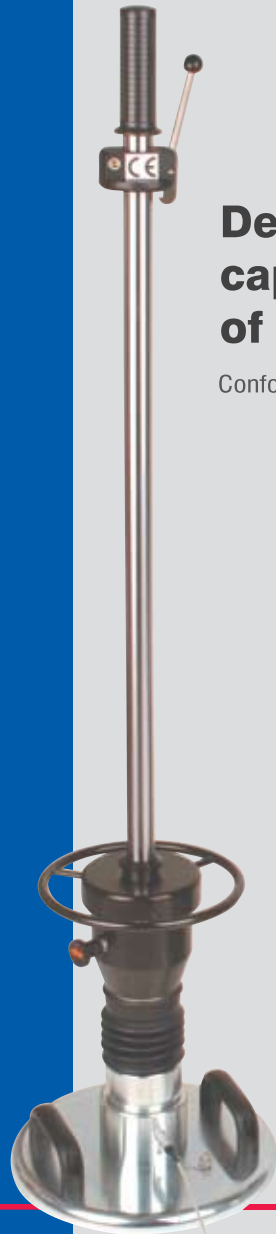


# HMP LFG THE LIGHT DROP-WEIGHT TESTER

The guarantee for fast, reliable and efficient testing.



## Determination of soil bearing capacity and compaction quality of soils and non-cohesive subbases

Conforming to the Engineering Code for Soil and Rock in Road Construction  
TP BF-StB Part B 8.3 Part 2003

Magdeburger  
Prüfgerätebau  
GmbH

BUILDING CALLS FOR TESTING!

[www.HMP-LFG.com](http://www.HMP-LFG.com)



Calibration institute  
authorized by the Federal  
Highway Research Institute



# HMP LFG

## HMP-LFG - The easy way



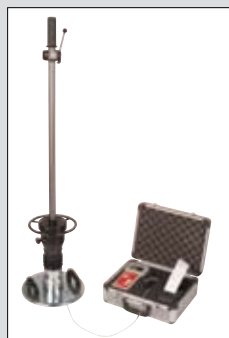
### Use

The dynamic plate load test employing the Light Drop-Weight Tester is used to determine the soil bearing capacity and compaction quality of soils and non-cohesive subbases, as well as for soil improvement applications. Built-in soil layers can easily be tested without load abutment, facilitating quick assessment of test lots even under limited space conditions. The test method is suited for coarse-grain and mixed grain soils having a maximum grain size of 63mm and can be used to determine the dynamic modulus of deformation of soil in the range  $E_{vd} = 15...70 \text{ MN/m}^2$ .

### Applications *multifunctional*

- Road and railway construction, earth-moving
- Quality assurance in canal construction
- Compaction monitoring in pipe trenches and cable ducts
- Testing of pavement bedding
- Testing of foundation backfill
- Quality inspection in boreholes
- Testing of modulus of deformation in line with soil exploration

### Tradition HMP LFG *trust*



1980 Development and production for more than 25 years.

### Intra-company monitoring *costs saving!*

Being easy to handle and providing immediate measuring results, the HMP Light Drop-Weight Tester is especially suited for monitoring intra-company operations. It facilitates quick decisions for continuing construction work at the site.

### Advantages *time saving*

#### Fast and cost-saving

- Time-saving (maximum 3 minutes per measuring point)
- No vehicle required
- Immediate on-site evaluation of test results

#### Easy to handle

- Low tester weight, small components, human-engineered
- Easy to operate and carry by one person
- Testing in difficult-to-reach locations

#### Reliable and precise

- Calibrated by approved calibration institute
- Complies with the latest state of the art
- Field tested, successful in use throughout the world

Over 25 years of development, improvement and manufacture by HMP using the most sophisticated and advanced technologies guarantee best reliability and accuracy of the device.

### Applicable codes

- (ZTVE-StB 94) German additional terms of contact and rules for earthwork in road construction
- (ZTVT-StB 95) German additional terms of contact and rules for sub-bases in earthwork.
- (ZTVA-StB 97) German additional terms of contact and rules for excavation in traffic access.
- (NGT 39) German rules for using the Light Drop-Weight Tester in railway construction.

# Better safe, than sorry.

## 100% of compaction control!



*Only 3 minutes to test result!*

### Prepare

- Prepare the test ground.
- Arrange equipment and connect to settlement measuring instrument.

### Measure

- Press the Power key to switch on the settlement measuring instrument.
- Perform 3 impacts in succession.
- The settlement value in mm is displayed after each impact.
- The test series completed, the average settlement, the deformation modulus, the path-to-speed ratio and the settlement curve are calculated.

### Evaluation via PC Software

*convenient with PC*

Series of measured data cannot only be printed by using a thermal printer, but they can also be transferred to a PC.

