

Thanks to automatic storage of test result, position, time and date. All relevant requirements for obligatory self-supervision are simply to be met.

Voice-navigation and one-button operation considerably simplify service on construction sites. Remaining questions can be solved as well. A comprehensive initial training by our TERRATEST® specialists is available.

Voice-Navigation

SAVING TIME and MONEY

Investment for TERRATEST® instruments is amortized within a couple of months, as it assists users saving money every day. Expensive external soil expertise is no more needed; the compaction proof is furnished at once.

Voice navigation guides the user by spoken instructions clearly and unequivocally through measuring procedures. A test can be performed also by personnel disposing only of normal formation. The test is quickly documented by means of the professional TERRATEST®.

„Since we have purchased our new TERRATEST® equipment, we can carry out the compaction tests on our own, external testing laboratories are no more necessary. The software furthermore enables the results to be documented and filed on the PC without great effort. A professional documentation is quickly created by a few clicks."
Engineer Willy Grothe,
CEO of Calvörder Construction, Germany.

Comprehensive DOCUMENTATION

TERRATEST® has configured its software thoroughly with the target of professionally presenting measuring results. Each document features:

- Title page
- Single logs with satellite photo of the measuring position
- Statistical analysis of all single results
- Overview of all individual measuring positions in a Google® Maps satellite photo

Each user from now on is able to establish on his own, a detailed and structured documentation of his compaction proofs without external assistance.

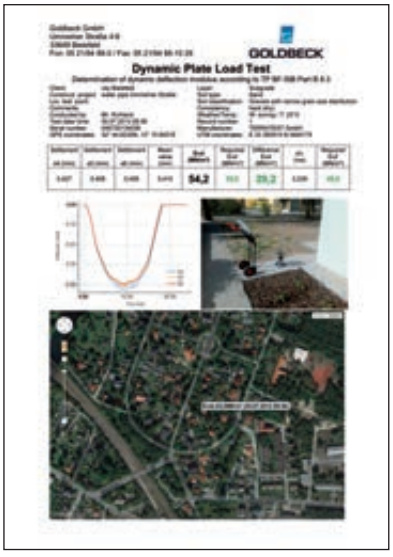

GOLDBECK

Dynamic Plate Load Test

according to
TP-BF StB Teil B 8.3

with Light Weight Deflectometer
TERRATEST 5000 BLU

building project:
pipeline construction
Ummelner Strasse, Bielefeld


GOLDBECK

Dynamic Plate Load Test

Measuring Results

Professional Presentation

„TERRATEST® 2.0" has been designed with maximum user convenience in mind. No complicate supplementary procedures for analysis and filing are required. A photo of the measuring point as well as a Google® Maps satellite photo in the log may be included.

