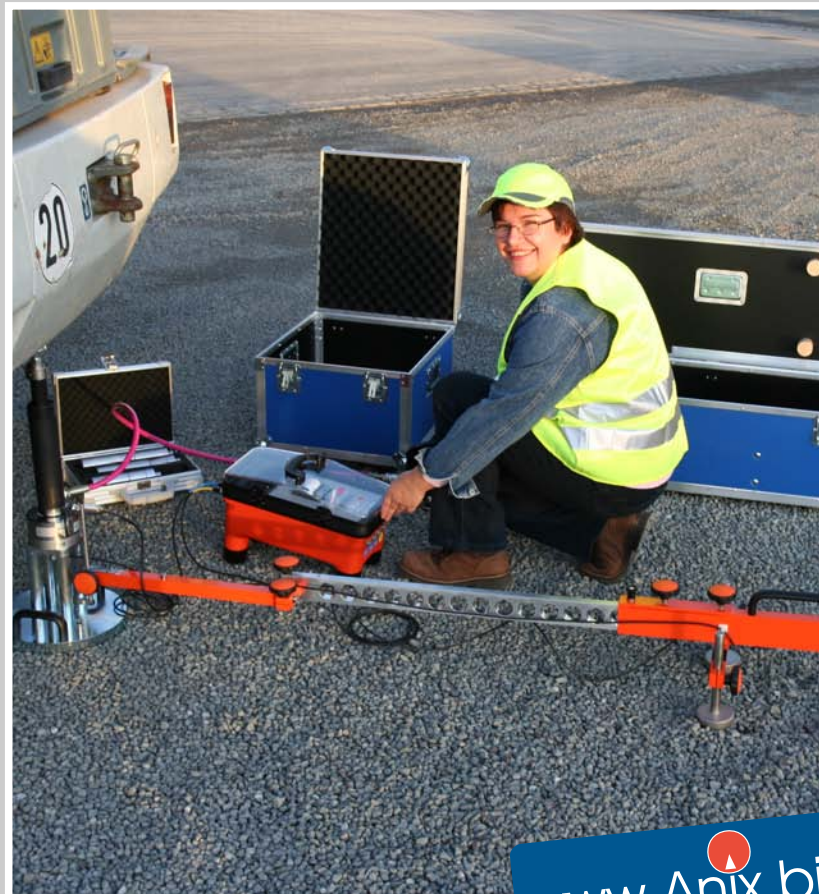


THE NEW GENERATION

AX[®] 01a Plate bearing tester

Electronic evaluation · mini printer · compact design



www.Anix.biz
Precision Electronic Instruments

Anix GmbH · Hintern Hecken 1 · Germany · 39179 Barleben
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- Electronic evaluation
- Immediate printing
- Storage of test results
- Compact design
- Simple 4-button user interface
- Excel[®] - spreadsheets
- Long operation time
- Robust and durable

The static plate bearing test is used for earthworks, foundations and road construction to determine the deformability, strength and bearing capacity of soils and base layers.



The AX[®] 01a is characterized by a high quality, aluminium and stainless steel chassis. Rugged waterproof industrial sensors are used to ensure accurate results.


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THE NEW GENERATION AX[®] 01a Plate bearing tester

Technical specification

The results of the test are calculated and displayed immediately. Additionally the data are stored at the SD card. The thermal printer provides an immediate printout of the results. The measurement data (average compressive strength below the plate and the corresponding deflection of the load plate) are shown in a printed diagram.

The electronic device of AX[®] 01a evaluates the strain moduli E_{v1} , E_{v2} (a figure of the bearing capacity) and the ratio E_{v2}/E_{v1} (a figure for the compaction level).

Results can be transferred to the PC and are available for further processing in Microsoft Excel[®].

The compact design of the AX[®] 01a allows easy transportation in the trunk of a car.

The equipment can be operated by one person and can be used in the rain also.

Technical specifications:

Version: June 2013

Technical data is subject to change without notice. We reserve the right to further developments and technical modifications of our products.

