



Light Weight Deflectometer TERRATEST 8000 **WIRELESS**

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



Device is talking



iPHONE +
ANDROID APP



CHECK THE COMPACTION with the APP

With **TERRATEST 8000 WIRELESS**, the light weight deflectometer can be controlled via smartphone, eliminating the need for the external measurement electronics ,ROBUSTA'.

The TERRATEST® APP creates a complete test report with just a few clicks, including a Google® Maps satellite image.

Using the smartphone app, construction projects, clients, materials, soil type, and test personnel can be entered. The test report can then be sent via email.



TERRATEST 8000 WIRELESS transmits test results directly from the loading plate to the smartphone. This allows full measurement reports to be emailed directly from the construction site.



 **MADE IN
GERMANY**

TEST WITHOUT CABLES

The **TERRATEST 8000 WIRELESS** revolutionizes soil compaction measurement with the light weight deflectometer, as it does not require a cable to transmit test results.

Measurements are transmitted via **Bluetooth®** from the loading plate to the measurement electronics or directly to a smartphone. No cable disturbs the test process – a huge advantage on construction sites, as the electronic unit no longer needs to be placed right next to the mechanics. In fact, tests can be taken using only a smartphone, without the external measurement computer ,ROBUSTA'.

With **TERRATEST 8000 WIRELESS**, fully comprehensive test reports, including a Google® Maps photo of the test location, can be created via the app and sent directly from the construction site via email. Faded thermal paper printouts are a thing of the past. For users who do not require a printer, TERRATEST® offers more cost-effective device options without external measurement computer.



High-Precision-Acceleration Meter

Extremely accurate equipment designed for applications under permanent shocks.



Inclined Bearing Plate Handles

Ergonomic handling in construction site using mobile measuring system ,CARRELLO'.



Electroless Nickel Dispersion Coatings

This type of coating, known from fuel pumps, is perfectly suited for construction sites.



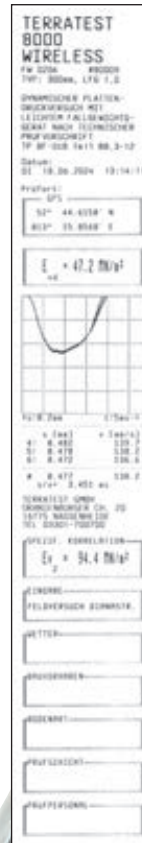
Active Transport-Fix-System

Push-Pull weight fixing ensures safe transport of drop weight.



Easy-to-handle catching ring

Hexagonal ergonomic handgrip, makes catching and carrying of the load weight comfortable



Construction site printout

Print your test report directly on the construction site.



APP for iPhone and Android



TERRATEST 8000 WIRELESS is transmitting all test data via Bluetooth® directly to your smartphone, you can leave the test computer at home.



Send your test data by email to your office or customer - immediately from construction site.



FULLY EQUIPPED

Perfect for construction site



**WEATHERPROOF. INDESTRUCTIBLE.
ONLY ONE BUTTON.**

Weatherproof Electronics Box

Operate the weatherproof, indestructible electronic box on the construction site with the external button. In this way, the measuring computer remains permanently protected against rain, dust and sand.



The measuring computer disposes of protection class IP 43, preventing penetration of dust and water.



Shockproof test computer

Test computer remains closed and protected during test mode, service by external pushbutton.



Integrated Printer

Print out your test data directly in construction site.



GPS System

Allows legally effective identification of test position.



Wi-Fi for App Use

Transfer test results to your iPhone or Android device and create and send reports directly from the construction site.



Rechargeable Power-Battery ,EVERfull'

Power Battery with short charging time and long lifetime **power for 2.000 tests/600 printouts.**



Voice Navigation

Follow spoken instructions, that's all.



Backlit Graphic Display

Clear visualization of results, intuitive menu structure.



Bluetooth®-Technology

Test data are transferred directly from load plate to smartphone or measuring computer
The **'Magic-Eye'** supports the test process with a power LED featuring four colors.



One-Touch External Button

One touch operation when cover is closed.
No need to open the case in dusty environment.



Device is talking

DO-IT-YOURSELF compaction test

Never wait for
a test laboratory again!

Avoid construction damages

Test natural soil before
construction starts

Check subcontractors














Quote from the current ZTV A-StB 2017:

„The test using the dynamic plate load test is particularly suitable for pipeline trench construction, as testing can be carried out in individual layers of the trench within a short period of time.“



INTERNATIONAL STANDARDS

-  ASTM E2835-11, USA
-  TP BF-StB Part B8.3, 2012, GERMANY
-  TP Gestein-StB Part 8.2.1, GERMANY
-  UNE 103 807-2, SPAIN
-  TB 10102-2010, J338-2004, CHINA
-  RIL 836 Deutsche Bahn AG (NGT 39), Railway Construction, GERMANY
-  RVS 08.03.04., AUSTRIA
-  Test Method Q258A 2021, AUSTRALIA
-  VSS 70 313 (July 2019), SWITZERLAND
-  ČSN 736192 - 1996, CZECH REPUBLIC
-  SB 250 versie 4.1, 4.16.2, BELGIUM



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®.