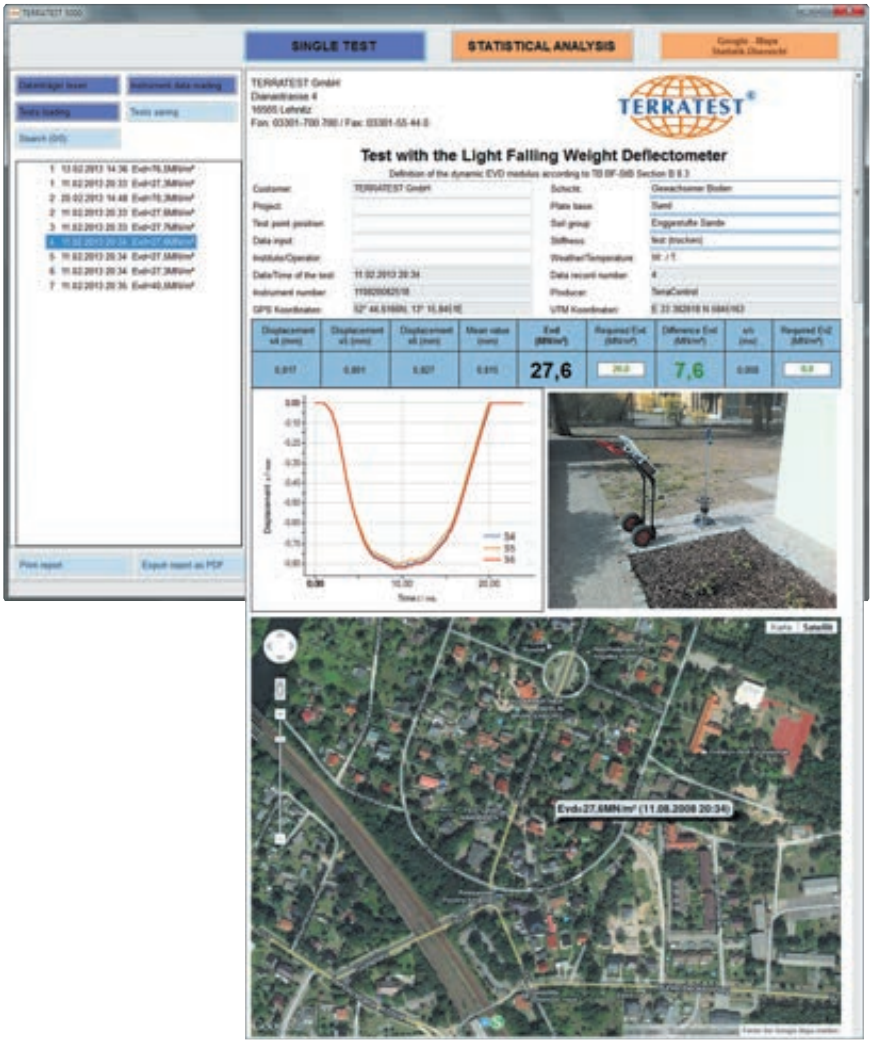

GOLDBECK

Dynamic Plate Load Test, Statistical Analysis

Furnish Compaction Proofs *on your own*

By means of software TERRATEST 2.0

Results captured are quickly analyzed, compiled and documented by easy-to-handle software package TERRATEST® 2.0. By means of the USB-device provided, files are transferred to the PC in no time, measurements afterwards to be opened by the software as well. Individual logs and statistical analysis of the test field are automatically created, In conformity with German test Directive TP BF-StB 8.3. Requirements of obligatory self-supervision with respect to compaction proofs acc. to ZTV E-StB 2009 resp. ZTV A StB 2012, are met without any effort. Simultaneously with each measurement, the integrated GPS system saves the coordinates of the measuring point. In the end, the result is presented automatically on the PC together with date, time and a Google® Maps satellite photo in form of an individual log. Each measurement can distinctly be assigned, ensuring a legally effective identification.



USB STREAMING

EXTRACT Your Results Directly to the Smartphone

Send the results from **TERRATEST 4000 STREAM** to smartphone and tablet in no time – directly on the construction site.

By means of the Android APP; construction project, client, material, type of layer and testing personnel can be entered, then by E-Mail send the log to your office or to the client himself.

The test log prepared this way can be completed by Google®-Maps satellite photo, settlement curves, personal notes and your company logo.

TERRATEST 4000 STREAM:
All Results Directly to Smartphone or Tablet!

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Bluetooth®
THE ORIGINAL
Bluetooth®

COMPLETE EQUIPMENT

QUALIFIED FOR ANY CONSTRUCTION SITE – SUITABLE FOR ANY WEATHER!

- STREAMING (USB STREAMING)
- Android App for Smartphone
- Weatherproof Electronic Box (IP53)
- Printer Integrated
- Rechargeable Battery
- Voice Navigation
- GPS System
- PC Software
- On-Site Instruction
- Directly from Manufacturer
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TERRATEST®

TERRATEST GmbH
Friedrich-Wolf-Strasse 13
16515 Oranienburg

Tel: +49 33 01 700 700
Fax: +49 33 01 55 44 0

www.terratest.de
info@terratest.de

WWW.TERRATEST.DE

PHotos: Frank G. Schulz · Layout: IDEENFABRIK (0 33 01) 700 700