- Connect the PC to the settlement measuring instrument.
- Read in the series of measured values.
- Comfortable processing of the protocol by means of a special software program

Continue? 2  
0.39 0.39 0.38  
Sm = 0.385 MN/m  
Evd = 58.44 MN/m<sup>2</sup>

Store? 9  
203 203 203  
Vm = 202.8 mm/s  
s/v = 2.13 ms

DYNAMIC PLATE  
LOAD TEST  
TP BF-SEB PART B 8.3  
DEVICE: HMP LFG-K No. 2812

PERSON

WEATHER/TEMPERATURE

PROJECT

TEST SURFACE/LAYER

No.: 1

TESTDATE/TIME: 14.02.2006 12:28

S1 (mm)	S2 (mm)	S3 (mm)
0.380	0.382	0.381

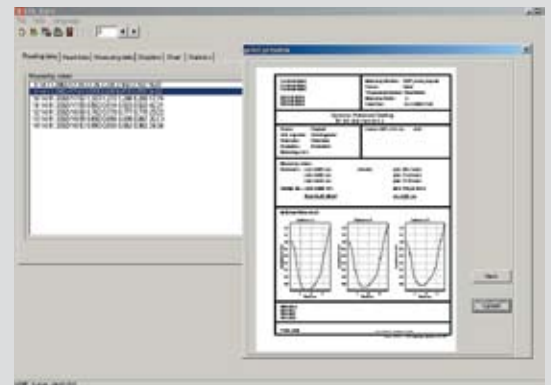
U1 (mm/s)	U2 (mm/s)	U3 (mm/s)
102.7	103.2	102.9

EVALUATION:

Sm = 0.381 mm  
Evd = 59.06 MN/m<sup>2</sup>

Um = 102.9 mm/s  
S/V = 3.702 ms

t = Sm/s/dju, s = 0.10 mm/dju



### Evaluation via Thermal printer:

*any time & any place*

- Printing of measured data from memory for documentation purposes at any time and in any place.
- Up to 200 series can be stored.



- The print-out contains the following data:

- date, time
- settlement s
- settlement speed v
- dynamic deformation modulus  $E_{vd}$
- path-to-speed ratio s/v
- settlement curves

# Specifications

## Loading mechanism

┃ Total weight	15.0 kg
┃ Drop weight	10.0 kg
┃ max. impact force	7.07 kN
┃ Duration of impact	17,0 ± 1,5 ms
┃ Material	zinc coated/hard-crome plated steel

## Load plate

┃ Diameter	300 mm
┃ Plate thickness	20.0 mm
┃ Total weight	15.0 kg
┃ Material	zinc coated steel

## Electronic settlement measuring instrument

┃ Power supply	4 X R6 batteries
┃ Dimensions	210 mm X 80 mm X 25 mm
┃ Settlement measuring range	0,1 bis 2,0 mm ± 0,02 mm
┃ Measuring range $E_{vd}$	$E_{vd} < 225 \text{ MN/m}^2$
┃ Temperature range	0 bis 40 °C
┃ Storage capacity of measured data	200 series
┃ Menu navigation selectable:	german, english, polish, czech, spain, french, russian, lithuanian and chinese.

# Accessory



**Transport cart** (collapsible)  
for long distances at the site



**Base plate with magnet**  
for proper positioning  
of loading unit



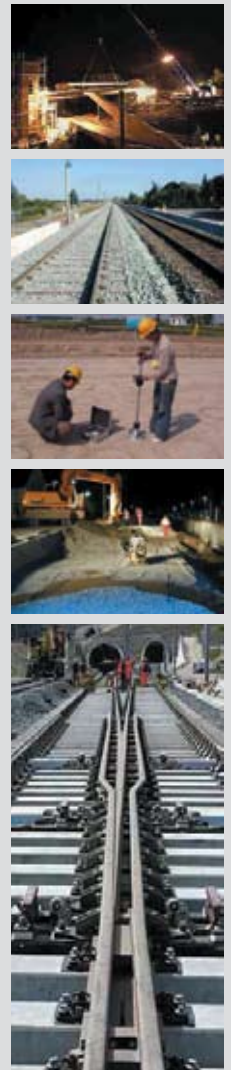
**Transport box** (Wood)  
for storing the device  
and shipping purposes



**Thermal printer**  
small, quick printer with light resistant  
paper, charger and adapter cable



**Special Software program**  
to transfer measured data to a PC for  
comfortable evaluation and editing



*HMP-LFG - worldwide in use*





**environmental systems & services**

8 River Street Richmond VIC 3121 | AUSTRALIA  
T +61 3 8420 8999 | F +61 3 8420 8900  
geotechnical@esands.com

[www.esands.com](http://www.esands.com)