MINIMUM REQUIREMENTS



Recognized PROOF OF SOIL COMPACTING

Benchmarks according to ZTV E-StB 2009 and ZTV A-StB 2012

Quote from the ZTV E-StB 2009:

„..... 4.5.2 Requirements for deflection modulus

The requirements detailed below are based on the 10% minimum quantile. When constructing roads corresponding to Construction Classes SV, or I to IV on frost-free subsoil or substructure, it is necessary to obtain a deflection modulus of at least $E_{v2} = 120 \text{ MN/m}^2$ or alternatively $E_{vd} = 65 \text{ MN/m}^2$ on the subgrade. For Construction Classes V and VI a deflection modulus of at least $E_{v2} = 100 \text{ MN/m}^2$ or alternatively $E_{vd} = 50 \text{ MN/m}^2$ must be obtained. The deflection modulus E_{v2} is to be verified through the static plate load test, as defined in DIN 18134, and the deflection modulus E_{vd} through the dynamic plate load test, as defined in TP BF-StB Part B 8.3.

Table: Benchmarks for the allocation of the static deflection modulus E_{v2} or the dynamic deflection modulus E_{vd} to degree of compaction D_{pr} on coarse-grained soil types

	Required compaction in different depths (ZTV T-StB 95*) (ZTV E-StB 94)	Based on benchmarks for the allocation to D_{pr} (ZTV E-StB 09)	Proposal for the allocation of E_{vd} to E_{v2} (acc. ZTV E-StB 09)
Soil Types DIN 18 196	Degree of compaction D_{pr} in %	Deflection modulus E_{v2} in MN/m^2	Deflection modulus E_{vd} in MN/m^2
Gravels and sands with $\leq 7\%$ by weight $< 0,063 \text{ mm}$ (gravels with wideor intermittent grain size distribution, gravel-clay and gravel-peat mixtures)	$D_{pr} \geq 103$ ≥ 100 ≥ 98 ≥ 97	$E_{v2} \geq 120$ ≥ 100 ≥ 80 ≥ 70	$E_{vd} \geq 65$ ≥ 50 ≥ 40 ≥ 35
Gravels and sands with narrow grain size distribution, sands with wide or intermittent grain size distribution	≥ 100 ≥ 98 ≥ 97	≥ 80 ≥ 70 ≥ 60	≥ 40 ≥ 35 ≥ 32
Mixed gravels and sands with 7-15% by weight $< 0,063 \text{ mm}$ (gravel-silt and gravel-clay mixtures, sand-silt and sand-clay mixtures)	Proctor ≥ 100 ≥ 97	Static ≥ 70 ≥ 45	Dynamic ≥ 35 ≥ 25

ZTV E-StB 09
ZTV A-StB 12

1) In accordance with ZTV E-StB 09 §14.2.5 and ZTV E-StB 12 client and contractor may agree upon these reference values as benchmarks for verification of the achieved compaction.

To be on the safe side always perform a correlation measurement with the static plate load test in accordance with DIN 18134.

The test must be performed and evaluated according to German standard TP BF StB Part B 8.3.

For general information only! All details are subject to change.

ONLINE SOFTWARE ,TEOLO'

Create test reports yourself

The device price already includes the web-based online software ,TEOLO' for evaluating test results on a PC. With just a few clicks, a professional documentation of the test results is created.

Using the smartphone app, a complete test report can even be created and sent directly from the construction site to anywhere you want. This allows you to provide compaction proofs yourself without the need for a soil expert. All requirements for self-monitoring according to testing regulations are quickly met.

With the web-based ,TEOLO' software, it's child's play. It doesn't get more legally secure than this!

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Dynamic Plate Load Test

Determination of the dynamic deflection modulus according to ASTM E2835-11

Client	TERRATEST GmbH	Layer	Subgrade
Construction project	FW13	Soil Type	Silt
Local Test Point	Point 1	Consistency	Hard (dry)
Conducted By	Krone	Weather / Temp	cloudy, 12°C
Date-Time	19.03.2019 13:43	Record Number	1
Serial Number	120620140328	Manufacturer	TERRATEST GmbH
GPS Co-Ordinates	52° 44.6140N 013° 15.8187E	UTM Co-Ordinates	E 33 382788 N 5645150
Comments		Soil Classification	Gravel-sand mixtures with intermittent grain...

Settlement 30mm	Settlement 35mm	Settlement 50mm	Mean Value(mm)	Evd (MN/m2)	Required EVD (MN/m2)	Difference EVD (MN/m2)	UV (ms)	Required EV2 (MN/m2)
0.256	0.250	0.254	0.253	88.9	65	23.9	2.459	120



33 data by amCharts





Google
Imagery ©2019, DigitalGlobe, GeoBasis, GEBCO, GeoContent



(Krone)



Online
SOFTWARE ,TEOLO'

Professional Compaction Proofs

Transfer your test results via USB stick or smartphone to your PC and create professional test reports. Your results are automatically evaluated, documented, and archived.

The GPS system simultaneously records the coordinates of each test position (when GPS is activated). Each test is later automatically displayed on the PC as an individual report, including the measurement value, date, time, and a Google® Maps satellite photo. The GPS location ensures that every measurement is precisely assigned and legally secured.

With ,TEOLO', you can effortlessly meet the requirements for self-monitoring compaction proofs according to **ASTM E2835-11 and other national standards.**

The ,TEOLO' PC software is particularly user-friendly and clearly structured. Create compaction proofs yourself with just a few clicks.

The ,TEOLO' PC software is particularly user-friendly and clearly designed. Create compaction proofs yourself with just a few clicks.



DO-IT-YOURSELF compaction test

- ✓ Worldwide accepted (ASTM E2835-11)
- ✓ SELF EXPLAINING
- ✓ 1 person only 2 minutes
- ✓ Perfect for self monitoring
- ✓ Test soil before you start
- ✓ Test homogeneity quickly
- ✓ Test subbase layers before overlay
- ✓ Test highly compacted layers
- ✓ Avoid damages after trenching
- ✓ Not nuclear, no counterweight



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