Electronic device:

- Case made from PET, transparent top cover with scratch-resistant surface
- Thermal printer with 58 mm print width
- SD card for the storage of approximately 200 tests
- Plate diameters are adjustable: 300 mm, 600 mm, 762 mm
- Precision (resolution): Deflection 0,01 mm
Normal stress 0,0001 MN/m² (printed and stored)
0,001 MN/m² (displayed)
- Rechargeable battery, 4.8 V, 4 Ah, fast charger 2 h, about 48 h battery life

Test tripod:

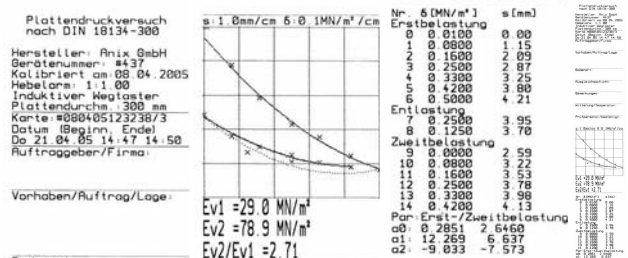
- Direct measurement of the deflection according to DIN 18134 and other standards (displacement measurement with one sensor only)
- Test beam can be folded-out and is extractable
- Hemispherical feet for an optimal placement at rough and soft surfaces
- Short (250 mm) and long (500 mm) fixture for the displacement sensor (for measurements in pits deeper than 0.3 m)
- Displacement sensor is made from stainless steel, stroke of the sensor: 15 mm

Loading apparatus:

- Hydraulic jack assembly with jack for 100 kN force, manual hydraulic pump
- Bearing plate made from steel S355JO, stainless surface, diameter 300 mm, tunnel for the displacement sensor
- Force sensor 100 kN, made from stainless steel
- Extension set (2 x 25 mm, 2 x 50 mm, 2 x 100 mm, 2 x 150 mm, complete height 650 mm, complete weight 3.4 kg)
- Upper magnetic ball joint (loadable up to 60kN, weight 0.7 kg)

Dimensions:

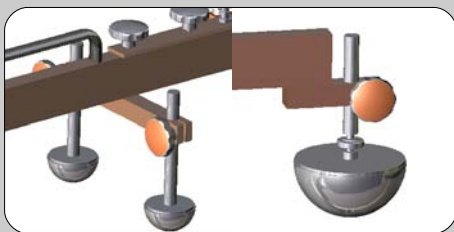
- Test tripod: folded L 1150 x W 340 x H 260 mm,
unfolded L 2330 x W 340 x H 310 mm
- Height of the hydraulic jack (retracted): 285 mm, stroke 150 mm
- Weight of the hydraulic jack assembly (jack + pump + hose): 11.9 kg
- Bearing plate with force sensor mounted: diameter 300 mm, height 265 mm,
- Weight complete: (without packaging, without transport box): 56.8 kg



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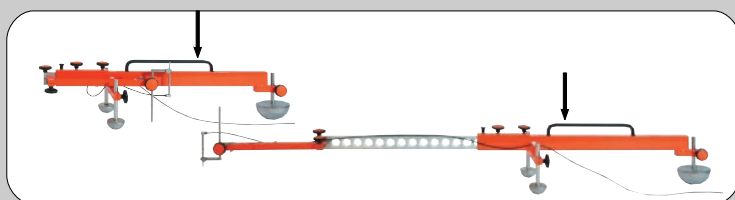
Leveling device



Fast and safe positioning by hemispherical feet.



Measurements in pits deeper than 0,3 m.



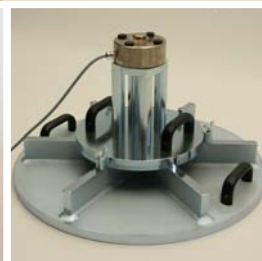
The carrying handle allows the transportation of the test tripod when folded or extended.

The hemispherical feet of the AX[®] 01a provide a quick and safe positioning of the system even on rough layers.

The feet are height-adjustable - fine adjustment with a leveling screw at the rear foot.

