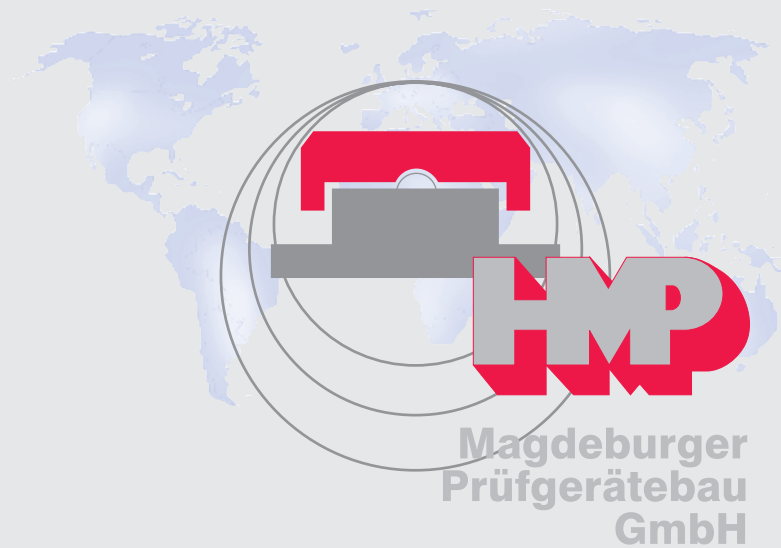


# HMP DDG THE STATIC PLATE LOAD TESTER

The guarantee for fast, reliable and efficient testing.



Magdeburger  
Prüfgerätebau  
GmbH

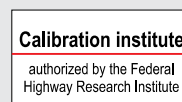
## Determination of load settlement lines in order to evaluate deformation and bearing capacity of soils

according to DIN 18 134 Issue 2001



Building calls for testing!

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



# HMP

## THE STATIC PLATE PRESSURE



### Use

The Static Plate Load Test applies in earthworks and foundation engineering as well as road construction in order to determine load settlement lines in order to evaluate the deformability and the bearing capacity of the soil. The static plate load test is indicated in DIN 18 134.

### HMP PDG - Equipment configuration

#### ● Load equipment

Hydraulic pump with pneumatic cylinder for 100kN compressive force and 150 mm lift with 2 m long high-pressure hose, 1 set of hydraulic cylinder extensions (pluggable), pressure plate with magnetic clamp and upper ball joint

#### ● Load plate

with handgrips and adjustable circular level diameter: 300 mm, plate thickness: 25 mm

#### ● Settlement measuring instrument

Three-point seated carrier frame, equipped with pluggable on and swivelling sensing arm (DIN 18134, Fig. 3a) as well as adjustable circular bases dimensions: 2320 x 570 x 420 mm (L x W x H), weight: 12,5 kg

#### ● Force measurement

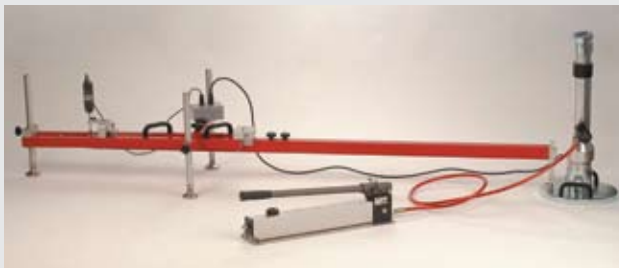
Electric load cell 50 kN, completely with pressure piece and adapter

#### ● Path measurement

Electronic dial gauge, measuring range 25 mm, resolution 0.01 mm, digital display, degree of protection Ip42

#### ● Measuring head

Acquisition of force- and path values as well as digital, interference-free transfer to the measuring instrument



#### ● Evaluation units

4 different variants:

**HMP PDG, -SD, -D** with automatic evaluation unit

**HMP PDG-K** with automatic evaluation unit PLUS

### Automatic Evaluation Unit

**HMP PDG-SD, -D ... cost-saving, compact, comfortable**

**Automatic data transfer**

**Evaluation, display and print-out at the site**

**Long work duration with one accumulator charge Possible**

**PC-connection, revise / protocol print-out**

#### ● Measuring instrument

Measured value acquisition of force and path with automatic evaluation

- comfortable user interface
- memory capacity for 200 tests
- LCD-Display 60 x 30 mm
- Accumulator for 12 hours of autonomic operation, rechargeable via mains or vehicle adapter

#### ● Thermal printer to print-out data and load settlement lines at the site

#### ● handy aluminum case for measuring instruments

Dimensions: 460 x 340 x 210 mm/8 kg

#### Data acquisition

- Acquisition and displaying of tension with 0.0001 MN/m<sup>2</sup> resolution and settling with 0.01 mm resolution

#### Evaluation

- Calculation and displaying of deformation modulus
- Construction site documentation directly via mini printer with the graphical presentation of load settlement lines
- Further evaluations via optional PC-Software