Big star-grip screws allow to lock the feet and measuring arms with work gloves.

Because of the fixed measuring beam the equipment can be used in pits deeper than 0,3 m (according to DIN 18134).

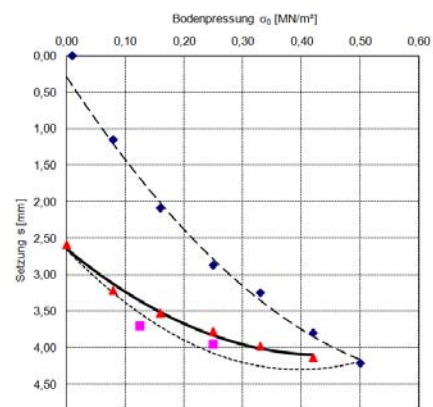



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THE NEW GENERATION AX[®] 01a Plate bearing tester

PC-evaluation

Last- stufe	Normalsp. σ_v [MN/m ²]	Setzung s [mm]
Erstbelastung		
1	0,0100	0,00
2	0,0800	1,15
3	0,1600	2,09
4	0,2500	2,87
5	0,3300	3,25
6	0,4200	3,80
7	0,5000	4,21
Entlastung		
8	0,2500	3,95
9	0,1250	3,70
Zweitbelastung		
10	0,0000	2,59
11	0,0800	3,22
12	0,1600	3,53
13	0,2500	3,78
14	0,3300	3,98
15	0,4200	4,13



Storage of measurements

- The AX[®] 01a can store up to 200 measurements on an SD card.
- The USB card reader for the PC is included.
- A data transfer cable is not necessary.

Data handling

- Data handling is carried out with Microsoft Excel[®] on a Windows PC. You are flexible to create your own test reports with your company logo and your layout.
- The design of the test report can be created without any special software.



Gefordertes Mindestquantil E_{v1} : $\geq 45 \text{ MN/m}^2$				Gefordertes Höchstquantil E_{v2}/E_{v1} : $\leq 2,2$			
Prüfpunkt-Nr	Messdatum	Messzeit	σ_{trag} [MN/m ²]	E_{v1} [MN/m ²]	E_{v2} [MN/m ²]	E_{v2}/E_{v1}	Bemerkungen
1	23.09.2012	11:54	0,500	29,0	78,9	2,71	
2	23.09.2012	11:58	0,461	26,4	74,2	2,81	
Kartennr.: #230903115428				Arithmetisches Mittel der Stichprobe:		76,5	2,76
Gerätenr.: #22				Standardabweichung:		3,3	0,07
Ø-Platte: 300 mm				Variationskoeffizient:		4,3%	2,6%
Hebelverhält.: 1:2,00				Qualitätszahl Q:		9,49	-7,92
				Die Prüfkriterien ($Q > 0,88$) sind		erfüllt	nicht erfüllt

THE NEW GENERATION

AX[®] 02 Planograph

Segmented compact design



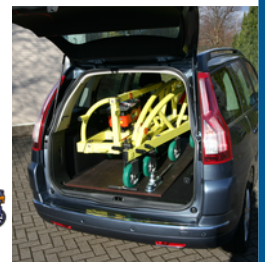
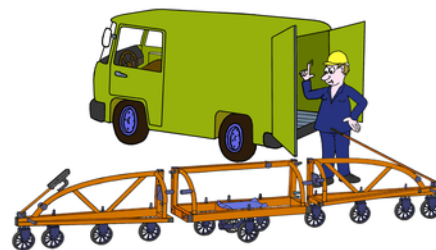
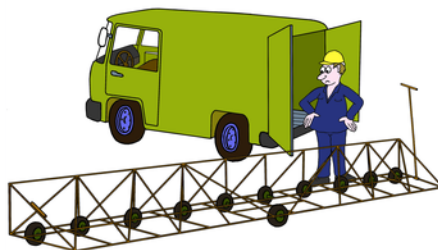
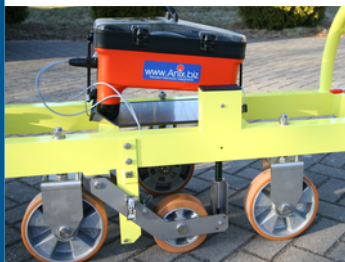
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- 3 segments
- Easy to transport in a car and on pallet
- Without special trailer
- Space-saving storage
- Easy assembling on site
- Secured wheel adjustment
- Durable and waterproof industrial sensors

The planograph is used to measure precisely the surfaces of roads to evaluate the longitudinal unevenness of the surface layer.

The AX[®] 02 consists of 3 frame parts with a total of 10 wheels, a stabilizing wheel, a measuring wheel and an evaluation unit. The equipment can be operated by one person and in the rain also.



The planograph AX[®] 02 is characterized by a high-quality aluminium and stainless steel construction.


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THE NEW GENERATION

AX[®] 02 Planograph

Technical data

- Electronic evaluation
- Immediate printing
- Storage of test results
- Compact design
- Simple 4-button user interface
- Excel[®] - spreadsheets
- Long operation time
- Robust and durable

The road surface is recorded continuously, limit violations are audible signaled.

Technical data:

June 2013

Technical data is subject to change without notice. We reserve the right to further developments and technical modifications of our products.

Planograph:

- Innovative connection of the segments, very low deflection
- Suitable for measurements in walking speed 8 km/h
- Corrosion resistant construction, robust and durable
- Wheel adjustment with vertical set screws
- Turning device for easy turning of the planograph (option)
- Limit value is adjustable before testing, automatic identification of p and p² (violation of the limit value)
- Pause / continuation of the recording during the test is possible
- Numerous possibilities for comments during measurement.
- Printing of summary table (p and p² and corresponding distances) on site
- Graphical analysis and print with Microsoft Excel[®] on a PC (graphical analysis is limited to approx. 5 km on Excel[®] 2000, XP and 2003 because of only 65 536 rows)
- The evaluation unit can be used on the frame or remotely connected with a optional spiral cable up to 7 m distance (expandable with additional cables up to 14 m or 21 m)

Electronic measuring device:

- Case made from PET, transparent top cover with scratch-resistant surface
- Thermal printer with 58 mm print width.
- SD card for storage
- Multi-line backlit LCD display, 4 external buttons, 6 internal buttons to operate.
- Audible signal in case of limit violation.
- Accuracy of measurement:
 - Vertical deflection: 0 .. 20 mm (resolution: ± 0.1 mm)
 - Distance: Infinite (resolution: appr. 10 cm)
- Battery: 4.8 V, 4 Ah, quick rechargeable in 2 h, for about 48 hours continuous operation
- Weight 4.0 kg

Dimensions:

- segments 1 and 3: length 1.45 m, height 0.72 m, weight 25 kg
- segment 2: length 1.30 m, height 0.72 m, weight 30 kg
- mounted: total length 4.20 m, height 0.72 m, weight 80 kg



THE NEW GENERATION

AX[®] 02 Planograph

Evaluation with a Microsoft Windows PC

Ergebnistabelle:				17.07.12 12:49
Station km	Meßwert (mm)	Überschreitung p(mm)		Hinweis
0,0000				BEGINN PFLASTER
0,0300				ENDE PFLASTER
0,0106	3,5	0		Verschmutzung
0,0215	20,2	17		Entwässerungseinrichtung
0,0265	3,3	0	0	
0,0297	6,8	4	16	Schacht
0,0743	8,1	5		Verschmutzung
0,1232	6,7	4		Verschmutzung
0,1349	14,2	11	121	Übergang
0,1427	9,2	6		Verschmutzung
0,1587	3,9	1	1	
0,1640	7,1	4		Verschmutzung
0,1671	3,3	0		
0,3252	3,7	1		Verschmutzung
0,3873	5,4	2		Verschmutzung
0,3899	4,8	2		Verschmutzung
0,3935	9,9	7	49	Fahrspur
0,3963	5,9	3	9	Fahrspur
0,3984	3,8	1		Verschmutzung
0,4007	6,9	4	16	Fahrspur
0,4082			212	