Display measurement



Display result



Measuring case with measuring instrument, dial gauge, thermal printer, measuring head, pressure piece, load cell

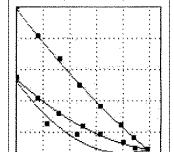
```

PLATE PRESSURE TEST
according to DIN 18 134
Device: HMP PDG-SD No.0218
assistant
weather/temperature today
object/test point
    
```

```

Print time:18.08.2008 11:40
Print time: 18.08.2008 11:53
    
```

	Pressure MN/m <sup>2</sup>	Settlement mm
1	0.0000	0.00
2	0.0833	0.30
3	0.1668	1.30
4	0.2402	2.48
5	0.3301	3.06
6	0.4230	3.60
7	0.4999	4.00
****Unloaded****		
8	0.2475	3.38
9	0.1294	3.64
10	0.0000	2.48
****Second Load****		
11	0.0833	3.34
12	0.1723	3.44
13	0.2451	3.62
14	0.3331	3.78
15	0.4198	3.98



```

Evaluation:
sig0 max=0.4999MN/m²
a1= 12.270mm/(MN/m²)
a2= -8.664mm/(MN/m²)²
Ev1= 28.31MN/m²
a1= 6.320mm/(MN/m²)
a2= -7.234mm/(MN/m²)²
Ev2= 83.21MN/m²
Ev2/Ev1= 2.94
    
```

Print-out thermal printer

# PDG TESTER

Trust, but verify!



## Automatic Evaluation Unit PLUS

**HMP PDG-K ... Compact, very comfortable evaluation**

In addition:  
comprehensive data management,  
displaying the load settlement lines,  
comfortable data input via keyboard

- **Measuring computer**  
measured data acquisition of force and path with automatic evaluation
  - comfortable user interface with alphanumeric membrane keyboard, graphical display and menu-controlled operator guidance
  - 250 tests can be stored
  - large LCD-Display 118 x 89 mm
  - accumulator for 12 hours autonomic operation with charging capability via mains or vehicle adaptor
- **PC-keyboard** with protective foil
- **Thermal printer** for print-outs of data and load settlement lines at the site
- **Aluminium case** carrying the measurement instruments  
Dimensions: 460 x 360 x 230 mm/14,5 kg



Measurement case level 1 with measurement computer, thermal printer and dial gauge



Measurement case level 2 with measuring head, accumulator, load cell, charger, PC-keyboard with protective foil

### Data acquisition

- Display of tension, resolution 0,0001 MN/m<sup>2</sup> and settlement resolution 0,01 mm
- Manual data input/operating via membrane or PC-keyboard
- Comfortable menu navigation

### Data management

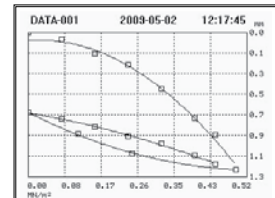
- Setting up and revising of up to 99 protocol head templates and desired value tables for various load

### Evaluation

- Calculating of the deformation modulus

data-006	2009-05-02	12:14:12
Meas value 3:	0.1597 MN/m <sup>2</sup>	0.200 mm
Meas value 4:	0.2399 MN/m <sup>2</sup>	0.300 mm
Meas value 5:	0.3199 MN/m <sup>2</sup>	0.540 mm
Meas value 6:	0.3988 MN/m <sup>2</sup>	0.820 mm
Set point:	0.4500	
Compression [MN/m <sup>2</sup> ]	Settlement [mm]	
<b>0.4080</b>	<b>1.080</b>	
Accumulator: 12.7 V	°C: +19	

menu measurement

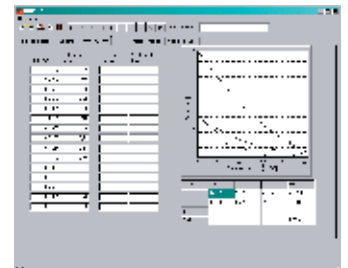


display pressure setting lines

- Displaying of evaluation
- Construction site documentation directly via the mini printer

### Options

- **PC-Software**
  - Transfer, display, revise and print-out of data on PC
  - Storage of the data in the database with comfortable search facilities
  - Editing possibility regarding protocol heads and desired value tables
- ASCII-export in order to use the data with other programmes



- **Data transfer software**
- **1 transport box**



# HMP GmbH PROFIL



## Scope of service

- Development and manufacture of testers for soil mechanics
- Service - Calibration and repair of testers

## Scope of delivery

- Testers for
  - Soil mechanics
  - Concrete testing
  - Road construction
  - Refurbishment of buildings
- Laboratory equipment
- Glassware and laboratory small parts
- Survey equipment
- Electronic and mechanical scales



Electronic scales



Densitometer



Drying cabinet



HMP LFG Light Drop-Weight Tester



Penetrometer

*HMP-PDG - In action all over the world*



  
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)