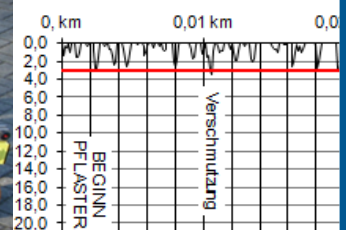
Edit Route:

- Subsequent changing of the start value (km)
- Possibility of inversion of the route: start->end to end->start (for inverted driving directions during measurements)

Edit and review table of results:

- Enter / edit comments of surface characteristics
- Possibility for customization of initialized comments.
- Remove values out of the p^2 calculation (for instance violations created by contamination)

- Analysis with Microsoft Excel[®].
No additional evaluation software - no administrative rights needed.
- Continuously automatic identification of limit violations
- Edit and review of the table of results
- Forwarding your report as a PDF or Excel[®] file
- Flexibility to create your own test report with your company logo and your layout



The new Generation AX[®] 02 Planograph

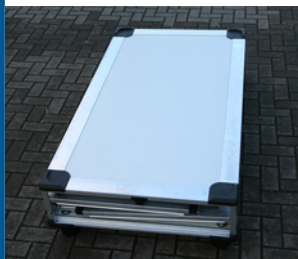
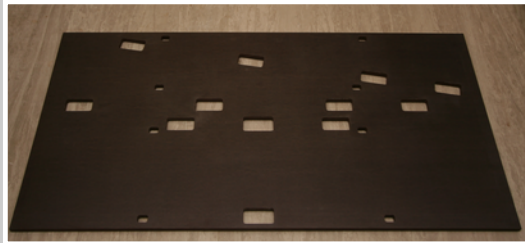
Storage and transport

- Transport plate "BASIC" - approx. 163 x 86 x 2 cm.

- The planograph on the transport plate. The wheels snap into the cutouts. Fastening with 2 tensioning belts. Height about 73 cm.

- The transportbox "ADVANCED" consisting of transport plate, 4 wooden frames and a truck tarp. It is suitable for the transport on an pallet.

- The Planograph AX[®] 02 - for transport in the car.



Benkelman – Beam AX 06

Determination of the load-bearing capacity of roads made of asphalt or pavement



Benkelman – Beam AX 06

Measurement of load-bearing capacity of road surface layers made of asphalt or pavement

The Benkelman Beam enables precise and non-destructive measurements of the load-bearing capacity of road surface layers made of asphalt or pavement (in conjunction with further investigations).

- Identification of visually undetectable weak points
- Formation of homogeneous roads sections with comparable load-bearing capacity
- Determination of load bearing behavior over longer periods of time and after extreme hydrological events
- Identification of structural causes of damage and assessment of the structural condition
- Selection of appropriate road maintenance measures

The Benkelman beam AX 06 is a new development. Special attention has been paid to the following characteristics:

- truss grid beam construction made of stainless steel
- is delivered in calibrated condition
- 1:2 measuring bridge with precision bearings
- easy to assemble, simply take the front part, hook in and tighten the screws^{(1),(2)}
- improved mounts for dial gauge⁽⁴⁾
- lockable height adjustment of the feet⁽⁶⁾

Technical specifications:

- according to the requirements of "FGSV Working Paper No. 443, Load-bearing capacity of road surface pavements, Part B 1: Benkelman Beam, Device description, measurement execution, Part C1: Analysis and evaluation of subsidence measurements"
- Pack size disassembled, length < 2 m⁽⁵⁾, Mass: 17 kg
- lever ratio 1:2
- Distance between probe tip and front support feet of the support frame: 2,40 m
- Material: stainless steel (1.4301), powder-coated white
- digital dial gauge, reading: 0,001 mm, accuracy $\pm 0,005$ mm, measuring range: 12,5 mm
- additionally required is a load vehicle of 10 t with only one rear axle and twin tires⁽³⁾

Manufacturer:

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